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This index covers all technical items—papers, correspondence, reviews, etc.—that appeared in this periodical during 2021, and items from previous years that were commented upon or corrected in 2021. Departments and other items may also be covered if they have been judged to have archival value.

The Author Index contains the primary entry for each item, listed under the first author's name. The primary entry includes the coauthors' names, the title of the paper or other item, and its location, specified by the publication abbreviation, year, month, and inclusive pagination. The Subject Index contains entries describing the item under all appropriate subject headings, plus the first author's name, the publication abbreviation, month, and year, and inclusive pages. Note that the item title is found only under the primary entry in the Author Index.

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Chang, X., Wang, J., and Zhao, X., Peak-to-Peak Filtering for Discrete-Time Singular Systems; *TCSII July 2021 2543-2547*

Chang, Y., Tsai, K., and Cheng, Y., Data Retention-Based Low Leakage Power TCAM for Network Packet Routing; *TCSII Feb. 2021 757-761*

Chang, Y., Kang, C., and Lu, H., A V-Band High Gain Sub-Harmonic Down-Conversion Mixer Using PMOS Cross Couple Pair to Implement Negative Impedance and Current-Bleeding Technique; *TCSII Aug. 2021 2765-2769*

Chatterjee, B., see Srivastava, A., *TCSII April 2021 1108-1112*

Chatterjee, S., and Roy, S., A Square Wave-Based Digital Foreground Calibration Algorithm of a Pipeline ADC Using Approximate Harmonic Sampling; *TCSII April 2021 1068-1072*

Chaurasiya, R.B., and Shrestha, R., Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio; *TCSII April 2021 1198-1202*

Chaves, D.P.B., see Souza, C.E.C., *TCSII Jan. 2021 491-495*

Chaves, D.P.B., see Souza, C.E.C., *TCSII April 2021 1472-1476*

Che, W., see Xun, M., *TCSII April 2021 1228-1232*

Che, W., see Shen, G., *TCSII April 2021 1123-1127*

Che, W., see Feng, W., *TCSII June 2021 1897-1901*

Che, W., see Feng, L., *TCSII June 2021 1877-1881*

Che, W., see Shen, G., *TCSII June 2021 1778-1782*

Che, W., see Qiu, F., *TCSII Oct. 2021 3199-3203*

Chen, B., see Shi, J., *TCSII March 2021 993-997*

Chen, B., see Yang, C., *TCSII April 2021 1492-1496*

Chen, B., see Li, J., *TCSII Aug. 2021 2997-3001*

Chen, B.J., see Le Zhang, Q., *TCSII June 2021 1922-1926*

Chen, C., see Lu, Y., *TCSII March 2021 873-877*

Chen, C., see Bao, H., *TCSII April 2021 1453-1457*

Chen, C., and Chu, W., How it Flies and Why it Flies? Volleyball Trajectory Segmentation and Classification; *TCSII May 2021 1591-1595*

Chen, C., see Lai, Q., *TCSII June 2021 2197-2201*

Chen, C., see Huang, W., *TCSII July 2021 2715-2719*

Chen, C., see Li, Y., *TCSII Aug. 2021 2860-2864*

Chen, D., see Bhatheja, K., *TCSII May 2021 1690-1694*

Chen, D., see Zhou, K., *TCSII Aug. 2021 2932-2936*

Chen, F., see Wang, W., *TCSII June 2021 2107-2111*

Chen, F., see Xie, Y., *TCSII June 2021 1872-1876*

Chen, F., see Xu, K., *TCSII July 2021 2578-2582*

Chen, F., see Deng, Q., *TCSII Sept. 2021 3167-3171*

Chen, F., see Shao, Q., *TCSII Dec. 2021 3527-3531*

Chen, G., see Yang, X., *TCSII March 2021 953-957*

Chen, G., see Wang, W., *TCSII June 2021 2107-2111*

Chen, G., see Lou, Y., *TCSII June 2021 2112-2116*

- Chen, G.**, see van Wyk, M.A., *TCSII June 2021 2182-2186*
- Chen, G.**, see Dong, S., *TCSII Oct. 2021 3261-3265*
- Chen, G.**, see van Wyk, M.A., *TCSII Oct. 2021 3234-3235*
- Chen, H.**, see Guo, J., *TCSII Jan. 2021 146-150*
- Chen, H.**, see Tseng, T., *TCSII Jan. 2021 196-200*
- Chen, H.**, see Wu, L., *TCSII April 2021 1448-1452*
- Chen, H.**, see Feng, L., *TCSII June 2021 1877-1881*
- Chen, H.**, see Gao, F., *TCSII June 2021 1992-1996*
- Chen, H.**, Wang, T., Cao, J., Vidal, P., and Yang, Y., Dynamic Quaternion Extreme Learning Machine; *TCSII Aug. 2021 3012-3016*
- Chen, H.**, see Xiong, X., *TCSII Dec. 2021 3562-3566*
- Chen, L.**, see Wang, H., *TCSII June 2021 1982-1986*
- Chen, J.**, see Lim, T., *TCSII Jan. 2021 221-225*
- Chen, J.**, Qian, J., and Huang, S., A Low-Noise and High-Gain Folded Mixer for a UWB System in 0.18- μm SiGe Bi-CMOS Technology; *TCSII Feb. 2021 612-616*
- Chen, J.**, see Zhang, N., *TCSII March 2021 1043-1047*
- Chen, J.**, Zhang, L., Zheng, H., Wang, X., and Ming, Z., DeepPoison: Feature Transfer Based Stealthy Poisoning Attack for DNNs; *TCSII July 2021 2618-2622*
- Chen, J.**, Xiong, H., Zheng, H., Ming, Z., and Liu, Y., Anti-Interpolation: An Attack Facilitator Hiding Adversaries Into Images; *TCSII July 2021 2670-2674*
- Chen, J.**, see Cai, H., *TCSII July 2021 2633-2639*
- Chen, J.**, see Li, H., *TCSII Aug. 2021 2770-2774*
- Chen, J.**, Zhao, W., Wang, Y., and Ha, Y., Analysis and Design of Reconfigurable Sense Amplifier for Compute SRAM With High-Speed Compute and Normal Read Access; *TCSII Dec. 2021 3503-3507*
- Chen, L.**, see Ran, G., *TCSII Jan. 2021 276-280*
- Chen, L.**, see Ge, Z., *TCSII May 2021 1586-1590*
- Chen, L.**, Chen, W., Liu, Y., Chen, X., and Ghannouchi, F.M., Hybrid Harmonic Cancellation Digital Predistortion With a Feedback Loop Compensation ; *TCSII June 2021 2222-2226*
- Chen, L.**, see Huang, G., *TCSII Oct. 2021 3361-3365*
- Chen, L.**, see Zhi, H., *TCSII Dec. 2021 3547-3551*
- Chen, M.**, see Bao, H., *TCSII April 2021 1453-1457*
- Chen, M.**, see Hao, Y., *TCSII May 2021 1610-1614*
- Chen, M.**, see Gao, Z., *TCSII July 2021 2563-2567*
- Chen, P.**, see Lin, I., *TCSII April 2021 1413-1417*
- Chen, S.**, see Jiang, C., *TCSII April 2021 1313-1317*
- Chen, T.**, and Pan, Y., A Novel Diagnostic Method for Multiple Open-Circuit Faults of Voltage-Source Inverters Based on Output Line Voltage Residuals Analysis ; *TCSII April 2021 1343-1347*
- Chen, T.**, see Zhou, J., *TCSII April 2021 1348-1352*
- Chen, W.**, see Houran, M.A., *TCSII Jan. 2021 366-370*
- Chen, W.**, Zhang, G., Liu, S., and Yang, J., Synthesis of Multi-Port Filtering Power Divider for Mixed Topology Using Matrix Optimization; *TCSII Jan. 2021 176-180*
- Chen, W.**, see Dong, Q., *TCSII Jan. 2021 236-240*
- Chen, W.**, see Ma, D., *TCSII Feb. 2021 727-731*
- Chen, W.**, Wu, Y., Wang, W., Xu, K., and Shi, J., Synthesis Design on Wideband Single-Ended and Differential Dual-Band Filtering Impedance Transformer; *TCSII March 2021 913-917*
- Chen, W.**, see Hao, Y., *TCSII May 2021 1610-1614*
- Chen, W.**, see Chen, L., *TCSII June 2021 2222-2226*
- Chen, W.**, see Chen, X., *TCSII June 2021 2077-2081*
- Chen, W.**, see Wang, D., *TCSII July 2021 2342-2346*
- Chen, W.**, see Lin, Y., *TCSII Aug. 2021 2820-2824*
- Chen, W.**, see Zhang, Q., *TCSII Nov. 2021 3411-3415*
- Chen, W.**, see Ma, D., *TCSII Dec. 2021 3567-3571*
- Chen, X.**, see Jiang, X., *TCSII Jan. 2021 376-380*
- Chen, X.**, see Liu, B., *TCSII Jan. 2021 406-410*
- Chen, X.**, Zhang, T., Ye, W., Wang, Z., and Iu, H.H., Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption; *TCSII Jan. 2021 396-400*
- Chen, X.**, and Zhao, L., Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems; *TCSII April 2021 1273-1277*
- Chen, X.**, see Chen, L., *TCSII June 2021 2222-2226*
- Chen, X.**, Chen, W., Ren, Y., Yang, X., and Qiao, L., DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module; *TCSII June 2021 2077-2081*
- Chen, X.**, see Wang, D., *TCSII July 2021 2342-2346*
- Chen, X.**, Li, Y., Ma, H., Tang, H., and Xie, Y., A Novel Variable Exponential Discrete Time Sliding Mode Reaching Law ; *TCSII July 2021 2518-2522*
- Chen, Y.**, and Ruan, S., A Throughput-Optimized Channel-Oriented Processing Element Array for Convolutional Neural Networks; *TCSII Feb. 2021 752-756*
- Chen, Y.**, Improvement of Accuracy of Fixed-Width Booth Multipliers Using Data Scaling Technology; *TCSII March 2021 1018-1022*
- Chen, Y.**, see Gu, P., *TCSII March 2021 963-967*
- Chen, Y.**, see Jiang, C., *TCSII April 2021 1313-1317*
- Chen, Y.**, see Xu, N., *TCSII June 2021 1952-1956*
- Chen, Y.**, and Guo, J., A 42nA I_{O} , 1.5–6V V_{IN} , Self-Regulated CMOS Voltage Reference With –93dB PSR at 10 Hz for Energy Harvesting Systems; *TCSII July 2021 2357-2361*
- Chen, Y.**, see Huang, Y., *TCSII Sept. 2021 3093-3097*
- Chen, Y.**, see Nazhamaiti, M., *TCSII Sept. 2021 3078-3082*
- Chen, Y.**, see Qiao, H., *TCSII Sept. 2021 3118-3122*
- Chen, Y.**, see Mariappan, S., *TCSII Nov. 2021 3381-3385*
- Chen, Z.**, see Hu, D., *TCSII April 2021 1537-1541*
- Chen, Z.**, see Zhu, Y., *TCSII April 2021 1293-1297*
- Chen, Z.**, see Xu, H., *TCSII June 2021 2117-2121*
- Chen, Z.**, see Xu, D., *TCSII Dec. 2021 3607-3611*
- Cheng, B.**, see Cai, Z., *TCSII Sept. 2021 3177-3181*
- Cheng, C.**, see Liu, B., *TCSII Nov. 2021 3406-3410*
- Cheng, D.**, see Zhang, X., *TCSII April 2021 1263-1267*
- Cheng, J.**, see Fu, W., *TCSII July 2021 2352-2356*
- Cheng, K.M.**, see Zhai, C., *TCSII March 2021 868-872*
- Cheng, S.**, see Li, F., *TCSII April 2021 1138-1142*
- Cheng, W.**, see Yang, B., *TCSII Dec. 2021 3572-3576*
- Cheng, Y.**, see Chang, Y., *TCSII Feb. 2021 757-761*
- Cherubini, G.**, see Karunaratne, G., *TCSII May 2021 1725-1729*
- Chevalier, P.**, see Amendola, G., *TCSII Sept. 2021 3098-3102*
- Chi, J.**, see Liu, H., *TCSII June 2021 2082-2086*
- Chiang, H.**, see Zeng, L., *TCSII July 2021 2498-2502*
- Chiluveru, S.R.**, see Gyanendra, ., *TCSII April 2021 1373-1377*
- Chiluveru, S.R.**, Gyanendra, Chunarkar, S., Tripathy, M., and Kaushik, B.K., Efficient Hardware Implementation of DNN-Based Speech Enhancement Algorithm With Precise Sigmoid Activation Function ; *TCSII Nov. 2021 3461-3465*
- Chithra, Narayanan, A.**, Kumar, R.S.A., and Krishnapura, N., Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit; *TCSII June 2021 1788-1792*
- Chiu, H.**, see Tseng, T., *TCSII Jan. 2021 196-200*
- Chiu, H.**, see Pamungkas, L., *TCSII July 2021 2513-2517*
- Cho, H.**, see Bae, S., *TCSII Sept. 2021 3063-3067*
- Cho, J.H.**, see Im, H., *TCSII May 2021 1596-1599*
- Cho, K.**, see Han, J., *TCSII May 2021 1645-1649*
- Cho, K.**, see Jin, W., *TCSII Sept. 2021 3048-3052*
- Choi, H.**, see Choi, K., *TCSII March 2021 858-862*
- Choi, H.**, see Kim, H., *TCSII July 2021 2297-2301*
- Choi, J.**, Youn, S., Hwang, J.Y., Ha, S., Kim, C., and Je, M., Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers; *TCSII Jan. 2021 19-23*
- Choi, J.**, see Choi, Y., *TCSII Oct. 2021 3189-3193*
- Choi, J.**, see Park, J., *TCSII Nov. 2021 3386-3390*
- Choi, K.**, Yeo, H.G., Choi, H., and Jee, D., A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV^2f ; *TCSII March 2021 858-862*
- Choi, K.**, see Kim, S., *TCSII Aug. 2021 2810-2814*
- Choi, W.**, see Kim, M., *TCSII March 2021 908-912*
- Choi, Y.**, see Kim, S., *TCSII Aug. 2021 2947-2951*
- Choi, Y.**, Lee, Y., Park, H., Choi, J., Sim, J., Kwon, Y., and Kim, C., A 0.99-pJ/b 15-Gb/s Counter-Based Adaptive Equalizer Using Single Comparator in 28-nm CMOS; *TCSII Oct. 2021 3189-3193*

- Chong, G.**, Ramiah, H., Yin, J., Rajendran, J., Mak, P., and Martins, R.P., A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting; *TCSII June 2021 1743-1747*
- Chong, K.**, Gao, Y., and Mok, P.K.T., A Customized AC Hybrid LED Driver With Flicker Reduction for High Nominal Range Applications; *TCSII May 2021 1635-1639*
- Chong, K.**, see Ho, W., *TCSII June 2021 2122-2126*
- Chong, Y.S.**, see Pu, J., *TCSII April 2021 1398-1402*
- Choo, H.S.**, see Im, H., *TCSII May 2021 1596-1599*
- Chou, M.**, and Liu, S., A Type-I PLL With Foreground Loop Bandwidth Calibration; *TCSII April 2021 1103-1107*
- Chou, T.**, see Akbari, M., *TCSII Oct. 2021 3209-3213*
- Choubey, B.**, see Levski, D., *TCSII Jan. 2021 102-105*
- Chrzanoska-Jeske, M.**, see Mohapatra, S., *TCSII Jan. 2021 271-275*
- Chu, H.**, see Xu, J., *TCSII June 2021 2142-2146*
- Chu, M.**, see Zhang, M., *TCSII Jan. 2021 481-485*
- Chu, W.**, see Chen, C., *TCSII May 2021 1591-1595*
- Chu, Y.**, see Xiong, X., *TCSII July 2021 2508-2512*
- Chu, Z.**, Li, Z., Xia, Y., Wang, L., and Liu, W., BCD Adder Designs Based on Three-Input XOR and Majority Gates; *TCSII June 2021 1942-1946*
- Chua, L.**, see Irmanova, A., *TCSII April 2021 1133-1137*
- Chunarkar, S.**, see Chiluveru, S.R., *TCSII Nov. 2021 3461-3465*
- Coelho, R.F.**, see Schmitz, L., *TCSII July 2021 2533-2537*
- Colalongo, L.**, see Richelli, A., *TCSII April 2021 1078-1082*
- Colli, S.**, see Lupo, N., *TCSII Sept. 2021 3138-3142*
- Coppola, G.**, see Taufique, Z., *TCSII May 2021 1720-1724*
- Cordero, R.**, Estrabis, T., Batista, E.A., Andrea, C.Q., and Gentil, G., Ramp-Tracking Generalized Predictive Control System-Based on Second-Order Difference; *TCSII April 2021 1283-1287*
- Cordero, R.**, Estrabis, T., Gentil, G., Batista, E.A., and Andrea, C.Q., Development of a Generalized Predictive Control System for Polynomial Reference Tracking; *TCSII Aug. 2021 2875-2879*
- Cordova, D.**, see Asprilla, A., *TCSII Feb. 2021 602-606*
- Corsonello, P.**, see Perri, S., *TCSII Nov. 2021 3456-3460*
- Corti, E.**, see Nunez, J., *TCSII Oct. 2021 3356-3360*
- Coskun, A.**, see Dhananjay, K., *TCSII March 2021 837-843*
- Costa, R.**, see Prospero, L., *TCSII Dec. 2021 3488-3492*
- Cowan, G.**, see Nguyen, V.H., *TCSII May 2021 1625-1629*
- Craninckx, J.**, see Bunsen, K., *TCSII Feb. 2021 592-596*
- Crespo-Yepes, A.**, see Ntinias, V., *TCSII April 2021 1378-1382*
- Crovetti, P.**, see Toledo, P., *TCSII March 2021 816-822*
- Crovetti, P.**, see Aiello, O., *TCSII July 2021 2675-2679*
- Crovetti, P.**, see Toledo, P., *TCSII Sept. 2021 3073-3077*
- Crupi, F.**, see Fassio, L., *TCSII April 2021 1393-1397*
- Crupi, F.**, see Fassio, L., *TCSII Sept. 2021 3038-3042*
- Cui, X.**, Cao, J., Wang, T., and Lai, X., Robust Randomized Autoencoder and Correntropy Criterion-Based One-Class Classification; *TCSII April 2021 1517-1521*
- Cui, X.**, see Kuang, Y., *TCSII July 2021 2655-2659*
- D**
- da Costa, E.A.C.**, see da Rosa, M.M., *TCSII Feb. 2021 597-601*
- da Rosa, M.M.**, Seidel, H.B., Paim, G., da Costa, E.A.C., Almeida, S., and Bampi, S., An Energy-Efficient Haar Wavelet Transform Architecture for Respiratory Signal Processing; *TCSII Feb. 2021 597-601*
- da Silva, L.S.**, see Olivera, F., *TCSII Feb. 2021 587-591*
- Daei, S.**, see Bayat, S., *TCSII June 2021 2212-2216*
- Dai, M.**, Xiao, B., Zhang, C., and Wu, J., Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities; *TCSII Aug. 2021 2855-2859*
- Dai, X.**, Yang, Q., Du, H., Guo, C., and Zhang, A., Direct Synthesis Method for Dual-Band Bandpass Filters With Wide Fractional Bandwidth Range and Center Frequency Ratio; *TCSII Aug. 2021 2755-2759*
- Dai, X.**, see Yu, Z., *TCSII Oct. 2021 3241-3245*
- Dai, X.**, see Yu, Z., *TCSII Nov. 2021 3446-3450*
- Dai, Z.**, see Kuang, Y., *TCSII July 2021 2655-2659*
- Danesh, A.R.**, see Malekzadeh-Arasteh, O., *TCSII Jan. 2021 151-155*
- Dang, L.**, see Li, J., *TCSII Aug. 2021 2997-3001*
- Dansereau, D.G.**, see Edussooriya, C.U.S., *TCSII July 2021 2735-2741*
- Dao, X.**, Gao, M., and Han, Z., A Stop Condition for Compressed Recovery of Random Modulated Signal; *TCSII April 2021 1557-1561*
- Darak, S.J.**, see Santosh, S.V.S., *TCSII March 2021 1008-1012*
- Darak, S.J.**, see Agrawal, N., *TCSII July 2021 2399-2403*
- Daros Fernandes, T.**, Galup-Montoro, C., and Schneider, M.C., Analysis and Design of the Three-Inverter Schmitt Trigger for Supply Voltages Down to 50 mV; *TCSII July 2021 2302-2306*
- Dash, S.**, see Sangam, R.S., *TCSII Jan. 2021 181-185*
- De, A.**, see Bose, S., *TCSII Nov. 2021 3451-3455*
- de Aranda, R.P.**, see Rodriguez-Perez, A., *TCSII Jan. 2021 56-62*
- de Boer, P.**, Alink, M.S.O., and Klumperink, E.A.M., Simplified Harmonic Rejection Mixer Analysis and Design Based on a Filtered Periodic Impulse Model; *TCSII July 2021 2292-2296*
- de Frein, R.**, Power-Weighted LPC Formant Estimation; *TCSII June 2021 2207-2211*
- De Jesus Guzman, M.**, and Maghari, N., Slew Rate in Self-Biased Ring Amplifiers; *TCSII Aug. 2021 2795-2799*
- De La Fuente-Cortes, G.**, Diaz-Mendez, A., Flores-Verdad, G.E., and Gonzalez-Diaz, V.R., On-Chip Fuzzy Logic Synthesis of a New Ischemic and Non-Ischemic Heartbeat Classifier; *TCSII Jan. 2021 476-480*
- de la Rosa, J.M.**, Editorial: A Year Ahead Full of New Initiatives; *TCSII Jan. 2021 4*
- De La Rosa, J.M.**, Outgoing Editorial; *TCSII Dec. 2021 3477*
- de Lamare, R.C.**, see Yu, T., *TCSII July 2021 2720-2724*
- De Matteis, M.**, Galante, N., Fary, F., Vallicelli, E., and Baschiroto, A., 64 dB Dynamic-Range 810 μ W 90 MHz Fully-Differential Flipped-Source-Follower Analog Filter in 28nm-CMOS; *TCSII Sept. 2021 3068-3072*
- De Rose, R.**, see Fassio, L., *TCSII April 2021 1393-1397*
- De Rose, R.**, see Fassio, L., *TCSII Sept. 2021 3038-3042*
- Dean, R.N.**, see Rhea, B.K., *TCSII March 2021 1028-1032*
- Deh, T.**, Ray, D., and George, N.V., A Reduced Complexity Random Fourier Filter Based Nonlinear Multichannel Narrowband Active Noise Control System; *TCSII Jan. 2021 516-520*
- Dekimpe, R.**, and Bol, D., A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS; *TCSII July 2021 2272-2276*
- Del Barrio, A.A.**, see Garcia Moreno, D., *TCSII Nov. 2021 3391-3395*
- Demosthenous, A.**, see Regnacq, L., *TCSII Sept. 2021 3133-3137*
- Deng, Q.**, Peng, Y., Han, T., and Qu, D., Event-Triggered Bipartite Consensus in Networked Euler-Lagrange Systems With External Disturbance; *TCSII Aug. 2021 2870-2874*
- Deng, Q.**, Sun, H., Chen, F., Shu, Y., Wang, H., and Ha, Y., An Optimized FPGA-Based Real-Time NDT for 3D-LiDAR Localization in Smart Vehicles; *TCSII Sept. 2021 3167-3171*
- Deng, Y.**, see Ma, T., *TCSII March 2021 1048-1052*
- Dermit, D.**, see Bunsen, K., *TCSII Feb. 2021 592-596*
- Desai, A.**, see Nakhlestani, A., *TCSII Feb. 2021 692-696*
- Deval, Y.**, see Asprilla, A., *TCSII Feb. 2021 602-606*
- Deveerasetty, K.K.**, see Samuel, E.R., *TCSII June 2021 2022-2026*
- Dhananjay, K.**, Shukla, P., Pavlidis, V.F., Coskun, A., and Salman, E., Monolithic 3D Integrated Circuits: Recent Trends and Future Prospects; *TCSII March 2021 837-843*
- Di Nunzio, L.**, see Giardino, D., *TCSII June 2021 1912-1916*
- Diao, J.**, see Liu, H., *TCSII Feb. 2021 772-776*
- Diaz-Mendez, A.**, see De La Fuente-Cortes, G., *TCSII Jan. 2021 476-480*
- Diba, M.**, see Mojarad, M., *TCSII Dec. 2021 3498-3502*
- Dietz, M.**, see Maiwald, T., *TCSII July 2021 2277-2281*
- Ding, F.**, see Zhou, Y., *TCSII Dec. 2021 3597-3601*
- Ding, G.**, see Li, B., *TCSII July 2021 2660-2664*
- Ding, K.**, and Zhu, Q., A Note on Sampled-Data Synchronization of Memristor Networks Subject to Actuator Failures and Two Different Activations; *TCSII June 2021 2097-2101*
- Ding, S.**, see Hou, Q., *TCSII Feb. 2021 747-751*
- Ding, S.**, see Liu, L., *TCSII April 2021 1278-1282*

Ding, S., see Rong, N., *TCSII Oct. 2021 3296-3300*
Ding, S.X., see Liu, R., *TCSII Jan. 2021 291-295*
Ding, T., see Jia, W., *TCSII Jan. 2021 496-500*
Ding, X., see Shan, Z., *TCSII Feb. 2021 712-716*
Ding, X., see Sun, J., *TCSII June 2021 1783-1787*
Ding, Y., see Hu, D., *TCSII April 2021 1542-1546*
Ding, Y., see Cao, H., *TCSII July 2021 2287-2291*
Ding, Z., see Wang, G., *TCSII March 2021 938-942*
Diniz, P.S.R., see Lima, M.V.S., *TCSII Feb. 2021 797-801*
Djerafi, T., see Noferesti, M., *TCSII Jan. 2021 171-175*
Do, A.H., see Malekzadeh-Arasteh, O., *TCSII Jan. 2021 151-155*
Do, A.T., see Pu, J., *TCSII Jan. 2021 471-475*
Do, A.T., see Pu, J., *TCSII April 2021 1398-1402*
Do, A.T., see Nambiar, V.P., *TCSII Sept. 2021 3148-3152*
Dogancay, K., see Wang, W., *TCSII Aug. 2021 3027-3031*
Dong, Q., Wu, Y., Chen, W., Yang, Y., and Wang, W., Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values; *TCSII Jan. 2021 236-240*
Dong, S., Liu, M., Wu, Z., and Shi, K., Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes; *TCSII June 2021 1967-1971*
Dong, S., Chen, G., Liu, M., and Wu, Z., Cooperative Adaptive H_∞ Output Regulation of Continuous-Time Heterogeneous Multi-Agent Markov Jump Systems; *TCSII Oct. 2021 3261-3265*
Dong, X., see Liu, B., *TCSII Jan. 2021 406-410*
Doshi, I., see Jha, C.K., *TCSII Feb. 2021 767-771*
Dou, C., see Wang, L., *TCSII May 2021 1640-1644*
Dragicevic, T., see Kobaku, T., *TCSII Jan. 2021 286-290*
Dragicevic, T., see Habibi, M.R., *TCSII Feb. 2021 717-721*
Drouin, D., see Liu, T., *TCSII April 2021 1128-1132*
Du, C., see Xu, W., *TCSII April 2021 1168-1172*
Du, H., and Lv, D., On Determining of LTI Systems Having Nondecreasing Step Response; *TCSII June 2021 2087-2091*
Du, H., see Dai, X., *TCSII Aug. 2021 2755-2759*
Du, Y., see Cai, Z., *TCSII Sept. 2021 3177-3181*
Duan, N., see Min, H., *TCSII March 2021 973-977*
Duan, Y., see Xu, J., *TCSII June 2021 1932-1936*
Duan, Z., see Yin, G., *TCSII July 2021 2262-2266*
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E

Ecoffey, S., see Liu, T., *TCSII April 2021 1128-1132*
Edussooriya, C.U.S., Wijenayake, C., Madanayake, A., Liyanage, N., Premaratne, S., Vorhies, J.T., Dansereau, D.G., Agathoklis, P., and Bruton, L.T., Real-Time Light Field Signal Processing Using 4D/5D Linear Digital Filter FPGA Circuits; *TCSII July 2021 2735-2741*
Ellinger, F., see Testa, P.V., *TCSII March 2021 928-932*
Ellinger, F., see An, X., *TCSII April 2021 1083-1087*
Elnaqib, A., Okuhara, H., Jang, T., Rossi, D., and Benini, L., A 0.5GHz 0.35mW LDO-Powered Constant-Slope Phase Interpolator With 0.22% INL; *TCSII Jan. 2021 156-160*
ElShater, A., see Lee, C.Y., *TCSII July 2021 2327-2331*
Eltawil, A., see Rakka, M., *TCSII Feb. 2021 762-766*
Elwakil, A.S., Allagui, A., and Psychalinos, C., On The Equivalent Impedance of Two-Impedance Self-Similar Ladder Networks; *TCSII July 2021 2685-2689*
Eshraghian, J.K., see Lammie, C., *TCSII May 2021 1650-1654*
Estrabis, T., see Cordero, R., *TCSII April 2021 1283-1287*
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Fakharzadeh, M., see Golvaei, M., *TCSII Jan. 2021 241-245*
Fan, D., see Meng, J., *TCSII May 2021 1576-1580*

Fan, H., see Liu, L., *TCSII July 2021 2282-2286*
Fan, M., Song, K., and Fan, Y., Reconfigurable Bandpass Filter With Wide-Range Bandwidth and Frequency Control; *TCSII June 2021 1758-1762*
Fan, M., Song, K., Yang, L., and Gomez-Garcia, R., Frequency-Reconfigurable Input-Reflectionless Bandpass Filter and Filtering Power Divider With Constant Absolute Bandwidth; *TCSII July 2021 2424-2428*
Fan, T., see Li, Z., *TCSII Sept. 2021 3058-3062*
Fan, X., Wang, G., Han, J., and Wang, Y., Interacting Multiple Model Based on Maximum Correntropy Kalman Filter; *TCSII Aug. 2021 3017-3021*
Fan, Y., see Nagam, S.S., *TCSII May 2021 1670-1674*
Fan, Y., see Fan, M., *TCSII June 2021 1758-1762*
Fang, J., see Zhou, K., *TCSII Aug. 2021 2932-2936*
Fang, X., see Zhang, K., *TCSII Nov. 2021 3441-3445*
Faridi, J., see Khan, M.T., *TCSII April 2021 1188-1192*
Fary, F., see De Matteis, M., *TCSII Sept. 2021 3068-3072*
Fassio, L., Settino, F., Lin, L., De Rose, R., Lanuzza, M., Crupi, F., and Alioto, M., A Robust, High-Speed and Energy-Efficient Ultralow-Voltage Level Shifter; *TCSII April 2021 1393-1397*
Fassio, L., Lin, L., De Rose, R., Lanuzza, M., Crupi, F., and Alioto, M., A 0.6-to-1.8V CMOS Current Reference With Near-100% Power Utilization; *TCSII Sept. 2021 3038-3042*
Fattori, M., see Ragonese, E., *TCSII Jan. 2021 42-48*
Fazzolari, R., see Cardarilli, G.C., *TCSII April 2021 1428-1432*
Fazzolari, R., see Giardino, D., *TCSII June 2021 1912-1916*
Fegghi, R., and Joodaki, M., Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT; *TCSII April 2021 1193-1197*
Fei, S., see Min, H., *TCSII March 2021 973-977*
Fei, Z., see Lin, P., *TCSII April 2021 1328-1332*
Feng, J., see Cai, J., *TCSII March 2021 958-962*
Feng, J., see Yu, C., *TCSII Aug. 2021 2790-2794*
Feng, L., Zhu, H., Feng, W., Chen, H., Shi, W., Che, W., and Xue, Q., A New Class of Wideband MS-to-MS Vialless Vertical Transition With Function of Filtering Performance; *TCSII June 2021 1877-1881*
Feng, L., see Shi, W., *TCSII July 2021 2247-2251*
Feng, Q., see Liu, J., *TCSII July 2021 2384-2388*
Feng, T., Ma, K., and Wang, Y., A Dual-Band Coupled Line Power Divider Using SISL Technology; *TCSII Feb. 2021 657-661*
Feng, W., see Yang, X., *TCSII March 2021 953-957*
Feng, W., see Shi, Y., *TCSII March 2021 878-882*
Feng, W., see Xun, M., *TCSII April 2021 1228-1232*
Feng, W., see Shen, G., *TCSII April 2021 1123-1127*
Feng, W., Pan, B., Zhu, H., Zhou, X.Y., Che, W., and Xue, Q., High Performance Balanced Bandpass Filters With Wideband Common Mode Suppression; *TCSII June 2021 1897-1901*
Feng, W., see Feng, L., *TCSII June 2021 1877-1881*
Feng, W., see Shen, G., *TCSII June 2021 1778-1782*
Feng, X., see Sun, C., *TCSII July 2021 2558-2562*
Feng, Y., Shou, Y., and Yu, X., Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach; *TCSII July 2021 2593-2597*
Feng, Z., see Wang, D., *TCSII July 2021 2342-2346*
Fengel, C.V., see Kim, J., *TCSII May 2021 1735-1739*
Fernandez, V., see Alvarez, A., *TCSII April 2021 1213-1217*
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Ferreira, R., see Almeida, D.D., *TCSII Sept. 2021 3158-3162*
Ferri, G., see Stornelli, V., *TCSII Jan. 2021 72-76*
Figarado, S., see Arumalla, R.T., *TCSII Aug. 2021 2890-2894*
Firouz, S., Aghdam, E.N., and Jafarnejad, R., A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes; *TCSII Feb. 2021 607-611*
Flanagan, M.F., see Garcia-Herrero, F., *TCSII April 2021 1438-1442*
Flores-Verdad, G.E., see De La Fuente-Cortes, G., *TCSII Jan. 2021 476-480*
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- Frustaci, F.**, see Perri, S., *TCSII Nov. 2021 3456-3460*
- Fu, H.**, see Li, X., *TCSII July 2021 2419-2423*
- Fu, H.**, see Li, B., *TCSII July 2021 2660-2664*
- Fu, M.J.**, see Burns, R.P., *TCSII April 2021 1118-1122*
- Fu, W.**, Li, Z., Liu, P., Cheng, J., and Qiu, X., Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters; *TCSII July 2021 2352-2356*
- Funayama, K.**, Tanaka, H., Hirotsu, J., Shimaoka, K., Ohno, Y., and Tadokoro, Y., Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics; *TCSII Oct. 2021 3251-3255*
- G**
- Galanis, I.**, Anagnostopoulos, I., Nguyen, C., and Bares, G., Efficient Deployment of Spiking Neural Networks on SpiNNaker Neuromorphic Platform; *TCSII June 2021 1937-1941*
- Galante, N.**, see De Matteis, M., *TCSII Sept. 2021 3068-3072*
- Galaviz-Aguilar, J.A.**, Vargas-Rosales, C., and Tlelo-Cuautle, E., Automated Driving of GaN Chireix Power Amplifier for the Digital Predistortion Linearization; *TCSII June 2021 1887-1891*
- Galayko, D.**, see Koskin, E., *TCSII Jan. 2021 77-81*
- Galias, Z.**, Periodic Orbits of the Logistic Map in Single and Double Precision Implementations; *TCSII Nov. 2021 3471-3475*
- Galup-Montoro, C.**, see Daros Fernandes, T., *TCSII July 2021 2302-2306*
- Gao, C.**, see Meng, X., *TCSII July 2021 2503-2507*
- Gao, F.**, Zhu, C., Huang, J., and Wu, Y., Global Fixed-Time Output Feedback Stabilization of Perturbed Planar Nonlinear Systems; *TCSII Feb. 2021 707-711*
- Gao, F.**, Chen, H., Huang, J., and Wu, Y., A General Fixed-Time Observer for Lower-Triangular Nonlinear Systems; *TCSII June 2021 1992-1996*
- Gao, J.**, Gu, T., Nie, K., Gao, Z., and Xu, J., A Low-Ripple Charge Pump With Novel Compensator for Transient-Response Improvement in CMOS Image Sensors; *TCSII April 2021 1113-1117*
- Gao, J.**, see Wang, L., *TCSII May 2021 1640-1644*
- Gao, L.**, see Xu, K., *TCSII July 2021 2578-2582*
- Gao, M.**, see Dao, X., *TCSII April 2021 1557-1561*
- Gao, S.**, see Cai, Q., *TCSII Feb. 2021 777-781*
- Gao, S.**, see Tan, W., *TCSII Aug. 2021 2927-2931*
- Gao, X.**, Pu, C., and Li, L., Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks; *TCSII April 2021 1477-1481*
- Gao, Y.**, see Liu, H., *TCSII Jan. 2021 211-215*
- Gao, Y.**, see Chong, K., *TCSII May 2021 1635-1639*
- Gao, Y.**, see Shi, W., *TCSII July 2021 2247-2251*
- Gao, Z.**, Gong, Z., Cai, Q., Ma, C., and Grebogi, C., Complex Network Analysis of Experimental EEG Signals for Decoding Brain Cognitive State; *TCSII Jan. 2021 531-535*
- Gao, Z.**, Qu, Z., Wang, H., and Ma, C., Characterization of Two-Phase Flow Structure by Deep Learning-Based Super Resolution; *TCSII Feb. 2021 782-786*
- Gao, Z.**, see Cai, Q., *TCSII Feb. 2021 777-781*
- Gao, Z.**, see Gao, J., *TCSII April 2021 1113-1117*
- Gao, Z.**, Chen, M., Liu, K., Zhao, J., Li, Y., and Wang, G., An Asynchronous AC-DC Boost Converter With Event-Driven Voltage Regulator and 94% Efficiency for Low-Frequency Electromagnetic Energy Harvesting; *TCSII July 2021 2563-2567*
- Gao, Z.**, see Mu, Y., *TCSII Oct. 2021 3326-3330*
- Garcia Moreno, D.**, Del Barrio, A.A., Botella, G., and Hasler, J., A Cluster of FPAAAs to Recognize Images Using Neural Networks; *TCSII Nov. 2021 3391-3395*
- Garcia-Herrero, F.**, McGuire, G., Flanagan, M.F., Sanchez-Macian, A., and Maestro, J.A., Decoding Algorithm for Quadruple-Error-Correcting Reed-Solomon Codes and Its Derived Architectures; *TCSII April 2021 1438-1442*
- Garrido, M.**, and Paz, P., Optimum MDC FFT Hardware Architectures in Terms of Delays and Multiplexers; *TCSII March 2021 1003-1007*
- Gasmi, N.**, see Thabet, A., *TCSII March 2021 948-952*
- Gasulla, M.**, see Reverter, F., *TCSII Jan. 2021 63-66*
- Ge, Q.**, see Lu, C., *TCSII Feb. 2021 802-806*
- Ge, Z.**, Chen, L., Gomez-Garcia, R., and Zhu, X., Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband; *TCSII May 2021 1586-1590*
- Geng, J.**, see Liu, L., *TCSII July 2021 2282-2286*
- Geng, S.**, see Zhang, M., *TCSII Jan. 2021 481-485*
- Geng, X.**, Xie, Q., and Wang, Z., A Quadrature Sub-Sampling Phase Detector for Fast-Relocked Sub-Sampling PLL Under External Interference; *TCSII Jan. 2021 87-91*
- Geng, Z.**, Han, M., and Zhou, G., Switching Signals Based Condition Monitoring for Submodule Capacitors in Modular Multilevel Converters; *TCSII June 2021 2017-2021*
- Genov, R.**, see Liu, T., *TCSII April 2021 1128-1132*
- Gentil, G.**, see Cordero, R., *TCSII April 2021 1283-1287*
- Gentil, G.**, see Cordero, R., *TCSII Aug. 2021 2875-2879*
- George, N.V.**, see Deb, T., *TCSII Jan. 2021 516-520*
- George, N.V.**, see Kumar, K., *TCSII Jan. 2021 526-530*
- George, N.V.**, see Yadav, S.K., *TCSII April 2021 1522-1526*
- George, N.V.**, see Kumar, K., *TCSII June 2021 2202-2206*
- George, N.V.**, see Bhattacharjee, S.S., *TCSII Aug. 2021 3002-3006*
- Ghaderi, E.**, see Bansal, S., *TCSII Jan. 2021 106-110*
- Ghaedrahmati, H.**, Zhou, J., and Staszewski, R.B., A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer; *TCSII Sept. 2021 3113-3117*
- Ghafoorifard, H.**, see Sheikhamadi, S., *TCSII Jan. 2021 92-96*
- Ghannouchi, F.M.**, see Chen, L., *TCSII June 2021 2222-2226*
- Ghannouchi, F.M.**, see Wang, D., *TCSII July 2021 2342-2346*
- Ghatak, R.**, see Bandyopadhyay, A., *TCSII June 2021 1892-1896*
- Ghosh, S.**, see Sharma, R.K., *TCSII April 2021 1238-1242*
- Ghosh, S.**, Sahoo, B.D., and Nittala, S., Performance Limits of Generalized Sampling Based 2-Channel Analog-to-Digital Converter; *TCSII July 2021 2257-2261*
- Ghosh, S.**, Majumder, M., and Kudeshia, A., LeukoX: Leukocyte Classification Using Least Entropy Combiner (LEC) for Ensemble Learning; *TCSII Aug. 2021 2977-2981*
- Giardino, D.**, Cardarilli, G.C., Di Nunzio, L., Fazzolari, R., Nannarelli, A., Re, M., and Spano, S., M-PSK Demodulator With Joint Carrier and Timing Recovery; *TCSII June 2021 1912-1916*
- Giri, S.K.**, see Rana, N., *TCSII July 2021 2588-2592*
- Gogineni, V.C.**, Talebi, S.P., and Werner, S., Performance of Clustered Multitask Diffusion LMS Suffering From Inter-Node Communication Delays; *TCSII July 2021 2695-2699*
- Goh, W.L.**, see Pu, J., *TCSII Jan. 2021 471-475*
- Goh, W.L.**, see Pu, J., *TCSII April 2021 1398-1402*
- Goh, W.L.**, see Nambiar, V.P., *TCSII Sept. 2021 3148-3152*
- Gohil, V.**, Walia, S., Mekie, J., and Awasthi, M., Fixed-Point: A Floating-Point Representation for Error-Resilient Applications; *TCSII Oct. 2021 3341-3345*
- Golvaei, M.**, and Fakhrazadeh, M., A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing; *TCSII Jan. 2021 241-245*
- Gomez-Diaz, J.S.**, see Wu, X., *TCSII Feb. 2021 667-671*
- Gomez-Garcia, R.**, see Ge, Z., *TCSII May 2021 1586-1590*
- Gomez-Garcia, R.**, Yang, L., and Psychogiou, D., A Frequency Transformation for Co-Designed Multi-Passband/Multi-Embedded-Notch RF Filters; *TCSII July 2021 2429-2433*
- Gomez-Garcia, R.**, see Fan, M., *TCSII July 2021 2424-2428*
- Gomez-Garcia, R.**, see Zhu, X., *TCSII Sept. 2021 3128-3132*
- Goncalves, G.**, and Cabrera, F.L., Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips; *TCSII Nov. 2021 3396-3400*
- Gong, H.**, see Li, Y., *TCSII Oct. 2021 3224-3228*
- Gong, J.**, Ning, D., Wu, X., and He, G., Bounded Leader-Following Consensus of Heterogeneous Directed Delayed Multi-Agent Systems via Asynchronous Impulsive Control; *TCSII July 2021 2680-2684*
- Gong, M.**, Cao, N., Chang, M., and Raychowdhury, A., A 65nm Thermometer-Encoded Time/Charge-Based Compute-in-Memory Neural Network Accelerator at 0.735pJ/MAC and 0.41pJ/Update; *TCSII April 2021 1408-1412*
- Gong, Z.**, see Gao, Z., *TCSII Jan. 2021 531-535*

- Gong, Z.**, see Zhou, G., *TCSII Jan. 2021 296-300*
- Gonzalez-Diaz, V.R.**, see De La Fuente-Cortes, G., *TCSII Jan. 2021 476-480*
- Gorbachev, S.**, see Zhu, W., *TCSII Oct. 2021 3311-3315*
- Graham, D.W.**, see Andryczcik, S., *TCSII July 2021 2337-2341*
- Grasso, A.D.**, see Ballo, A., *TCSII Aug. 2021 2895-2901*
- Grebogi, C.**, see Gao, Z., *TCSII Jan. 2021 531-535*
- Grebogi, C.**, see Cai, Q., *TCSII Feb. 2021 777-781*
- Greenberg, S.**, see Bensimon, M., *TCSII Aug. 2021 2937-2941*
- Gu, C.**, see Xu, D., *TCSII Dec. 2021 3607-3611*
- Gu, P.**, Chen, Y., and Tian, S., Learnability of Linear Fractional-Order ILC Systems; *TCSII March 2021 963-967*
- Gu, T.**, see Gao, J., *TCSII April 2021 1113-1117*
- Gu, Y.**, see Yang, C., *TCSII April 2021 1492-1496*
- Gu, Z.**, see Yan, S., *TCSII July 2021 2463-2467*
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- Gudem, P.S.**, see Rizwan, S., *TCSII March 2021 903-907*
- Guerrero, J.M.**, see Akhavan, A., *TCSII April 2021 1333-1337*
- Guo, C.**, see Dai, X., *TCSII Aug. 2021 2755-2759*
- Guo, H.**, Pang, Z., Sun, J., and Li, J., An Output-Coding-Based Detection Scheme Against Replay Attacks in Cyber-Physical Systems; *TCSII Oct. 2021 3306-3310*
- Guo, J.**, Chen, H., Lei, Y., Li, X., Wang, Q., Xie, C., Miao, J., Lv, Y., Liu, W., and Song, Z., An Ultra-Low Quiescent Current Resistor-Less Power on Reset Circuit; *TCSII Jan. 2021 146-150*
- Guo, J.**, see Zou, W., *TCSII Feb. 2021 702-706*
- Guo, J.**, see Chen, Y., *TCSII July 2021 2357-2361*
- Guo, M.**, see Wu, J., *TCSII Aug. 2021 2907-2911*
- Guo, S.**, see Bi, X., *TCSII Jan. 2021 141-145*
- Guo, X.**, and Li, H., Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display; *TCSII July 2021 2307-2311*
- Guo, Y.**, see Zhu, H., *TCSII Jan. 2021 191-195*
- Guo, Y.**, see Xu, J., *TCSII June 2021 1932-1936*
- Guo, Y.**, see Zheng, H., *TCSII Sept. 2021 3172-3176*
- Guo, Y.**, see Zhi, H., *TCSII Dec. 2021 3547-3551*
- Guo, Y.**, see Le, S., *TCSII Dec. 2021 3557-3561*
- Guo, Y.J.**, see Zhu, H., *TCSII July 2021 2332-2336*
- Guo, Z.**, see Liu, Y., *TCSII June 2021 2177-2181*
- Gupta, M.**, see Mishra, S.K., *TCSII Oct. 2021 3229-3233*
- Gupta, S.**, see Bansal, S., *TCSII Jan. 2021 106-110*
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- Gurbuz, Y.**, see Caliskan, C., *TCSII Jan. 2021 186-190*
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- Gutierrez-Frias, E.F.**, see Padilla-Cantoya, I., *TCSII Aug. 2021 2775-2779*
- Gwee, B.**, see Ho, W., *TCSII June 2021 2122-2126*
- Gyanendra, Chiluveru, S.R.**, Raman, B., Tripathy, M., and Kaushik, B.K., Memory Efficient Architecture for Lifting-Based Discrete Wavelet Packet Transform; *TCSII April 2021 1373-1377*
- Gyanendra, see Chiluveru, S.R.**, *TCSII Nov. 2021 3461-3465*
- ## H
- Ha, S.**, see Choi, J., *TCSII Jan. 2021 19-23*
- Ha, S.**, see Akram, M.A., *TCSII May 2021 1620-1624*
- Ha, Y.**, see Zhang, H., *TCSII May 2021 1695-1699*
- Ha, Y.**, and Bonizzoni, E., Guest Editorial Special Issue on the 2021 IEEE International Symposium on Circuits and Systems; *TCSII May 2021 1565*
- Ha, Y.**, and Bonizzoni, E., Guest Editorial Special Issue on the 2021 ISICAS: A CAS Journal Track Symposium; *TCSII Sept. 2021 3037*
- Ha, Y.**, see Deng, Q., *TCSII Sept. 2021 3167-3171*
- Ha, Y.**, see Chen, J., *TCSII Dec. 2021 3503-3507*
- Haberle, M.**, see Rajabzadeh, M., *TCSII Jan. 2021 111-115*
- Habibi, M.R.**, Baghaee, H.R., Dragicevic, T., and Blaabjerg, F., False Data Injection Cyber-Attacks Mitigation in Parallel DC/DC Converters Based on Artificial Neural Networks; *TCSII Feb. 2021 717-721*
- Habibi, M.R.**, see Adineh, B., *TCSII July 2021 2583-2587*
- Habibi, Z.**, and Zayyani, H., Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification; *TCSII Aug. 2021 3032-3036*
- Haddad, D.B.**, see Silva, T.T.P., *TCSII Aug. 2021 3022-3026*
- Hagelauer, A.**, see Maiwald, T., *TCSII July 2021 2277-2281*
- Haiut, M.**, see Bensimon, M., *TCSII Aug. 2021 2937-2941*
- Hamed, H.F.A.**, see Abd-Elkader, A.A.H., *TCSII June 2021 2137-2141*
- Han, C.**, see Lee, S., *TCSII June 2021 1862-1866*
- Han, D.**, see Kim, S., *TCSII May 2021 1675-1679*
- Han, H.**, see Tan, X., *TCSII Feb. 2021 662-666*
- Han, J.**, see Zhu, Y., *TCSII April 2021 1293-1297*
- Han, J.**, Cho, K., Kim, H., Boo, J., Kim, J.S., and Ahn, G., A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback; *TCSII May 2021 1645-1649*
- Han, J.**, see Fan, X., *TCSII Aug. 2021 3017-3021*
- Han, J.**, see Zhou, K., *TCSII Aug. 2021 2932-2936*
- Han, J.**, see Lin, Z., *TCSII Oct. 2021 3351-3355*
- Han, M.**, see Geng, Z., *TCSII June 2021 2017-2021*
- Han, Q.**, see Pang, Z., *TCSII Jan. 2021 426-430*
- Han, Q.**, see Pang, Z., *TCSII April 2021 1253-1257*
- Han, S.**, Jiang, H., Ma, J., Wu, X., and Ren, T., Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators; *TCSII Aug. 2021 2902-2906*
- Han, T.**, and Zheng, W.X., Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach; *TCSII Jan. 2021 281-285*
- Han, T.**, see Hao, L., *TCSII June 2021 2067-2071*
- Han, T.**, Song, Y., and Hill, D.J., Ensuring Network Connectedness in Optimal Transmission Switching Problems; *TCSII July 2021 2603-2607*
- Han, T.**, see Deng, Q., *TCSII Aug. 2021 2870-2874*
- Han, Y.**, see Yao, L., *TCSII Aug. 2021 2987-2991*
- Han, Y.**, see Lian, J., *TCSII Oct. 2021 3271-3275*
- Han, Z.**, see Dao, X., *TCSII April 2021 1557-1561*
- Han, Z.**, see Wang, C., *TCSII Nov. 2021 3426-3430*
- Hanson, E.**, see Kim, B., *TCSII May 2021 1600-1604*
- Hao, J.**, see Li, Z., *TCSII June 2021 2102-2106*
- Hao, L.**, Zhan, X., Wu, J., Han, T., and Yan, H., Bipartite Finite Time and Fixed Time Output Consensus of Heterogeneous Multiagent Systems Under State Feedback Control; *TCSII June 2021 2067-2071*
- Hao, Y.**, Chen, M., Chen, W., Zhao, Y., and Li, Y., An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range; *TCSII May 2021 1610-1614*
- Hao, Y.**, see Zhao, Y., *TCSII Nov. 2021 3431-3435*
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- Harrison, R.C.**, see Rhea, B.K., *TCSII March 2021 1028-1032*
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- Hashim, Y.**, see Akbari, M., *TCSII June 2021 1817-1821*
- Hasler, J.**, see Garcia Moreno, D., *TCSII Nov. 2021 3391-3395*
- Hazarika, P.**, see Bhowmik, B., *TCSII Dec. 2021 3483-3487*
- He, D.**, and Xu, L., Exponential Stability of Impulsive Fractional Switched Systems With Time Delays; *TCSII June 2021 1972-1976*
- He, F.**, Xie, Q., and Wang, Z., Optimize the Efficiency of Lossy Matching Network: A Top-Down Splitting Algorithm Based on Generalized Quality-Based Equation; *TCSII Aug. 2021 2750-2754*
- He, G.**, see Gong, J., *TCSII July 2021 2680-2684*
- He, J.**, see Shi, C., *TCSII May 2021 1581-1585*
- He, K.**, see Yu, Z., *TCSII May 2021 1665-1669*
- He, R.**, and Tousi, Y., Analysis of Stable Modes of a Scalable Coupled Oscillator Array; *TCSII Feb. 2021 647-651*
- He, S.**, see Shi, W., *TCSII July 2021 2247-2251*
- He, W.**, Zhang, J., Lin, Y., Zhou, X., Li, P., Liu, L., Wu, N., and Shi, C., A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features; *TCSII March 2021 1013-1017*
- He, W.**, see Zhang, W., *TCSII April 2021 1323-1327*
- He, Y.**, see Pei, H., *TCSII Jan. 2021 461-465*
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- Heo, H.**, see Kim, H., *TCSII July 2021 2297-2301*
- Herbert, T.B.**, Hyland, J.S., Abdullah, S., Wight, J., and Amaya, R.E., An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride; *TCSII July 2021 2252-2256*
- Herceg, M.**, see Sneler, L., *TCSII June 2021 1902-1906*
- Hernandez, L.**, see Perez, C., *TCSII Oct. 2021 3194-3198*
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- Heydari, P.**, see Malekzadeh-Arasteh, O., *TCSII Jan. 2021 151-155*
- Hiari, O.**, Mesleh, R., and Alkhatib, A., A Physical Transmitter Implementation of a Quadrature Space Shift Keying MIMO System; *TCSII Jan. 2021 251-255*
- Hill, D.J.**, see Han, T., *TCSII July 2021 2603-2607*
- Hirotani, J.**, see Funayama, K., *TCSII Oct. 2021 3251-3255*
- Ho, W.**, Chong, K., Kim, T.T., and Gwee, B., A Power-Aware Toggling-Frequency Actuator in Data-Toggling SRAM for Secure Data Protection; *TCSII June 2021 2122-2126*
- Hoang, T.**, see Sarmiento, M., *TCSII Sept. 2021 3182-3186*
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- Holland, K.**, see Rizwan, S., *TCSII March 2021 903-907*
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- Hou, D.**, see Li, H., *TCSII Aug. 2021 2770-2774*
- Hou, K.**, see Ma, D., *TCSII Feb. 2021 727-731*
- Hou, Q.**, and Ding, S., GPIO Based Super-Twisting Sliding Mode Control for PMSM; *TCSII Feb. 2021 747-751*
- Houran, M.A.**, Yang, X., and Chen, W., Two-Degree-of-Freedom WPT System Using Cylindrical-Joint Structure for Applications With Movable Parts; *TCSII Jan. 2021 366-370*
- Hsu, H.**, see Tsao, Y., *TCSII June 2021 1927-1931*
- Hu, C.**, see Ma, D., *TCSII Dec. 2021 3567-3571*
- Hu, D.**, Cao, J., Lai, X., Wang, Y., Wang, S., and Ding, Y., Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features; *TCSII April 2021 1542-1546*
- Hu, D.**, Chen, Z., and Yin, F., Information Weighted Consensus With Interacting Multiple Model Over Distributed Networks; *TCSII April 2021 1537-1541*
- Hu, J.**, see Sanabria-Borbon, A., *TCSII Jan. 2021 36-41*
- Hu, J.**, Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions; *TCSII July 2021 2568-2572*
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- Hu, W.**, see Yu, Y., *TCSII April 2021 1318-1322*
- Hu, X.**, see Lin, I., *TCSII April 2021 1413-1417*
- Hu, X.**, see Yang, B., *TCSII Dec. 2021 3572-3576*
- Hu, Y.**, Siriburanon, T., and Staszewski, R.B., Oscillator Flicker Phase Noise: A Tutorial; *TCSII Feb. 2021 538-544*
- Hu, Y.**, see Bao, H., *TCSII April 2021 1453-1457*
- Hua, Z.**, see Bao, B., *TCSII Aug. 2021 2992-2996*
- Huan, Y.**, see Xu, J., *TCSII June 2021 2142-2146*
- Huang, B.**, see Xu, J., *TCSII June 2021 2142-2146*
- Huang, C.**, see Yao, Y., *TCSII June 2021 1837-1841*
- Huang, C.**, Liu, F., Wang, Q., and Huo, Z., Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory; *TCSII July 2021 2478-2482*
- Huang, G.**, Ni, A., Lu, W., Peng, H., and Wang, J., Parameters Measurement of Multiple Exponentially Damped Sinusoids With Sub-Nyquist Sampling; *TCSII July 2021 2710-2714*
- Huang, G.**, Chen, L., Lu, W., Peng, H., and Wang, J., FRI Sampling of Parametric Signals With Non-Ideal Sinc Kernel; *TCSII Oct. 2021 3361-3365*
- Huang, J.**, see Gao, F., *TCSII Feb. 2021 707-711*
- Huang, J.**, see Gao, F., *TCSII June 2021 1992-1996*
- Huang, M.**, Lu, Y., and Martins, R.P., Review of Analog-Assisted-Digital and Digital-Assisted-Analog Low Dropout Regulators; *TCSII Jan. 2021 24-29*
- Huang, M.**, see Xu, J., *TCSII July 2021 2267-2271*
- Huang, M.**, see Wang, Y., *TCSII Sept. 2021 3103-3107*
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- Huang, R.**, see Kuang, Y., *TCSII July 2021 2655-2659*
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- Huang, S.**, see Chen, J., *TCSII Feb. 2021 612-616*
- Huang, S.**, see Li, Y., *TCSII Oct. 2021 3224-3228*
- Huang, T.**, see Jiang, X., *TCSII Jan. 2021 376-380*
- Huang, T.**, see Li, B., *TCSII April 2021 1303-1307*
- Huang, W.**, Liu, L., and Zhu, Z., A Sub-200nW All-in-One Bandgap Voltage and Current Reference Without Amplifiers; *TCSII Jan. 2021 121-125*
- Huang, W.**, and Chen, C., A Novel Quaternion Kernel LMS Algorithm With Variable Kernel Width; *TCSII July 2021 2715-2719*
- Huang, X.**, see Yang, B., *TCSII Dec. 2021 3572-3576*
- Huang, Y.**, see Bhamra, H., *TCSII Jan. 2021 206-210*
- Huang, Y.**, see Tan, X., *TCSII Feb. 2021 662-666*
- Huang, Y.**, see Zhou, K., *TCSII Aug. 2021 2932-2936*
- Huang, Y.**, Chen, Y., Jiao, H., Mak, P., and Martins, R.P., A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6 -dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques; *TCSII Sept. 2021 3093-3097*
- Huang, Y.**, see Li, Z., *TCSII Sept. 2021 3153-3157*
- Huang, Z.**, see Zhu, H., *TCSII Jan. 2021 191-195*
- Huang, Z.**, Tang, Z., Yu, X., Shi, Z., Lin, L., and Tan, N.N., A BJT-Based CMOS Temperature Sensor With Duty-Cycle-Modulated Output and $\pm 0.5^\circ\text{C}$ (3σ) Inaccuracy From -40°C to 125°C ; *TCSII Aug. 2021 2780-2784*
- Huang, Z.**, see Li, Y., *TCSII Oct. 2021 3224-3228*
- Huemer, M.**, see Paireder, T., *TCSII March 2021 923-927*
- Huemer, M.**, see Motz, C., *TCSII March 2021 823-829*
- Huo, Z.**, see Huang, C., *TCSII July 2021 2478-2482*
- Huq, S.M.I.**, Baroi, O.L., Shihab, S.A., and Biswas, S.N., Comparative Study and Design of Current Starved Ring Oscillators in 16 nm Technology; *TCSII April 2021 1098-1102*
- Hussein, S.M.**, see Akbari, M., *TCSII June 2021 1817-1821*
- Hussein, S.M.**, see Akbari, M., *TCSII Oct. 2021 3209-3213*
- Hwang, I.**, see Akram, M.A., *TCSII May 2021 1620-1624*
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- Hyland, J.S.**, see Herbert, T.B., *TCSII July 2021 2252-2256*
- Hyun, Y.**, and Park, I., Constant-Time Synchronous Binary Counter With Minimal Clock Period; *TCSII July 2021 2645-2649*

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- Igreja, F.**, see Silva, T.T.P., *TCSII Aug. 2021 3022-3026*
- Im, D.**, see Ryu, J., *TCSII May 2021 1700-1704*
- Im, H.**, Park, K., Cho, J.H., Choo, H.S., and Kim, S.Y., Design of a Pseudo-Wide Dynamic Range CMOS Image Sensor by Using the Bidirectional Gamma Curvature Technique; *TCSII May 2021 1596-1599*
- Imana, J.L.**, Low-Delay FPGA-Based Implementation of Finite Field Multipliers; *TCSII Aug. 2021 2952-2956*
- Imran, M.**, see Batool, S., *TCSII Oct. 2021 3281-3285*
- Imran, M.**, see Batool, S., *TCSII Oct. 2021 3281-3285*
- Iqbal, A.**, Tiang, J.J., Wong, S.K., Wong, S.W., and Mallat, N.K., QMSIW-Based Single and Triple Band Bandpass Filters; *TCSII July 2021 2443-2447*
- Iqbal, N.**, see Lawal, A., *TCSII Aug. 2021 3007-3011*
- Irazoqui, P.**, see Bhamra, H., *TCSII Jan. 2021 206-210*
- Irmanova, A.**, Maan, A., James, A., and Chua, L., Analog Self-Timed Programming Circuits for Aging Memristors; *TCSII April 2021 1133-1137*
- Ishibashi, K.**, see Sarmiento, M., *TCSII Sept. 2021 3182-3186*
- Islam, A.**, see Pal, S., *TCSII June 2021 2147-2151*
- Islam, A.**, see Pal, S., *TCSII Oct. 2021 3336-3340*
- Islam, R.**, Saha, B., and Bezzam, I., Resonant Energy Recycling SRAM Architecture; *TCSII April 2021 1383-1387*
- Ismail, A.**, see Sandell, M., *TCSII Feb. 2021 792-796*

Ismail, A., and Sandell, M., Balanced Multi-Cell Modulation for Flash Memory; *TCSII July 2021 2394-2398*
Iu, H.H., see Chen, X., *TCSII Jan. 2021 396-400*
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Jafri, A.R., see Najam-Ul-Islam, M., *TCSII March 2021 918-922*
Jahan, N., Barakat, A., and Pokharel, R.K., Design of Low Phase Noise VCO Considering C/L Ratio of LC Resonator in 0.18- μm CMOS Technology; *TCSII Dec. 2021 3513-3517*
Jain, S., Mitra, R., and Bhatia, V., Kernel Recursive Maximum Versoria Criterion Algorithm Using Random Fourier Features; *TCSII July 2021 2725-2729*
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Jatskevich, J., see Shan, Z., *TCSII Feb. 2021 712-716*
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Jeong, D., see Lee, K., *TCSII Feb. 2021 622-626*
Jeong, G., see Park, J., *TCSII June 2021 1798-1802*
Jeong, J., Shim, J., Hong, S., and Kwon, O., A High-Speed and Energy-Efficient Multi-Bit Cyclic ADC Using Single-Slope Quantizer for CMOS Image Sensors; *TCSII July 2021 2322-2326*
Jeyasenthil, R., see Kobaku, T., *TCSII Jan. 2021 286-290*
Jeyasenthil, R., and Kobaku, T., Quantitative Synthesis to Tracking Error Problem Based on Nominal Sensitivity Formulation; *TCSII July 2021 2483-2487*
Jha, C.K., Doshi, I., and Mekie, J., Analysis of Worst-Case Data Dependent Temporal Approximation in Floating Point Units; *TCSII Feb. 2021 767-771*
Ji, S., see Xu, J., *TCSII June 2021 1932-1936*
Ji, Y., see Wang, G., *TCSII March 2021 938-942*
Jia, Q., see Ayepah, K., *TCSII June 2021 2172-2176*
Jia, W., Ding, T., Qu, M., Bai, L., and Li, F., Conic Programming for Circuit Equations With Rational Current Controlled Resistors; *TCSII Jan. 2021 496-500*
Jiang, B., see Meng, X., *TCSII July 2021 2503-2507*
Jiang, C., Chen, S., Chen, Y., Liu, D., and Bo, Y., GNSS Vector Tracking Method Using Graph Optimization; *TCSII April 2021 1313-1317*
Jiang, D., see Regnacq, L., *TCSII Sept. 2021 3133-3137*
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Jiang, H., see Han, S., *TCSII Aug. 2021 2902-2906*
Jiang, J., Liu, X., Ki, W., Mok, P.K.T., and Lu, Y., Circuit Techniques for High Efficiency Fully-Integrated Switched-Capacitor Converters; *TCSII Feb. 2021 556-561*
Jiang, J., see Tay, D.B., *TCSII March 2021 1053-1057*
Jiang, J., see Zhou, K., *TCSII Aug. 2021 2932-2936*
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Jiang, X., Chen, X., Huang, T., and Yan, H., Bifurcation and Control for a Predator-Prey System With Two Delays; *TCSII Jan. 2021 376-380*
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Jo, Y., Kim, J.E., Baek, K., and Kim, T.T., A 0.007 mm² 0.6 V 6 MS/s Low-Power Double Rail-to-Rail SAR ADC in 65-nm CMOS; *TCSII Sept. 2021 3088-3092*
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Jordan, M.G., Korol, G., Rutzig, M.B., and Beck, A.C.S., Resource-Aware Collaborative Allocation for CPU-FPGA Cloud Environments; *TCSII May 2021 1655-1659*
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- Karimi, H.R.**, see Meng, X., *TCSII July 2021 2503-2507*
- Karimian, G.**, see Khakpour, A., *TCSII April 2021 1512-1516*
- Karunaratne, G.**, Le Gallo, M., Hersche, M., Cherubini, G., Benini, L., Sebastian, A., and Rahimi, A., Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing ; *TCSII May 2021 1725-1729*
- Kashani, M.H.**, Asghari, M., Yavari, M., and Mirabbasi, S., A +7.6 dBm IIP3 2.4-GHz Double-Balanced Mixer With 10.5 dB NF in 65-nm CMOS; *TCSII Oct. 2021 3214-3218*
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- Kersting, B.**, see Khaddam-Aljameh, R., *TCSII Dec. 2021 3522-3526*
- Khaddam-Aljameh, R.**, Martemucci, M., Kersting, B., Le Gallo, M., Bruce, R.L., BrightSky, M., and Sebastian, A., A Multi-Memristive Unit-Cell Array With Diagonal Interconnects for In-Memory Computing; *TCSII Dec. 2021 3522-3526*
- Khakpour, A.**, and Karimian, G., A New Fast Convergent Blind Timing Skew Error Correction Structure for TIADC; *TCSII April 2021 1512-1516*
- Khan, A.**, Bai, X., Zhang, B., and Yan, P., Interval State Estimator Design for Linear Parameter Varying (LPV) Systems; *TCSII Aug. 2021 2865-2869*
- Khan, A.T.**, Li, S., and Zhou, X., Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search; *TCSII Oct. 2021 3276-3280*
- Khan, M.T.**, and Shaik, R.A., High-Throughput and Improved-Convergent Design of Pipelined Adaptive DFE for 5G Communication; *TCSII Feb. 2021 652-656*
- Khan, M.T.**, Kumar, J., Ahamed, S.R., and Faridi, J., Partial-LUT Designs for Low-Complexity Realization of DA-Based BLMS Adaptive Filter; *TCSII April 2021 1188-1192*
- Khooban, M.**, see Salehi, Z., *TCSII July 2021 2488-2492*
- Ki, W.**, see Jiang, J., *TCSII Feb. 2021 556-561*
- Ki, W.**, see Pal, S., *TCSII June 2021 2147-2151*
- Ki, W.**, see Pal, S., *TCSII Oct. 2021 3336-3340*
- Kientle, D.**, see Rizwan, S., *TCSII March 2021 903-907*
- Kim, B.**, Hanson, E., and Li, H., An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks; *TCSII May 2021 1600-1604*
- Kim, B.**, see Lee, S., *TCSII June 2021 1862-1866*
- Kim, C.**, see Choi, J., *TCSII Jan. 2021 19-23*
- Kim, C.**, see Kim, H., *TCSII July 2021 2297-2301*
- Kim, C.**, see Choi, Y., *TCSII Oct. 2021 3189-3193*
- Kim, G.**, see Jang, Y., *TCSII Oct. 2021 3366-3370*
- Kim, H.**, see Lee, K., *TCSII Feb. 2021 622-626*
- Kim, H.**, see Han, J., *TCSII May 2021 1645-1649*
- Kim, H.**, Kwon, Y., You, D., Choi, H., Kim, S.H., Heo, H., Kim, C., Lee, H., and Ko, H., Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation; *TCSII July 2021 2297-2301*
- Kim, J.**, Fengel, C.V., Yu, S., Minot, E.D., and Johnston, M.L., Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications; *TCSII May 2021 1735-1739*
- Kim, J.**, see Ryu, J., *TCSII May 2021 1700-1704*
- Kim, J.**, Lee, J., Kim, K., Moon, B.M., and Jung, S., A 0.166 pJ/b/pF, 3.5–5 Gb/s TSV I/O Interface With VOH Drift Control; *TCSII June 2021 1822-1826*
- Kim, J.**, see Pham, X.T., *TCSII June 2021 1793-1797*
- Kim, J.**, see Mahmood, H.U., *TCSII Aug. 2021 2805-2809*
- Kim, J.**, see Kim, S., *TCSII Aug. 2021 2810-2814*
- Kim, J.E.**, see Jo, Y., *TCSII Sept. 2021 3088-3092*
- Kim, J.S.**, see Han, J., *TCSII May 2021 1645-1649*
- Kim, J.Y.**, see Kim, K., *TCSII April 2021 1433-1437*
- Kim, K.**, Kim, J.Y., Moon, B.M., and Jung, S., A 6.9- μm^2 3.26-ns 31.25-fJ Robust Level Shifter With Wide Voltage and Frequency Ranges; *TCSII April 2021 1433-1437*
- Kim, K.**, see Kim, J., *TCSII June 2021 1822-1826*
- Kim, K.**, see Kim, S., *TCSII Aug. 2021 2810-2814*
- Kim, M.**, Kwon, D., Rho, D., and Choi, W., A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion; *TCSII March 2021 908-912*
- Kim, N.**, see Chae, M., *TCSII July 2021 2409-2413*
- Kim, O.**, see Lee, K., *TCSII Feb. 2021 622-626*
- Kim, S.**, Kim, Y., and Ahn, C.K., Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors; *TCSII Jan. 2021 381-385*
- Kim, S.**, see Kim, Y., *TCSII Jan. 2021 511-515*
- Kim, S.**, and Ahn, C.K., Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach; *TCSII Feb. 2021 737-741*
- Kim, S.**, and Ahn, C.K., Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer; *TCSII April 2021 1308-1312*
- Kim, S.**, see Um, S., *TCSII May 2021 1605-1609*
- Kim, S.**, see Um, S., *TCSII May 2021 1605-1609*
- Kim, S.**, Han, D., and Yoo, H., A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network; *TCSII May 2021 1675-1679*
- Kim, S.**, see Kim, S., *TCSII May 2021 1675-1679*
- Kim, S.**, see Kim, S., *TCSII May 2021 1675-1679*
- Kim, S.**, see Park, J.K., *TCSII July 2021 2528-2532*
- Kim, S.**, and Ahn, C.K., Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique; *TCSII July 2021 2458-2462*
- Kim, S.**, Kang, Y., Baek, S., Choi, Y., and Kang, S., Low-Power Ternary Multiplication Using Approximate Computing; *TCSII Aug. 2021 2947-2951*
- Kim, S.**, Choi, K., Kim, K., Ko, J., Kim, J., and Lee, S., A Low-Noise and Fast-Settling UHF RFID Receiver With Digitally Controlled Leakage Cancellation; *TCSII Aug. 2021 2810-2814*
- Kim, S.**, see Park, J., *TCSII Nov. 2021 3386-3390*
- Kim, S.H.**, see Kim, H., *TCSII July 2021 2297-2301*
- Kim, S.Y.**, see Im, H., *TCSII May 2021 1596-1599*
- Kim, T.**, and Shin, J., A Resource-Efficient Inference Accelerator for Binary Convolutional Neural Networks ; *TCSII Jan. 2021 451-455*
- Kim, T.**, Kwak, S., and Park, J., Hybrid System Control for Robot Motors Based on a Reduced Component, Multi-Voltage Power Supply System; *TCSII Dec. 2021 3582-3586*
- Kim, T.T.**, see Ho, W., *TCSII June 2021 2122-2126*
- Kim, T.T.**, see Jo, Y., *TCSII Sept. 2021 3088-3092*
- Kim, W.**, and Lee, M., A 92- μW /Gb/s Self-Biased SLVS Receiver for MIPI D-PHY Applications; *TCSII Oct. 2021 3219-3223*
- Kim, Y.**, see Kim, S., *TCSII Jan. 2021 381-385*
- Kim, Y.**, Kim, S., and Ahn, C.K., Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives; *TCSII Jan. 2021 511-515*
- Kinget, P.R.**, see Nagam, S.S., *TCSII May 2021 1670-1674*
- Klimach, H.**, see Toledo, P., *TCSII Sept. 2021 3073-3077*
- Klumperink, E.**, see Zanen, J., *TCSII April 2021 1183-1187*
- Klumperink, E.A.M.**, see de Boer, P., *TCSII July 2021 2292-2296*
- Knox, M.E.**, see Shakya, D., *TCSII Sept. 2021 3043-3047*
- Ko, H.**, see Yoon, C., *TCSII Jan. 2021 136-140*
- Ko, H.**, see Kim, H., *TCSII July 2021 2297-2301*
- Ko, J.**, see Kim, S., *TCSII Aug. 2021 2810-2814*
- Kobaku, T.**, Jeyasenthil, R., Sahoo, S., Ramchand, R., and Dragicevic, T., Quantitative Feedback Design-Based Robust PID Control of Voltage Mode Controlled DC-DC Boost Converter; *TCSII Jan. 2021 286-290*
- Kobaku, T.**, see Jeyasenthil, R., *TCSII July 2021 2483-2487*
- Kobayashi, H.**, see Wei, J., *TCSII July 2021 2640-2644*
- Koh, E.K.**, see Nambiar, V.P., *TCSII Sept. 2021 3148-3152*
- Kolb, K.**, see Maiwald, T., *TCSII July 2021 2277-2281*
- Kong, L.**, see Xiu, X., *TCSII Jan. 2021 361-365*
- Kong, M.**, Wu, Y., Zhuang, Z., Wang, W., and Wang, C., Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPD Technology; *TCSII July 2021 2414-2418*
- Korol, G.**, see Jordan, M.G., *TCSII May 2021 1655-1659*

- Koskin, E.**, Bisiaux, P., Galayko, D., and Blokhina, E., Jitter Optimisation in a Generalised All-Digital Phase-Locked Loop Model; *TCSII Jan. 2021* 77-81
- Kovacs-Vajna, Z.**, see Richelli, A., *TCSII April 2021* 1078-1082
- Krishna, I.S.**, and Mukherjee, S., Triple-Mode Substrate Integrated Coaxial Resonator Based Bandpass Filter Featuring Flexible Transmission Zeros and Adjustable Bandwidth; *TCSII April 2021* 1223-1227
- Krishna Velidi, V.**, see Narayana Rao Vanukuru, V., *TCSII Jan. 2021* 201-205
- Krishnapura, N.**, see Mondal, I., *TCSII April 2021* 1173-1177
- Krishnapura, N.**, see Chithra, ., *TCSII June 2021* 1788-1792
- Kshetrimayum, R.S.**, see Sangam, R.S., *TCSII Jan. 2021* 181-185
- Kuang, R.**, see Peng, F., *TCSII April 2021* 1233-1237
- Kuang, Y.**, Cui, X., Zhong, Y., Liu, K., Zou, C., Dai, Z., Wang, Y., Yu, D., and Huang, R., A 64K-Neuron 64M-1b-Synapse 2.64pJ/SOP Neuromorphic Chip With All Memory on Chip for Spike-Based Models in 65nm CMOS; *TCSII July 2021* 2655-2659
- Kubo, K.**, see Wei, J., *TCSII July 2021* 2640-2644
- Kudeshia, A.**, see Ghosh, S., *TCSII Aug. 2021* 2977-2981
- Kumar, A.**, Xiong, X., Pan, X., Reza, M., Beig, A.R., and Jaafari, K.A., A Wide Voltage Gain Bidirectional DC-DC Converter Based on Quasi Z-Source and Switched Capacitor Network; *TCSII April 2021* 1353-1357
- Kumar, G.G.**, Sai Krishna, M.V., Kumaravel, S., and Babaei, E., Multi-Stage DC-DC Converter Using Active LC2D Network With Minimum Component; *TCSII March 2021* 943-947
- Kumar, J.**, see Khan, M.T., *TCSII April 2021* 1188-1192
- Kumar, K.**, Bhattacharjee, S.S., and George, N.V., Joint Logarithmic Hyperbolic Cosine Robust Sparse Adaptive Algorithms; *TCSII Jan. 2021* 526-530
- Kumar, K.**, Bhattacharjee, S.S., and George, N.V., Modified Champernowne Function Based Robust and Sparsity-Aware Adaptive Filters; *TCSII June 2021* 2202-2206
- Kumar, K.**, see Bhattacharjee, S.S., *TCSII Aug. 2021* 3002-3006
- Kumar, M.**, Open Circuit Fault Detection and Switch Identification for LS-PWM H-Bridge Inverter; *TCSII April 2021* 1363-1367
- Kumar, N.**, see Singh, B., *TCSII June 2021* 1947-1951
- Kumar, P.**, see Rituraj, G., *TCSII June 2021* 2072-2076
- Kumar, R.S.A.**, see Chithra, ., *TCSII June 2021* 1788-1792
- Kumar, Y.B.N.**, see Veerendranath, P.S., *TCSII June 2021* 1748-1752
- Kumaravel, S.**, see Kumar, G.G., *TCSII March 2021* 943-947
- Kuo, C.**, see Wang, C., *TCSII Sept. 2021* 3163-3166
- Kuo, T.**, see Yang, C., *TCSII July 2021* 2312-2316
- Kurdahi, F.J.**, see Rakka, M., *TCSII Feb. 2021* 762-766
- Kuwana, A.**, see Wei, J., *TCSII July 2021* 2640-2644
- Kuznetsov, N.V.**, Lobachev, M.Y., Yuldashev, M.V., and Yuldashev, R.V., The Egan Problem on the Pull-in Range of Type 2 PLLs; *TCSII April 2021* 1467-1471
- Kwak, S.**, see Kim, T., *TCSII Dec. 2021* 3582-3586
- Kwon, D.**, see Kim, M., *TCSII March 2021* 908-912
- Kwon, H.**, see Chae, M., *TCSII July 2021* 2409-2413
- Kwon, K.**, see Song, E., *TCSII July 2021* 2369-2373
- Kwon, O.**, see Jeong, J., *TCSII July 2021* 2322-2326
- Kwon, Y.**, see Kim, H., *TCSII July 2021* 2297-2301
- Kwon, Y.**, see Choi, Y., *TCSII Oct. 2021* 3189-3193
- L**
- Lai, J.**, see Lee, M., *TCSII Jan. 2021* 441-445
- Lai, J.**, see Lu, X., *TCSII Feb. 2021* 682-686
- Lai, J.**, and Lu, X., Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks; *TCSII June 2021* 2052-2056
- Lai, Q.**, Wan, Z., Kengne, L.K., Kamdem Kuate, P.D., and Chen, C., Two-Memristor-Based Chaotic System With Infinite Coexisting Attractors; *TCSII June 2021* 2197-2201
- Lai, X.**, see Hu, D., *TCSII April 2021* 1542-1546
- Lai, X.**, see Cui, X., *TCSII April 2021* 1517-1521
- Lallechere, S.**, see Ravelo, B., *TCSII July 2021* 2364-2368
- Lammie, C.**, Eshraghian, J.K., Lu, W.D., and Azghadi, M.R., Memristive Stochastic Computing for Deep Learning Parameter Optimization; *TCSII May 2021* 1650-1654
- Lan, K.**, see Lin, Y., *TCSII April 2021* 1368-1372
- Lanuzza, M.**, see Fassio, L., *TCSII April 2021* 1393-1397
- Lanuzza, M.**, see Fassio, L., *TCSII Sept. 2021* 3038-3042
- Lao, Y.**, see Tan, W., *TCSII Aug. 2021* 2927-2931
- Lappas, J.**, see Sudarshan, C., *TCSII May 2021* 1615-1619
- Lapuyade, H.**, see Asprilla, A., *TCSII Feb. 2021* 602-606
- Lara, P.**, see Silva, T.T.P., *TCSII Aug. 2021* 3022-3026
- Lawal, A.**, Mayyala, Q., Abed-Meraim, K., Iqbal, N., and Zerguine, A., Blind Signal Estimation Using Structured Subspace Technique; *TCSII Aug. 2021* 3007-3011
- Le, S.**, Wu, Y., Guo, Y., and Vecchio, C.D., Game Theoretic Approach for a Service Function Chain Routing in NFV With Coupled Constraints; *TCSII Dec. 2021* 3557-3561
- Le Gallo, M.**, see Karunarathne, G., *TCSII May 2021* 1725-1729
- Le Gallo, M.**, see Khaddam-Aljameh, R., *TCSII Dec. 2021* 3522-3526
- Le Zhang, Q.**, Chen, B.J., Shum, K., and Chan, C.H., Ultra-Wideband and Compact Terahertz Planar Load Based on Spoof Surface Plasmon Polaritons With Nickel; *TCSII June 2021* 1922-1926
- Le Zhang, Q.**, and Chan, C.H., Spoof Surface Plasmon Polariton Filter With Reconfigurable Dual and Non-Linear Notched Characteristics; *TCSII Aug. 2021* 2815-2819
- Lee, C.Y.**, Venkatachala, P.K., ElShater, A., and Moon, U., A Pseudo-Pseudo-Differential ADC Achieving 105dB SNDR in 10kHz Bandwidth Using Ring Amplifier Based Integrators; *TCSII July 2021* 2327-2331
- Lee, D.**, and Nguyen, C., Dual Q/V -Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines; *TCSII March 2021* 898-902
- Lee, H.**, see Pham, T.X., *TCSII Jan. 2021* 216-220
- Lee, H.**, see Kim, H., *TCSII July 2021* 2297-2301
- Lee, H.**, see Tho, N.H., *TCSII July 2021* 2347-2351
- Lee, J.**, Liao, C., Yin, S., and Lo, K., A Multilevel Inverter for Contactless Power Transfer System; *TCSII Jan. 2021* 401-405
- Lee, J.**, see Pham, X.T., *TCSII Jan. 2021* 116-120
- Lee, J.**, see Lee, K., *TCSII Feb. 2021* 622-626
- Lee, J.**, and Hong, S., A 24-30 GHz 31.7% Fractional Bandwidth Power Amplifier With an Adaptive Capacitance Linearizer; *TCSII April 2021* 1163-1167
- Lee, J.**, see Kim, J., *TCSII June 2021* 1822-1826
- Lee, J.**, see Pham, X.T., *TCSII June 2021* 1793-1797
- Lee, J.**, see Park, C., *TCSII June 2021* 1768-1772
- Lee, J.**, see Park, J.K., *TCSII July 2021* 2528-2532
- Lee, J.**, Offset and Gain FPN Calibrated Linear-Logarithmic Image Sensor With Shared Pixel Architecture; *TCSII Dec. 2021* 3518-3521
- Lee, K.**, Kim, H., Jung, W., Lee, J., Ju, H., Park, K., Kim, O., and Jeong, D., An Adaptive Offset Cancellation Scheme and Shared-Summer Adaptive DFE for 0.068 pJ/b/dB 1.62-to-10 Gb/s Low-Power Receiver in 40 nm CMOS; *TCSII Feb. 2021* 622-626
- Lee, M.**, and Lai, J., Unified Voltage Balancing Feedforward for Three-Level Boost PFC Converter in Discontinuous and Critical Conduction Modes; *TCSII Jan. 2021* 441-445
- Lee, M.**, see Park, C., *TCSII June 2021* 1768-1772
- Lee, M.**, see Bae, S., *TCSII Sept. 2021* 3063-3067
- Lee, M.**, see Kim, W., *TCSII Oct. 2021* 3219-3223
- Lee, S.**, and Sanchez-Sinencio, E., Current Reference Circuits: A Tutorial; *TCSII March 2021* 830-836
- Lee, S.**, see Tseng, C., *TCSII May 2021* 1630-1634
- Lee, S.**, Seo, J., Han, C., Sim, J., Park, H., and Kim, B., A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces; *TCSII June 2021* 1862-1866
- Lee, S.**, see Mahmood, H.U., *TCSII Aug. 2021* 2805-2809
- Lee, S.**, see Kim, S., *TCSII Aug. 2021* 2810-2814
- Lee, T.**, and Je, M., Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain; *TCSII Feb. 2021* 574-580
- Lee, W.**, see Wong, Z., *TCSII June 2021* 2157-2161
- Lee, Y.**, see Lim, T., *TCSII Jan. 2021* 221-225
- Lee, Y.**, see Choi, Y., *TCSII Oct. 2021* 3189-3193
- Lee, Y.K.**, see Nambiar, V.P., *TCSII Sept. 2021* 3148-3152

- Lei, B., *see* Li, B., *TCSII July 2021 2660-2664*
- Lei, K., Mak, P., and Martins, R.P., Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era; *TCSII Jan. 2021 30-35*
- Lei, S., *see* Li, B., *TCSII July 2021 2660-2664*
- Lei, Y., *see* Guo, J., *TCSII Jan. 2021 146-150*
- Leng, M., *see* Zhou, G., *TCSII Jan. 2021 296-300*
- Lennox, B., *see* Wu, K., *TCSII Oct. 2021 3316-3320*
- Levski, D., Wany, M., and Choubey, B., Compensation of Signal-Dependent Readout Noise in Photon Transfer Curve Characterisation of CMOS Image Sensors; *TCSII Jan. 2021 102-105*
- Li, B., Wen, G., Peng, Z., Wen, S., and Huang, T., Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises; *TCSII April 2021 1303-1307*
- Li, B., *see* Zhou, S., *TCSII July 2021 2493-2497*
- Li, B., Wang, J., Ding, G., Fu, H., Lei, B., Yang, H., Bi, J., and Lei, S., A High-Performance and Low-Cost Montgomery Modular Multiplication Based on Redundant Binary Representation; *TCSII July 2021 2660-2664*
- Li, C., *see* Ran, G., *TCSII Jan. 2021 276-280*
- Li, C., *see* Wu, J., *TCSII April 2021 1502-1506*
- Li, C., Zhu, S., Sun, Z., and Rogers, J., BAS Optimized ELM for KUKA iiwa Robot Learning; *TCSII June 2021 1987-1991*
- Li, C., *see* Xu, K., *TCSII July 2021 2578-2582*
- Li, C., *see* Zhi, H., *TCSII Dec. 2021 3547-3551*
- Li, D., *see* Ran, G., *TCSII Jan. 2021 276-280*
- Li, D., *see* Zhu, Z., *TCSII March 2021 888-892*
- Li, F., *see* Jia, W., *TCSII Jan. 2021 496-500*
- Li, F., *see* Wang, Z., *TCSII Jan. 2021 431-435*
- Li, F., and Cheng, S., An Accuracy-Improved and Internal Regulator-Free Temperature Sensor With a Non-Linear Current Mode Feedback Pseudo-PLL; *TCSII April 2021 1138-1142*
- Li, F., *see* Nambiar, V.P., *TCSII Sept. 2021 3148-3152*
- Li, G., *see* Liu, B., *TCSII Jan. 2021 406-410*
- Li, H., *see* Xu, J., *TCSII Jan. 2021 166-170*
- Li, H., *see* Zhang, Z., *TCSII Jan. 2021 336-340*
- Li, H., Liu, Q., and Zhang, X., On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems; *TCSII Feb. 2021 677-681*
- Li, H., *see* Wang, N., *TCSII March 2021 1033-1037*
- Li, H., Abdelhadi, A., Shi, R., Zhang, J., and Liu, Q., Adversarial Hardware With Functional and Topological Camouflage; *TCSII May 2021 1685-1689*
- Li, H., *see* Kim, B., *TCSII May 2021 1600-1604*
- Li, H., *see* Zhang, Y., *TCSII June 2021 2027-2031*
- Li, H., *see* Liu, A., *TCSII July 2021 2553-2557*
- Li, H., *see* Xu, J., *TCSII July 2021 2267-2271*
- Li, H., *see* Guo, X., *TCSII July 2021 2307-2311*
- Li, H., *see* Bao, B., *TCSII Aug. 2021 2992-2996*
- Li, H., *see* Lu, X., *TCSII Aug. 2021 2917-2921*
- Li, H., Chen, J., Hou, D., Li, Z., Wang, Z., and Hong, W., A High-Linearity Adaptive-Bias SiGe Power Amplifier for 5G Communication; *TCSII Aug. 2021 2770-2774*
- Li, J., *see* Liu, H., *TCSII Jan. 2021 211-215*
- Li, J., *see* Wang, M., *TCSII March 2021 1023-1027*
- Li, J., *see* Li, W., *TCSII April 2021 1338-1342*
- Li, J., *see* Zhang, A., *TCSII June 2021 1882-1886*
- Li, J., *see* Tong, X., *TCSII June 2021 1807-1811*
- Li, J., Niu, Y., and Yang, Y., Output-Feedback Control Under Hidden Markov Analog Fading and Redundant Channels; *TCSII Aug. 2021 2922-2926*
- Li, J., Xie, Y., Dang, L., Song, C., and Chen, B., Fixed-Point Minimum Error Entropy With Sparsity Penalty Constraints; *TCSII Aug. 2021 2997-3001*
- Li, J., Un, K., Yu, W., Mak, P., and Martins, R.P., An FPGA-Based Energy-Efficient Reconfigurable Convolutional Neural Network Accelerator for Object Recognition Applications; *TCSII Sept. 2021 3143-3147*
- Li, J., *see* Guo, H., *TCSII Oct. 2021 3306-3310*
- Li, K., *see* Bao, B., *TCSII Aug. 2021 2992-2996*
- Li, L., *see* Liu, R., *TCSII Jan. 2021 291-295*
- Li, L., *see* Wan, C., *TCSII April 2021 1158-1162*
- Li, L., *see* Gao, X., *TCSII April 2021 1477-1481*
- Li, L., *see* Zhang, A., *TCSII June 2021 2007-2011*
- Li, L., *see* Lin, Z., *TCSII July 2021 2628-2632*
- Li, L., *see* Liu, R., *TCSII Oct. 2021 3291-3295*
- Li, M., *see* Tan, X., *TCSII Feb. 2021 662-666*
- Li, M., *see* Wang, H., *TCSII July 2021 2548-2552*
- Li, N., *see* Ravelo, B., *TCSII Feb. 2021 637-641*
- Li, P., *see* Zhang, M., *TCSII Jan. 2021 481-485*
- Li, P., Kang, Y., Zhao, Y., and Wang, T., A Novel Self-Triggered MPC Scheme for Constrained Input-Affine Nonlinear Systems; *TCSII Jan. 2021 306-310*
- Li, P., *see* He, W., *TCSII March 2021 1013-1017*
- Li, P., *see* Shi, J., *TCSII June 2021 2152-2156*
- Li, Q., *see* Liu, H., *TCSII Feb. 2021 772-776*
- Li, Q., *see* Yang, S., *TCSII Sept. 2021 3108-3112*
- Li, R., *see* Shi, X., *TCSII March 2021 983-987*
- Li, S., *see* Li, Z., *TCSII Feb. 2021 742-746*
- Li, S., *see* Wang, J., *TCSII March 2021 1038-1042*
- Li, S., *see* Zhang, L., *TCSII March 2021 933-937*
- Li, S., *see* Zhang, Y., *TCSII April 2021 1298-1302*
- Li, S., and Ma, H., Leader-Following Tracking Control of Discrete-Time Uncertain Nonlinear MASs With Parametric and Nonparametric State Couplings; *TCSII June 2021 2037-2041*
- Li, S., *see* Li, Z., *TCSII June 2021 2062-2066*
- Li, S., *see* Khan, A.T., *TCSII Oct. 2021 3276-3280*
- Li, W., Zhou, J., Li, J., Xie, T., and Lu, J., Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control; *TCSII April 2021 1338-1342*
- Li, W., *see* Yu, T., *TCSII July 2021 2720-2724*
- Li, W., *see* Cao, H., *TCSII July 2021 2287-2291*
- Li, X., *see* Yang, S., *TCSII Jan. 2021 486-490*
- Li, X., *see* Peng, C., *TCSII Jan. 2021 466-470*
- Li, X., *see* Guo, J., *TCSII Jan. 2021 146-150*
- Li, X., *see* Xiao, J., *TCSII June 2021 1842-1846*
- Li, X., Liu, B., Fu, H., and Ma, K., A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique; *TCSII July 2021 2419-2423*
- Li, X., *see* Yin, G., *TCSII July 2021 2262-2266*
- Li, X., *see* Wang, H., *TCSII Oct. 2021 3371-3375*
- Li, X., *see* Yang, B., *TCSII Dec. 2021 3572-3576*
- Li, Y., *see* Yang, S., *TCSII Jan. 2021 486-490*
- Li, Y., *see* Zhou, G., *TCSII Jan. 2021 296-300*
- Li, Y., *see* Xiang, Y., *TCSII Jan. 2021 501-505*
- Li, Y., and Zhang, H., New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach; *TCSII Feb. 2021 697-701*
- Li, Y., *see* Ma, H., *TCSII Feb. 2021 722-726*
- Li, Y., *see* Wu, B., *TCSII Feb. 2021 617-621*
- Li, Y., *see* Ma, H., *TCSII April 2021 1268-1272*
- Li, Y., *see* Zhou, J., *TCSII April 2021 1348-1352*
- Li, Y., *see* Hao, Y., *TCSII May 2021 1610-1614*
- Li, Y., *see* Sun, Z., *TCSII June 2021 2237-2241*
- Li, Y., *see* Sun, Z., *TCSII June 2021 2237-2241*
- Li, Y., *see* Liang, T., *TCSII June 2021 2217-2221*
- Li, Y., *see* Liang, T., *TCSII June 2021 2217-2221*
- Li, Y., *see* Liang, T., *TCSII June 2021 2227-2231*
- Li, Y., *see* Xu, X., *TCSII July 2021 2523-2527*
- Li, Y., *see* Chen, X., *TCSII July 2021 2518-2522*
- Li, Y., *see* Gao, Z., *TCSII July 2021 2563-2567*
- Li, Y., Zhu, S., Chen, C., and Guan, X., Optimal Denial-of-Service Attack Strategy on State Estimation Over Infinite-Time Horizon ; *TCSII Aug. 2021 2860-2864*
- Li, Y., *see* Liu, T., *TCSII Aug. 2021 2880-2884*
- Li, Y., *see* Cai, Q., *TCSII Sept. 2021 3123-3127*
- Li, Y., *see* Liu, C., *TCSII Oct. 2021 3301-3305*
- Li, Y., Ye, L., Liu, X., Huang, S., Ma, Y., Huang, Z., and Gong, H., A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors; *TCSII Oct. 2021 3224-3228*
- Li, Z., *see* Liu, B., *TCSII Jan. 2021 406-410*

- Li, Z.**, see Xu, H., *TCSII Feb. 2021 627-631*
- Li, Z.**, see Liu, H., *TCSII Feb. 2021 772-776*
- Li, Z.**, and Li, S., Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective; *TCSII Feb. 2021 742-746*
- Li, Z.**, see Wang, M., *TCSII March 2021 1023-1027*
- Li, Z.**, see Zhang, N., *TCSII March 2021 1043-1047*
- Li, Z.**, see Chu, Z., *TCSII June 2021 1942-1946*
- Li, Z.**, Hao, J., Liu, J., Wang, H., and Xian, M., An IoT-Applicable Access Control Model Under Double-Layer Blockchain; *TCSII June 2021 2102-2106*
- Li, Z.**, and Li, S., A Sparse Optimization-Based Control Method for Manipulator With Simultaneous Potential Energy Minimization; *TCSII June 2021 2062-2066*
- Li, Z.**, see Liu, H., *TCSII June 2021 2082-2086*
- Li, Z.**, Qiao, J., and Zhuang, Y., An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in 0.18 μm SiGe BiCMOS; *TCSII June 2021 1763-1767*
- Li, Z.**, see Fu, W., *TCSII July 2021 2352-2356*
- Li, Z.**, see Zhang, S., *TCSII July 2021 2473-2477*
- Li, Z.**, see Li, H., *TCSII Aug. 2021 2770-2774*
- Li, Z.**, Huang, Y., Tian, L., Zhu, R., Xiao, S., and Yu, Z., A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method; *TCSII Sept. 2021 3153-3157*
- Li, Z.**, Tang, M., Fan, T., and Pan, Q., A 56-Gb/s PAM4 Receiver Analog Front-End With Fixed Peaking Frequency and Bandwidth in 40-nm CMOS; *TCSII Sept. 2021 3058-3062*
- Li, Z.**, and Zhao, J., Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model; *TCSII Oct. 2021 3256-3260*
- Lian, J.**, and Han, Y., Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack; *TCSII Oct. 2021 3271-3275*
- Lian, X.**, see Liu, B., *TCSII Jan. 2021 406-410*
- Lian, Y.**, see Cai, Q., *TCSII Sept. 2021 3123-3127*
- Liang, S.**, see Liu, X., *TCSII April 2021 1093-1097*
- Liang, T.**, Li, Y., Xue, W., Li, Y., and Jiang, T., Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises; *TCSII June 2021 2217-2221*
- Liang, T.**, Li, Y., and Xia, Y., Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function; *TCSII June 2021 2227-2231*
- Liang, X.**, see Liu, L., *TCSII July 2021 2282-2286*
- Liao, C.**, see Lee, J., *TCSII Jan. 2021 401-405*
- Liao, L.**, see Zhang, Y., *TCSII April 2021 1298-1302*
- Lim, H.**, see Jang, Y., *TCSII Oct. 2021 3366-3370*
- Lim, T.**, Anand, A., Chen, J., Liu, X., and Lee, Y., Design Method for Tunable Planar Bandpass Filters With Single-Bias Control and Wide Tunable Frequency Range; *TCSII Jan. 2021 221-225*
- Lima, M.V.S.**, Diniz, P.S.R., and Yazdanpanah, H., Set-Membership Constrained Frequency-Domain Algorithm; *TCSII Feb. 2021 797-801*
- Lin, D.**, see Tsai, T., *TCSII Aug. 2021 2962-2966*
- Lin, F.**, see Sun, J.X., *TCSII June 2021 1827-1831*
- Lin, I.**, Tang, C., Ni, C., Hu, X., Shen, Y., Chen, P., and Xie, Y., A Novel, Efficient Implementation of a Local Binary Convolutional Neural Network; *TCSII April 2021 1413-1417*
- Lin, L.**, see Fassio, L., *TCSII April 2021 1393-1397*
- Lin, L.**, see Huang, Z., *TCSII Aug. 2021 2780-2784*
- Lin, L.**, see Fassio, L., *TCSII Sept. 2021 3038-3042*
- Lin, M.**, see Liu, W., *TCSII Aug. 2021 2830-2834*
- Lin, N.**, see Xu, H., *TCSII Feb. 2021 627-631*
- Lin, P.**, Sun, X., and Fei, Z., A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain; *TCSII April 2021 1328-1332*
- Lin, Q.**, see Liu, W., *TCSII Aug. 2021 2830-2834*
- Lin, Y.**, see He, W., *TCSII March 2021 1013-1017*
- Lin, Y.**, see Lu, Y., *TCSII March 2021 873-877*
- Lin, Y.**, and Lan, K., Realization of a Compact and High-Performance Power Divider Using Parallel RC Isolation Network; *TCSII April 2021 1368-1372*
- Lin, Y.**, and Tsai, Z., Frequency-Reconfigurable Phase Shifter Based on a 65-nm CMOS Process for 5G Applications; *TCSII Aug. 2021 2825-2829*
- Lin, Y.**, Xu, T., and Chen, W., A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration; *TCSII Aug. 2021 2820-2824*
- Lin, Z.**, see Peng, C., *TCSII Jan. 2021 466-470*
- Lin, Z.**, Li, L., Wu, X., Peng, C., Lu, W., and Zhao, Q., Half-Select Disturb-Free 10T Tunnel FET SRAM Cell With Improved Noise Margin and Low Power Consumption; *TCSII July 2021 2628-2632*
- Lin, Z.**, Xie, G., Xu, W., Han, J., and Zhang, Y., Accelerating Stochastic Computing Using Deterministic Halton Sequences; *TCSII Oct. 2021 3351-3355*
- Linares-Barranco, B.**, see Nunez, J., *TCSII Oct. 2021 3356-3360*
- Lisha, L.**, Bass, O., and Shor, J., A 5800 μm^2 Process Monitor Circuit for Measurement of in-Die Variation of V_{th} in 65nm; *TCSII March 2021 863-867*
- Liu, A.**, and Li, H., Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method; *TCSII July 2021 2553-2557*
- Liu, B.**, Li, Z., Wang, H., Dong, X., Su, W., Li, G., Chen, X., Fernando, T., Iu, H.H.C., Lian, X., and Liu, X., Impedance Modeling of DFIG Wind Farms With Various Rotor Speeds and Frequency Coupling; *TCSII Jan. 2021 406-410*
- Liu, B.**, see Li, X., *TCSII July 2021 2419-2423*
- Liu, B.**, Zhou, Y., and Cheng, C., Miniaturized Ultra-Wideband Bandpass Filter With Ultra-Wide Stopband Using π -Type Unit With Inductive Loading on Integrated Passive Device; *TCSII Nov. 2021 3406-3410*
- Liu, C.**, Wu, X., and Mao, B., Formation Tracking of Second-Order Multi-Agent Systems With Multiple Leaders Based on Sampled Data; *TCSII Jan. 2021 331-335*
- Liu, C.**, and Shi, C.R., Design of the Class-E Power Amplifier Considering the Temperature Effect of the Transistor On-Resistance for Sensor Applications; *TCSII May 2021 1705-1709*
- Liu, C.**, see Sun, C., *TCSII July 2021 2558-2562*
- Liu, C.**, Ma, H., Tian, S., and Li, Y., Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty; *TCSII Oct. 2021 3301-3305*
- Liu, D.**, Zhang, X., and Tse, C.K., A Tutorial on Modeling and Analysis of Cascading Failure in Future Power Grids; *TCSII Jan. 2021 49-55*
- Liu, D.**, see Wu, B., *TCSII Feb. 2021 617-621*
- Liu, D.**, see Jiang, C., *TCSII April 2021 1313-1317*
- Liu, F.**, see Zhao, S., *TCSII April 2021 1527-1531*
- Liu, F.**, see Huang, C., *TCSII July 2021 2478-2482*
- Liu, G.**, see Pang, Z., *TCSII Jan. 2021 426-430*
- Liu, G.**, see Pang, Z., *TCSII April 2021 1253-1257*
- Liu, G.**, see Yu, Y., *TCSII April 2021 1318-1322*
- Liu, G.**, see Zhao, L., *TCSII Dec. 2021 3552-3556*
- Liu, H.**, Qiu, Z., Pan, W., Li, J., Zheng, L., and Gao, Y., Low-Cost and Programmable CRC Implementation Based on FPGA; *TCSII Jan. 2021 211-215*
- Liu, H.**, and Yu, W., Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations; *TCSII Jan. 2021 351-355*
- Liu, H.**, see Tang, J., *TCSII Jan. 2021 131-135*
- Liu, H.**, Sun, S., Liu, J., Li, Q., Diao, J., and Li, Z., Binary Memristive Synapse Based Vector Neural Network Architecture and Its Application; *TCSII Feb. 2021 772-776*
- Liu, H.**, see Zhai, C., *TCSII March 2021 868-872*
- Liu, H.**, see Yu, Y., *TCSII April 2021 1153-1157*
- Liu, H.**, Zhu, X., Wang, Y., Men, K., and Yeo, K.S., A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS; *TCSII June 2021 1847-1851*
- Liu, H.**, see Yu, Y., *TCSII June 2021 1857-1861*
- Liu, H.**, Chi, J., Li, Z., Zeng, Z., and Lu, J., Parameter Identification of Memristor-Based Chaotic Systems via the Drive-Response Synchronization Method; *TCSII June 2021 2082-2086*
- Liu, H.**, see Liu, W., *TCSII Aug. 2021 2830-2834*
- Liu, H.**, see Wang, C., *TCSII Nov. 2021 3426-3430*
- Liu, J.**, see Ran, G., *TCSII Jan. 2021 276-280*
- Liu, J.**, see Liu, H., *TCSII Feb. 2021 772-776*
- Liu, J.**, see Wang, L., *TCSII May 2021 1640-1644*
- Liu, J.**, see Li, Z., *TCSII June 2021 2102-2106*
- Liu, J.**, and Feng, Q., A Miniaturized LDPC Encoder: Two-Layer Architecture for CCSDS Near-Earth Standard; *TCSII July 2021 2384-2388*

- Liu, K., Wang, X., Wang, R., Sun, G., and Wang, X., Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor; *TCSII June 2021* 2047-2051
- Liu, K., see Kuang, Y., *TCSII July 2021* 2655-2659
- Liu, K., see Gao, Z., *TCSII July 2021* 2563-2567
- Liu, K., see Xu, S., *TCSII July 2021* 2598-2602
- Liu, K., and Wang, R., Antisaturation Command Filtered Backstepping Control-Based Disturbance Rejection for a Quadrotor UAV; *TCSII Dec. 2021* 3577-3581
- Liu, L., see Huang, W., *TCSII Jan. 2021* 121-125
- Liu, L., see Yang, S., *TCSII Jan. 2021* 486-490
- Liu, L., see He, W., *TCSII March 2021* 1013-1017
- Liu, L., Ding, S., and Yu, X., Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint; *TCSII April 2021* 1278-1282
- Liu, L., see Shi, C., *TCSII May 2021* 1581-1585
- Liu, L., Liang, X., Fan, H., Jin, R., Bai, X., and Geng, J., Compact Wideband Bandstop Filter With Directly Controlled Rejection; *TCSII July 2021* 2282-2286
- Liu, M., see Zhu, Z., *TCSII March 2021* 888-892
- Liu, M., see Wu, J., *TCSII April 2021* 1502-1506
- Liu, M., see Dong, S., *TCSII June 2021* 1967-1971
- Liu, M., see Dong, S., *TCSII Oct. 2021* 3261-3265
- Liu, P., see Zhang, A., *TCSII June 2021* 1882-1886
- Liu, P., see Fu, W., *TCSII July 2021* 2352-2356
- Liu, P., see Yao, L., *TCSII Aug. 2021* 2987-2991
- Liu, Q., see Li, H., *TCSII Feb. 2021* 677-681
- Liu, Q., see Li, H., *TCSII May 2021* 1685-1689
- Liu, Q., see Wang, L., *TCSII May 2021* 1640-1644
- Liu, Q., and He, Y., A Robust Fully Arctangent Adaptive Interpolated Volterra Filtering Algorithm Against Impulsive Noise; *TCSII July 2021* 2742-2746
- Liu, Q., see Zhou, K., *TCSII Aug. 2021* 2932-2936
- Liu, Q., see Zhang, G., *TCSII Dec. 2021* 3542-3546
- Liu, R., Yang, Y., Li, L., and Ding, S.X., Key Performance Indicators Based Fault Detection and Isolation Using Data-Driven Approaches; *TCSII Jan. 2021* 291-295
- Liu, R., see Qian, J., *TCSII April 2021* 1532-1536
- Liu, R., see Zhang, Y., *TCSII June 2021* 2027-2031
- Liu, R., Li, L., and Yang, Y., Performance Residual Based Fault Detection for Feedback Control Systems; *TCSII Oct. 2021* 3291-3295
- Liu, S., see Chen, W., *TCSII Jan. 2021* 176-180
- Liu, S., see Chang, S., *TCSII Jan. 2021* 161-165
- Liu, S., see Shi, J., *TCSII March 2021* 993-997
- Liu, S., see Lu, Y., *TCSII March 2021* 873-877
- Liu, S., see Wu, H., *TCSII April 2021* 1482-1486
- Liu, S., see Chou, M., *TCSII April 2021* 1103-1107
- Liu, S., see Yao, Y., *TCSII June 2021* 1837-1841
- Liu, T., Amirsoleimani, A., Alibart, F., Ecoffey, S., Drouin, D., and Genov, R., AIDX: Adaptive Inference Scheme to Mitigate State-Drift in Memristive VMM Accelerators; *TCSII April 2021* 1128-1132
- Liu, T., Sheng, A., Qi, G., and Li, Y., Admissible Bipartite Consensus in Networks of Singular Agents Over Signed Graphs; *TCSII Aug. 2021* 2880-2884
- Liu, W., see Xiao, C., *TCSII Jan. 2021* 261-265
- Liu, W., see Guo, J., *TCSII Jan. 2021* 146-150
- Liu, W., see Xiu, X., *TCSII Jan. 2021* 361-365
- Liu, W., see Liu, X., *TCSII April 2021* 1093-1097
- Liu, W., see Waris, H., *TCSII May 2021* 1566-1570
- Liu, W., see Chu, Z., *TCSII June 2021* 1942-1946
- Liu, W., see Sun, J., *TCSII June 2021* 1783-1787
- Liu, W., Lin, M., Shi, J., Lin, Q., Wang, G., Wang, P., and Liu, H., High Throughput Low Complexity and Low Power ePiBM RS Decoder Using Fractional Folding; *TCSII Aug. 2021* 2830-2834
- Liu, X., see Lim, T., *TCSII Jan. 2021* 221-225
- Liu, X., see Liu, B., *TCSII Jan. 2021* 406-410
- Liu, X., see Silva-Martinez, J., *TCSII Feb. 2021* 568-573
- Liu, X., see Jiang, J., *TCSII Feb. 2021* 556-561
- Liu, X., see Wu, X., *TCSII Feb. 2021* 667-671
- Liu, X., Liang, S., Liu, W., and Sun, P., A 2.5 ppm/°C Voltage Reference Combining Traditional BGR and ZTC MOSFET High-Order Curvature Compensation; *TCSII April 2021* 1093-1097
- Liu, X., see Yan, J., *TCSII June 2021* 1962-1966
- Liu, X., see Wang, D., *TCSII July 2021* 2342-2346
- Liu, X., see Li, Y., *TCSII Oct. 2021* 3224-3228
- Liu, Y., see Zhang, Y., *TCSII Jan. 2021* 411-415
- Liu, Y., see Xiang, Y., *TCSII Jan. 2021* 501-505
- Liu, Y., see Wang, L., *TCSII May 2021* 1640-1644
- Liu, Y., see Chen, L., *TCSII June 2021* 2222-2226
- Liu, Y., lu, H.H., Guo, Z., and Si, G., The Simple Charge-Controlled Grounded/Floating Mem-Element Emulator; *TCSII June 2021* 2177-2181
- Liu, Y., see Chen, J., *TCSII July 2021* 2670-2674
- Liu, Y., see Yin, G., *TCSII July 2021* 2262-2266
- Liu, Y., lu, H.H., and Qian, Y., Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator; *TCSII Aug. 2021* 2982-2986
- Liu, Z., see Ma, H., *TCSII Feb. 2021* 722-726
- Liu, Z., see Ma, H., *TCSII April 2021* 1268-1272
- Liu, Z., see Xiong, X., *TCSII April 2021* 1288-1292
- Liu, Z., see Xiong, X., *TCSII June 2021* 2057-2061
- Liu, Z., see Xu, H., *TCSII June 2021* 2117-2121
- Liu, Z., see Zhai, Y., *TCSII July 2021* 2448-2452
- Liu, Z., see Nazhamaiti, M., *TCSII Sept. 2021* 3078-3082
- Liu, Z., see Zhang, Q., *TCSII Nov. 2021* 3411-3415
- Liu, Z., see Xiong, X., *TCSII Dec. 2021* 3562-3566
- Liyanage, N., see Edussooriya, C.U.S., *TCSII July 2021* 2735-2741
- Lo, K., see Lee, J., *TCSII Jan. 2021* 401-405
- Lobachev, M.Y., see Kuznetsov, N.V., *TCSII April 2021* 1467-1471
- Lombardi, F., see Waris, H., *TCSII May 2021* 1566-1570
- Lou, Y., see Xi, X., *TCSII April 2021* 1497-1501
- Lou, Y., Xie, S., and Chen, G., Searching Better Rewiring Strategies and Objective Functions for Stronger Controllability Robustness; *TCSII June 2021* 2112-2116
- Lou, Y., see Xiong, X., *TCSII June 2021* 2057-2061
- Lou, Y., see Xiong, X., *TCSII July 2021* 2508-2512
- Lou, Y., see Xiong, X., *TCSII Dec. 2021* 3562-3566
- Lu, C., Zhang, Y., and Ge, Q., Kalman Filter Based on Multiple Scaled Multivariate Skew Normal Variance Mean Mixture Distributions With Application to Target Tracking; *TCSII Feb. 2021* 802-806
- Lu, H., see Zhang, M., *TCSII Jan. 2021* 481-485
- Lu, H., see Chang, Y., *TCSII Aug. 2021* 2765-2769
- Lu, J., see Zhang, Q., *TCSII Feb. 2021* 732-736
- Lu, J., see Li, W., *TCSII April 2021* 1338-1342
- Lu, J., see Zhang, Q., *TCSII June 2021* 1997-2001
- Lu, J., see Zhang, A., *TCSII June 2021* 2007-2011
- Lu, J., see Jin, X., *TCSII June 2021* 2187-2191
- Lu, J., see Liu, H., *TCSII June 2021* 2082-2086
- Lu, R., see Ye, Y., *TCSII July 2021* 2538-2542
- Lu, W., see Huang, G., *TCSII July 2021* 2710-2714
- Lu, W., see Lin, Z., *TCSII July 2021* 2628-2632
- Lu, W., see Huang, G., *TCSII Oct. 2021* 3361-3365
- Lu, W.D., see Lammie, C., *TCSII May 2021* 1650-1654
- Lu, X., and Lai, J., Two-Layer Cooperative Control for Multiple Converter-Network Clusters; *TCSII Feb. 2021* 682-686
- Lu, X., see Lai, J., *TCSII June 2021* 2052-2056
- Lu, X., and Li, H., Prescribed Finite-Time H_∞ Control for Nonlinear Descriptor Systems; *TCSII Aug. 2021* 2917-2921
- Lu, Y., see Huang, M., *TCSII Jan. 2021* 24-29
- Lu, Y., see Jiang, J., *TCSII Feb. 2021* 556-561
- Lu, Y., Liu, S., Yang, Y., Kang, H., Chen, C., Chan, K., and Lin, Y., A 2.4-3.0GHz Process-Tolerant Sub-Sampling PLL With Loop Bandwidth Calibration; *TCSII March 2021* 873-877
- Lu, Y., see Ye, Y., *TCSII July 2021* 2538-2542
- Lu, Y., see Wang, C., *TCSII July 2021* 2608-2612
- Lu, Y., see Wang, Y., *TCSII Sept. 2021* 3103-3107
- Luo, P., see Wang, Y., *TCSII Sept. 2021* 3103-3107
- Luo, Q., see Wei, Y., *TCSII April 2021* 1243-1247

- Luo, W.**, *see* Pang, Z., *TCSII Jan. 2021 426-430*
- Luo, Y.**, and Ortmanns, M., Input Referred Noise of VCO-Based Comparators; *TCSII Jan. 2021 82-86*
- Luo, Y.**, Yang, J., Zhang, Q., and Wang, C., A Fractional-Order Adaptive Filtering Algorithm in Impulsive Noise Environments; *TCSII Oct. 2021 3376-3380*
- Lupo, N.**, Bartolini, M., Pulici, P., Colli, S., Nessi, M., and Bonizzoni, E., On the Linearity of BJT-Based Current-Mode DAC Drivers; *TCSII Sept. 2021 3138-3142*
- Lv, D.**, *see* Du, H., *TCSII June 2021 2087-2091*
- Lv, Y.**, *see* Guo, J., *TCSII Jan. 2021 146-150*
- Lv, Y.**, *see* Zhang, K., *TCSII Nov. 2021 3441-3445*
- Ly, N.**, *see* Nguyen, V.H., *TCSII May 2021 1625-1629*

M

- Ma, C.**, *see* Gao, Z., *TCSII Jan. 2021 531-535*
- Ma, C.**, *see* Gao, Z., *TCSII Feb. 2021 782-786*
- Ma, D.**, Chen, W., Shu, L., Qu, X., and Hou, K., A MMC-Based Multiport Power Electronic Transformer With Shared Medium-Frequency Transformer; *TCSII Feb. 2021 727-731*
- Ma, D.**, Chen, W., Shu, L., Qu, X., and Hu, C., A MMC-Based Multiport AC-DC Converter for Hybrid AC/DC Systems; *TCSII Dec. 2021 3567-3571*
- Ma, G.**, *see* Xu, S., *TCSII July 2021 2598-2602*
- Ma, H.**, Xiong, Z., Li, Y., and Liu, Z., Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law; *TCSII Feb. 2021 722-726*
- Ma, H.**, Xiong, Z., Li, Y., and Liu, Z., Design of Discrete-Time Sliding Mode Control With Disturbance Compensator-Based Switching Function; *TCSII April 2021 1268-1272*
- Ma, H.**, *see* Yang, C., *TCSII April 2021 1492-1496*
- Ma, H.**, *see* Li, S., *TCSII June 2021 2037-2041*
- Ma, H.**, *see* Chen, X., *TCSII July 2021 2518-2522*
- Ma, H.**, *see* Liu, C., *TCSII Oct. 2021 3301-3305*
- Ma, J.**, *see* Yu, Z., *TCSII July 2021 2690-2694*
- Ma, J.**, *see* Han, S., *TCSII Aug. 2021 2902-2906*
- Ma, K.**, *see* Feng, T., *TCSII Feb. 2021 657-661*
- Ma, K.**, *see* Xu, W., *TCSII April 2021 1168-1172*
- Ma, K.**, *see* Li, X., *TCSII July 2021 2419-2423*
- Ma, L.**, *see* Zhang, Y., *TCSII June 2021 1917-1921*
- Ma, L.**, Wu, Y., and Wang, W., Design of Wideband Butler Matrix With Equal/Unequal Phase Differences for Flexible Beam-Controllability; *TCSII Dec. 2021 3537-3541*
- Ma, P.**, *see* Shi, J., *TCSII June 2021 2152-2156*
- Ma, T.**, Deng, Y., and Wei, Y., Variable Filter Design by Second Order Transformation; *TCSII March 2021 1048-1052*
- Ma, W.**, *see* Xiang, Y., *TCSII Jan. 2021 501-505*
- Ma, X.**, *see* Wu, H., *TCSII April 2021 1482-1486*
- Ma, X.**, *see* Wang, G., *TCSII July 2021 2705-2709*
- Ma, Y.**, *see* Li, Y., *TCSII Oct. 2021 3224-3228*
- Ma, Z.**, *see* Zhang, B., *TCSII April 2021 1423-1427*
- Maamar, A.E.T.**, Kermadi, M., Helaimi, M., Taleb, R., and Mekhilef, S., An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality; *TCSII June 2021 2092-2096*
- Maan, A.**, *see* Irmanova, A., *TCSII April 2021 1133-1137*
- Madanayake, A.**, *see* Vorhies, J.T., *TCSII Feb. 2021 787-791*
- Madanayake, A.**, *see* Edussooriya, C.U.S., *TCSII July 2021 2735-2741*
- Madanayake, A.**, *see* Akram, N., *TCSII Aug. 2021 2840-2844*
- Madhukumar, A.S.**, *see* Agrawal, N., *TCSII July 2021 2399-2403*
- Maestro, J.A.**, *see* Garcia-Herrero, F., *TCSII April 2021 1438-1442*
- Maghari, N.**, *see* De Jesus Guzman, M., *TCSII Aug. 2021 2795-2799*
- Mahmood, H.U.**, Utomo, D.R., Kim, J., and Lee, S., A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation; *TCSII Aug. 2021 2805-2809*
- Maiwald, T.**, Potschka, J., Kolb, K., Dietz, M., Hagelauer, A., Visweswaran, A., and Weigel, R., A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band; *TCSII July 2021 2277-2281*
- Majumdar, S.**, Single Bit-Line Differential Sensing Based Real-Time NVS-RAM for Low Power Applications; *TCSII July 2021 2623-2627*
- Majumder, M.**, *see* Ghosh, S., *TCSII Aug. 2021 2977-2981*
- Mak, P.**, *see* Lei, K., *TCSII Jan. 2021 30-35*
- Mak, P.**, *see* Mariappan, S., *TCSII April 2021 1178-1182*
- Mak, P.**, *see* Chong, G., *TCSII June 2021 1743-1747*
- Mak, P.**, *see* Huang, Y., *TCSII Sept. 2021 3093-3097*
- Mak, P.**, *see* Yang, S., *TCSII Sept. 2021 3108-3112*
- Mak, P.**, *see* Li, J., *TCSII Sept. 2021 3143-3147*
- Mak, P.**, *see* Mariappan, S., *TCSII Nov. 2021 3381-3385*
- Malekzadeh-Arasteh, O.**, Danesh, A.R., Do, A.H., Nenadic, Z., and Heydari, P., An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems; *TCSII Jan. 2021 151-155*
- Mallat, N.K.**, *see* Nouri, M., *TCSII July 2021 2700-2704*
- Mallat, N.K.**, *see* Iqbal, A., *TCSII July 2021 2443-2447*
- Mammela, A.**, *see* Shahabuddin, S., *TCSII March 2021 851-857*
- Mandal, M.K.**, *see* Singh, A., *TCSII Jan. 2021 97-101*
- Mandal, S.**, *see* Akram, N., *TCSII Aug. 2021 2840-2844*
- Mani, A.**, *see* Nambiar, V.P., *TCSII Sept. 2021 3148-3152*
- Mansour, M.M.**, *see* Usman, S., *TCSII July 2021 2389-2393*
- Mantooth, A.**, *see* Wei, Y., *TCSII April 2021 1243-1247*
- Mao, B.**, *see* Liu, C., *TCSII Jan. 2021 331-335*
- Mao, B.**, *see* Xu, Y., *TCSII Jan. 2021 311-315*
- Mariappan, S.**, Rajendran, J., Ramiah, H., Mak, P., Yin, J., and Martins, R.P., An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers; *TCSII April 2021 1178-1182*
- Mariappan, S.**, Rajendran, J., Chen, Y., Mak, P., and Martins, R.P., A 1.7-to-2.7GHz 35–38% PAE Multiband CMOS Power Amplifier Employing a Digitally-Assisted Analog Pre-Distorter (DAAPD) Reconfigurable Linearization Technique; *TCSII Nov. 2021 3381-3385*
- Martemucci, M.**, *see* Khaddam-Aljameh, R., *TCSII Dec. 2021 3522-3526*
- Martens, E.**, *see* Bunsen, K., *TCSII Feb. 2021 592-596*
- Martin-Martinez, J.**, *see* Ntinis, V., *TCSII April 2021 1378-1382*
- Martins, D.C.**, *see* Schmitz, L., *TCSII July 2021 2533-2537*
- Martins, R.P.**, *see* Huang, M., *TCSII Jan. 2021 24-29*
- Martins, R.P.**, *see* Lei, K., *TCSII Jan. 2021 30-35*
- Martins, R.P.**, *see* Mariappan, S., *TCSII April 2021 1178-1182*
- Martins, R.P.**, *see* Chong, G., *TCSII June 2021 1743-1747*
- Martins, R.P.**, *see* Wang, C., *TCSII July 2021 2608-2612*
- Martins, R.P.**, *see* Huang, Y., *TCSII Sept. 2021 3093-3097*
- Martins, R.P.**, *see* Yang, S., *TCSII Sept. 2021 3108-3112*
- Martins, R.P.**, *see* Li, J., *TCSII Sept. 2021 3143-3147*
- Martins, R.P.**, *see* Wang, Y., *TCSII Sept. 2021 3103-3107*
- Martins, R.P.**, *see* Mariappan, S., *TCSII Nov. 2021 3381-3385*
- Matic, T.**, *see* Sneler, L., *TCSII June 2021 1902-1906*
- Matuz, B.**, *see* Alvarez, A., *TCSII April 2021 1213-1217*
- Mayyala, Q.**, *see* Lawal, A., *TCSII Aug. 2021 3007-3011*
- Mazzanti, A.**, *see* Petricli, I., *TCSII Jan. 2021 256-260*
- Mazzanti, A.**, *see* Bevilacqua, A., *TCSII Feb. 2021 550-555*
- McGuire, G.**, *see* Garcia-Herrero, F., *TCSII April 2021 1438-1442*
- Medina-Vazquez, A.S.**, *see* Padilla-Cantoya, I., *TCSII Aug. 2021 2775-2779*
- Mekhilef, S.**, *see* Sathik, M.J., *TCSII April 2021 1358-1362*
- Mekhilef, S.**, *see* Maamar, A.E.T., *TCSII June 2021 2092-2096*
- Mekie, J.**, *see* Jha, C.K., *TCSII Feb. 2021 767-771*
- Mekie, J.**, *see* Gohil, V., *TCSII Oct. 2021 3341-3345*
- Melcon, A.A.**, *see* Wu, X., *TCSII Feb. 2021 667-671*
- Men, K.**, *see* Liu, H., *TCSII June 2021 1847-1851*
- Meng, J.**, Yang, L., Peng, X., Yu, S., Fan, D., and Seo, J., Structured Pruning of RRAM Crossbars for Efficient In-Memory Computing Acceleration of Deep Neural Networks; *TCSII May 2021 1576-1580*
- Meng, M.**, *see* Zhang, X., *TCSII April 2021 1263-1267*
- Meng, X.**, Wu, Z., Gao, C., Jiang, B., and Karimi, H.R., Finite-Time Projective Synchronization Control of Variable-Order Fractional Chaotic Systems via Sliding Mode Approach; *TCSII July 2021 2503-2507*

- Mesleh, R.**, see Hiari, O., *TCSII Jan. 2021 251-255*
- Miao, J.**, see Guo, J., *TCSII Jan. 2021 146-150*
- Milner, L.E.**, see Chakraborty, S., *TCSII Jan. 2021 226-230*
- Min, H.**, Duan, N., Yu, X., and Fei, S., Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties; *TCSII March 2021 973-977*
- Ming, Z.**, see Chen, J., *TCSII July 2021 2618-2622*
- Ming, Z.**, see Chen, J., *TCSII July 2021 2670-2674*
- Minot, E.D.**, see Kim, J., *TCSII May 2021 1735-1739*
- Mirabbasi, S.**, see Kashani, M.H., *TCSII Oct. 2021 3214-3218*
- Mirfarshbafan, S.H.**, Taner, S., and Studer, C., SMUL-FFT: A Streaming Multiplierless Fast Fourier Transform; *TCSII May 2021 1715-1719*
- Mishra, S.K.**, Upadhyay, D.K., and Gupta, M., Approximation of Fractional-Order Butterworth Filter Using Pole-Placement in W -Plane; *TCSII Oct. 2021 3229-3233*
- Mitra, R.**, see Jain, S., *TCSII July 2021 2725-2729*
- Moaiyeri, M.H.**, see Jooq, M.K.Q., *TCSII June 2021 2162-2166*
- Moezzi, M.**, see Sheikhamadi, S., *TCSII Jan. 2021 92-96*
- Mohan, A.**, and Mondal, S., An Impedance Matching Strategy for Micro-Scale RF Energy Harvesting Systems; *TCSII April 2021 1458-1462*
- Mohan, P.V.A.**, and Phalgun, P.S., Evaluation of Mixed-Radix Digit Computation Techniques for the Three Moduli RNS $\{2n-1, 2n, 2n^{+1}-1\}$; *TCSII April 2021 1418-1422*
- Mohapatra, S.**, Vendra, S.K., and Chrzanowska-Jeske, M., Fast Buffer Count Estimation in 3D IC Floorplanning; *TCSII Jan. 2021 271-275*
- Mohapatra, S.**, see Pal, S., *TCSII Oct. 2021 3336-3340*
- Mojarad, M.**, and Diba, M., A Fully Integrated Low-Power Capacitive Sensor Frontend With Automatic Tuning Scheme; *TCSII Dec. 2021 3498-3502*
- Mok, K.**, see Wong, Z., *TCSII June 2021 2157-2161*
- Mok, P.K.T.**, see Jiang, J., *TCSII Feb. 2021 556-561*
- Mok, P.K.T.**, see Chong, K., *TCSII May 2021 1635-1639*
- Molahosseini, A.S.**, see Taheri, M., *TCSII April 2021 1388-1392*
- Molinar-Solis, J.E.**, see Padilla-Cantoya, I., *TCSII Aug. 2021 2775-2779*
- Molnar, A.C.**, see Palmer, D.M., *TCSII May 2021 1680-1684*
- Momeni, O.**, see Wang, H., *TCSII June 2021 1852-1856*
- Monaco, E.**, see Petricli, I., *TCSII Jan. 2021 256-260*
- Mondal, I.**, and Krishnapura, N., Effects of AC Response Imperfections in True-Time-Delay Lines; *TCSII April 2021 1173-1177*
- Mondal, S.**, see Mohan, A., *TCSII April 2021 1458-1462*
- Mondal, T.**, see Bandyopadhyay, A., *TCSII June 2021 1892-1896*
- Moon, B.M.**, see Kim, K., *TCSII April 2021 1433-1437*
- Moon, B.M.**, see Kim, J., *TCSII June 2021 1822-1826*
- Moon, U.**, see Lee, C.Y., *TCSII July 2021 2327-2331*
- Moraitis, M.**, see Yu, Y., *TCSII May 2021 1710-1714*
- Morozov, D.V.**, see Pilipko, M.M., *TCSII July 2021 2613-2617*
- Mosalam, H.**, see Zhu, J., *TCSII Sept. 2021 3053-3057*
- Motz, C.**, see Paireder, T., *TCSII March 2021 923-927*
- Motz, C.**, Paireder, T., Pretl, H., and Huemer, M., A Survey on Self-Interference Cancellation in Mobile LTE-A/5G FDD Transceivers; *TCSII March 2021 823-829*
- Mu, Y.**, Zhang, H., Ren, H., and Cai, Y., Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems; *TCSII July 2021 2453-2457*
- Mu, Y.**, Zhang, H., Xi, R., and Gao, Z., State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults; *TCSII Oct. 2021 3326-3330*
- Mukherjee, J.**, see Tiwari, S., *TCSII Oct. 2021 3204-3208*
- Mukherjee, S.**, see Krishna, I.S., *TCSII April 2021 1223-1227*
- Musolino, F.**, see Toledo, P., *TCSII March 2021 816-822*
- Mustacchio, C.**, see Amendola, G., *TCSII Sept. 2021 3098-3102*
- N**
- Na, T.**, Kang, S.H., and Jung, S., STT-MRAM Sensing: A Review; *TCSII Jan. 2021 12-18*
- Nacif, J.A.M.**, see Almeida, D.D., *TCSII Sept. 2021 3158-3162*
- Nadal, J.**, see Najam-Ul-Islam, M., *TCSII March 2021 918-922*
- Nafe, M.**, see Wu, X., *TCSII Feb. 2021 667-671*
- Nafria, M.**, see Ntinias, V., *TCSII April 2021 1378-1382*
- Nagam, S.S.**, Fan, Y., and Kinget, P.R., Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop; *TCSII May 2021 1670-1674*
- Nagulapalli, R.**, Palani, R.K., and Bhagavatula, S., A 24.4 ppm/°C Voltage Mode Bandgap Reference With a 1.05V Supply; *TCSII April 2021 1088-1092*
- Naik, B.S.**, Suresh, Y., Venkataramanaiah, J., and Panda, A.K., A Hybrid Nine-Level Inverter Topology With Boosting Capability and Reduced Component Count; *TCSII Jan. 2021 316-320*
- Najam-Ul-Islam, M.**, Nauman, M., Jafri, A.R., Nadal, J., Nour, C.A., and Baghdadi, A., Hardware Implementation of Overlap-Save-Based Fading Channel Emulator; *TCSII March 2021 918-922*
- Nakhlestani, A.**, Kaveri, S.V., Radfar, M., and Desai, A., Low-Power Area-Efficient LDO With Loop-Gain and Bandwidth Enhancement Using Non-Dominant Pole Movement Technique for IoT Applications; *TCSII Feb. 2021 692-696*
- Nambiar, V.P.**, see Pu, J., *TCSII Jan. 2021 471-475*
- Nambiar, V.P.**, see Pu, J., *TCSII April 2021 1398-1402*
- Nambiar, V.P.**, Pu, J., Lee, Y.K., Mani, A., Koh, E.K., Wong, M.M., Li, F., Goh, W.L., and Do, A.T., Energy Efficient 0.5V 4.8pJ/SOP 0.93μW Leakage/Core Neuromorphic Processor Design; *TCSII Sept. 2021 3148-3152*
- Nannarelli, A.**, see Giardino, D., *TCSII June 2021 1912-1916*
- Narayana Rao Vanukuru, V.**, and Krishna Velidi, V., Millimeter-Wave CMOS 30/80 GHz Sharp-Rejection Dual-Band Bandstop Filters Using TFMS Open-Stepped-Impedance Resonators; *TCSII Jan. 2021 201-205*
- Narayanan, A.**, see Chithra, ., *TCSII June 2021 1788-1792*
- Nauman, M.**, see Najam-Ul-Islam, M., *TCSII March 2021 918-922*
- Nauta, B.**, see Zanen, J., *TCSII April 2021 1183-1187*
- Navi, K.**, see Taheri, M., *TCSII April 2021 1388-1392*
- Nayak, B.**, see Roy, T., *TCSII Dec. 2021 3587-3591*
- Nazhamaiti, M.**, Xu, H., Liu, Z., Chen, Y., Wei, Q., Wu, X., and Qiao, F., NS-MD: Near-Sensor Motion Detection With Energy Harvesting Image Sensor for Always-On Visual Perception; *TCSII Sept. 2021 3078-3082*
- Nebhen, J.**, see Ravelo, B., *TCSII July 2021 2364-2368*
- Neenadic, Z.**, see Malekzadeh-Arastehe, O., *TCSII Jan. 2021 151-155*
- Neshatvar, N.**, see Regnacq, L., *TCSII Sept. 2021 3133-3137*
- Nessi, M.**, see Lupo, N., *TCSII Sept. 2021 3138-3142*
- Nguyen, C.**, see Lee, D., *TCSII March 2021 898-902*
- Nguyen, C.**, see Galanis, I., *TCSII June 2021 1937-1941*
- Nguyen, K.**, see Sarmiento, M., *TCSII Sept. 2021 3182-3186*
- Nguyen, N.T.**, see Pham, X.T., *TCSII Jan. 2021 116-120*
- Nguyen, V.**, see Pham, X.T., *TCSII June 2021 1793-1797*
- Nguyen, V.H.**, Ly, N., Alameh, A.H., Blaquiére, Y., and Cowan, G., A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers; *TCSII May 2021 1625-1629*
- Ni, A.**, see Huang, G., *TCSII July 2021 2710-2714*
- Ni, C.**, see Lin, I., *TCSII April 2021 1413-1417*
- Ni, J.**, see Zhang, N., *TCSII March 2021 1043-1047*
- Ni, Y.**, see Xu, H., *TCSII June 2021 2117-2121*
- Nie, K.**, see Gao, J., *TCSII April 2021 1113-1117*
- Nie, Y.**, see Shi, J., *TCSII July 2021 2379-2383*
- Nikandish, G.R.**, Staszewski, R.B., and Zhu, A., A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters; *TCSII Jan. 2021 246-250*
- Ning, D.**, see Gong, J., *TCSII July 2021 2680-2684*
- Ning, X.**, see Zhu, H., *TCSII Jan. 2021 191-195*
- Nittala, S.**, see Ghosh, S., *TCSII July 2021 2257-2261*
- Niu, Y.**, see Li, J., *TCSII Aug. 2021 2922-2926*
- Noferesti, M.**, and Djerafi, T., Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency; *TCSII Jan. 2021 171-175*
- Nora, P.**, see Bizzarri, F., *TCSII Oct. 2021 3331-3335*
- Nour, C.A.**, see Najam-Ul-Islam, M., *TCSII March 2021 918-922*
- Nouri, M.**, Behrooz, H., Mallat, N.K., and Aghdam, S.A., A Wideband 5G Cyclostationary Spectrum Sensing Method by Kernel Least Mean Square Algorithm for Cognitive Radio Networks; *TCSII July 2021 2700-2704*

Ntinis, V., Rubio, A., Sirakoulis, G.C., Aguilera, E.S., Pedro, M., Crespo-Yepes, A., Martin-Martinez, J., Rodriguez, R., and Nafria, M., Power-Efficient Noise-Induced Reduction of ReRAM Cell's Temporal Variability Effects; *TCSII April 2021 1378-1382*

Nunez, J., Quintana, J.M., Avedillo, M.J., Jimenez, M., Todri-Sanial, A., Corti, E., Karg, S., and Linares-Barranco, B., Insights Into the Dynamics of Coupled VO₂ Oscillators for ONNs; *TCSII Oct. 2021 3356-3360*

Nunzio, L.D., see Cardarilli, G.C., *TCSII April 2021 1428-1432*

O

O'Connell, I., see Salgado, G.M., *TCSII Feb. 2021 545-549*

O'Hare, D., see Salgado, G.M., *TCSII Feb. 2021 545-549*

Ohno, Y., see Funayama, K., *TCSII Oct. 2021 3251-3255*

Okuhara, H., see Elnaqib, A., *TCSII Jan. 2021 156-160*

Oliveira, I., see Bandeira, V., *TCSII Jan. 2021 446-450*

Olivera, F., da Silva, L.S., and Petraglia, A., A 120 mV Supply, Triode-Regulated Femto-Watt CMOS Voltage Reference Design; *TCSII Feb. 2021 587-591*

Ortmanns, M., see Rajabzadeh, M., *TCSII Jan. 2021 111-115*

Ortmanns, M., see Luo, Y., *TCSII Jan. 2021 82-86*

Ost, L., see Bandeira, V., *TCSII Jan. 2021 446-450*

Ozbay, E., see Sutbas, B., *TCSII April 2021 1148-1152*

Ozdemir, R., see Sengul, M., *TCSII April 2021 1208-1212*

P

Padhy, P.K., see Trivedi, R., *TCSII March 2021 968-972*

Padilla-Cantoya, I., Molinar-Solis, J.E., Medina-Vazquez, A.S., Gurrola-Navarro, M.A., Rizo-Dominguez, L., and Gutierrez-Frias, E.F., Class AB Op-Amp With Accurate Static Current Control for Low and High Supply Voltages; *TCSII Aug. 2021 2775-2779*

Paily, R., see Bora, S., *TCSII June 2021 2132-2136*

Paim, G., see da Rosa, M.M., *TCSII Feb. 2021 597-601*

Paireder, T., Motz, C., Sadjina, S., and Huemer, M., A Robust Mixed-Signal Cancellation Approach for Even-Order Intermodulation Distortions in LTE-A/5G-Transceivers; *TCSII March 2021 923-927*

Paireder, T., see Motz, C., *TCSII March 2021 823-829*

Pal, A.K., see Xiong, X., *TCSII June 2021 2057-2061*

Pal, D., and Panigrahi, B.K., On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach; *TCSII July 2021 2468-2472*

Pal, S., Sri, D.D., Ki, W., and Islam, A., Highly Stable Low Power Radiation Hardened Memory-by-Design SRAM for Space Applications; *TCSII June 2021 2147-2151*

Pal, S., Mohapatra, S., Ki, W., and Islam, A., Soft-Error-Aware Read-Decoupled SRAM With Multi-Node Recovery for Aerospace Applications; *TCSII Oct. 2021 3336-3340*

Palani, R.K., see Nagulapalli, R., *TCSII April 2021 1088-1092*

Pallotta, A., see Amendola, G., *TCSII Sept. 2021 3098-3102*

Palmer, D.M., and Molnar, A.C., An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking; *TCSII May 2021 1680-1684*

Palumbo, G., see Ballo, A., *TCSII Aug. 2021 2895-2901*

Pamungkas, L., Wu, S., and Chiu, H., Equivalent Circuit Approach for Output Characteristic Design of Capacitive Power Transfer; *TCSII July 2021 2513-2517*

Pan, B., see Feng, W., *TCSII June 2021 1897-1901*

Pan, Q., see Zhu, J., *TCSII Sept. 2021 3053-3057*

Pan, Q., see Li, Z., *TCSII Sept. 2021 3058-3062*

Pan, W., see Liu, H., *TCSII Jan. 2021 211-215*

Pan, W., see Shi, J., *TCSII June 2021 2152-2156*

Pan, X., see Kumar, A., *TCSII April 2021 1353-1357*

Pan, Y., see Chen, T., *TCSII April 2021 1343-1347*

Panda, A.K., see Naik, B.S., *TCSII Jan. 2021 316-320*

Panda, G., see Panda, K.P., *TCSII March 2021 978-982*

Panda, K.P., Bana, P.R., and Panda, G., A Reduced Device Count Single DC Hybrid Switched-Capacitor Self-Balanced Inverter; *TCSII March 2021 978-982*

Pandey, P.K., and Singh, R., Fast Average-Consensus on Networks Using Heterogeneous Diffusion; *TCSII Nov. 2021 3421-3425*

Panella, M., see Cardarilli, G.C., *TCSII April 2021 1428-1432*

Pang, Z., Luo, W., Liu, G., and Han, Q., Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts; *TCSII Jan. 2021 426-430*

Pang, Z., Zheng, C., Sun, J., Han, Q., and Liu, G., Distance- and Velocity-Based Collision Avoidance for Time-Varying Formation Control of Second-Order Multi-Agent Systems; *TCSII April 2021 1253-1257*

Pang, Z., see Guo, H., *TCSII Oct. 2021 3306-3310*

Panigrahi, B.K., see Singh, B., *TCSII June 2021 1947-1951*

Panigrahi, B.K., see Pal, D., *TCSII July 2021 2468-2472*

Panigrahi, C.K., see Roy, T., *TCSII Dec. 2021 3587-3591*

Panja, S., see Bhowmick, S., *TCSII Jan. 2021 386-390*

Panuganti, K., see Arumalla, R.T., *TCSII Aug. 2021 2890-2894*

Papandreou, N., see Pozidis, H., *TCSII March 2021 844-850*

Park, B., see Song, E., *TCSII July 2021 2369-2373*

Park, B., see Jang, Y., *TCSII Oct. 2021 3366-3370*

Park, C., Tavares, Y.A., Lee, J., Wo, J., and Lee, M., 5th-Order Continuous-Time Low-Pass Filter Achieving 56 MHz Bandwidth 30.5 dBm IIP3 With a Novel Low-Distortion Amplifier; *TCSII June 2021 1768-1772*

Park, G., see Ryu, J., *TCSII May 2021 1700-1704*

Park, H., see Lee, S., *TCSII June 2021 1862-1866*

Park, H., see Chae, M., *TCSII July 2021 2409-2413*

Park, H., see Choi, Y., *TCSII Oct. 2021 3189-3193*

Park, I., see Hyun, Y., *TCSII July 2021 2645-2649*

Park, J., Jeong, G., and Hong, S., A Ka-Band Variable-Gain Phase Shifter With Multiple Vector Generators; *TCSII June 2021 1798-1802*

Park, J., Shin, Y., Choi, J., and Kim, S., A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters; *TCSII Nov. 2021 3386-3390*

Park, J., see Kim, T., *TCSII Dec. 2021 3582-3586*

Park, J.H., see Song, S., *TCSII Jan. 2021 436-440*

Park, J.K., Lee, J., Kim, S., and Ahn, C.K., Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach; *TCSII July 2021 2528-2532*

Park, K., see Lee, K., *TCSII Feb. 2021 622-626*

Park, K., see Im, H., *TCSII May 2021 1596-1599*

Park, S., Wang, S., and Hong, S., A K-Band Dual-Mode Common Gate Cross-Summing VG-LNA With Low Phase Variation; *TCSII July 2021 2438-2442*

Parker, A.E., see Chakraborty, S., *TCSII Jan. 2021 226-230*

Parmar, Y., and Sridharan, K., A High-Performance VLSI Architecture for a Self-Feedback Convolutional Neural Network; *TCSII Jan. 2021 456-460*

Parssinen, A., see Shaheen, R.A., *TCSII Feb. 2021 642-646*

Parvizi, M., see Pike, J., *TCSII Jan. 2021 231-235*

Pavan, S., and Shibata, H., Continuous-Time Pipelined Analog-to-Digital Converters: A Mini-Tutorial; *TCSII March 2021 810-815*

Pavlidis, V.F., see Dhananjay, K., *TCSII March 2021 837-843*

Paz, P., see Garrido, M., *TCSII March 2021 1003-1007*

Pedram, M., see Vahdat, S., *TCSII Oct. 2021 3346-3350*

Pedro, M., see Ntinis, V., *TCSII April 2021 1378-1382*

Pei, H., Yi, X., Zhou, H., and He, Y., Design of Ultra-Low Power Consumption Approximate 4–2 Compressors Based on the Compensation Characteristic; *TCSII Jan. 2021 461-465*

Pei, Z., see Yang, B., *TCSII Dec. 2021 3572-3576*

Peluso, V., see Rizzo, R.G., *TCSII Feb. 2021 672-676*

Peng, C., Yang, Z., Lin, Z., Wu, X., and Li, X., Reverse Bias Current Eliminated, Read-Separated, and Write-Enhanced Tunnel FET SRAM; *TCSII Jan. 2021 466-470*

Peng, C., see Lin, Z., *TCSII July 2021 2628-2632*

Peng, F., Zhang, Y., Kuang, R., and Xie, G., Spars: A Full Flow Quantum-Dot Cellular Automata Circuit Design Tool; *TCSII April 2021 1233-1237*

Peng, H., see Huang, G., *TCSII July 2021 2710-2714*

Peng, H., see Huang, G., *TCSII Oct. 2021 3361-3365*

Peng, J., see Shi, W., *TCSII July 2021 2247-2251*

Peng, W., see Wang, H., *TCSII June 2021 1982-1986*

Peng, X., see Zhang, M., *TCSII Jan. 2021 481-485*

Peng, X., *see* Meng, J., *TCSII May 2021 1576-1580*
Peng, Y., *see* Deng, Q., *TCSII Aug. 2021 2870-2874*
Peng, Z., *see* Li, B., *TCSII April 2021 1303-1307*
Perez, C., Quintero, A., Amaral, P., Wiesbauer, A., and Hernandez, L., A 73dB-A Audio VCO-ADC Based on a Maximum Length Sequence Generator in 130nm CMOS; *TCSII Oct. 2021 3194-3198*
Perkins, E., *see* Rhea, B.K., *TCSII March 2021 1028-1032*
Perri, S., Spagnolo, F., Frustaci, F., and Corsonello, P., Accuracy Improved Low-Energy Multi-Bit Approximate Adders in QCA; *TCSII Nov. 2021 3456-3460*
Pershin, Y.V., *see* Slipko, V.A., *TCSII June 2021 2167-2171*
Petraglia, A., *see* Olivera, F., *TCSII Feb. 2021 587-591*
Petranovic, N., *see* Cantoni, A., *TCSII Jan. 2021 371-375*
Petricli, I., Zhang, H., Monaco, E., Albasini, G., and Mazzanti, A., A 112 Gb/s PAM-4 RX Front-End With Unlocked Decision Feedback Equalizer; *TCSII Jan. 2021 256-260*
Phalgun, P.S., *see* Mohan, P.V.A., *TCSII April 2021 1418-1422*
Pham, C., *see* Sarmiento, M., *TCSII Sept. 2021 3182-3186*
Pham, T.X., Tan, T.N., and Lee, H., Minimal-Set Trellis Min-Max Decoder Architecture for Nonbinary LDPC Codes; *TCSII Jan. 2021 216-220*
Pham, X.T., Duong, D.N., Nguyen, N.T., Van Truong, N., and Lee, J., A 4.5 GΩ-Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz ; *TCSII Jan. 2021 116-120*
Pham, X.T., Nguyen, V., Kim, J., and Lee, J., A 0.52 μW, 38 nV/√Hz Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage; *TCSII June 2021 1793-1797*
Picos, R., *see* Svetoslavov, G., *TCSII April 2021 1463-1466*
Pike, J., Parvizi, M., Berton, D., Ben-Hamida, N., Aouini, S., and Plett, C., New Charge-Steering DFEs in 55-nm CMOS; *TCSII Jan. 2021 231-235*
Pilipko, M.M., *see* Yenuchenko, M.S., *TCSII March 2021 883-887*
Pilipko, M.M., and Morozov, D.V., The XOR-MAJ Thermometer-to-Binary Encoder Structure Stable to Bubble Errors ; *TCSII July 2021 2613-2617*
Pimentel, C., *see* Souza, C.E.C., *TCSII Jan. 2021 491-495*
Pimentel, C., *see* Souza, C.E.C., *TCSII April 2021 1472-1476*
Pineda de Gyvez, J., *see* Singh, K., *TCSII Jan. 2021 5-11*
Ping, L., *see* van Wyk, M.A., *TCSII Oct. 2021 3234-3235*
Plett, C., *see* Pike, J., *TCSII Jan. 2021 231-235*
Pokharel, R.K., *see* Barakat, A., *TCSII Feb. 2021 632-636*
Pokharel, R.K., *see* Jahan, N., *TCSII Dec. 2021 3513-3517*
Potschka, J., *see* Maiwald, T., *TCSII July 2021 2277-2281*
Pozidis, H., Papandreou, N., and Stanisavljevic, M., Circuit and System-Level Aspects of Phase Change Memory; *TCSII March 2021 844-850*
Prefasi, E., *see* Rodriguez-Perez, A., *TCSII Jan. 2021 56-62*
Premaratne, S., *see* Edussooriya, C.U.S., *TCSII July 2021 2735-2741*
Prethl, H., *see* Motz, C., *TCSII March 2021 823-829*
Prospero, L., Costa, R., and Badia, L., Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents; *TCSII Dec. 2021 3488-3492*
Psychalinos, C., *see* Elwakil, A.S., *TCSII July 2021 2685-2689*
Psychogiou, D., *see* Gomez-Garcia, R., *TCSII July 2021 2429-2433*
Pu, C., *see* Gao, X., *TCSII April 2021 1477-1481*
Pu, J., Goh, W.L., Nambiar, V.P., and Do, A.T., A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations; *TCSII Jan. 2021 471-475*
Pu, J., Goh, W.L., Nambiar, V.P., Chong, Y.S., and Do, A.T., A Low-Cost High-Throughput Digital Design of Biorealistic Spiking Neuron; *TCSII April 2021 1398-1402*
Pu, J., *see* Nambiar, V.P., *TCSII Sept. 2021 3148-3152*
Puglisi, C., *see* Bansal, S., *TCSII Jan. 2021 106-110*
Pulici, P., *see* Lupo, N., *TCSII Sept. 2021 3138-3142*

Q

Qi, G., *see* Liu, T., *TCSII Aug. 2021 2880-2884*
Qi, W., Zong, G., and Karimi, H.R., SMC for Nonlinear Stochastic Switching Systems With Quantization ; *TCSII June 2021 2032-2036*
Qian, J., *see* Chen, J., *TCSII Feb. 2021 612-616*

Qian, J., Tian, F., Zhang, S., and Liu, R., A Novel Conformal Design for Multi-Sensor System Synthesis; *TCSII April 2021 1532-1536*
Qian, J., Zhang, A., Tian, F., and Zhang, Y., A Pre-Concentration System Design for Electronic Nose via Finite Element Method; *TCSII Dec. 2021 3592-3596*
Qian, K., *see* Qian, L., *TCSII June 2021 1832-1836*
Qian, L., Qian, K., Shi, Y., Xia, H., Wang, J., and Xia, Y., TSV Based Orthogonal Coils With High Misalignment Tolerance for Inductive Power Transfer in Biomedical Implants; *TCSII June 2021 1832-1836*
Qian, Y., *see* Liu, Y., *TCSII Aug. 2021 2982-2986*
Qiao, D., *see* Bai, C., *TCSII Dec. 2021 3508-3512*
Qiao, F., *see* Xu, H., *TCSII Feb. 2021 627-631*
Qiao, F., *see* Nazhamaiti, M., *TCSII Sept. 2021 3078-3082*
Qiao, H., Zhan, C., and Chen, Y., A -40 °C to 140 °C Picowatt CMOS Voltage Reference With 0.25-V Power Supply; *TCSII Sept. 2021 3118-3122*
Qiao, J., *see* Li, Z., *TCSII June 2021 1763-1767*
Qiao, L., *see* Chen, X., *TCSII June 2021 2077-2081*
Qin, Z., Tao, J., and Xia, Y., A Proportionate Recursive Least Squares Algorithm and Its Performance Analysis; *TCSII Jan. 2021 506-510*
Qiu, F., Zhu, H., Wu, L., Che, W., and Xue, Q., A 15–38 GHz Vector-Summing Phase-Shifter With 360° Phase-Shifting Range Using Improved I/Q Generator; *TCSII Oct. 2021 3199-3203*
Qiu, J., *see* Zhang, Y., *TCSII Jan. 2021 411-415*
Qiu, L., and Zhu, L., Synthesis Design of Filtering Differential Phase Shifters of Independently Suppressed Harmonics; *TCSII Aug. 2021 2760-2764*
Qiu, X., *see* Fu, W., *TCSII July 2021 2352-2356*
Qiu, Z., *see* Liu, H., *TCSII Jan. 2021 211-215*
Qu, D., *see* Deng, Q., *TCSII Aug. 2021 2870-2874*
Qu, M., *see* Jia, W., *TCSII Jan. 2021 496-500*
Qu, W., *see* Cao, H., *TCSII July 2021 2287-2291*
Qu, X., *see* Ma, D., *TCSII Feb. 2021 727-731*
Qu, X., *see* Ma, D., *TCSII Dec. 2021 3567-3571*
Qu, Z., *see* Gao, Z., *TCSII Feb. 2021 782-786*
Quintana, J.M., *see* Nunez, J., *TCSII Oct. 2021 3356-3360*
Quintero, A., *see* Perez, C., *TCSII Oct. 2021 3194-3198*

R

Radfar, M., *see* Nakhlestani, A., *TCSII Feb. 2021 692-696*
Radhika, S., Albu, F., and Chandrasekar, A., Steady State Mean Square Analysis of Standard Maximum Versoria Criterion Based Adaptive Algorithm ; *TCSII April 2021 1547-1551*
Radin, R.L., Sawan, M., and Schneider, M.C., An Accurate Zero-Current-Switching Circuit for Ultra-Low-Voltage Boost Converters; *TCSII June 2021 1773-1777*
Radwan, A.G., *see* Sayed, W.S., *TCSII Nov. 2021 3466-3470*
Ragonese, E., Fattori, M., and Cantatore, E., Printed Organic Electronics on Flexible Foil: Circuit Design and Emerging Applications; *TCSII Jan. 2021 42-48*
Rahajandraibe, W., *see* Ravelo, B., *TCSII July 2021 2364-2368*
Rahimi, A., *see* Karunaratne, G., *TCSII May 2021 1725-1729*
Rahkonen, T., *see* Shaheen, R.A., *TCSII Feb. 2021 642-646*
Raissi, T., *see* Zhang, J., *TCSII Oct. 2021 3286-3290*
Rajabzadeh, M., Haberle, M., Becker, J., and Ortmanns, M., Comparison Study of DAC Realizations in Current Input CTEΔ Modulators; *TCSII Jan. 2021 111-115*
Rajendran, J., *see* Sanabria-Borbon, A., *TCSII Jan. 2021 36-41*
Rajendran, J., *see* Mariappan, S., *TCSII April 2021 1178-1182*
Rajendran, J., *see* Chong, G., *TCSII June 2021 1743-1747*
Rajendran, J., *see* Mariappan, S., *TCSII Nov. 2021 3381-3385*
Rakka, M., Fouda, M.E., Kanj, R., Eltawil, A., and Kurdahi, F.J., Design Exploration of Sensing Techniques in 2T-2R Resistive Ternary CAMs; *TCSII Feb. 2021 762-766*
Raman, B., *see* Gyanendra, ., *TCSII April 2021 1373-1377*
Ramchand, R., *see* Kobaku, T., *TCSII Jan. 2021 286-290*
Ramiah, H., *see* Mariappan, S., *TCSII April 2021 1178-1182*
Ramiah, H., *see* Chong, G., *TCSII June 2021 1743-1747*

- Ran, G.**, Liu, J., Li, C., Chen, L., and Li, D., Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems; *TCSII Jan. 2021 276-280*
- Rana, N.**, Banerjee, S., Giri, S.K., Trivedi, A., and Williamson, S.S., Modeling, Analysis and Implementation of an Improved Interleaved Buck-Boost Converter; *TCSII July 2021 2588-2592*
- Rao, L.**, Zhang, B., and Zhao, J., An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network; *TCSII Aug. 2021 2957-2961*
- Rappaport, T.S.**, see Akram, N., *TCSII Aug. 2021 2840-2844*
- Rappaport, T.S.**, see Shakya, D., *TCSII Sept. 2021 3043-3047*
- Rashdan, M.**, see Abd-Elkader, A.A.H., *TCSII June 2021 2137-2141*
- Ravelo, B.**, Wan, F., Li, N., Xu, Z., Thakur, P., and Thakur, A., Diakoptics Modelling Applied to Flying Bird-Shape NGD Microstrip Circuit; *TCSII Feb. 2021 637-641*
- Ravelo, B.**, Wan, F., Nebhen, J., Rahajandraibe, W., and Lallechere, S., Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function; *TCSII July 2021 2364-2368*
- Rawat, K.**, see Aggrawal, E., *TCSII Aug. 2021 2800-2804*
- Rawat, U.**, see Srivastava, A., *TCSII April 2021 1108-1112*
- Ray, D.**, see Deb, T., *TCSII Jan. 2021 516-520*
- Raychowdhury, A.**, see Gong, M., *TCSII April 2021 1408-1412*
- Re, M.**, see Cardarilli, G.C., *TCSII April 2021 1428-1432*
- Re, M.**, see Giardino, D., *TCSII June 2021 1912-1916*
- records, L.V.**, see Thomas, M., *TCSII Aug. 2021 2912-2916*
- Reddy, V.B.**, and Harischandrapa, N., Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter; *TCSII Jan. 2021 346-350*
- Regnacq, L.**, Wu, Y., Neshatvar, N., Jiang, D., and Demosthenous, A., A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS; *TCSII Sept. 2021 3133-3137*
- Reis, R.**, see Bandeira, V., *TCSII Jan. 2021 446-450*
- Ren, H.**, see Mu, Y., *TCSII July 2021 2453-2457*
- Ren, T.**, see Han, S., *TCSII Aug. 2021 2902-2906*
- Ren, Y.**, see Chen, X., *TCSII June 2021 2077-2081*
- Reverter, F.**, and Gasulla, M., A Novel General-Purpose Theorem for the Analysis of Linear Circuits; *TCSII Jan. 2021 63-66*
- Reza, M.**, see Kumar, A., *TCSII April 2021 1353-1357*
- Rhea, B.K.**, Harrison, R.C., Werner, F.T., Perkins, E., and Dean, R.N., Approximating an Exactly Solvable Chaotic Oscillator Using a Colpitts Oscillator Circuit; *TCSII March 2021 1028-1032*
- Rhee, W.**, see Zhao, J., *TCSII April 2021 1143-1147*
- Rho, D.**, see Kim, M., *TCSII March 2021 908-912*
- Richelli, A.**, Colalongo, L., and Kovacs-Vajna, Z., EMI Effect in Voltage-to-Time Converters; *TCSII April 2021 1078-1082*
- Rincon-Mora, G.A.**, see Yang, S., *TCSII April 2021 1248-1252*
- Rituraj, G.**, and Kumar, P., A New Magnetic Structure of Unipolar Rectangular Coils in WPT Systems to Minimize the Ferrite Volume While Maintaining Maximum Coupling; *TCSII June 2021 2072-2076*
- Rivet, F.**, see Asprilla, A., *TCSII Feb. 2021 602-606*
- Rizo-Dominguez, L.**, see Padilla-Cantoya, I., *TCSII Aug. 2021 2775-2779*
- Rizwan, S.**, Gudem, P.S., Holland, K., Kienle, D., and Vaidyanathan, M., Expressions for the Harmonic Transfer Functions of N-Path Filters With Arbitrary Source and Load Impedances; *TCSII March 2021 903-907*
- Rizzo, R.G.**, Peluso, V., and Calimera, A., TVFS: Topology Voltage Frequency Scaling for Reliable Embedded ConvNets; *TCSII Feb. 2021 672-676*
- Rodriguez, R.**, see Ntinias, V., *TCSII April 2021 1378-1382*
- Rodriguez-Perez, A.**, Torres, L.M., Prefasi, E., and de Aranda, R.P., Multi-Gigabit Transceivers for Optical Data Communications From the Standardization Perspective; *TCSII Jan. 2021 56-62*
- Rogers, J.**, see Li, C., *TCSII June 2021 1987-1991*
- Rong, K.**, see Bao, B., *TCSII Aug. 2021 2992-2996*
- Rong, N.**, Wang, Z., Xie, X., and Ding, S., Event-Triggered Synchronization for Discrete-Time Neural Networks With Unknown Delays; *TCSII Oct. 2021 3296-3300*
- Rosa, F.**, see Bandeira, V., *TCSII Jan. 2021 446-450*
- Rosato, A.**, see Cardarilli, G.C., *TCSII April 2021 1428-1432*
- Roshdy, M.**, see Sayed, W.S., *TCSII Nov. 2021 3466-3470*
- Rossi, D.**, see Elnaqib, A., *TCSII Jan. 2021 156-160*
- Rout, R.**, and Subudhi, B., Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle; *TCSII Jan. 2021 416-420*
- Roy, S.**, see Chatterjee, S., *TCSII April 2021 1068-1072*
- Roy, T.**, Tesfay, M.W., Nayak, B., and Panigrahi, C.K., A 7-Level Switched Capacitor Multilevel Inverter With Reduced Switches and Voltage Stresses; *TCSII Dec. 2021 3587-3591*
- Ruan, S.**, see Chen, Y., *TCSII Feb. 2021 752-756*
- Rubino, R.**, see Toledo, P., *TCSII March 2021 816-822*
- Rubio, A.**, see Ntinias, V., *TCSII April 2021 1378-1382*
- Rutzig, M.B.**, see Jordan, M.G., *TCSII May 2021 1655-1659*
- Ryu, J.**, Park, G., Im, D., Kim, J., and Yoo, H., A 0.82 μ W CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices; *TCSII May 2021 1700-1704*

S

- Sabri, M.**, Shabani, A., and Alizadeh, B., SAT-Based Integrated Hardware Trojan Detection and Localization Approach Through Path-Delay Analysis; *TCSII Aug. 2021 2850-2854*
- Sadjina, S.**, see Paireder, T., *TCSII March 2021 923-927*
- Safari, L.**, see Stornelli, V., *TCSII Jan. 2021 72-76*
- Saha, B.**, see Islam, R., *TCSII April 2021 1383-1387*
- Sahoo, B.D.**, see Ghosh, S., *TCSII July 2021 2257-2261*
- Sahoo, S.**, see Kobaku, T., *TCSII Jan. 2021 286-290*
- Sai Krishna, M.V.**, see Kumar, G.G., *TCSII March 2021 943-947*
- Said, L.A.**, see Sayed, W.S., *TCSII Nov. 2021 3466-3470*
- Salehi, Z.**, Karimaghaee, P., and Khooban, N.G., Mixed Positive-Bounded Balanced Truncation; *TCSII July 2021 2488-2492*
- Salgado, G.M.**, O'Hare, D., and O'Connell, I., Recent Advances and Trends in Noise Shaping SAR ADCs; *TCSII Feb. 2021 545-549*
- Salman, E.**, see Dhananjay, K., *TCSII March 2021 837-843*
- Samuel, E.R.**, and Deveerasetty, K.K., Laguerre Expansion Series Based Reduced Order Interval Systems; *TCSII June 2021 2022-2026*
- Sanabria-Borbon, A.**, Jayasankaran, N.G., Hu, J., Rajendran, J., and Sanchez-Sinencio, E., Analog/RF IP Protection: Attack Models, Defense Techniques, and Challenges; *TCSII Jan. 2021 36-41*
- Sanchez-Macian, A.**, see Garcia-Herrero, F., *TCSII April 2021 1438-1442*
- Sanchez-Sinencio, E.**, see Sanabria-Borbon, A., *TCSII Jan. 2021 36-41*
- Sanchez-Sinencio, E.**, see Lee, S., *TCSII March 2021 830-836*
- Sandeep, N.**, A 13-Level Switched-Capacitor-Based Boosting Inverter; *TCSII March 2021 998-1002*
- Sandeep, N.**, see Sathik, M.J., *TCSII April 2021 1358-1362*
- Sandell, M.**, and Ismail, A., Machine Learning for LLR Estimation in Flash Memory With LDPC Codes; *TCSII Feb. 2021 792-796*
- Sandell, M.**, see Ismail, A., *TCSII July 2021 2394-2398*
- Sangalang, R.G.B.**, see Wang, C., *TCSII Dec. 2021 3478-3482*
- Sangam, R.S.**, Dash, S., and Kshetrimayum, R.S., Ultra-Broadband Bandpass Filter Using Linearly Tapered Coupled-Microstrip Line and Open Loop Defected Ground Structure; *TCSII Jan. 2021 181-185*
- Santosh, S.V.S.**, and Darak, S.J., Intelligent and Reconfigurable Architecture for KL Divergence-Based Multi-Armed Bandit Algorithms; *TCSII March 2021 1008-1012*
- Sarker, P.**, see Bandyopadhyay, A., *TCSII June 2021 1892-1896*
- Sarker, A.**, Kermani, M.M., and Azarderakhsh, R., Fault Detection Architectures for Inverted Binary Ring-LWE Construction Benchmarked on FPGA; *TCSII April 2021 1403-1407*
- Sarmiento, M.**, Nguyen, K., Duran, C., Hoang, T., Serrano, R., Hoang, V., Tran, X., Ishibashi, K., and Pham, C., A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications; *TCSII Sept. 2021 3182-3186*
- Sathik, M.J.**, Sandeep, N., Siddique, M.D., Almakhles, D., and Mekhilef, S., Compact Seven-Level Boost Type Inverter Topology; *TCSII April 2021 1358-1362*
- Sawan, M.**, see Radin, R.L., *TCSII June 2021 1773-1777*

- Saxena, V.**, Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration; *TCSII Feb. 2021* 581-586
- Sayed, W.S.**, Roshdy, M., Said, L.A., and Radwan, A.G., Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control; *TCSII Nov. 2021* 3466-3470
- Schmitz, L.**, Martins, D.C., and Coelho, R.F., A Simple, Accurate Small-Signal Model of a Coupled-Inductor-Based DC-DC Converter Including the Leakage Inductance Effect; *TCSII July 2021* 2533-2537
- Schneider, M.C.**, see Radin, R.L., *TCSII June 2021* 1773-1777
- Schneider, M.C.**, see Daros Fernandes, T., *TCSII July 2021* 2302-2306
- Sebastian, A.**, see Karunaratne, G., *TCSII May 2021* 1725-1729
- Sebastian, A.**, see Khaddam-Aljameh, R., *TCSII Dec. 2021* 3522-3526
- Seidel, H.B.**, see da Rosa, M.M., *TCSII Feb. 2021* 597-601
- Semyonov, E.V.**, Simple Behavioral Model of Baseband Pulse Devices in the Form of a Second-Order Nonlinear Recursive Filter; *TCSII June 2021* 2192-2196
- Sen, S.**, see Srivastava, A., *TCSII April 2021* 1108-1112
- Sengul, M.**, Cakmak, G., and Ozdemir, R., Phase Shifting Properties of High-Pass and Low-Pass Mixed-Element Two-Ports; *TCSII April 2021* 1208-1212
- Sengul, M.**, Narrower Band Matching With Low Quality Factor Values; *TCSII July 2021* 2434-2437
- Sengul, M.**, Solution of Lossless Broadband Matching Problems via Insertion Loss Method; *TCSII Oct. 2021* 3236-3240
- Sengupta, S.**, and Johnston, M.L., A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization; *TCSII April 2021* 1073-1077
- Seo, J.**, see Meng, J., *TCSII May 2021* 1576-1580
- Seo, J.**, see Lee, S., *TCSII June 2021* 1862-1866
- Serrano, R.**, see Sarmiento, M., *TCSII Sept. 2021* 3182-3186
- Settino, F.**, see Fassio, L., *TCSII April 2021* 1393-1397
- Sevimli, O.**, see Chakraborty, S., *TCSII Jan. 2021* 226-230
- Shabani, A.**, and Alizadeh, B., Enhancing Hardware Trojan Detection Sensitivity Using Partition-Based Shuffling Scheme; *TCSII Jan. 2021* 266-270
- Shabani, A.**, see Sabri, M., *TCSII Aug. 2021* 2850-2854
- Shafique, M.**, see Castro-Godinez, J., *TCSII Aug. 2021* 2845-2849
- Shahabuddin, S.**, Mammela, A., Juntti, M., and Silven, O., ASIP for 5G and Beyond: Opportunities and Vision; *TCSII March 2021* 851-857
- Shaheen, R.A.**, Rahkonen, T., and Parssinen, A., Millimeter-wave Frequency Reconfigurable Low Noise Amplifiers for 5G; *TCSII Feb. 2021* 642-646
- Shaik, R.A.**, see Khan, M.T., *TCSII Feb. 2021* 652-656
- Shaikh, M.A.**, see Bhattacharjee, S.S., *TCSII Aug. 2021* 3002-3006
- Shakya, D.**, Wu, T., Knox, M.E., and Rappaport, T.S., A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance; *TCSII Sept. 2021* 3043-3047
- Shan, W.**, see Cai, Z., *TCSII Sept. 2021* 3177-3181
- Shan, Z.**, Ding, X., Jatskevich, J., and Tse, C.K., Synthesis of Multi-Input Multi-Output DC/DC Converters Without Energy Buffer Stages; *TCSII Feb. 2021* 712-716
- Shang, D.**, see Wang, L., *TCSII May 2021* 1640-1644
- Shang, J.**, see Zhou, J., *TCSII April 2021* 1348-1352
- Shang, X.**, see Cai, Z., *TCSII Sept. 2021* 3177-3181
- Shanmugam, L.**, and Joo, Y.H., Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method; *TCSII Jan. 2021* 301-305
- Shao, Q.**, and Chen, F., Design of 2×8 Filtering Butler Matrix With Arbitrary Power Distribution; *TCSII Dec. 2021* 3527-3531
- Shao, X.**, see Wang, H., *TCSII July 2021* 2548-2552
- Sharma, R.K.**, Xiong, X., Kamal, S., and Ghosh, S., Discrete-Time Super-Twisting Fractional-Order Differentiator With Implicit Euler Method; *TCSII April 2021* 1238-1242
- Sharma, S.K.**, see Joshi, A., *TCSII July 2021* 2317-2321
- Sharma, V.**, see Veerendranath, P.S., *TCSII June 2021* 1748-1752
- Sharon Hu, X.**, see Wu, B., *TCSII Feb. 2021* 617-621
- Sheikhahmadi, S.**, Moezzi, M., and Ghafoorifard, H., A Low Phase Noise Class-C Oscillator With Improved Resonator and Robust Start-Up; *TCSII Jan. 2021* 92-96
- Shen, G.**, Che, W., Feng, W., Shi, Y., Xu, F., and Xue, Q., Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits; *TCSII April 2021* 1123-1127
- Shen, G.**, Che, W., Feng, W., Shi, Y., Shen, Y., and Xu, F., A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology; *TCSII June 2021* 1778-1782
- Shen, J.**, see Wu, C., *TCSII Oct. 2021* 3321-3325
- Shen, Y.**, see Lin, I., *TCSII April 2021* 1413-1417
- Shen, Y.**, see Shen, G., *TCSII June 2021* 1778-1782
- Shen, Y.**, see Wang, L., *TCSII Oct. 2021* 3266-3270
- Sheng, A.**, see Liu, T., *TCSII Aug. 2021* 2880-2884
- Shi, C.**, see He, W., *TCSII March 2021* 1013-1017
- Shi, C.**, Wang, T., He, J., Zhang, J., Liu, L., and Wu, N., DeepTempo: A Hardware-Friendly Direct Feedback Alignment Multi-Layer Tempotron Learning Rule for Deep Spiking Neural Networks; *TCSII May 2021* 1581-1585
- Shi, C.R.**, see Liu, C., *TCSII May 2021* 1705-1709
- Shi, J.**, see Chen, W., *TCSII March 2021* 913-917
- Shi, J.**, Liu, S., Chen, B., and Yu, L., Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids; *TCSII March 2021* 993-997
- Shi, J.**, Zhang, X., Ma, P., Pan, W., Li, P., and Tang, Z., Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal; *TCSII June 2021* 2152-2156
- Shi, J.**, Cooperative Control for Nonlinear Multi-Agent Systems Based on Event-Triggered Scheme; *TCSII June 2021* 1977-1981
- Shi, J.**, Nie, Y., Zhang, W., and Wu, Y., Differential Filtering Phase Shifter With Wide Common-Mode Suppression Bandwidth and High Frequency Selectivity; *TCSII July 2021* 2379-2383
- Shi, J.**, see Liu, W., *TCSII Aug. 2021* 2830-2834
- Shi, K.**, see Dong, S., *TCSII June 2021* 1967-1971
- Shi, R.**, Quantum Multiparty Privacy Set Intersection Cardinality; *TCSII April 2021* 1203-1207
- Shi, R.**, see Li, H., *TCSII May 2021* 1685-1689
- Shi, W.**, see Feng, L., *TCSII June 2021* 1877-1881
- Shi, W.**, Peng, J., Feng, L., Gao, Y., He, S., and Yue, C.P., Design and Analysis of Continuous-Mode Doherty Power Amplifier With Second Harmonic Control; *TCSII July 2021* 2247-2251
- Shi, W.**, see Shi, W., *TCSII July 2021* 2247-2251
- Shi, X.**, Zhou, Z., Zhou, D., and Li, R., Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation; *TCSII March 2021* 983-987
- Shi, X.**, see Zhu, W., *TCSII Oct. 2021* 3311-3315
- Shi, Y.**, Feng, W., Wang, H., Zheng, S., Zhou, M., and Wu, Q., Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits; *TCSII March 2021* 878-882
- Shi, Y.**, see Shen, G., *TCSII April 2021* 1123-1127
- Shi, Y.**, see Qian, L., *TCSII June 2021* 1832-1836
- Shi, Y.**, see Shen, G., *TCSII June 2021* 1778-1782
- Shi, Z.**, see Huang, Z., *TCSII Aug. 2021* 2780-2784
- Shibata, H.**, see Pavan, S., *TCSII March 2021* 810-815
- Shihab, S.A.**, see Huq, S.M.I., *TCSII April 2021* 1098-1102
- Shim, J.**, see Jeong, J., *TCSII July 2021* 2322-2326
- Shimaoka, K.**, see Funayama, K., *TCSII Oct. 2021* 3251-3255
- Shin, J.**, see Kim, T., *TCSII Jan. 2021* 451-455
- Shin, K.**, Jee, D., and Jeon, D., A 65nm 0.6–1.2V Low-Dropout Regulator Using Voltage-Difference-to-Time Converter With Direct Output Feedback; *TCSII Jan. 2021* 67-71
- Shin, Y.**, see Park, J., *TCSII Nov. 2021* 3386-3390
- Shmaliy, Y.S.**, see Zhao, S., *TCSII April 2021* 1527-1531
- Shoaran, M.**, see Taufique, Z., *TCSII May 2021* 1720-1724
- Shor, J.**, see Lisha, L., *TCSII March 2021* 863-867
- Shou, Y.**, see Feng, Y., *TCSII July 2021* 2593-2597
- Shrestha, R.**, see Chaurasiya, R.B., *TCSII April 2021* 1198-1202
- Shrestha, R.**, see Verma, A., *TCSII Aug. 2021* 2835-2839
- Shrimali, H.**, see Joshi, A., *TCSII July 2021* 2317-2321
- Shu, L.**, see Ma, D., *TCSII Feb. 2021* 727-731
- Shu, L.**, see Ma, D., *TCSII Dec. 2021* 3567-3571

- Shu, Y.**, *see* Zhang, H., *TCSII May 2021 1695-1699*
- Shu, Y.**, *see* Deng, Q., *TCSII Sept. 2021 3167-3171*
- Shukla, P.**, *see* Dhananjay, K., *TCSII March 2021 837-843*
- Shum, K.**, *see* Le Zhang, Q., *TCSII June 2021 1922-1926*
- Si, G.**, *see* Liu, Y., *TCSII June 2021 2177-2181*
- Si, X.**, *see* Wang, L., *TCSII May 2021 1640-1644*
- Siddique, M.D.**, *see* Sathik, M.J., *TCSII April 2021 1358-1362*
- Silva, T.T.P.**, Igreja, F., Lara, P., Tarrataca, L., Kar, A., and Haddad, D.B., On the Skewness of the LMS Adaptive Weights; *TCSII Aug. 2021 3022-3026*
- Silva-Martinez, J.**, Liu, X., and Zhou, D., Recent Advances on Linear Low-Dropout Regulators; *TCSII Feb. 2021 568-573*
- Silven, O.**, *see* Shahabuddin, S., *TCSII March 2021 851-857*
- Sim, J.**, *see* Lee, S., *TCSII June 2021 1862-1866*
- Sim, J.**, *see* Bae, S., *TCSII Sept. 2021 3063-3067*
- Sim, J.**, *see* Choi, Y., *TCSII Oct. 2021 3189-3193*
- Singh, A.**, and Mandal, M.K., Parasitic Compensation and Hence Isolation Improvement of PIN Diode-Based Switches; *TCSII Jan. 2021 97-101*
- Singh, B.**, Kumar, N., and Panigrahi, B.K., Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation; *TCSII June 2021 1947-1951*
- Singh, K.**, and Pineda de Gyvez, J., Twenty Years of Near/Sub-Threshold Design Trends and Enablement; *TCSII Jan. 2021 5-11*
- Singh, R.**, *see* Pandey, P.K., *TCSII Nov. 2021 3421-3425*
- Singh, S.**, J., S.N., and Srivastava, N., Effect of Various Delay Line Ratios and Their Non-Linearity on the Performance of DIFM; *TCSII June 2021 1907-1911*
- Sirakoulis, G.C.**, *see* Ntinias, V., *TCSII April 2021 1378-1382*
- Siriburanon, T.**, *see* Hu, Y., *TCSII Feb. 2021 538-544*
- Slipko, V.A.**, and Pershin, Y.V., Importance of the Window Function Choice for the Predictive Modelling of Memristors; *TCSII June 2021 2167-2171*
- Snelcer, L.**, Matic, T., and Herceg, M., A Tunable CMOS IR-UWB Pulse Generator Based on Feedback Controlled Oscillator Switching; *TCSII June 2021 1902-1906*
- So, H.C.**, *see* Yang, C., *TCSII April 2021 1492-1496*
- Song, C.**, *see* Li, J., *TCSII Aug. 2021 2997-3001*
- Song, E.**, Park, B., and Kwon, K., 2.4-GHz Low-Power Low-IF Receiver With a Quadrature Local Oscillator Buffer for Bluetooth Low Energy Applications; *TCSII July 2021 2369-2373*
- Song, K.**, *see* Fan, M., *TCSII June 2021 1758-1762*
- Song, K.**, *see* Fan, M., *TCSII July 2021 2424-2428*
- Song, P.**, *see* Zhao, H., *TCSII Dec. 2021 3602-3606*
- Song, S.**, Park, J.H., Zhang, B., and Song, X., Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle; *TCSII Jan. 2021 436-440*
- Song, X.**, *see* Song, S., *TCSII Jan. 2021 436-440*
- Song, Y.**, *see* Han, T., *TCSII July 2021 2603-2607*
- Song, Z.**, *see* Guo, J., *TCSII Jan. 2021 146-150*
- Sonkusale, S.**, *see* Wang, W., *TCSII June 2021 1803-1806*
- Souza, C.E.C.**, Chaves, D.P.B., and Pimentel, C., One-Dimensional Pseudo-Chaotic Sequences Based on the Discrete Arnold's Cat Map Over \mathbb{Z}_3^m ; *TCSII Jan. 2021 491-495*
- Souza, C.E.C.**, Campello, R., Pimentel, C., and Chaves, D.P.B., Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding; *TCSII April 2021 1472-1476*
- Spagnolo, F.**, *see* Perri, S., *TCSII Nov. 2021 3456-3460*
- Spano, S.**, *see* Cardarilli, G.C., *TCSII April 2021 1428-1432*
- Spano, S.**, *see* Giardino, D., *TCSII June 2021 1912-1916*
- Sri, D.D.**, *see* Pal, S., *TCSII June 2021 2147-2151*
- Sridharan, K.**, *see* Parmar, Y., *TCSII Jan. 2021 456-460*
- Srivastava, A.**, Chatterjee, B., Rawat, U., He, Y., Weinstein, D., and Sen, S., Analysis and Design Considerations for Achieving the Fundamental Limits of Phase Noise in mmWave Oscillators With On-Chip MEMS Resonator; *TCSII April 2021 1108-1112*
- Srivastava, N.**, *see* Singh, S., *TCSII June 2021 1907-1911*
- Stanisavljevic, M.**, *see* Pozidis, H., *TCSII March 2021 844-850*
- Staszewski, R.B.**, *see* Nikandish, G.R., *TCSII Jan. 2021 246-250*
- Staszewski, R.B.**, *see* Hu, Y., *TCSII Feb. 2021 538-544*
- Staszewski, R.B.**, *see* Ghaedrahmati, H., *TCSII Sept. 2021 3113-3117*
- Stavrinos, S.G.**, *see* Svetoslavov, G., *TCSII April 2021 1463-1466*
- Steiner, L.**, *see* Sudarshan, C., *TCSII May 2021 1615-1619*
- Stornelli, V.**, Safari, L., Barile, G., and Ferri, G., A New Extremely Low Power Temperature Insensitive Electronically Tunable VCII-Based Grounded Capacitance Multiplier; *TCSII Jan. 2021 72-76*
- Strong, M.**, *see* Bhatheja, K., *TCSII May 2021 1690-1694*
- Studer, C.**, *see* Mirfarshbafan, S.H., *TCSII May 2021 1715-1719*
- Su, W.**, *see* Liu, B., *TCSII Jan. 2021 406-410*
- Su, Y.**, and Zheng, C., A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization; *TCSII Jan. 2021 326-330*
- Subudhi, B.**, *see* Rout, R., *TCSII Jan. 2021 416-420*
- Sudarshan, C.**, Steiner, L., Jung, M., Lappas, J., Weis, C., and Wehn, N., A Novel DRAM Architecture for Improved Bandwidth Utilization and Latency Reduction Using Dual-Page Operation; *TCSII May 2021 1615-1619*
- Sull, J.**, *see* Yoon, C., *TCSII Jan. 2021 136-140*
- Sun, C.**, Liu, C., Feng, X., and Jiao, X., Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control; *TCSII July 2021 2558-2562*
- Sun, G.**, *see* Liu, K., *TCSII June 2021 2047-2051*
- Sun, H.**, *see* Yang, S., *TCSII Jan. 2021 486-490*
- Sun, H.**, *see* Deng, Q., *TCSII Sept. 2021 3167-3171*
- Sun, J.**, *see* Pang, Z., *TCSII April 2021 1253-1257*
- Sun, J.**, *see* Zhang, L., *TCSII April 2021 1063-1067*
- Sun, J.**, *see* Zhang, A., *TCSII June 2021 1882-1886*
- Sun, J.**, Ding, X., Yan, C., and Liu, W., Background Calibration for Bit Weights in Pipelined ADCs Using Adaptive Dither Windows; *TCSII June 2021 1783-1787*
- Sun, J.**, *see* Wang, H., *TCSII June 2021 1982-1986*
- Sun, J.**, *see* Guo, H., *TCSII Oct. 2021 3306-3310*
- Sun, J.X.**, Lin, F., Zhou, X.Y., and Zhu, X., Design of 74% Fractional Bandwidth Continuous-Mode Doherty Power Amplifier Using Compensation Susceptance; *TCSII June 2021 1827-1831*
- Sun, K.**, *see* Tan, X., *TCSII Feb. 2021 662-666*
- Sun, M.**, *see* Ayepah, K., *TCSII June 2021 2172-2176*
- Sun, P.**, *see* Liu, X., *TCSII April 2021 1093-1097*
- Sun, P.**, *see* Xu, N., *TCSII June 2021 1952-1956*
- Sun, R.**, *see* Wu, J., *TCSII April 2021 1502-1506*
- Sun, S.**, *see* Liu, H., *TCSII Feb. 2021 772-776*
- Sun, S.**, *see* Zhou, Y., *TCSII Aug. 2021 2885-2889*
- Sun, W.**, *see* Sun, Z., *TCSII June 2021 2237-2241*
- Sun, X.**, *see* Lin, P., *TCSII April 2021 1328-1332*
- Sun, Y.**, *see* Yu, Z., *TCSII Oct. 2021 3241-3245*
- Sun, Y.**, *see* Yu, Z., *TCSII Nov. 2021 3446-3450*
- Sun, Z.**, *see* Li, C., *TCSII June 2021 1987-1991*
- Sun, Z.**, Li, Y., Li, Y., Jiang, T., and Sun, W., Steady-State Mean-Square Error Analysis for Non-Negative Least Lncosh Algorithm; *TCSII June 2021 2237-2241*
- Sun, Z.**, *see* Xu, S., *TCSII July 2021 2598-2602*
- Sun, Z.**, and Huang, R., Time Complexity of In-Memory Matrix-Vector Multiplication; *TCSII Aug. 2021 2785-2789*
- Suresh, Y.**, *see* Naik, B.S., *TCSII Jan. 2021 316-320*
- Sutbas, B.**, Ozbay, E., and Atalar, A., Accurate Isolation Networks in Quadrature Couplers and Power Dividers; *TCSII April 2021 1148-1152*
- Svetoslavov, G.**, Camps, O., Stavrinos, S.G., and Picos, R., A Switched Capacitor Memristive Emulator; *TCSII April 2021 1463-1466*

T

- Tadokoro, Y.**, *see* Funayama, K., *TCSII Oct. 2021 3251-3255*
- Taberi, M.**, Molahosseini, A.S., and Navi, K., Efficient Incorporation of the RNS Datapath in Reverse Converter; *TCSII April 2021 1388-1392*
- Takeda, K.**, and Torikai, H., A Novel Hardware-Oriented Recurrent Network of Asynchronous CA Neurons for a Neural Integrator; *TCSII Aug. 2021 2972-2976*
- Taleb, R.**, *see* Maamar, A.E.T., *TCSII June 2021 2092-2096*

- Talebi, S.P.**, see Gogineni, V.C., *TCSII July 2021 2695-2699*
- Tamersit, K.**, see Jooq, M.K.Q., *TCSII June 2021 2162-2166*
- Tan, G.**, and Wang, Z., Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term; *TCSII Jan. 2021 356-360*
- Tan, N.N.**, see Huang, Z., *TCSII Aug. 2021 2780-2784*
- Tan, T.N.**, see Pham, T.X., *TCSII Jan. 2021 216-220*
- Tan, W.**, Case, B.M., Wang, A., Gao, S., and Lao, Y., High-Speed Modular Multiplier for Lattice-Based Cryptosystems; *TCSII Aug. 2021 2927-2931*
- Tan, X.**, Han, H., Li, M., Sun, K., Huang, Y., You, X., and Zhang, C., Approximate Expectation Propagation Massive MIMO Detector With Weighted Neumann-Series; *TCSII Feb. 2021 662-666*
- Tan, X.**, Cao, M., and Cao, J., Distributed Dynamic Event-Based Control for Nonlinear Multi-Agent Systems; *TCSII Feb. 2021 687-691*
- Tan, X.**, see Wang, H., *TCSII June 2021 1982-1986*
- Tanaka, H.**, see Funayama, K., *TCSII Oct. 2021 3251-3255*
- Tanaka, Y.**, see Wei, J., *TCSII July 2021 2640-2644*
- Taner, S.**, see Mirfarshbafan, S.H., *TCSII May 2021 1715-1719*
- Tang, C.**, see Lin, I., *TCSII April 2021 1413-1417*
- Tang, H.**, see Chen, X., *TCSII July 2021 2518-2522*
- Tang, J.**, Liu, H., and Yang, Y., Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband; *TCSII Jan. 2021 131-135*
- Tang, K.**, see Akbari, M., *TCSII June 2021 1817-1821*
- Tang, K.**, see Akbari, M., *TCSII Oct. 2021 3209-3213*
- Tang, M.**, see Li, Z., *TCSII Sept. 2021 3058-3062*
- Tang, P.**, see Yu, Y., *TCSII April 2021 1153-1157*
- Tang, P.**, see Yu, Y., *TCSII June 2021 1857-1861*
- Tang, W.**, see Zhang, Q., *TCSII Nov. 2021 3411-3415*
- Tang, W.**, see Zhang, G., *TCSII Dec. 2021 3542-3546*
- Tang, X.**, see Wang, H., *TCSII June 2021 1982-1986*
- Tang, Z.**, see Shi, J., *TCSII June 2021 2152-2156*
- Tang, Z.**, see Huang, Z., *TCSII Aug. 2021 2780-2784*
- Tanzawa, T.**, see Ballo, A., *TCSII Aug. 2021 2895-2901*
- Tao, J.**, see Qin, Z., *TCSII Jan. 2021 506-510*
- Tarrataca, L.**, see Silva, T.T.P., *TCSII Aug. 2021 3022-3026*
- Taufique, Z.**, Zhu, B., Coppola, G., Shoaran, M., and Altaf, M.A.B., A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials; *TCSII May 2021 1720-1724*
- Tavares, Y.A.**, see Park, C., *TCSII June 2021 1768-1772*
- Tavazoei, M.S.**, Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions; *TCSII July 2021 2374-2378*
- Tay, D.B.**, and Jiang, J., Time-Varying Graph Signal Denoising via Median Filters; *TCSII March 2021 1053-1057*
- Testafay, M.W.**, see Roy, T., *TCSII Dec. 2021 3587-3591*
- Testa, P.V.**, Carta, C., and Ellinger, F., Synthetic Transmission Lines in Cutoff Operation for Wideband High-Impedance DC Supplies; *TCSII March 2021 928-932*
- Thabet, A.**, Gasmi, N., Frej, G.B.H., and Boutayeb, M., Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation; *TCSII March 2021 948-952*
- Thakur, A.**, see Ravelo, B., *TCSII Feb. 2021 637-641*
- Thakur, P.**, see Ravelo, B., *TCSII Feb. 2021 637-641*
- Tho, N.H.**, Lee, H., An, T., and Kang, J., A 0.32–2.7 Gb/s Reference-Less Continuous-Rate Clock and Data Recovery Circuit With Unrestricted and Fast Frequency Acquisition; *TCSII July 2021 2347-2351*
- Thomas, M.**, Bandyopadhyay, B., and records, L.V., Discrete-Time Sliding Mode Control Design for Unicycle Robot With Bounded Inputs; *TCSII Aug. 2021 2912-2916*
- Tian, F.**, see Qian, J., *TCSII April 2021 1532-1536*
- Tian, F.**, see Qian, J., *TCSII Dec. 2021 3592-3596*
- Tian, H.**, see Zhou, K., *TCSII Aug. 2021 2932-2936*
- Tian, L.**, see Li, Z., *TCSII Sept. 2021 3153-3157*
- Tian, S.**, see Gu, P., *TCSII March 2021 963-967*
- Tian, S.**, see Liu, C., *TCSII Oct. 2021 3301-3305*
- Tian, Y.**, and Wang, Z., H_{∞} Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities; *TCSII Jan. 2021 321-325*
- Tiang, J.J.**, see Iqbal, A., *TCSII July 2021 2443-2447*
- Tirupathi, R.**, and Kar, S.K., A 200 $\mu\text{g}/\sqrt{\text{Hz}}$, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer; *TCSII June 2021 1753-1757*
- Tiwari, S.**, and Mukherjee, J., An Inductorless Wideband Gm-Boosted Balun LNA With nMOS-pMOS Configuration and Capacitively Coupled Loads for Sub-GHz IoT Applications; *TCSII Oct. 2021 3204-3208*
- Tlelo-Cuautle, E.**, see Galaviz-Aguilar, J.A., *TCSII June 2021 1887-1891*
- Todri-Sanial, A.**, see Nunez, J., *TCSII Oct. 2021 3356-3360*
- Toledo, P.**, Rubino, R., Musolino, F., and Crovetto, P., Re-Thinking Analog Integrated Circuits in Digital Terms: A New Design Concept for the IoT Era; *TCSII March 2021 816-822*
- Toledo, P.**, see Aiello, O., *TCSII July 2021 2675-2679*
- Toledo, P.**, Crovetto, P., Klimach, H., Bampi, S., Aiello, O., and Alioto, M., A 300mV-Supply, Sub-nW-Power Digital-Based Operational Transconductance Amplifier; *TCSII Sept. 2021 3073-3077*
- Tommasino, P.**, see Amendola, G., *TCSII Sept. 2021 3098-3102*
- Tong, X.**, An, D., and Li, J., Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants; *TCSII June 2021 1807-1811*
- Torikai, H.**, see Takeda, K., *TCSII Aug. 2021 2972-2976*
- Torkamani, R.**, and Zayyani, H., Statistical Graph Signal Recovery Using Variational Bayes; *TCSII June 2021 2232-2236*
- Torres, F.S.**, see Almeida, D.D., *TCSII Sept. 2021 3158-3162*
- Torres, L.M.**, see Rodriguez-Perez, A., *TCSII Jan. 2021 56-62*
- Tousi, Y.**, see He, R., *TCSII Feb. 2021 647-651*
- Tran, X.**, see Sarmiento, M., *TCSII Sept. 2021 3182-3186*
- Traversa, A.**, see Amendola, G., *TCSII Sept. 2021 3098-3102*
- Trifiletti, A.**, see Amendola, G., *TCSII Sept. 2021 3098-3102*
- Tripathy, M.**, see Gyanendra, ., *TCSII April 2021 1373-1377*
- Tripathy, M.**, see Chiluveru, S.R., *TCSII Nov. 2021 3461-3465*
- Trivedi, A.**, see Rana, N., *TCSII July 2021 2588-2592*
- Trivedi, R.**, and Padhy, P.K., Design of Indirect Fractional Order IMC Controller for Fractional Order Processes; *TCSII March 2021 968-972*
- Tsai, K.**, see Chang, Y., *TCSII Feb. 2021 757-761*
- Tsai, T.**, Tung, N., and Lin, D., VLSI Implementation of Multi-Channel ECG Lossless Compression System; *TCSII Aug. 2021 2962-2966*
- Tsai, Z.**, see Lin, Y., *TCSII Aug. 2021 2825-2829*
- Tsao, Y.**, and Hsu, H., A 52–58 GHz Power Amplifier With 18.6-dBm Saturated Output Power for Space Applications; *TCSII June 2021 1927-1931*
- Tse, C.K.**, see Liu, D., *TCSII Jan. 2021 49-55*
- Tse, C.K.**, see Shan, Z., *TCSII Feb. 2021 712-716*
- Tseng, C.**, and Lee, S., Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation; *TCSII May 2021 1630-1634*
- Tseng, I.**, see Wang, C., *TCSII Dec. 2021 3478-3482*
- Tseng, T.**, Chen, H., and Chiu, H., Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy; *TCSII Jan. 2021 196-200*
- Tu, Y.**, see Van, L., *TCSII Dec. 2021 3493-3497*
- Tung, N.**, see Tsai, T., *TCSII Aug. 2021 2962-2966*

U

Usman, S., and Mansour, M.M., Fast Column Message-Passing Decoding of Low-Density Parity-Check Codes; *TCSII July 2021 2389-2393*
Utomo, D.R., see Mahmood, H.U., *TCSII Aug. 2021 2805-2809*

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Vahdat, S., Kamal, M., Afzali-Kusha, A., and Pedram, M., LATIM: Loading-Aware Offline Training Method for Inverter-Based Memristive Neural Networks; *TCSII Oct. 2021 3346-3350*
Vaidyanathan, M., see Rizwan, S., *TCSII March 2021 903-907*
Vallicelli, E., see De Matteis, M., *TCSII Sept. 2021 3068-3072*
Van, L., Tu, Y., Chang, C., Wang, H., and Jung, T., Hardware-Oriented Memory-Limited Online Artifact Subspace Reconstruction (HMO-ASR) Algorithm; *TCSII Dec. 2021 3493-3497*
Van Truong, N., see Pham, X.T., *TCSII Jan. 2021 116-120*
van Wyk, M.A., Chen, G., and Wong, E.W.M., Multivaluedness in Networks: Exemplars; *TCSII June 2021 2182-2186*
van Wyk, M.A., Ping, L., and Chen, G., Multivaluedness in Networks: Shannon's Noisy-Channel Coding Theorem; *TCSII Oct. 2021 3234-3235*
Vargas-Rosales, C., see Galaviz-Aguilar, J.A., *TCSII June 2021 1887-1891*
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Vasquez, J.C., see Akhavan, A., *TCSII April 2021 1333-1337*
Vecchio, C.D., see Le, S., *TCSII Dec. 2021 3557-3561*
Veerendranath, P.S., Sharma, V., Vasanth, M.H., and Kumar, Y.B.N., A Novel Complex Filter Design With Dual Feedback for High Frequency Wireless Receiver Applications; *TCSII June 2021 1748-1752*
Vendra, S.K., see Mohapatra, S., *TCSII Jan. 2021 271-275*
Venkatachala, P.K., see Lee, C.Y., *TCSII July 2021 2327-2331*
Venkataramanaiah, J., see Naik, B.S., *TCSII Jan. 2021 316-320*
Verma, A., and Shrestha, R., Hardware-Efficient and High-Throughput LLRC Segregation Based Binary QC-LDPC Decoding Algorithm and Architecture; *TCSII Aug. 2021 2835-2839*
Vidal, P., see Chen, H., *TCSII Aug. 2021 3012-3016*
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Viviani, G.L., Multiple Potential Well Precision Oscillators; *TCSII Aug. 2021 2967-2971*
Vorhies, J.T., Hoover, A.P., and Madanayake, A., Adaptive Filtering of 4-D Light Field Images for Depth-Based Image Enhancement; *TCSII Feb. 2021 787-791*
Vorhies, J.T., see Edussooriya, C.U.S., *TCSII July 2021 2735-2741*

W

Wagner, J., see An, X., *TCSII April 2021 1083-1087*
Walia, S., see Gohil, V., *TCSII Oct. 2021 3341-3345*
Wan, C., Zhang, H., Li, L., and Wang, K., A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE; *TCSII April 2021 1158-1162*
Wan, F., see Ravelo, B., *TCSII Feb. 2021 637-641*
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Wan, Z., see Lai, Q., *TCSII June 2021 2197-2201*
Wang, A., see Tan, W., *TCSII Aug. 2021 2927-2931*
Wang, B., see Yuan, B., *TCSII Sept. 2021 3083-3087*
Wang, C., Tutorial: Design of High-Speed Nano-Scale CMOS Mixed-Voltage Digital I/O Buffer With High Reliability to PVT Variations; *TCSII Feb. 2021 562-567*
Wang, C., see Wang, G., *TCSII March 2021 938-942*
Wang, C., see Waris, H., *TCSII May 2021 1566-1570*
Wang, C., see Kong, M., *TCSII July 2021 2414-2418*
Wang, C., Lu, Y., and Martins, R.P., A Highly Integrated 3-Phase 4:1 Resonant Switched-Capacitor Converter With Parasitic Loss Reduction and Fast Pre-Charge Startup; *TCSII July 2021 2608-2612*
Wang, C., and Kuo, C., 200-MHz Single-Ended 6T 1-kb SRAM With 0.2313 pJ Energy/Access Using 40-nm CMOS Logic Process; *TCSII Sept. 2021 3163-3166*
Wang, C., see Luo, Y., *TCSII Oct. 2021 3376-3380*

Wang, C., Han, Z., Liu, H., Wen, P., Wang, L., and Zhang, X., A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator; *TCSII Nov. 2021 3426-3430*
Wang, C., Sangalang, R.G.B., and Tseng, I., A Single-Ended Low Power 16-nm FinFET 6T SRAM Design With PDP Reduction Circuit; *TCSII Dec. 2021 3478-3482*
Wang, D., Chen, W., Chen, X., Liu, X., Ghannouchi, F.M., and Feng, Z., A 24-29.5 GHz Voltage-Combined Doherty Power Amplifier Based on Compact Low-Loss Combiner; *TCSII July 2021 2342-2346*
Wang, D., see Zhang, K., *TCSII Nov. 2021 3441-3445*
Wang, G., Wang, C., Ding, Z., and Ji, Y., Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains; *TCSII March 2021 938-942*
Wang, G., see Gao, Z., *TCSII July 2021 2563-2567*
Wang, G., Yang, C., and Ma, X., A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution; *TCSII July 2021 2705-2709*
Wang, G., see Fan, X., *TCSII Aug. 2021 3017-3021*
Wang, G., see Liu, W., *TCSII Aug. 2021 2830-2834*
Wang, G., see Zhao, H., *TCSII Dec. 2021 3602-3606*
Wang, H., see Liu, B., *TCSII Jan. 2021 406-410*
Wang, H., see Gao, Z., *TCSII Feb. 2021 782-786*
Wang, H., see Shi, Y., *TCSII March 2021 878-882*
Wang, H., see Li, Z., *TCSII June 2021 2102-2106*
Wang, H., Peng, W., Tan, X., Sun, J., Tang, X., and Chen, I., Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique; *TCSII June 2021 1982-1986*
Wang, H., and Momeni, O., A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL; *TCSII June 2021 1852-1856*
Wang, H., Li, M., Zhang, C., and Shao, X., Event-Based Prescribed Performance Control for Dynamic Positioning Vessels; *TCSII July 2021 2548-2552*
Wang, H., see Deng, Q., *TCSII Sept. 2021 3167-3171*
Wang, H., Li, X., Bi, D., Xie, X., and Xie, Y., A Robust Student's t -Based Kernel Adaptive Filter; *TCSII Oct. 2021 3371-3375*
Wang, H., see Van, L., *TCSII Dec. 2021 3493-3497*
Wang, J., and Li, S., A Memory-Reduced Frequency Estimator for the Measurement of Sinusoidal Signal; *TCSII March 2021 1038-1042*
Wang, J., see Cai, J., *TCSII March 2021 958-962*
Wang, J., see Qian, L., *TCSII June 2021 1832-1836*
Wang, J., see Chang, X., *TCSII July 2021 2543-2547*
Wang, J., see Zhou, S., *TCSII July 2021 2493-2497*
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Wang, K., see Wan, C., *TCSII April 2021 1158-1162*
Wang, L., see Yang, X., *TCSII March 2021 953-957*
Wang, L., see Zhao, Y., *TCSII March 2021 988-992*
Wang, L., Ye, W., Dou, C., Si, X., Xu, X., Liu, J., Shang, D., Gao, J., Zhang, F., Liu, Y., Chang, M., and Liu, Q., Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control; *TCSII May 2021 1640-1644*
Wang, L., see Chu, Z., *TCSII June 2021 1942-1946*
Wang, L., Wu, Z., and Shen, Y., Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain; *TCSII Oct. 2021 3266-3270*
Wang, L., see Wang, C., *TCSII Nov. 2021 3426-3430*
Wang, M., Li, J., Zhang, X., Lu, H.H., Fernando, T., Li, Z., and Zeng, Y., A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations; *TCSII March 2021 1023-1027*
Wang, N., Zhang, G., and Li, H., Parametric Control for Multi-Scroll Attractor Generation via Nested Sine-PWL Function; *TCSII March 2021 1033-1037*
Wang, P., see Zhang, L., *TCSII April 2021 1063-1067*
Wang, P., see Liu, W., *TCSII Aug. 2021 2830-2834*
Wang, Q., see Guo, J., *TCSII Jan. 2021 146-150*
Wang, Q., see Huang, C., *TCSII July 2021 2478-2482*
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Wang, Q., see Zhao, Y., *TCSII Nov. 2021 3431-3435*
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- Wang, R., see Liu, K., *TCSII Dec. 2021 3577-3581*
- Wang, S., see Xiao, C., *TCSII Jan. 2021 261-265*
- Wang, S., see Hu, D., *TCSII April 2021 1542-1546*
- Wang, S., see Park, S., *TCSII July 2021 2438-2442*
- Wang, T., see Li, P., *TCSII Jan. 2021 306-310*
- Wang, T., see Cui, X., *TCSII April 2021 1517-1521*
- Wang, T., see Shi, C., *TCSII May 2021 1581-1585*
- Wang, T., see Zeng, L., *TCSII July 2021 2498-2502*
- Wang, T., see Chen, H., *TCSII Aug. 2021 3012-3016*
- Wang, W., see Zhang, M., *TCSII Jan. 2021 481-485*
- Wang, W., see Dong, Q., *TCSII Jan. 2021 236-240*
- Wang, W., see Chen, W., *TCSII March 2021 913-917*
- Wang, W., see Zheng, Y., *TCSII April 2021 1218-1222*
- Wang, W., see Zhang, Y., *TCSII June 2021 1917-1921*
- Wang, W., Chen, F., Xiang, L., and Chen, G., A Distributed Algorithm for Tracking General Functions of Multiple Signals Not-Necessarily Having Steady States; *TCSII June 2021 2107-2111*
- Wang, W., Wu, Y., and Yang, Y., Isolation Enhancement in Dual-Band Monopole Antenna for 5G Applications; *TCSII June 2021 1867-1871*
- Wang, W., see Wang, W., *TCSII June 2021 1867-1871*
- Wang, W., see Yan, D., *TCSII June 2021 2127-2131*
- Wang, W., and Sonkusale, S., A 10-Bit Current Output DAC With Active Resistive Load Interpolation; *TCSII June 2021 1803-1806*
- Wang, W., see Kong, M., *TCSII July 2021 2414-2418*
- Wang, W., see Yan, D., *TCSII July 2021 2665-2669*
- Wang, W., and Dogancay, K., Transient Performance Analysis of Geometric Algebra Least Mean Square Adaptive Filter; *TCSII Aug. 2021 3027-3031*
- Wang, W., see Ma, L., *TCSII Dec. 2021 3537-3541*
- Wang, W., see Zhang, Y., *TCSII Dec. 2021 3532-3536*
- Wang, X., see Xiao, C., *TCSII Jan. 2021 261-265*
- Wang, X., see Liu, K., *TCSII June 2021 2047-2051*
- Wang, X., see Liu, K., *TCSII June 2021 2047-2051*
- Wang, X., see Chen, J., *TCSII July 2021 2618-2622*
- Wang, X., see Zhang, S., *TCSII July 2021 2473-2477*
- Wang, Y., see Wu, B., *TCSII Feb. 2021 617-621*
- Wang, Y., see Feng, T., *TCSII Feb. 2021 657-661*
- Wang, Y., see Zhang, X., *TCSII April 2021 1263-1267*
- Wang, Y., see Hu, D., *TCSII April 2021 1542-1546*
- Wang, Y., see Yu, Z., *TCSII May 2021 1665-1669*
- Wang, Y., see Liu, H., *TCSII June 2021 1847-1851*
- Wang, Y., see Kuang, Y., *TCSII July 2021 2655-2659*
- Wang, Y., see Yin, G., *TCSII July 2021 2262-2266*
- Wang, Y., see Fan, X., *TCSII Aug. 2021 3017-3021*
- Wang, Y., Huang, M., Luo, P., Lu, Y., and Martins, R.P., Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved $V-f$ Model; *TCSII Sept. 2021 3103-3107*
- Wang, Y., see Chen, J., *TCSII Dec. 2021 3503-3507*
- Wang, Z., see Tian, Y., *TCSII Jan. 2021 321-325*
- Wang, Z., see Geng, X., *TCSII Jan. 2021 87-91*
- Wang, Z., see Chen, X., *TCSII Jan. 2021 396-400*
- Wang, Z., Wei, A., Zhao, X., Zhang, X., and Li, F., Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach; *TCSII Jan. 2021 431-435*
- Wang, Z., see Tan, G., *TCSII Jan. 2021 356-360*
- Wang, Z., see Wu, B., *TCSII Feb. 2021 617-621*
- Wang, Z., see Zhao, J., *TCSII April 2021 1143-1147*
- Wang, Z., Zhao, H., and Zeng, X., Constrained Least Mean M-Estimation Adaptive Filtering Algorithm; *TCSII April 2021 1507-1511*
- Wang, Z., see Wei, Y., *TCSII April 2021 1243-1247*
- Wang, Z., see Yu, Z., *TCSII May 2021 1665-1669*
- Wang, Z., see He, F., *TCSII Aug. 2021 2750-2754*
- Wang, Z., see Li, H., *TCSII Aug. 2021 2770-2774*
- Wang, Z., see Rong, N., *TCSII Oct. 2021 3296-3300*
- Wany, M., see Levski, D., *TCSII Jan. 2021 102-105*
- Waris, H., Wang, C., Liu, W., and Lombardi, F., AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators; *TCSII May 2021 1566-1570*
- Wehn, N., see Sudarshan, C., *TCSII May 2021 1615-1619*
- Wei, A., see Wang, Z., *TCSII Jan. 2021 431-435*
- Wei, J., Kuwana, A., Kobayashi, H., Kubo, K., and Tanaka, Y., Floating-Point Inverse Square Root Algorithm Based on Taylor-Series Expansion; *TCSII July 2021 2640-2644*
- Wei, Q., see Xu, H., *TCSII Feb. 2021 627-631*
- Wei, Q., see Nazhamaiti, M., *TCSII Sept. 2021 3078-3082*
- Wei, Y., see Ma, T., *TCSII March 2021 1048-1052*
- Wei, Y., Luo, Q., Wang, Z., and Mantooh, A., Transformer Secondary Voltage Based Resonant Frequency Tracking for LLC Converter; *TCSII April 2021 1243-1247*
- Wei, Y., Lyapunov Stability Theory for Nonlinear Nabla Fractional Order Systems; *TCSII Oct. 2021 3246-3250*
- Weigel, R., see Maiwald, T., *TCSII July 2021 2277-2281*
- Weinstein, D., see Srivastava, A., *TCSII April 2021 1108-1112*
- Weis, C., see Sudarshan, C., *TCSII May 2021 1615-1619*
- Wen, C., see Yan, J., *TCSII June 2021 1962-1966*
- Wen, G., see Li, B., *TCSII April 2021 1303-1307*
- Wen, G., see Zhang, W., *TCSII April 2021 1323-1327*
- Wen, G., see Zhai, Y., *TCSII July 2021 2448-2452*
- Wen, P., see Wang, C., *TCSII Nov. 2021 3426-3430*
- Wen, S., see Li, B., *TCSII April 2021 1303-1307*
- Werner, F.T., see Rhea, B.K., *TCSII March 2021 1028-1032*
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- Wiesbauer, A., see Perez, C., *TCSII Oct. 2021 3194-3198*
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- Wijenayake, C., see Edussooriya, C.U.S., *TCSII July 2021 2735-2741*
- Williamson, S.S., see Rana, N., *TCSII July 2021 2588-2592*
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- Wong, D.C., see Wong, Z., *TCSII June 2021 2157-2161*
- Wong, E.W.M., see van Wyk, M.A., *TCSII June 2021 2182-2186*
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- Wong, S.K., see Iqbal, A., *TCSII July 2021 2443-2447*
- Wong, S.W., see Iqbal, A., *TCSII July 2021 2443-2447*
- Wong, Z., Wong, D.C., Lee, W., and Mok, K., High-Speed RLWE-Oriented Polynomial Multiplier Utilizing Karatsuba Algorithm; *TCSII June 2021 2157-2161*
- Wu, B., Wang, Z., Li, Y., Wang, Y., Liu, D., Zhao, W., and Sharon Hu, X., A NAND-SPIN-Based Magnetic ADC; *TCSII Feb. 2021 617-621*
- Wu, C., Yan, J., Shen, J., Wu, X., and Xiao, B., Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling; *TCSII Oct. 2021 3321-3325*
- Wu, C.W., Synchronization in Dynamical Systems Coupled via Multiple Directed Networks; *TCSII May 2021 1660-1664*
- Wu, H., Ma, X., Yang, C.H., and Liu, S., Attention Based Bidirectional Convolutional LSTM for High-Resolution Radio Tomographic Imaging; *TCSII April 2021 1482-1486*
- Wu, J., see Zhang, L., *TCSII April 2021 1063-1067*
- Wu, J., Jiang, Y., Li, C., Sun, R., Zhang, C., Yu, Y., Zhu, Y., and Liu, M., Circuit Synthesis of 3-D Rotation Orthonormalization; *TCSII April 2021 1502-1506*
- Wu, J., see Hao, L., *TCSII June 2021 2067-2071*
- Wu, J., see Zhang, C., *TCSII June 2021 2012-2016*
- Wu, J., see Yin, G., *TCSII July 2021 2262-2266*
- Wu, J., see Yao, L., *TCSII Aug. 2021 2987-2991*
- Wu, J., see Dai, M., *TCSII Aug. 2021 2855-2859*
- Wu, J., and Guo, M., A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid; *TCSII Aug. 2021 2907-2911*
- Wu, K., Hu, J., Lennox, B., and Arvin, F., Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance; *TCSII Oct. 2021 3316-3320*
- Wu, L., and Chen, H., Spanning-Tree-Based Synchronization Conditions for Second-Order Kuramoto Networks; *TCSII April 2021 1448-1452*
- Wu, L., see Qiu, F., *TCSII Oct. 2021 3199-3203*
- Wu, N., see He, W., *TCSII March 2021 1013-1017*
- Wu, N., see Shi, C., *TCSII May 2021 1581-1585*
- Wu, Q., see Zhao, Y., *TCSII March 2021 988-992*
- Wu, Q., see Shi, Y., *TCSII March 2021 878-882*

- Wu, S., and Baas, B.M., Display Stream Compression Decoders for Fine-Grained Many-Core Processor Arrays; *TCSII May 2021 1730-1734*
- Wu, S., see Pamungkas, L., *TCSII July 2021 2513-2517*
- Wu, T., see Shakya, D., *TCSII Sept. 2021 3043-3047*
- Wu, W., Xue, M., Xing, Q., and Yu, F., High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA; *TCSII July 2021 2650-2654*
- Wu, X., see Peng, C., *TCSII Jan. 2021 466-470*
- Wu, X., see Liu, C., *TCSII Jan. 2021 331-335*
- Wu, X., see Xu, Y., *TCSII Jan. 2021 311-315*
- Wu, X., see Zhu, H., *TCSII Jan. 2021 191-195*
- Wu, X., Nafe, M., Melcon, A.A., Gomez-Diaz, J.S., and Liu, X., Frequency Tunable Non-Reciprocal Bandpass Filter Using Time-Modulated Microstrip $\lambda_g/2$ Resonators; *TCSII Feb. 2021 667-671*
- Wu, X., see Gong, J., *TCSII July 2021 2680-2684*
- Wu, X., see Lin, Z., *TCSII July 2021 2628-2632*
- Wu, X., see Han, S., *TCSII Aug. 2021 2902-2906*
- Wu, X., see Nazhamaiti, M., *TCSII Sept. 2021 3078-3082*
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- Wu, Y., see Dong, Q., *TCSII Jan. 2021 236-240*
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- Wu, Y., see Chen, W., *TCSII March 2021 913-917*
- Wu, Y., see Yu, Y., *TCSII April 2021 1153-1157*
- Wu, Y., see Zheng, Y., *TCSII April 2021 1218-1222*
- Wu, Y., see Zhang, Y., *TCSII June 2021 1917-1921*
- Wu, Y., see Gao, F., *TCSII June 2021 1992-1996*
- Wu, Y., see Wang, W., *TCSII June 2021 1867-1871*
- Wu, Y., see Yu, Y., *TCSII June 2021 1857-1861*
- Wu, Y., see Shi, J., *TCSII July 2021 2379-2383*
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- Wu, Y., see Regnacq, L., *TCSII Sept. 2021 3133-3137*
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- Wu, Y., see Zhang, Y., *TCSII Dec. 2021 3532-3536*
- Wu, Y., see Le, S., *TCSII Dec. 2021 3557-3561*
- Wu, Z., see Dong, S., *TCSII June 2021 1967-1971*
- Wu, Z., see Meng, X., *TCSII July 2021 2503-2507*
- Wu, Z., see Dong, S., *TCSII Oct. 2021 3261-3265*
- Wu, Z., see Wang, L., *TCSII Oct. 2021 3266-3270*
- X**
- Xavier, N., and Bandyopadhyay, B., Practical Sliding Mode Using State Dependent Intermittent Control; *TCSII Jan. 2021 341-345*
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- Xi, X., and Lou, Y., Sparse FIR Filter Design With k -Max Sparsity and Peak Error Constraints; *TCSII April 2021 1497-1501*
- Xia, H., see Qian, L., *TCSII June 2021 1832-1836*
- Xia, Y., see Qin, Z., *TCSII Jan. 2021 506-510*
- Xia, Y., see Chu, Z., *TCSII June 2021 1942-1946*
- Xia, Y., see Qian, L., *TCSII June 2021 1832-1836*
- Xia, Y., see Liang, T., *TCSII June 2021 2227-2231*
- Xian, C., see Zhong, Z., *TCSII April 2021 1258-1262*
- Xian, M., see Li, Z., *TCSII June 2021 2102-2106*
- Xiang, L., see Wang, W., *TCSII June 2021 2107-2111*
- Xiang, Y., Xu, Y., Li, Y., Ma, W., Xuan, Q., and Liu, Y., Side-Channel Gray-Box Attack for DNNs; *TCSII Jan. 2021 501-505*
- Xiang, Z., see Zou, W., *TCSII Feb. 2021 702-706*
- Xiao, B., see Zhang, C., *TCSII June 2021 2012-2016*
- Xiao, B., see Dai, M., *TCSII Aug. 2021 2855-2859*
- Xiao, B., see Wu, C., *TCSII Oct. 2021 3321-3325*
- Xiao, C., Wang, S., Liu, W., Wang, X., and Casseau, E., An Optimal Algorithm for Enumerating Connected Convex Subgraphs in Acyclic Digraphs; *TCSII Jan. 2021 261-265*
- Xiao, J., Yang, X., and Li, X., A 3.9GHz/63.6% FBW Multi-Mode Filtering Power Divider Using Self-Packaged SISL; *TCSII June 2021 1842-1846*
- Xiao, L., see Yuan, B., *TCSII Sept. 2021 3083-3087*
- Xiao, S., see Li, Z., *TCSII Sept. 2021 3153-3157*
- Xiao, S., see Zheng, H., *TCSII Sept. 2021 3172-3176*
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- Xie, G., see Peng, F., *TCSII April 2021 1233-1237*
- Xie, G., see Lin, Z., *TCSII Oct. 2021 3351-3355*
- Xie, Q., see Geng, X., *TCSII Jan. 2021 87-91*
- Xie, Q., see He, F., *TCSII Aug. 2021 2750-2754*
- Xie, S., see Lou, Y., *TCSII June 2021 2112-2116*
- Xie, T., see Li, W., *TCSII April 2021 1338-1342*
- Xie, X., see Rong, N., *TCSII Oct. 2021 3296-3300*
- Xie, X., see Wang, H., *TCSII Oct. 2021 3371-3375*
- Xie, Y., see Lin, I., *TCSII April 2021 1413-1417*
- Xie, Y., and Chen, F., Dual-Band and Wide Stopband Coaxial Filters Using Open-Circuited-Stub-Loaded Resonators; *TCSII June 2021 1872-1876*
- Xie, Y., see Chen, X., *TCSII July 2021 2518-2522*
- Xie, Y., see Li, J., *TCSII Aug. 2021 2997-3001*
- Xie, Y., see Wang, H., *TCSII Oct. 2021 3371-3375*
- Xing, L., see Yan, J., *TCSII June 2021 1962-1966*
- Xing, M., see Ye, Y., *TCSII July 2021 2538-2542*
- Xing, Q., see Wu, W., *TCSII July 2021 2650-2654*
- Xiong, H., see Chen, J., *TCSII July 2021 2670-2674*
- Xiong, X., see Sharma, R.K., *TCSII April 2021 1238-1242*
- Xiong, X., see Kumar, A., *TCSII April 2021 1353-1357*
- Xiong, X., Liu, Z., Kamal, S., and Jin, S., Discrete-Time Super-Twisting Observer With Implicit Euler Method; *TCSII April 2021 1288-1292*
- Xiong, X., Pal, A.K., Liu, Z., Kamal, S., Huang, R., and Lou, Y., Discrete-Time Adaptive Super-Twisting Observer With Predefined Arbitrary Convergence Time; *TCSII June 2021 2057-2061*
- Xiong, X., Chu, Y., Udai, A.D., Kamal, S., Jin, S., and Lou, Y., Implicit Discrete-Time Terminal Sliding Mode Control for Second-Order Systems; *TCSII July 2021 2508-2512*
- Xiong, X., see Zhou, K., *TCSII Aug. 2021 2932-2936*
- Xiong, X., Chen, H., Lou, Y., Liu, Z., Kamal, S., and Yamamoto, M., Implicit Discrete-Time Adaptive First-Order Sliding Mode Control With Predefined Convergence Time; *TCSII Dec. 2021 3562-3566*
- Xiong, Z., see Ma, H., *TCSII Feb. 2021 722-726*
- Xiong, Z., see Ma, H., *TCSII April 2021 1268-1272*
- Xiu, X., Yang, Y., Kong, L., and Liu, W., Data-Driven Process Monitoring Using Structured Joint Sparse Canonical Correlation Analysis; *TCSII Jan. 2021 361-365*
- Xiu, X., see Zhang, Y., *TCSII June 2021 2027-2031*
- Xu, D., see Zhou, S., *TCSII July 2021 2493-2497*
- Xu, D., Yang, H., Gu, C., Chen, Z., Xuan, Q., and Yang, X., Adversarial Examples Detection of Radio Signals Based on Multifeature Fusion; *TCSII Dec. 2021 3607-3611*
- Xu, F., see Shen, G., *TCSII April 2021 1123-1127*
- Xu, F., see Shen, G., *TCSII June 2021 1778-1782*
- Xu, G., see Zhou, G., *TCSII Jan. 2021 296-300*
- Xu, G., see Zhai, J., *TCSII Jan. 2021 391-395*
- Xu, H., Li, Z., Lin, N., Wei, Q., Qiao, F., Yin, X., and Yang, H., MACSen: A Processing-In-Sensor Architecture Integrating MAC Operations Into Image Sensor for Ultra-Low-Power BNN-Based Intelligent Visual Perception; *TCSII Feb. 2021 627-631*
- Xu, H., Ni, Y., Liu, Z., and Chen, Z., Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism; *TCSII June 2021 2117-2121*
- Xu, H., see Nazhamaiti, M., *TCSII Sept. 2021 3078-3082*
- Xu, J., Zhan, W., Li, H., and Zhang, X.Y., Switchable Diplexer Based on Coupling Control; *TCSII Jan. 2021 166-170*
- Xu, J., see Gao, J., *TCSII April 2021 1113-1117*
- Xu, J., Cai, Q., Guo, Y., Ji, S., and Duan, Y., A BPF Integrated SP4T Switch Using Parallel Switched Fractal Common Feeding Line; *TCSII June 2021 1932-1936*
- Xu, J., Huan, Y., Huang, B., Chu, H., Jin, Y., Zheng, L., and Zou, Z., A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture; *TCSII June 2021 2142-2146*

- Xu, J.**, Huang, M., Li, H., Yang, Y., and Zhang, X.Y., Design of Balanced Filtering Rat-Race Coupler Based on Quad-Mode Dielectric Resonator; *TCSII July 2021* 2267-2271
- Xu, K.**, see Chen, W., *TCSII March 2021* 913-917
- Xu, K.**, Gao, L., Chen, F., Li, C., and Xuan, Q., Robust Finite-Time Dynamic Average Consensus With Exponential Convergence Rates; *TCSII July 2021* 2578-2582
- Xu, L.**, see He, D., *TCSII June 2021* 1972-1976
- Xu, N.**, Chen, Y., Xue, A., Zhao, X., and Sun, P., Set Stabilization and Optimal Control of Switched Multi-Valued Logical Control Networks With State-Dependent Switching Signals; *TCSII June 2021* 1952-1956
- Xu, Q.**, see Cao, Z., *TCSII Nov. 2021* 3416-3420
- Xu, S.**, see Yang, H., *TCSII April 2021* 1487-1491
- Xu, S.**, Sun, Z., Yao, C., Liu, K., and Ma, G., Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM; *TCSII July 2021* 2598-2602
- Xu, T.**, see Lin, Y., *TCSII Aug. 2021* 2820-2824
- Xu, T.**, see Yang, S., *TCSII Sept. 2021* 3108-3112
- Xu, W.**, Ma, K., and Du, C., Design and Loss Reduction of Multiple-Zeros Dual-Band Bandpass Filter Using SISL; *TCSII April 2021* 1168-1172
- Xu, W.**, see Lin, Z., *TCSII Oct. 2021* 3351-3355
- Xu, X.**, see Wang, L., *TCSII May 2021* 1640-1644
- Xu, X.**, Li, Y., and Zhang, H., Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems; *TCSII July 2021* 2523-2527
- Xu, X.**, see Cai, Q., *TCSII Sept. 2021* 3123-3127
- Xu, Y.**, Wu, X., Mao, B., and Xie, C., A Unified Finite-/Fixed-Time Synchronization Approach to Multi-Layer Networks; *TCSII Jan. 2021* 311-315
- Xu, Y.**, see Xiang, Y., *TCSII Jan. 2021* 501-505
- Xu, Z.**, see Ravelo, B., *TCSII Feb. 2021* 637-641
- Xuan, Q.**, see Xiang, Y., *TCSII Jan. 2021* 501-505
- Xuan, Q.**, see Xu, K., *TCSII July 2021* 2578-2582
- Xuan, Q.**, see Xu, D., *TCSII Dec. 2021* 3607-3611
- Xue, A.**, see Xu, N., *TCSII June 2021* 1952-1956
- Xue, M.**, see Wu, W., *TCSII July 2021* 2650-2654
- Xue, N.**, see Zeng, X., *TCSII June 2021* 1812-1816
- Xue, Q.**, see Xun, M., *TCSII April 2021* 1228-1232
- Xue, Q.**, see Shen, G., *TCSII April 2021* 1123-1127
- Xue, Q.**, see Feng, W., *TCSII June 2021* 1897-1901
- Xue, Q.**, see Feng, L., *TCSII June 2021* 1877-1881
- Xue, Q.**, see Qiu, F., *TCSII Oct. 2021* 3199-3203
- Xue, W.**, see Liang, T., *TCSII June 2021* 2217-2221
- Xue, X.**, see Zhou, K., *TCSII Aug. 2021* 2932-2936
- Xun, M.**, Yang, W., Feng, W., Zhang, Y., Xue, Q., and Che, W., A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression; *TCSII April 2021* 1228-1232
- Xun, T.**, see Zhao, Y., *TCSII March 2021* 988-992
- Y**
- Yadav, S.K.**, and George, N.V., Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization; *TCSII April 2021* 1522-1526
- Yamamoto, M.**, see Xiong, X., *TCSII Dec. 2021* 3562-3566
- Yan, C.**, see Sun, J., *TCSII June 2021* 1783-1787
- Yan, D.**, Wang, W., Zuo, L., and Zhang, X., Revisiting the Adjoint Matrix for FPGA Calculating the Triangular Matrix Inversion; *TCSII June 2021* 2127-2131
- Yan, D.**, Wang, W., Zuo, L., and Zhang, X., A Novel Scheme for Real-Time Max/Min-Set-Selection Sorters on FPGA; *TCSII July 2021* 2665-2669
- Yan, H.**, see Jiang, X., *TCSII Jan. 2021* 376-380
- Yan, H.**, see Hao, L., *TCSII June 2021* 2067-2071
- Yan, J.**, Cao, J., and Cao, Y., Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology; *TCSII June 2021* 2002-2006
- Yan, J.**, Wen, C., Liu, X., and Xing, L., Resilient Impulsive Control for Second-Order Consensus Under Malicious Nodes; *TCSII June 2021* 1962-1966
- Yan, J.**, see Wu, C., *TCSII Oct. 2021* 3321-3325
- Yan, P.**, see Khan, A., *TCSII Aug. 2021* 2865-2869
- Yan, S.**, Gu, Z., and Ahn, C.K., Memory-Event-Triggered H_∞ Filtering of Unmanned Surface Vehicles With Communication Delays; *TCSII July 2021* 2463-2467
- Yan, W.**, see Zhang, Z., *TCSII Jan. 2021* 336-340
- Yang, B.**, Huang, X., Hu, X., Cheng, W., Pei, Z., and Li, X., Optimizing Robustness of Core-Periphery Structure in Complex Networks; *TCSII Dec. 2021* 3572-3576
- Yang, C.**, Gu, Y., Chen, B., Ma, H., and So, H.C., 2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery; *TCSII April 2021* 1492-1496
- Yang, C.**, and Kuo, T., A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References; *TCSII July 2021* 2312-2316
- Yang, C.**, see Wang, G., *TCSII July 2021* 2705-2709
- Yang, C.H.**, see Wu, H., *TCSII April 2021* 1482-1486
- Yang, H.**, see Xu, H., *TCSII Feb. 2021* 627-631
- Yang, H.**, see Zhao, Y., *TCSII March 2021* 988-992
- Yang, H.**, Xu, S., and Jiang, G., A High Data Rate Solution for Differential Chaos Shift Keying Based on Carrier Index Modulation; *TCSII April 2021* 1487-1491
- Yang, H.**, see Li, B., *TCSII July 2021* 2660-2664
- Yang, H.**, see Yin, G., *TCSII July 2021* 2262-2266
- Yang, H.**, see Xu, D., *TCSII Dec. 2021* 3607-3611
- Yang, J.**, see Chen, W., *TCSII Jan. 2021* 176-180
- Yang, J.**, see Zhang, L., *TCSII March 2021* 933-937
- Yang, J.**, see Yang, S.Y., *TCSII July 2021* 2404-2408
- Yang, J.**, see Luo, Y., *TCSII Oct. 2021* 3376-3380
- Yang, J.**, see Zhang, G., *TCSII Dec. 2021* 3542-3546
- Yang, L.**, see Meng, J., *TCSII May 2021* 1576-1580
- Yang, L.**, see Gomez-Garcia, R., *TCSII July 2021* 2429-2433
- Yang, L.**, see Fan, M., *TCSII July 2021* 2424-2428
- Yang, Q.**, see Dai, X., *TCSII Aug. 2021* 2755-2759
- Yang, S.**, Liu, L., Li, Y., Li, X., Sun, H., and Zheng, N., Lane Shared Bit-Pragmatic Deep Neural Network Computing Architecture and Circuit; *TCSII Jan. 2021* 486-490
- Yang, S.**, and Rincon-Mora, G.A., Efficient Power Transfers in Piezoelectric Energy-Harvesting Switched-Inductor Chargers; *TCSII April 2021* 1248-1252
- Yang, S.**, Yin, J., Xu, T., Yi, T., Mak, P., Li, Q., and Martins, R.P., A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS; *TCSII Sept. 2021* 3108-3112
- Yang, S.Y.**, Yang, J., Zhao, J., and Zhang, X.Y., Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter; *TCSII July 2021* 2404-2408
- Yang, W.**, see Xun, M., *TCSII April 2021* 1228-1232
- Yang, X.**, see Houran, M.A., *TCSII Jan. 2021* 366-370
- Yang, X.**, see Zhang, Y., *TCSII Jan. 2021* 411-415
- Yang, X.**, Feng, W., Chen, G., Wang, L., Zou, T., and Jiang, P., Enhancing Coupled Networks Robustness via Removing Key Fragile Dependency Links; *TCSII March 2021* 953-957
- Yang, X.**, see Chen, X., *TCSII June 2021* 2077-2081
- Yang, X.**, see Xiao, J., *TCSII June 2021* 1842-1846
- Yang, X.**, see Cao, H., *TCSII July 2021* 2287-2291
- Yang, X.**, see Zheng, H., *TCSII Sept. 2021* 3172-3176
- Yang, X.**, see Xu, D., *TCSII Dec. 2021* 3607-3611
- Yang, Y.**, see Liu, R., *TCSII Jan. 2021* 291-295
- Yang, Y.**, see Dong, Q., *TCSII Jan. 2021* 236-240
- Yang, Y.**, see Xiu, X., *TCSII Jan. 2021* 361-365
- Yang, Y.**, see Tang, J., *TCSII Jan. 2021* 131-135
- Yang, Y.**, see Lu, Y., *TCSII March 2021* 873-877
- Yang, Y.**, see Zhang, Y., *TCSII June 2021* 1917-1921
- Yang, Y.**, see Wang, W., *TCSII June 2021* 1867-1871
- Yang, Y.**, see Zhang, Y., *TCSII June 2021* 2027-2031
- Yang, Y.**, see Xu, J., *TCSII July 2021* 2267-2271
- Yang, Y.**, see Li, J., *TCSII Aug. 2021* 2922-2926
- Yang, Y.**, see Chen, H., *TCSII Aug. 2021* 3012-3016
- Yang, Y.**, see Liu, R., *TCSII Oct. 2021* 3291-3295

- Yang, Z.**, see Peng, C., *TCSII Jan. 2021* 466-470
- Yao, C.**, see Xu, S., *TCSII July 2021* 2598-2602
- Yao, L.**, see Zeng, X., *TCSII June 2021* 1812-1816
- Yao, L.**, Liu, P., Wu, J., Han, Y., Zhong, Y., and You, Z., Integrating Two Logics Into One Crossbar Array for Logic Gate Design; *TCSII Aug. 2021* 2987-2991
- Yao, Y.**, Huang, C., and Liu, S., A Jitter-Tolerance-Enhanced Digital CDR Circuit Using Background Loop Gain Controller; *TCSII June 2021* 1837-1841
- Yavari, M.**, see Kashani, M.H., *TCSII Oct. 2021* 3214-3218
- Yazdanpanah, H.**, see Lima, M.V.S., *TCSII Feb. 2021* 797-801
- Yazici, M.**, see Burak, A., *TCSII Jan. 2021* 126-130
- Yazici, M.**, see Caliskan, C., *TCSII Jan. 2021* 186-190
- Ye, L.**, see Li, Y., *TCSII Oct. 2021* 3224-3228
- Ye, W.**, see Chen, X., *TCSII Jan. 2021* 396-400
- Ye, W.**, see Wang, L., *TCSII May 2021* 1640-1644
- Ye, Y.**, Lu, Y., Wu, Y., Lu, R., and Xing, M., Positive Consensus in Fractional-Order Interval Networked Systems; *TCSII July 2021* 2538-2542
- Yenuchenko, M.S.**, and Pilipko, M.M., Multi-Flip Technique Compensating a Gradient Rotation in Unary DACs; *TCSII March 2021* 883-887
- Yeo, H.G.**, see Choi, K., *TCSII March 2021* 858-862
- Yeo, K.S.**, see Liu, H., *TCSII June 2021* 1847-1851
- Yesil, A.**, and Babacan, Y., Electronically Controllable Memcapacitor Circuit With Experimental Results; *TCSII April 2021* 1443-1447
- Yi, K.**, see Yu, Y., *TCSII April 2021* 1153-1157
- Yi, T.**, see Yang, S., *TCSII Sept. 2021* 3108-3112
- Yi, X.**, see Pei, H., *TCSII Jan. 2021* 461-465
- Yin, F.**, see Hu, D., *TCSII April 2021* 1537-1541
- Yin, G.**, Cai, Y., Wu, J., Duan, Z., Zhu, Z., Liu, Y., Wang, Y., Yang, H., and Li, X., Enabling Lower-Power Charge-Domain Nonvolatile In-Memory Computing With Ferroelectric FETs; *TCSII July 2021* 2262-2266
- Yin, J.**, see Mariappan, S., *TCSII April 2021* 1178-1182
- Yin, J.**, see Chong, G., *TCSII June 2021* 1743-1747
- Yin, J.**, see Yang, S., *TCSII Sept. 2021* 3108-3112
- Yin, S.**, see Lee, J., *TCSII Jan. 2021* 401-405
- Yin, W.**, see Yu, Y., *TCSII April 2021* 1153-1157
- Yin, X.**, see Xu, H., *TCSII Feb. 2021* 627-631
- Yin, Z.**, see Zhang, H., *TCSII May 2021* 1695-1699
- Ying, J.**, see Yuan, B., *TCSII Sept. 2021* 3083-3087
- Ying, L.**, see Cai, Q., *TCSII Sept. 2021* 3123-3127
- Yoo, H.**, see Um, S., *TCSII May 2021* 1605-1609
- Yoo, H.**, see Kim, S., *TCSII May 2021* 1675-1679
- Yoo, H.**, see Ryu, J., *TCSII May 2021* 1700-1704
- Yoon, C.**, Ko, H., Kang, B., Sull, J., and Jeong, D., 0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop; *TCSII Jan. 2021* 136-140
- Yoshitomi, K.**, see Barakat, A., *TCSII Feb. 2021* 632-636
- You, D.**, see Kim, H., *TCSII July 2021* 2297-2301
- You, X.**, see Tan, X., *TCSII Feb. 2021* 662-666
- You, Z.**, see Yao, L., *TCSII Aug. 2021* 2987-2991
- Youn, S.**, see Choi, J., *TCSII Jan. 2021* 19-23
- Yu, C.**, Feng, J., and Zhao, D., A 28-GHz Doherty Power Amplifier With a Compact Transformer-Based Quadrature Hybrid in 65-nm CMOS; *TCSII Aug. 2021* 2790-2794
- Yu, D.**, see Kuang, Y., *TCSII July 2021* 2655-2659
- Yu, F.**, see Zhang, B., *TCSII April 2021* 1423-1427
- Yu, F.**, see Wu, W., *TCSII July 2021* 2650-2654
- Yu, H.**, see Zhang, Y., *TCSII Dec. 2021* 3532-3536
- Yu, L.**, see Shi, J., *TCSII March 2021* 993-997
- Yu, L.**, see Zhou, Y., *TCSII Aug. 2021* 2885-2889
- Yu, P.**, see Zhang, N., *TCSII June 2021* 1957-1961
- Yu, S.**, see Kim, J., *TCSII May 2021* 1735-1739
- Yu, S.**, see Meng, J., *TCSII May 2021* 1576-1580
- Yu, T.**, Li, W., Yu, Y., and de Lamare, R.C., Robust Adaptive Filtering Based on Exponential Functional Link Network: Analysis and Application; *TCSII July 2021* 2720-2724
- Yu, W.**, see Liu, H., *TCSII Jan. 2021* 351-355
- Yu, W.**, see Li, J., *TCSII Sept. 2021* 3143-3147
- Yu, X.**, see Zhang, L., *TCSII March 2021* 933-937
- Yu, X.**, see Min, H., *TCSII March 2021* 973-977
- Yu, X.**, see Liu, L., *TCSII April 2021* 1278-1282
- Yu, X.**, see Feng, Y., *TCSII July 2021* 2593-2597
- Yu, X.**, see Huang, Z., *TCSII Aug. 2021* 2780-2784
- Yu, X.**, see Zhang, K., *TCSII Nov. 2021* 3441-3445
- Yu, Y.**, Liu, G., and Hu, W., Online Learning Based Voltage and Power Regulator for AC Microgrids; *TCSII April 2021* 1318-1322
- Yu, Y.**, Tang, P., Yi, K., Zhao, C., Liu, H., Wu, Y., Yin, W., and Kang, K., A Wideband CMOS Frequency Quadrupler With Transformer-Based Tail Feedback Loop; *TCSII April 2021* 1153-1157
- Yu, Y.**, see Wu, J., *TCSII April 2021* 1502-1506
- Yu, Y.**, Moraitis, M., and Dubrova, E., Can Deep Learning Break a True Random Number Generator?; *TCSII May 2021* 1710-1714
- Yu, Y.**, Zhu, J., Zong, Z., Tang, P., Liu, H., Zhao, C., Wu, Y., and Kang, K., A 21-to-41-GHz High-Gain Low Noise Amplifier With Triple-Coupled Technique for Multiband Wireless Applications; *TCSII June 2021* 1857-1861
- Yu, Y.**, see Yu, T., *TCSII July 2021* 2720-2724
- Yu, Z.**, Wang, Y., Zhang, Z., He, K., Zeng, L., Wang, Z., and Zhao, W., Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory; *TCSII May 2021* 1665-1669
- Yu, Z.**, and Zhang, W., Consensus of the Hybrid Multiagent System Under Impulse Control; *TCSII July 2021* 2573-2577
- Yu, Z.**, Jiang, Z., Ma, J., and Zheng, Y., Safeness-Based Community Penetration; *TCSII July 2021* 2690-2694
- Yu, Z.**, see Li, Z., *TCSII Sept. 2021* 3153-3157
- Yu, Z.**, see Zheng, H., *TCSII Sept. 2021* 3172-3176
- Yu, Z.**, Sun, Y., and Dai, X., Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation; *TCSII Oct. 2021* 3241-3245
- Yu, Z.**, Sun, Y., and Dai, X., Stability and Stabilization of the Fractional-Order Power System With Time Delay; *TCSII Nov. 2021* 3446-3450
- Yuan, B.**, Xiao, L., Wang, B., and Ying, J., High-Speed Dynamic Level Shifter for High-Side Bootstrapped Gate Driver in High-Voltage Buck Regulators; *TCSII Sept. 2021* 3083-3087
- Yuan, M.**, Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems; *TCSII Nov. 2021* 3436-3440
- Yuan, Q.**, see Bhamra, H., *TCSII Jan. 2021* 206-210
- Yuan, T.**, see Bi, X., *TCSII Jan. 2021* 141-145
- Yue, C.P.**, see Shi, W., *TCSII July 2021* 2247-2251
- Yuldashev, M.V.**, see Kuznetsov, N.V., *TCSII April 2021* 1467-1471
- Yuldashev, R.V.**, see Kuznetsov, N.V., *TCSII April 2021* 1467-1471

Z

- Zeng, Y.**, see Wang, M., *TCSII March 2021 1023-1027*
- Zeng, Z.**, see Liu, H., *TCSII June 2021 2082-2086*
- Zerguine, A.**, see Lawal, A., *TCSII Aug. 2021 3007-3011*
- Zhai, C.**, Liu, H., and Cheng, K.M., Single-Chip CMOS Reconfigurable Dual-Band Tri-Mode High-Efficiency RF Amplifier Design; *TCSII March 2021 868-872*
- Zhai, J.**, and Xu, G., A Novel Non-Singular Terminal Sliding Mode Trajectory Tracking Control for Robotic Manipulators; *TCSII Jan. 2021 391-395*
- Zhai, J.**, Cai, Y., and Zhou, Q., Placement and Routing Methods Considering Shape Constraints of JTL for RSFQ Circuits; *TCSII May 2021 1571-1575*
- Zhai, Y.**, Liu, Z., Guan, Z., and Wen, G., Resilient Consensus of Multi-Agent Systems With Switching Topologies: A Trusted-Region-Based Sliding-Window Weighted Approach; *TCSII July 2021 2448-2452*
- Zhan, C.**, see Zhu, J., *TCSII Sept. 2021 3053-3057*
- Zhan, C.**, see Qiao, H., *TCSII Sept. 2021 3118-3122*
- Zhan, W.**, see Xu, J., *TCSII Jan. 2021 166-170*
- Zhan, X.**, see Hao, L., *TCSII June 2021 2067-2071*
- Zhang, A.**, Li, L., and Lu, J., Event-Based Output Regulation of Boolean Control Networks With Time Delay; *TCSII June 2021 2007-2011*
- Zhang, A.**, Cao, W., Liu, P., Sun, J., and Li, J., Channel Estimation for MmWave Massive MIMO With Hybrid Precoding Based on Log-Sum Sparse Constraints; *TCSII June 2021 1882-1886*
- Zhang, A.**, see Dai, X., *TCSII Aug. 2021 2755-2759*
- Zhang, A.**, see Qian, J., *TCSII Dec. 2021 3592-3596*
- Zhang, B.**, see Song, S., *TCSII Jan. 2021 436-440*
- Zhang, B.**, Ma, Z., and Yu, F., A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition; *TCSII April 2021 1423-1427*
- Zhang, B.**, see Khan, A., *TCSII Aug. 2021 2865-2869*
- Zhang, B.**, see Rao, L., *TCSII Aug. 2021 2957-2961*
- Zhang, C.**, see Tan, X., *TCSII Feb. 2021 662-666*
- Zhang, C.**, see Wu, J., *TCSII April 2021 1502-1506*
- Zhang, C.**, Ahn, C.K., Xiao, B., and Wu, J., On Attitude Tracking Control With Communication-Saving: An Integrated Quantized and Event-Based Scheme; *TCSII June 2021 2012-2016*
- Zhang, C.**, see Wang, H., *TCSII July 2021 2548-2552*
- Zhang, C.**, see Dai, M., *TCSII Aug. 2021 2855-2859*
- Zhang, F.**, see Wang, L., *TCSII May 2021 1640-1644*
- Zhang, G.**, see Chen, W., *TCSII Jan. 2021 176-180*
- Zhang, G.**, see Wang, N., *TCSII March 2021 1033-1037*
- Zhang, G.**, see Zhang, Q., *TCSII Nov. 2021 3411-3415*
- Zhang, G.**, Zhang, Q., Liu, Q., Tang, W., and Yang, J., Design of a New Dual-Band Balanced-to-Balanced Filtering Power Divider Based on the Circular Microstrip Patch Resonator; *TCSII Dec. 2021 3542-3546*
- Zhang, H.**, see Petricli, I., *TCSII Jan. 2021 256-260*
- Zhang, H.**, see Li, Y., *TCSII Feb. 2021 697-701*
- Zhang, H.**, see Wan, C., *TCSII April 2021 1158-1162*
- Zhang, H.**, Shu, Y., Jiang, W., Yin, Z., Zhao, W., and Ha, Y., A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications; *TCSII May 2021 1695-1699*
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- Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency. *Noferesti, M.*, +, *TCSII Jan. 2021* 171-175
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- Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C.*, +, *TCSII Oct. 2021* 3301-3305
- Adaptive Finite-Time Attitude Tracking Control for State Constrained Rigid Spacecraft Systems. *Zhao, L.*, +, *TCSII Dec. 2021* 3552-3556
- Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K.*, +, *TCSII June 2021* 2047-2051
- Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021* 386-390
- Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R.*, +, *TCSII Jan. 2021* 416-420
- Discrete-Time Adaptive Super-Twisting Observer With Predefined Arbitrary Convergence Time. *Xiong, X.*, +, *TCSII June 2021* 2057-2061
- Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G.*, +, *TCSII March 2021* 938-942
- Event-Based Prescribed Performance Control for Dynamic Positioning Vessels. *Wang, H.*, +, *TCSII July 2021* 2548-2552
- Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021* 436-440
- Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation. *Shi, X.*, +, *TCSII March 2021* 983-987
- Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021* 2453-2457
- Global Adaptive Leader-Following Consensus for Second-Order Nonlinear Multiagent Systems With Switching Topologies. *Zou, W.*, +, *TCSII Feb. 2021* 702-706
- Invariant Manifold Based Output-Feedback Sliding Mode Control for Systems With Mismatched Disturbances. *Zhang, L.*, +, *TCSII March 2021* 933-937
- Leader-Following Tracking Control of Discrete-Time Uncertain Nonlinear MASs With Parametric and Nonparametric State Couplings. *Li, S.*, +, *TCSII June 2021* 2037-2041
- Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021* 1273-1277
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021* 426-430
- Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021* 1318-1322
- Practical Sliding Mode Using State Depended Intermittent Control. *Xavier, N.*, +, *TCSII Jan. 2021* 341-345
- Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C.*, +, *TCSII Oct. 2021* 3321-3325
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021* 1982-1986
- Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint. *Liu, L.*, +, *TCSII April 2021* 1278-1282
- Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law. *Ma, H.*, +, *TCSII Feb. 2021* 722-726
- State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021* 3326-3330
- Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation. *Singh, B.*, +, *TCSII June 2021* 1947-1951
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021* 973-977
- Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021* 2558-2562
- Adaptive equalizers**
- An Adaptive Offset Cancellation Scheme and Shared-Summer Adaptive DFE for 0.068 pJ/b/dB 1.62-to-10 Gb/s Low-Power Receiver in 40 nm CMOS. *Lee, K.*, +, *TCSII Feb. 2021* 622-626
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- Adaptive estimation**
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- Adaptive Filtering of 4-D Light Field Images for Depth-Based Image Enhancement. *Vorhies, J.T.*, +, *TCSII Feb. 2021* 787-791
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- Constrained Least Mean M-Estimation Adaptive Filtering Algorithm. *Wang, Z.*, +, *TCSII April 2021* 1507-1511

- Joint Logarithmic Hyperbolic Cosine Robust Sparse Adaptive Algorithms. *Kumar, K.*, +, *TCSII Jan. 2021* 526-530
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- Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification. *Habibi, Z.*, +, *TCSII Aug. 2021* 3032-3036
- Modified Champernowne Function Based Robust and Sparsity-Aware Adaptive Filters. *Kumar, K.*, +, *TCSII June 2021* 2202-2206
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- Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises. *Liang, T.*, +, *TCSII June 2021* 2217-2221
- Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function. *Liang, T.*, +, *TCSII June 2021* 2227-2231
- Robust Adaptive Filtering Based on Exponential Functional Link Network: Analysis and Application. *Yu, T.*, +, *TCSII July 2021* 2720-2724
- Robust Constrained Generalized Correntropy and Maximum Versoria Criterion Adaptive Filters. *Bhattacharjee, S.S.*, +, *TCSII Aug. 2021* 3002-3006
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- Steady State Mean Square Analysis of Standard Maximum Versoria Criterion Based Adaptive Algorithm. *Radhika, S.*, +, *TCSII April 2021* 1547-1551
- Steady-State Mean-Square Error Performance Analysis of the Tensor LMS Algorithm. *Zhang, N.*, +, *TCSII March 2021* 1043-1047
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- Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function. *Liang, T.*, +, *TCSII June 2021* 2227-2231
- Adaptive systems**
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- Steady-State Mean-Square Error Analysis for Non-Negative Least Lncosh Algorithm. *Sun, Z.*, +, *TCSII June 2021* 2237-2241
- Adders**
- A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J.*, +, *TCSII May 2021* 1645-1649
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- An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks. *Kim, B.*, +, *TCSII May 2021* 1600-1604
- BCD Adder Designs Based on Three-Input XOR and Majority Gates. *Chu, Z.*, +, *TCSII June 2021* 1942-1946
- Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021* 3148-3152
- Integrating Two Logics Into One Crossbar Array for Logic Gate Design. *Yao, L.*, +, *TCSII Aug. 2021* 2987-2991
- The XOR-MAJ Thermometer-to-Binary Encoder Structure Stable to Bubble Errors. *Pilipko, M.M.*, +, *TCSII July 2021* 2613-2617
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- Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021* 2558-2562
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- A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications. *Zhang, H.*, +, *TCSII May 2021* 1695-1699
- A 64K-Neuron 64M-1b-Synapse 2.64pJ/SOP Neuromorphic Chip With All Memory on Chip for Spike-Based Models in 65nm CMOS. *Kuang, Y.*, +, *TCSII July 2021* 2655-2659
- A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J.*, +, *TCSII June 2021* 2142-2146
- A Novel, Efficient Implementation of a Local Binary Convolutional Neural Network. *Lin, I.*, +, *TCSII April 2021* 1413-1417
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- Equivalent Circuit Approach for Output Characteristic Design of Capacitive Power Transfer. *Pamungkas, L.*, +, *TCSII July 2021* 2513-2517
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- Aircraft control**
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- Algebra**
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- On Set Stability of Finite-Field Networks. *Zhu, W.*, +, *TCSII Oct. 2021* 3311-3315
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- A 15–38 GHz Vector-Summing Phase-Shifter With 360° Phase-Shifting Range Using Improved I/Q Generator. *Qiu, F.*, +, *TCSII Oct. 2021* 3199-3203
- All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021* 186-190
- Effects of AC Response Imperfections in True-Time-Delay Lines. *Mondal, I.*, +, *TCSII April 2021* 1173-1177
- Amplifiers**
- A 0.52 μ W, 38 nV/ $\sqrt{\text{Hz}}$ Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage. *Pham, X.T.*, +, *TCSII June 2021* 1793-1797
- A 0.5GHz 0.35mW LDO-Powered Constant-Slope Phase Interpolator With 0.22% INL. *Elnaqib, A.*, +, *TCSII Jan. 2021* 156-160
- A 65nm 0.6–1.2V Low-Dropout Regulator Using Voltage-Difference-to-Time Converter With Direct Output Feedback. *Shin, K.*, +, *TCSII Jan. 2021* 67-71
- A Compact Single-Transistor Current Source for Analog Design in Nanometer Digital CMOS. *Bai, C.*, +, *TCSII Dec. 2021* 3508-3512
- A New Extremely Low Power Temperature Insensitive Electronically Tunable VCII-Based Grounded Capacitance Multiplier. *Stornelli, V.*, +, *TCSII Jan. 2021* 72-76
- A Novel DRAM Architecture for Improved Bandwidth Utilization and Latency Reduction Using Dual-Page Operation. *Sudarshan, C.*, +, *TCSII May 2021* 1615-1619
- A Pseudo-Pseudo-Differential ADC Achieving 105dB SNDR in 10kHz Bandwidth Using Ring Amplifier Based Integrators. *Lee, C.Y.*, +, *TCSII July 2021* 2327-2331
- An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arasteht, O.*, +, *TCSII Jan. 2021* 151-155
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Amplitude shift keying

A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*

A Tunable CMOS IR-UWB Pulse Generator Based on Feedback Controlled Oscillator Switching. *Snelter, L.*, +, *TCSII June 2021 1902-1906*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Analog circuits

A High-Speed and Energy-Efficient Multi-Bit Cyclic ADC Using Single-Slope Quantizer for CMOS Image Sensors. *Jeong, J.*, +, *TCSII July 2021 2322-2326*

Exploring Feasible Design Space for Multi-Octave Power Amplifier Using Nonlinear Embedding. *Aggrawal, E.*, +, *TCSII Aug. 2021 2800-2804*

Analog integrated circuits

Analog/RF IP Protection: Attack Models, Defense Techniques, and Challenges. *Sanabria-Borbon, A.*, +, *TCSII Jan. 2021 36-41*

Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*

Analog processing circuits

An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *Zhou, K.*, +, *TCSII Aug. 2021 2932-2936*

Re-Thinking Analog Integrated Circuits in Digital Terms: A New Design Concept for the IoT Era. *Toledo, P.*, +, *TCSII March 2021 816-822*

Analog-digital conversion

A 0.007 mm² 0.6 V 6 MS/s Low-Power Double Rail-to-Rail SAR ADC in 65-nm CMOS. *Jo, Y.*, +, *TCSII Sept. 2021 3088-3092*

A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References. *Yang, C.*, +, *TCSII July 2021 2312-2316*

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*

A 65nm Thermometer-Encoded Time/Charge-Based Compute-in-Memory Neural Network Accelerator at 0.735pJ/MAC and 0.41pJ/Update. *Gong, M.*, +, *TCSII April 2021 1408-1412*

A 73dB-A Audio VCO-ADC Based on a Maximum Length Sequence Generator in 130nm CMOS. *Perez, C.*, +, *TCSII Oct. 2021 3194-3198*

A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J.*, +, *TCSII May 2021 1645-1649*

A High-Speed and Energy-Efficient Multi-Bit Cyclic ADC Using Single-Slope Quantizer for CMOS Image Sensors. *Jeong, J.*, +, *TCSII July 2021 2322-2326*

A NAND-SPIN-Based Magnetic ADC. *Wu, B.*, +, *TCSII Feb. 2021 617-621*

A New Fast Convergent Blind Timing Skew Error Correction Structure for TIADC. *Khakpour, A.*, +, *TCSII April 2021 1512-1516*

A Pseudo-Pseudo-Differential ADC Achieving 105dB SNDR in 10kHz Bandwidth Using Ring Amplifier Based Integrators. *Lee, C.Y.*, +, *TCSII July 2021 2327-2331*

A Redundancy-Based Background Calibration for Comparator Offset/Threshold and DAC Gain in a Ping-Pong SAR ADC. *Bunsen, K.*, +, *TCSII Feb. 2021 592-596*

A Square Wave-Based Digital Foreground Calibration Algorithm of a Pipeline ADC Using Approximate Harmonic Sampling. *Chatterjee, S.*, +, *TCSII April 2021 1068-1072*

A TD-ADC for IR-UWB Radars With Equivalent Sampling Technology and 8-GS/s Effective Sampling Rate. *Zhu, Z.*, +, *TCSII March 2021 888-892*

A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization. *Sengupta, S.*, +, *TCSII April 2021 1073-1077*

An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking. *Palmer, D.M.*, +, *TCSII May 2021 1680-1684*

Background Calibration for Bit Weights in Pipelined ADCs Using Adaptive Dither Windows. *Sun, J.*, +, *TCSII June 2021 1783-1787*

Continuous-Time Pipelined Analog-to-Digital Converters: A Mini-Tutorial. *Pavan, S.*, +, *TCSII March 2021 810-815*

Correlation-Based Background Calibration of Bit Weight in SAR ADCs Using DAS Algorithm. *Zhang, L.*, +, *TCSII April 2021 1063-1067*

Design of a Pseudo-Wide Dynamic Range CMOS Image Sensor by Using the Bidirectional Gamma Curvature Technique. *Im, H.*, +, *TCSII May 2021 1596-1599*

Digitally Assisted Secondary Switch-and-Compare Technique for a SAR ADC. *Joshi, A.*, +, *TCSII July 2021 2317-2321*

Input Referred Noise of VCO-Based Comparators. *Luo, Y.*, +, *TCSII Jan. 2021 82-86*

Linearization of Voltage-Controlled Oscillators Using Floating-Gate Transistors. *Andryzcik, S.*, +, *TCSII July 2021 2337-2341*

Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation. *Kim, H.*, +, *TCSII July 2021 2297-2301*

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*

Neural-Network Based Self-Initializing Algorithm for Multi-Parameter Optimization of High-Speed ADCs. *Bansal, S.*, +, *TCSII Jan. 2021 106-110*

Performance Limits of Generalized Sampling Based 2-Channel Analog-to-Digital Converter. *Ghosh, S.*, +, *TCSII July 2021 2257-2261*

Recent Advances and Trends in Noise Shaping SAR ADCs. *Salgado, G.M.*, +, *TCSII Feb. 2021 545-549*

Spacetime Frequency-Multiplexed Digital-RF Array Receivers With Reduced ADC Count. *Akram, N.*, +, *TCSII Aug. 2021 2840-2844*

The XOR-MAJ Thermometer-to-Binary Encoder Structure Stable to Bubble Errors. *Pilipko, M.M.*, +, *TCSII July 2021 2613-2617*

Angular measurement

An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking. *Palmer, D.M.*, +, *TCSII May 2021 1680-1684*

Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*

Angular velocity control

Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*

Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K.*, +, *TCSII July 2021 2528-2532*

Antenna arrays

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Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J.*, +, *TCSII April 2021 1183-1187*

SMUL-FFT: A Streaming Multiplierless Fast Fourier Transform. *Mirfarshbafan, S.H.*, +, *TCSII May 2021 1715-1719*

Antenna feeds

A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression. *Xun, M.*, +, *TCSII April 2021 1228-1232*

A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator. *Wang, C.*, +, *TCSII Nov. 2021 3426-3430*

Antenna phased arrays

An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in 0.18 μ m SiGe BiCMOS. *Li, Z.*, +, *TCSII June 2021 1763-1767*

Spacetime Frequency-Multiplexed Digital-RF Array Receivers With Reduced ADC Count. *Akram, N.*, +, *TCSII Aug. 2021 2840-2844*

Antenna radiation patterns

A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression. *Xun, M.*, +, *TCSII April 2021 1228-1232*

Isolation Enhancement in Dual-Band Monopole Antenna for 5G Applications. *Wang, W.*, +, *TCSII June 2021 1867-1871*

Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q.*, +, *TCSII Jan. 2021 236-240*

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A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator. *Wang, C.*, +, *TCSII Nov. 2021 3426-3430*

Application specific integrated circuits

- A 200 $\mu\text{g}/\sqrt{\text{Hz}}$, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer. *Tirupathi, R.*, +, *TCSII June 2021 1753-1757*
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- Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*
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- AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators. *Waris, H.*, +, *TCSII May 2021 1566-1570*
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Approximation theory

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- Approximating an Exactly Solvable Chaotic Oscillator Using a Colpitts Oscillator Circuit. *Rhea, B.K.*, +, *TCSII March 2021 1028-1032*
- Approximation of Fractional-Order Butterworth Filter Using Pole-Placement in W -Plane. *Mishra, S.K.*, +, *TCSII Oct. 2021 3229-3233*
- AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators. *Waris, H.*, +, *TCSII May 2021 1566-1570*
- AxLS: A Framework for Approximate Logic Synthesis Based on Netlist Transformations. *Castro-Godinez, J.*, +, *TCSII Aug. 2021 2845-2849*
- Design of Indirect Fractional Order IMC Controller for Fractional Order Processes. *Trivedi, R.*, +, *TCSII March 2021 968-972*
- Expressions for the Harmonic Transfer Functions of N-Path Filters With Arbitrary Source and Load Impedances. *Rizwan, S.*, +, *TCSII March 2021 903-907*
- Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*
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- Laguerre Expansion Series Based Reduced Order Interval Systems. *Samuel, E.R.*, +, *TCSII June 2021 2022-2026*
- LATIM: Loading-Aware Offline Training Method for Inverter-Based Memristive Neural Networks. *Vahdat, S.*, +, *TCSII Oct. 2021 3346-3350*
- Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*
- New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach. *Li, Y.*, +, *TCSII Feb. 2021 697-701*
- On Determining of LTI Systems Having Nondecreasing Step Response. *Du, H.*, +, *TCSII June 2021 2087-2091*

Array signal processing

- Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*
- Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J.*, +, *TCSII April 2021 1183-1187*
- Spacetime Frequency-Multiplexed Digital-RF Array Receivers With Reduced ADC Count. *Akram, N.*, +, *TCSII Aug. 2021 2840-2844*

Artificial intelligence

- An Extensive Soft Error Reliability Analysis of a Real Autonomous Vehicle Software Stack. *Bandeira, V.*, +, *TCSII Jan. 2021 446-450*

Asymptotic stability

- Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Exponential Stability of Impulsive Fractional Switched Systems With Time Delays. *He, D.*, +, *TCSII June 2021 1972-1976*
- Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K.*, +, *TCSII Oct. 2021 3316-3320*
- Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L.*, +, *TCSII Jan. 2021 301-305*
- Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G.*, +, *TCSII Jan. 2021 356-360*
- Indefinite Lyapunov–Razumikhin Functions-Based Stability and Event-Triggered Control of Switched Nonlinear Time-Delay Systems. *Zhang, J.*, +, *TCSII Oct. 2021 3286-3290*
- Lyapunov Stability Theory for Nonlinear Nabla Fractional Order Systems. *Wei, Y.*, *TCSII Oct. 2021 3246-3250*
- Necessary and Sufficient Conditions for Extended Strictly Positive Realness of Singular Fractional-Order Systems. *Zhang, Q.*, +, *TCSII June 2021 1997-2001*
- New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach. *Li, Y.*, +, *TCSII Feb. 2021 697-701*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*
- Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N.*, +, *TCSII June 2021 1957-1961*
- Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*

Asynchronous circuits

- A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*
- A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J.*, +, *TCSII May 2021 1645-1649*
- A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z.*, +, *TCSII Sept. 2021 3153-3157*

Asynchronous generators

- Impedance Modeling of DFIG Wind Farms With Various Rotor Speeds and Frequency Coupling. *Liu, B.*, +, *TCSII Jan. 2021 406-410*

Attenuators

- X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*

Attitude control

- Adaptive Finite-Time Attitude Tracking Control for State Constrained Rigid Spacecraft Systems. *Zhao, L.*, +, *TCSII Dec. 2021 3552-3556*
- Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S.*, +, *TCSII July 2021 2458-2462*
- Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K.*, +, *TCSII June 2021 2047-2051*
- Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities. *Dai, M.*, +, *TCSII Aug. 2021 2855-2859*

Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*

On Attitude Tracking Control With Communication-Saving: An Integrated Quantized and Event-Based Scheme. *Zhang, C.*, +, *TCSII June 2021 2012-2016*

Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C.*, +, *TCSII Oct. 2021 3321-3325*

Authorization

An IoT-Applicable Access Control Model Under Double-Layer Blockchain. *Li, Z.*, +, *TCSII June 2021 2102-2106*

Automatic test pattern generation

Enhancing Hardware Trojan Detection Sensitivity Using Partition-Based Shuffling Scheme. *Shabani, A.*, +, *TCSII Jan. 2021 266-270*

SAT-Based Integrated Hardware Trojan Detection and Localization Approach Through Path-Delay Analysis. *Sabri, M.*, +, *TCSII Aug. 2021 2850-2854*

Automotive electronics

A Supply Voltage Noise Immunity Enhancement Design for High-Voltage Gate Driver IC Based on Bootstrap Circuit. *Jin, W.*, +, *TCSII Sept. 2021 3048-3052*

Autonomous underwater vehicles

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R.*, +, *TCSII Jan. 2021 416-420*

Avalanche photodiodes

A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors. *Li, Y.*, +, *TCSII Oct. 2021 3224-3228*

Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F.*, +, *TCSII March 2021 893-897*

AWGN channels

A High Data Rate Solution for Differential Chaos Shift Keying Based on Carrier Index Modulation. *Yang, H.*, +, *TCSII April 2021 1487-1491*

B

Backpropagation

Binary Memristive Synapse Based Vector Neural Network Architecture and Its Application. *Liu, H.*, +, *TCSII Feb. 2021 772-776*

DeepTempo: A Hardware-Friendly Direct Feedback Alignment Multi-Layer Tempotron Learning Rule for Deep Spiking Neural Networks. *Shi, C.*, +, *TCSII May 2021 1581-1585*

Backstepping

Adaptive Finite-Time Attitude Tracking Control for State Constrained Rigid Spacecraft Systems. *Zhao, L.*, +, *TCSII Dec. 2021 3552-3556*

Antisaturation Command Filtered Backstepping Control-Based Disturbance Rejection for a Quadrotor UAV. *Liu, K.*, +, *TCSII Dec. 2021 3577-3581*

Baluns

A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS. *Liu, H.*, +, *TCSII June 2021 1847-1851*

A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band. *Maiwald, T.*, +, *TCSII July 2021 2277-2281*

A V-Band High Gain Sub-Harmonic Down-Conversion Mixer Using PMOS Cross Couple Pair to Implement Negative Impedance and Current-Bleeding Technique. *Chang, Y.*, +, *TCSII Aug. 2021 2765-2769*

An Edge-Coupled Marchand Balun With Partial Ground for Excellent Balance in 0.13 μm SiGe Technology. *Chakraborty, S.*, +, *TCSII Jan. 2021 226-230*

An Inductorless Wideband Gm-Boosted Balun LNA With nMOS-pMOS Configuration and Capacitively Coupled Loads for Sub-GHz IoT Applications. *Tiwari, S.*, +, *TCSII Oct. 2021 3204-3208*

Band-pass filters

A 3.9GHz/63.6% FBW Multi-Mode Filtering Power Divider Using Self-Packaged SISL. *Xiao, J.*, +, *TCSII June 2021 1842-1846*

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*

A BPF Integrated SP4T Switch Using Parallel Switched Fractal Common Feeding Line. *Xu, J.*, +, *TCSII June 2021 1932-1936*

A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression. *Xun, M.*, +, *TCSII April 2021 1228-1232*

A Dual Function Reconfigurable Bandpass Filter for Wideband and Tri-Band Operations. *Bandyopadhyay, A.*, +, *TCSII June 2021 1892-1896*

A Dual-Band Coupled Line Power Divider Using SISL Technology. *Feng, T.*, +, *TCSII Feb. 2021 657-661*

A Frequency Transformation for Co-Designed Multi-Passband/Multi-Embedded-Notch RF Filters. *Gomez-Garcia, R.*, +, *TCSII July 2021 2429-2433*

A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G.*, +, *TCSII June 2021 1778-1782*

A New Class of Wideband MS-to-MS Vialess Vertical Transition With Function of Filtering Performance. *Feng, L.*, +, *TCSII June 2021 1877-1881*

All-Frequency Absorptive CL Dual-Band BPF With Complementary Lossy Bandstop Branches. *Zhang, Y.*, +, *TCSII Dec. 2021 3532-3536*

An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B.*, +, *TCSII July 2021 2252-2256*

An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M.*, +, *TCSII June 2021 1817-1821*

Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J.*, +, *TCSII Jan. 2021 131-135*

Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*

Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency. *Noferesti, M.*, +, *TCSII Jan. 2021 171-175*

Design and Loss Reduction of Multiple-Zeros Dual-Band Bandpass Filter Using SISL. *Xu, W.*, +, *TCSII April 2021 1168-1172*

Design Method for Tunable Planar Bandpass Filters With Single-Bias Control and Wide Tunable Frequency Range. *Lim, T.*, +, *TCSII Jan. 2021 221-225*

Design of 2×8 Filtering Butler Matrix With Arbitrary Power Distribution. *Shao, Q.*, +, *TCSII Dec. 2021 3527-3531*

Diakoptics Modelling Applied to Flying Bird-Shape NGD Microstrip Circuit. *Ravelo, B.*, +, *TCSII Feb. 2021 637-641*

Differential Filtering Phase Shifter With Wide Common-Mode Suppression Bandwidth and High Frequency Selectivity. *Shi, J.*, +, *TCSII July 2021 2379-2383*

Direct Synthesis Method for Dual-Band Bandpass Filters With Wide Fractional Bandwidth Range and Center Frequency Ratio. *Dai, X.*, +, *TCSII Aug. 2021 2755-2759*

Dual-Band and Tri-Band Balanced-to-Single Ended Power Dividers With Wideband Common-Mode Suppression. *Zhu, H.*, +, *TCSII July 2021 2332-2336*

Exploiting Parasitic Capacitances in 3-D Inductors to Design RF CMOS Quasi-Elliptic-Type Broad-Band Bandpass Filters. *Zhu, X.*, +, *TCSII Sept. 2021 3128-3132*

Frequency Tunable Non-Reciprocal Bandpass Filter Using Time-Modulated Microstrip $\lambda_g/2$ Resonators. *Wu, X.*, +, *TCSII Feb. 2021 667-671*

Frequency-Reconfigurable Input-Reflectionless Bandpass Filter and Filtering Power Divider With Constant Absolute Bandwidth. *Fan, M.*, +, *TCSII July 2021 2424-2428*

High Performance Balanced Bandpass Filters With Wideband Common Mode Suppression. *Feng, W.*, +, *TCSII June 2021 1897-1901*

Millimeter-Wave CMOS 30/80 GHz Sharp-Rejection Dual-Band Bandstop Filters Using TFMS Open-Stepped-Impedance Resonators. *Narayana Rao Vanukuru, V.*, +, *TCSII Jan. 2021 201-205*

Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*

Miniaturized Ultra-Wideband Bandpass Filter With Ultra-Wide Stopband Using π -Type Unit With Inductive Loading on Integrated Passive Device. *Liu, B.*, +, *TCSII Nov. 2021 3406-3410*

Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters. *Fu, W.*, +, *TCSII July 2021 2352-2356*

QMSIW-Based Single and Triple Band Bandpass Filters. *Iqbal, A.*, +, *TCSII July 2021 2443-2447*

Reconfigurable Bandpass Filter With Wide-Range Bandwidth and Frequency Control. *Fan, M.*, +, *TCSII June 2021 1758-1762*

Reconfigurable-Bandwidth DWB BPF With Fixed Operation Frequency and Controllable Stopband. *Bi, X.*, +, *TCSII Jan. 2021 141-145*

Simplified Harmonic Rejection Mixer Analysis and Design Based on a Filtered Periodic Impulse Model. *de Boer, P.*, +, *TCSII July 2021 2292-2296*

Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q.*, +, *TCSII Jan. 2021 236-240*

Switchable Diplexer Based on Coupling Control. *Xu, J.*, +, *TCSII Jan. 2021 166-170*

Synthesis Design of Filtering Differential Phase Shifters of Independently Suppressed Harmonics. *Qiu, L.*, +, *TCSII Aug. 2021 2760-2764*

Synthesis Design on Wideband Single-Ended and Differential Dual-Band Filtering Impedance Transformer. *Chen, W.*, +, *TCSII March 2021 913-917*

Triple-Mode Substrate Integrated Coaxial Resonator Based Bandpass Filter Featuring Flexible Transmission Zeros and Adjustable Bandwidth. *Krishna, I.S.*, +, *TCSII April 2021 1223-1227*

Ultra-Broadband Bandpass Filter Using Linearly Tapered Coupled-Microstrip Line and Open Loop Defected Ground Structure. *Sangam, R.S.*, +, *TCSII Jan. 2021 181-185*

Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*

Band-stop filters

A Dual Function Reconfigurable Bandpass Filter for Wideband and Tri-Band Operations. *Bandyopadhyay, A.*, +, *TCSII June 2021 1892-1896*

A Frequency Transformation for Co-Designed Multi-Passband/Multi-Embedded-Notch RF Filters. *Gomez-Garcia, R.*, +, *TCSII July 2021 2429-2433*

A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G.*, +, *TCSII June 2021 1778-1782*

Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J.*, +, *TCSII Jan. 2021 131-135*

Compact Wideband Bandstop Filter With Directly Controlled Rejection. *Liu, L.*, +, *TCSII July 2021 2282-2286*

Dual-Band and Wide Stopband Coaxial Filters Using Open-Circuited-Stub-Loaded Resonators. *Xie, Y.*, +, *TCSII June 2021 1872-1876*

Frequency-Reconfigurable Input-Reflectionless Bandpass Filter and Filtering Power Divider With Constant Absolute Bandwidth. *Fan, M.*, +, *TCSII July 2021 2424-2428*

Millimeter-Wave CMOS 30/80 GHz Sharp-Rejection Dual-Band Bandstop Filters Using TFMS Open-Stepped-Impedance Resonators. *Narayana Rao Vanakuru, V.*, +, *TCSII Jan. 2021 201-205*

Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*

Simultaneous Wireless Power and Information Transfer Using Coupled Co-Existing Defected Ground Structure Resonators. *Barakat, A.*, +, *TCSII Feb. 2021 632-636*

Synthesis Design of Filtering Differential Phase Shifters of Independently Suppressed Harmonics. *Qiu, L.*, +, *TCSII Aug. 2021 2760-2764*

Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPTD Technology. *Kong, M.*, +, *TCSII July 2021 2414-2418*

Bandwidth

Dual-Band Filtering Power Divider Based on a Single Circular Patch Resonator With Improved Bandwidths and Good Isolation. *Zhang, Q.*, +, *TCSII Nov. 2021 3411-3415*

Barium compounds

Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J.*, +, *TCSII Jan. 2021 131-135*

Battery powered vehicles

Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X.*, +, *TCSII Jan. 2021 396-400*

Bayes methods

A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*

Kalman Filter Based on Multiple Scaled Multivariate Skew Normal Variance Mean Mixture Distributions With Application to Target Tracking. *Lu, C.*, +, *TCSII Feb. 2021 802-806*

Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification. *Habibi, Z.*, +, *TCSII Aug. 2021 3032-3036*

Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents. *Prospero, L.*, +, *TCSII Dec. 2021 3488-3492*

Statistical Graph Signal Recovery Using Variational Bayes. *Torkamani, R.*, +, *TCSII June 2021 2232-2236*

Beam steering

Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q.*, +, *TCSII Jan. 2021 236-240*

BiCMOS analog integrated circuits

A High-Linearity Adaptive-Bias SiGe Power Amplifier for 5G Communication. *Li, H.*, +, *TCSII Aug. 2021 2770-2774*

BiCMOS integrated circuits

A 24-29.5 GHz Voltage-Combined Doherty Power Amplifier Based on Compact Low-Loss Combiner. *Wang, D.*, +, *TCSII July 2021 2342-2346*

A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C.*, +, *TCSII April 2021 1158-1162*

A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS. *Liu, H.*, +, *TCSII June 2021 1847-1851*

A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band. *Maiwald, T.*, +, *TCSII July 2021 2277-2281*

A Low-Noise and High-Gain Folded Mixer for a UWB System in 0.18- μm SiGe Bi-CMOS Technology. *Chen, J.*, +, *TCSII Feb. 2021 612-616*

All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021 186-190*

An Edge-Coupled Marchand Balun With Partial Ground for Excellent Balance in 0.13 μm SiGe Technology. *Chakraborty, S.*, +, *TCSII Jan. 2021 226-230*

An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in 0.18 μm SiGe BiCMOS. *Li, Z.*, +, *TCSII June 2021 1763-1767*

Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G.*, +, *TCSII Sept. 2021 3098-3102*

Dual Q/V-Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines. *Lee, D.*, +, *TCSII March 2021 898-902*

On the Linearity of BJT-Based Current-Mode DAC Drivers. *Lupo, N.*, +, *TCSII Sept. 2021 3138-3142*

X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*

Bifurcation

2-D Piecewise-Linear Neuron Model. *Bao, H.*, +, *TCSII April 2021 1453-1457*

A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M.*, +, *TCSII March 2021 1023-1027*

Bifurcation and Control for a Predator-Prey System With Two Delays. *Jiang, X.*, +, *TCSII Jan. 2021 376-380*

Closed-Form Operational Boundaries for Buck Converters With Constant On-Time Control. *Bizzarri, F.*, +, *TCSII Oct. 2021 3331-3335*

Big Data

Circuit and System-Level Aspects of Phase Change Memory. *Pozidis, H.*, +, *TCSII March 2021 844-850*

BIMOS integrated circuits

A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV². *Choi, K.*, +, *TCSII March 2021 858-862*

A Supply Voltage Noise Immunity Enhancement Design for High-Voltage Gate Driver IC Based on Bootstrap Circuit. *Jin, W.*, +, *TCSII Sept. 2021 3048-3052*

Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*

Binary codes

BCD Adder Designs Based on Three-Input XOR and Majority Gates. *Chu, Z.*, +, *TCSII June 2021 1942-1946*

The XOR-MAJ Thermometer-to-Binary Encoder Structure Stable to Bubble Errors. *Pilipko, M.M.*, +, *TCSII July 2021 2613-2617*

Bioelectric phenomena

A Low-Cost Bioimpedance Phase Angle Monitor for Portable Electrical Surface Stimulation Burn Prevention. *Burns, R.P.*, +, *TCSII April 2021 1118-1122*

Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator. *Liu, Y.*, +, *TCSII Aug. 2021 2982-2986*

Bioelectric potentials

A 0.52 μ W, 38 nV/ $\sqrt{\text{Hz}}$ Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage. *Pham, X.T.*, +, *TCSII June 2021 1793-1797*

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*

An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arastehe, O.*, +, *TCSII Jan. 2021 151-155*

Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T.*, +, *TCSII Feb. 2021 574-580*

Bioimpedance

An 8-Channel 1.76-mW 4.84-mm² Electrical Impedance Tomography SoC With Direct IF Frequency Division Multiplexing. *Zeng, L.*, +, *TCSII Nov. 2021 3401-3405*

Biological system modeling

On The Equivalent Impedance of Two-Impedance Self-Similar Ladder Networks. *Elwakil, A.S.*, +, *TCSII July 2021 2685-2689*

Biological techniques

A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L.*, +, *TCSII Sept. 2021 3133-3137*

Biological tissues

A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L.*, +, *TCSII Sept. 2021 3133-3137*

A Quick Method of Phase Fitting in RF Segmented Demodulation. *Zhang, L.*, *TCSII July 2021 2730-2734*

Biomedical communication

Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X.*, +, *TCSII June 2021 1807-1811*

Biomedical electrodes

A 4.5 G Ω -Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz. *Pham, X.T.*, +, *TCSII Jan. 2021 116-120*

A Low-Cost Bioimpedance Phase Angle Monitor for Portable Electrical Surface Stimulation Burn Prevention. *Burns, R.P.*, +, *TCSII April 2021 1118-1122*

An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y.*, +, *TCSII May 2021 1610-1614*

An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arastehe, O.*, +, *TCSII Jan. 2021 151-155*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Biomedical electronics

A 0.52 μ W, 38 nV/ $\sqrt{\text{Hz}}$ Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage. *Pham, X.T.*, +, *TCSII June 2021 1793-1797*

A 4.5 G Ω -Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz. *Pham, X.T.*, +, *TCSII Jan. 2021 116-120*

A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R.*, +, *TCSII July 2021 2272-2276*

A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization. *Sengupta, S.*, +, *TCSII April 2021 1073-1077*

An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y.*, +, *TCSII May 2021 1610-1614*

An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arastehe, O.*, +, *TCSII Jan. 2021 151-155*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Biomedical measurement

A Low-Cost Bioimpedance Phase Angle Monitor for Portable Electrical Surface Stimulation Burn Prevention. *Burns, R.P.*, +, *TCSII April 2021 1118-1122*

Biomedical MRI

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y.*, +, *TCSII July 2021 2404-2408*

Parameters Measurement of Multiple Exponentially Damped Sinusoids With Sub-Nyquist Sampling. *Huang, G.*, +, *TCSII July 2021 2710-2714*

Biomedical ultrasonics

A Quick Method of Phase Fitting in RF Segmented Demodulation. *Zhang, L.*, *TCSII July 2021 2730-2734*

Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J.*, +, *TCSII Jan. 2021 19-23*

Biomembrane transport

Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator. *Liu, Y.*, +, *TCSII Aug. 2021 2982-2986*

Bipolar MIMIC

A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band. *Maiwald, T.*, +, *TCSII July 2021 2277-2281*

Bipolar transistor circuits

Approximating an Exactly Solvable Chaotic Oscillator Using a Colpitts Oscillator Circuit. *Rhea, B.K.*, +, *TCSII March 2021 1028-1032*

Bipolar transistors

A BJT-Based CMOS Temperature Sensor With Duty-Cycle-Modulated Output and $\pm 0.5^\circ\text{C}$ (3σ) Inaccuracy From -40°C to 125°C . *Huang, Z.*, +, *TCSII Aug. 2021 2780-2784*

Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation. *Kim, H.*, +, *TCSII July 2021 2297-2301*

On the Linearity of BJT-Based Current-Mode DAC Drivers. *Lupo, N.*, +, *TCSII Sept. 2021 3138-3142*

Biquadratic filters

64 dB Dynamic-Range 810 μ W 90 MHz Fully-Differential Flipped-Source-Follower Analog Filter in 28nm-CMOS. *De Matteis, M.*, +, *TCSII Sept. 2021 3068-3072*

Blockchains

An IoT-Applicable Access Control Model Under Double-Layer Blockchain. *Li, Z.*, +, *TCSII June 2021 2102-2106*

Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X.*, +, *TCSII Jan. 2021 396-400*

Bluetooth

2.4-GHz Low-Power Low-IF Receiver With a Quadrature Local Oscillator Buffer for Bluetooth Low Energy Applications. *Song, E.*, +, *TCSII July 2021 2369-2373*

Boolean algebra

Criteria for Observability and Reconstructibility of Boolean Control Networks via Set Controllability. *Zhang, X.*, +, *TCSII April 2021 1263-1267*

Boolean functions

Criteria for Observability and Reconstructibility of Boolean Control Networks via Set Controllability. *Zhang, X.*, +, *TCSII April 2021 1263-1267*

Event-Based Output Regulation of Boolean Control Networks With Time Delay. *Zhang, A.*, +, *TCSII June 2021 2007-2011*

Integrating Two Logics Into One Crossbar Array for Logic Gate Design. *Yao, L.*, +, *TCSII Aug. 2021 2987-2991*

Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method. *Liu, A.*, +, *TCSII July 2021 2553-2557*

Boosting

Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control. *Sayed, W.S.*, +, *TCSII Nov. 2021 3466-3470*

Bootstrap circuits

A Supply Voltage Noise Immunity Enhancement Design for High-Voltage Gate Driver IC Based on Bootstrap Circuit. *Jin, W.*, +, *TCSII Sept. 2021 3048-3052*

An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y.*, +, *TCSII May 2021 1610-1614*

High-Speed Dynamic Level Shifter for High-Side Bootstrapped Gate Driver in High-Voltage Buck Regulators. *Yuan, B.*, +, *TCSII Sept. 2021 3083-3087*

Brain

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*

A Low-Cost High-Throughput Digital Design of Biorealistic Spiking Neuron. *Pu, J.*, +, *TCSII April 2021 1398-1402*

Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T.*, +, *TCSII Feb. 2021 574-580*

Bridge circuits

Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B.*, +, *TCSII Jan. 2021 346-350*

Open Circuit Fault Detection and Switch Identification for LS-PWM H-Bridge Inverter. *Kumar, M.*, *TCSII April 2021 1363-1367*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Brushless DC motors

Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K.*, +, *TCSII July 2021 2528-2532*

Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*

Buffer circuits

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

A Robust, High-Speed and Energy-Efficient Ultralow-Voltage Level Shifter. *Fassio, L.*, +, *TCSII April 2021 1393-1397*

Fast Buffer Count Estimation in 3D IC Floorplanning. *Mohapatra, S.*, +, *TCSII Jan. 2021 271-275*

Tutorial: Design of High-Speed Nano-Scale CMOS Mixed-Voltage Digital I/O Buffer With High Reliability to PVTL Variations. *Wang, C.*, *TCSII Feb. 2021 562-567*

Built-in self test

200-MHz Single-Ended 6T 1-kb SRAM With 0.2313 pJ Energy/Access Using 40-nm CMOS Logic Process. *Wang, C.*, +, *TCSII Sept. 2021 3163-3166*

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

Built-in self-test

A Single-Ended Low Power 16-nm FinFET 6T SRAM Design With PDP Reduction Circuit. *Wang, C.*, +, *TCSII Dec. 2021 3478-3482*

Butler matrices

Design of 2 × 8 Filtering Butler Matrix With Arbitrary Power Distribution. *Shao, Q.*, +, *TCSII Dec. 2021 3527-3531*

Design of Wideband Butler Matrix With Equal/Unequal Phase Differences for Flexible Beam-Controllability. *Ma, L.*, +, *TCSII Dec. 2021 3537-3541*

Butterworth filters

Approximation of Fractional-Order Butterworth Filter Using Pole-Placement in *W*-Plane. *Mishra, S.K.*, +, *TCSII Oct. 2021 3229-3233*

C**Cache storage**

Resonant Energy Recycling SRAM Architecture. *Islam, R.*, +, *TCSII April 2021 1383-1387*

Calibration

A 2.4–3.0GHz Process-Tolerant Sub-Sampling PLL With Loop Bandwidth Calibration. *Lu, Y.*, +, *TCSII March 2021 873-877*

A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References. *Yang, C.*, +, *TCSII July 2021 2312-2316*

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

A 5800 μm² Process Monitor Circuit for Measurement of in-Die Variation of V_{th} in 65nm. *Lisha, L.*, +, *TCSII March 2021 863-867*

A Redundancy-Based Background Calibration for Comparator Offset/Threshold and DAC Gain in a Ping-Pong SAR ADC. *Bunsen, K.*, +, *TCSII Feb. 2021 592-596*

A Square Wave-Based Digital Foreground Calibration Algorithm of a Pipeline ADC Using Approximate Harmonic Sampling. *Chatterjee, S.*, +, *TCSII April 2021 1068-1072*

A TD-ADC for IR-UWB Radars With Equivalent Sampling Technology and 8-GS/s Effective Sampling Rate. *Zhu, Z.*, +, *TCSII March 2021 888-892*

A Type-I PLL With Foreground Loop Bandwidth Calibration. *Chou, M.*, +, *TCSII April 2021 1103-1107*

An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y.*, +, *TCSII May 2021 1610-1614*

Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit. *Chithra, .*, +, *TCSII June 2021 1788-1792*

Correlation-Based Background Calibration of Bit Weight in SAR ADCs Using DAS Algorithm. *Zhang, L.*, +, *TCSII April 2021 1063-1067*

Current Reference Circuits: A Tutorial. *Lee, S.*, +, *TCSII March 2021 830-836*

Digitally Assisted Secondary Switch-and-Compare Technique for a SAR ADC. *Joshi, A.*, +, *TCSII July 2021 2317-2321*

Cameras

How it Flies and Why it Flies? Volleyball Trajectory Segmentation and Classification. *Chen, C.*, +, *TCSII May 2021 1591-1595*

Cantilevers

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K.*, +, *TCSII Oct. 2021 3251-3255*

Capacitance

A 7-Level Switched Capacitor Multilevel Inverter With Reduced Switches and Voltage Stresses. *Roy, T.*, +, *TCSII Dec. 2021 3587-3591*

Equivalent Circuit Approach for Output Characteristic Design of Capacitive Power Transfer. *Pamungkas, L.*, +, *TCSII July 2021 2513-2517*

Capacitive sensors

A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μm CMOS. *Zeng, X.*, +, *TCSII June 2021 1812-1816*

A 200 μg/√Hz, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer. *Tirupathi, R.*, +, *TCSII June 2021 1753-1757*

A Fully Integrated Low-Power Capacitive Sensor Frontend With Automatic Tuning Scheme. *Mojarad, M.*, +, *TCSII Dec. 2021 3498-3502*

Design Exploration of Sensing Techniques in 2T-2R Resistive Ternary CAMs. *Rakka, M.*, +, *TCSII Feb. 2021 762-766*

Capacitors

0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop. *Yoon, C.*, +, *TCSII Jan. 2021 136-140*

- A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters. *Park, J., +, TCSII Nov. 2021 3386-3390*
- A 65nm 0.6–1.2V Low-Dropout Regulator Using Voltage-Difference-to-Time Converter With Direct Output Feedback. *Shin, K., +, TCSII Jan. 2021 67-71*
- A 7-Level Switched Capacitor Multilevel Inverter With Reduced Switches and Voltage Stresses. *Roy, T., +, TCSII Dec. 2021 3587-3591*
- A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G., +, TCSII June 2021 1778-1782*
- A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S., +, TCSII July 2021 2493-2497*
- A New Extremely Low Power Temperature Insensitive Electronically Tunable VCI-Based Grounded Capacitance Multiplier. *Stornelli, V., +, TCSII Jan. 2021 72-76*
- A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H., +, TCSII May 2021 1625-1629*
- A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting. *Chong, G., +, TCSII June 2021 1743-1747*
- Correlation-Based Background Calibration of Bit Weight in SAR ADCs Using DAS Algorithm. *Zhang, L., +, TCSII April 2021 1063-1067*
- Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips. *Goncalves, G., +, TCSII Nov. 2021 3396-3400*
- Electronically Controllable Memcapacitor Circuit With Experimental Results. *Yesil, A., +, TCSII April 2021 1443-1447*
- Equivalent Circuit Approach for Output Characteristic Design of Capacitive Power Transfer. *Pamungkas, L., +, TCSII July 2021 2513-2517*
- Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H., +, TCSII Jan. 2021 191-195*
- Multi-Stage DC-DC Converter Using Active LC2D Network With Minimum Component. *Kumar, G.G., +, TCSII March 2021 943-947*
- Novel Multifunctional Dual-Band Coupled-Line Coupler With Reuse of Low-Frequency Trans-Directional and High-Frequency Contra-Directional Functions. *Zhang, Y., +, TCSII June 2021 1917-1921*
- Optimize the Efficiency of Lossy Matching Network: A Top-Down Splitting Algorithm Based on Generalized Quality-Based Equation. *He, F., +, TCSII Aug. 2021 2750-2754*
- QMSIW-Based Single and Triple Band Bandpass Filters. *Iqbal, A., +, TCSII July 2021 2443-2447*
- Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J., +, TCSII Feb. 2021 568-573*
- Switching Signals Based Condition Monitoring for Submodule Capacitors in Modular Multilevel Converters. *Geng, Z., +, TCSII June 2021 2017-2021*
- The Simple Charge-Controlled Grounded/Floating Mem-Element Emulator. *Liu, Y., +, TCSII June 2021 2177-2181*
- Carbon nanotube field effect transistors**
- Ultra-Compact Ternary Logic Gates Based on Negative Capacitance Carbon Nanotube FETs. *Jooq, M.K.Q., +, TCSII June 2021 2162-2166*
- Carbon nanotubes**
- Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S., +, TCSII Aug. 2021 2947-2951*
- Cascade control**
- A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain. *Lin, P., +, TCSII April 2021 1328-1332*
- Cascade systems**
- Multivaluedness in Networks: Shannon's Noisy-Channel Coding Theorem. *van Wyk, M.A., +, TCSII Oct. 2021 3234-3235*
- Cavity resonator filters**
- QMSIW-Based Single and Triple Band Bandpass Filters. *Iqbal, A., +, TCSII July 2021 2443-2447*
- CCD image sensors**
- Compensation of Signal-Dependent Readout Noise in Photon Transfer Curve Characterisation of CMOS Image Sensors. *Levski, D., +, TCSII Jan. 2021 102-105*
- Cellular automata**
- A Novel Hardware-Oriented Recurrent Network of Asynchronous CA Neurons for a Neural Integrator. *Takeda, K., +, TCSII Aug. 2021 2972-2976*
- BCD Adder Designs Based on Three-Input XOR and Majority Gates. *Chu, Z., +, TCSII June 2021 1942-1946*
- Spars: A Full Flow Quantum-Dot Cellular Automata Circuit Design Tool. *Peng, F., +, TCSII April 2021 1233-1237*
- Cellular biophysics**
- Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T., +, TCSII Feb. 2021 574-580*
- Cellular neural networks**
- A Novel Hardware-Oriented Recurrent Network of Asynchronous CA Neurons for a Neural Integrator. *Takeda, K., +, TCSII Aug. 2021 2972-2976*
- Ceramic packaging**
- Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y., +, TCSII March 2021 878-882*
- Channel allocation**
- Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents. *Prospero, L., +, TCSII Dec. 2021 3488-3492*
- Channel bank filters**
- Performance Limits of Generalized Sampling Based 2-Channel Analog-to-Digital Converter. *Ghosh, S., +, TCSII July 2021 2257-2261*
- Channel coding**
- An Output-Coding-Based Detection Scheme Against Replay Attacks in Cyber-Physical Systems. *Guo, H., +, TCSII Oct. 2021 3306-3310*
- Multivaluedness in Networks: Shannon's Noisy-Channel Coding Theorem. *van Wyk, M.A., +, TCSII Oct. 2021 3234-3235*
- Channel estimation**
- Blind Signal Estimation Using Structured Subspace Technique. *Lawal, A., +, TCSII Aug. 2021 3007-3011*
- Channel Estimation for MmWave Massive MIMO With Hybrid Precoding Based on Log-Sum Sparse Constraints. *Zhang, A., +, TCSII June 2021 1882-1886*
- Chaos**
- A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M., +, TCSII March 2021 1023-1027*
- Approximating an Exactly Solvable Chaotic Oscillator Using a Colpitts Oscillator Circuit. *Rhea, B.K., +, TCSII March 2021 1028-1032*
- Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C., +, TCSII April 2021 1472-1476*
- Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control. *Sayed, W.S., +, TCSII Nov. 2021 3466-3470*
- Finite-Time Projective Synchronization Control of Variable-Order Fractional Chaotic Systems via Sliding Mode Approach. *Meng, X., +, TCSII July 2021 2503-2507*
- Memristor-Coupled Logistic Hyperchaotic Map. *Bao, B., +, TCSII Aug. 2021 2992-2996*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X., +, TCSII June 2021 2187-2191*
- One-Dimensional Pseudo-Chaotic Sequences Based on the Discrete Arnold's Cat Map Over \mathbb{Z}_3^m . *Souza, C.E.C., +, TCSII Jan. 2021 491-495*
- Parameter Identification of Memristor-Based Chaotic Systems via the Drive-Response Synchronization Method. *Liu, H., +, TCSII June 2021 2082-2086*
- Parametric Control for Multi-Scroll Attractor Generation via Nested Sine-PWL Function. *Wang, N., +, TCSII March 2021 1033-1037*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z., +, TCSII Nov. 2021 3446-3450*
- Two-Memristor-Based Chaotic System With Infinite Coexisting Attractors. *Lai, Q., +, TCSII June 2021 2197-2201*

Chaotic communication

A High Data Rate Solution for Differential Chaos Shift Keying Based on Carrier Index Modulation. *Yang, H.*, +, *TCSII April 2021 1487-1491*

Charge pump circuits

A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL. *Wang, H.*, +, *TCSII June 2021 1852-1856*

A Low-Ripple Charge Pump With Novel Compensator for Transient-Response Improvement in CMOS Image Sensors. *Gao, J.*, +, *TCSII April 2021 1113-1117*

Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit. *Chithra, .*, +, *TCSII June 2021 1788-1792*

Charge Pumps for Ultra-Low-Power Applications: Analysis, Design, and New Solutions. *Ballo, A.*, +, *TCSII Aug. 2021 2895-2901*

Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*

Charge transfer

Offset and Gain FPN Calibrated Linear-Logarithmic Image Sensor With Shared Pixel Architecture. *Lee, J.*, *TCSII Dec. 2021 3518-3521*

Chebyshev approximation

Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation. *Tseng, C.*, +, *TCSII May 2021 1630-1634*

Chebyshev filters

Narrower Band Matching With Low Quality Factor Values. *Sengul, M.*, *TCSII July 2021 2434-2437*

Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPOD Technology. *Kong, M.*, +, *TCSII July 2021 2414-2418*

Chemical reactors

Input Delay Estimation for Input-Affine Dynamical Systems Based on Taylor Expansion. *Zhang, Y.*, +, *TCSII April 2021 1298-1302*

Choppers (circuits)

A 0.52 μ W, 38 nV/ $\sqrt{\text{Hz}}$ Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage. *Pham, X.T.*, +, *TCSII June 2021 1793-1797*

A 4.5 G Ω -Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz. *Pham, X.T.*, +, *TCSII Jan. 2021 116-120*

Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation. *Kim, H.*, +, *TCSII July 2021 2297-2301*

Chua's circuit

Parametric Control for Multi-Scroll Attractor Generation via Nested Sine-PWL Function. *Wang, N.*, +, *TCSII March 2021 1033-1037*

Circuit analysis computing

Lane Shared Bit-Pragmatic Deep Neural Network Computing Architecture and Circuit. *Yang, S.*, +, *TCSII Jan. 2021 486-490*

Circuit breakers

A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid. *Wu, J.*, +, *TCSII Aug. 2021 2907-2911*

Circuit feedback

0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop. *Yoon, C.*, +, *TCSII Jan. 2021 136-140*

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*

A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J.*, +, *TCSII May 2021 1645-1649*

A Wideband CMOS Frequency Quadrupler With Transformer-Based Tail Feedback Loop. *Yu, Y.*, +, *TCSII April 2021 1153-1157*

An Accuracy-Improved and Internal Regulator-Free Temperature Sensor With a Non-Linear Current Mode Feedback Pseudo-PLL. *Li, F.*, +, *TCSII April 2021 1138-1142*

Circuit noise

Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop. *Nagam, S.S.*, +, *TCSII May 2021 1670-1674*

Circuit optimization

A +7.6 dBm IIP3 2.4-GHz Double-Balanced Mixer With 10.5 dB NF in 65-nm CMOS. *Kashani, M.H.*, +, *TCSII Oct. 2021 3214-3218*

FPGA-Based Optimized Design of Montgomery Modular Multiplier. *Abd-Elkader, A.A.H.*, +, *TCSII June 2021 2137-2141*

Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*

Circuit oscillations

Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Feghhi, R.*, +, *TCSII April 2021 1193-1197*

Circuit simulation

An Impedance Matching Strategy for Micro-Scale RF Energy Harvesting Systems. *Mohan, A.*, +, *TCSII April 2021 1458-1462*

Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function. *Ravelo, B.*, +, *TCSII July 2021 2364-2368*

Spars: A Full Flow Quantum-Dot Cellular Automata Circuit Design Tool. *Peng, F.*, +, *TCSII April 2021 1233-1237*

Circuit stability

Design of the Class-E Power Amplifier Considering the Temperature Effect of the Transistor On-Resistance for Sensor Applications. *Liu, C.*, +, *TCSII May 2021 1705-1709*

Highly Stable Low Power Radiation Hardened Memory-by-Design SRAM for Space Applications. *Pal, S.*, +, *TCSII June 2021 2147-2151*

Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Feghhi, R.*, +, *TCSII April 2021 1193-1197*

Circuit synthesis

Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips. *Goncalves, G.*, +, *TCSII Nov. 2021 3396-3400*

Circuit theory

Guest Editorial Special Issue on the 2021 IEEE International Symposium on Circuits and Systems. *Ha, Y.*, +, *TCSII May 2021 1565*

Multivaluedness in Networks: Exemplars. *van Wyk, M.A.*, +, *TCSII June 2021 2182-2186*

Circuit tuning

A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6 -dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y.*, +, *TCSII Sept. 2021 3093-3097*

An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B.*, +, *TCSII July 2021 2252-2256*

Comparative Study and Design of Current Starved Ring Oscillators in 16 nm Technology. *Huq, S.M.I.*, +, *TCSII April 2021 1098-1102*

Design Method for Tunable Planar Bandpass Filters With Single-Bias Control and Wide Tunable Frequency Range. *Lim, T.*, +, *TCSII Jan. 2021 221-225*

Millimeter-wave Frequency Reconfigurable Low Noise Amplifiers for 5G. *Shaheen, R.A.*, +, *TCSII Feb. 2021 642-646*

Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPOD Technology. *Kong, M.*, +, *TCSII July 2021 2414-2418*

Circuits and systems

A Theorem on Power Superposition in Resistive Networks. *Barbi, I.*, *TCSII July 2021 2362-2363*

Guest Editorial Special Issue on the 2021 IEEE International Symposium on Circuits and Systems. *Ha, Y.*, +, *TCSII May 2021 1565*

Guest Editorial Special Issue on the 2021 ISICAS: A CAS Journal Track Symposium. *Ha, Y.*, +, *TCSII Sept. 2021 3037*

Clock and data recovery circuits

A 0.32–2.7 Gb/s Reference-Less Continuous-Rate Clock and Data Recovery Circuit With Unrestricted and Fast Frequency Acquisition. *Tho, N.H.*, +, *TCSII July 2021 2347-2351*

A 5-Gb/s Adaptive Digital CDR Circuit With SSC Capability and Enhanced High-Frequency Jitter Tolerance. *Chang, S.*, +, *TCSII Jan. 2021 161-165*

A Jitter-Tolerance-Enhanced Digital CDR Circuit Using Background Loop Gain Controller. *Yao, Y.*, +, *TCSII June 2021 1837-1841*

Clocks

0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop. *Yoon, C.*, +, *TCSII Jan. 2021 136-140*

- A 0.5GHz 0.35mW LDO-Powered Constant-Slope Phase Interpolator With 0.22% INL. *Elnaqib, A.*, +, *TCSII Jan. 2021 156-160*
- A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J.*, +, *TCSII Jan. 2021 471-475*
- A Power-Aware Toggling-Frequency Actuator in Data-Toggling SRAM for Secure Data Protection. *Ho, W.*, +, *TCSII June 2021 2122-2126*
- An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y.*, +, *TCSII May 2021 1610-1614*
- Capacitor-Less Dual-Mode All-Digital LDO With $\Delta\Sigma$ -Modulation-Based Ripple Reduction. *Akram, M.A.*, +, *TCSII May 2021 1620-1624*
- Comparison Study of DAC Realizations in Current Input CTΣA Modulators. *Rajabzadeh, M.*, +, *TCSII Jan. 2021 111-115*
- Constant-Time Synchronous Binary Counter With Minimal Clock Period. *Hyun, Y.*, +, *TCSII July 2021 2645-2649*
- Generalized Polyphase Digital Channelizer. *Jang, Y.*, +, *TCSII Oct. 2021 3366-3370*
- Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*
- New Charge-Steering DFEs in 55-nm CMOS. *Pike, J.*, +, *TCSII Jan. 2021 231-235*
- Placement and Routing Methods Considering Shape Constraints of JTL for RSFQ Circuits. *Zhai, J.*, +, *TCSII May 2021 1571-1575*
- Closed loop systems**
- Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model. *Li, Z.*, +, *TCSII Oct. 2021 3256-3260*
- Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S.*, +, *TCSII July 2021 2458-2462*
- Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L.*, +, *TCSII Oct. 2021 3266-3270*
- Design of Discrete-Time Sliding Mode Control With Disturbance Compensator-Based Switching Function. *Ma, H.*, +, *TCSII April 2021 1268-1272*
- Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G.*, +, *TCSII March 2021 938-942*
- Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*
- Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*
- Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation. *Shi, X.*, +, *TCSII March 2021 983-987*
- Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L.*, +, *TCSII Jan. 2021 301-305*
- Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*
- Global Fixed-Time Output Feedback Stabilization of Perturbed Planar Nonlinear Systems. *Gao, F.*, +, *TCSII Feb. 2021 707-711*
- Modeling, Analysis and Implementation of an Improved Interleaved Buck-Boost Converter. *Rana, N.*, +, *TCSII July 2021 2588-2592*
- Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S.*, +, *TCSII June 2021 1967-1971*
- On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*
- Performance Residual Based Fault Detection for Feedback Control Systems. *Liu, R.*, +, *TCSII Oct. 2021 3291-3295*
- Prescribed Finite-Time H_∞ Control for Nonlinear Descriptor Systems. *Lu, X.*, +, *TCSII Aug. 2021 2917-2921*
- Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*
- Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint. *Liu, L.*, +, *TCSII April 2021 1278-1282*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*
- Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*
- Cloud computing**
- Resource-Aware Collaborative Allocation for CPU-FPGA Cloud Environments. *Jordan, M.G.*, +, *TCSII May 2021 1655-1659*
- CMOS analog integrated circuits**
- 5th-Order Continuous-Time Low-Pass Filter Achieving 56 MHz Bandwidth 30.5 dBm IIP3 With a Novel Low-Distortion Amplifier. *Park, C.*, +, *TCSII June 2021 1768-1772*
- 64 dB Dynamic-Range 810 μ W 90 MHz Fully-Differential Flipped-Source-Follower Analog Filter in 28nm-CMOS. *De Matteis, M.*, +, *TCSII Sept. 2021 3068-3072*
- A +7.6 dBm IIP3 2.4-GHz Double-Balanced Mixer With 10.5 dB NF in 65-nm CMOS. *Kashani, M.H.*, +, *TCSII Oct. 2021 3214-3218*
- A 24–30 GHz 31.7% Fractional Bandwidth Power Amplifier With an Adaptive Capacitance Linearizer. *Lee, J.*, +, *TCSII April 2021 1163-1167*
- A 28-GHz Doherty Power Amplifier With a Compact Transformer-Based Quadrature Hybrid in 65-nm CMOS. *Yu, C.*, +, *TCSII Aug. 2021 2790-2794*
- A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X.*, +, *TCSII July 2021 2419-2423*
- A 300mV-Supply, Sub-nW-Power Digital-Based Operational Transconductance Amplifier. *Toledo, P.*, +, *TCSII Sept. 2021 3073-3077*
- A 56-Gb/s PAM4 Receiver Analog Front-End With Fixed Peaking Frequency and Bandwidth in 40-nm CMOS. *Li, Z.*, +, *TCSII Sept. 2021 3058-3062*
- A Compact Single-Transistor Current Source for Analog Design in Nanometer Digital CMOS. *Bai, C.*, +, *TCSII Dec. 2021 3508-3512*
- A K-Band Dual-Mode Common Gate Cross-Summing VG-LNA With Low Phase Variation. *Park, S.*, +, *TCSII July 2021 2438-2442*
- A Ka-Band Variable-Gain Phase Shifter With Multiple Vector Generators. *Park, J.*, +, *TCSII June 2021 1798-1802*
- A New Extremely Low Power Temperature Insensitive Electronically Tunable VCH-Based Grounded Capacitance Multiplier. *Stornelli, V.*, +, *TCSII Jan. 2021 72-76*
- A Wideband CMOS Frequency Quadrupler With Transformer-Based Tail Feedback Loop. *Yu, Y.*, +, *TCSII April 2021 1153-1157*
- An Inductorless Wideband Gm-Boosted Balun LNA With nMOS-pMOS Configuration and Capacitively Coupled Loads for Sub-GHz IoT Applications. *Tiwari, S.*, +, *TCSII Oct. 2021 3204-3208*
- An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*
- Comparative Study and Design of Current Starved Ring Oscillators in 16 nm Technology. *Huq, S.M.I.*, +, *TCSII April 2021 1098-1102*

- Design of the Class-E Power Amplifier Considering the Temperature Effect of the Transistor On-Resistance for Sensor Applications. *Liu, C., +, TCSII May 2021 1705-1709*
- Fully Differential Ultra-Wideband Amplifier With 46-dB Gain and Positive Feedback for Increased Bandwidth. *An, X., +, TCSII April 2021 1083-1087*
- Linearization of Voltage-Controlled Oscillators Using Floating-Gate Transistors. *Andryczik, S., +, TCSII July 2021 2337-2341*
- Re-Thinking Analog Integrated Circuits in Digital Terms: A New Design Concept for the IoT Era. *Toledo, P., +, TCSII March 2021 816-822*
- Single-Chip CMOS Reconfigurable Dual-Band Tri-Mode High-Efficiency RF Amplifier Design. *Zhai, C., +, TCSII March 2021 868-872*
- CMOS digital integrated circuits**
- A 0.5GHz 0.35mW LDO-Powered Constant-Slope Phase Interpolator With 0.22% INL. *Elnaqib, A., +, TCSII Jan. 2021 156-160*
- A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References. *Yang, C., +, TCSII July 2021 2312-2316*
- A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H., +, TCSII Sept. 2021 3113-3117*
- A 5-Gb/s Adaptive Digital CDR Circuit With SSC Capability and Enhanced High-Frequency Jitter Tolerance. *Chang, S., +, TCSII Jan. 2021 161-165*
- A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J., +, TCSII May 2021 1645-1649*
- A Jitter-Tolerance-Enhanced Digital CDR Circuit Using Background Loop Gain Controller. *Yao, Y., +, TCSII June 2021 1837-1841*
- A TD-ADC for IR-UWB Radars With Equivalent Sampling Technology and 8-GS/s Effective Sampling Rate. *Zhu, Z., +, TCSII March 2021 888-892*
- Capacitor-Less Dual-Mode All-Digital LDO With $\Delta\Sigma$ -Modulation-Based Ripple Reduction. *Akram, M.A., +, TCSII May 2021 1620-1624*
- Comparison Study of DAC Realizations in Current Input CT $\Sigma\Delta$ Modulators. *Rajabzadeh, M., +, TCSII Jan. 2021 111-115*
- CMOS image sensors**
- A 0.82 μ W CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J., +, TCSII May 2021 1700-1704*
- A High-Speed and Energy-Efficient Multi-Bit Cyclic ADC Using Single-Slope Quantizer for CMOS Image Sensors. *Jeong, J., +, TCSII July 2021 2322-2326*
- A Low-Ripple Charge Pump With Novel Compensator for Transient-Response Improvement in CMOS Image Sensors. *Gao, J., +, TCSII April 2021 1113-1117*
- Compensation of Signal-Dependent Readout Noise in Photon Transfer Curve Characterisation of CMOS Image Sensors. *Levski, D., +, TCSII Jan. 2021 102-105*
- Design of a Pseudo-Wide Dynamic Range CMOS Image Sensor by Using the Bidirectional Gamma Curvature Technique. *Im, H., +, TCSII May 2021 1596-1599*
- MACSen: A Processing-In-Sensor Architecture Integrating MAC Operations Into Image Sensor for Ultra-Low-Power BNN-Based Intelligent Visual Perception. *Xu, H., +, TCSII Feb. 2021 627-631*
- NS-MD: Near-Sensor Motion Detection With Energy Harvesting Image Sensor for Always-On Visual Perception. *Nazhamaiti, M., +, TCSII Sept. 2021 3078-3082*
- Offset and Gain FPN Calibrated Linear-Logarithmic Image Sensor With Shared Pixel Architecture. *Lee, J., TCSII Dec. 2021 3518-3521*
- CMOS integrated circuits**
- 0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop. *Yoon, C., +, TCSII Jan. 2021 136-140*
- 2.4-GHz Low-Power Low-IF Receiver With a Quadrature Local Oscillator Buffer for Bluetooth Low Energy Applications. *Song, E., +, TCSII July 2021 2369-2373*
- A -40 $^{\circ}$ C to 140 $^{\circ}$ C Picowatt CMOS Voltage Reference With 0.25-V Power Supply. *Qiao, H., +, TCSII Sept. 2021 3118-3122*
- A 0.007 mm² 0.6 V 6 MS/s Low-Power Double Rail-to-Rail SAR ADC in 65-nm CMOS. *Jo, Y., +, TCSII Sept. 2021 3088-3092*
- A 0.166 pJ/b/pF, 3.5-5 Gb/s TSV I/O Interface With V_{OH} Drift Control. *Kim, J., +, TCSII June 2021 1822-1826*
- A 0.3-V Conductance-Based Silicon Neuron in 0.18 μ m CMOS Process. *Akbari, M., +, TCSII Oct. 2021 3209-3213*
- A 0.32-2.7 Gb/s Reference-Less Continuous-Rate Clock and Data Recovery Circuit With Unrestricted and Fast Frequency Acquisition. *Tho, N.H., +, TCSII July 2021 2347-2351*
- A 0.52 μ W, 38 nV/ $\sqrt{\text{Hz}}$ Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage. *Pham, X.T., +, TCSII June 2021 1793-1797*
- A 0.6-to-1.8V CMOS Current Reference With Near-100% Power Utilization. *Fassio, L., +, TCSII Sept. 2021 3038-3042*
- A 0.99-pJ/b 15-Gb/s Counter-Based Adaptive Equalizer Using Single Comparator in 28-nm CMOS. *Choi, Y., +, TCSII Oct. 2021 3189-3193*
- A 10-Bit Current Output DAC With Active Resistive Load Interpolation. *Wang, W., +, TCSII June 2021 1803-1806*
- A 112 Gb/s PAM-4 RX Front-End With Unlocked Decision Feedback Equalizer. *Petricli, I., +, TCSII Jan. 2021 256-260*
- A 120 mV Supply, Triode-Regulated Femto-Watt CMOS Voltage Reference Design. *Olivera, F., +, TCSII Feb. 2021 587-591*
- A 15-38 GHz Vector-Summing Phase-Shifter With 360 $^{\circ}$ Phase-Shifting Range Using Improved I/Q Generator. *Qiu, F., +, TCSII Oct. 2021 3199-3203*
- A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μ m CMOS. *Zeng, X., +, TCSII June 2021 1812-1816*
- A 19-48.3-GHz 6th-Order Transformer-Based Injection-Locked Frequency Divider With 87.1% Locking Range in 40-nm CMOS. *Zhu, J., +, TCSII Sept. 2021 3053-3057*
- A 2.4-3.0GHz Process-Tolerant Sub-Sampling PLL With Loop Bandwidth Calibration. *Lu, Y., +, TCSII March 2021 873-877*
- A 2.5 ppm/ $^{\circ}$ C Voltage Reference Combining Traditional BGR and ZTC MOSFET High-Order Curvature Compensation. *Liu, X., +, TCSII April 2021 1093-1097*
- A 200 $\mu\text{g}/\sqrt{\text{Hz}}$, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer. *Tirupathi, R., +, TCSII June 2021 1753-1757*
- A 21-to-41-GHz High-Gain Low Noise Amplifier With Triple-Coupled Technique for Multiband Wireless Applications. *Yu, Y., +, TCSII June 2021 1857-1861*
- A 24.4 ppm/ $^{\circ}$ C Voltage Mode Bandgap Reference With a 1.05V Supply. *Nagulapalli, R., +, TCSII April 2021 1088-1092*
- A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S., +, TCSII Sept. 2021 3063-3067*
- A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation. *Mahmood, H.U., +, TCSII Aug. 2021 2805-2809*
- A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV²f. *Choi, K., +, TCSII March 2021 858-862*
- A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6-dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y., +, TCSII Sept. 2021 3093-3097*
- A 4.5 G Ω -Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz. *Pham, X.T., +, TCSII Jan. 2021 116-120*
- A 42nA I_Q , 1.5-6V V_{IN} , Self-Regulated CMOS Voltage Reference With -93dB PSR at 10 Hz for Energy Harvesting Systems. *Chen, Y., +, TCSII July 2021 2357-2361*
- A 43.1TOPS/W Energy-Efficient Absolute-Difference-Accumulation Operation Computing-In-Memory With Computation Reuse. *Um, S., +, TCSII May 2021 1605-1609*
- A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y., +, TCSII Aug. 2021 2820-2824*
- A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications. *Zhang, H., +, TCSII May 2021 1695-1699*
- A 6.9- μm^2 3.26-ns 31.25-fJ Robust Level Shifter With Wide Voltage and Frequency Ranges. *Kim, K., +, TCSII April 2021 1433-1437*

- A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*
- A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network. *Kim, S.*, +, *TCSII May 2021 1675-1679*
- A 65nm 0.6–1.2V Low-Dropout Regulator Using Voltage-Difference-to-Time Converter With Direct Output Feedback. *Shin, K.*, +, *TCSII Jan. 2021 67-71*
- A 65nm Thermometer-Encoded Time/Charge-Based Compute-in-Memory Neural Network Accelerator at 0.735pJ/MAC and 0.41pJ/Update. *Gong, M.*, +, *TCSII April 2021 1408-1412*
- A 73dB-A Audio VCO-ADC Based on a Maximum Length Sequence Generator in 130nm CMOS. *Perez, C.*, +, *TCSII Oct. 2021 3194-3198*
- A 92- μW /Gbps Self-Biased SLVS Receiver for MIPI D-PHY Applications. *Kim, W.*, +, *TCSII Oct. 2021 3219-3223*
- A BJT-Based CMOS Temperature Sensor With Duty-Cycle-Modulated Output and $\pm 0.5^\circ\text{C}$ (3σ) Inaccuracy From -40°C to 125°C . *Huang, Z.*, +, *TCSII Aug. 2021 2780-2784*
- A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R.*, +, *TCSII July 2021 2272-2276*
- A Customized AC Hybrid LED Driver With Flicker Reduction for High Nominal Range Applications. *Chong, K.*, +, *TCSII May 2021 1635-1639*
- A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces. *Lee, S.*, +, *TCSII June 2021 1862-1866*
- A Duo-Binary Transceiver With Time-Based Receiver and Voltage-Mode Time-Interleaved Mixing Transmitter for DRAM Interface. *Chae, M.*, +, *TCSII July 2021 2409-2413*
- A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors. *Li, Y.*, +, *TCSII Oct. 2021 3224-3228*
- A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L.*, +, *TCSII Sept. 2021 3133-3137*
- A Highly Integrated 3-Phase 4:1 Resonant Switched-Capacitor Converter With Parasitic Loss Reduction and Fast Pre-Charge Startup. *Wang, C.*, +, *TCSII July 2021 2608-2612*
- A Low Phase Noise Class-C Oscillator With Improved Resonator and Robust Start-Up. *Sheikhahmadi, S.*, +, *TCSII Jan. 2021 92-96*
- A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S.*, +, *TCSII Feb. 2021 607-611*
- A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M.*, +, *TCSII March 2021 908-912*
- A Novel Complex Filter Design With Dual Feedback for High Frequency Wireless Receiver Applications. *Veerendranath, P.S.*, +, *TCSII June 2021 1748-1752*
- A Sub-200nW All-in-One Bandgap Voltage and Current Reference Without Amplifiers. *Huang, W.*, +, *TCSII Jan. 2021 121-125*
- A Time-Domain Binary CNN Engine With Error-Detection-Based Resilience in 28nm CMOS. *Cai, Z.*, +, *TCSII Sept. 2021 3177-3181*
- A Tunable CMOS IR-UWB Pulse Generator Based on Feedback Controlled Oscillator Switching. *Snelter, L.*, +, *TCSII June 2021 1902-1906*
- A Type-I PLL With Foreground Loop Bandwidth Calibration. *Chou, M.*, +, *TCSII April 2021 1103-1107*
- A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*
- A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting. *Chong, G.*, +, *TCSII June 2021 1743-1747*
- A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance. *Shakya, D.*, +, *TCSII Sept. 2021 3043-3047*
- Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved $V-f$ Model. *Wang, Y.*, +, *TCSII Sept. 2021 3103-3107*
- An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers. *Mariappan, S.*, +, *TCSII April 2021 1178-1182*
- An Accuracy-Improved and Internal Regulator-Free Temperature Sensor With a Non-Linear Current Mode Feedback Pseudo-PLL. *Li, F.*, +, *TCSII April 2021 1138-1142*
- An Accurate Zero-Current-Switching Circuit for Ultra-Low-Voltage Boost Converters. *Radin, R.L.*, +, *TCSII June 2021 1773-1777*
- An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y.*, +, *TCSII May 2021 1610-1614*
- An Adaptive Offset Cancellation Scheme and Shared-Summer Adaptive DFE for 0.068 pJ/dB 1.62-to-10 Gb/s Low-Power Receiver in 40 nm CMOS. *Lee, K.*, +, *TCSII Feb. 2021 622-626*
- An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M.*, +, *TCSII June 2021 1817-1821*
- An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arasteh, O.*, +, *TCSII Jan. 2021 151-155*
- An Asynchronous AC-DC Boost Converter With Event-Driven Voltage Regulator and 94% Efficiency for Low-Frequency Electromagnetic Energy Harvesting. *Gao, Z.*, +, *TCSII July 2021 2563-2567*
- An Energy-Efficient Haar Wavelet Transform Architecture for Respiratory Signal Processing. *da Rosa, M.M.*, +, *TCSII Feb. 2021 597-601*
- An Impedance Adapting Compensation Scheme for High Current NMOS LDO Design. *Cao, H.*, +, *TCSII July 2021 2287-2291*
- An Impedance Matching Strategy for Micro-Scale RF Energy Harvesting Systems. *Mohan, A.*, +, *TCSII April 2021 1458-1462*
- An Ultra-Low Quiescent Current Resistor-Less Power on Reset Circuit. *Guo, J.*, +, *TCSII Jan. 2021 146-150*
- Analysis and Design of the Three-Inverter Schmitt Trigger for Supply Voltages Down to 50 mV. *Daros Fernandes, T.*, +, *TCSII July 2021 2302-2306*
- Approximate Expectation Propagation Massive MIMO Detector With Weighted Neumann-Series. *Tan, X.*, +, *TCSII Feb. 2021 662-666*
- Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X.*, +, *TCSII June 2021 1807-1811*
- Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*
- Background Calibration for Bit Weights in Pipelined ADCs Using Adaptive Dither Windows. *Sun, J.*, +, *TCSII June 2021 1783-1787*
- Digitally Assisted Secondary Switch-and-Compare Technique for a SAR ADC. *Joshi, A.*, +, *TCSII July 2021 2317-2321*
- Efficient Incorporation of the RNS Datapath in Reverse Converter. *Taheri, M.*, +, *TCSII April 2021 1388-1392*
- EMI Effect in Voltage-to-Time Converters. *Richelli, A.*, +, *TCSII April 2021 1078-1082*
- Energy Efficient 0.5V 4.8pJ/SOP 0.93 μW Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*
- Exploiting Parasitic Capacitances in 3-D Inductors to Design RF CMOS Quasi-Elliptic-Type Broad-Band Bandpass Filters. *Zhu, X.*, +, *TCSII Sept. 2021 3128-3132*
- Fast Column Message-Passing Decoding of Low-Density Parity-Check Codes. *Usman, S.*, +, *TCSII July 2021 2389-2393*
- Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*
- Frequency-Reconfigurable Phase Shifter Based on a 65-nm CMOS Process for 5G Applications. *Lin, Y.*, +, *TCSII Aug. 2021 2825-2829*
- Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display. *Guo, X.*, +, *TCSII July 2021 2307-2311*
- High Throughput Low Complexity and Low Power ePiBM RS Decoder Using Fractional Folding. *Liu, W.*, +, *TCSII Aug. 2021 2830-2834*
- Improvement of Accuracy of Fixed-Width Booth Multipliers Using Data Scaling Technology. *Chen, Y.*, *TCSII March 2021 1018-1022*
- Input Referred Noise of VCO-Based Comparators. *Luo, Y.*, +, *TCSII Jan. 2021 82-86*
- Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation. *Kim, H.*, +, *TCSII July 2021 2297-2301*
- Low-Power Area-Efficient LDO With Loop-Gain and Bandwidth Enhancement Using Non-Dominant Pole Movement Technique for IoT Applications. *Nakhlestani, A.*, +, *TCSII Feb. 2021 692-696*

- Millimeter-Wave CMOS 30/80 GHz Sharp-Rejection Dual-Band Bandstop Filters Using TFMS Open-Stepped-Impedance Resonators. *Narayana Rao Vanukuru, V.*, +, *TCSII Jan. 2021 201-205*
- Millimeter-wave Frequency Reconfigurable Low Noise Amplifiers for 5G. *Shaheen, R.A.*, +, *TCSII Feb. 2021 642-646*
- Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*
- Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*
- New Charge-Steering DFEs in 55-nm CMOS. *Pike, J.*, +, *TCSII Jan. 2021 231-235*
- Oscillator Flicker Phase Noise: A Tutorial. *Hu, Y.*, +, *TCSII Feb. 2021 538-544*
- Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F.*, +, *TCSII March 2021 893-897*
- Recent Advances and Trends in Noise Shaping SAR ADCs. *Salgado, G.M.*, +, *TCSII Feb. 2021 545-549*
- The XOR-MAJ Thermometer-to-Binary Encoder Structure Stable to Bubble Errors. *Pilipko, M.M.*, +, *TCSII July 2021 2613-2617*
- Tutorial: Design of High-Speed Nano-Scale CMOS Mixed-Voltage Digital I/O Buffer With High Reliability to PVT Variations. *Wang, C.*, *TCSII Feb. 2021 562-567*

CMOS logic circuits

- 200-MHz Single-Ended 6T 1-kb SRAM With 0.2313 pJ Energy/Access Using 40-nm CMOS Logic Process. *Wang, C.*, +, *TCSII Sept. 2021 3163-3166*
- A High-Performance and Low-Cost Montgomery Modular Multiplication Based on Redundant Binary Representation. *Li, B.*, +, *TCSII July 2021 2660-2664*
- Constant-Time Synchronous Binary Counter With Minimal Clock Period. *Hyun, Y.*, +, *TCSII July 2021 2645-2649*
- Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*
- Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*
- Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory. *Yu, Z.*, +, *TCSII May 2021 1665-1669*
- Spars: A Full Flow Quantum-Dot Cellular Automata Circuit Design Tool. *Peng, F.*, +, *TCSII April 2021 1233-1237*
- Ultra-Compact Ternary Logic Gates Based on Negative Capacitance Carbon Nanotube FETs. *Jooq, M.K.Q.*, +, *TCSII June 2021 2162-2166*

CMOS memory circuits

- A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J.*, +, *TCSII June 2021 2142-2146*
- A Power-Aware Toggling-Frequency Actuator in Data-Toggling SRAM for Secure Data Protection. *Ho, W.*, +, *TCSII June 2021 2122-2126*
- Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*
- Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V.*, *TCSII Feb. 2021 581-586*
- Power-Efficient Noise-Induced Reduction of ReRAM Cell's Temporal Variability Effects. *Ntinis, V.*, +, *TCSII April 2021 1378-1382*
- Resonant Energy Recycling SRAM Architecture. *Islam, R.*, +, *TCSII April 2021 1383-1387*
- Single Bit-Line Differential Sensing Based Real-Time NVSRAM for Low Power Applications. *Majumdar, S.*, *TCSII July 2021 2623-2627*

CMOS technology

- A 1.7-to-2.7GHz 35–38% PAE Multiband CMOS Power Amplifier Employing a Digitally-Assisted Analog Pre-Distorter (DAAPD) Reconfigurable Linearization Technique. *Mariappan, S.*, +, *TCSII Nov. 2021 3381-3385*
- Analysis and Design of Reconfigurable Sense Amplifier for Compute SRAM With High-Speed Compute and Normal Read Access. *Chen, J.*, +, *TCSII Dec. 2021 3503-3507*
- Design of Low Phase Noise VCO Considering C/L Ratio of LC Resonator in 0.18- μ m CMOS Technology. *Jahan, N.*, +, *TCSII Dec. 2021 3513-3517*

Code division multiple access

- An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers. *Mariappan, S.*, +, *TCSII April 2021 1178-1182*
- Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A.*, +, *TCSII June 2021 1887-1891*

Cognition

- Complex Network Analysis of Experimental EEG Signals for Decoding Brain Cognitive State. *Gao, Z.*, +, *TCSII Jan. 2021 531-535*
- Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G.*, +, *TCSII May 2021 1725-1729*

Cognitive radio

- A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M.*, +, *TCSII Jan. 2021 241-245*
- A Wideband 5G Cyclostationary Spectrum Sensing Method by Kernel Least Mean Square Algorithm for Cognitive Radio Networks. *Nouri, M.*, +, *TCSII July 2021 2700-2704*
- Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*

Coils

- A Multilevel Inverter for Contactless Power Transfer System. *Lee, J.*, +, *TCSII Jan. 2021 401-405*
- A New Magnetic Structure of Unipolar Rectangular Coils in WPT Systems to Minimize the Ferrite Volume While Maintaining Maximum Coupling. *Rituraj, G.*, +, *TCSII June 2021 2072-2076*
- TSV Based Orthogonal Coils With High Misalignment Tolerance for Inductive Power Transfer in Biomedical Implants. *Qian, L.*, +, *TCSII June 2021 1832-1836*
- Two-Degree-of-Freedom WPT System Using Cylindrical-Joint Structure for Applications With Movable Parts. *Houran, M.A.*, +, *TCSII Jan. 2021 366-370*

Collision avoidance

- Distance- and Velocity-Based Collision Avoidance for Time-Varying Formation Control of Second-Order Multi-Agent Systems. *Pang, Z.*, +, *TCSII April 2021 1253-1257*
- Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K.*, +, *TCSII Oct. 2021 3316-3320*

Combinational circuits

- Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*

Communication complexity

- Quantum Multiparty Privacy Set Intersection Cardinality. *Shi, R.*, *TCSII April 2021 1203-1207*

Comparators (circuits)

- A 0.007 mm² 0.6 V 6 MS/s Low-Power Double Rail-to-Rail SAR ADC in 65-nm CMOS. *Jo, Y.*, +, *TCSII Sept. 2021 3088-3092*
- A 0.3-V Conductance-Based Silicon Neuron in 0.18 μ m CMOS Process. *Akbari, M.*, +, *TCSII Oct. 2021 3209-3213*
- A 0.99-pJ/b 15-Gb/s Counter-Based Adaptive Equalizer Using Single Comparator in 28-nm CMOS. *Choi, Y.*, +, *TCSII Oct. 2021 3189-3193*
- A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References. *Yang, C.*, +, *TCSII July 2021 2312-2316*
- A BJT-Based CMOS Temperature Sensor With Duty-Cycle-Modulated Output and $\pm 0.5^\circ\text{C}$ (3σ) Inaccuracy From -40°C to 125°C . *Huang, Z.*, +, *TCSII Aug. 2021 2780-2784*
- A High-Speed and Energy-Efficient Multi-Bit Cyclic ADC Using Single-Slope Quantizer for CMOS Image Sensors. *Jeong, J.*, +, *TCSII July 2021 2322-2326*
- A Redundancy-Based Background Calibration for Comparator Offset/Threshold and DAC Gain in a Ping-Pong SAR ADC. *Bunsen, K.*, +, *TCSII Feb. 2021 592-596*
- An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking. *Palmer, D.M.*, +, *TCSII May 2021 1680-1684*
- Background Calibration for Bit Weights in Pipelined ADCs Using Adaptive Dither Windows. *Sun, J.*, +, *TCSII June 2021 1783-1787*

Digitally Assisted Secondary Switch-and-Compare Technique for a SAR ADC. *Joshi, A.*, +, *TCSII July 2021 2317-2321*

Input Referred Noise of VCO-Based Comparators. *Luo, Y.*, +, *TCSII Jan. 2021 82-86*

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*

Rail-to-Rail Dynamic Voltage Comparator Scalable Down to pW-Range Power and 0.15-V Supply. *Aiello, O.*, +, *TCSII July 2021 2675-2679*

Compensation

A 2.5 ppm/°C Voltage Reference Combining Traditional BGR and ZTC MOSFET High-Order Curvature Compensation. *Liu, X.*, +, *TCSII April 2021 1093-1097*

A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*

An Impedance Adapting Compensation Scheme for High Current NMOS LDO Design. *Cao, H.*, +, *TCSII July 2021 2287-2291*

Design of Discrete-Time Sliding Mode Control With Disturbance Compensator-Based Switching Function. *Ma, H.*, +, *TCSII April 2021 1268-1272*

Design of the Class-E Power Amplifier Considering the Temperature Effect of the Transistor On-Resistance for Sensor Applications. *Liu, C.*, +, *TCSII May 2021 1705-1709*

Equivalent Circuit Approach for Output Characteristic Design of Capacitive Power Transfer. *Pamungkas, L.*, +, *TCSII July 2021 2513-2517*

GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q.*, +, *TCSII Feb. 2021 747-751*

Complex networks

A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*

Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control. *Li, W.*, +, *TCSII April 2021 1338-1342*

Complex Network Analysis of Experimental EEG Signals for Decoding Brain Cognitive State. *Gao, Z.*, +, *TCSII Jan. 2021 531-535*

Enhancing Coupled Networks Robustness via Removing Key Fragile Dependency Links. *Yang, X.*, +, *TCSII March 2021 953-957*

Optimizing Robustness of Core-Periphery Structure in Complex Networks. *Yang, B.*, +, *TCSII Dec. 2021 3572-3576*

Searching Better Rewiring Strategies and Objective Functions for Stronger Controllability Robustness. *Lou, Y.*, +, *TCSII June 2021 2112-2116*

Spanning-Tree-Based Synchronization Conditions for Second-Order Kuramoto Networks. *Wu, L.*, +, *TCSII April 2021 1448-1452*

Synchronization in Dynamical Systems Coupled via Multiple Directed Networks. *Wu, C.W.*, *TCSII May 2021 1660-1664*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X.*, +, *TCSII April 2021 1477-1481*

Compressed sensing

2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*

A Stop Condition for Compressed Recovery of Random Modulated Signal. *Dao, X.*, +, *TCSII April 2021 1557-1561*

Compressors

Design of Ultra-Low Power Consumption Approximate 4–2 Compressors Based on the Compensation Characteristic. *Pei, H.*, +, *TCSII Jan. 2021 461-465*

Computability

Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M.*, +, *TCSII Jan. 2021 481-485*

Computational complexity

A New Fast Convergent Blind Timing Skew Error Correction Structure for TIADC. *Khakpour, A.*, +, *TCSII April 2021 1512-1516*

A Novel, Efficient Implementation of a Local Binary Convolutional Neural Network. *Lin, L.*, +, *TCSII April 2021 1413-1417*

A Pairwise Convex Hull Approach for Effective Representation of Uncertainty for System Analysis and Its Application to Power Grids. *Zeng, L.*, +, *TCSII July 2021 2498-2502*

A Reduced Complexity Random Fourier Filter Based Nonlinear Multichannel Narrowband Active Noise Control System. *Deb, T.*, +, *TCSII Jan. 2021 516-520*

A Robust Fully Arctangent Adaptive Interpolated Volterra Filtering Algorithm Against Impulsive Noise. *Liu, Q.*, +, *TCSII July 2021 2742-2746*

A Throughput-Optimized Channel-Oriented Processing Element Array for Convolutional Neural Networks. *Chen, Y.*, +, *TCSII Feb. 2021 752-756*

A Time-Domain Binary CNN Engine With Error-Detection-Based Resilience in 28nm CMOS. *Cai, Z.*, +, *TCSII Sept. 2021 3177-3181*

Adaptive Finite-Time Attitude Tracking Control for State Constrained Rigid Spacecraft Systems. *Zhao, L.*, +, *TCSII Dec. 2021 3552-3556*

An Optimal Algorithm for Enumerating Connected Convex Subgraphs in Acyclic Digraphs. *Xiao, C.*, +, *TCSII Jan. 2021 261-265*

Constrained Least Mean M-Estimation Adaptive Filtering Algorithm. *Wang, Z.*, +, *TCSII April 2021 1507-1511*

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H.*, +, *TCSII Jan. 2021 351-355*

Ensuring Network Connectedness in Optimal Transmission Switching Problems. *Han, T.*, +, *TCSII July 2021 2603-2607*

Fast Column Message-Passing Decoding of Low-Density Parity-Check Codes. *Usman, S.*, +, *TCSII July 2021 2389-2393*

Generalized Polyphase Digital Channelizer. *Jang, Y.*, +, *TCSII Oct. 2021 3366-3370*

Laguerre Expansion Series Based Reduced Order Interval Systems. *Samuel, E.R.*, +, *TCSII June 2021 2022-2026*

Low-Delay FPGA-Based Implementation of Finite Field Multipliers. *Imana, J.L.*, *TCSII Aug. 2021 2952-2956*

Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification. *Habibi, Z.*, +, *TCSII Aug. 2021 3032-3036*

Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation. *Tseng, C.*, +, *TCSII May 2021 1630-1634*

Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M.*, +, *TCSII Jan. 2021 481-485*

Resilient Consensus of Multi-Agent Systems With Switching Topologies: A Trusted-Region-Based Sliding-Window Weighted Approach. *Zhai, Y.*, +, *TCSII July 2021 2448-2452*

Steady-State Mean-Square Error Performance Analysis of the Tensor LMS Algorithm. *Zhang, N.*, +, *TCSII March 2021 1043-1047*

Structured Pruning of RRAM Crossbars for Efficient In-Memory Computing Acceleration of Deep Neural Networks. *Meng, J.*, +, *TCSII May 2021 1576-1580*

Time Complexity of In-Memory Matrix-Vector Multiplication. *Sun, Z.*, +, *TCSII Aug. 2021 2785-2789*

Computational efficiency

Accuracy Improved Low-Energy Multi-Bit Approximate Adders in QCA. *Perri, S.*, +, *TCSII Nov. 2021 3456-3460*

Computational geometry

A Pairwise Convex Hull Approach for Effective Representation of Uncertainty for System Analysis and Its Application to Power Grids. *Zeng, L.*, +, *TCSII July 2021 2498-2502*

Computer network security

Optimal Denial-of-Service Attack Strategy on State Estimation Over Infinite-Time Horizon. *Li, Y.*, +, *TCSII Aug. 2021 2860-2864*

Optimal DoS Attack Against LQR Control Channels. *Zhou, J.*, +, *TCSII April 2021 1348-1352*

Computer vision

A 0.82 μW CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J.*, +, *TCSII May 2021 1700-1704*

A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features. *He, W.*, +, *TCSII March 2021 1013-1017*

Condition monitoring

A Remaining Useful Life Prediction Method in the Early Stage of Stochastic Degradation Process. *Zhang, Y.*, +, *TCSII June 2021 2027-2031*

Switching Signals Based Condition Monitoring for Submodule Capacitors in Modular Multilevel Converters. *Geng, Z.*, +, *TCSII June 2021 2017-2021*

Conjugate gradient methods

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H., +, TCSII Jan. 2021 351-355*

Consensus protocol

Fast Average-Consensus on Networks Using Heterogeneous Diffusion. *Pandey, P.K., +, TCSII Nov. 2021 3421-3425*

Content-addressable storage

Data Retention-Based Low Leakage Power TCAM for Network Packet Routing. *Chang, Y., +, TCSII Feb. 2021 757-761*

Design Exploration of Sensing Techniques in 2T-2R Resistive Ternary CAMs. *Rakka, M., +, TCSII Feb. 2021 762-766*

Insights Into the Dynamics of Coupled VO₂ Oscillators for ONNs. *Nunez, J., +, TCSII Oct. 2021 3356-3360*

Continuous systems

A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y., +, TCSII Jan. 2021 326-330*

Consensus of the Hybrid Multiagent System Under Impulse Control. *Yu, Z., +, TCSII July 2021 2573-2577*

Continuous time filters

5th-Order Continuous-Time Low-Pass Filter Achieving 56 MHz Bandwidth 30.5 dBm IIP3 With a Novel Low-Distortion Amplifier. *Park, C., +, TCSII June 2021 1768-1772*

64 dB Dynamic-Range 810 μ W 90 MHz Fully-Differential Flipped-Source-Follower Analog Filter in 28nm-CMOS. *De Matteis, M., +, TCSII Sept. 2021 3068-3072*

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H., +, TCSII Sept. 2021 3113-3117*

Continuous-Time Pipelined Analog-to-Digital Converters: A Mini-Tutorial. *Pavan, S., +, TCSII March 2021 810-815*

Continuous time systems

Cooperative Adaptive H_∞ Output Regulation of Continuous-Time Heterogeneous Multi-Agent Markov Jump Systems. *Dong, S., +, TCSII Oct. 2021 3261-3265*

Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X., +, TCSII July 2021 2523-2527*

New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach. *Li, Y., +, TCSII Feb. 2021 697-701*

Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N., +, TCSII June 2021 1957-1961*

Control engineering computing

An Extensive Soft Error Reliability Analysis of a Real Autonomous Vehicle Software Stack. *Bandeira, V., +, TCSII Jan. 2021 446-450*

Two-Layer Cooperative Control for Multiple Converter-Network Clusters. *Lu, X., +, TCSII Feb. 2021 682-686*

Control nonlinearities

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S., +, TCSII Jan. 2021 436-440*

Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X., +, TCSII April 2021 1273-1277*

Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H., +, TCSII March 2021 973-977*

Control system analysis

On Determining of LTI Systems Having Nondecreasing Step Response. *Du, H., +, TCSII June 2021 2087-2091*

Control system synthesis

A General Fixed-Time Observer for Lower-Triangular Nonlinear Systems. *Gao, F., +, TCSII June 2021 1992-1996*

A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain. *Lin, P., +, TCSII April 2021 1328-1332*

A Novel Non-Singular Terminal Sliding Mode Trajectory Tracking Control for Robotic Manipulators. *Zhai, J., +, TCSII Jan. 2021 391-395*

A Novel Self-Triggered MPC Scheme for Constrained Input-Affine Nonlinear Systems. *Li, P., +, TCSII Jan. 2021 306-310*

A Novel Variable Exponential Discrete Time Sliding Mode Reaching Law. *Chen, X., +, TCSII July 2021 2518-2522*

A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y., +, TCSII Jan. 2021 326-330*

Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C., +, TCSII Oct. 2021 3301-3305*

Admissible Bipartite Consensus in Networks of Singular Agents Over Signed Graphs. *Liu, T., +, TCSII Aug. 2021 2880-2884*

Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model. *Li, Z., +, TCSII Oct. 2021 3256-3260*

Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S., +, TCSII July 2021 2458-2462*

Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K., +, TCSII June 2021 2047-2051*

Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L., +, TCSII Oct. 2021 3266-3270*

Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T., +, TCSII Jan. 2021 281-285*

Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S., +, TCSII Jan. 2021 386-390*

Bounded Leader-Following Consensus of Heterogeneous Directed Delayed Multi-Agent Systems via Asynchronous Impulsive Control. *Gong, J., +, TCSII July 2021 2680-2684*

Bounded Real Lemmas for Singular Fractional-Order Systems: The $1 < \alpha < 2$ Case. *Zhang, Q., +, TCSII Feb. 2021 732-736*

Class AB Op-Amp With Accurate Static Current Control for Low and High Supply Voltages. *Padilla-Cantoya, I., +, TCSII Aug. 2021 2775-2779*

Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions. *Tavazoei, M.S., TCSII July 2021 2374-2378*

Cooperative Adaptive H_∞ Output Regulation of Continuous-Time Heterogeneous Multi-Agent Markov Jump Systems. *Dong, S., +, TCSII Oct. 2021 3261-3265*

Criteria for Observability and Reconstructibility of Boolean Control Networks via Set Controllability. *Zhang, X., +, TCSII April 2021 1263-1267*

Design of Discrete-Time Sliding Mode Control With Disturbance Compensator-Based Switching Function. *Ma, H., +, TCSII April 2021 1268-1272*

Design of Indirect Fractional Order IMC Controller for Fractional Order Processes. *Trivedi, R., +, TCSII March 2021 968-972*

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R., +, TCSII Jan. 2021 416-420*

Development of a Generalized Predictive Control System for Polynomial Reference Tracking. *Cordero, R., +, TCSII Aug. 2021 2875-2879*

Discrete-Time Adaptive Super-Twisting Observer With Predefined Arbitrary Convergence Time. *Xiong, X., +, TCSII June 2021 2057-2061*

Discrete-Time Sliding Mode Control Design for Unicycle Robot With Bounded Inputs. *Thomas, M., +, TCSII Aug. 2021 2912-2916*

Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G., +, TCSII March 2021 938-942*

Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M., TCSII Nov. 2021 3436-3440*

Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X., +, TCSII July 2021 2523-2527*

Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J., TCSII July 2021 2568-2572*

Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S., +, TCSII Jan. 2021 381-385*

Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems. *Ran, G., +, TCSII Jan. 2021 276-280*

Event-Based Output Regulation of Boolean Control Networks With Time Delay. *Zhang, A., +, TCSII June 2021 2007-2011*

- Event-Based Prescribed Performance Control for Dynamic Positioning Vessels. *Wang, H.*, +, *TCSII July 2021 2548-2552*
- Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*
- Event-Triggered Bipartite Consensus in Networked Euler–Lagrange Systems With External Disturbance. *Deng, Q.*, +, *TCSII Aug. 2021 2870-2874*
- Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation. *Shi, X.*, +, *TCSII March 2021 983-987*
- Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities. *Dai, M.*, +, *TCSII Aug. 2021 2855-2859*
- Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K.*, +, *TCSII Oct. 2021 3316-3320*
- Finite-Time Projective Synchronization Control of Variable-Order Fractional Chaotic Systems via Sliding Mode Approach. *Meng, X.*, +, *TCSII July 2021 2503-2507*
- Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L.*, +, *TCSII Jan. 2021 301-305*
- Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*
- Global Adaptive Leader-Following Consensus for Second-Order Nonlinear Multiagent Systems With Switching Topologies. *Zou, W.*, +, *TCSII Feb. 2021 702-706*
- Global Fixed-Time Output Feedback Stabilization of Perturbed Planar Nonlinear Systems. *Gao, F.*, +, *TCSII Feb. 2021 707-711*
- Input Delay Estimation for Input-Affine Dynamical Systems Based on Taylor Expansion. *Zhang, Y.*, +, *TCSII April 2021 1298-1302*
- Interval State Estimator Design for Linear Parameter Varying (LPV) Systems. *Khan, A.*, +, *TCSII Aug. 2021 2865-2869*
- Invariant Manifold Based Output-Feedback Sliding Mode Control for Systems With Mismatched Disturbances. *Zhang, L.*, +, *TCSII March 2021 933-937*
- Learnability of Linear Fractional-Order ILC Systems. *Gu, P.*, +, *TCSII March 2021 963-967*
- Necessary and Sufficient Conditions for Extended Strictly Positive Realness of Singular Fractional-Order Systems. *Zhang, Q.*, +, *TCSII June 2021 1997-2001*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*
- Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S.*, +, *TCSII June 2021 1967-1971*
- On Attitude Tracking Control With Communication-Saving: An Integrated Quantized and Event-Based Scheme. *Zhang, C.*, +, *TCSII June 2021 2012-2016*
- On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*
- On Determining of LTI Systems Having Nondecreasing Step Response. *Du, H.*, +, *TCSII June 2021 2087-2091*
- Performance Residual Based Fault Detection for Feedback Control Systems. *Liu, R.*, +, *TCSII Oct. 2021 3291-3295*
- Practical Sliding Mode Using State Depended Intermittent Control. *Xavier, N.*, +, *TCSII Jan. 2021 341-345*
- Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C.*, +, *TCSII Oct. 2021 3321-3325*
- Prescribed Finite-Time H_∞ Control for Nonlinear Descriptor Systems. *Lu, X.*, +, *TCSII Aug. 2021 2917-2921*
- Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism. *Xu, H.*, +, *TCSII June 2021 2117-2121*
- Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*
- Quantitative Feedback Design-Based Robust PID Control of Voltage Mode Controlled DC-DC Boost Converter. *Kobaku, T.*, +, *TCSII Jan. 2021 286-290*
- Quantitative Synthesis to Tracking Error Problem Based on Nominal Sensitivity Formulation. *Jeyasenthil, R.*, +, *TCSII July 2021 2483-2487*
- Ramp-Tracking Generalized Predictive Control System-Based on Second-Order Difference. *Cordero, R.*, +, *TCSII April 2021 1283-1287*
- Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint. *Liu, L.*, +, *TCSII April 2021 1278-1282*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law. *Ma, H.*, +, *TCSII Feb. 2021 722-726*
- SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W.*, +, *TCSII June 2021 2032-2036*
- Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*
- Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*
- Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method. *Liu, A.*, +, *TCSII July 2021 2553-2557*
- State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*
- Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*
- Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*
- Velocity Constraint on Double-Integrator Dynamics Subject to Antagonistic Information. *Zhang, Y.*, +, *TCSII Jan. 2021 411-415*
- Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*
- Controllability**
- Criteria for Observability and Reconstructibility of Boolean Control Networks via Set Controllability. *Zhang, X.*, +, *TCSII April 2021 1263-1267*
- Convergence**
- 2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*
- Affine Projection Algorithm for Censored Regression. *Zhao, H.*, +, *TCSII Dec. 2021 3602-3606*
- Bounded Leader-Following Consensus of Heterogeneous Directed Delayed Multi-Agent Systems via Asynchronous Impulsive Control. *Gong, J.*, +, *TCSII July 2021 2680-2684*
- Discrete-Time Adaptive Super-Twisting Observer With Predefined Arbitrary Convergence Time. *Xiong, X.*, +, *TCSII June 2021 2057-2061*
- Fast Average-Consensus on Networks Using Heterogeneous Diffusion. *Pandey, P.K.*, +, *TCSII Nov. 2021 3421-3425*
- Implicit Discrete-Time Adaptive First-Order Sliding Mode Control With Predefined Convergence Time. *Xiong, X.*, +, *TCSII Dec. 2021 3562-3566*
- Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises. *Liang, T.*, +, *TCSII June 2021 2217-2221*

Periodic Orbits of the Logistic Map in Single and Double Precision Implementations. *Galias, Z.*, *TCSII Nov. 2021 3471-3475*

Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C.*, +, *TCSII Oct. 2021 3321-3325*

Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function. *Liang, T.*, +, *TCSII June 2021 2227-2231*

Robust Constrained Generalized Correntropy and Maximum Versoria Criterion Adaptive Filters. *Bhattacharjee, S.S.*, +, *TCSII Aug. 2021 3002-3006*

Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective. *Li, Z.*, +, *TCSII Feb. 2021 742-746*

Convergence of numerical methods

Performance of Clustered Multitask Diffusion LMS Suffering From Inter-Node Communication Delays. *Gogineni, V.C.*, +, *TCSII July 2021 2695-2699*

Robust Finite-Time Dynamic Average Consensus With Exponential Convergence Rates. *Xu, K.*, +, *TCSII July 2021 2578-2582*

Steady-State Mean-Square Error Performance Analysis of the Tensor LMS Algorithm. *Zhang, N.*, +, *TCSII March 2021 1043-1047*

Converters

Efficient Incorporation of the RNS Datapath in Reverse Converter. *Taheri, M.*, +, *TCSII April 2021 1388-1392*

EMI Effect in Voltage-to-Time Converters. *Richelli, A.*, +, *TCSII April 2021 1078-1082*

Convex programming

Conic Programming for Circuit Equations With Rational Current Controlled Resistors. *Jia, W.*, +, *TCSII Jan. 2021 496-500*

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H.*, +, *TCSII Jan. 2021 351-355*

Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G.*, +, *TCSII Jan. 2021 356-360*

H_∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y.*, +, *TCSII Jan. 2021 321-325*

Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*

Convolution

High-Speed RLWE-Oriented Polynomial Multiplier Utilizing Karatsuba Algorithm. *Wong, Z.*, +, *TCSII June 2021 2157-2161*

Set-Membership Constrained Frequency-Domain Algorithm. *Lima, M.V.S.*, +, *TCSII Feb. 2021 797-801*

Convolutional neural nets

A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications. *Zhang, H.*, +, *TCSII May 2021 1695-1699*

A 64K-Neuron 64M-1b-Synapse 2.64pJ/SOP Neuromorphic Chip With All Memory on Chip for Spike-Based Models in 65nm CMOS. *Kuang, Y.*, +, *TCSII July 2021 2655-2659*

A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*

A High-Performance VLSI Architecture for a Self-Feedback Convolutional Neural Network. *Parmar, Y.*, +, *TCSII Jan. 2021 456-460*

A Novel, Efficient Implementation of a Local Binary Convolutional Neural Network. *Lin, L.*, +, *TCSII April 2021 1413-1417*

A Resource-Efficient Inference Accelerator for Binary Convolutional Neural Networks. *Kim, T.*, +, *TCSII Jan. 2021 451-455*

A Throughput-Optimized Channel-Oriented Processing Element Array for Convolutional Neural Networks. *Chen, Y.*, +, *TCSII Feb. 2021 752-756*

AIDX: Adaptive Inference Scheme to Mitigate State-Drift in Memristive VMM Accelerators. *Liu, T.*, +, *TCSII April 2021 1128-1132*

An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks. *Kim, B.*, +, *TCSII May 2021 1600-1604*

An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L.*, +, *TCSII Aug. 2021 2957-2961*

An FPGA-Based Energy-Efficient Reconfigurable Convolutional Neural Network Accelerator for Object Recognition Applications. *Li, J.*, +, *TCSII Sept. 2021 3143-3147*

Efficient Deployment of Spiking Neural Networks on SpiNNaker Neuromorphic Platform. *Galanis, I.*, +, *TCSII June 2021 1937-1941*

LeukoX: Leukocyte Classification Using Least Entropy Combiner (LEC) for Ensemble Learning. *Ghosh, S.*, +, *TCSII Aug. 2021 2977-2981*

Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*

TVFS: Topology Voltage Frequency Scaling for Reliable Embedded ConvNets. *Rizzo, R.G.*, +, *TCSII Feb. 2021 672-676*

Cooperative communication

A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M.*, +, *TCSII Jan. 2021 241-245*

Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*

Coplanar waveguides

A New Class of Wideband MS-to-MS Vialess Vertical Transition With Function of Filtering Performance. *Feng, L.*, +, *TCSII June 2021 1877-1881*

Design Method for Tunable Planar Bandpass Filters With Single-Bias Control and Wide Tunable Frequency Range. *Lim, T.*, +, *TCSII Jan. 2021 221-225*

Correlation methods

A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance. *Shakya, D.*, +, *TCSII Sept. 2021 3043-3047*

Correlation-Based Background Calibration of Bit Weight in SAR ADCs Using DAS Algorithm. *Zhang, L.*, +, *TCSII April 2021 1063-1067*

Data-Driven Process Monitoring Using Structured Joint Sparse Canonical Correlation Analysis. *Xiu, X.*, +, *TCSII Jan. 2021 361-365*

Time-Varying Graph Signal Denoising via Median Filters. *Tay, D.B.*, +, *TCSII March 2021 1053-1057*

Cost reduction

Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J.*, +, *TCSII June 2021 2002-2006*

Counting circuits

A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition. *Zhang, B.*, +, *TCSII April 2021 1423-1427*

Constant-Time Synchronous Binary Counter With Minimal Clock Period. *Hyun, Y.*, +, *TCSII July 2021 2645-2649*

Coupled circuits

A 4.5 G Ω -Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz. *Pham, X.T.*, +, *TCSII Jan. 2021 116-120*

Analysis of Stable Modes of a Scalable Coupled Oscillator Array. *He, R.*, +, *TCSII Feb. 2021 647-651*

Design of Balanced Filtering Rat-Race Coupler Based on Quad-Mode Dielectric Resonator. *Xu, J.*, +, *TCSII July 2021 2267-2271*

Synthesis of Wideband Filtering Couplers for Arbitrary High Power-Division Ratios Based on Three Different Types of Coupled-Line Sections. *Zheng, Y.*, +, *TCSII April 2021 1218-1222*

Ultra-Broadband Bandpass Filter Using Linearly Tapered Coupled-Microstrip Line and Open Loop Defected Ground Structure. *Sangam, R.S.*, +, *TCSII Jan. 2021 181-185*

Coupled transmission lines

An Edge-Coupled Marchand Balun With Partial Ground for Excellent Balance in 0.13 μm SiGe Technology. *Chakraborty, S.*, +, *TCSII Jan. 2021 226-230*

Synthesis of Wideband Filtering Couplers for Arbitrary High Power-Division Ratios Based on Three Different Types of Coupled-Line Sections. *Zheng, Y.*, +, *TCSII April 2021 1218-1222*

Covariance matrices

Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*

Hardware-Oriented Memory-Limited Online Artifact Subspace Reconstruction (HMO-ASR) Algorithm. *Van, L.*, +, *TCSII Dec. 2021 3493-3497*

Crosstalk

A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R.*, +, *TCSII Jan. 2021 246-250*

Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*

Cryptographic protocols

Quantum Multiparty Privacy Set Intersection Cardinality. *Shi, R.*, *TCSII April 2021 1203-1207*

Cryptography

Can Deep Learning Break a True Random Number Generator?. *Yu, Y.*, +, *TCSII May 2021 1710-1714*

Enhancing Hardware Trojan Detection Sensitivity Using Partition-Based Shuffling Scheme. *Shabani, A.*, +, *TCSII Jan. 2021 266-270*

Fault Detection Architectures for Inverted Binary Ring-LWE Construction Benchmarked on FPGA. *Sarker, A.*, +, *TCSII April 2021 1403-1407*

High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA. *Wu, W.*, +, *TCSII July 2021 2650-2654*

High-Speed RLWE-Oriented Polynomial Multiplier Utilizing Karatsuba Algorithm. *Wong, Z.*, +, *TCSII June 2021 2157-2161*

Low-Delay FPGA-Based Implementation of Finite Field Multipliers. *Imana, J.L.*, *TCSII Aug. 2021 2952-2956*

One-Dimensional Pseudo-Chaotic Sequences Based on the Discrete Arnold's Cat Map Over \mathbb{Z}_3^m . *Souza, C.E.C.*, +, *TCSII Jan. 2021 491-495*

Resilient Impulsive Control for Second-Order Consensus Under Malicious Nodes. *Yan, J.*, +, *TCSII June 2021 1962-1966*

Crystal filters

Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*

Crystal oscillators

Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era. *Lei, K.*, +, *TCSII Jan. 2021 30-35*

Current conveyors

A New Extremely Low Power Temperature Insensitive Electronically Tunable VCII-Based Grounded Capacitance Multiplier. *Stornelli, V.*, +, *TCSII Jan. 2021 72-76*

Current mirrors

A Robust, High-Speed and Energy-Efficient Ultralow-Voltage Level Shifter. *Fassio, L.*, +, *TCSII April 2021 1393-1397*

A Sub-200nW All-in-One Bandgap Voltage and Current Reference Without Amplifiers. *Huang, W.*, +, *TCSII Jan. 2021 121-125*

A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*

Current-mode circuits

An Accuracy-Improved and Internal Regulator-Free Temperature Sensor With a Non-Linear Current Mode Feedback Pseudo-PLL. *Li, F.*, +, *TCSII April 2021 1138-1142*

An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M.*, +, *TCSII June 2021 1817-1821*

Cyber-physical systems

An Output-Coding-Based Detection Scheme Against Replay Attacks in Cyber-Physical Systems. *Guo, H.*, +, *TCSII Oct. 2021 3306-3310*

Cyclic codes

A Miniaturized LDPC Encoder: Two-Layer Architecture for CCSDS Near-Earth Standard. *Liu, J.*, +, *TCSII July 2021 2384-2388*

Hardware-Efficient and High-Throughput LLRC Segregation Based Binary QC-LDPC Decoding Algorithm and Architecture. *Verma, A.*, +, *TCSII Aug. 2021 2835-2839*

Cyclic redundancy check codes

Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H.*, +, *TCSII Jan. 2021 211-215*

D

Damping

A General Fixed-Time Observer for Lower-Triangular Nonlinear Systems. *Gao, F.*, +, *TCSII June 2021 1992-1996*

A Robust Method for Controlling Grid-Connected Inverters in Weak Grids. *Akhavan, A.*, +, *TCSII April 2021 1333-1337*

Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*

Parameters Measurement of Multiple Exponentially Damped Sinusoids With Sub-Nyquist Sampling. *Huang, G.*, +, *TCSII July 2021 2710-2714*

Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Data analysis

Analysis of Worst-Case Data Dependent Temporal Approximation in Floating Point Units. *Jha, C.K.*, +, *TCSII Feb. 2021 767-771*

Circuit and System-Level Aspects of Phase Change Memory. *Pozidis, H.*, +, *TCSII March 2021 844-850*

Data communication

A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces. *Lee, S.*, +, *TCSII June 2021 1862-1866*

Multi-Gigabit Transceivers for Optical Data Communications From the Standardization Perspective. *Rodriguez-Perez, A.*, +, *TCSII Jan. 2021 56-62*

Data compression

Display Stream Compression Decoders for Fine-Grained Many-Core Processor Arrays. *Wu, S.*, +, *TCSII May 2021 1730-1734*

Narrower Band Matching With Low Quality Factor Values. *Sengul, M.*, *TCSII July 2021 2434-2437*

VLSI Implementation of Multi-Channel ECG Lossless Compression System. *Tsai, T.*, +, *TCSII Aug. 2021 2962-2966*

Data flow graphs

An Optimal Algorithm for Enumerating Connected Convex Subgraphs in Acyclic Digraphs. *Xiao, C.*, +, *TCSII Jan. 2021 261-265*

Data models

Hierarchical Estimation Approach for RBF-AR Models With Regression Weights Based on the Increasing Data Length. *Zhou, Y.*, +, *TCSII Dec. 2021 3597-3601*

Data privacy

Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism. *Xu, H.*, +, *TCSII June 2021 2117-2121*

Quantum Multiparty Privacy Set Intersection Cardinality. *Shi, R.*, *TCSII April 2021 1203-1207*

Safeness-Based Community Penetration. *Yu, Z.*, +, *TCSII July 2021 2690-2694*

Data protection

A Power-Aware Toggling-Frequency Actuator in Data-Toggling SRAM for Secure Data Protection. *Ho, W.*, +, *TCSII June 2021 2122-2126*

Data structures

An Optimized FPGA-Based Real-Time NDT for 3D-LiDAR Localization in Smart Vehicles. *Deng, Q.*, +, *TCSII Sept. 2021 3167-3171*

Database management systems

High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA. *Wu, W.*, +, *TCSII July 2021 2650-2654*

DC distribution systems

Synthetic Transmission Lines in Cutoff Operation for Wideband High-Impedance DC Supplies. *Testa, P.V.*, +, *TCSII March 2021 928-932*

DC motors

Invariant Manifold Based Output-Feedback Sliding Mode Control for Systems With Mismatched Disturbances. *Zhang, L.*, +, *TCSII March 2021 933-937*

DC-AC power converters

A Hybrid Nine-Level Inverter Topology With Boosting Capability and Reduced Component Count. *Naik, B.S.*, +, *TCSII Jan. 2021 316-320*

Selective Lower Order Harmonic Elimination in DC-AC Converter Using Space Vector Approach. *Arumalla, R.T.*, +, *TCSII Aug. 2021 2890-2894*

DC-DC power converters

A Simple, Accurate Small-Signal Model of a Coupled-Inductor-Based DC-DC Converter Including the Leakage Inductance Effect. *Schmitz, L.*, +, *TCSII July 2021 2533-2537*

- A Wide Voltage Gain Bidirectional DC–DC Converter Based on Quasi Z-Source and Switched Capacitor Network. *Kumar, A.*, +, *TCSII April 2021 1353-1357*
- An Asynchronous AC-DC Boost Converter With Event-Driven Voltage Regulator and 94% Efficiency for Low-Frequency Electromagnetic Energy Harvesting. *Gao, Z.*, +, *TCSII July 2021 2563-2567*
- An Ultra-Low Quiescent Current Resistor-Less Power on Reset Circuit. *Guo, J.*, +, *TCSII Jan. 2021 146-150*
- Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B.*, +, *TCSII Jan. 2021 346-350*
- False Data Injection Cyber-Attacks Mitigation in Parallel DC/DC Converters Based on Artificial Neural Networks. *Habibi, M.R.*, +, *TCSII Feb. 2021 717-721*
- High-Speed Dynamic Level Shifter for High-Side Bootstrapped Gate Driver in High-Voltage Buck Regulators. *Yuan, B.*, +, *TCSII Sept. 2021 3083-3087*
- Modeling, Analysis and Implementation of an Improved Interleaved Buck-Boost Converter. *Rana, N.*, +, *TCSII July 2021 2588-2592*
- Multi-Stage DC-DC Converter Using Active LC2D Network With Minimum Component. *Kumar, G.G.*, +, *TCSII March 2021 943-947*
- Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*
- Quantitative Feedback Design-Based Robust PID Control of Voltage Mode Controlled DC-DC Boost Converter. *Kobaku, T.*, +, *TCSII Jan. 2021 286-290*
- Stabilizing Effect of Load Converter in Cascaded System Considering Ripple Interaction. *Zhou, G.*, +, *TCSII Jan. 2021 296-300*
- Synthesis of Multi-Input Multi-Output DC/DC Converters Without Energy Buffer Stages. *Shan, Z.*, +, *TCSII Feb. 2021 712-716*
- Transformer Secondary Voltage Based Resonant Frequency Tracking for LLC Converter. *Wei, Y.*, +, *TCSII April 2021 1243-1247*
- Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators. *Han, S.*, +, *TCSII Aug. 2021 2902-2906*
- Decision feedback equalizers**
- A 112 Gb/s PAM-4 RX Front-End With Unlocked Decision Feedback Equalizer. *Petricli, I.*, +, *TCSII Jan. 2021 256-260*
- A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces. *Lee, S.*, +, *TCSII June 2021 1862-1866*
- A Duo-Binary Transceiver With Time-Based Receiver and Voltage-Mode Time-Interleaved Mixing Transmitter for DRAM Interface. *Chae, M.*, +, *TCSII July 2021 2409-2413*
- An Adaptive Offset Cancellation Scheme and Shared-Summer Adaptive DFE for 0.068 pJ/b/dB 1.62-to-10 Gb/s Low-Power Receiver in 40 nm CMOS. *Lee, K.*, +, *TCSII Feb. 2021 622-626*
- High-Throughput and Improved-Convergent Design of Pipelined Adaptive DFE for 5G Communication. *Khan, M.T.*, +, *TCSII Feb. 2021 652-656*
- New Charge-Steering DFEs in 55-nm CMOS. *Pike, J.*, +, *TCSII Jan. 2021 231-235*
- Decision making**
- Evolutionary Game Dynamics Based on Local Intervention in Multi-Agent Systems. *Zhu, Y.*, +, *TCSII April 2021 1293-1297*
- Decoding**
- An Efficient NB-LDPC Decoder Architecture for Space Telecommand Links. *Alvarez, A.*, +, *TCSII April 2021 1213-1217*
- Decoding Algorithm for Quadruple-Error-Correcting Reed-Solomon Codes and Its Derived Architectures. *Garcia-Herrero, F.*, +, *TCSII April 2021 1438-1442*
- Display Stream Compression Decoders for Fine-Grained Many-Core Processor Arrays. *Wu, S.*, +, *TCSII May 2021 1730-1734*
- Fast Column Message-Passing Decoding of Low-Density Parity-Check Codes. *Usman, S.*, +, *TCSII July 2021 2389-2393*
- Hardware-Efficient and High-Throughput LLRC Segregation Based Binary QC-LDPC Decoding Algorithm and Architecture. *Verma, A.*, +, *TCSII Aug. 2021 2835-2839*
- High Throughput Low Complexity and Low Power ePiBM RS Decoder Using Fractional Folding. *Liu, W.*, +, *TCSII Aug. 2021 2830-2834*
- Minimal-Set Trellis Min-Max Decoder Architecture for Nonbinary LDPC Codes. *Pham, T.X.*, +, *TCSII Jan. 2021 216-220*
- Deep learning**
- Adversarial Examples Detection of Radio Signals Based on Multifeature Fusion. *Xu, D.*, +, *TCSII Dec. 2021 3607-3611*
- Efficient Hardware Implementation of DNN-Based Speech Enhancement Algorithm With Precise Sigmoid Activation Function. *Chiluveru, S.R.*, +, *TCSII Nov. 2021 3461-3465*
- Deep learning (artificial intelligence)**
- A 0.82 μ W CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J.*, +, *TCSII May 2021 1700-1704*
- A 43.1TOPS/W Energy-Efficient Absolute-Difference-Accumulation Operation Computing-In-Memory With Computation Reuse. *Um, S.*, +, *TCSII May 2021 1605-1609*
- A Throughput-Optimized Channel-Oriented Processing Element Array for Convolutional Neural Networks. *Chen, Y.*, +, *TCSII Feb. 2021 752-756*
- A Time-Domain Binary CNN Engine With Error-Detection-Based Resilience in 28nm CMOS. *Cai, Z.*, +, *TCSII Sept. 2021 3177-3181*
- Anti-Interpolation: An Attack Facilitator Hiding Adversaries Into Images. *Chen, J.*, +, *TCSII July 2021 2670-2674*
- Can Deep Learning Break a True Random Number Generator?. *Yu, Y.*, +, *TCSII May 2021 1710-1714*
- Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C.*, +, *TCSII April 2021 1472-1476*
- DeepPoison: Feature Transfer Based Stealthy Poisoning Attack for DNNs. *Chen, J.*, +, *TCSII July 2021 2618-2622*
- DeepTempo: A Hardware-Friendly Direct Feedback Alignment Multi-Layer Tempotron Learning Rule for Deep Spiking Neural Networks. *Shi, C.*, +, *TCSII May 2021 1581-1585*
- Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L.*, +, *TCSII May 2021 1640-1644*
- Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*
- Lane Shared Bit-Pragmatic Deep Neural Network Computing Architecture and Circuit. *Yang, S.*, +, *TCSII Jan. 2021 486-490*
- LeukoX: Leukocyte Classification Using Least Entropy Combiner (LEC) for Ensemble Learning. *Ghosh, S.*, +, *TCSII Aug. 2021 2977-2981*
- Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*
- Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V.*, *TCSII Feb. 2021 581-586*
- Structured Pruning of RRAM Crossbars for Efficient In-Memory Computing Acceleration of Deep Neural Networks. *Meng, J.*, +, *TCSII May 2021 1576-1580*
- Defected ground structures**
- Isolation Enhancement in Dual-Band Monopole Antenna for 5G Applications. *Wang, W.*, +, *TCSII June 2021 1867-1871*
- Simultaneous Wireless Power and Information Transfer Using Coupled Co-Existing Defected Ground Structure Resonators. *Barakat, A.*, +, *TCSII Feb. 2021 632-636*
- Ultra-Broadband Bandpass Filter Using Linearly Tapered Coupled-Microstrip Line and Open Loop Defected Ground Structure. *Sangam, R.S.*, +, *TCSII Jan. 2021 181-185*
- Delay circuits**
- Diakoptics Modelling Applied to Flying Bird-Shape NGD Microstrip Circuit. *Ravelo, B.*, +, *TCSII Feb. 2021 637-641*
- Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function. *Ravelo, B.*, +, *TCSII July 2021 2364-2368*
- Delay lines**
- 28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*
- A Time-Domain Binary CNN Engine With Error-Detection-Based Resilience in 28nm CMOS. *Cai, Z.*, +, *TCSII Sept. 2021 3177-3181*
- Background Calibration for Bit Weights in Pipelined ADCs Using Adaptive Dither Windows. *Sun, J.*, +, *TCSII June 2021 1783-1787*
- Effect of Various Delay Line Ratios and Their Non-Linearity on the Performance of DIFM. *Singh, S.*, +, *TCSII June 2021 1907-1911*

Effects of AC Response Imperfections in True-Time-Delay Lines. *Mondal, I., +, TCSII April 2021 1173-1177*

Delay lock loops

28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A., +, TCSII Feb. 2021 602-606*

Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit. *Chithra, ., +, TCSII June 2021 1788-1792*

High Throughput Low Complexity and Low Power ePiBM RS Decoder Using Fractional Folding. *Liu, W., +, TCSII Aug. 2021 2830-2834*

Delay systems

Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M., TCSII Nov. 2021 3436-3440*

Indefinite Lyapunov–Razumikhin Functions-Based Stability and Event-Triggered Control of Switched Nonlinear Time-Delay Systems. *Zhang, J., +, TCSII Oct. 2021 3286-3290*

Memory-Event-Triggered H_∞ Filtering of Unmanned Surface Vehicles With Communication Delays. *Yan, S., +, TCSII July 2021 2463-2467*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J., +, TCSII June 2021 2052-2056*

Delay-differential systems

Exponential Stability of Impulsive Fractional Switched Systems With Time Delays. *He, D., +, TCSII June 2021 1972-1976*

Delays

Bifurcation and Control for a Predator-Prey System With Two Delays. *Jiang, X., +, TCSII Jan. 2021 376-380*

Bounded Leader-Following Consensus of Heterogeneous Directed Delayed Multi-Agent Systems via Asynchronous Impulsive Control. *Gong, J., +, TCSII July 2021 2680-2684*

Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control. *Li, W., +, TCSII April 2021 1338-1342*

Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M., TCSII Nov. 2021 3436-3440*

Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems. *Ran, G., +, TCSII Jan. 2021 276-280*

Event-Based Output Regulation of Boolean Control Networks With Time Delay. *Zhang, A., +, TCSII June 2021 2007-2011*

Event-Triggered Synchronization for Discrete-Time Neural Networks With Unknown Delays. *Rong, N., +, TCSII Oct. 2021 3296-3300*

Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K., +, TCSII June 2021 2172-2176*

Exponential Stability of Impulsive Fractional Switched Systems With Time Delays. *He, D., +, TCSII June 2021 1972-1976*

Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G., +, TCSII Jan. 2021 356-360*

H_∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y., +, TCSII Jan. 2021 321-325*

Indefinite Lyapunov–Razumikhin Functions-Based Stability and Event-Triggered Control of Switched Nonlinear Time-Delay Systems. *Zhang, J., +, TCSII Oct. 2021 3286-3290*

Input Delay Estimation for Input-Affine Dynamical Systems Based on Taylor Expansion. *Zhang, Y., +, TCSII April 2021 1298-1302*

Memory-Event-Triggered H_∞ Filtering of Unmanned Surface Vehicles With Communication Delays. *Yan, S., +, TCSII July 2021 2463-2467*

Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X., +, TCSII June 2021 2187-2191*

Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z., +, TCSII Jan. 2021 426-430*

Optimum MDC FFT Hardware Architectures in Terms of Delays and Multiplexers. *Garrido, M., +, TCSII March 2021 1003-1007*

Performance of Clustered Multitask Diffusion LMS Suffering From Inter-Node Communication Delays. *Gogineni, V.C., +, TCSII July 2021 2695-2699*

SAT-Based Integrated Hardware Trojan Detection and Localization Approach Through Path-Delay Analysis. *Sabri, M., +, TCSII Aug. 2021 2850-2854*

Separating Radar Signals From Impulsive Noise Using Atomic Norm Minimization. *Bayat, S., +, TCSII June 2021 2212-2216*

Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z., +, TCSII Nov. 2021 3446-3450*

Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method. *Liu, A., +, TCSII July 2021 2553-2557*

Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J., +, TCSII Oct. 2021 3271-3275*

Delta-sigma modulation

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H., +, TCSII Sept. 2021 3113-3117*

A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J., +, TCSII May 2021 1645-1649*

Capacitor-Less Dual-Mode All-Digital LDO With $\Delta\Sigma$ -Modulation-Based Ripple Reduction. *Akram, M.A., +, TCSII May 2021 1620-1624*

Demodulation

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J., +, TCSII April 2021 1143-1147*

A 200 $\mu\text{g}/\sqrt{\text{Hz}}$, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer. *Tirupathi, R., +, TCSII June 2021 1753-1757*

A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L., +, TCSII Sept. 2021 3133-3137*

A Quick Method of Phase Fitting in RF Segmented Demodulation. *Zhang, L., TCSII July 2021 2730-2734*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J., +, TCSII May 2021 1735-1739*

M-PSK Demodulator With Joint Carrier and Timing Recovery. *Giardino, D., +, TCSII June 2021 1912-1916*

Demodulators

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J., +, TCSII April 2021 1143-1147*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J., +, TCSII May 2021 1735-1739*

M-PSK Demodulator With Joint Carrier and Timing Recovery. *Giardino, D., +, TCSII June 2021 1912-1916*

Design methodology

Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips. *Goncalves, G., +, TCSII Nov. 2021 3396-3400*

Desorption

A Novel Conformal Design for Multi-Sensor System Synthesis. *Qian, J., +, TCSII April 2021 1532-1536*

Dielectric losses

A Dual-Band Coupled Line Power Divider Using SISL Technology. *Feng, T., +, TCSII Feb. 2021 657-661*

Dielectric resonator antennas

A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator. *Wang, C., +, TCSII Nov. 2021 3426-3430*

Dielectric resonator filters

Design of Balanced Filtering Rat-Race Coupler Based on Quad-Mode Dielectric Resonator. *Xu, J., +, TCSII July 2021 2267-2271*

Differential amplifiers

A 0.3-V Conductance-Based Silicon Neuron in 0.18 μm CMOS Process. *Akbari, M., +, TCSII Oct. 2021 3209-3213*

A 200 $\mu\text{g}/\sqrt{\text{Hz}}$, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer. *Tirupathi, R., +, TCSII June 2021 1753-1757*

A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S., +, TCSII Feb. 2021 607-611*

Analysis and Design of Reconfigurable Sense Amplifier for Compute SRAM With High-Speed Compute and Normal Read Access. *Chen, J., +, TCSII Dec. 2021 3503-3507*

Fully Differential Ultra-Wideband Amplifier With 46-dB Gain and Positive Feedback for Increased Bandwidth. *An, X.*, +, *TCSII April 2021 1083-1087*

Differential equations

A Novel Hardware-Oriented Recurrent Network of Asynchronous CA Neurons for a Neural Integrator. *Takeda, K.*, +, *TCSII Aug. 2021 2972-2976*

Bifurcation and Control for a Predator-Prey System With Two Delays. *Jiang, X.*, +, *TCSII Jan. 2021 376-380*

Discrete-Time Super-Twisting Fractional-Order Differentiator With Implicit Euler Method. *Sharma, R.K.*, +, *TCSII April 2021 1238-1242*

Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K.*, +, *TCSII June 2021 2172-2176*

Digital arithmetic

A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition. *Zhang, B.*, +, *TCSII April 2021 1423-1427*

Adversarial Hardware With Functional and Topological Camouflage. *Li, H.*, +, *TCSII May 2021 1685-1689*

AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators. *Waris, H.*, +, *TCSII May 2021 1566-1570*

AxLS: A Framework for Approximate Logic Synthesis Based on Netlist Transformations. *Castro-Godinez, J.*, +, *TCSII Aug. 2021 2845-2849*

Low-Delay FPGA-Based Implementation of Finite Field Multipliers. *Imana, J.L.*, *TCSII Aug. 2021 2952-2956*

Ultra-Compact Ternary Logic Gates Based on Negative Capacitance Carbon Nanotube FETs. *Jooq, M.K.Q.*, +, *TCSII June 2021 2162-2166*

Digital circuits

Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit. *Chithra, .*, +, *TCSII June 2021 1788-1792*

Digital control

A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*

A Low-Noise and Fast-Settling UHF RFID Receiver With Digitally Controlled Leakage Cancellation. *Kim, S.*, +, *TCSII Aug. 2021 2810-2814*

An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in 0.18 μm SiGe BiCMOS. *Li, Z.*, +, *TCSII June 2021 1763-1767*

Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*

Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*

Digital filters

A 5-Gb/s Adaptive Digital CDR Circuit With SSC Capability and Enhanced High-Frequency Jitter Tolerance. *Chang, S.*, +, *TCSII Jan. 2021 161-165*

Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*

Narrower Band Matching With Low Quality Factor Values. *Sengul, M.*, *TCSII July 2021 2434-2437*

Real-Time Light Field Signal Processing Using 4D/5D Linear Digital Filter FPGA Circuits. *Edussooriya, C.U.S.*, +, *TCSII July 2021 2735-2741*

Variable Filter Design by Second Order Transformation. *Ma, T.*, +, *TCSII March 2021 1048-1052*

Digital integrated circuits

Analog/RF IP Protection: Attack Models, Defense Techniques, and Challenges. *Sanabria-Borbon, A.*, +, *TCSII Jan. 2021 36-41*

Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*

Twenty Years of Near/Sub-Threshold Design Trends and Enablement. *Singh, K.*, +, *TCSII Jan. 2021 5-11*

Digital phase locked loops

A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S.*, +, *TCSII Sept. 2021 3063-3067*

Jitter Optimisation in a Generalised All-Digital Phase-Locked Loop Model. *Koskin, E.*, +, *TCSII Jan. 2021 77-81*

Digital signal processing chips

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K.*, +, *TCSII Oct. 2021 3251-3255*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Digital signatures

Area-Time Efficient Hardware Architecture for Signature Based on Ed448. *Bisheh-Niasar, M.*, +, *TCSII Aug. 2021 2942-2946*

Digital-analog conversion

A 10-Bit Current Output DAC With Active Resistive Load Interpolation. *Wang, W.*, +, *TCSII June 2021 1803-1806*

A Redundancy-Based Background Calibration for Comparator Offset/Threshold and DAC Gain in a Ping-Pong SAR ADC. *Bunsen, K.*, +, *TCSII Feb. 2021 592-596*

A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization. *Sengupta, S.*, +, *TCSII April 2021 1073-1077*

Comparison Study of DAC Realizations in Current Input CT Δ Modulators. *Rajabzadeh, M.*, +, *TCSII Jan. 2021 111-115*

Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display. *Guo, X.*, +, *TCSII July 2021 2307-2311*

Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation. *Kim, H.*, +, *TCSII July 2021 2297-2301*

Multi-Flip Technique Compensating a Gradient Rotation in Unary DACs. *Yenuchenko, M.S.*, +, *TCSII March 2021 883-887*

On the Linearity of BJT-Based Current-Mode DAC Drivers. *Lupo, N.*, +, *TCSII Sept. 2021 3138-3142*

Directed graphs

A Rigid Formation Control Approach for Multi-Agent Systems With Curvature Constraints. *Zhao, Y.*, +, *TCSII Nov. 2021 3431-3435*

Bipartite Finite Time and Fixed Time Output Consensus of Heterogeneous Multiagent Systems Under State Feedback Control. *Hao, L.*, +, *TCSII June 2021 2067-2071*

Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*

Cooperative Adaptive H_∞ Output Regulation of Continuous-Time Heterogeneous Multi-Agent Markov Jump Systems. *Dong, S.*, +, *TCSII Oct. 2021 3261-3265*

Cooperative Bipartite Containment Control for Heterogeneous Networks With Structurally Balanced Graph. *Zhou, Y.*, +, *TCSII Aug. 2021 2885-2889*

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H.*, +, *TCSII Jan. 2021 351-355*

Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J.*, +, *TCSII June 2021 2002-2006*

Event-Triggered Bipartite Consensus in Networked Euler-Lagrange Systems With External Disturbance. *Deng, Q.*, +, *TCSII Aug. 2021 2870-2874*

Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*

Synchronization in Dynamical Systems Coupled via Multiple Directed Networks. *Wu, C.W.*, *TCSII May 2021 1660-1664*

Direction-of-arrival estimation

Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*

Directional couplers

Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*

Hybrid Harmonic Cancellation Digital Predistortion With a Feedback Loop Compensation. *Chen, L.*, +, *TCSII June 2021 2222-2226*

Discrete cosine transforms

A Cluster of FPAA's to Recognize Images Using Neural Networks. *Garcia Moreno, D.*, +, *TCSII Nov. 2021 3391-3395*

Time Complexity of In-Memory Matrix-Vector Multiplication. *Sun, Z.*, +, *TCSII Aug. 2021 2785-2789*

Discrete Fourier transforms

A Memory-Reduced Frequency Estimator for the Measurement of Sinusoidal Signal. *Wang, J.*, +, *TCSII March 2021 1038-1042*

SMUL-FFT: A Streaming Multiplierless Fast Fourier Transform. *Mirfarsh-bafan, S.H.*, +, *TCSII May 2021 1715-1719*

Discrete systems

Consensus of the Hybrid Multiagent System Under Impulse Control. *Yu, Z.*, +, *TCSII July 2021 2573-2577*

Discrete time filters

Continuous-Time Pipelined Analog-to-Digital Converters: A Mini-Tutorial. *Pavan, S.*, +, *TCSII March 2021 810-815*

Discrete time systems

A Novel Variable Exponential Discrete Time Sliding Mode Reaching Law. *Chen, X.*, +, *TCSII July 2021 2518-2522*

Design of Discrete-Time Sliding Mode Control With Disturbance Compensator-Based Switching Function. *Ma, H.*, +, *TCSII April 2021 1268-1272*

Discrete-Time Adaptive Super-Twisting Observer With Predefined Arbitrary Convergence Time. *Xiong, X.*, +, *TCSII June 2021 2057-2061*

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H.*, +, *TCSII Jan. 2021 351-355*

Discrete-Time Sliding Mode Control Design for Unicycle Robot With Bounded Inputs. *Thomas, M.*, +, *TCSII Aug. 2021 2912-2916*

Discrete-Time Super-Twisting Fractional-Order Differentiator With Implicit Euler Method. *Sharma, R.K.*, +, *TCSII April 2021 1238-1242*

Discrete-Time Super-Twisting Observer With Implicit Euler Method. *Xiong, X.*, +, *TCSII April 2021 1288-1292*

Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*

Event-Triggered Synchronization for Discrete-Time Neural Networks With Unknown Delays. *Rong, N.*, +, *TCSII Oct. 2021 3296-3300*

Implicit Discrete-Time Terminal Sliding Mode Control for Second-Order Systems. *Xiong, X.*, +, *TCSII July 2021 2508-2512*

Interacting Multiple Model Based on Maximum Correntropy Kalman Filter. *Fan, X.*, +, *TCSII Aug. 2021 3017-3021*

Leader-Following Tracking Control of Discrete-Time Uncertain Nonlinear MASs With Parametric and Nonparametric State Couplings. *Li, S.*, +, *TCSII June 2021 2037-2041*

Optimal FIR Filter for Discrete-Time LTV Systems and Fast Iterative Algorithm. *Zhao, S.*, +, *TCSII April 2021 1527-1531*

Peak-to-Peak Filtering for Discrete-Time Singular Systems. *Chang, X.*, +, *TCSII July 2021 2543-2547*

Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law. *Ma, H.*, +, *TCSII Feb. 2021 722-726*

Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N.*, +, *TCSII June 2021 1957-1961*

Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*

Stability Preserving Model Reduction Technique for Weighted and Limited Interval Discrete-Time Systems With Error Bound. *Batool, S.*, +, *TCSII Oct. 2021 3281-3285*

State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*

Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*

Discrete wavelet transforms

Memory Efficient Architecture for Lifting-Based Discrete Wavelet Packet Transform. *Gyanendra, .*, +, *TCSII April 2021 1373-1377*

Discrete-time systems

Implicit Discrete-Time Adaptive First-Order Sliding Mode Control With Predefined Convergence Time. *Xiong, X.*, +, *TCSII Dec. 2021 3562-3566*

Distributed algorithms

A Distributed Algorithm for Tracking General Functions of Multiple Signals Not-Necessarily Having Steady States. *Wang, W.*, +, *TCSII June 2021 2107-2111*

Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J.*, +, *TCSII June 2021 2002-2006*

Robust Minimum Disturbance Diffusion LMS for Distributed Estimation. *Zayyani, H.*, *TCSII Jan. 2021 521-525*

Distributed amplifiers

Synthetic Transmission Lines in Cutoff Operation for Wideband High-Impedance DC Supplies. *Testa, P.V.*, +, *TCSII March 2021 928-932*

Distributed arithmetic

Partial-LUT Designs for Low-Complexity Realization of DA-Based BLMS Adaptive Filter. *Khan, M.T.*, +, *TCSII April 2021 1188-1192*

Distributed control

Admissible Bipartite Consensus in Networks of Singular Agents Over Signed Graphs. *Liu, T.*, +, *TCSII Aug. 2021 2880-2884*

Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T.*, +, *TCSII Jan. 2021 281-285*

Cooperative Bipartite Containment Control for Heterogeneous Networks With Structurally Balanced Graph. *Zhou, Y.*, +, *TCSII Aug. 2021 2885-2889*

Cooperative Control for Nonlinear Multi-Agent Systems Based on Event-Triggered Scheme. *Shi, J.*, *TCSII June 2021 1977-1981*

Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G.*, +, *TCSII March 2021 938-942*

Distributed Dynamic Event-Based Control for Nonlinear Multi-Agent Systems. *Tan, X.*, +, *TCSII Feb. 2021 687-691*

Distributed Nash Equilibrium Seeking Under Event-Triggered Mechanism. *Zhang, K.*, +, *TCSII Nov. 2021 3441-3445*

Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems. *Ran, G.*, +, *TCSII Jan. 2021 276-280*

Event-Based Leader-Following Synchronization of Coupled Harmonic Oscillators Under Jointly Connected Switching Topologies. *Cai, J.*, +, *TCSII March 2021 958-962*

Event-Triggered Bipartite Consensus in Networked Euler-Lagrange Systems With External Disturbance. *Deng, Q.*, +, *TCSII Aug. 2021 2870-2874*

Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities. *Dai, M.*, +, *TCSII Aug. 2021 2855-2859*

Finite-Time Distributed Optimal Tracking for Multiple Heterogeneous Linear Systems. *Zhong, Z.*, +, *TCSII April 2021 1258-1262*

Formation Tracking of Second-Order Multi-Agent Systems With Multiple Leaders Based on Sampled Data. *Liu, C.*, +, *TCSII Jan. 2021 331-335*

Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z.*, +, *TCSII Jan. 2021 336-340*

Global Adaptive Leader-Following Consensus for Second-Order Nonlinear Multiagent Systems With Switching Topologies. *Zou, W.*, +, *TCSII Feb. 2021 702-706*

Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*

Positive Consensus in Fractional-Order Interval Networked Systems. *Ye, Y.*, +, *TCSII July 2021 2538-2542*

Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism. *Xu, H.*, +, *TCSII June 2021 2117-2121*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*

Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*

Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*

Distributed power generation

Compact Seven-Level Boost Type Inverter Topology. *Sathik, M.J.*, +, *TCSII April 2021 1358-1362*

False Data Injection Cyber-Attacks Mitigation in Parallel DC/DC Converters Based on Artificial Neural Networks. *Habibi, M.R.*, +, *TCSII Feb. 2021 717-721*

On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D., +, TCSII July 2021 2468-2472*

Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y., +, TCSII April 2021 1318-1322*

Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B., +, TCSII July 2021 2583-2587*

Stabilizing Effect of Load Converter in Cascaded System Considering Ripple Interaction. *Zhou, G., +, TCSII Jan. 2021 296-300*

Two-Layer Cooperative Control for Multiple Converter-Network Clusters. *Lu, X., +, TCSII Feb. 2021 682-686*

Distributed processing

An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *Zhou, K., +, TCSII Aug. 2021 2932-2936*

Distribution networks

Synthesis of Multi-Input Multi-Output DC/DC Converters Without Energy Buffer Stages. *Shan, Z., +, TCSII Feb. 2021 712-716*

Disturbance observers

Antisaturation Command Filtered Backstepping Control-Based Disturbance Rejection for a Quadrotor UAV. *Liu, K., +, TCSII Dec. 2021 3577-3581*

Doppler effect

Hardware Implementation of Overlap-Save-Based Fading Channel Emulator. *Najam-Ul-Islam, M., +, TCSII March 2021 918-922*

Doppler radar

Separating Radar Signals From Impulsive Noise Using Atomic Norm Minimization. *Bayat, S., +, TCSII June 2021 2212-2216*

DRAM chips

A Duo-Binary Transceiver With Time-Based Receiver and Voltage-Mode Time-Interleaved Mixing Transmitter for DRAM Interface. *Chae, M., +, TCSII July 2021 2409-2413*

A Novel DRAM Architecture for Improved Bandwidth Utilization and Latency Reduction Using Dual-Page Operation. *Sudarshan, C., +, TCSII May 2021 1615-1619*

Circuit and System-Level Aspects of Phase Change Memory. *Pozidis, H., +, TCSII March 2021 844-850*

Driver circuits

0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop. *Yoon, C., +, TCSII Jan. 2021 136-140*

A 0.166 pJ/b/pF, 3.5–5 Gb/s TSV I/O Interface With V_{OH} Drift Control. *Kim, J., +, TCSII June 2021 1822-1826*

A 24–30 GHz 31.7% Fractional Bandwidth Power Amplifier With an Adaptive Capacitance Linearizer. *Lee, J., +, TCSII April 2021 1163-1167*

A Customized AC Hybrid LED Driver With Flicker Reduction for High Nominal Range Applications. *Chong, K., +, TCSII May 2021 1635-1639*

A Duo-Binary Transceiver With Time-Based Receiver and Voltage-Mode Time-Interleaved Mixing Transmitter for DRAM Interface. *Chae, M., +, TCSII July 2021 2409-2413*

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M., +, TCSII March 2021 908-912*

A Supply Voltage Noise Immunity Enhancement Design for High-Voltage Gate Driver IC Based on Bootstrap Circuit. *Jin, W., +, TCSII Sept. 2021 3048-3052*

A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H., +, TCSII May 2021 1625-1629*

An Impedance Adapting Compensation Scheme for High Current NMOS LDO Design. *Cao, H., +, TCSII July 2021 2287-2291*

Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display. *Guo, X., +, TCSII July 2021 2307-2311*

High-Speed Dynamic Level Shifter for High-Side Bootstrapped Gate Driver in High-Voltage Buck Regulators. *Yuan, B., +, TCSII Sept. 2021 3083-3087*

On the Linearity of BJT-Based Current-Mode DAC Drivers. *Lupo, N., +, TCSII Sept. 2021 3138-3142*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S., +, TCSII April 2021 1308-1312*

Dual band

All-Frequency Absorptive CL Dual-Band BPF With Complementary Lossy Bandstop Branches. *Zhang, Y., +, TCSII Dec. 2021 3532-3536*

Design of a New Dual-Band Balanced-to-Balanced Filtering Power Divider Based on the Circular Microstrip Patch Resonator. *Zhang, G., +, TCSII Dec. 2021 3542-3546*

Dual-Band Filtering Power Divider Based on a Single Circular Patch Resonator With Improved Bandwidths and Good Isolation. *Zhang, Q., +, TCSII Nov. 2021 3411-3415*

Dynamic range

Offset and Gain FPN Calibrated Linear-Logarithmic Image Sensor With Shared Pixel Architecture. *Lee, J., TCSII Dec. 2021 3518-3521*

E

Edge detection

NS-MD: Near-Sensor Motion Detection With Energy Harvesting Image Sensor for Always-On Visual Perception. *Nazhamaiti, M., +, TCSII Sept. 2021 3078-3082*

Eigenvalues and eigenfunctions

Fast Average-Consensus on Networks Using Heterogeneous Diffusion. *Pandey, P.K., +, TCSII Nov. 2021 3421-3425*

Hardware-Oriented Memory-Limited Online Artifact Subspace Reconstruction (HMO-ASR) Algorithm. *Van, L., +, TCSII Dec. 2021 3493-3497*

On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D., +, TCSII July 2021 2468-2472*

Robust Minimum Disturbance Diffusion LMS for Distributed Estimation. *Zayyani, H., TCSII Jan. 2021 521-525*

Electric breakdown

Efficient Power Transfers in Piezoelectric Energy-Harvesting Switched-Inductor Chargers. *Yang, S., +, TCSII April 2021 1248-1252*

Fast Gate Leakage Current Monitor With Large Dynamic Range. *Bhatheja, K., +, TCSII May 2021 1690-1694*

Electric connectors

A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H., +, TCSII May 2021 1625-1629*

Electric current control

A Customized AC Hybrid LED Driver With Flicker Reduction for High Nominal Range Applications. *Chong, K., +, TCSII May 2021 1635-1639*

Class AB Op-Amp With Accurate Static Current Control for Low and High Supply Voltages. *Padilla-Cantoya, I., +, TCSII Aug. 2021 2775-2779*

Conic Programming for Circuit Equations With Rational Current Controlled Resistors. *Jia, W., +, TCSII Jan. 2021 496-500*

Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S., +, TCSII Feb. 2021 737-741*

Electric fuses

A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors. *Li, Y., +, TCSII Oct. 2021 3224-3228*

Electric impedance measurement

A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L., +, TCSII Sept. 2021 3133-3137*

A Low-Cost Bioimpedance Phase Angle Monitor for Portable Electrical Surface Stimulation Burn Prevention. *Burns, R.P., +, TCSII April 2021 1118-1122*

Electric vehicle charging

Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X., +, TCSII Jan. 2021 396-400*

Electric vehicles

Compact Seven-Level Boost Type Inverter Topology. *Sathik, M.J., +, TCSII April 2021 1358-1362*

Electrical impedance tomography

An 8-Channel 1.76-mW 4.84-mm² Electrical Impedance Tomography SoC With Direct IF Frequency Division Multiplexing. *Zeng, L., +, TCSII Nov. 2021 3401-3405*

Electrocardiography

A 1.3 μW Event-Driven ANN Core for Cardiac Arrhythmia Classification in Wearable Sensors. *Cai, Q., +, TCSII Sept. 2021 3123-3127*

A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization. *Sengupta, S., +, TCSII April 2021 1073-1077*

On-Chip Fuzzy Logic Synthesis of a New Ischemic and Non-Ischemic Heartbeat Classifier. *De La Fuente-Cortes, G., +, TCSII Jan. 2021 476-480*

VLSI Implementation of Multi-Channel ECG Lossless Compression System. *Tsai, T., +, TCSII Aug. 2021 2962-2966*

Electrochemical impedance spectroscopy

A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L., +, TCSII Sept. 2021 3133-3137*

Electroencephalography

A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q., +, TCSII Feb. 2021 777-781*

Complex Network Analysis of Experimental EEG Signals for Decoding Brain Cognitive State. *Gao, Z., +, TCSII Jan. 2021 531-535*

Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G., +, TCSII May 2021 1725-1729*

Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D., +, TCSII April 2021 1542-1546*

Hardware-Oriented Memory-Limited Online Artifact Subspace Reconstruction (HMO-ASR) Algorithm. *Van, L., +, TCSII Dec. 2021 3493-3497*

Electromagnetic compatibility

Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y., +, TCSII March 2021 878-882*

Electromagnetic interference

DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X., +, TCSII June 2021 2077-2081*

EMI Effect in Voltage-to-Time Converters. *Richelli, A., +, TCSII April 2021 1078-1082*

Electromagnetic wave polarization

A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression. *Xun, M., +, TCSII April 2021 1228-1232*

Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency. *Nofaresti, M., +, TCSII Jan. 2021 171-175*

Electromagnetic wave propagation

Ultra-Wideband and Compact Terahertz Planar Load Based on Spoof Surface Plasmon Polaritons With Nickel. *Le Zhang, Q., +, TCSII June 2021 1922-1926*

Electromyography

Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G., +, TCSII May 2021 1725-1729*

Electronic data interchange

Performance of Clustered Multitask Diffusion LMS Suffering From Inter-Node Communication Delays. *Gogineni, V.C., +, TCSII July 2021 2695-2699*

Electronic design automation

A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z., +, TCSII Sept. 2021 3153-3157*

Adversarial Hardware With Functional and Topological Camouflage. *Li, H., +, TCSII May 2021 1685-1689*

Re-Thinking Analog Integrated Circuits in Digital Terms: A New Design Concept for the IoT Era. *Toledo, P., +, TCSII March 2021 816-822*

Electronic engineering computing

Lane Shared Bit-Pragmatic Deep Neural Network Computing Architecture and Circuit. *Yang, S., +, TCSII Jan. 2021 486-490*

Structured Pruning of RRAM Crossbars for Efficient In-Memory Computing Acceleration of Deep Neural Networks. *Meng, J., +, TCSII May 2021 1576-1580*

Electronic noses

A Novel Conformal Design for Multi-Sensor System Synthesis. *Qian, J., +, TCSII April 2021 1532-1536*

A Pre-Concentration System Design for Electronic Nose via Finite Element Method. *Qian, J., +, TCSII Dec. 2021 3592-3596*

Electronic warfare

Effect of Various Delay Line Ratios and Their Non-Linearity on the Performance of DIFM. *Singh, S., +, TCSII June 2021 1907-1911*

Electronics packaging

A 3.9GHz/63.6% FBW Multi-Mode Filtering Power Divider Using Self-Packaged SISL. *Xiao, J., +, TCSII June 2021 1842-1846*

Elemental semiconductors

A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R., +, TCSII July 2021 2272-2276*

A Highly Integrated 3-Phase 4:1 Resonant Switched-Capacitor Converter With Parasitic Loss Reduction and Fast Pre-Charge Startup. *Wang, C., +, TCSII July 2021 2608-2612*

A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H., +, TCSII May 2021 1625-1629*

An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M., +, TCSII June 2021 1817-1821*

Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L., +, TCSII May 2021 1640-1644*

Elliptic filters

Exploiting Parasitic Capacitances in 3-D Inductors to Design RF CMOS Quasi-Elliptic-Type Broad-Band Bandpass Filters. *Zhu, X., +, TCSII Sept. 2021 3128-3132*

Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z., +, TCSII May 2021 1586-1590*

Embedded systems

A High-Performance VLSI Architecture for a Self-Feedback Convolutional Neural Network. *Parmar, Y., +, TCSII Jan. 2021 456-460*

Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L., +, TCSII May 2021 1640-1644*

TVFS: Topology Voltage Frequency Scaling for Reliable Embedded ConvNets. *Rizzo, R.G., +, TCSII Feb. 2021 672-676*

Encoding

An Output-Coding-Based Detection Scheme Against Replay Attacks in Cyber-Physical Systems. *Guo, H., +, TCSII Oct. 2021 3306-3310*

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y., +, TCSII July 2021 2404-2408*

The XOR-MAJ Thermometer-to-Binary Encoder Structure Stable to Bubble Errors. *Pilipko, M.M., +, TCSII July 2021 2613-2617*

End effectors

A Sparse Optimization-Based Control Method for Manipulator With Simultaneous Potential Energy Minimization. *Li, Z., +, TCSII June 2021 2062-2066*

Energy conservation

A 0.166 pJ/b/pF, 3.5-5 Gb/s TSV I/O Interface With VOH Drift Control. *Kim, J., +, TCSII June 2021 1822-1826*

A 0.5GHz 0.35mW LDO-Powered Constant-Slope Phase Interpolator With 0.22% INL. *Elnaqib, A., +, TCSII Jan. 2021 156-160*

A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μm CMOS. *Zeng, X., +, TCSII June 2021 1812-1816*

A 43.1TOPS/W Energy-Efficient Absolute-Difference-Accumulation Operation Computing-In-Memory With Computation Reuse. *Um, S., +, TCSII May 2021 1605-1609*

A 6.9- μm^2 3.26-ns 31.25-fj Robust Level Shifter With Wide Voltage and Frequency Ranges. *Kim, K., +, TCSII April 2021 1433-1437*

A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J., +, TCSII Jan. 2021 471-475*

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M., +, TCSII March 2021 908-912*

A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J., +, TCSII June 2021 2142-2146*

A Robust, High-Speed and Energy-Efficient Ultralow-Voltage Level Shifter. *Fassio, L., +, TCSII April 2021 1393-1397*

An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *Zhou, K.*, +, *TCSII Aug. 2021 2932-2936*

An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L.*, +, *TCSII Aug. 2021 2957-2961*

An FPGA-Based Energy-Efficient Reconfigurable Convolutional Neural Network Accelerator for Object Recognition Applications. *Li, J.*, +, *TCSII Sept. 2021 3143-3147*

Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X.*, +, *TCSII June 2021 1807-1811*

Balancing the Cost and Performance Trade-Offs in SNN Processors. *Zheng, H.*, +, *TCSII Sept. 2021 3172-3176*

Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L.*, +, *TCSII May 2021 1640-1644*

Efficient Incorporation of the RNS Datapath in Reverse Converter. *Taheri, M.*, +, *TCSII April 2021 1388-1392*

Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*

Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J.*, +, *TCSII Jan. 2021 19-23*

Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*

Optimize the Efficiency of Lossy Matching Network: A Top-Down Splitting Algorithm Based on Generalized Quality-Based Equation. *He, F.*, +, *TCSII Aug. 2021 2750-2754*

Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era. *Lei, K.*, +, *TCSII Jan. 2021 30-35*

Toward Energy-Efficient STT-MRAM Design With Multi-Modes Reconfiguration. *Cai, H.*, +, *TCSII July 2021 2633-2639*

Energy consumption

A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μ m CMOS. *Zeng, X.*, +, *TCSII June 2021 1812-1816*

A 6.9- μ m² 3.26-ns 31.25-fJ Robust Level Shifter With Wide Voltage and Frequency Ranges. *Kim, K.*, +, *TCSII April 2021 1433-1437*

An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L.*, +, *TCSII Aug. 2021 2957-2961*

Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X.*, +, *TCSII Jan. 2021 396-400*

Structured Pruning of RRAM Crossbars for Efficient In-Memory Computing Acceleration of Deep Neural Networks. *Meng, J.*, +, *TCSII May 2021 1576-1580*

Energy gap

A Sub-200nW All-in-One Bandgap Voltage and Current Reference Without Amplifiers. *Huang, W.*, +, *TCSII Jan. 2021 121-125*

Energy harvesting

A 42nA I_Q , 1.5–6V V_{IN} , Self-Regulated CMOS Voltage Reference With –93dB PSR at 10 Hz for Energy Harvesting Systems. *Chen, Y.*, +, *TCSII July 2021 2357-2361*

A Battery-Less Energy Platform for Low-Power Energy Sources Powering Multiple Loads. *Umaz, R.*, *TCSII June 2021 2042-2046*

A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting. *Chong, G.*, +, *TCSII June 2021 1743-1747*

Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved $V-f$ Model. *Wang, Y.*, +, *TCSII Sept. 2021 3103-3107*

An Asynchronous AC-DC Boost Converter With Event-Driven Voltage Regulator and 94% Efficiency for Low-Frequency Electromagnetic Energy Harvesting. *Gao, Z.*, +, *TCSII July 2021 2563-2567*

An Impedance Matching Strategy for Micro-Scale RF Energy Harvesting Systems. *Mohan, A.*, +, *TCSII April 2021 1458-1462*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

An Ultra-Low Quiescent Current Resistor-Less Power on Reset Circuit. *Guo, J.*, +, *TCSII Jan. 2021 146-150*

Efficient Power Transfers in Piezoelectric Energy-Harvesting Switched-Inductor Chargers. *Yang, S.*, +, *TCSII April 2021 1248-1252*

NS-MD: Near-Sensor Motion Detection With Energy Harvesting Image Sensor for Always-On Visual Perception. *Nazhamaiti, M.*, +, *TCSII Sept. 2021 3078-3082*

Energy storage

A Wide Voltage Gain Bidirectional DC–DC Converter Based on Quasi Z-Source and Switched Capacitor Network. *Kumar, A.*, +, *TCSII April 2021 1353-1357*

Hybrid System Control for Robot Motors Based on a Reduced Component, Multi-Voltage Power Supply System. *Kim, T.*, +, *TCSII Dec. 2021 3582-3586*

Entropy

Complex Network Analysis of Experimental EEG Signals for Decoding Brain Cognitive State. *Gao, Z.*, +, *TCSII Jan. 2021 531-535*

Constrained Least Mean M-Estimation Adaptive Filtering Algorithm. *Wang, Z.*, +, *TCSII April 2021 1507-1511*

Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control. *Sayed, W.S.*, +, *TCSII Nov. 2021 3466-3470*

LeukoX: Leukocyte Classification Using Least Entropy Combiner (LEC) for Ensemble Learning. *Ghosh, S.*, +, *TCSII Aug. 2021 2977-2981*

Robust Constrained Generalized Correntropy and Maximum Versoria Criterion Adaptive Filters. *Bhattacharjee, S.S.*, +, *TCSII Aug. 2021 3002-3006*

Robust Randomized Autoencoder and Correntropy Criterion-Based One-Class Classification. *Cui, X.*, +, *TCSII April 2021 1517-1521*

Entropy codes

VLSI Implementation of Multi-Channel ECG Lossless Compression System. *Tsai, T.*, +, *TCSII Aug. 2021 2962-2966*

Equalizers

A 0.99-pJ/b 15-Gb/s Counter-Based Adaptive Equalizer Using Single Comparator in 28-nm CMOS. *Choi, Y.*, +, *TCSII Oct. 2021 3189-3193*

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

A 56-Gb/s PAM4 Receiver Analog Front-End With Fixed Peaking Frequency and Bandwidth in 40-nm CMOS. *Li, Z.*, +, *TCSII Sept. 2021 3058-3062*

Joint Logarithmic Hyperbolic Cosine Robust Sparse Adaptive Algorithms. *Kumar, K.*, +, *TCSII Jan. 2021 526-530*

Equivalent circuits

A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression. *Xun, M.*, +, *TCSII April 2021 1228-1232*

A MMC-Based Multiport AC–N–DC Converter for Hybrid AC/DC Systems. *Ma, D.*, +, *TCSII Dec. 2021 3567-3571*

DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X.*, +, *TCSII June 2021 2077-2081*

Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J.*, +, *TCSII Jan. 2021 19-23*

Equivalent Circuit Approach for Output Characteristic Design of Capacitive Power Transfer. *Pamungkas, L.*, +, *TCSII July 2021 2513-2517*

Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*

Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H.*, +, *TCSII Jan. 2021 191-195*

Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters. *Fu, W.*, +, *TCSII July 2021 2352-2356*

QMSIW-Based Single and Triple Band Bandpass Filters. *Iqbal, A.*, +, *TCSII July 2021 2443-2447*

Synthesis of Wideband Filtering Couplers for Arbitrary High Power-Division Ratios Based on Three Different Types of Coupled-Line Sections. *Zheng, Y.*, +, *TCSII April 2021 1218-1222*

Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*

Error compensation

Improvement of Accuracy of Fixed-Width Booth Multipliers Using Data Scaling Technology. *Chen, Y.*, *TCSII March 2021 1018-1022*

Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*

Error correction

A 6.9- μm^2 3.26-ns 31.25-fj Robust Level Shifter With Wide Voltage and Frequency Ranges. *Kim, K.*, +, *TCSII April 2021 1433-1437*

A New Fast Convergent Blind Timing Skew Error Correction Structure for TIADC. *Khakpour, A.*, +, *TCSII April 2021 1512-1516*

Error correction codes

Decoding Algorithm for Quadruple-Error-Correcting Reed-Solomon Codes and Its Derived Architectures. *Garcia-Herrero, F.*, +, *TCSII April 2021 1438-1442*

Machine Learning for LLR Estimation in Flash Memory With LDPC Codes. *Sandell, M.*, +, *TCSII Feb. 2021 792-796*

Minimal-Set Trellis Min-Max Decoder Architecture for Nonbinary LDPC Codes. *Pham, T.X.*, +, *TCSII Jan. 2021 216-220*

Error detection

A Time-Domain Binary CNN Engine With Error-Detection-Based Resilience in 28nm CMOS. *Cai, Z.*, +, *TCSII Sept. 2021 3177-3181*

Error detection codes

Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H.*, +, *TCSII Jan. 2021 211-215*

Error statistics

A 5-Gb/s Adaptive Digital CDR Circuit With SSC Capability and Enhanced High-Frequency Jitter Tolerance. *Chang, S.*, +, *TCSII Jan. 2021 161-165*

A High Data Rate Solution for Differential Chaos Shift Keying Based on Carrier Index Modulation. *Yang, H.*, +, *TCSII April 2021 1487-1491*

A Jitter-Tolerance-Enhanced Digital CDR Circuit Using Background Loop Gain Controller. *Yao, Y.*, +, *TCSII June 2021 1837-1841*

A Physical Transmitter Implementation of a Quadrature Space Shift Keying MIMO System. *Hiari, O.*, +, *TCSII Jan. 2021 251-255*

An Adaptive Offset Cancellation Scheme and Shared-Summer Adaptive DFE for 0.068 pJ/b/dB 1.62-to-10 Gb/s Low-Power Receiver in 40 nm CMOS. *Lee, K.*, +, *TCSII Feb. 2021 622-626*

Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C.*, +, *TCSII April 2021 1472-1476*

Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*

Power-Efficient Noise-Induced Reduction of ReRAM Cell's Temporal Variability Effects. *Ntinas, V.*, +, *TCSII April 2021 1378-1382*

Estimation theory

Blind Signal Estimation Using Structured Subspace Technique. *Lawal, A.*, +, *TCSII Aug. 2021 3007-3011*

Machine Learning for LLR Estimation in Flash Memory With LDPC Codes. *Sandell, M.*, +, *TCSII Feb. 2021 792-796*

Evolutionary computation

Evolutionary Game Dynamics Based on Local Intervention in Multi-Agent Systems. *Zhu, Y.*, +, *TCSII April 2021 1293-1297*

Eye

TSV Based Orthogonal Coils With High Misalignment Tolerance for Inductive Power Transfer in Biomedical Implants. *Qian, L.*, +, *TCSII June 2021 1832-1836*

F**Face recognition**

DeepPoison: Feature Transfer Based Stealthy Poisoning Attack for DNNs. *Chen, J.*, +, *TCSII July 2021 2618-2622*

Fading channels

Hardware Implementation of Overlap-Save-Based Fading Channel Emulator. *Najam-Ul-Islam, M.*, +, *TCSII March 2021 918-922*

Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y.*, +, *TCSII July 2021 2593-2597*

Output-Feedback Control Under Hidden Markov Analog Fading and Redundant Channels. *Li, J.*, +, *TCSII Aug. 2021 2922-2926*

Failure analysis

A Supply Voltage Noise Immunity Enhancement Design for High-Voltage Gate Driver IC Based on Bootstrap Circuit. *Jin, W.*, +, *TCSII Sept. 2021 3048-3052*

A Tutorial on Modeling and Analysis of Cascading Failure in Future Power Grids. *Liu, D.*, +, *TCSII Jan. 2021 49-55*

Enhancing Coupled Networks Robustness via Removing Key Fragile Dependency Links. *Yang, X.*, +, *TCSII March 2021 953-957*

Fast Gate Leakage Current Monitor With Large Dynamic Range. *Bhatheja, K.*, +, *TCSII May 2021 1690-1694*

Fast Fourier transforms

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*

Optimum MDC FFT Hardware Architectures in Terms of Delays and Multiplexers. *Garrido, M.*, +, *TCSII March 2021 1003-1007*

SMUL-FFT: A Streaming Multiplierless Fast Fourier Transform. *Mirfarshbafan, S.H.*, +, *TCSII May 2021 1715-1719*

Fault currents

A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid. *Wu, J.*, +, *TCSII Aug. 2021 2907-2911*

Fault diagnosis

A Novel Diagnostic Method for Multiple Open-Circuit Faults of Voltage-Source Inverters Based on Output Line Voltage Residuals Analysis. *Chen, T.*, +, *TCSII April 2021 1343-1347*

Data-Driven Process Monitoring Using Structured Joint Sparse Canonical Correlation Analysis. *Xiu, X.*, +, *TCSII Jan. 2021 361-365*

Fault Detection Architectures for Inverted Binary Ring-LWE Construction Benchmarked on FPGA. *Sarker, A.*, +, *TCSII April 2021 1403-1407*

Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*

Key Performance Indicators Based Fault Detection and Isolation Using Data-Driven Approaches. *Liu, R.*, +, *TCSII Jan. 2021 291-295*

Open Circuit Fault Detection and Switch Identification for LS-PWM H-Bridge Inverter. *Kumar, M.*, *TCSII April 2021 1363-1367*

Performance Residual Based Fault Detection for Feedback Control Systems. *Liu, R.*, +, *TCSII Oct. 2021 3291-3295*

SAT-Based Integrated Hardware Trojan Detection and Localization Approach Through Path-Delay Analysis. *Sabri, M.*, +, *TCSII Aug. 2021 2850-2854*

Switching Signals Based Condition Monitoring for Submodule Capacitors in Modular Multilevel Converters. *Geng, Z.*, +, *TCSII June 2021 2017-2021*

Fault tolerance

Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM. *Xu, S.*, +, *TCSII July 2021 2598-2602*

Fault tolerant control

State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*

Feature extraction

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*

A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features. *He, W.*, +, *TCSII March 2021 1013-1017*

Adversarial Examples Detection of Radio Signals Based on Multifeature Fusion. *Xu, D.*, +, *TCSII Dec. 2021 3607-3611*

An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L.*, +, *TCSII Aug. 2021 2957-2961*

DeepPoison: Feature Transfer Based Stealthy Poisoning Attack for DNNs. *Chen, J.*, +, *TCSII July 2021 2618-2622*

Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*

MACSen: A Processing-In-Sensor Architecture Integrating MAC Operations Into Image Sensor for Ultra-Low-Power BNN-Based Intelligent Visual Perception. *Xu, H.*, +, *TCSII Feb. 2021 627-631*

Feedback

- A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y.*, +, *TCSII Jan. 2021 326-330*
- Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved V-f Model. *Wang, Y.*, +, *TCSII Sept. 2021 3103-3107*
- An Output-Coding-Based Detection Scheme Against Replay Attacks in Cyber-Physical Systems. *Guo, H.*, +, *TCSII Oct. 2021 3306-3310*
- Bifurcation and Control for a Predator-Prey System With Two Delays. *Jiang, X.*, +, *TCSII Jan. 2021 376-380*
- Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T.*, +, *TCSII Jan. 2021 281-285*
- Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*
- Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions. *Tavazoei, M.S.*, *TCSII July 2021 2374-2378*
- Cooperative Bipartite Containment Control for Heterogeneous Networks With Structurally Balanced Graph. *Zhou, Y.*, +, *TCSII Aug. 2021 2885-2889*
- Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J.*, *TCSII July 2021 2568-2572*
- Event-Triggered Bipartite Consensus in Networked Euler-Lagrange Systems With External Disturbance. *Deng, Q.*, +, *TCSII Aug. 2021 2870-2874*
- Global Fixed-Time Output Feedback Stabilization of Perturbed Planar Nonlinear Systems. *Gao, F.*, +, *TCSII Feb. 2021 707-711*
- Invariant Manifold Based Output-Feedback Sliding Mode Control for Systems With Mismatched Disturbances. *Zhang, L.*, +, *TCSII March 2021 933-937*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*
- Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*
- Output-Feedback Control Under Hidden Markov Analog Fading and Redundant Channels. *Li, J.*, +, *TCSII Aug. 2021 2922-2926*
- Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K.*, +, *TCSII July 2021 2528-2532*
- Performance Residual Based Fault Detection for Feedback Control Systems. *Liu, R.*, +, *TCSII Oct. 2021 3291-3295*
- Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*
- Quantitative Feedback Design-Based Robust PID Control of Voltage Mode Controlled DC-DC Boost Converter. *Kobaku, T.*, +, *TCSII Jan. 2021 286-290*
- Quantitative Synthesis to Tracking Error Problem Based on Nominal Sensitivity Formulation. *Jeyasenthil, R.*, +, *TCSII July 2021 2483-2487*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*

- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*
- Unified Voltage Balancing Feedforward for Three-Level Boost PFC Converter in Discontinuous and Critical Conduction Modes. *Lee, M.*, +, *TCSII Jan. 2021 441-445*
- Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*

Feedback amplifiers

- Fully Differential Ultra-Wideband Amplifier With 46-dB Gain and Positive Feedback for Increased Bandwidth. *An, X.*, +, *TCSII April 2021 1083-1087*

Feedforward

- A +7.6 dBm IIP3 2.4-GHz Double-Balanced Mixer With 10.5 dB NF in 65-nm CMOS. *Kashani, M.H.*, +, *TCSII Oct. 2021 3214-3218*
- A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*
- A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J.*, +, *TCSII May 2021 1645-1649*
- A Cluster of FPAs to Recognize Images Using Neural Networks. *Garcia Moreno, D.*, +, *TCSII Nov. 2021 3391-3395*
- A Novel Self-Triggered MPC Scheme for Constrained Input-Affine Nonlinear Systems. *Li, P.*, +, *TCSII Jan. 2021 306-310*
- Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop. *Nagam, S.S.*, +, *TCSII May 2021 1670-1674*
- Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*
- GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q.*, +, *TCSII Feb. 2021 747-751*
- On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*
- Recent Advances and Trends in Noise Shaping SAR ADCs. *Salgado, G.M.*, +, *TCSII Feb. 2021 545-549*
- Unified Voltage Balancing Feedforward for Three-Level Boost PFC Converter in Discontinuous and Critical Conduction Modes. *Lee, M.*, +, *TCSII Jan. 2021 441-445*

Feedforward neural networks

- A Cluster of FPAs to Recognize Images Using Neural Networks. *Garcia Moreno, D.*, +, *TCSII Nov. 2021 3391-3395*
- DeepTempo: A Hardware-Friendly Direct Feedback Alignment Multi-Layer Tempotron Learning Rule for Deep Spiking Neural Networks. *Shi, C.*, +, *TCSII May 2021 1581-1585*

Ferrites

- A New Magnetic Structure of Unipolar Rectangular Coils in WPT Systems to Minimize the Ferrite Volume While Maintaining Maximum Coupling. *Rituraj, G.*, +, *TCSII June 2021 2072-2076*
- Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency. *Noferesti, M.*, +, *TCSII Jan. 2021 171-175*

Ferroelectric materials

- Ultra-Compact Ternary Logic Gates Based on Negative Capacitance Carbon Nanotube FETs. *Jooq, M.K.Q.*, +, *TCSII June 2021 2162-2166*

Ferroelectric storage

- Enabling Lower-Power Charge-Domain Nonvolatile In-Memory Computing With Ferroelectric FETs. *Yin, G.*, +, *TCSII July 2021 2262-2266*

Fibonacci sequences

- One-Dimensional Pseudo-Chaotic Sequences Based on the Discrete Arnold's Cat Map Over \mathbb{Z}_3^m . *Souza, C.E.C.*, +, *TCSII Jan. 2021 491-495*

Field effect MIMIC

- A 15–38 GHz Vector-Summing Phase-Shifter With 360° Phase-Shifting Range Using Improved I/Q Generator. *Qiu, F.*, +, *TCSII Oct. 2021 3199-3203*
- A 19–48.3-GHz 6th-Order Transformer-Based Injection-Locked Frequency Divider With 87.1% Locking Range in 40-nm CMOS. *Zhu, J.*, +, *TCSII Sept. 2021 3053-3057*
- A 21-to-41-GHz High-Gain Low Noise Amplifier With Triple-Coupled Technique for Multiband Wireless Applications. *Yu, Y.*, +, *TCSII June 2021 1857-1861*

- A 24–29.5 GHz Voltage-Combined Doherty Power Amplifier Based on Compact Low-Loss Combiner. *Wang, D.*, +, *TCSII July 2021 2342-2346*
- A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X.*, +, *TCSII July 2021 2419-2423*
- A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C.*, +, *TCSII April 2021 1158-1162*
- A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS. *Liu, H.*, +, *TCSII June 2021 1847-1851*
- A High-Linearity Adaptive-Bias SiGe Power Amplifier for 5G Communication. *Li, H.*, +, *TCSII Aug. 2021 2770-2774*
- A Ka-Band Variable-Gain Phase Shifter With Multiple Vector Generators. *Park, J.*, +, *TCSII June 2021 1798-1802*
- A Wideband CMOS Frequency Quadrupler With Transformer-Based Tail Feedback Loop. *Yu, Y.*, +, *TCSII April 2021 1153-1157*
- A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance. *Shakya, D.*, +, *TCSII Sept. 2021 3043-3047*
- Exploiting Parasitic Capacitances in 3-D Inductors to Design RF CMOS Quasi-Elliptic-Type Broad-Band Bandpass Filters. *Zhu, X.*, +, *TCSII Sept. 2021 3128-3132*
- Frequency-Reconfigurable Phase Shifter Based on a 65-nm CMOS Process for 5G Applications. *Lin, Y.*, +, *TCSII Aug. 2021 2825-2829*
- Millimeter-wave Frequency Reconfigurable Low Noise Amplifiers for 5G. *Shaheen, R.A.*, +, *TCSII Feb. 2021 642-646*
- Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*
- Field effect MMIC**
- A 24–30 GHz 31.7% Fractional Bandwidth Power Amplifier With an Adaptive Capacitance Linearizer. *Lee, J.*, +, *TCSII April 2021 1163-1167*
- A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S.*, +, *TCSII Sept. 2021 3063-3067*
- A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*
- A 28-GHz Doherty Power Amplifier With a Compact Transformer-Based Quadrature Hybrid in 65-nm CMOS. *Yu, C.*, +, *TCSII Aug. 2021 2790-2794*
- A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6 -dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y.*, +, *TCSII Sept. 2021 3093-3097*
- A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X.*, +, *TCSII July 2021 2419-2423*
- Frequency-Reconfigurable Phase Shifter Based on a 65-nm CMOS Process for 5G Applications. *Lin, Y.*, +, *TCSII Aug. 2021 2825-2829*
- Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H.*, +, *TCSII Jan. 2021 191-195*
- Field effect transistor switches**
- An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T.*, +, *TCSII June 2021 2092-2096*
- Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H.*, +, *TCSII Jan. 2021 191-195*
- Field effect transistors**
- Enabling Lower-Power Charge-Domain Nonvolatile In-Memory Computing With Ferroelectric FETs. *Yin, G.*, +, *TCSII July 2021 2262-2266*
- Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*
- Half-Select Disturb-Free 10T Tunnel FET SRAM Cell With Improved Noise Margin and Low Power Consumption. *Lin, Z.*, +, *TCSII July 2021 2628-2632*
- Reverse Bias Current Eliminated, Read-Separated, and Write-Enhanced Tunnel FET SRAM. *Peng, C.*, +, *TCSII Jan. 2021 466-470*
- Field programmable analog arrays**
- A Cluster of FPAA to Recognize Images Using Neural Networks. *Garcia Moreno, D.*, +, *TCSII Nov. 2021 3391-3395*
- Field programmable gate arrays**
- A Cluster of FPAA to Recognize Images Using Neural Networks. *Garcia Moreno, D.*, +, *TCSII Nov. 2021 3391-3395*
- A High-Performance Core Micro-Architecture Based on RISC-V ISA for Low Power Applications. *Bora, S.*, +, *TCSII June 2021 2132-2136*
- A High-Performance VLSI Architecture for a Self-Feedback Convolutional Neural Network. *Parmar, Y.*, +, *TCSII Jan. 2021 456-460*
- A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features. *He, W.*, +, *TCSII March 2021 1013-1017*
- A Low-Cost High-Throughput Digital Design of Biorealistic Spiking Neuron. *Pu, J.*, +, *TCSII April 2021 1398-1402*
- A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z.*, +, *TCSII Sept. 2021 3153-3157*
- A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J.*, +, *TCSII June 2021 2142-2146*
- A Miniaturized LDPC Encoder: Two-Layer Architecture for CCSDS Near-Earth Standard. *Liu, J.*, +, *TCSII July 2021 2384-2388*
- A New SCTN Digital Low Power Spiking Neuron. *Bensimon, M.*, +, *TCSII Aug. 2021 2937-2941*
- A Novel Hardware-Oriented Recurrent Network of Asynchronous CA Neurons for a Neural Integrator. *Takeda, K.*, +, *TCSII Aug. 2021 2972-2976*
- A Novel Scheme for Real-Time Max/Min-Set-Selection Sorters on FPGA. *Yan, D.*, +, *TCSII July 2021 2665-2669*
- A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M.*, +, *TCSII Sept. 2021 3182-3186*
- A Switched Capacitor Memristive Emulator. *Svetoslavov, G.*, +, *TCSII April 2021 1463-1466*
- An Efficient NB-LDPC Decoder Architecture for Space Telecommand Links. *Alvarez, A.*, +, *TCSII April 2021 1213-1217*
- An Energy-Efficient Haar Wavelet Transform Architecture for Respiratory Signal Processing. *da Rosa, M.M.*, +, *TCSII Feb. 2021 597-601*
- An FPGA-Based Energy-Efficient Reconfigurable Convolutional Neural Network Accelerator for Object Recognition Applications. *Li, J.*, +, *TCSII Sept. 2021 3143-3147*
- An Optimized FPGA-Based Real-Time NDT for 3D-LiDAR Localization in Smart Vehicles. *Deng, Q.*, +, *TCSII Sept. 2021 3167-3171*
- Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*
- Area-Time Efficient Hardware Architecture for Signature Based on Ed448. *Bisheh-Niasar, M.*, +, *TCSII Aug. 2021 2942-2946*
- AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators. *Waris, H.*, +, *TCSII May 2021 1566-1570*
- Balancing the Cost and Performance Trade-Offs in SNN Processors. *Zheng, H.*, +, *TCSII Sept. 2021 3172-3176*
- Can Deep Learning Break a True Random Number Generator?. *Yu, Y.*, +, *TCSII May 2021 1710-1714*
- Circuit Synthesis of 3-D Rotation Orthonormalization. *Wu, J.*, +, *TCSII April 2021 1502-1506*
- Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control. *Sayed, W.S.*, +, *TCSII Nov. 2021 3466-3470*
- Fault Detection Architectures for Inverted Binary Ring-LWE Construction Benchmarked on FPGA. *Sarker, A.*, +, *TCSII April 2021 1403-1407*
- FPGA-Based Optimized Design of Montgomery Modular Multiplier. *Abd-Elkader, A.A.H.*, +, *TCSII June 2021 2137-2141*
- HAMBug: A Hybrid CPU-FPGA System to Detect Race Conditions. *Almeida, D.D.*, +, *TCSII Sept. 2021 3158-3162*

- Hardware-Efficient and High-Throughput LLRC Segregation Based Binary QC-LDPC Decoding Algorithm and Architecture. *Verma, A.*, +, *TCSII Aug. 2021 2835-2839*
- High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA. *Wu, W.*, +, *TCSII July 2021 2650-2654*
- High-Speed RLWE-Oriented Polynomial Multiplier Utilizing Karatsuba Algorithm. *Wong, Z.*, +, *TCSII June 2021 2157-2161*
- Jitter Optimisation in a Generalised All-Digital Phase-Locked Loop Model. *Koskin, E.*, +, *TCSII Jan. 2021 77-81*
- Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H.*, +, *TCSII Jan. 2021 211-215*
- Low-Delay FPGA-Based Implementation of Finite Field Multipliers. *Imana, J.L.*, *TCSII Aug. 2021 2952-2956*
- Partial-LUT Designs for Low-Complexity Realization of DA-Based BLMS Adaptive Filter. *Khan, M.T.*, +, *TCSII April 2021 1188-1192*
- Real-Time Light Field Signal Processing Using 4D/5D Linear Digital Filter FPGA Circuits. *Edussooriya, C.U.S.*, +, *TCSII July 2021 2735-2741*
- Resource-Aware Collaborative Allocation for CPU-FPGA Cloud Environments. *Jordan, M.G.*, +, *TCSII May 2021 1655-1659*
- Revisiting the Adjoint Matrix for FPGA Calculating the Triangular Matrix Inversion. *Yan, D.*, +, *TCSII June 2021 2127-2131*
- File organization**
- High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA. *Wu, W.*, +, *TCSII July 2021 2650-2654*
- Filtering**
- Design of 2×8 Filtering Butler Matrix With Arbitrary Power Distribution. *Shao, Q.*, +, *TCSII Dec. 2021 3527-3531*
- Dual-Band Filtering Power Divider Based on a Single Circular Patch Resonator With Improved Bandwidths and Good Isolation. *Zhang, Q.*, +, *TCSII Nov. 2021 3411-3415*
- Filtering theory**
- A Proportionate Recursive Least Squares Algorithm and Its Performance Analysis. *Qin, Z.*, +, *TCSII Jan. 2021 506-510*
- A Reduced Complexity Random Fourier Filter Based Nonlinear Multichannel Narrowband Active Noise Control System. *Deb, T.*, +, *TCSII Jan. 2021 516-520*
- High-Throughput and Improved-Convergent Design of Pipelined Adaptive DFE for 5G Communication. *Khan, M.T.*, +, *TCSII Feb. 2021 652-656*
- Kernel Recursive Maximum Versoria Criterion Algorithm Using Random Fourier Features. *Jain, S.*, +, *TCSII July 2021 2725-2729*
- Narrower Band Matching With Low Quality Factor Values. *Sengul, M.*, *TCSII July 2021 2434-2437*
- Peak-to-Peak Filtering for Discrete-Time Singular Systems. *Chang, X.*, +, *TCSII July 2021 2543-2547*
- Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function. *Liang, T.*, +, *TCSII June 2021 2227-2231*
- Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function. *Ravelo, B.*, +, *TCSII July 2021 2364-2368*
- Set-Membership Constrained Frequency-Domain Algorithm. *Lima, M.V.S.*, +, *TCSII Feb. 2021 797-801*
- Simplified Harmonic Rejection Mixer Analysis and Design Based on a Filtered Periodic Impulse Model. *de Boer, P.*, +, *TCSII July 2021 2292-2296*
- Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*
- Filters**
- A Novel Complex Filter Design With Dual Feedback for High Frequency Wireless Receiver Applications. *Veerendranath, P.S.*, +, *TCSII June 2021 1748-1752*
- Expressions for the Harmonic Transfer Functions of N-Path Filters With Arbitrary Source and Load Impedances. *Rizwan, S.*, +, *TCSII March 2021 903-907*
- FinFETs**
- A Single-Ended Low Power 16-nm FinFET 6T SRAM Design With PDP Reduction Circuit. *Wang, C.*, +, *TCSII Dec. 2021 3478-3482*
- Finite element analysis**
- A Novel Conformal Design for Multi-Sensor System Synthesis. *Qian, J.*, +, *TCSII April 2021 1532-1536*
- A Pre-Concentration System Design for Electronic Nose via Finite Element Method. *Qian, J.*, +, *TCSII Dec. 2021 3592-3596*
- TSV Based Orthogonal Coils With High Misalignment Tolerance for Inductive Power Transfer in Biomedical Implants. *Qian, L.*, +, *TCSII June 2021 1832-1836*
- Finite impulse response filters**
- Area-Delay-Power Efficient VLSI Architecture of FIR Filter for Processing Seismic Signal. *Bose, S.*, +, *TCSII Nov. 2021 3451-3455*
- Finite state machines**
- Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C.*, +, *TCSII April 2021 1472-1476*
- FIR filters**
- Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation. *Tseng, C.*, +, *TCSII May 2021 1630-1634*
- Optimal FIR Filter for Discrete-Time LTV Systems and Fast Iterative Algorithm. *Zhao, S.*, +, *TCSII April 2021 1527-1531*
- Sparse FIR Filter Design With k -Max Sparsity and Peak Error Constraints. *Xi, X.*, +, *TCSII April 2021 1497-1501*
- Fixed point arithmetic**
- A Parallel Hardware Implementation for 2-D Hierarchical Clustering Based on Fuzzy Logic. *Cardarilli, G.C.*, +, *TCSII April 2021 1428-1432*
- Flash memories**
- Balanced Multi-Cell Modulation for Flash Memory. *Ismail, A.*, +, *TCSII July 2021 2394-2398*
- Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*
- Machine Learning for LLR Estimation in Flash Memory With LDPC Codes. *Sandell, M.*, +, *TCSII Feb. 2021 792-796*
- Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory. *Yu, Z.*, +, *TCSII May 2021 1665-1669*
- Flexible electronics**
- An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*
- Printed Organic Electronics on Flexible Foil: Circuit Design and Emerging Applications. *Ragonese, E.*, +, *TCSII Jan. 2021 42-48*
- Flexible manipulators**
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Flicker noise**
- A Pseudo-Pseudo-Differential ADC Achieving 105dB SNDR in 10kHz Bandwidth Using Ring Amplifier Based Integrators. *Lee, C.Y.*, +, *TCSII July 2021 2327-2331*
- Oscillator Flicker Phase Noise: A Tutorial. *Hu, Y.*, +, *TCSII Feb. 2021 538-544*
- Flip-flops**
- A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*
- Constant-Time Synchronous Binary Counter With Minimal Clock Period. *Hyun, Y.*, +, *TCSII July 2021 2645-2649*
- Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*
- Placement and Routing Methods Considering Shape Constraints of JTL for RSFQ Circuits. *Zhai, J.*, +, *TCSII May 2021 1571-1575*
- Floating point arithmetic**
- Analysis of Worst-Case Data Dependent Temporal Approximation in Floating Point Units. *Jha, C.K.*, +, *TCSII Feb. 2021 767-771*
- Fixed-Posit: A Floating-Point Representation for Error-Resilient Applications. *Gohil, V.*, +, *TCSII Oct. 2021 3341-3345*
- Floating-Point Inverse Square Root Algorithm Based on Taylor-Series Expansion. *Wei, J.*, +, *TCSII July 2021 2640-2644*
- Floating-point arithmetic**
- Periodic Orbits of the Logistic Map in Single and Double Precision Implementations. *Galias, Z.*, *TCSII Nov. 2021 3471-3475*
- Flow measurement**
- Characterization of Two-Phase Flow Structure by Deep Learning-Based Super Resolution. *Gao, Z.*, +, *TCSII Feb. 2021 782-786*

Formal verification

Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M.*, +, *TCSII Jan. 2021 481-485*

Formation control

A Rigid Formation Control Approach for Multi-Agent Systems With Curvature Constraints. *Zhao, Y.*, +, *TCSII Nov. 2021 3431-3435*

Leader-Follower Affine Formation Control of Second-Order Nonlinear Uncertain Multi-Agent Systems. *Zhi, H.*, +, *TCSII Dec. 2021 3547-3551*

Fourier analysis

Kernel Recursive Maximum Versoria Criterion Algorithm Using Random Fourier Features. *Jain, S.*, +, *TCSII July 2021 2725-2729*

Fourier series

Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B.*, +, *TCSII Jan. 2021 346-350*

FRI Sampling of Parametric Signals With Non-Ideal Sinc Kernel. *Huang, G.*, +, *TCSII Oct. 2021 3361-3365*

Frequency control

A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*

Reconfigurable Bandpass Filter With Wide-Range Bandwidth and Frequency Control. *Fan, M.*, +, *TCSII June 2021 1758-1762*

Frequency converters

Novel Multifunctional Dual-Band Coupled-Line Coupler With Reuse of Low-Frequency Trans-Directional and High-Frequency Contra-Directional Functions. *Zhang, Y.*, +, *TCSII June 2021 1917-1921*

Frequency dividers

A 19–48.3-GHz 6th-Order Transformer-Based Injection-Locked Frequency Divider With 87.1% Locking Range in 40-nm CMOS. *Zhu, J.*, +, *TCSII Sept. 2021 3053-3057*

Frequency division multiplexing

A Survey on Self-Interference Cancellation in Mobile LTE-A/5G FDD Transceivers. *Motz, C.*, +, *TCSII March 2021 823-829*

An 8-Channel 1.76-mW 4.84-mm² Electrical Impedance Tomography SoC With Direct IF Frequency Division Multiplexing. *Zeng, L.*, +, *TCSII Nov. 2021 3401-3405*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Frequency estimation

A Memory-Reduced Frequency Estimator for the Measurement of Sinusoidal Signal. *Wang, J.*, +, *TCSII March 2021 1038-1042*

Power-Weighted LPC Formant Estimation. *de Frein, R.*, *TCSII June 2021 2207-2211*

Frequency measurement

A Memory-Reduced Frequency Estimator for the Measurement of Sinusoidal Signal. *Wang, J.*, +, *TCSII March 2021 1038-1042*

Effect of Various Delay Line Ratios and Their Non-Linearity on the Performance of DIFM. *Singh, S.*, +, *TCSII June 2021 1907-1911*

Frequency modulation

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Frequency multipliers

A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S.*, +, *TCSII Sept. 2021 3063-3067*

A Wideband CMOS Frequency Quadrupler With Transformer-Based Tail Feedback Loop. *Yu, Y.*, +, *TCSII April 2021 1153-1157*

Frequency response

28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*

Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*

Stability Preserving Model Reduction Technique for Weighted and Limited Interval Discrete-Time Systems With Error Bound. *Batool, S.*, +, *TCSII Oct. 2021 3281-3285*

Synthetic Transmission Lines in Cutoff Operation for Wideband High-Impedance DC Supplies. *Testa, P.V.*, +, *TCSII March 2021 928-932*

Frequency shift keying

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Frequency synthesizers

28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*

A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S.*, +, *TCSII Sept. 2021 3063-3067*

A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL. *Wang, H.*, +, *TCSII June 2021 1852-1856*

Frequency-domain analysis

Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function. *Ravelo, B.*, +, *TCSII July 2021 2364-2368*

Set-Membership Constrained Frequency-Domain Algorithm. *Lima, M.V.S.*, +, *TCSII Feb. 2021 797-801*

Sparse FIR Filter Design With k -Max Sparsity and Peak Error Constraints. *Xi, X.*, +, *TCSII April 2021 1497-1501*

Fuzzy control

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*

Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L.*, +, *TCSII Jan. 2021 301-305*

Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*

On-Chip Fuzzy Logic Synthesis of a New Ischemic and Non-Ischemic Heartbeat Classifier. *De La Fuente-Cortes, G.*, +, *TCSII Jan. 2021 476-480*

Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*

Fuzzy logic

A Parallel Hardware Implementation for 2-D Hierarchical Clustering Based on Fuzzy Logic. *Cardarilli, G.C.*, +, *TCSII April 2021 1428-1432*

On-Chip Fuzzy Logic Synthesis of a New Ischemic and Non-Ischemic Heartbeat Classifier. *De La Fuente-Cortes, G.*, +, *TCSII Jan. 2021 476-480*

Fuzzy set theory

A Parallel Hardware Implementation for 2-D Hierarchical Clustering Based on Fuzzy Logic. *Cardarilli, G.C.*, +, *TCSII April 2021 1428-1432*

On-Chip Fuzzy Logic Synthesis of a New Ischemic and Non-Ischemic Heartbeat Classifier. *De La Fuente-Cortes, G.*, +, *TCSII Jan. 2021 476-480*

Fuzzy systems

Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*

State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*

G**Gain control**

A 5-Gb/s Adaptive Digital CDR Circuit With SSC Capability and Enhanced High-Frequency Jitter Tolerance. *Chang, S.*, +, *TCSII Jan. 2021 161-165*

A Jitter-Tolerance-Enhanced Digital CDR Circuit Using Background Loop Gain Controller. *Yao, Y.*, +, *TCSII June 2021 1837-1841*

A K-Band Dual-Mode Common Gate Cross-Summing VG-LNA With Low Phase Variation. *Park, S.*, +, *TCSII July 2021 2438-2442*

A Ka-Band Variable-Gain Phase Shifter With Multiple Vector Generators. *Park, J.*, +, *TCSII June 2021 1798-1802*

Leader-Follower Affine Formation Control of Second-Order Nonlinear Uncertain Multi-Agent Systems. *Zhi, H.*, +, *TCSII Dec. 2021 3547-3551*

Gallium arsenide

A 52–58 GHz Power Amplifier With 18.6-dBm Saturated Output Power for Space Applications. *Tsao, Y.*, +, *TCSII June 2021 1927-1931*

A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors. *Li, Y.*, +, *TCSII Oct. 2021 3224-3228*

A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G.*, +, *TCSII June 2021 1778-1782*

Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H.*, +, *TCSII Jan. 2021 191-195*

Gallium compounds

A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R.*, +, *TCSII Jan. 2021 246-250*

Accurate Isolation Networks in Quadrature Couplers and Power Dividers. *Sutbas, B.*, +, *TCSII April 2021 1148-1152*

An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B.*, +, *TCSII July 2021 2252-2256*

Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A.*, +, *TCSII June 2021 1887-1891*

Design and Analysis of Continuous-Mode Doherty Power Amplifier With Second Harmonic Control. *Shi, W.*, +, *TCSII July 2021 2247-2251*

Exploring Feasible Design Space for Multi-Octave Power Amplifier Using Nonlinear Embedding. *Aggrawal, E.*, +, *TCSII Aug. 2021 2800-2804*

Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Fegghi, R.*, +, *TCSII April 2021 1193-1197*

Galois fields

Low-Delay FPGA-Based Implementation of Finite Field Multipliers. *Imana, J.L.*, *TCSII Aug. 2021 2952-2956*

Minimal-Set Trellis Min-Max Decoder Architecture for Nonbinary LDPC Codes. *Pham, T.X.*, +, *TCSII Jan. 2021 216-220*

Game theory

Distributed Nash Equilibrium Seeking Under Event-Triggered Mechanism. *Zhang, K.*, +, *TCSII Nov. 2021 3441-3445*

Evolutionary Game Dynamics Based on Local Intervention in Multi-Agent Systems. *Zhu, Y.*, +, *TCSII April 2021 1293-1297*

Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y.*, +, *TCSII July 2021 2593-2597*

Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents. *Prospero, L.*, +, *TCSII Dec. 2021 3488-3492*

Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method. *Liu, A.*, +, *TCSII July 2021 2553-2557*

Games

Game Theoretic Approach for a Service Function Chain Routing in NFV With Coupled Constraints. *Le, S.*, +, *TCSII Dec. 2021 3557-3561*

Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents. *Prospero, L.*, +, *TCSII Dec. 2021 3488-3492*

Gas sensors

A Novel Conformal Design for Multi-Sensor System Synthesis. *Qian, J.*, +, *TCSII April 2021 1532-1536*

Gaussian distribution

A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*

Fixed-Point Minimum Error Entropy With Sparsity Penalty Constraints. *Li, J.*, +, *TCSII Aug. 2021 2997-3001*

Kalman Filter Based on Multiple Scaled Multivariate Skew Normal Variance Mean Mixture Distributions With Application to Target Tracking. *Lu, C.*, +, *TCSII Feb. 2021 802-806*

On the Skewness of the LMS Adaptive Weights. *Silva, T.T.P.*, +, *TCSII Aug. 2021 3022-3026*

Gaussian noise

A Robust Student's t -Based Kernel Adaptive Filter. *Wang, H.*, +, *TCSII Oct. 2021 3371-3375*

Constrained Least Mean M-Estimation Adaptive Filtering Algorithm. *Wang, Z.*, +, *TCSII April 2021 1507-1511*

Fixed-Point Minimum Error Entropy With Sparsity Penalty Constraints. *Li, J.*, +, *TCSII Aug. 2021 2997-3001*

Interacting Multiple Model Based on Maximum Correntropy Kalman Filter. *Fan, X.*, +, *TCSII Aug. 2021 3017-3021*

Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises. *Liang, T.*, +, *TCSII June 2021 2217-2221*

Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function. *Liang, T.*, +, *TCSII June 2021 2227-2231*

Steady State Mean Square Analysis of Standard Maximum Versoria Criterion Based Adaptive Algorithm. *Radhika, S.*, +, *TCSII April 2021 1547-1551*

Gaussian processes

A Robust Student's t -Based Kernel Adaptive Filter. *Wang, H.*, +, *TCSII Oct. 2021 3371-3375*

Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification. *Habibi, Z.*, +, *TCSII Aug. 2021 3032-3036*

Statistical Graph Signal Recovery Using Variational Bayes. *Torkamani, R.*, +, *TCSII June 2021 2232-2236*

Ge-Si alloys

A 24-29.5 GHz Voltage-Combined Doherty Power Amplifier Based on Compact Low-Loss Combiner. *Wang, D.*, +, *TCSII July 2021 2342-2346*

A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C.*, +, *TCSII April 2021 1158-1162*

A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS. *Liu, H.*, +, *TCSII June 2021 1847-1851*

A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band. *Maiwald, T.*, +, *TCSII July 2021 2277-2281*

A High-Linearity Adaptive-Bias SiGe Power Amplifier for 5G Communication. *Li, H.*, +, *TCSII Aug. 2021 2770-2774*

A Low-Noise and High-Gain Folded Mixer for a UWB System in 0.18- μm SiGe Bi-CMOS Technology. *Chen, J.*, +, *TCSII Feb. 2021 612-616*

All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021 186-190*

An Edge-Coupled Marchand Balun With Partial Ground for Excellent Balance in 0.13 μm SiGe Technology. *Chakraborty, S.*, +, *TCSII Jan. 2021 226-230*

An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in 0.18 μm SiGe BiCMOS. *Li, Z.*, +, *TCSII June 2021 1763-1767*

Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G.*, +, *TCSII Sept. 2021 3098-3102*

Dual Q/V -Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines. *Lee, D.*, +, *TCSII March 2021 898-902*

Synthetic Transmission Lines in Cutoff Operation for Wideband High-Impedance DC Supplies. *Testa, P.V.*, +, *TCSII March 2021 928-932*

X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*

Generalization (artificial intelligence)

Dynamic Quaternion Extreme Learning Machine. *Chen, H.*, +, *TCSII Aug. 2021 3012-3016*

Genetic algorithms

A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R.*, +, *TCSII July 2021 2272-2276*

Safeness-Based Community Penetration. *Yu, Z.*, +, *TCSII July 2021 2690-2694*

Genetics

Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T.*, +, *TCSII Feb. 2021 574-580*

Gesture recognition

A 0.82 μW CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J.*, +, *TCSII May 2021 1700-1704*

Gradient methods

2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*

A Fractional-Order Adaptive Filtering Algorithm in Impulsive Noise Environments. *Luo, Y.*, +, *TCSII Oct. 2021 3376-3380*

A Novel Quaternion Kernel LMS Algorithm With Variable Kernel Width. *Huang, W.*, +, *TCSII July 2021 2715-2719*

Channel Estimation for MmWave Massive MIMO With Hybrid Precoding Based on Log-Sum Sparse Constraints. *Zhang, A.*, +, *TCSII June 2021 1882-1886*

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H.*, +, *TCSII Jan. 2021 351-355*
 Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K.*, +, *TCSII Oct. 2021 3316-3320*
 Neural-Network Based Self-Initializing Algorithm for Multi-Parameter Optimization of High-Speed ADCs. *Bansal, S.*, +, *TCSII Jan. 2021 106-110*

Graph theory

A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*

Admissible Bipartite Consensus in Networks of Singular Agents Over Signed Graphs. *Liu, T.*, +, *TCSII Aug. 2021 2880-2884*

Adversarial Hardware With Functional and Topological Camouflage. *Li, H.*, +, *TCSII May 2021 1685-1689*

Bipartite Finite Time and Fixed Time Output Consensus of Heterogeneous Multiagent Systems Under State Feedback Control. *Hao, L.*, +, *TCSII June 2021 2067-2071*

Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T.*, +, *TCSII Jan. 2021 281-285*

Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*

Consensus of the Hybrid Multiagent System Under Impulse Control. *Yu, Z.*, +, *TCSII July 2021 2573-2577*

Cooperative Bipartite Containment Control for Heterogeneous Networks With Structurally Balanced Graph. *Zhou, Y.*, +, *TCSII Aug. 2021 2885-2889*

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H.*, +, *TCSII Jan. 2021 351-355*

Distributed Nash Equilibrium Seeking Under Event-Triggered Mechanism. *Zhang, K.*, +, *TCSII Nov. 2021 3441-3445*

GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C.*, +, *TCSII April 2021 1313-1317*

Leader-Following Tracking Control of Discrete-Time Uncertain Nonlinear MASs With Parametric and Nonparametric State Couplings. *Li, S.*, +, *TCSII June 2021 2037-2041*

Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation. *Tseng, C.*, +, *TCSII May 2021 1630-1634*

Resilient Consensus of Multi-Agent Systems With Switching Topologies: A Trusted-Region-Based Sliding-Window Weighted Approach. *Zhai, Y.*, +, *TCSII July 2021 2448-2452*

Searching Better Rewiring Strategies and Objective Functions for Stronger Controllability Robustness. *Lou, Y.*, +, *TCSII June 2021 2112-2116*

Set Stabilization and Optimal Control of Switched Multi-Valued Logical Control Networks With State-Dependent Switching Signals. *Xu, N.*, +, *TCSII June 2021 1952-1956*

Spanning-Tree-Based Synchronization Conditions for Second-Order Kuramoto Networks. *Wu, L.*, +, *TCSII April 2021 1448-1452*

Spars: A Full Flow Quantum-Dot Cellular Automata Circuit Design Tool. *Peng, F.*, +, *TCSII April 2021 1233-1237*

Statistical Graph Signal Recovery Using Variational Bayes. *Torkamani, R.*, +, *TCSII June 2021 2232-2236*

Time-Varying Graph Signal Denoising via Median Filters. *Tay, D.B.*, +, *TCSII March 2021 1053-1057*

Velocity Constraint on Double-Integrator Dynamics Subject to Antagonistic Information. *Zhang, Y.*, +, *TCSII Jan. 2021 411-415*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X.*, +, *TCSII April 2021 1477-1481*

Graphene

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Graphene devices

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Gray codes

Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display. *Guo, X.*, +, *TCSII July 2021 2307-2311*

Greedy algorithms

Safeness-Based Community Penetration. *Yu, Z.*, +, *TCSII July 2021 2690-2694*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X.*, +, *TCSII April 2021 1477-1481*

H

H^∞ control

Bounded Real Lemmas for Singular Fractional-Order Systems: The $1 < \alpha < 2$ Case. *Zhang, Q.*, +, *TCSII Feb. 2021 732-736*

Haar transforms

An Energy-Efficient Haar Wavelet Transform Architecture for Respiratory Signal Processing. *da Rosa, M.M.*, +, *TCSII Feb. 2021 597-601*

Hafnium compounds

Single Bit-Line Differential Sensing Based Real-Time NVSRAM for Low Power Applications. *Majumdar, S.*, *TCSII July 2021 2623-2627*

Hardware

Area-Delay-Power Efficient VLSI Architecture of FIR Filter for Processing Seismic Signal. *Bose, S.*, +, *TCSII Nov. 2021 3451-3455*

Efficient Hardware Implementation of DNN-Based Speech Enhancement Algorithm With Precise Sigmoid Activation Function. *Chiluveru, S.R.*, +, *TCSII Nov. 2021 3461-3465*

Hardware accelerators

A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications. *Zhang, H.*, +, *TCSII May 2021 1695-1699*

An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *Zhou, K.*, +, *TCSII Aug. 2021 2932-2936*

Hardware-software codesign

An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *Zhou, K.*, +, *TCSII Aug. 2021 2932-2936*

Balancing the Cost and Performance Trade-Offs in SNN Processors. *Zheng, H.*, +, *TCSII Sept. 2021 3172-3176*

Harmonic analysis

A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L.*, +, *TCSII Sept. 2021 3133-3137*

A New Perspective on Constraints in the Optimization of PWM Waveform Synthesis in Inverters. *Cantoni, A.*, +, *TCSII Jan. 2021 371-375*

A Square Wave-Based Digital Foreground Calibration Algorithm of a Pipeline ADC Using Approximate Harmonic Sampling. *Chatterjee, S.*, +, *TCSII April 2021 1068-1072*

Tunable Reflectionless Filter With Independently Controllable Dual Passbands and Absorbed Harmonic Signals. *Cao, Z.*, +, *TCSII Nov. 2021 3416-3420*

Harmonic distortion

A 300mV-Supply, Sub-nW-Power Digital-Based Operational Transconductance Amplifier. *Toledo, P.*, +, *TCSII Sept. 2021 3073-3077*

A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S.*, +, *TCSII Feb. 2021 607-611*

A Reduced Complexity Random Fourier Filter Based Nonlinear Multichannel Narrowband Active Noise Control System. *Deb, T.*, +, *TCSII Jan. 2021 516-520*

An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T.*, +, *TCSII June 2021 2092-2096*

Hybrid Harmonic Cancellation Digital Predistortion With a Feedback Loop Compensation. *Chen, L.*, +, *TCSII June 2021 2222-2226*

Selective Lower Order Harmonic Elimination in DC-AC Converter Using Space Vector Approach. *Arumalla, R.T.*, +, *TCSII Aug. 2021 2890-2894*

Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B.*, +, *TCSII July 2021 2583-2587*

Harmonics

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K.*, +, *TCSII Oct. 2021 3251-3255*

Harmonics suppression

An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T.*, +, *TCSII June 2021 2092-2096*

Design of a New Dual-Band Balanced-to-Balanced Filtering Power Divider Based on the Circular Microstrip Patch Resonator. *Zhang, G.*, +, *TCSII Dec. 2021 3542-3546*

Selective Lower Order Harmonic Elimination in DC-AC Converter Using Space Vector Approach. *Arumalla, R.T.*, +, *TCSII Aug. 2021 2890-2894*

Synthesis Design of Filtering Differential Phase Shifters of Independently Suppressed Harmonics. *Qiu, L.*, +, *TCSII Aug. 2021 2760-2764*

Helicopters

Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S.*, +, *TCSII July 2021 2458-2462*

HEMT circuits

A 52–58 GHz Power Amplifier With 18.6-dBm Saturated Output Power for Space Applications. *Tsao, Y.*, +, *TCSII June 2021 1927-1931*

Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Fegghi, R.*, +, *TCSII April 2021 1193-1197*

HEMT integrated circuits

An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B.*, +, *TCSII July 2021 2252-2256*

Hidden Markov models

Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L.*, +, *TCSII Oct. 2021 3266-3270*

Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S.*, +, *TCSII June 2021 1967-1971*

Output-Feedback Control Under Hidden Markov Analog Fading and Redundant Channels. *Li, J.*, +, *TCSII Aug. 2021 2922-2926*

High electron mobility transistors

Exploring Feasible Design Space for Multi-Octave Power Amplifier Using Nonlinear Embedding. *Aggrawal, E.*, +, *TCSII Aug. 2021 2800-2804*

Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H.*, +, *TCSII Jan. 2021 191-195*

High-pass filters

A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X.*, +, *TCSII July 2021 2419-2423*

Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*

Performance Limits of Generalized Sampling Based 2-Channel Analog-to-Digital Converter. *Ghosh, S.*, +, *TCSII July 2021 2257-2261*

Phase Shifting Properties of High-Pass and Low-Pass Mixed-Element Two-Ports. *Sengul, M.*, +, *TCSII April 2021 1208-1212*

Reconfigurable Bandpass Filter With Wide-Range Bandwidth and Frequency Control. *Fan, M.*, +, *TCSII June 2021 1758-1762*

High-speed integrated circuits

A TD-ADC for IR-UWB Radars With Equivalent Sampling Technology and 8-GS/s Effective Sampling Rate. *Zhu, Z.*, +, *TCSII March 2021 888-892*

High-speed optical techniques

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K.*, +, *TCSII Oct. 2021 3251-3255*

High-temperature superconductors

Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J.*, +, *TCSII Jan. 2021 131-135*

Hilbert spaces

A Robust Student's t -Based Kernel Adaptive Filter. *Wang, H.*, +, *TCSII Oct. 2021 3371-3375*

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- A NAND-SPIN-Based Magnetic ADC. *Wu, B.*, +, *TCSII Feb. 2021 617-621*
- An Extensive Soft Error Reliability Analysis of a Real Autonomous Vehicle Software Stack. *Bandeira, V.*, +, *TCSII Jan. 2021 446-450*
- Balanced Multi-Cell Modulation for Flash Memory. *Ismail, A.*, +, *TCSII July 2021 2394-2398*
- Fast Gate Leakage Current Monitor With Large Dynamic Range. *Bhatheja, K.*, +, *TCSII May 2021 1690-1694*
- Power-Efficient Noise-Induced Reduction of ReRAM Cell's Temporal Variability Effects. *Ntinis, V.*, +, *TCSII April 2021 1378-1382*
- Tutorial: Design of High-Speed Nano-Scale CMOS Mixed-Voltage Digital I/O Buffer With High Reliability to PVTL Variations. *Wang, C.*, *TCSII Feb. 2021 562-567*
- Integrated circuit testing**
- A 300mV-Supply, Sub-nW-Power Digital-Based Operational Transconductance Amplifier. *Toledo, P.*, +, *TCSII Sept. 2021 3073-3077*
- A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*
- Enhancing Hardware Trojan Detection Sensitivity Using Partition-Based Shuffling Scheme. *Shabani, A.*, +, *TCSII Jan. 2021 266-270*
- SAT-Based Integrated Hardware Trojan Detection and Localization Approach Through Path-Delay Analysis. *Sabri, M.*, +, *TCSII Aug. 2021 2850-2854*
- Integrating circuits**
- Simple Behavioral Model of Baseband Pulse Devices in the Form of a Second-Order Nonlinear Recursive Filter. *Semyonov, E.V.*, *TCSII June 2021 2192-2196*

Integration

Discrete-Time Super-Twisting Fractional-Order Differentiator With Implicit Euler Method. *Sharma, R.K.*, +, *TCSII April 2021 1238-1242*

Intelligent robots

Intelligent and Reconfigurable Architecture for KL Divergence-Based Multi-Armed Bandit Algorithms. *Santosh, S.V.S.*, +, *TCSII March 2021 1008-1012*

Interconnected systems

Distributed Dynamic Event-Based Control for Nonlinear Multi-Agent Systems. *Tan, X.*, +, *TCSII Feb. 2021 687-691*

Interference filters

Robust Adaptive Filtering Based on Exponential Functional Link Network: Analysis and Application. *Yu, T.*, +, *TCSII July 2021 2720-2724*

Interference suppression

A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S.*, +, *TCSII Feb. 2021 607-611*

A Robust Mixed-Signal Cancellation Approach for Even-Order Intermodulation Distortions in LTE-A/5G-Transceivers. *Paireder, T.*, +, *TCSII March 2021 923-927*

A Survey on Self-Interference Cancellation in Mobile LTE-A/5G FDD Transceivers. *Motz, C.*, +, *TCSII March 2021 823-829*

A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*

Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop. *Nagam, S.S.*, +, *TCSII May 2021 1670-1674*

DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X.*, +, *TCSII June 2021 2077-2081*

Intermodulation

An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers. *Mariappan, S.*, +, *TCSII April 2021 1178-1182*

Intermodulation distortion

A +7.6 dBm IIP3 2.4-GHz Double-Balanced Mixer With 10.5 dB NF in 65-nm CMOS. *Kashani, M.H.*, +, *TCSII Oct. 2021 3214-3218*

A Robust Mixed-Signal Cancellation Approach for Even-Order Intermodulation Distortions in LTE-A/5G-Transceivers. *Paireder, T.*, +, *TCSII March 2021 923-927*

An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers. *Mariappan, S.*, +, *TCSII April 2021 1178-1182*

Internet of Things

2.4-GHz Low-Power Low-IF Receiver With a Quadrature Local Oscillator Buffer for Bluetooth Low Energy Applications. *Song, E.*, +, *TCSII July 2021 2369-2373*

A 0.82 μ W CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J.*, +, *TCSII May 2021 1700-1704*

A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters. *Park, J.*, +, *TCSII Nov. 2021 3386-3390*

A Highly Integrated 3-Phase 4:1 Resonant Switched-Capacitor Converter With Parasitic Loss Reduction and Fast Pre-Charge Startup. *Wang, C.*, +, *TCSII July 2021 2608-2612*

A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J.*, +, *TCSII June 2021 2142-2146*

A Parallel Hardware Implementation for 2-D Hierarchical Clustering Based on Fuzzy Logic. *Cardarilli, G.C.*, +, *TCSII April 2021 1428-1432*

A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M.*, +, *TCSII Sept. 2021 3182-3186*

An Impedance Matching Strategy for Micro-Scale RF Energy Harvesting Systems. *Mohan, A.*, +, *TCSII April 2021 1458-1462*

An IoT-Applicable Access Control Model Under Double-Layer Blockchain. *Li, Z.*, +, *TCSII June 2021 2102-2106*

Low-Power Area-Efficient LDO With Loop-Gain and Bandwidth Enhancement Using Non-Dominant Pole Movement Technique for IoT Applications. *Nakhlestani, A.*, +, *TCSII Feb. 2021 692-696*

NS-MD: Near-Sensor Motion Detection With Energy Harvesting Image Sensor for Always-On Visual Perception. *Nazhamaiti, M.*, +, *TCSII Sept. 2021 3078-3082*

Re-Thinking Analog Integrated Circuits in Digital Terms: A New Design Concept for the IoT Era. *Toledo, P.*, +, *TCSII March 2021 816-822*

Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents. *Prospero, L.*, +, *TCSII Dec. 2021 3488-3492*

Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era. *Lei, K.*, +, *TCSII Jan. 2021 30-35*

Synthesis of Multi-Input Multi-Output DC/DC Converters Without Energy Buffer Stages. *Shan, Z.*, +, *TCSII Feb. 2021 712-716*

Interpolation

A Memory-Reduced Frequency Estimator for the Measurement of Sinusoidal Signal. *Wang, J.*, +, *TCSII March 2021 1038-1042*

A Robust Fully Arctangent Interpolated Volterra Filtering Algorithm Against Impulsive Noise. *Liu, Q.*, +, *TCSII July 2021 2742-2746*

Anti-Interpolation: An Attack Facilitator Hiding Adversaries Into Images. *Chen, J.*, +, *TCSII July 2021 2670-2674*

Characterization of Two-Phase Flow Structure by Deep Learning-Based Super Resolution. *Gao, Z.*, +, *TCSII Feb. 2021 782-786*

Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*

Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*

Hardware Implementation of Overlap-Save-Based Fading Channel Emulator. *Najam-Ul-Islam, M.*, +, *TCSII March 2021 918-922*

Intersymbol interference

M-PSK Demodulator With Joint Carrier and Timing Recovery. *Giardino, D.*, +, *TCSII June 2021 1912-1916*

Invasive software

Adversarial Hardware With Functional and Topological Camouflage. *Li, H.*, +, *TCSII May 2021 1685-1689*

Enhancing Hardware Trojan Detection Sensitivity Using Partition-Based Shuffling Scheme. *Shabani, A.*, +, *TCSII Jan. 2021 266-270*

Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*

SAT-Based Integrated Hardware Trojan Detection and Localization Approach Through Path-Delay Analysis. *Sabri, M.*, +, *TCSII Aug. 2021 2850-2854*

Inverters

A 0.52 μ W, 38 nV/ $\sqrt{\text{Hz}}$ Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage. *Pham, X.T.*, +, *TCSII June 2021 1793-1797*

A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters. *Park, J.*, +, *TCSII Nov. 2021 3386-3390*

A Hybrid Nine-Level Inverter Topology With Boosting Capability and Reduced Component Count. *Naik, B.S.*, +, *TCSII Jan. 2021 316-320*

A Multilevel Inverter for Contactless Power Transfer System. *Lee, J.*, +, *TCSII Jan. 2021 401-405*

A Novel Diagnostic Method for Multiple Open-Circuit Faults of Voltage-Source Inverters Based on Output Line Voltage Residuals Analysis. *Chen, T.*, +, *TCSII April 2021 1343-1347*

A Reduced Device Count Single DC Hybrid Switched-Capacitor Self-Balanced Inverter. *Panda, K.P.*, +, *TCSII March 2021 978-982*

An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T.*, +, *TCSII June 2021 2092-2096*

Analysis and Design of the Three-Inverter Schmitt Trigger for Supply Voltages Down to 50 mV. *Daros Fernandes, T.*, +, *TCSII July 2021 2302-2306*

Compact Seven-Level Boost Type Inverter Topology. *Sathik, M.J.*, +, *TCSII April 2021 1358-1362*

LATIM: Loading-Aware Offline Training Method for Inverter-Based Memristive Neural Networks. *Vahdat, S.*, +, *TCSII Oct. 2021 3346-3350*

Open Circuit Fault Detection and Switch Identification for LS-PWM H-Bridge Inverter. *Kumar, M.*, *TCSII April 2021 1363-1367*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*

Iterative methods

2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*

A Stop Condition for Compressed Recovery of Random Modulated Signal. *Dao, X.*, +, *TCSII April 2021 1557-1561*

Channel Estimation for MmWave Massive MIMO With Hybrid Precoding Based on Log-Sum Sparse Constraints. *Zhang, A.*, +, *TCSII June 2021 1882-1886*

Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*

Fixed-Point Minimum Error Entropy With Sparsity Penalty Constraints. *Li, J.*, +, *TCSII Aug. 2021 2997-3001*

Learnability of Linear Fractional-Order ILC Systems. *Gu, P.*, +, *TCSII March 2021 963-967*

M-PSK Demodulator With Joint Carrier and Timing Recovery. *Giardino, D.*, +, *TCSII June 2021 1912-1916*

Optimal FIR Filter for Discrete-Time LTV Systems and Fast Iterative Algorithm. *Zhao, S.*, +, *TCSII April 2021 1527-1531*

Sparse FIR Filter Design With k -Max Sparsity and Peak Error Constraints. *Xi, X.*, +, *TCSII April 2021 1497-1501*

J

Jamming

A Stop Condition for Compressed Recovery of Random Modulated Signal. *Dao, X.*, +, *TCSII April 2021 1557-1561*

Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y.*, +, *TCSII July 2021 2593-2597*

Optimal DoS Attack Against LQR Control Channels. *Zhou, J.*, +, *TCSII April 2021 1348-1352*

Jitter

0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop. *Yoon, C.*, +, *TCSII Jan. 2021 136-140*

A 0.166 pJ/b/pF, 3.5–5 Gb/s TSV I/O Interface With V_{OH} Drift Control. *Kim, J.*, +, *TCSII June 2021 1822-1826*

A 2.4–3.0GHz Process-Tolerant Sub-Sampling PLL With Loop Bandwidth Calibration. *Lu, Y.*, +, *TCSII March 2021 873-877*

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

A 5-Gb/s Adaptive Digital CDR Circuit With SSC Capability and Enhanced High-Frequency Jitter Tolerance. *Chang, S.*, +, *TCSII Jan. 2021 161-165*

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

A Jitter-Tolerance-Enhanced Digital CDR Circuit Using Background Loop Gain Controller. *Yao, Y.*, +, *TCSII June 2021 1837-1841*

A Type-I PLL With Foreground Loop Bandwidth Calibration. *Chou, M.*, +, *TCSII April 2021 1103-1107*

Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop. *Nagam, S.S.*, +, *TCSII May 2021 1670-1674*

Comparison Study of DAC Realizations in Current Input CTE Δ Modulators. *Rajabzadeh, M.*, +, *TCSII Jan. 2021 111-115*

Jitter Optimisation in a Generalised All-Digital Phase-Locked Loop Model. *Koskin, E.*, +, *TCSII Jan. 2021 77-81*

Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F.*, +, *TCSII March 2021 893-897*

K

Kalman filters

A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*

GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C.*, +, *TCSII April 2021 1313-1317*

Information Weighted Consensus With Interacting Multiple Model Over Distributed Networks. *Hu, D.*, +, *TCSII April 2021 1537-1541*

Interacting Multiple Model Based on Maximum Correntropy Kalman Filter. *Fan, X.*, +, *TCSII Aug. 2021 3017-3021*

Kalman Filter Based on Multiple Scaled Multivariate Skew Normal Variance Mean Mixture Distributions With Application to Target Tracking. *Lu, C.*, +, *TCSII Feb. 2021 802-806*

Knapsack problems

Resource-Aware Collaborative Allocation for CPU-FPGA Cloud Environments. *Jordan, M.G.*, +, *TCSII May 2021 1655-1659*

L

Ladder filters

Solution of Lossless Broadband Matching Problems via Insertion Loss Method. *Sengul, M.*, *TCSII Oct. 2021 3236-3240*

Ladder networks

A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References. *Yang, C.*, +, *TCSII July 2021 2312-2316*

Laplace equations

Fast Average-Consensus on Networks Using Heterogeneous Diffusion. *Pandey, P.K.*, +, *TCSII Nov. 2021 3421-3425*

Laplace transforms

Lyapunov Stability Theory for Nonlinear Nabla Fractional Order Systems. *Wei, Y.*, *TCSII Oct. 2021 3246-3250*

LC circuits

Narrower Band Matching With Low Quality Factor Values. *Sengul, M.*, *TCSII July 2021 2434-2437*

Oscillator Flicker Phase Noise: A Tutorial. *Hu, Y.*, +, *TCSII Feb. 2021 538-544*

Synthesis Design on Wideband Single-Ended and Differential Dual-Band Filtering Impedance Transformer. *Chen, W.*, +, *TCSII March 2021 913-917*

Lead bonding

DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X.*, +, *TCSII June 2021 2077-2081*

Leakage currents

A -40 °C to 140 °C Picowatt CMOS Voltage Reference With 0.25-V Power Supply. *Qiao, H.*, +, *TCSII Sept. 2021 3118-3122*

A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting. *Chong, G.*, +, *TCSII June 2021 1743-1747*

Fast Gate Leakage Current Monitor With Large Dynamic Range. *Bhatheja, K.*, +, *TCSII May 2021 1690-1694*

Learning (artificial intelligence)

2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*

A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M.*, +, *TCSII Jan. 2021 241-245*

A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*

A New SCTN Digital Low Power Spiking Neuron. *Bensimon, M.*, +, *TCSII Aug. 2021 2937-2941*

An FPGA-Based Energy-Efficient Reconfigurable Convolutional Neural Network Accelerator for Object Recognition Applications. *Li, J.*, +, *TCSII Sept. 2021 3143-3147*

Attention Based Bidirectional Convolutional LSTM for High-Resolution Radio Tomographic Imaging. *Wu, H.*, +, *TCSII April 2021 1482-1486*

BAS Optimized ELM for KUKA iiwa Robot Learning. *Li, C.*, +, *TCSII June 2021 1987-1991*

Characterization of Two-Phase Flow Structure by Deep Learning-Based Super Resolution. *Gao, Z.*, +, *TCSII Feb. 2021 782-786*

Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J.*, +, *TCSII March 2021 993-997*

Dynamic Quaternion Extreme Learning Machine. *Chen, H.*, +, *TCSII Aug. 2021 3012-3016*

- Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G.*, +, *TCSII May 2021 1725-1729*
- Intelligent and Reconfigurable Architecture for KL Divergence-Based Multi-Armed Bandit Algorithms. *Santosh, S.V.S.*, +, *TCSII March 2021 1008-1012*
- Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y.*, +, *TCSII July 2021 2593-2597*
- Kernel Recursive Maximum Versoria Criterion Algorithm Using Random Fourier Features. *Jain, S.*, +, *TCSII July 2021 2725-2729*
- LATIM: Loading-Aware Offline Training Method for Inverter-Based Memristive Neural Networks. *Vahdat, S.*, +, *TCSII Oct. 2021 3346-3350*
- Learnability of Linear Fractional-Order ILC Systems. *Gu, P.*, +, *TCSII March 2021 963-967*
- Machine Learning for LLR Estimation in Flash Memory With LDPC Codes. *Sandell, M.*, +, *TCSII Feb. 2021 792-796*
- Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021 1318-1322*
- Robust Randomized Autoencoder and Correntropy Criterion-Based One-Class Classification. *Cui, X.*, +, *TCSII April 2021 1517-1521*
- TVFS: Topology Voltage Frequency Scaling for Reliable Embedded ConvNets. *Rizzo, R.G.*, +, *TCSII Feb. 2021 672-676*
- Learning systems**
- Learnability of Linear Fractional-Order ILC Systems. *Gu, P.*, +, *TCSII March 2021 963-967*
- Least mean squares methods**
- A 15–38 GHz Vector-Summing Phase-Shifter With 360° Phase-Shifting Range Using Improved I/Q Generator. *Qiu, F.*, +, *TCSII Oct. 2021 3199-3203*
- A Novel Quaternion Kernel LMS Algorithm With Variable Kernel Width. *Huang, W.*, +, *TCSII July 2021 2715-2719*
- A Proportionate Recursive Least Squares Algorithm and Its Performance Analysis. *Qin, Z.*, +, *TCSII Jan. 2021 506-510*
- A Reduced Complexity Random Fourier Filter Based Nonlinear Multichannel Narrowband Active Noise Control System. *Deb, T.*, +, *TCSII Jan. 2021 516-520*
- A Robust Generalized Proportionate Diffusion LMS Algorithm for Distributed Estimation. *Zayyani, H.*, +, *TCSII April 2021 1552-1556*
- A Robust Student's *t*-Based Kernel Adaptive Filter. *Wang, H.*, +, *TCSII Oct. 2021 3371-3375*
- A Wideband 5G Cyclostationary Spectrum Sensing Method by Kernel Least Mean Square Algorithm for Cognitive Radio Networks. *Nouri, M.*, +, *TCSII July 2021 2700-2704*
- Constrained Least Mean M-Estimation Adaptive Filtering Algorithm. *Wang, Z.*, +, *TCSII April 2021 1507-1511*
- Fixed-Point Minimum Error Entropy With Sparsity Penalty Constraints. *Li, J.*, +, *TCSII Aug. 2021 2997-3001*
- Joint Logarithmic Hyperbolic Cosine Robust Sparse Adaptive Algorithms. *Kumar, K.*, +, *TCSII Jan. 2021 526-530*
- Kernel Recursive Maximum Versoria Criterion Algorithm Using Random Fourier Features. *Jain, S.*, +, *TCSII July 2021 2725-2729*
- On the Skewness of the LMS Adaptive Weights. *Silva, T.T.P.*, +, *TCSII Aug. 2021 3022-3026*
- Partial-LUT Designs for Low-Complexity Realization of DA-Based BLMS Adaptive Filter. *Khan, M.T.*, +, *TCSII April 2021 1188-1192*
- Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises. *Liang, T.*, +, *TCSII June 2021 2217-2221*
- Performance of Clustered Multitask Diffusion LMS Suffering From Inter-Node Communication Delays. *Gogineni, V.C.*, +, *TCSII July 2021 2695-2699*
- Robust Constrained Generalized Correntropy and Maximum Versoria Criterion Adaptive Filters. *Bhattacharjee, S.S.*, +, *TCSII Aug. 2021 3002-3006*
- Robust Minimum Disturbance Diffusion LMS for Distributed Estimation. *Zayyani, H.*, *TCSII Jan. 2021 521-525*
- Steady State Mean Square Analysis of Standard Maximum Versoria Criterion Based Adaptive Algorithm. *Radhika, S.*, +, *TCSII April 2021 1547-1551*
- Steady-State Mean-Square Error Performance Analysis of the Tensor LMS Algorithm. *Zhang, N.*, +, *TCSII March 2021 1043-1047*
- Transient Performance Analysis of Geometric Algebra Least Mean Square Adaptive Filter. *Wang, W.*, +, *TCSII Aug. 2021 3027-3031*
- Legged locomotion**
- Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*
- Light emitting diodes**
- A Customized AC Hybrid LED Driver With Flicker Reduction for High Nominal Range Applications. *Chong, K.*, +, *TCSII May 2021 1635-1639*
- Linear antenna arrays**
- Spacetime Frequency-Multiplexed Digital-RF Array Receivers With Reduced ADC Count. *Akram, N.*, +, *TCSII Aug. 2021 2840-2844*
- Linear circuits**
- A Theorem on Power Superposition in Resistive Networks. *Barbi, I.*, *TCSII July 2021 2362-2363*
- Linear matrix inequalities**
- Bounded Leader-Following Consensus of Heterogeneous Directed Delayed Multi-Agent Systems via Asynchronous Impulsive Control. *Gong, J.*, +, *TCSII July 2021 2680-2684*
- Bounded Real Lemmas for Singular Fractional-Order Systems: The $1 < \alpha < 2$ Case. *Zhang, Q.*, +, *TCSII Feb. 2021 732-736*
- Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions. *Tavazoei, M.S.*, *TCSII July 2021 2374-2378*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J.*, *TCSII July 2021 2568-2572*
- Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*
- Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G.*, +, *TCSII Jan. 2021 356-360*
- H_∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y.*, +, *TCSII Jan. 2021 321-325*
- Necessary and Sufficient Conditions for Extended Strictly Positive Realness of Singular Fractional-Order Systems. *Zhang, Q.*, +, *TCSII June 2021 1997-2001*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*
- On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*
- Peak-to-Peak Filtering for Discrete-Time Singular Systems. *Chang, X.*, +, *TCSII July 2021 2543-2547*
- Positive Consensus in Fractional-Order Interval Networked Systems. *Ye, Y.*, +, *TCSII July 2021 2538-2542*
- Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*
- State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- Linear predictive coding**
- Power-Weighted LPC Formant Estimation. *de Frein, R.*, *TCSII June 2021 2207-2211*
- Linear programming**
- Conic Programming for Circuit Equations With Rational Current Controlled Resistors. *Jia, W.*, +, *TCSII Jan. 2021 496-500*

Sparse FIR Filter Design With k -Max Sparsity and Peak Error Constraints. *Xi, X.*, +, *TCSII April 2021 1497-1501*

Linear quadratic control

Optimal DoS Attack Against LQR Control Channels. *Zhou, J.*, +, *TCSII April 2021 1348-1352*

Linear regression

AI Technology for NoC Performance Evaluation. *Bhowmik, B.*, +, *TCSII Dec. 2021 3483-3487*

Linear systems

Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model. *Li, Z.*, +, *TCSII Oct. 2021 3256-3260*

Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L.*, +, *TCSII Oct. 2021 3266-3270*

Bipartite Finite Time and Fixed Time Output Consensus of Heterogeneous Multiagent Systems Under State Feedback Control. *Hao, L.*, +, *TCSII June 2021 2067-2071*

Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*

Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions. *Tavazoei, M.S.*, *TCSII July 2021 2374-2378*

Cooperative Adaptive H_∞ Output Regulation of Continuous-Time Heterogeneous Multi-Agent Markov Jump Systems. *Dong, S.*, +, *TCSII Oct. 2021 3261-3265*

Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*

Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J.*, *TCSII July 2021 2568-2572*

Finite-Time Distributed Optimal Tracking for Multiple Heterogeneous Linear Systems. *Zhong, Z.*, +, *TCSII April 2021 1258-1262*

Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z.*, +, *TCSII Jan. 2021 336-340*

Interval State Estimator Design for Linear Parameter Varying (LPV) Systems. *Khan, A.*, +, *TCSII Aug. 2021 2865-2869*

New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach. *Li, Y.*, +, *TCSII Feb. 2021 697-701*

On Determining of LTI Systems Having Nondecreasing Step Response. *Du, H.*, +, *TCSII June 2021 2087-2091*

Optimal FIR Filter for Discrete-Time LTV Systems and Fast Iterative Algorithm. *Zhao, S.*, +, *TCSII April 2021 1527-1531*

Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*

Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*

Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N.*, +, *TCSII June 2021 1957-1961*

Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*

Linearization techniques

An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers. *Mariappan, S.*, +, *TCSII April 2021 1178-1182*

Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A.*, +, *TCSII June 2021 1887-1891*

Linearization of Voltage-Controlled Oscillators Using Floating-Gate Transistors. *Andryczik, S.*, +, *TCSII July 2021 2337-2341*

Linux

An Extensive Soft Error Reliability Analysis of a Real Autonomous Vehicle Software Stack. *Bandeira, V.*, +, *TCSII Jan. 2021 446-450*

Lithium compounds

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M.*, +, *TCSII March 2021 908-912*

A Remaining Useful Life Prediction Method in the Early Stage of Stochastic Degradation Process. *Zhang, Y.*, +, *TCSII June 2021 2027-2031*

Load (electric)

Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J.*, +, *TCSII June 2021 2002-2006*

Load flow

Ensuring Network Connectedness in Optimal Transmission Switching Problems. *Han, T.*, +, *TCSII July 2021 2603-2607*

Local area networks

Multi-Gigabit Transceivers for Optical Data Communications From the Standardization Perspective. *Rodriguez-Perez, A.*, +, *TCSII Jan. 2021 56-62*

Logic circuits

28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*

An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in 0.18 μ m SiGe BiCMOS. *Li, Z.*, +, *TCSII June 2021 1763-1767*

AxLS: A Framework for Approximate Logic Synthesis Based on Netlist Transformations. *Castro-Godinez, J.*, +, *TCSII Aug. 2021 2845-2849*

Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*

Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation. *Kim, H.*, +, *TCSII July 2021 2297-2301*

Logic design

A High-Performance Core Micro-Architecture Based on RISC-V ISA for Low Power Applications. *Bora, S.*, +, *TCSII June 2021 2132-2136*

A Low-Cost High-Throughput Digital Design of Biorealistic Spiking Neuron. *Pu, J.*, +, *TCSII April 2021 1398-1402*

A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z.*, +, *TCSII Sept. 2021 3153-3157*

A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J.*, +, *TCSII June 2021 2142-2146*

A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*

An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks. *Kim, B.*, +, *TCSII May 2021 1600-1604*

An Optimized FPGA-Based Real-Time NDT for 3D-LiDAR Localization in Smart Vehicles. *Deng, Q.*, +, *TCSII Sept. 2021 3167-3171*

AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators. *Waris, H.*, +, *TCSII May 2021 1566-1570*

AxLS: A Framework for Approximate Logic Synthesis Based on Netlist Transformations. *Castro-Godinez, J.*, +, *TCSII Aug. 2021 2845-2849*

Balancing the Cost and Performance Trade-Offs in SNN Processors. *Zheng, H.*, +, *TCSII Sept. 2021 3172-3176*

BCD Adder Designs Based on Three-Input XOR and Majority Gates. *Chu, Z.*, +, *TCSII June 2021 1942-1946*

Constant-Time Synchronous Binary Counter With Minimal Clock Period. *Hyun, Y.*, +, *TCSII July 2021 2645-2649*

Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*

Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*

Integrating Two Logics Into One Crossbar Array for Logic Gate Design. *Yao, L.*, +, *TCSII Aug. 2021 2987-2991*

Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H.*, +, *TCSII Jan. 2021 211-215*

Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V.*, *TCSII Feb. 2021 581-586*

Recent Advances and Trends in Noise Shaping SAR ADCs. *Salgado, G.M.*, +, *TCSII Feb. 2021 545-549*

Spars: A Full Flow Quantum-Dot Cellular Automata Circuit Design Tool. *Peng, F.*, +, *TCSII April 2021 1233-1237*

Ultra-Compact Ternary Logic Gates Based on Negative Capacitance Carbon Nanotube FETs. *Jooq, M.K.Q.*, +, *TCSII June 2021 2162-2166*

Logic gates

- A 13-Level Switched-Capacitor-Based Boosting Inverter. *Sandeep, N., TCSII March 2021 998-1002*
- A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation. *Mahmood, H.U., +, TCSII Aug. 2021 2805-2809*
- A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H., +, TCSII Sept. 2021 3113-3117*
- A High-Performance and Low-Cost Montgomery Modular Multiplication Based on Redundant Binary Representation. *Li, B., +, TCSII July 2021 2660-2664*
- A New SCTN Digital Low Power Spiking Neuron. *Bensimon, M., +, TCSII Aug. 2021 2937-2941*
- A Theorem on Power Superposition in Resistive Networks. *Barbi, I., TCSII July 2021 2362-2363*
- Accuracy Improved Low-Energy Multi-Bit Approximate Adders in QCA. *Perri, S., +, TCSII Nov. 2021 3456-3460*
- BCD Adder Designs Based on Three-Input XOR and Majority Gates. *Chu, Z., +, TCSII June 2021 1942-1946*
- Integrating Two Logics Into One Crossbar Array for Logic Gate Design. *Yao, L., +, TCSII Aug. 2021 2987-2991*
- Ultra-Compact Ternary Logic Gates Based on Negative Capacitance Carbon Nanotube FETs. *Jooq, M.K.Q., +, TCSII June 2021 2162-2166*

Logic testing

- A 5800 μm^2 Process Monitor Circuit for Measurement of in-Die Variation of V_{th} in 65nm. *Lisha, L., +, TCSII March 2021 863-867*
- A High-Performance Core Micro-Architecture Based on RISC-V ISA for Low Power Applications. *Bora, S., +, TCSII June 2021 2132-2136*
- Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J., +, TCSII June 2021 2152-2156*

Long Term Evolution

- A 1.7-to-2.7GHz 35–38% PAE Multiband CMOS Power Amplifier Employing a Digitally-Assisted Analog Pre-Distorter (DAAPD) Reconfigurable Linearization Technique. *Mariappan, S., +, TCSII Nov. 2021 3381-3385*
- A Novel Complex Filter Design With Dual Feedback for High Frequency Wireless Receiver Applications. *Veerendranath, P.S., +, TCSII June 2021 1748-1752*
- A Robust Mixed-Signal Cancellation Approach for Even-Order Intermodulation Distortions in LTE-A/5G-Transceivers. *Paireder, T., +, TCSII March 2021 923-927*
- A Survey on Self-Interference Cancellation in Mobile LTE-A/5G FDD Transceivers. *Motz, C., +, TCSII March 2021 823-829*
- An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B., +, TCSII July 2021 2252-2256*
- Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A., +, TCSII June 2021 1887-1891*
- Design and Analysis of Continuous-Mode Doherty Power Amplifier With Second Harmonic Control. *Shi, W., +, TCSII July 2021 2247-2251*
- Hardware Implementation of Overlap-Save-Based Fading Channel Emulator. *Najam-Ul-Islam, M., +, TCSII March 2021 918-922*

Loop antennas

- An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H., +, TCSII Jan. 2021 206-210*

Loss measurement

- Design of 2×8 Filtering Butler Matrix With Arbitrary Power Distribution. *Shao, Q., +, TCSII Dec. 2021 3527-3531*

Losses

- Synthesis of Multi-Input Multi-Output DC/DC Converters Without Energy Buffer Stages. *Shan, Z., +, TCSII Feb. 2021 712-716*

Low noise amplifiers

- A 21-to-41-GHz High-Gain Low Noise Amplifier With Triple-Coupled Technique for Multiband Wireless Applications. *Yu, Y., +, TCSII June 2021 1857-1861*

- A K-Band Dual-Mode Common Gate Cross-Summing VG-LNA With Low Phase Variation. *Park, S., +, TCSII July 2021 2438-2442*

- A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S., +, TCSII Feb. 2021 607-611*

- An Inductorless Wideband Gm-Boosted Balun LNA With nMOS-pMOS Configuration and Capacitively Coupled Loads for Sub-GHz IoT Applications. *Tiwari, S., +, TCSII Oct. 2021 3204-3208*

- Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G., +, TCSII Sept. 2021 3098-3102*

- Dual Q/V-Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines. *Lee, D., +, TCSII March 2021 898-902*

- Fully Differential Ultra-Wideband Amplifier With 46-dB Gain and Positive Feedback for Increased Bandwidth. *An, X., +, TCSII April 2021 1083-1087*

- Low-Noise Chopper Amplifier Using Lateral PNP Input Stage With Automatic Base Current Cancellation. *Kim, H., +, TCSII July 2021 2297-2301*

- Millimeter-wave Frequency Reconfigurable Low Noise Amplifiers for 5G. *Shaheen, R.A., +, TCSII Feb. 2021 642-646*

Low voltage

- A Compact Single-Transistor Current Source for Analog Design in Nanometer Digital CMOS. *Bai, C., +, TCSII Dec. 2021 3508-3512*

Low-pass filters

- 5th-Order Continuous-Time Low-Pass Filter Achieving 56 MHz Bandwidth 30.5 dBm IIP3 With a Novel Low-Distortion Amplifier. *Park, C., +, TCSII June 2021 1768-1772*

- A 0.3-V Conductance-Based Silicon Neuron in 0.18 μm CMOS Process. *Akbari, M., +, TCSII Oct. 2021 3209-3213*

- A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X., +, TCSII July 2021 2419-2423*

- An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M., +, TCSII June 2021 1817-1821*

- FRI Sampling of Parametric Signals With Non-Ideal Sinc Kernel. *Huang, G., +, TCSII Oct. 2021 3361-3365*

- Hybrid Harmonic Cancellation Digital Predistortion With a Feedback Loop Compensation. *Chen, L., +, TCSII June 2021 2222-2226*

- Performance Limits of Generalized Sampling Based 2-Channel Analog-to-Digital Converter. *Ghosh, S., +, TCSII July 2021 2257-2261*

- Phase Shifting Properties of High-Pass and Low-Pass Mixed-Element Two-Ports. *Sengul, M., +, TCSII April 2021 1208-1212*

- Reconfigurable Bandpass Filter With Wide-Range Bandwidth and Frequency Control. *Fan, M., +, TCSII June 2021 1758-1762*

- Simultaneous Wireless Power and Information Transfer Using Coupled Co-Existing Defected Ground Structure Resonators. *Barakat, A., +, TCSII Feb. 2021 632-636*

- Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y., +, TCSII Jan. 2021 511-515*

Low-power electronics

- 2.4-GHz Low-Power Low-IF Receiver With a Quadrature Local Oscillator Buffer for Bluetooth Low Energy Applications. *Song, E., +, TCSII July 2021 2369-2373*

- 200-MHz Single-Ended 6T 1-kb SRAM With 0.2313 pJ Energy/Access Using 40-nm CMOS Logic Process. *Wang, C., +, TCSII Sept. 2021 3163-3166*

- 28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A., +, TCSII Feb. 2021 602-606*

- 64 dB Dynamic-Range 810 μW 90 MHz Fully-Differential Flipped-Source-Follower Analog Filter in 28nm-CMOS. *De Matteis, M., +, TCSII Sept. 2021 3068-3072*

- A -40°C to 140°C Picowatt CMOS Voltage Reference With 0.25-V Power Supply. *Qiao, H., +, TCSII Sept. 2021 3118-3122*

- A 0.007 mm^2 0.6 V 6 MS/s Low-Power Double Rail-to-Rail SAR ADC in 65-nm CMOS. *Jo, Y., +, TCSII Sept. 2021 3088-3092*

- A 0.166 pJ/b/pF, 3.5–5 Gb/s TSV I/O Interface With V_{OH} Drift Control. *Kim, J., +, TCSII June 2021 1822-1826*

- A 0.52 μW , 38 nV/ $\sqrt{\text{Hz}}$ Chopper Amplifier With a Low-Noise DC Servo Loop, an Embedded Ripple Reduction Loop, and a Squeezed Inverter Stage. *Pham, X.T., +, TCSII June 2021 1793-1797*

- A 0.5GHz 0.35mW LDO-Powered Constant-Slope Phase Interpolator With 0.22% INL. *Elnaqib, A.*, +, *TCSII Jan. 2021 156-160*
- A 0.6-to-1.8V CMOS Current Reference With Near-100% Power Utilization. *Fassio, L.*, +, *TCSII Sept. 2021 3038-3042*
- A 0.99-pJ/b 15-Gb/s Counter-Based Adaptive Equalizer Using Single Comparator in 28-nm CMOS. *Choi, Y.*, +, *TCSII Oct. 2021 3189-3193*
- A 112 Gb/s PAM-4 RX Front-End With Unlocked Decision Feedback Equalizer. *Petricli, I.*, +, *TCSII Jan. 2021 256-260*
- A 120 mV Supply, Triode-Regulated Femto-Watt CMOS Voltage Reference Design. *Olivera, F.*, +, *TCSII Feb. 2021 587-591*
- A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μm CMOS. *Zeng, X.*, +, *TCSII June 2021 1812-1816*
- A 19–48.3-GHz 6th-Order Transformer-Based Injection-Locked Frequency Divider With 87.1% Locking Range in 40-nm CMOS. *Zhu, J.*, +, *TCSII Sept. 2021 3053-3057*
- A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*
- A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV²f. *Choi, K.*, +, *TCSII March 2021 858-862*
- A 300mV-Supply, Sub-nW-Power Digital-Based Operational Transconductance Amplifier. *Toledo, P.*, +, *TCSII Sept. 2021 3073-3077*
- A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*
- A 42nA I_Q, 1.5–6V V_{IN}, Self-Regulated CMOS Voltage Reference With –93dB PSR at 10 Hz for Energy Harvesting Systems. *Chen, Y.*, +, *TCSII July 2021 2357-2361*
- A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters. *Park, J.*, +, *TCSII Nov. 2021 3386-3390*
- A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*
- A 56-Gb/s PAM4 Receiver Analog Front-End With Fixed Peaking Frequency and Bandwidth in 40-nm CMOS. *Li, Z.*, +, *TCSII Sept. 2021 3058-3062*
- A 6.9- μm^2 3.26-ns 31.25-fJ Robust Level Shifter With Wide Voltage and Frequency Ranges. *Kim, K.*, +, *TCSII April 2021 1433-1437*
- A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*
- A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network. *Kim, S.*, +, *TCSII May 2021 1675-1679*
- A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J.*, +, *TCSII May 2021 1645-1649*
- A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL. *Wang, H.*, +, *TCSII June 2021 1852-1856*
- A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R.*, +, *TCSII July 2021 2272-2276*
- A Duo-Binary Transceiver With Time-Based Receiver and Voltage-Mode Time-Interleaved Mixing Transmitter for DRAM Interface. *Chae, M.*, +, *TCSII July 2021 2409-2413*
- A High-Performance Core Micro-Architecture Based on RISC-V ISA for Low Power Applications. *Bora, S.*, +, *TCSII June 2021 2132-2136*
- A High-Speed and Energy-Efficient Multi-Bit Cyclic ADC Using Single-Slope Quantizer for CMOS Image Sensors. *Jeong, J.*, +, *TCSII July 2021 2322-2326*
- A Jitter-Tolerance-Enhanced Digital CDR Circuit Using Background Loop Gain Controller. *Yao, Y.*, +, *TCSII June 2021 1837-1841*
- A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J.*, +, *TCSII Jan. 2021 471-475*
- A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S.*, +, *TCSII Feb. 2021 607-611*
- A Low-Noise and Fast-Settling UHF RFID Receiver With Digitally Controlled Leakage Cancellation. *Kim, S.*, +, *TCSII Aug. 2021 2810-2814*
- A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M.*, +, *TCSII March 2021 908-912*
- A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z.*, +, *TCSII Sept. 2021 3153-3157*
- A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J.*, +, *TCSII June 2021 2142-2146*
- A New Extremely Low Power Temperature Insensitive Electronically Tunable VCH-Based Grounded Capacitance Multiplier. *Stornelli, V.*, +, *TCSII Jan. 2021 72-76*
- A New SCTN Digital Low Power Spiking Neuron. *Bensimon, M.*, +, *TCSII Aug. 2021 2937-2941*
- A Power-Aware Toggling-Frequency Actuator in Data-Toggling SRAM for Secure Data Protection. *Ho, W.*, +, *TCSII June 2021 2122-2126*
- A Quadrature Sub-Sampling Phase Detector for Fast-Relocked Sub-Sampling PLL Under External Interference. *Geng, X.*, +, *TCSII Jan. 2021 87-91*
- A Robust, High-Speed and Energy-Efficient Ultralow-Voltage Level Shifter. *Fassio, L.*, +, *TCSII April 2021 1393-1397*
- A Single-Ended Low Power 16-nm FinFET 6T SRAM Design With PDP Reduction Circuit. *Wang, C.*, +, *TCSII Dec. 2021 3478-3482*
- A Sub-200nW All-in-One Bandgap Voltage and Current Reference Without Amplifiers. *Huang, W.*, +, *TCSII Jan. 2021 121-125*
- A Sub- μW Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M.*, +, *TCSII Sept. 2021 3182-3186*
- A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*
- A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting. *Chong, G.*, +, *TCSII June 2021 1743-1747*
- An Adaptive Offset Cancellation Scheme and Shared-Summer Adaptive DFE for 0.068 pJ/b/dB 1.62-to-10 Gb/s Low-Power Receiver in 40 nm CMOS. *Lee, K.*, +, *TCSII Feb. 2021 622-626*
- An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M.*, +, *TCSII June 2021 1817-1821*
- An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arasteh, O.*, +, *TCSII Jan. 2021 151-155*
- An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks. *Kim, B.*, +, *TCSII May 2021 1600-1604*
- An Impedance Adapting Compensation Scheme for High Current NMOS LDO Design. *Cao, H.*, +, *TCSII July 2021 2287-2291*
- An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*
- An Ultra-Low Quiescent Current Resistor-Less Power on Reset Circuit. *Guo, J.*, +, *TCSII Jan. 2021 146-150*
- Analysis and Design of the Three-Inverter Schmitt Trigger for Supply Voltages Down to 50 mV. *Daros Fernandes, T.*, +, *TCSII July 2021 2302-2306*
- Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X.*, +, *TCSII June 2021 1807-1811*
- Charge Pumps for Ultra-Low-Power Applications: Analysis, Design, and New Solutions. *Ballo, A.*, +, *TCSII Aug. 2021 2895-2901*
- Class AB Op-Amp With Accurate Static Current Control for Low and High Supply Voltages. *Padilla-Cantoya, I.*, +, *TCSII Aug. 2021 2775-2779*
- Comparative Study and Design of Current Starved Ring Oscillators in 16 nm Technology. *Huq, S.M.I.*, +, *TCSII April 2021 1098-1102*
- Data Retention-Based Low Leakage Power TCAM for Network Packet Routing. *Chang, Y.*, +, *TCSII Feb. 2021 757-761*
- Design of Ultra-Low Power Consumption Approximate 4–2 Compressors Based on the Compensation Characteristic. *Pei, H.*, +, *TCSII Jan. 2021 461-465*
- Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L.*, +, *TCSII May 2021 1640-1644*
- Enabling Lower-Power Charge-Domain Nonvolatile In-Memory Computing With Ferroelectric FETs. *Yin, G.*, +, *TCSII July 2021 2262-2266*

- Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*
- Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display. *Guo, X.*, +, *TCSII July 2021 2307-2311*
- Highly Stable Low Power Radiation Hardened Memory-by-Design SRAM for Space Applications. *Pal, S.*, +, *TCSII June 2021 2147-2151*
- Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*
- Low-Power Area-Efficient LDO With Loop-Gain and Bandwidth Enhancement Using Non-Dominant Pole Movement Technique for IoT Applications. *Nakhlestani, A.*, +, *TCSII Feb. 2021 692-696*
- Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*
- MACSen: A Processing-In-Sensor Architecture Integrating MAC Operations Into Image Sensor for Ultra-Low-Power BNN-Based Intelligent Visual Perception. *Xu, H.*, +, *TCSII Feb. 2021 627-631*
- Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*
- New Charge-Steering DFEs in 55-nm CMOS. *Pike, J.*, +, *TCSII Jan. 2021 231-235*
- NS-MD: Near-Sensor Motion Detection With Energy Harvesting Image Sensor for Always-On Visual Perception. *Nazhamaiti, M.*, +, *TCSII Sept. 2021 3078-3082*
- Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F.*, +, *TCSII March 2021 893-897*
- Rail-to-Rail Dynamic Voltage Comparator Scalable Down to pW-Range Power and 0.15-V Supply. *Aiello, O.*, +, *TCSII July 2021 2675-2679*
- Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*
- Resonant Energy Recycling SRAM Architecture. *Islam, R.*, +, *TCSII April 2021 1383-1387*
- Reverse Bias Current Eliminated, Read-Separated, and Write-Enhanced Tunnel FET SRAM. *Peng, C.*, +, *TCSII Jan. 2021 466-470*
- Single Bit-Line Differential Sensing Based Real-Time NVSRAM for Low Power Applications. *Majumdar, S.*, *TCSII July 2021 2623-2627*
- Lumped parameter networks**
- Phase Shifting Properties of High-Pass and Low-Pass Mixed-Element Two-Ports. *Sengul, M.*, +, *TCSII April 2021 1208-1212*
- Lyapunov methods**
- A Note on Sampled-Data Synchronization of Memristor Networks Subject to Actuator Failures and Two Different Activations. *Ding, K.*, +, *TCSII June 2021 2097-2101*
- A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M.*, +, *TCSII March 2021 1023-1027*
- A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y.*, +, *TCSII Jan. 2021 326-330*
- Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C.*, +, *TCSII Oct. 2021 3301-3305*
- Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model. *Li, Z.*, +, *TCSII Oct. 2021 3256-3260*
- Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K.*, +, *TCSII June 2021 2047-2051*
- Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T.*, +, *TCSII Jan. 2021 281-285*
- Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control. *Li, W.*, +, *TCSII April 2021 1338-1342*
- Cooperative Control for Nonlinear Multi-Agent Systems Based on Event-Triggered Scheme. *Shi, J.*, *TCSII June 2021 1977-1981*
- Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems. *Ran, G.*, +, *TCSII Jan. 2021 276-280*
- Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*
- Event-Triggered Synchronization for Discrete-Time Neural Networks With Unknown Delays. *Rong, N.*, +, *TCSII Oct. 2021 3296-3300*
- Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K.*, +, *TCSII Oct. 2021 3316-3320*
- Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L.*, +, *TCSII Jan. 2021 301-305*
- Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*
- Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G.*, +, *TCSII Jan. 2021 356-360*
- H ∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y.*, +, *TCSII Jan. 2021 321-325*
- Indefinite Lyapunov-Razumikhin Functions-Based Stability and Event-Triggered Control of Switched Nonlinear Time-Delay Systems. *Zhang, J.*, +, *TCSII Oct. 2021 3286-3290*
- Lyapunov Stability Theory for Nonlinear Nabla Fractional Order Systems. *Wei, Y.*, *TCSII Oct. 2021 3246-3250*
- New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach. *Li, Y.*, +, *TCSII Feb. 2021 697-701*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*
- Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*
- Output-Feedback Control Under Hidden Markov Analog Fading and Redundant Channels. *Li, J.*, +, *TCSII Aug. 2021 2922-2926*
- Parameter Identification of Memristor-Based Chaotic Systems via the Drive-Response Synchronization Method. *Liu, H.*, +, *TCSII June 2021 2082-2086*
- Peak-to-Peak Filtering for Discrete-Time Singular Systems. *Chang, X.*, +, *TCSII July 2021 2543-2547*
- Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*
- Robust Finite-Time Dynamic Average Consensus With Exponential Convergence Rates. *Xu, K.*, +, *TCSII July 2021 2578-2582*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint. *Liu, L.*, +, *TCSII April 2021 1278-1282*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law. *Ma, H.*, +, *TCSII Feb. 2021 722-726*
- SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W.*, +, *TCSII June 2021 2032-2036*
- Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*
- Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N.*, +, *TCSII June 2021 1957-1961*
- Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*
- Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method. *Liu, A.*, +, *TCSII July 2021 2553-2557*

- State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- The Egan Problem on the Pull-in Range of Type 2 PLLs. *Kuznetsov, N.V.*, +, *TCSII April 2021 1467-1471*
- Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*

M

Machine control

- A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain. *Lin, P.*, +, *TCSII April 2021 1328-1332*
- A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S.*, +, *TCSII July 2021 2493-2497*
- Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B.*, +, *TCSII Jan. 2021 346-350*
- Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*
- GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q.*, +, *TCSII Feb. 2021 747-751*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K.*, +, *TCSII July 2021 2528-2532*
- Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*
- Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*
- Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*

Machine learning

- AI Technology for NoC Performance Evaluation. *Bhowmik, B.*, +, *TCSII Dec. 2021 3483-3487*
- Hardware-Oriented Memory-Limited Online Artifact Subspace Reconstruction (HMO-ASR) Algorithm. *Van, L.*, +, *TCSII Dec. 2021 3493-3497*

Magnesium compounds

- Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J.*, +, *TCSII Jan. 2021 131-135*

Magnetic tunneling

- Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory. *Yu, Z.*, +, *TCSII May 2021 1665-1669*
- STT-MRAM Sensing: A Review. *Na, T.*, +, *TCSII Jan. 2021 12-18*
- Toward Energy-Efficient STT-MRAM Design With Multi-Modes Reconfiguration. *Cai, H.*, +, *TCSII July 2021 2633-2639*

Magnetoresistance

- STT-MRAM Sensing: A Review. *Na, T.*, +, *TCSII Jan. 2021 12-18*

Manipulator dynamics

- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*

Manipulator kinematics

- A Sparse Optimization-Based Control Method for Manipulator With Simultaneous Potential Energy Minimization. *Li, Z.*, +, *TCSII June 2021 2062-2066*

Manipulators

- A Novel Non-Singular Terminal Sliding Mode Trajectory Tracking Control for Robotic Manipulators. *Zhai, J.*, +, *TCSII Jan. 2021 391-395*
- Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective. *Li, Z.*, +, *TCSII Feb. 2021 742-746*

Marine vehicles

- Memory-Event-Triggered H_∞ Filtering of Unmanned Surface Vehicles With Communication Delays. *Yan, S.*, +, *TCSII July 2021 2463-2467*

Markov processes

- Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L.*, +, *TCSII Oct. 2021 3266-3270*
- Cooperative Adaptive H_∞ Output Regulation of Continuous-Time Heterogeneous Multi-Agent Markov Jump Systems. *Dong, S.*, +, *TCSII Oct. 2021 3261-3265*
- Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y.*, +, *TCSII July 2021 2593-2597*
- Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification. *Habibi, Z.*, +, *TCSII Aug. 2021 3032-3036*
- Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S.*, +, *TCSII June 2021 1967-1971*
- Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M.*, +, *TCSII Jan. 2021 481-485*
- SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W.*, +, *TCSII June 2021 2032-2036*
- Statistical Graph Signal Recovery Using Variational Bayes. *Torkamani, R.*, +, *TCSII June 2021 2232-2236*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*

Master-slave

- A Compact Single-Transistor Current Source for Analog Design in Nanometer Digital CMOS. *Bai, C.*, +, *TCSII Dec. 2021 3508-3512*

Mathematical analysis

- Event-Based Leader-Following Synchronization of Coupled Harmonic Oscillators Under Jointly Connected Switching Topologies. *Cai, J.*, +, *TCSII March 2021 958-962*
- Insights Into the Dynamics of Coupled VO₂ Oscillators for ONNs. *Nunez, J.*, +, *TCSII Oct. 2021 3356-3360*

Mathematical model

- A Theorem on Power Superposition in Resistive Networks. *Barbi, I.*, *TCSII July 2021 2362-2363*
- On The Equivalent Impedance of Two-Impedance Self-Similar Ladder Networks. *Ehwakil, A.S.*, +, *TCSII July 2021 2685-2689*

Mathematical programming

- Separating Radar Signals From Impulsive Noise Using Atomic Norm Minimization. *Bayat, S.*, +, *TCSII June 2021 2212-2216*

Mathematics computing

- A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition. *Zhang, B.*, +, *TCSII April 2021 1423-1427*
- Laguerre Expansion Series Based Reduced Order Interval Systems. *Samuel, E.R.*, +, *TCSII June 2021 2022-2026*

Matrix algebra

- 2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*
- A Note on Sampled-Data Synchronization of Memristor Networks Subject to Actuator Failures and Two Different Activations. *Ding, K.*, +, *TCSII June 2021 2097-2101*
- A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition. *Zhang, B.*, +, *TCSII April 2021 1423-1427*
- A Robust Generalized Proportionate Diffusion LMS Algorithm for Distributed Estimation. *Zayyani, H.*, +, *TCSII April 2021 1552-1556*
- Admissible Bipartite Consensus in Networks of Singular Agents Over Signed Graphs. *Liu, T.*, +, *TCSII Aug. 2021 2880-2884*

- Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*
- Circuit Synthesis of 3-D Rotation Orthonormalization. *Wu, J.*, +, *TCSII April 2021 1502-1506*
- Consensus of the Hybrid Multiagent System Under Impulse Control. *Yu, Z.*, +, *TCSII July 2021 2573-2577*
- Criteria for Observability and Reconstructibility of Boolean Control Networks via Set Controllability. *Zhang, X.*, +, *TCSII April 2021 1263-1267*
- DeepTempo: A Hardware-Friendly Direct Feedback Alignment Multi-Layer Tempotron Learning Rule for Deep Spiking Neural Networks. *Shi, C.*, +, *TCSII May 2021 1581-1585*
- Diakoptics Modelling Applied to Flying Bird-Shape NGD Microstrip Circuit. *Ravelo, B.*, +, *TCSII Feb. 2021 637-641*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J.*, *TCSII July 2021 2568-2572*
- Event-Based Output Regulation of Boolean Control Networks With Time Delay. *Zhang, A.*, +, *TCSII June 2021 2007-2011*
- Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K.*, +, *TCSII June 2021 2172-2176*
- Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*
- H_∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y.*, +, *TCSII Jan. 2021 321-325*
- Laguerre Expansion Series Based Reduced Order Interval Systems. *Samuel, E.R.*, +, *TCSII June 2021 2022-2026*
- Positive Consensus in Fractional-Order Interval Networked Systems. *Ye, Y.*, +, *TCSII July 2021 2538-2542*
- Statistical Graph Signal Recovery Using Variational Bayes. *Torkamani, R.*, +, *TCSII June 2021 2232-2236*
- Synthesis of Multi-Port Filtering Power Divider for Mixed Topology Using Matrix Optimization. *Chen, W.*, +, *TCSII Jan. 2021 176-180*
- Time Complexity of In-Memory Matrix-Vector Multiplication. *Sun, Z.*, +, *TCSII Aug. 2021 2785-2789*
- Time-Varying Graph Signal Denoising via Median Filters. *Tay, D.B.*, +, *TCSII March 2021 1053-1057*
- Velocity Constraint on Double-Integrator Dynamics Subject to Antagonistic Information. *Zhang, Y.*, +, *TCSII Jan. 2021 411-415*
- Matrix decomposition**
- AIDX: Adaptive Inference Scheme to Mitigate State-Drift in Memristive VMM Accelerators. *Liu, T.*, +, *TCSII April 2021 1128-1132*
- Revisiting the Adjoint Matrix for FPGA Calculating the Triangular Matrix Inversion. *Yan, D.*, +, *TCSII June 2021 2127-2131*
- Matrix inversion**
- Approximate Expectation Propagation Massive MIMO Detector With Weighted Neumann-Series. *Tan, X.*, +, *TCSII Feb. 2021 662-666*
- Revisiting the Adjoint Matrix for FPGA Calculating the Triangular Matrix Inversion. *Yan, D.*, +, *TCSII June 2021 2127-2131*
- Matrix multiplication**
- A 65nm Thermometer-Encoded Time/Charge-Based Compute-in-Memory Neural Network Accelerator at 0.735pJ/MAC and 0.41pJ/Update. *Gong, M.*, +, *TCSII April 2021 1408-1412*
- Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V.*, *TCSII Feb. 2021 581-586*
- Time Complexity of In-Memory Matrix-Vector Multiplication. *Sun, Z.*, +, *TCSII Aug. 2021 2785-2789*
- Maximum entropy methods**
- Robust Constrained Generalized Correntropy and Maximum Versoria Criterion Adaptive Filters. *Bhattacharjee, S.S.*, +, *TCSII Aug. 2021 3002-3006*
- Maximum likelihood decoding**
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- Maximum likelihood estimation**
- Adversarial Examples Detection of Radio Signals Based on Multifeature Fusion. *Xu, D.*, +, *TCSII Dec. 2021 3607-3611*
- Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification. *Habibi, Z.*, +, *TCSII Aug. 2021 3032-3036*
- Maximum power point trackers**
- Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved V-f Model. *Wang, Y.*, +, *TCSII Sept. 2021 3103-3107*
- Mean square error methods**
- A Distributed Algorithm for Tracking General Functions of Multiple Signals Not-Necessarily Having Steady States. *Wang, W.*, +, *TCSII June 2021 2107-2111*
- A K-Band Dual-Mode Common Gate Cross-Summing VG-LNA With Low Phase Variation. *Park, S.*, +, *TCSII July 2021 2438-2442*
- A Robust Fully Arctangent Interpolated Volterra Filtering Algorithm Against Impulsive Noise. *Liu, Q.*, +, *TCSII July 2021 2742-2746*
- All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021 186-190*
- Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A.*, +, *TCSII June 2021 1887-1891*
- Fixed-Point Minimum Error Entropy With Sparsity Penalty Constraints. *Li, J.*, +, *TCSII Aug. 2021 2997-3001*
- Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*
- Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function. *Liang, T.*, +, *TCSII June 2021 2227-2231*
- Steady State Mean Square Analysis of Standard Maximum Versoria Criterion Based Adaptive Algorithm. *Radhika, S.*, +, *TCSII April 2021 1547-1551*
- Steady-State Mean-Square Error Analysis for Non-Negative Least Lncosh Algorithm. *Sun, Z.*, +, *TCSII June 2021 2237-2241*
- Steady-State Mean-Square Error Performance Analysis of the Tensor LMS Algorithm. *Zhang, N.*, +, *TCSII March 2021 1043-1047*
- Median filters**
- Time-Varying Graph Signal Denoising via Median Filters. *Tay, D.B.*, +, *TCSII March 2021 1053-1057*
- Medical computing**
- Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator. *Liu, Y.*, +, *TCSII Aug. 2021 2982-2986*
- Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T.*, +, *TCSII Feb. 2021 574-580*
- Medical disorders**
- A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*
- Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*
- Medical image processing**
- A Quick Method of Phase Fitting in RF Segmented Demodulation. *Zhang, L.*, *TCSII July 2021 2730-2734*
- LeukoX: Leukocyte Classification Using Least Entropy Combiner (LEC) for Ensemble Learning. *Ghosh, S.*, +, *TCSII Aug. 2021 2977-2981*
- Medical robotics**
- BAS Optimized ELM for KUKA iiwa Robot Learning. *Li, C.*, +, *TCSII June 2021 1987-1991*
- Medical signal detection**
- A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*
- A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*
- An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y.*, +, *TCSII May 2021 1610-1614*
- Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*

- On-Chip Fuzzy Logic Synthesis of a New Ischemic and Non-Ischemic Heartbeat Classifier. *De La Fuente-Cortes, G.*, +, *TCSII Jan. 2021 476-480*
- Medical signal processing**
- A 1.3 μ W Event-Driven ANN Core for Cardiac Arrhythmia Classification in Wearable Sensors. *Cai, Q.*, +, *TCSII Sept. 2021 3123-3127*
- A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*
- A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*
- A Low-Cost Bioimpedance Phase Angle Monitor for Portable Electrical Surface Stimulation Burn Prevention. *Burns, R.P.*, +, *TCSII April 2021 1118-1122*
- An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arasteh, O.*, +, *TCSII Jan. 2021 151-155*
- An Energy-Efficient Haar Wavelet Transform Architecture for Respiratory Signal Processing. *da Rosa, M.M.*, +, *TCSII Feb. 2021 597-601*
- Complex Network Analysis of Experimental EEG Signals for Decoding Brain Cognitive State. *Gao, Z.*, +, *TCSII Jan. 2021 531-535*
- Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G.*, +, *TCSII May 2021 1725-1729*
- Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*
- Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*
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- VLSI Implementation of Multi-Channel ECG Lossless Compression System. *Tsai, T.*, +, *TCSII Aug. 2021 2962-2966*
- Meetings**
- Guest Editorial Special Issue on the 2021 IEEE International Symposium on Circuits and Systems. *Ha, Y.*, +, *TCSII May 2021 1565*
- Guest Editorial Special Issue on the 2021 ISICAS: A CAS Journal Track Symposium. *Ha, Y.*, +, *TCSII Sept. 2021 3037*
- Memory architecture**
- A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications. *Zhang, H.*, +, *TCSII May 2021 1695-1699*
- A 64K-Neuron 64M-1b-Synapse 2.64pJ/SOP Neuromorphic Chip With All Memory on Chip for Spike-Based Models in 65nm CMOS. *Kuang, Y.*, +, *TCSII July 2021 2655-2659*
- A Novel DRAM Architecture for Improved Bandwidth Utilization and Latency Reduction Using Dual-Page Operation. *Sudarshan, C.*, +, *TCSII May 2021 1615-1619*
- Design Exploration of Sensing Techniques in 2T-2R Resistive Ternary CAMs. *Rakka, M.*, +, *TCSII Feb. 2021 762-766*
- Resonant Energy Recycling SRAM Architecture. *Islam, R.*, +, *TCSII April 2021 1383-1387*
- Memristor circuits**
- LATIM: Loading-Aware Offline Training Method for Inverter-Based Memristive Neural Networks. *Vahdat, S.*, +, *TCSII Oct. 2021 3346-3350*
- Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*
- Memristors**
- A Note on Sampled-Data Synchronization of Memristor Networks Subject to Actuator Failures and Two Different Activations. *Ding, K.*, +, *TCSII June 2021 2097-2101*
- A Switched Capacitor Memristive Emulator. *Svetoslavov, G.*, +, *TCSII April 2021 1463-1466*
- AIDX: Adaptive Inference Scheme to Mitigate State-Drift in Memristive VMM Accelerators. *Liu, T.*, +, *TCSII April 2021 1128-1132*
- Analog Self-Timed Programming Circuits for Aging Memristors. *Irmanova, A.*, +, *TCSII April 2021 1133-1137*
- Binary Memristive Synapse Based Vector Neural Network Architecture and Its Application. *Liu, H.*, +, *TCSII Feb. 2021 772-776*
- Electronically Controllable Memcapacitor Circuit With Experimental Results. *Yesil, A.*, +, *TCSII April 2021 1443-1447*
- Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator. *Liu, Y.*, +, *TCSII Aug. 2021 2982-2986*
- Importance of the Window Function Choice for the Predictive Modelling of Memristors. *Slipko, V.A.*, +, *TCSII June 2021 2167-2171*
- Integrating Two Logics Into One Crossbar Array for Logic Gate Design. *Yao, L.*, +, *TCSII Aug. 2021 2987-2991*
- Memristor-Coupled Logistic Hyperchaotic Map. *Bao, B.*, +, *TCSII Aug. 2021 2992-2996*
- Parameter Identification of Memristor-Based Chaotic Systems via the Drive-Response Synchronization Method. *Liu, H.*, +, *TCSII June 2021 2082-2086*
- The Simple Charge-Controlled Grounded/Floating Mem-Element Emulator. *Liu, Y.*, +, *TCSII June 2021 2177-2181*
- Two-Memristor-Based Chaotic System With Infinite Coexisting Attractors. *Lai, Q.*, +, *TCSII June 2021 2197-2201*
- Merging**
- High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA. *Wu, W.*, +, *TCSII July 2021 2650-2654*
- Microactuators**
- A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μ m CMOS. *Zeng, X.*, +, *TCSII June 2021 1812-1816*
- Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators. *Han, S.*, +, *TCSII Aug. 2021 2902-2906*
- Microcontrollers**
- A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M.*, +, *TCSII Sept. 2021 3182-3186*
- Parametric Control for Multi-Scroll Attractor Generation via Nested Sine-PWL Function. *Wang, N.*, +, *TCSII March 2021 1033-1037*
- Two-Memristor-Based Chaotic System With Infinite Coexisting Attractors. *Lai, Q.*, +, *TCSII June 2021 2197-2201*
- Micromachining**
- A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV^2f . *Choi, K.*, +, *TCSII March 2021 858-862*
- Micromechanical resonators**
- Analysis and Design Considerations for Achieving the Fundamental Limits of Phase Noise in mmWave Oscillators With On-Chip MEMS Resonator. *Srivastava, A.*, +, *TCSII April 2021 1108-1112*
- Microprocessor chips**
- A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network. *Kim, S.*, +, *TCSII May 2021 1675-1679*
- A 65nm Thermometer-Encoded Time/Charge-Based Compute-in-Memory Neural Network Accelerator at 0.735pJ/MAC and 0.41pJ/Update. *Gong, M.*, +, *TCSII April 2021 1408-1412*
- A High-Performance Core Micro-Architecture Based on RISC-V ISA for Low Power Applications. *Bora, S.*, +, *TCSII June 2021 2132-2136*
- A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z.*, +, *TCSII Sept. 2021 3153-3157*
- A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M.*, +, *TCSII Sept. 2021 3182-3186*
- Adversarial Hardware With Functional and Topological Camouflage. *Li, H.*, +, *TCSII May 2021 1685-1689*
- ASIP for 5G and Beyond: Opportunities and Vision. *Shahabuddin, S.*, +, *TCSII March 2021 851-857*
- Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*
- Display Stream Compression Decoders for Fine-Grained Many-Core Processor Arrays. *Wu, S.*, +, *TCSII May 2021 1730-1734*
- Efficient Incorporation of the RNS Datapath in Reverse Converter. *Taheri, M.*, +, *TCSII April 2021 1388-1392*
- Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*
- HAMBug: A Hybrid CPU-FPGA System to Detect Race Conditions. *Almeida, D.D.*, +, *TCSII Sept. 2021 3158-3162*
- TVFS: Topology Voltage Frequency Scaling for Reliable Embedded Con-vNets. *Rizzo, R.G.*, +, *TCSII Feb. 2021 672-676*

Microsensors

- A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μm CMOS. *Zeng, X.*, +, *TCSII June 2021 1812-1816*
- A 200 $\mu\text{g}/\sqrt{\text{Hz}}$, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer. *Tirupathi, R.*, +, *TCSII June 2021 1753-1757*
- Efficient Power Transfers in Piezoelectric Energy-Harvesting Switched-Inductor Chargers. *Yang, S.*, +, *TCSII April 2021 1248-1252*

Microstrip

- A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator. *Wang, C.*, +, *TCSII Nov. 2021 3426-3430*
- Design of 2×8 Filtering Butler Matrix With Arbitrary Power Distribution. *Shao, Q.*, +, *TCSII Dec. 2021 3527-3531*
- Design of a New Dual-Band Balanced-to-Balanced Filtering Power Divider Based on the Circular Microstrip Patch Resonator. *Zhang, G.*, +, *TCSII Dec. 2021 3542-3546*

Microstrip antenna arrays

- Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q.*, +, *TCSII Jan. 2021 236-240*

Microstrip antennas

- A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression. *Xun, M.*, +, *TCSII April 2021 1228-1232*
- A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator. *Wang, C.*, +, *TCSII Nov. 2021 3426-3430*

Microstrip circuits

- Diakoptics Modelling Applied to Flying Bird-Shape NGD Microstrip Circuit. *Ravelo, B.*, +, *TCSII Feb. 2021 637-641*

Microstrip couplers

- Accurate Isolation Networks in Quadrature Couplers and Power Dividers. *Sutbas, B.*, +, *TCSII April 2021 1148-1152*

Microstrip directional couplers

- Novel Multifunctional Dual-Band Coupled-Line Coupler With Reuse of Low-Frequency Trans-Directional and High-Frequency Contra-Directional Functions. *Zhang, Y.*, +, *TCSII June 2021 1917-1921*

Microstrip filters

- A Frequency Transformation for Co-Designed Multi-Passband/Multi-Embedded-Notch RF Filters. *Gomez-Garcia, R.*, +, *TCSII July 2021 2429-2433*
- A New Class of Wideband MS-to-MS Vialess Vertical Transition With Function of Filtering Performance. *Feng, L.*, +, *TCSII June 2021 1877-1881*
- Differential Filtering Phase Shifter With Wide Common-Mode Suppression Bandwidth and High Frequency Selectivity. *Shi, J.*, +, *TCSII July 2021 2379-2383*
- Exploiting Parasitic Capacitances in 3-D Inductors to Design RF CMOS Quasi-Elliptic-Type Broad-Band Bandpass Filters. *Zhu, X.*, +, *TCSII Sept. 2021 3128-3132*
- Switchable Diplexer Based on Coupling Control. *Xu, J.*, +, *TCSII Jan. 2021 166-170*
- Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*

Microstrip lines

- A Duo-Binary Transceiver With Time-Based Receiver and Voltage-Mode Time-Interleaved Mixing Transmitter for DRAM Interface. *Chae, M.*, +, *TCSII July 2021 2409-2413*
- A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G.*, +, *TCSII June 2021 1778-1782*
- Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency. *Noferesti, M.*, +, *TCSII Jan. 2021 171-175*
- Differential Filtering Phase Shifter With Wide Common-Mode Suppression Bandwidth and High Frequency Selectivity. *Shi, J.*, +, *TCSII July 2021 2379-2383*
- High Performance Balanced Bandpass Filters With Wideband Common Mode Suppression. *Feng, W.*, +, *TCSII June 2021 1897-1901*
- Novel Multifunctional Dual-Band Coupled-Line Coupler With Reuse of Low-Frequency Trans-Directional and High-Frequency Contra-Directional Functions. *Zhang, Y.*, +, *TCSII June 2021 1917-1921*

- Ultra-Broadband Bandpass Filter Using Linearly Tapered Coupled-Microstrip Line and Open Loop Defected Ground Structure. *Sangam, R.S.*, +, *TCSII Jan. 2021 181-185*

- Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*

Microstrip resonators

- Design of a New Dual-Band Balanced-to-Balanced Filtering Power Divider Based on the Circular Microstrip Patch Resonator. *Zhang, G.*, +, *TCSII Dec. 2021 3542-3546*

Microstrip transitions

- A New Class of Wideband MS-to-MS Vialess Vertical Transition With Function of Filtering Performance. *Feng, L.*, +, *TCSII June 2021 1877-1881*
- Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*
- Dual-Band and Tri-Band Balanced-to-Single Ended Power Dividers With Wideband Common-Mode Suppression. *Zhu, H.*, +, *TCSII July 2021 2332-2336*

Microwave amplifiers

- A K-Band Dual-Mode Common Gate Cross-Summing VG-LNA With Low Phase Variation. *Park, S.*, +, *TCSII July 2021 2438-2442*
- X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*

Microwave detectors

- Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*

Microwave diodes

- Parasitic Compensation and Hence Isolation Improvement of PIN Diode-Based Switches. *Singh, A.*, +, *TCSII Jan. 2021 97-101*

Microwave filters

- A 3.9GHz/63.6% FBW Multi-Mode Filtering Power Divider Using Self-Packaged SISL. *Xiao, J.*, +, *TCSII June 2021 1842-1846*
- A BPF Integrated SP4T Switch Using Parallel Switched Fractal Common Feeding Line. *Xu, J.*, +, *TCSII June 2021 1932-1936*
- A Dual Function Reconfigurable Bandpass Filter for Wideband and Tri-Band Operations. *Bandyopadhyay, A.*, +, *TCSII June 2021 1892-1896*
- A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G.*, +, *TCSII June 2021 1778-1782*
- All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021 186-190*
- Differential Filtering Phase Shifter With Wide Common-Mode Suppression Bandwidth and High Frequency Selectivity. *Shi, J.*, +, *TCSII July 2021 2379-2383*
- Exploiting Parasitic Capacitances in 3-D Inductors to Design RF CMOS Quasi-Elliptic-Type Broad-Band Bandpass Filters. *Zhu, X.*, +, *TCSII Sept. 2021 3128-3132*
- Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters. *Fu, W.*, +, *TCSII July 2021 2352-2356*
- QMSIW-Based Single and Triple Band Bandpass Filters. *Iqbal, A.*, +, *TCSII July 2021 2443-2447*
- Reconfigurable-Bandwidth DWB BPF With Fixed Operation Frequency and Controllable Stopband. *Bi, X.*, +, *TCSII Jan. 2021 141-145*
- Simultaneous Wireless Power and Information Transfer Using Coupled Co-Existing Defected Ground Structure Resonators. *Barakat, A.*, +, *TCSII Feb. 2021 632-636*
- Switchable Diplexer Based on Coupling Control. *Xu, J.*, +, *TCSII Jan. 2021 166-170*
- Synthesis of Wideband Filtering Couplers for Arbitrary High Power-Division Ratios Based on Three Different Types of Coupled-Line Sections. *Zheng, Y.*, +, *TCSII April 2021 1218-1222*
- Triple-Mode Substrate Integrated Coaxial Resonator Based Bandpass Filter Featuring Flexible Transmission Zeros and Adjustable Bandwidth. *Krishna, I.S.*, +, *TCSII April 2021 1223-1227*
- Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*

- Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPTD Technology. *Kong, M.*, +, *TCSII July 2021 2414-2418*
- X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*
- Microwave heating**
- Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*
- Microwave integrated circuits**
- 28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*
- All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021 186-190*
- Microwave measurement**
- Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*
- Microwave metamaterials**
- Dual Q/V -Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines. *Lee, D.*, +, *TCSII March 2021 898-902*
- Microwave mixers**
- A Low-Noise and High-Gain Folded Mixer for a UWB System in 0.18- μm SiGe Bi-CMOS Technology. *Chen, J.*, +, *TCSII Feb. 2021 612-616*
- Simplified Harmonic Rejection Mixer Analysis and Design Based on a Filtered Periodic Impulse Model. *de Boer, P.*, +, *TCSII July 2021 2292-2296*
- Microwave phase shifters**
- All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021 186-190*
- An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in 0.18 μm SiGe BiCMOS. *Li, Z.*, +, *TCSII June 2021 1763-1767*
- Differential Filtering Phase Shifter With Wide Common-Mode Suppression Bandwidth and High Frequency Selectivity. *Shi, J.*, +, *TCSII July 2021 2379-2383*
- Frequency-Reconfigurable Phase Shifter Based on a 65-nm CMOS Process for 5G Applications. *Lin, Y.*, +, *TCSII Aug. 2021 2825-2829*
- X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*
- Microwave power amplifiers**
- A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R.*, +, *TCSII Jan. 2021 246-250*
- Microwave receivers**
- Effect of Various Delay Line Ratios and Their Non-Linearity on the Performance of DIFM. *Singh, S.*, +, *TCSII June 2021 1907-1911*
- Microwave resonators**
- Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters. *Fu, W.*, +, *TCSII July 2021 2352-2356*
- Microwave switches**
- A BPF Integrated SP4T Switch Using Parallel Switched Fractal Common Feeding Line. *Xu, J.*, +, *TCSII June 2021 1932-1936*
- All-Pass Network and Transformer Based SiGe BiCMOS Phase Shifter for Multi-Band Arrays. *Caliskan, C.*, +, *TCSII Jan. 2021 186-190*
- Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H.*, +, *TCSII Jan. 2021 191-195*
- Parasitic Compensation and Hence Isolation Improvement of PIN Diode-Based Switches. *Singh, A.*, +, *TCSII Jan. 2021 97-101*
- Millimeter wave amplifiers**
- A 21-to-41-GHz High-Gain Low Noise Amplifier With Triple-Coupled Technique for Multiband Wireless Applications. *Yu, Y.*, +, *TCSII June 2021 1857-1861*
- Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G.*, +, *TCSII Sept. 2021 3098-3102*
- Dual Q/V -Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines. *Lee, D.*, +, *TCSII March 2021 898-902*
- Millimeter-wave Frequency Reconfigurable Low Noise Amplifiers for 5G. *Shaheen, R.A.*, +, *TCSII Feb. 2021 642-646*
- Millimeter wave circuits**
- Realization of a Compact and High-Performance Power Divider Using Parallel RC Isolation Network. *Lin, Y.*, +, *TCSII April 2021 1368-1372*
- Millimeter wave communication**
- A Stop Condition for Compressed Recovery of Random Modulated Signal. *Dao, X.*, +, *TCSII April 2021 1557-1561*
- Frequency-Reconfigurable Phase Shifter Based on a 65-nm CMOS Process for 5G Applications. *Lin, Y.*, +, *TCSII Aug. 2021 2825-2829*
- Millimeter wave couplers**
- Accurate Isolation Networks in Quadrature Couplers and Power Dividers. *Sutbas, B.*, +, *TCSII April 2021 1148-1152*
- Millimeter wave detectors**
- A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL. *Wang, H.*, +, *TCSII June 2021 1852-1856*
- Millimeter wave filters**
- Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*
- Exploiting Parasitic Capacitances in 3-D Inductors to Design RF CMOS Quasi-Elliptic-Type Broad-Band Bandpass Filters. *Zhu, X.*, +, *TCSII Sept. 2021 3128-3132*
- Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z.*, +, *TCSII May 2021 1586-1590*
- Ultra-Low-Loss Millimeter-Wave LTCC Bandpass Filters Based on Flexible Design of Lumped and Distributed Circuits. *Shen, G.*, +, *TCSII April 2021 1123-1127*
- Millimeter wave frequency converters**
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- Millimeter wave integrated circuits**
- Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*
- Dual Q/V -Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines. *Lee, D.*, +, *TCSII March 2021 898-902*
- Millimeter wave mixers**
- A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band. *Maiwald, T.*, +, *TCSII July 2021 2277-2281*
- A V-Band High Gain Sub-Harmonic Down-Conversion Mixer Using PMOS Cross Couple Pair to Implement Negative Impedance and Current-Bleeding Technique. *Chang, Y.*, +, *TCSII Aug. 2021 2765-2769*
- Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G.*, +, *TCSII Sept. 2021 3098-3102*
- Millimeter wave oscillators**
- A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL. *Wang, H.*, +, *TCSII June 2021 1852-1856*
- A Wideband CMOS Frequency Quadrupler With Transformer-Based Tail Feedback Loop. *Yu, Y.*, +, *TCSII April 2021 1153-1157*
- Analysis and Design Considerations for Achieving the Fundamental Limits of Phase Noise in mmWave Oscillators With On-Chip MEMS Resonator. *Srivastava, A.*, +, *TCSII April 2021 1108-1112*
- Millimeter wave phase shifters**
- A 15–38 GHz Vector-Summing Phase-Shifter With 360° Phase-Shifting Range Using Improved I/Q Generator. *Qiu, F.*, +, *TCSII Oct. 2021 3199-3203*
- A 24-29.5 GHz Voltage-Combined Doherty Power Amplifier Based on Compact Low-Loss Combiner. *Wang, D.*, +, *TCSII July 2021 2342-2346*
- A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X.*, +, *TCSII July 2021 2419-2423*
- A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C.*, +, *TCSII April 2021 1158-1162*
- A 52–58 GHz Power Amplifier With 18.6-dBm Saturated Output Power for Space Applications. *Tsao, Y.*, +, *TCSII June 2021 1927-1931*
- A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS. *Liu, H.*, +, *TCSII June 2021 1847-1851*
- A High-Linearity Adaptive-Bias SiGe Power Amplifier for 5G Communication. *Li, H.*, +, *TCSII Aug. 2021 2770-2774*
- A Ka-Band Variable-Gain Phase Shifter With Multiple Vector Generators. *Park, J.*, +, *TCSII June 2021 1798-1802*

Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G.*, +, *TCSII Sept. 2021 3098-3102*

Frequency-Reconfigurable Phase Shifter Based on a 65-nm CMOS Process for 5G Applications. *Lin, Y.*, +, *TCSII Aug. 2021 2825-2829*

Millimeter wave propagation

A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance. *Shakya, D.*, +, *TCSII Sept. 2021 3043-3047*

Millimeter wave radar

Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*

Millimeter wave receivers

A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance. *Shakya, D.*, +, *TCSII Sept. 2021 3043-3047*

Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G.*, +, *TCSII Sept. 2021 3098-3102*

Millimeter wave transistors

A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C.*, +, *TCSII April 2021 1158-1162*

MIM devices

Miniaturized, Ultra-Wideband and High Isolation Single Pole Double Throw Switch by Using π -Type Topology in GaAs pHEMT Technology. *Zhu, H.*, +, *TCSII Jan. 2021 191-195*

MIMO communication

A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R.*, +, *TCSII Jan. 2021 246-250*

A Physical Transmitter Implementation of a Quadrature Space Shift Keying MIMO System. *Hiari, O.*, +, *TCSII Jan. 2021 251-255*

Approximate Expectation Propagation Massive MIMO Detector With Weighted Neumann-Series. *Tan, X.*, +, *TCSII Feb. 2021 662-666*

Channel Estimation for MmWave Massive MIMO With Hybrid Precoding Based on Log-Sum Sparse Constraints. *Zhang, A.*, +, *TCSII June 2021 1882-1886*

Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J.*, +, *TCSII April 2021 1183-1187*

SMUL-FFT: A Streaming Multiplierless Fast Fourier Transform. *Mirfarsh-bafan, S.H.*, +, *TCSII May 2021 1715-1719*

Minimax techniques

A Novel Scheme for Real-Time Max/Min-Set-Selection Sorters on FPGA. *Yan, D.*, +, *TCSII July 2021 2665-2669*

Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation. *Tseng, C.*, +, *TCSII May 2021 1630-1634*

Minimization

Fast Direction-of-Arrival Estimation via Coarray Interpolation Based on Truncated Nuclear Norm Regularization. *Yadav, S.K.*, +, *TCSII April 2021 1522-1526*

Separating Radar Signals From Impulsive Noise Using Atomic Norm Minimization. *Bayat, S.*, +, *TCSII June 2021 2212-2216*

Minimum entropy methods

Fixed-Point Minimum Error Entropy With Sparsity Penalty Constraints. *Li, J.*, +, *TCSII Aug. 2021 2997-3001*

Minimum shift keying

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

Mixed analog digital integrated circuits

A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R.*, +, *TCSII July 2021 2272-2276*

Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V.*, *TCSII Feb. 2021 581-586*

Mixers (circuits)

A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band. *Maiwald, T.*, +, *TCSII July 2021 2277-2281*

A V-Band High Gain Sub-Harmonic Down-Conversion Mixer Using PMOS Cross Couple Pair to Implement Negative Impedance and Current-Bleeding Technique. *Chang, Y.*, +, *TCSII Aug. 2021 2765-2769*

Evaluation of Mixed-Radix Digit Computation Techniques for the Three Moduli RNS $\{2n-1, 2n, 2n+1-1\}$. *Mohan, P.V.A.*, +, *TCSII April 2021 1418-1422*

Mixture models

A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*

Markovian Adaptive Filtering Algorithm for Block-Sparse System Identification. *Habibi, Z.*, +, *TCSII Aug. 2021 3032-3036*

MMIC

A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G.*, +, *TCSII June 2021 1778-1782*

Accurate Isolation Networks in Quadrature Couplers and Power Dividers. *Sutbas, B.*, +, *TCSII April 2021 1148-1152*

X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*

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MMIC oscillators

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*

MMIC phase shifters

A 15–38 GHz Vector-Summing Phase-Shifter With 360° Phase-Shifting Range Using Improved I/Q Generator. *Qiu, F.*, +, *TCSII Oct. 2021 3199-3203*

A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X.*, +, *TCSII July 2021 2419-2423*

A Ka-Band Variable-Gain Phase Shifter With Multiple Vector Generators. *Park, J.*, +, *TCSII June 2021 1798-1802*

MMIC power amplifiers

A 24–30 GHz 31.7% Fractional Bandwidth Power Amplifier With an Adaptive Capacitance Linearizer. *Lee, J.*, +, *TCSII April 2021 1163-1167*

A 28-GHz Doherty Power Amplifier With a Compact Transformer-Based Quadrature Hybrid in 65-nm CMOS. *Yu, C.*, +, *TCSII Aug. 2021 2790-2794*

Mobile computing

A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network. *Kim, S.*, +, *TCSII May 2021 1675-1679*

Mobile robots

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R.*, +, *TCSII Jan. 2021 416-420*

Discrete-Time Sliding Mode Control Design for Unicycle Robot With Bounded Inputs. *Thomas, M.*, +, *TCSII Aug. 2021 2912-2916*

Distance- and Velocity-Based Collision Avoidance for Time-Varying Formation Control of Second-Order Multi-Agent Systems. *Pang, Z.*, +, *TCSII April 2021 1253-1257*

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*

Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K.*, +, *TCSII Oct. 2021 3316-3320*

Hybrid System Control for Robot Motors Based on a Reduced Component, Multi-Voltage Power Supply System. *Kim, T.*, +, *TCSII Dec. 2021 3582-3586*

Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*

Modal analysis

On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D.*, +, *TCSII July 2021 2468-2472*

Modulation

- A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces. *Lee, S.*, +, *TCSII June 2021 1862-1866*
- A High Data Rate Solution for Differential Chaos Shift Keying Based on Carrier Index Modulation. *Yang, H.*, +, *TCSII April 2021 1487-1491*
- A Physical Transmitter Implementation of a Quadrature Space Shift Keying MIMO System. *Hiari, O.*, +, *TCSII Jan. 2021 251-255*
- Balanced Multi-Cell Modulation for Flash Memory. *Ismail, A.*, +, *TCSII July 2021 2394-2398*

Monopole antennas

- Isolation Enhancement in Dual-Band Monopole Antenna for 5G Applications. *Wang, W.*, +, *TCSII June 2021 1867-1871*

Monte Carlo methods

- A Physical Transmitter Implementation of a Quadrature Space Shift Keying MIMO System. *Hiari, O.*, +, *TCSII Jan. 2021 251-255*
- Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit. *Chithra, .*, +, *TCSII June 2021 1788-1792*
- Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M.*, +, *TCSII Jan. 2021 481-485*

MOS integrated circuits

- A V-Band High Gain Sub-Harmonic Down-Conversion Mixer Using PMOS Cross Couple Pair to Implement Negative Impedance and Current-Bleeding Technique. *Chang, Y.*, +, *TCSII Aug. 2021 2765-2769*

MOSFET

- A 42nA I_{Q1} , 1.5–6V V_{IN} , Self-Regulated CMOS Voltage Reference With –93dB PSR at 10 Hz for Energy Harvesting Systems. *Chen, Y.*, +, *TCSII July 2021 2357-2361*
- A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting. *Chong, G.*, +, *TCSII June 2021 1743-1747*
- Fast Gate Leakage Current Monitor With Large Dynamic Range. *Bhatheja, K.*, +, *TCSII May 2021 1690-1694*
- Half-Select Disturb-Free 10T Tunnel FET SRAM Cell With Improved Noise Margin and Low Power Consumption. *Lin, Z.*, +, *TCSII July 2021 2628-2632*
- New Charge-Steering DFEs in 55-nm CMOS. *Pike, J.*, +, *TCSII Jan. 2021 231-235*

MOSFET circuits

- A 2.5 ppm/°C Voltage Reference Combining Traditional BGR and ZTC MOSFET High-Order Curvature Compensation. *Liu, X.*, +, *TCSII April 2021 1093-1097*
- A Robust, High-Speed and Energy-Efficient Ultralow-Voltage Level Shifter. *Fassio, L.*, +, *TCSII April 2021 1393-1397*
- An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M.*, +, *TCSII June 2021 1817-1821*
- Balanced Multi-Cell Modulation for Flash Memory. *Ismail, A.*, +, *TCSII July 2021 2394-2398*

Motion control

- A Sparse Optimization-Based Control Method for Manipulator With Simultaneous Potential Energy Minimization. *Li, Z.*, +, *TCSII June 2021 2062-2066*
- Design of Discrete-Time Sliding Mode Control With Disturbance Compensator-Based Switching Function. *Ma, H.*, +, *TCSII April 2021 1268-1272*

Motor drives

- A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S.*, +, *TCSII July 2021 2493-2497*

MRAM devices

- Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory. *Yu, Z.*, +, *TCSII May 2021 1665-1669*
- STT-MRAM Sensing: A Review. *Na, T.*, +, *TCSII Jan. 2021 12-18*
- Toward Energy-Efficient STT-MRAM Design With Multi-Modes Reconfiguration. *Cai, H.*, +, *TCSII July 2021 2633-2639*

Multi-agent systems

- A Distributed Algorithm for Tracking General Functions of Multiple Signals Not-Necessarily Having Steady States. *Wang, W.*, +, *TCSII June 2021 2107-2111*

- A Rigid Formation Control Approach for Multi-Agent Systems With Curvature Constraints. *Zhao, Y.*, +, *TCSII Nov. 2021 3431-3435*
- Admissible Bipartite Consensus in Networks of Singular Agents Over Signed Graphs. *Liu, T.*, +, *TCSII Aug. 2021 2880-2884*
- Bipartite Finite Time and Fixed Time Output Consensus of Heterogeneous Multiagent Systems Under State Feedback Control. *Hao, L.*, +, *TCSII June 2021 2067-2071*
- Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T.*, +, *TCSII Jan. 2021 281-285*
- Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*
- Bounded Leader-Following Consensus of Heterogeneous Directed Delayed Multi-Agent Systems via Asynchronous Impulsive Control. *Gong, J.*, +, *TCSII July 2021 2680-2684*
- Consensus of the Hybrid Multiagent System Under Impulse Control. *Yu, Z.*, +, *TCSII July 2021 2573-2577*
- Cooperative Adaptive H_∞ Output Regulation of Continuous-Time Heterogeneous Multi-Agent Markov Jump Systems. *Dong, S.*, +, *TCSII Oct. 2021 3261-3265*
- Cooperative Bipartite Containment Control for Heterogeneous Networks With Structurally Balanced Graph. *Zhou, Y.*, +, *TCSII Aug. 2021 2885-2889*
- Cooperative Control for Nonlinear Multi-Agent Systems Based on Event-Triggered Scheme. *Shi, J.*, *TCSII June 2021 1977-1981*
- Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G.*, +, *TCSII March 2021 938-942*
- Distributed Dynamic Event-Based Control for Nonlinear Multi-Agent Systems. *Tan, X.*, +, *TCSII Feb. 2021 687-691*
- Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems. *Ran, G.*, +, *TCSII Jan. 2021 276-280*
- Event-Based Leader-Following Synchronization of Coupled Harmonic Oscillators Under Jointly Connected Switching Topologies. *Cai, J.*, +, *TCSII March 2021 958-962*
- Event-Triggered Bipartite Consensus in Networked Euler–Lagrange Systems With External Disturbance. *Deng, Q.*, +, *TCSII Aug. 2021 2870-2874*
- Evolutionary Game Dynamics Based on Local Intervention in Multi-Agent Systems. *Zhu, Y.*, +, *TCSII April 2021 1293-1297*
- Finite-Time Distributed Optimal Tracking for Multiple Heterogeneous Linear Systems. *Zhong, Z.*, +, *TCSII April 2021 1258-1262*
- Formation Tracking of Second-Order Multi-Agent Systems With Multiple Leaders Based on Sampled Data. *Liu, C.*, +, *TCSII Jan. 2021 331-335*
- Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z.*, +, *TCSII Jan. 2021 336-340*
- Global Adaptive Leader-Following Consensus for Second-Order Nonlinear Multiagent Systems With Switching Topologies. *Zou, W.*, +, *TCSII Feb. 2021 702-706*
- Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y.*, +, *TCSII July 2021 2593-2597*
- Leader–Follower Affine Formation Control of Second-Order Nonlinear Uncertain Multi-Agent Systems. *Zhi, H.*, +, *TCSII Dec. 2021 3547-3551*
- Leader-Following Tracking Control of Discrete-Time Uncertain Nonlinear MASs With Parametric and Nonparametric State Couplings. *Li, S.*, +, *TCSII June 2021 2037-2041*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism. *Xu, H.*, +, *TCSII June 2021 2117-2121*
- Resilient Consensus of Multi-Agent Systems With Switching Topologies: A Trusted-Region-Based Sliding-Window Weighted Approach. *Zhai, Y.*, +, *TCSII July 2021 2448-2452*
- Resilient Impulsive Control for Second-Order Consensus Under Malicious Nodes. *Yan, J.*, +, *TCSII June 2021 1962-1966*

- Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*
- Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*
- Velocity Constraint on Double-Integrator Dynamics Subject to Antagonistic Information. *Zhang, Y.*, +, *TCSII Jan. 2021 411-415*
- Multi-robot systems**
- Bipartite Finite Time and Fixed Time Output Consensus of Heterogeneous Multiagent Systems Under State Feedback Control. *Hao, L.*, +, *TCSII June 2021 2067-2071*
- Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T.*, +, *TCSII Jan. 2021 281-285*
- Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*
- Cooperative Bipartite Containment Control for Heterogeneous Networks With Structurally Balanced Graph. *Zhou, Y.*, +, *TCSII Aug. 2021 2885-2889*
- Cooperative Control for Nonlinear Multi-Agent Systems Based on Event-Triggered Scheme. *Shi, J.*, *TCSII June 2021 1977-1981*
- Distance- and Velocity-Based Collision Avoidance for Time-Varying Formation Control of Second-Order Multi-Agent Systems. *Pang, Z.*, +, *TCSII April 2021 1253-1257*
- Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G.*, +, *TCSII March 2021 938-942*
- Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems. *Ran, G.*, +, *TCSII Jan. 2021 276-280*
- Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K.*, +, *TCSII Oct. 2021 3316-3320*
- Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z.*, +, *TCSII Jan. 2021 336-340*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism. *Xu, H.*, +, *TCSII June 2021 2117-2121*
- Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*
- Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*
- Multichip modules**
- DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X.*, +, *TCSII June 2021 2077-2081*
- Multifrequency antennas**
- Isolation Enhancement in Dual-Band Monopole Antenna for 5G Applications. *Wang, W.*, +, *TCSII June 2021 1867-1871*
- Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q.*, +, *TCSII Jan. 2021 236-240*
- Multilevel converters**
- A MMC-Based Multiport AC–N–DC Converter for Hybrid AC/DC Systems. *Ma, D.*, +, *TCSII Dec. 2021 3567-3571*
- Multilevel inverters**
- A 7-Level Switched Capacitor Multilevel Inverter With Reduced Switches and Voltage Stresses. *Roy, T.*, +, *TCSII Dec. 2021 3587-3591*
- Multipath channels**
- A High Data Rate Solution for Differential Chaos Shift Keying Based on Carrier Index Modulation. *Yang, H.*, +, *TCSII April 2021 1487-1491*
- A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance. *Shakya, D.*, +, *TCSII Sept. 2021 3043-3047*
- Multiplexing**
- Spacetime Frequency-Multiplexed Digital-RF Array Receivers With Reduced ADC Count. *Akram, N.*, +, *TCSII Aug. 2021 2840-2844*
- Multiplexing equipment**
- Optimum MDC FFT Hardware Architectures in Terms of Delays and Multiplexers. *Garrido, M.*, +, *TCSII March 2021 1003-1007*
- Switchable Diplexer Based on Coupling Control. *Xu, J.*, +, *TCSII Jan. 2021 166-170*
- Multiplying circuits**
- A High-Performance and Low-Cost Montgomery Modular Multiplication Based on Redundant Binary Representation. *Li, B.*, +, *TCSII July 2021 2660-2664*
- AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators. *Waris, H.*, +, *TCSII May 2021 1566-1570*
- BCD Adder Designs Based on Three-Input XOR and Majority Gates. *Chu, Z.*, +, *TCSII June 2021 1942-1946*
- Design of Ultra-Low Power Consumption Approximate 4–2 Compressors Based on the Compensation Characteristic. *Pei, H.*, +, *TCSII Jan. 2021 461-465*
- Improvement of Accuracy of Fixed-Width Booth Multipliers Using Data Scaling Technology. *Chen, Y.*, *TCSII March 2021 1018-1022*
- Low-Delay FPGA-Based Implementation of Finite Field Multipliers. *Imana, J.L.*, *TCSII Aug. 2021 2952-2956*
- Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*
- Multiport networks**
- Synthesis of Multi-Port Filtering Power Divider for Mixed Topology Using Matrix Optimization. *Chen, W.*, +, *TCSII Jan. 2021 176-180*
- Multiprocessing systems**
- Display Stream Compression Decoders for Fine-Grained Many-Core Processor Arrays. *Wu, S.*, +, *TCSII May 2021 1730-1734*
- Multivalued logic**
- Set Stabilization and Optimal Control of Switched Multi-Valued Logical Control Networks With State-Dependent Switching Signals. *Xu, N.*, +, *TCSII June 2021 1952-1956*
- N
- NAND circuits**
- A NAND-SPIN-Based Magnetic ADC. *Wu, B.*, +, *TCSII Feb. 2021 617-621*
- Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*
- Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory. *Yu, Z.*, +, *TCSII May 2021 1665-1669*
- Nanoelectromechanical devices**
- Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K.*, +, *TCSII Oct. 2021 3251-3255*
- Nanoelectronics**
- A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*
- Recent Advances and Trends in Noise Shaping SAR ADCs. *Salgado, G.M.*, +, *TCSII Feb. 2021 545-549*
- Nanotechnology**
- Accuracy Improved Low-Energy Multi-Bit Approximate Adders in QCA. *Perri, S.*, +, *TCSII Nov. 2021 3456-3460*
- Negative resistance**
- Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era. *Lei, K.*, +, *TCSII Jan. 2021 30-35*
- Network analysis**
- A Novel General-Purpose Theorem for the Analysis of Linear Circuits. *Reverter, F.*, +, *TCSII Jan. 2021 63-66*
- Synthesis Design on Wideband Single-Ended and Differential Dual-Band Filtering Impedance Transformer. *Chen, W.*, +, *TCSII March 2021 913-917*
- Network function virtualization**
- Game Theoretic Approach for a Service Function Chain Routing in NFV With Coupled Constraints. *Le, S.*, +, *TCSII Dec. 2021 3557-3561*
- Network routing**
- A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J.*, +, *TCSII Jan. 2021 471-475*

Placement and Routing Methods Considering Shape Constraints of JTL for RSFQ Circuits. *Zhai, J.*, +, *TCSII May 2021 1571-1575*

Network synthesis

AxLS: A Framework for Approximate Logic Synthesis Based on Netlist Transformations. *Castro-Godinez, J.*, +, *TCSII Aug. 2021 2845-2849*

Circuit Techniques for High Efficiency Fully-Integrated Switched-Capacitor Converters. *Jiang, J.*, +, *TCSII Feb. 2021 556-561*

Design Method for Tunable Planar Bandpass Filters With Single-Bias Control and Wide Tunable Frequency Range. *Lim, T.*, +, *TCSII Jan. 2021 221-225*

Design of 74% Fractional Bandwidth Continuous-Mode Doherty Power Amplifier Using Compensation Susceptance. *Sun, J.X.*, +, *TCSII June 2021 1827-1831*

Slew Rate in Self-Biased Ring Amplifiers. *De Jesus Guzman, M.*, +, *TCSII Aug. 2021 2795-2799*

Synthesis Design on Wideband Single-Ended and Differential Dual-Band Filtering Impedance Transformer. *Chen, W.*, +, *TCSII March 2021 913-917*

Synthesis of Multi-Port Filtering Power Divider for Mixed Topology Using Matrix Optimization. *Chen, W.*, +, *TCSII Jan. 2021 176-180*

Network theory (graphs)

Cooperative Bipartite Containment Control for Heterogeneous Networks With Structurally Balanced Graph. *Zhou, Y.*, +, *TCSII Aug. 2021 2885-2889*

Enhancing Coupled Networks Robustness via Removing Key Fragile Dependency Links. *Yang, X.*, +, *TCSII March 2021 953-957*

Event-Triggered Bipartite Consensus in Networked Euler-Lagrange Systems With External Disturbance. *Deng, Q.*, +, *TCSII Aug. 2021 2870-2874*

On Set Stability of Finite-Field Networks. *Zhu, W.*, +, *TCSII Oct. 2021 3311-3315*

Searching Better Rewiring Strategies and Objective Functions for Stronger Controllability Robustness. *Lou, Y.*, +, *TCSII June 2021 2112-2116*

Synchronization in Dynamical Systems Coupled via Multiple Directed Networks. *Wu, C.W.*, *TCSII May 2021 1660-1664*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X.*, +, *TCSII April 2021 1477-1481*

Network topology

A New Extremely Low Power Temperature Insensitive Electronically Tunable VCII-Based Grounded Capacitance Multiplier. *Stornelli, V.*, +, *TCSII Jan. 2021 72-76*

Diakoptics Modelling Applied to Flying Bird-Shape NGD Microstrip Circuit. *Ravelo, B.*, +, *TCSII Feb. 2021 637-641*

Fast Average-Consensus on Networks Using Heterogeneous Diffusion. *Pandey, P.K.*, +, *TCSII Nov. 2021 3421-3425*

Recent Advances and Trends in Noise Shaping SAR ADCs. *Salgado, G.M.*, +, *TCSII Feb. 2021 545-549*

Synthesis Design of Filtering Differential Phase Shifters of Independently Suppressed Harmonics. *Qiu, L.*, +, *TCSII Aug. 2021 2760-2764*

Network-on-chip

A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J.*, +, *TCSII Jan. 2021 471-475*

AI Technology for NoC Performance Evaluation. *Bhowmik, B.*, +, *TCSII Dec. 2021 3483-3487*

Networked control systems

Event-Triggered Bipartite Consensus in Networked Euler-Lagrange Systems With External Disturbance. *Deng, Q.*, +, *TCSII Aug. 2021 2870-2874*

Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities. *Dai, M.*, +, *TCSII Aug. 2021 2855-2859*

Memory-Event-Triggered H_∞ Filtering of Unmanned Surface Vehicles With Communication Delays. *Yan, S.*, +, *TCSII July 2021 2463-2467*

Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*

Positive Consensus in Fractional-Order Interval Networked Systems. *Ye, Y.*, +, *TCSII July 2021 2538-2542*

Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*

Neural chips

A 0.3-V Conductance-Based Silicon Neuron in 0.18 μm CMOS Process. *Akbari, M.*, +, *TCSII Oct. 2021 3209-3213*

A 64K-Neuron 64M-1b-Synapse 2.64pJ/SOP Neuromorphic Chip With All Memory on Chip for Spike-Based Models in 65nm CMOS. *Kuang, Y.*, +, *TCSII July 2021 2655-2659*

A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J.*, +, *TCSII Jan. 2021 471-475*

A New SCTN Digital Low Power Spiking Neuron. *Bensimon, M.*, +, *TCSII Aug. 2021 2937-2941*

A Novel Hardware-Oriented Recurrent Network of Asynchronous CA Neurons for a Neural Integrator. *Takeda, K.*, +, *TCSII Aug. 2021 2972-2976*

An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks. *Kim, B.*, +, *TCSII May 2021 1600-1604*

Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L.*, +, *TCSII May 2021 1640-1644*

Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*

Neural network architecture

A Resource-Efficient Inference Accelerator for Binary Convolutional Neural Networks. *Kim, T.*, +, *TCSII Jan. 2021 451-455*

Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C.*, +, *TCSII April 2021 1472-1476*

Lane Shared Bit-Pragmatic Deep Neural Network Computing Architecture and Circuit. *Yang, S.*, +, *TCSII Jan. 2021 486-490*

Neural networks

2-D Piecewise-Linear Neuron Model. *Bao, H.*, +, *TCSII April 2021 1453-1457*

A 1.3 μW Event-Driven ANN Core for Cardiac Arrhythmia Classification in Wearable Sensors. *Cai, Q.*, +, *TCSII Sept. 2021 3123-3127*

A 65nm Thermometer-Encoded Time/Charge-Based Compute-in-Memory Neural Network Accelerator at 0.735pJ/MAC and 0.41pJ/Update. *Gong, M.*, +, *TCSII April 2021 1408-1412*

A Cluster of FPAs to Recognize Images Using Neural Networks. *Garcia Moreno, D.*, +, *TCSII Nov. 2021 3391-3395*

A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J.*, +, *TCSII Jan. 2021 471-475*

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*

A New SCTN Digital Low Power Spiking Neuron. *Bensimon, M.*, +, *TCSII Aug. 2021 2937-2941*

An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *Zhou, K.*, +, *TCSII Aug. 2021 2932-2936*

Balancing the Cost and Performance Trade-Offs in SNN Processors. *Zheng, H.*, +, *TCSII Sept. 2021 3172-3176*

Binary Memristive Synapse Based Vector Neural Network Architecture and Its Application. *Liu, H.*, +, *TCSII Feb. 2021 772-776*

DeepPoison: Feature Transfer Based Stealthy Poisoning Attack for DNNs. *Chen, J.*, +, *TCSII July 2021 2618-2622*

Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J.*, +, *TCSII March 2021 993-997*

Dynamic Quaternion Extreme Learning Machine. *Chen, H.*, +, *TCSII Aug. 2021 3012-3016*

Enabling Lower-Power Charge-Domain Nonvolatile In-Memory Computing With Ferroelectric FETs. *Yin, G.*, +, *TCSII July 2021 2262-2266*

Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G.*, +, *TCSII May 2021 1725-1729*

Event-Triggered Synchronization for Discrete-Time Neural Networks With Unknown Delays. *Rong, N.*, +, *TCSII Oct. 2021 3296-3300*

False Data Injection Cyber-Attacks Mitigation in Parallel DC/DC Converters Based on Artificial Neural Networks. *Habibi, M.R.*, +, *TCSII Feb. 2021 717-721*

Fixed-Posit: A Floating-Point Representation for Error-Resilient Applications. *Gohil, V.*, +, *TCSII Oct. 2021 3341-3345*

Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G.*, +, *TCSII Jan. 2021 356-360*

H_∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y.*, +, *TCSII Jan. 2021 321-325*

How it Flies and Why it Flies? Volleyball Trajectory Segmentation and Classification. *Chen, C.*, +, *TCSII May 2021 1591-1595*

Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator. *Liu, Y.*, +, *TCSII Aug. 2021 2982-2986*

Insights Into the Dynamics of Coupled VO_2 Oscillators for ONNs. *Nunez, J.*, +, *TCSII Oct. 2021 3356-3360*

LATIM: Loading-Aware Offline Training Method for Inverter-Based Memristive Neural Networks. *Vahdat, S.*, +, *TCSII Oct. 2021 3346-3350*

Machine Learning for LLR Estimation in Flash Memory With LDPC Codes. *Sandell, M.*, +, *TCSII Feb. 2021 792-796*

Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T.*, +, *TCSII Feb. 2021 574-580*

Neural-Network Based Self-Initializing Algorithm for Multi-Parameter Optimization of High-Speed ADCs. *Bansal, S.*, +, *TCSII Jan. 2021 106-110*

Robust Randomized Autoencoder and Corentropy Criterion-Based One-Class Classification. *Cui, X.*, +, *TCSII April 2021 1517-1521*

Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B.*, +, *TCSII July 2021 2583-2587*

Side-Channel Gray-Box Attack for DNNs. *Xiang, Y.*, +, *TCSII Jan. 2021 501-505*

Structured Pruning of RRAM Crossbars for Efficient In-Memory Computing Acceleration of Deep Neural Networks. *Meng, J.*, +, *TCSII May 2021 1576-1580*

Neurocontrollers

A Unified Finite-/Fixed-Time Synchronization Approach to Multi-Layer Networks. *Xu, Y.*, +, *TCSII Jan. 2021 311-315*

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R.*, +, *TCSII Jan. 2021 416-420*

Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*

Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021 1318-1322*

Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective. *Li, Z.*, +, *TCSII Feb. 2021 742-746*

Neuromorphic engineering

A 64K-Neuron 64M-1b-Synapse 2.64pJ/SOP Neuromorphic Chip With All Memory on Chip for Spike-Based Models in 65nm CMOS. *Kuang, Y.*, +, *TCSII July 2021 2655-2659*

Efficient Deployment of Spiking Neural Networks on SpiNNaker Neuromorphic Platform. *Galanis, I.*, +, *TCSII June 2021 1937-1941*

Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P.*, +, *TCSII Sept. 2021 3148-3152*

Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V.*, *TCSII Feb. 2021 581-586*

Neurophysiology

2-D Piecewise-Linear Neuron Model. *Bao, H.*, +, *TCSII April 2021 1453-1457*

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*

An Analysis of CMRR Degradation in Multi-Channel Biosignal Recording Systems. *Malekzadeh-Arasteht, O.*, +, *TCSII Jan. 2021 151-155*

Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G.*, +, *TCSII May 2021 1725-1729*

Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator. *Liu, Y.*, +, *TCSII Aug. 2021 2982-2986*

Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T.*, +, *TCSII Feb. 2021 574-580*

Newton method

A Novel Conformal Design for Multi-Sensor System Synthesis. *Qian, J.*, +, *TCSII April 2021 1532-1536*

Hierarchical Estimation Approach for RBF-AR Models With Regression Weights Based on the Increasing Data Length. *Zhou, Y.*, +, *TCSII Dec. 2021 3597-3601*

Nickel

Ultra-Wideband and Compact Terahertz Planar Load Based on Spoof Surface Plasmon Polaritons With Nickel. *Le Zhang, Q.*, +, *TCSII June 2021 1922-1926*

Nonlinear control systems

A General Fixed-Time Observer for Lower-Triangular Nonlinear Systems. *Gao, F.*, +, *TCSII June 2021 1992-1996*

A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M.*, +, *TCSII March 2021 1023-1027*

A Novel Non-Singular Terminal Sliding Mode Trajectory Tracking Control for Robotic Manipulators. *Zhai, J.*, +, *TCSII Jan. 2021 391-395*

A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*

A Novel Self-Triggered MPC Scheme for Constrained Input-Affine Nonlinear Systems. *Li, P.*, +, *TCSII Jan. 2021 306-310*

A Reduced Complexity Random Fourier Filter Based Nonlinear Multichannel Narrowband Active Noise Control System. *Deb, T.*, +, *TCSII Jan. 2021 516-520*

A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y.*, +, *TCSII Jan. 2021 326-330*

Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C.*, +, *TCSII Oct. 2021 3301-3305*

Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model. *Li, Z.*, +, *TCSII Oct. 2021 3256-3260*

Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K.*, +, *TCSII June 2021 2047-2051*

Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control. *Li, W.*, +, *TCSII April 2021 1338-1342*

Cooperative Control for Nonlinear Multi-Agent Systems Based on Event-Triggered Scheme. *Shi, J.*, *TCSII June 2021 1977-1981*

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R.*, +, *TCSII Jan. 2021 416-420*

Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G.*, +, *TCSII March 2021 938-942*

Distributed Dynamic Event-Based Control for Nonlinear Multi-Agent Systems. *Tan, X.*, +, *TCSII Feb. 2021 687-691*

Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*

Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*

Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*

Event-Based Finite-Time Consensus Control of Second-Order Delayed Multi-Agent Systems. *Ran, G.*, +, *TCSII Jan. 2021 276-280*

Event-Based Prescribed Performance Control for Dynamic Positioning Vessels. *Wang, H.*, +, *TCSII July 2021 2548-2552*

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*

- Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation. *Shi, X.*, +, *TCSII March 2021 983-987*
- Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities. *Dai, M.*, +, *TCSII Aug. 2021 2855-2859*
- Finite-Time Projective Synchronization Control of Variable-Order Fractional Chaotic Systems via Sliding Mode Approach. *Meng, X.*, +, *TCSII July 2021 2503-2507*
- Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L.*, +, *TCSII Jan. 2021 301-305*
- Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*
- Global Adaptive Leader-Following Consensus for Second-Order Nonlinear Multiagent Systems With Switching Topologies. *Zou, W.*, +, *TCSII Feb. 2021 702-706*
- Global Fixed-Time Output Feedback Stabilization of Perturbed Planar Nonlinear Systems. *Gao, F.*, +, *TCSII Feb. 2021 707-711*
- Indefinite Lyapunov–Razumikhin Functions-Based Stability and Event-Triggered Control of Switched Nonlinear Time-Delay Systems. *Zhang, J.*, +, *TCSII Oct. 2021 3286-3290*
- Input Delay Estimation for Input-Affine Dynamical Systems Based on Taylor Expansion. *Zhang, Y.*, +, *TCSII April 2021 1298-1302*
- Interval State Estimator Design for Linear Parameter Varying (LPV) Systems. *Khan, A.*, +, *TCSII Aug. 2021 2865-2869*
- Invariant Manifold Based Output-Feedback Sliding Mode Control for Systems With Mismatched Disturbances. *Zhang, L.*, +, *TCSII March 2021 933-937*
- Leader-Following Tracking Control of Discrete-Time Uncertain Nonlinear MASs With Parametric and Nonparametric State Couplings. *Li, S.*, +, *TCSII June 2021 2037-2041*
- Lyapunov Stability Theory for Nonlinear Nabla Fractional Order Systems. *Wei, Y.*, *TCSII Oct. 2021 3246-3250*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*
- Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*
- Performance Residual Based Fault Detection for Feedback Control Systems. *Liu, R.*, +, *TCSII Oct. 2021 3291-3295*
- Prescribed Finite-Time H_∞ Control for Nonlinear Descriptor Systems. *Lu, X.*, +, *TCSII Aug. 2021 2917-2921*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective. *Li, Z.*, +, *TCSII Feb. 2021 742-746*
- Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint. *Liu, L.*, +, *TCSII April 2021 1278-1282*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W.*, +, *TCSII June 2021 2032-2036*
- Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*
- Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N.*, +, *TCSII June 2021 1957-1961*
- Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*
- State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*
- Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*
- Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*
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- Nonlinear dynamical systems**
- A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M.*, +, *TCSII March 2021 1023-1027*
- Input Delay Estimation for Input-Affine Dynamical Systems Based on Taylor Expansion. *Zhang, Y.*, +, *TCSII April 2021 1298-1302*
- Multiple Potential Well Precision Oscillators. *Viviani, G.L.*, *TCSII Aug. 2021 2967-2971*
- Multivaluedness in Networks: Exemplars. *van Wyk, M.A.*, +, *TCSII June 2021 2182-2186*
- Periodic Orbits of the Logistic Map in Single and Double Precision Implementations. *Galias, Z.*, *TCSII Nov. 2021 3471-3475*
- Nonlinear equations**
- Implicit Discrete-Time Terminal Sliding Mode Control for Second-Order Systems. *Xiong, X.*, +, *TCSII July 2021 2508-2512*
- Nonlinear filters**
- A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*
- A Robust Fully Arctangent Adaptive Interpolated Volterra Filtering Algorithm Against Impulsive Noise. *Liu, Q.*, +, *TCSII July 2021 2742-2746*
- Robust Adaptive Filtering Based on Exponential Functional Link Network: Analysis and Application. *Yu, T.*, +, *TCSII July 2021 2720-2724*
- Simple Behavioral Model of Baseband Pulse Devices in the Form of a Second-Order Nonlinear Recursive Filter. *Semyonov, E.V.*, *TCSII June 2021 2192-2196*
- Nonlinear network analysis**
- Conic Programming for Circuit Equations With Rational Current Controlled Resistors. *Jia, W.*, +, *TCSII Jan. 2021 496-500*
- Normal distribution**
- An Optimized FPGA-Based Real-Time NDT for 3D-LiDAR Localization in Smart Vehicles. *Deng, Q.*, +, *TCSII Sept. 2021 3167-3171*
- Kalman Filter Based on Multiple Scaled Multivariate Skew Normal Variance Mean Mixture Distributions With Application to Target Tracking. *Lu, C.*, +, *TCSII Feb. 2021 802-806*
- Statistical Graph Signal Recovery Using Variational Bayes. *Torkamani, R.*, +, *TCSII June 2021 2232-2236*
- Notch filters**
- A Frequency Transformation for Co-Designed Multi-Passband/Multi-Embedded-Notch RF Filters. *Gomez-Garcia, R.*, +, *TCSII July 2021 2429-2433*
- Numerical analysis**
- A Unified Finite-/Fixed-Time Synchronization Approach to Multi-Layer Networks. *Xu, Y.*, +, *TCSII Jan. 2021 311-315*
- Bifurcation and Control for a Predator-Prey System With Two Delays. *Jiang, X.*, +, *TCSII Jan. 2021 376-380*
- Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control. *Li, W.*, +, *TCSII April 2021 1338-1342*
- Ensuring Network Connectedness in Optimal Transmission Switching Problems. *Han, T.*, +, *TCSII July 2021 2603-2607*
- Memristor-Coupled Logistic Hyperchaotic Map. *Bao, B.*, +, *TCSII Aug. 2021 2992-2996*

Parameter Identification of Memristor-Based Chaotic Systems via the Drive-Response Synchronization Method. *Liu, H.*, +, *TCSII June 2021 2082-2086*

Robust Adaptive Filtering Based on Exponential Functional Link Network: Analysis and Application. *Yu, T.*, +, *TCSII July 2021 2720-2724*

Numerical simulation

Game Theoretic Approach for a Service Function Chain Routing in NFV With Coupled Constraints. *Le, S.*, +, *TCSII Dec. 2021 3557-3561*

Implicit Discrete-Time Adaptive First-Order Sliding Mode Control With Predefined Convergence Time. *Xiong, X.*, +, *TCSII Dec. 2021 3562-3566*

Periodic Orbits of the Logistic Map in Single and Double Precision Implementations. *Galias, Z.*, *TCSII Nov. 2021 3471-3475*

Numerical stability

Constrained Least Mean M-Estimation Adaptive Filtering Algorithm. *Wang, Z.*, +, *TCSII April 2021 1507-1511*

Discrete-Time Super-Twisting Fractional-Order Differentiator With Implicit Euler Method. *Sharma, R.K.*, +, *TCSII April 2021 1238-1242*

O

Object detection

A High-Performance VLSI Architecture for a Self-Feedback Convolutional Neural Network. *Parmar, Y.*, +, *TCSII Jan. 2021 456-460*

A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features. *He, W.*, +, *TCSII March 2021 1013-1017*

How it Flies and Why it Flies? Volleyball Trajectory Segmentation and Classification. *Chen, C.*, +, *TCSII May 2021 1591-1595*

Object recognition

An FPGA-Based Energy-Efficient Reconfigurable Convolutional Neural Network Accelerator for Object Recognition Applications. *Li, J.*, +, *TCSII Sept. 2021 3143-3147*

Object tracking

A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network. *Kim, S.*, +, *TCSII May 2021 1675-1679*

A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features. *He, W.*, +, *TCSII March 2021 1013-1017*

Observability

Criteria for Observability and Reconstructibility of Boolean Control Networks via Set Controllability. *Zhang, X.*, +, *TCSII April 2021 1263-1267*

Observers

A General Fixed-Time Observer for Lower-Triangular Nonlinear Systems. *Gao, F.*, +, *TCSII June 2021 1992-1996*

A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain. *Lin, P.*, +, *TCSII April 2021 1328-1332*

A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y.*, +, *TCSII Jan. 2021 326-330*

Admissible Bipartite Consensus in Networks of Singular Agents Over Signed Graphs. *Liu, T.*, +, *TCSII Aug. 2021 2880-2884*

Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S.*, +, *TCSII July 2021 2458-2462*

Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K.*, +, *TCSII June 2021 2047-2051*

Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*

Discrete-Time Adaptive Super-Twisting Observer With Predefined Arbitrary Convergence Time. *Xiong, X.*, +, *TCSII June 2021 2057-2061*

Discrete-Time Super-Twisting Observer With Implicit Euler Method. *Xiong, X.*, +, *TCSII April 2021 1288-1292*

Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*

Event-Based Prescribed Performance Control for Dynamic Positioning Vessels. *Wang, H.*, +, *TCSII July 2021 2548-2552*

Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y.*, +, *TCSII July 2021 2453-2457*

Global Fixed-Time Output Feedback Stabilization of Perturbed Planar Nonlinear Systems. *Gao, F.*, +, *TCSII Feb. 2021 707-711*

GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q.*, +, *TCSII Feb. 2021 747-751*

Interval State Estimator Design for Linear Parameter Varying (LPV) Systems. *Khan, A.*, +, *TCSII Aug. 2021 2865-2869*

Invariant Manifold Based Output-Feedback Sliding Mode Control for Systems With Mismatched Disturbances. *Zhang, L.*, +, *TCSII March 2021 933-937*

Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*

Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*

Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S.*, +, *TCSII June 2021 1967-1971*

On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*

Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021 1318-1322*

Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K.*, +, *TCSII July 2021 2528-2532*

Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*

Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*

State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*

Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*

OFDM modulation

Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*

Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J.*, +, *TCSII April 2021 1183-1187*

Operating system kernels

An Extensive Soft Error Reliability Analysis of a Real Autonomous Vehicle Software Stack. *Bandeira, V.*, +, *TCSII Jan. 2021 446-450*

Operational amplifiers

200-MHz Single-Ended 6T 1-kb SRAM With 0.2313 pJ Energy/Access Using 40-nm CMOS Logic Process. *Wang, C.*, +, *TCSII Sept. 2021 3163-3166*

5th-Order Continuous-Time Low-Pass Filter Achieving 56 MHz Bandwidth 30.5 dBm IIP3 With a Novel Low-Distortion Amplifier. *Park, C.*, +, *TCSII June 2021 1768-1772*

A 200 $\mu\text{g}/\sqrt{\text{Hz}}$, 2.7 milli-g Offset Differential Interface for Capacitive Micro Accelerometer. *Tirupathi, R.*, +, *TCSII June 2021 1753-1757*

A 300mV-Supply, Sub-nW-Power Digital-Based Operational Transconductance Amplifier. *Toledo, P.*, +, *TCSII Sept. 2021 3073-3077*

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*

A 4.5 G Ω -Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz. *Pham, X.T.*, +, *TCSII Jan. 2021 116-120*

A 56-Gb/s PAM4 Receiver Analog Front-End With Fixed Peaking Frequency and Bandwidth in 40-nm CMOS. *Li, Z., +, TCSII Sept. 2021 3058-3062*

A Broadband Zero-IF Down-Conversion Mixer in 130 nm SiGe BiCMOS for Beyond 5G Communication Systems in D-Band. *Maiwald, T., +, TCSII July 2021 2277-2281*

A High-Speed and Energy-Efficient Multi-Bit Cyclic ADC Using Single-Slope Quantizer for CMOS Image Sensors. *Jeong, J., +, TCSII July 2021 2322-2326*

A Square Wave-Based Digital Foreground Calibration Algorithm of a Pipeline ADC Using Approximate Harmonic Sampling. *Chatterjee, S., +, TCSII April 2021 1068-1072*

Class AB Op-Amp With Accurate Static Current Control for Low and High Supply Voltages. *Padilla-Cantoya, I., +, TCSII Aug. 2021 2775-2779*

Output-Feedback Control Under Hidden Markov Analog Fading and Redundant Channels. *Li, J., +, TCSII Aug. 2021 2922-2926*

Optical communication equipment

Multi-Gigabit Transceivers for Optical Data Communications From the Standardization Perspective. *Rodriguez-Perez, A., +, TCSII Jan. 2021 56-62*

Optical delay lines

Effect of Various Delay Line Ratios and Their Non-Linearity on the Performance of DIFM. *Singh, S., +, TCSII June 2021 1907-1911*

Optical modulation

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M., +, TCSII March 2021 908-912*

Optical pulse generation

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K., +, TCSII Oct. 2021 3251-3255*

Optical radar

A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors. *Li, Y., +, TCSII Oct. 2021 3224-3228*

An Optimized FPGA-Based Real-Time NDT for 3D-LiDAR Localization in Smart Vehicles. *Deng, Q., +, TCSII Sept. 2021 3167-3171*

Optical sensors

An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking. *Palmer, D.M., +, TCSII May 2021 1680-1684*

Optical transceivers

Multi-Gigabit Transceivers for Optical Data Communications From the Standardization Perspective. *Rodriguez-Perez, A., +, TCSII Jan. 2021 56-62*

Optical transmitters

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M., +, TCSII March 2021 908-912*

Optical waveguides

Spoof Surface Plasmon Polariton Filter With Reconfigurable Dual and Non-Linear Notched Characteristics. *Le Zhang, Q., +, TCSII Aug. 2021 2815-2819*

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A Novel Self-Triggered MPC Scheme for Constrained Input-Affine Nonlinear Systems. *Li, P., +, TCSII Jan. 2021 306-310*

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R., +, TCSII Jan. 2021 416-420*

Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X., +, TCSII July 2021 2523-2527*

Finite-Time Distributed Optimal Tracking for Multiple Heterogeneous Linear Systems. *Zhong, Z., +, TCSII April 2021 1258-1262*

Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z., +, TCSII Jan. 2021 336-340*

Set Stabilization and Optimal Control of Switched Multi-Valued Logical Control Networks With State-Dependent Switching Signals. *Xu, N., +, TCSII June 2021 1952-1956*

Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T., +, TCSII Oct. 2021 3276-3280*

Optimization

A New Perspective on Constraints in the Optimization of PWM Waveform Synthesis in Inverters. *Cantoni, A., +, TCSII Jan. 2021 371-375*

A Sparse Optimization-Based Control Method for Manipulator With Simultaneous Potential Energy Minimization. *Li, Z., +, TCSII June 2021 2062-2066*

An Optimal Algorithm for Enumerating Connected Convex Subgraphs in Acyclic Digraphs. *Xiao, C., +, TCSII Jan. 2021 261-265*

Channel Estimation for MmWave Massive MIMO With Hybrid Precoding Based on Log-Sum Sparse Constraints. *Zhang, A., +, TCSII June 2021 1882-1886*

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y., +, TCSII July 2021 2404-2408*

DeepTempo: A Hardware-Friendly Direct Feedback Alignment Multi-Layer Tempotron Learning Rule for Deep Spiking Neural Networks. *Shi, C., +, TCSII May 2021 1581-1585*

Development of a Generalized Predictive Control System for Polynomial Reference Tracking. *Cordero, R., +, TCSII Aug. 2021 2875-2879*

Discrete-Time Algorithm for Distributed Unconstrained Optimization Problem With Finite-Time Computations. *Liu, H., +, TCSII Jan. 2021 351-355*

Finite-Time Distributed Optimal Tracking for Multiple Heterogeneous Linear Systems. *Zhong, Z., +, TCSII April 2021 1258-1262*

GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C., +, TCSII April 2021 1313-1317*

Hardware-Efficient and High-Throughput LLRC Segregation Based Binary QC-LDPC Decoding Algorithm and Architecture. *Verma, A., +, TCSII Aug. 2021 2835-2839*

Hierarchical Estimation Approach for RBF-AR Models With Regression Weights Based on the Increasing Data Length. *Zhou, Y., +, TCSII Dec. 2021 3597-3601*

Intelligent and Reconfigurable Architecture for KL Divergence-Based Multi-Armed Bandit Algorithms. *Santosh, S.V.S., +, TCSII March 2021 1008-1012*

Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H., +, TCSII Jan. 2021 211-215*

Neural-Network Based Self-Initializing Algorithm for Multi-Parameter Optimization of High-Speed ADCs. *Bansal, S., +, TCSII Jan. 2021 106-110*

Optimal Denial-of-Service Attack Strategy on State Estimation Over Infinite-Time Horizon. *Li, Y., +, TCSII Aug. 2021 2860-2864*

Optimize the Efficiency of Lossy Matching Network: A Top-Down Splitting Algorithm Based on Generalized Quality-Based Equation. *He, F., +, TCSII Aug. 2021 2750-2754*

Optimizing Robustness of Core-Periphery Structure in Complex Networks. *Yang, B., +, TCSII Dec. 2021 3572-3576*

Partial-LUT Designs for Low-Complexity Realization of DA-Based BLMS Adaptive Filter. *Khan, M.T., +, TCSII April 2021 1188-1192*

Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises. *Liang, T., +, TCSII June 2021 2217-2221*

Ramp-Tracking Generalized Predictive Control System-Based on Second-Order Difference. *Cordero, R., +, TCSII April 2021 1283-1287*

Resource-Aware Collaborative Allocation for CPU-FPGA Cloud Environments. *Jordan, M.G., +, TCSII May 2021 1655-1659*

Robust Constrained Generalized Correntropy and Maximum Versoria Criterion Adaptive Filters. *Bhattacharjee, S.S., +, TCSII Aug. 2021 3002-3006*

Robust Minimum Disturbance Diffusion LMS for Distributed Estimation. *Zayyani, H., TCSII Jan. 2021 521-525*

Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective. *Li, Z., +, TCSII Feb. 2021 742-746*

Set Stabilization and Optimal Control of Switched Multi-Valued Logical Control Networks With State-Dependent Switching Signals. *Xu, N., +, TCSII June 2021 1952-1956*

Simplified Harmonic Rejection Mixer Analysis and Design Based on a Filtered Periodic Impulse Model. *de Boer, P., +, TCSII July 2021 2292-2296*

Sparse FIR Filter Design With k -Max Sparsity and Peak Error Constraints. *Xi, X., +, TCSII April 2021 1497-1501*

Steady-State Mean-Square Error Analysis for Non-Negative Least Lncosh Algorithm. *Sun, Z., +, TCSII June 2021 2237-2241*

Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T., +, TCSII Oct. 2021 3276-3280*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X., +, TCSII April 2021 1477-1481*

Organic compounds

A Novel Conformal Design for Multi-Sensor System Synthesis. *Qian, J., +, TCSII April 2021 1532-1536*

Organic light emitting diodes

Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display. *Guo, X., +, TCSII July 2021 2307-2311*

Oscillations

A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M., +, TCSII March 2021 1023-1027*

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K., +, TCSII Oct. 2021 3251-3255*

Event-Based Leader-Following Synchronization of Coupled Harmonic Oscillators Under Jointly Connected Switching Topologies. *Cai, J., +, TCSII March 2021 958-962*

Oscillators

A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters. *Park, J., +, TCSII Nov. 2021 3386-3390*

Analysis and Design of the Three-Inverter Schmitt Trigger for Supply Voltages Down to 50 mV. *Daros Fernandes, T., +, TCSII July 2021 2302-2306*

Analysis of Stable Modes of a Scalable Coupled Oscillator Array. *He, R., +, TCSII Feb. 2021 647-651*

Approximating an Exactly Solvable Chaotic Oscillator Using a Colpitts Oscillator Circuit. *Rhea, B.K., +, TCSII March 2021 1028-1032*

Comparative Study and Design of Current Starved Ring Oscillators in 16 nm Technology. *Huq, S.M.I., +, TCSII April 2021 1098-1102*

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K., +, TCSII Oct. 2021 3251-3255*

Implementation of Hodgkin-Huxley Neuron Model With the Novel Memristive Oscillator. *Liu, Y., +, TCSII Aug. 2021 2982-2986*

Insights Into the Dynamics of Coupled VO₂ Oscillators for ONNs. *Nunez, J., +, TCSII Oct. 2021 3356-3360*

Multiple Potential Well Precision Oscillators. *Viviani, G.L., TCSII Aug. 2021 2967-2971*

Oscillator Flicker Phase Noise: A Tutorial. *Hu, Y., +, TCSII Feb. 2021 538-544*

Simplified Harmonic Rejection Mixer Analysis and Design Based on a Filtered Periodic Impulse Model. *de Boer, P., +, TCSII July 2021 2292-2296*

Spanning-Tree-Based Synchronization Conditions for Second-Order Kuramoto Networks. *Wu, L., +, TCSII April 2021 1448-1452*

P

P-i-n diodes

A BPF Integrated SP4T Switch Using Parallel Switched Fractal Common Feeding Line. *Xu, J., +, TCSII June 2021 1932-1936*

A Dual Function Reconfigurable Bandpass Filter for Wideband and Tri-Band Operations. *Bandyopadhyay, A., +, TCSII June 2021 1892-1896*

Parasitic Compensation and Hence Isolation Improvement of PIN Diode-Based Switches. *Singh, A., +, TCSII Jan. 2021 97-101*

Parallel algorithms

A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition. *Zhang, B., +, TCSII April 2021 1423-1427*

Parallel architectures

A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition. *Zhang, B., +, TCSII April 2021 1423-1427*

Decoding Algorithm for Quadruple-Error-Correcting Reed-Solomon Codes and Its Derived Architectures. *Garcia-Herrero, F., +, TCSII April 2021 1438-1442*

Hardware Implementation of Overlap-Save-Based Fading Channel Emulator. *Najam-Ul-Islam, M., +, TCSII March 2021 918-922*

Parallel processing

A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features. *He, W., +, TCSII March 2021 1013-1017*

Parallel programming

Single Bit-Line Differential Sensing Based Real-Time NVSRAM for Low Power Applications. *Majumdar, S., TCSII July 2021 2623-2627*

Parameter estimation

Hierarchical Estimation Approach for RBF-AR Models With Regression Weights Based on the Increasing Data Length. *Zhou, Y., +, TCSII Dec. 2021 3597-3601*

Parameters Measurement of Multiple Exponentially Damped Sinusoids With Sub-Nyquist Sampling. *Huang, G., +, TCSII July 2021 2710-2714*

Pareto optimization

A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R., +, TCSII July 2021 2272-2276*

Parity check codes

A Miniaturized LDPC Encoder: Two-Layer Architecture for CCSDS Near-Earth Standard. *Liu, J., +, TCSII July 2021 2384-2388*

An Efficient NB-LDPC Decoder Architecture for Space Telecommand Links. *Alvarez, A., +, TCSII April 2021 1213-1217*

Fast Column Message-Passing Decoding of Low-Density Parity-Check Codes. *Usman, S., +, TCSII July 2021 2389-2393*

Hardware-Efficient and High-Throughput LLRC Segregation Based Binary QC-LDPC Decoding Algorithm and Architecture. *Verma, A., +, TCSII Aug. 2021 2835-2839*

Machine Learning for LLR Estimation in Flash Memory With LDPC Codes. *Sandell, M., +, TCSII Feb. 2021 792-796*

Minimal-Set Trellis Min-Max Decoder Architecture for Nonbinary LDPC Codes. *Pham, T.X., +, TCSII Jan. 2021 216-220*

Particle swarm optimization

Neural-Network Based Self-Initializing Algorithm for Multi-Parameter Optimization of High-Speed ADCs. *Bansal, S., +, TCSII Jan. 2021 106-110*

Synthesis of Multi-Port Filtering Power Divider for Mixed Topology Using Matrix Optimization. *Chen, W., +, TCSII Jan. 2021 176-180*

Passband

A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator. *Wang, C., +, TCSII Nov. 2021 3426-3430*

All-Frequency Absorptive CL Dual-Band BPF With Complementary Lossy Bandstop Branches. *Zhang, Y., +, TCSII Dec. 2021 3532-3536*

Tunable Reflectionless Filter With Independently Controllable Dual Passbands and Absorbed Harmonic Signals. *Cao, Z., +, TCSII Nov. 2021 3416-3420*

Passive filters

Millimeter-Wave Wide-Band Bandpass Filter in CMOS Technology Using a Two-Layered Highpass-Type Approach With Embedded Upper Stopband. *Ge, Z., +, TCSII May 2021 1586-1590*

Reconfigurable-Bandwidth DWB BPF With Fixed Operation Frequency and Controllable Stopband. *Bi, X., +, TCSII Jan. 2021 141-145*

Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPD Technology. *Kong, M., +, TCSII July 2021 2414-2418*

Passive networks

Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function. *Ravelo, B., +, TCSII July 2021 2364-2368*

Path planning

Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control. *Sayed, W.S., +, TCSII Nov. 2021 3466-3470*

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R., +, TCSII Jan. 2021 416-420*

Patient diagnosis

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z., +, TCSII May 2021 1720-1724*

Patient monitoring

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z., +, TCSII May 2021 1720-1724*

Patient rehabilitation

BAS Optimized ELM for KUKA iiwa Robot Learning. *Li, C.*, +, *TCSII June 2021 1987-1991*

Pattern classification

A Resource-Efficient Inference Accelerator for Binary Convolutional Neural Networks. *Kim, T.*, +, *TCSII Jan. 2021 451-455*

Robust Randomized Autoencoder and Correntropy Criterion-Based One-Class Classification. *Cui, X.*, +, *TCSII April 2021 1517-1521*

Pattern clustering

A Parallel Hardware Implementation for 2-D Hierarchical Clustering Based on Fuzzy Logic. *Cardarilli, G.C.*, +, *TCSII April 2021 1428-1432*

DeepPoison: Feature Transfer Based Stealthy Poisoning Attack for DNNs. *Chen, J.*, +, *TCSII July 2021 2618-2622*

Pattern recognition

Insights Into the Dynamics of Coupled VO₂ Oscillators for ONNs. *Nunez, J.*, +, *TCSII Oct. 2021 3356-3360*

PD control

A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y.*, +, *TCSII Jan. 2021 326-330*

Pendulums

Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective. *Li, Z.*, +, *TCSII Feb. 2021 742-746*

Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint. *Liu, L.*, +, *TCSII April 2021 1278-1282*

Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*

Performance evaluation

A Multi-Memristive Unit-Cell Array With Diagonal Interconnects for In-Memory Computing. *Khaddam-Aljameh, R.*, +, *TCSII Dec. 2021 3522-3526*

AI Technology for NoC Performance Evaluation. *Bhowmik, B.*, +, *TCSII Dec. 2021 3483-3487*

Periodic structures

Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*

Peripheral interfaces

A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M.*, +, *TCSII Sept. 2021 3182-3186*

Permanent magnet machines

A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain. *Lin, P.*, +, *TCSII April 2021 1328-1332*

Permanent magnet motors

Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*

Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*

Perturbation methods

Adversarial Examples Detection of Radio Signals Based on Multifeature Fusion. *Xu, D.*, +, *TCSII Dec. 2021 3607-3611*

Phase change materials

Circuit and System-Level Aspects of Phase Change Memory. *Pozidis, H.*, +, *TCSII March 2021 844-850*

Phase change memories

Circuit and System-Level Aspects of Phase Change Memory. *Pozidis, H.*, +, *TCSII March 2021 844-850*

Phase change memory

A Multi-Memristive Unit-Cell Array With Diagonal Interconnects for In-Memory Computing. *Khaddam-Aljameh, R.*, +, *TCSII Dec. 2021 3522-3526*

Phase control

A Ka-Band Variable-Gain Phase Shifter With Multiple Vector Generators. *Park, J.*, +, *TCSII June 2021 1798-1802*

X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*

Phase detectors

A 2.4–3.0GHz Process-Tolerant Sub-Sampling PLL With Loop Bandwidth Calibration. *Lu, Y.*, +, *TCSII March 2021 873-877*

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6 -dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y.*, +, *TCSII Sept. 2021 3093-3097*

A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*

A Quadrature Sub-Sampling Phase Detector for Fast-Relocked Sub-Sampling PLL Under External Interference. *Geng, X.*, +, *TCSII Jan. 2021 87-91*

Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop. *Nagam, S.S.*, +, *TCSII May 2021 1670-1674*

Input Referred Noise of VCO-Based Comparators. *Luo, Y.*, +, *TCSII Jan. 2021 82-86*

Phase diagrams

A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M.*, +, *TCSII March 2021 1023-1027*

Phase locked loops

A 2.4–3.0GHz Process-Tolerant Sub-Sampling PLL With Loop Bandwidth Calibration. *Lu, Y.*, +, *TCSII March 2021 873-877*

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S.*, +, *TCSII Sept. 2021 3063-3067*

A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6 -dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y.*, +, *TCSII Sept. 2021 3093-3097*

A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*

A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL. *Wang, H.*, +, *TCSII June 2021 1852-1856*

A Quadrature Sub-Sampling Phase Detector for Fast-Relocked Sub-Sampling PLL Under External Interference. *Geng, X.*, +, *TCSII Jan. 2021 87-91*

A Type-I PLL With Foreground Loop Bandwidth Calibration. *Chou, M.*, +, *TCSII April 2021 1103-1107*

An Accuracy-Improved and Internal Regulator-Free Temperature Sensor With a Non-Linear Current Mode Feedback Pseudo-PLL. *Li, F.*, +, *TCSII April 2021 1138-1142*

Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop. *Nagam, S.S.*, +, *TCSII May 2021 1670-1674*

Jitter Optimisation in a Generalised All-Digital Phase-Locked Loop Model. *Koskin, E.*, +, *TCSII Jan. 2021 77-81*

The Egan Problem on the Pull-in Range of Type 2 PLLs. *Kuznetsov, N.V.*, +, *TCSII April 2021 1467-1471*

Phase locked oscillators

Auxiliary Feed-Forward Noise Cancellation Techniques for a Generic Type-II Ring Oscillator Phase Locked Loop. *Nagam, S.S.*, +, *TCSII May 2021 1670-1674*

Phase measurement

A Goertzel Filter-Based System for Fast Simultaneous Multi-Frequency EIS. *Regnacq, L.*, +, *TCSII Sept. 2021 3133-3137*

Phase noise

0.76-mW/pF/GHz, 7-GHz Quadrature Resonant Clock With Frequency Tuning Capacitor and Amplitude Control Feedback Loop. *Yoon, C.*, +, *TCSII Jan. 2021 136-140*

28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*

- A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S., +, TCSII Sept. 2021 3063-3067*
- A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6 -dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y., +, TCSII Sept. 2021 3093-3097*
- A $600\text{-}\mu\text{m}^2$ Ring-VCO-Based Hybrid PLL Using a $30\text{-}\mu\text{W}$ Charge-Sharing Integrator in 28-nm CMOS. *Yang, S., +, TCSII Sept. 2021 3108-3112*
- A Low Phase Noise Class-C Oscillator With Improved Resonator and Robust Start-Up. *Sheikhahmadi, S., +, TCSII Jan. 2021 92-96*
- A Wideband CMOS Frequency Quadrupler With Transformer-Based Tail Feedback Loop. *Yu, Y., +, TCSII April 2021 1153-1157*
- Analysis and Design Considerations for Achieving the Fundamental Limits of Phase Noise in mmWave Oscillators With On-Chip MEMS Resonator. *Srivastava, A., +, TCSII April 2021 1108-1112*
- Comparative Study and Design of Current Starved Ring Oscillators in 16 nm Technology. *Huq, S.M.I., +, TCSII April 2021 1098-1102*
- Design of Low Phase Noise VCO Considering C/L Ratio of LC Resonator in $0.18\text{-}\mu\text{m}$ CMOS Technology. *Jahan, N., +, TCSII Dec. 2021 3513-3517*
- Oscillator Flicker Phase Noise: A Tutorial. *Hu, Y., +, TCSII Feb. 2021 538-544*
- Phase shift keying**
- M-PSK Demodulator With Joint Carrier and Timing Recovery. *Giardino, D., +, TCSII June 2021 1912-1916*
- Phase shifters**
- An X-Band 5-Bit Active Phase Shifter Based on a Novel Vector-Sum Technique in $0.18\mu\text{m}$ SiGe BiCMOS. *Li, Z., +, TCSII June 2021 1763-1767*
- Phase Shifting Properties of High-Pass and Low-Pass Mixed-Element Two-Ports. *Sengul, M., +, TCSII April 2021 1208-1212*
- Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q., +, TCSII Jan. 2021 236-240*
- Synthesis Design of Filtering Differential Phase Shifters of Independently Suppressed Harmonics. *Qiu, L., +, TCSII Aug. 2021 2760-2764*
- Phased arrays**
- Design of Wideband Butler Matrix With Equal/Unequal Phase Differences for Flexible Beam-Controllability. *Ma, L., +, TCSII Dec. 2021 3537-3541*
- Photoconducting switches**
- A Scalable, General Purpose Circuit Model for Vanadium Compensated, Semi-Insulating, Vertical 6H-SiC PCSS. *Zhao, Y., +, TCSII March 2021 988-992*
- Photodetectors**
- A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors. *Li, Y., +, TCSII Oct. 2021 3224-3228*
- An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking. *Palmer, D.M., +, TCSII May 2021 1680-1684*
- Photodiodes**
- Compensation of Signal-Dependent Readout Noise in Photon Transfer Curve Characterisation of CMOS Image Sensors. *Levski, D., +, TCSII Jan. 2021 102-105*
- Photon counting**
- Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F., +, TCSII March 2021 893-897*
- Photonic band gap**
- Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y., +, TCSII March 2021 878-882*
- Photovoltaic power systems**
- Compact Seven-Level Boost Type Inverter Topology. *Sathik, M.J., +, TCSII April 2021 1358-1362*
- Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation. *Singh, B., +, TCSII June 2021 1947-1951*
- PI control**
- A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain. *Lin, P., +, TCSII April 2021 1328-1332*
- GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q., +, TCSII Feb. 2021 747-751*
- Saturated PI Control for Nonlinear System With Provable Convergence: An Optimization Perspective. *Li, Z., +, TCSII Feb. 2021 742-746*
- Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S., +, TCSII April 2021 1308-1312*
- Piecewise linear techniques**
- 2-D Piecewise-Linear Neuron Model. *Bao, H., +, TCSII April 2021 1453-1457*
- A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization. *Sengupta, S., +, TCSII April 2021 1073-1077*
- Efficient Hardware Implementation of DNN-Based Speech Enhancement Algorithm With Precise Sigmoid Activation Function. *Chiluveru, S.R., +, TCSII Nov. 2021 3461-3465*
- Parametric Control for Multi-Scroll Attractor Generation via Nested Sine-PWL Function. *Wang, N., +, TCSII March 2021 1033-1037*
- Sparse FIR Filter Design With k -Max Sparsity and Peak Error Constraints. *Xi, X., +, TCSII April 2021 1497-1501*
- Piezoelectric actuators**
- Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators. *Han, S., +, TCSII Aug. 2021 2902-2906*
- Piezoelectric transducers**
- A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV^2f . *Choi, K., +, TCSII March 2021 858-862*
- Efficient Power Transfers in Piezoelectric Energy-Harvesting Switched-Inductor Chargers. *Yang, S., +, TCSII April 2021 1248-1252*
- Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J., +, TCSII Jan. 2021 19-23*
- Pipe flow**
- Characterization of Two-Phase Flow Structure by Deep Learning-Based Super Resolution. *Gao, Z., +, TCSII Feb. 2021 782-786*
- Pipeline arithmetic**
- A Novel Pipelined Algorithm and Modular Architecture for Non-Square Matrix Transposition. *Zhang, B., +, TCSII April 2021 1423-1427*
- Pipeline processing**
- A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z., +, TCSII Sept. 2021 3153-3157*
- Background Calibration for Bit Weights in Pipelined ADCs Using Adaptive Dither Windows. *Sun, J., +, TCSII June 2021 1783-1787*
- High-Throughput and Improved-Convergent Design of Pipelined Adaptive DFE for 5G Communication. *Khan, M.T., +, TCSII Feb. 2021 652-656*
- Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H., +, TCSII Jan. 2021 211-215*
- Planar waveguides**
- Ultra-Wideband and Compact Terahertz Planar Load Based on Spoof Surface Plasmon Polaritons With Nickel. *Le Zhang, Q., +, TCSII June 2021 1922-1926*
- Poincare mapping**
- Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C., +, TCSII April 2021 1472-1476*
- Polaritons**
- Spoof Surface Plasmon Polariton Filter With Reconfigurable Dual and Non-Linear Notched Characteristics. *Le Zhang, Q., +, TCSII Aug. 2021 2815-2819*
- Poles and zeros**
- A $19\text{-}48.3\text{-GHz}$ 6th-Order Transformer-Based Injection-Locked Frequency Divider With 87.1% Locking Range in 40-nm CMOS. *Zhu, J., +, TCSII Sept. 2021 3053-3057*
- Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S., +, TCSII July 2021 2458-2462*
- Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J., +, TCSII Jan. 2021 131-135*
- Compact Wideband Bandstop Filter With Directly Controlled Rejection. *Liu, L., +, TCSII July 2021 2282-2286*

Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Fegghi, R.*, +, *TCSII April 2021 1193-1197*

On Determining of LTI Systems Having Nondecreasing Step Response. *Du, H.*, +, *TCSII June 2021 2087-2091*

Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K.*, +, *TCSII July 2021 2528-2532*

Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*

Synthesis of Multi-Port Filtering Power Divider for Mixed Topology Using Matrix Optimization. *Chen, W.*, +, *TCSII Jan. 2021 176-180*

Ultra-Broadband Bandpass Filter Using Linearly Tapered Coupled-Microstrip Line and Open Loop Defected Ground Structure. *Sangam, R.S.*, +, *TCSII Jan. 2021 181-185*

Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFPD Technology. *Kong, M.*, +, *TCSII July 2021 2414-2418*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Polynomial approximation

Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation. *Tseng, C.*, +, *TCSII May 2021 1630-1634*

Polynomials

Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions. *Tavazoei, M.S.*, *TCSII July 2021 2374-2378*

Conic Programming for Circuit Equations With Rational Current Controlled Resistors. *Jia, W.*, +, *TCSII Jan. 2021 496-500*

Decoding Algorithm for Quadruple-Error-Correcting Reed-Solomon Codes and Its Derived Architectures. *Garcia-Herrero, F.*, +, *TCSII April 2021 1438-1442*

Development of a Generalized Predictive Control System for Polynomial Reference Tracking. *Cordero, R.*, +, *TCSII Aug. 2021 2875-2879*

High-Speed Modular Multiplier for Lattice-Based Cryptosystems. *Tan, W.*, +, *TCSII Aug. 2021 2927-2931*

High-Speed RLWE-Oriented Polynomial Multiplier Utilizing Karatsuba Algorithm. *Wong, Z.*, +, *TCSII June 2021 2157-2161*

Laguerre Expansion Series Based Reduced Order Interval Systems. *Samuel, E.R.*, +, *TCSII June 2021 2022-2026*

Low-Delay FPGA-Based Implementation of Finite Field Multipliers. *Imana, J.L.*, *TCSII Aug. 2021 2952-2956*

The Simple Charge-Controlled Grounded/Floating Mem-Element Emulator. *Liu, Y.*, +, *TCSII June 2021 2177-2181*

Portable instruments

A Low-Cost Bioimpedance Phase Angle Monitor for Portable Electrical Surface Stimulation Burn Prevention. *Burns, R.P.*, +, *TCSII April 2021 1118-1122*

MACSen: A Processing-In-Sensor Architecture Integrating MAC Operations Into Image Sensor for Ultra-Low-Power BNN-Based Intelligent Visual Perception. *Xu, H.*, +, *TCSII Feb. 2021 627-631*

Pose estimation

Circuit Synthesis of 3-D Rotation Orthonormalization. *Wu, J.*, +, *TCSII April 2021 1502-1506*

Position control

A Sparse Optimization-Based Control Method for Manipulator With Simultaneous Potential Energy Minimization. *Li, Z.*, +, *TCSII June 2021 2062-2066*

Event-Based Prescribed Performance Control for Dynamic Positioning Vessels. *Wang, H.*, +, *TCSII July 2021 2548-2552*

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*

Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*

Position measurement

GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C.*, +, *TCSII April 2021 1313-1317*

Power amplifiers

A 1.7-to-2.7GHz 35–38% PAE Multiband CMOS Power Amplifier Employing a Digitally-Assisted Analog Pre-Distorter (DAAPD) Reconfigurable Linearization Technique. *Mariappan, S.*, +, *TCSII Nov. 2021 3381-3385*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A.*, +, *TCSII June 2021 1887-1891*

Hybrid Harmonic Cancellation Digital Predistortion With a Feedback Loop Compensation. *Chen, L.*, +, *TCSII June 2021 2222-2226*

Power aware computing

A 0.82 μ W CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J.*, +, *TCSII May 2021 1700-1704*

A 43.1TOPS/W Energy-Efficient Absolute-Difference-Accumulation Operation Computing-In-Memory With Computation Reuse. *Um, S.*, +, *TCSII May 2021 1605-1609*

A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications. *Zhang, H.*, +, *TCSII May 2021 1695-1699*

A Novel, Efficient Implementation of a Local Binary Convolutional Neural Network. *Lin, I.*, +, *TCSII April 2021 1413-1417*

An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L.*, +, *TCSII Aug. 2021 2957-2961*

Balancing the Cost and Performance Trade-Offs in SNN Processors. *Zheng, H.*, +, *TCSII Sept. 2021 3172-3176*

Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S.*, +, *TCSII Aug. 2021 2947-2951*

TVFS: Topology Voltage Frequency Scaling for Reliable Embedded ConvNets. *Rizzo, R.G.*, +, *TCSII Feb. 2021 672-676*

Twenty Years of Near/Sub-Threshold Design Trends and Enablement. *Singh, K.*, +, *TCSII Jan. 2021 5-11*

Power capacitors

A Wide Voltage Gain Bidirectional DC–DC Converter Based on Quasi Z-Source and Switched Capacitor Network. *Kumar, A.*, +, *TCSII April 2021 1353-1357*

Power combiners

A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C.*, +, *TCSII April 2021 1158-1162*

A 60 GHz 8-Way Combined Power Amplifier in 0.18 μ m SiGe BiCMOS. *Liu, H.*, +, *TCSII June 2021 1847-1851*

Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Fegghi, R.*, +, *TCSII April 2021 1193-1197*

Realization of a Compact and High-Performance Power Divider Using Parallel RC Isolation Network. *Lin, Y.*, +, *TCSII April 2021 1368-1372*

Power consumption

A 0.82 μ W CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J.*, +, *TCSII May 2021 1700-1704*

A 64.1mW Accurate Real-Time Visual Object Tracking Processor With Spatial Early Stopping on Siamese Network. *Kim, S.*, +, *TCSII May 2021 1675-1679*

A Low Power and Low Area Router With Congestion-Aware Routing Algorithm for Spiking Neural Network Hardware Implementations. *Pu, J.*, +, *TCSII Jan. 2021 471-475*

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M.*, +, *TCSII March 2021 908-912*

A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z.*, +, *TCSII Sept. 2021 3153-3157*

A New Extremely Low Power Temperature Insensitive Electronically Tunable VCII-Based Grounded Capacitance Multiplier. *Stornelli, V.*, +, *TCSII Jan. 2021 72-76*

A Time-Domain Binary CNN Engine With Error-Detection-Based Resilience in 28nm CMOS. *Cai, Z.*, +, *TCSII Sept. 2021 3177-3181*

- An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M.*, +, *TCSII June 2021 1817-1821*
- Data Retention-Based Low Leakage Power TCAM for Network Packet Routing. *Chang, Y.*, +, *TCSII Feb. 2021 757-761*
- Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J.*, +, *TCSII Jan. 2021 19-23*
- Gray Code-Based 10-Bit Source Driver for Large-Size OLED Display. *Guo, X.*, +, *TCSII July 2021 2307-2311*
- Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*
- Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory. *Yu, Z.*, +, *TCSII May 2021 1665-1669*
- Resonant Energy Recycling SRAM Architecture. *Islam, R.*, +, *TCSII April 2021 1383-1387*
- Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era. *Lei, K.*, +, *TCSII Jan. 2021 30-35*
- Power control**
- Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021 1318-1322*
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- A MMC-Based Multiport AC–DC Converter for Hybrid AC/DC Systems. *Ma, D.*, +, *TCSII Dec. 2021 3567-3571*
- Power converters**
- A MMC-Based Multiport Power Electronic Transformer With Shared Medium-Frequency Transformer. *Ma, D.*, +, *TCSII Feb. 2021 727-731*
- A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S.*, +, *TCSII July 2021 2493-2497*
- An Accurate Zero-Current-Switching Circuit for Ultra-Low-Voltage Boost Converters. *Radin, R.L.*, +, *TCSII June 2021 1773-1777*
- Closed-Form Operational Boundaries for Buck Converters With Constant On-Time Control. *Bizzarri, F.*, +, *TCSII Oct. 2021 3331-3335*
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- Stabilizing Effect of Load Converter in Cascaded System Considering Ripple Interaction. *Zhou, G.*, +, *TCSII Jan. 2021 296-300*
- Two-Layer Cooperative Control for Multiple Converter-Network Clusters. *Lu, X.*, +, *TCSII Feb. 2021 682-686*
- Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators. *Han, S.*, +, *TCSII Aug. 2021 2902-2906*
- Unified Voltage Balancing Feedforward for Three-Level Boost PFC Converter in Discontinuous and Critical Conduction Modes. *Lee, M.*, +, *TCSII Jan. 2021 441-445*
- Power distribution**
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- Power distribution control**
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- Power dividers**
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- A Dual-Band Coupled Line Power Divider Using SISL Technology. *Feng, T.*, +, *TCSII Feb. 2021 657-661*
- Accurate Isolation Networks in Quadrature Couplers and Power Dividers. *Sutbas, B.*, +, *TCSII April 2021 1148-1152*
- Design of a New Dual-Band Balanced-to-Balanced Filtering Power Divider Based on the Circular Microstrip Patch Resonator. *Zhang, G.*, +, *TCSII Dec. 2021 3542-3546*
- Dual-Band and Tri-Band Balanced-to-Single Ended Power Dividers With Wideband Common-Mode Suppression. *Zhu, H.*, +, *TCSII July 2021 2332-2336*
- Dual-Band Filtering Power Divider Based on a Single Circular Patch Resonator With Improved Bandwidths and Good Isolation. *Zhang, Q.*, +, *TCSII Nov. 2021 3411-3415*
- Frequency-Reconfigurable Input-Reflectionless Bandpass Filter and Filtering Power Divider With Constant Absolute Bandwidth. *Fan, M.*, +, *TCSII July 2021 2424-2428*
- Realization of a Compact and High-Performance Power Divider Using Parallel RC Isolation Network. *Lin, Y.*, +, *TCSII April 2021 1368-1372*
- Synthesis of Multi-Port Filtering Power Divider for Mixed Topology Using Matrix Optimization. *Chen, W.*, +, *TCSII Jan. 2021 176-180*
- Synthesis of Wideband Filtering Couplers for Arbitrary High Power-Division Ratios Based on Three Different Types of Coupled-Line Sections. *Zheng, Y.*, +, *TCSII April 2021 1218-1222*
- Ultra-Wideband and Compact Terahertz Planar Load Based on Spoof Surface Plasmon Polaritons With Nickel. *Le Zhang, Q.*, +, *TCSII June 2021 1922-1926*
- Power electronics**
- A MMC-Based Multiport Power Electronic Transformer With Shared Medium-Frequency Transformer. *Ma, D.*, +, *TCSII Feb. 2021 727-731*
- A Tutorial on Modeling and Analysis of Cascading Failure in Future Power Grids. *Liu, D.*, +, *TCSII Jan. 2021 49-55*
- Conic Programming for Circuit Equations With Rational Current Controlled Resistors. *Jia, W.*, +, *TCSII Jan. 2021 496-500*
- Synthesis of Multi-Input Multi-Output DC/DC Converters Without Energy Buffer Stages. *Shan, Z.*, +, *TCSII Feb. 2021 712-716*
- Power engineering computing**
- A Remaining Useful Life Prediction Method in the Early Stage of Stochastic Degradation Process. *Zhang, Y.*, +, *TCSII June 2021 2027-2031*
- Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X.*, +, *TCSII Jan. 2021 396-400*
- Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B.*, +, *TCSII July 2021 2583-2587*
- Two-Layer Cooperative Control for Multiple Converter-Network Clusters. *Lu, X.*, +, *TCSII Feb. 2021 682-686*
- Power factor**
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- Power factor correction**
- Unified Voltage Balancing Feedforward for Three-Level Boost PFC Converter in Discontinuous and Critical Conduction Modes. *Lee, M.*, +, *TCSII Jan. 2021 441-445*
- Power generation control**
- Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved V–f Model. *Wang, Y.*, +, *TCSII Sept. 2021 3103-3107*
- False Data Injection Cyber-Attacks Mitigation in Parallel DC/DC Converters Based on Artificial Neural Networks. *Habibi, M.R.*, +, *TCSII Feb. 2021 717-721*
- Modeling, Analysis and Implementation of an Improved Interleaved Buck-Boost Converter. *Rana, N.*, +, *TCSII July 2021 2588-2592*
- Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021 1318-1322*
- Power generation dispatch**
- Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J.*, +, *TCSII June 2021 2002-2006*
- Power generation economics**
- Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J.*, +, *TCSII June 2021 2002-2006*
- Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B.*, +, *TCSII July 2021 2583-2587*

Power generation faults

Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B., +, TCSII July 2021 2583-2587*

Power generation scheduling

Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J., +, TCSII June 2021 2002-2006*

Power grids

A MMC-Based Multiport AC–DC Converter for Hybrid AC/DC Systems. *Ma, D., +, TCSII Dec. 2021 3567-3571*

A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid. *Wu, J., +, TCSII Aug. 2021 2907-2911*

A Novel Diagnostic Method for Multiple Open-Circuit Faults of Voltage-Source Inverters Based on Output Line Voltage Residuals Analysis. *Chen, T., +, TCSII April 2021 1343-1347*

A Pairwise Convex Hull Approach for Effective Representation of Uncertainty for System Analysis and Its Application to Power Grids. *Zeng, L., +, TCSII July 2021 2498-2502*

A Robust Method for Controlling Grid-Connected Inverters in Weak Grids. *Akhavan, A., +, TCSII April 2021 1333-1337*

A Tutorial on Modeling and Analysis of Cascading Failure in Future Power Grids. *Liu, D., +, TCSII Jan. 2021 49-55*

Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X., +, TCSII Jan. 2021 396-400*

Impedance Modeling of DFIG Wind Farms With Various Rotor Speeds and Frequency Coupling. *Liu, B., +, TCSII Jan. 2021 406-410*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J., +, TCSII June 2021 2052-2056*

Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation. *Singh, B., +, TCSII June 2021 1947-1951*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X., +, TCSII April 2021 1477-1481*

Power harmonic filters

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K., +, TCSII Oct. 2021 3251-3255*

Tunable Reflectionless Filter With Independently Controllable Dual Passbands and Absorbed Harmonic Signals. *Cao, Z., +, TCSII Nov. 2021 3416-3420*

Power inductors

A Simple, Accurate Small-Signal Model of a Coupled-Inductor-Based DC-DC Converter Including the Leakage Inductance Effect. *Schmitz, L., +, TCSII July 2021 2533-2537*

An Accurate Zero-Current-Switching Circuit for Ultra-Low-Voltage Boost Converters. *Radin, R.L., +, TCSII June 2021 1773-1777*

Synthetic Transmission Lines in Cutoff Operation for Wideband High-Impedance DC Supplies. *Testa, P.V., +, TCSII March 2021 928-932*

Power integrated circuits

A Supply Voltage Noise Immunity Enhancement Design for High-Voltage Gate Driver IC Based on Bootstrap Circuit. *Jin, W., +, TCSII Sept. 2021 3048-3052*

Power MOSFET

An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T., +, TCSII June 2021 2092-2096*

DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X., +, TCSII June 2021 2077-2081*

Power semiconductor devices

Open Circuit Fault Detection and Switch Identification for LS-PWM H-Bridge Inverter. *Kumar, M., TCSII April 2021 1363-1367*

Power supply circuits

A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV²f. *Choi, K., +, TCSII March 2021 858-862*

A 42nA I_Q, 1.5–6V V_{IN}, Self-Regulated CMOS Voltage Reference With –93dB PSR at 10 Hz for Energy Harvesting Systems. *Chen, Y., +, TCSII July 2021 2357-2361*

Input Referred Noise of VCO-Based Comparators. *Luo, Y., +, TCSII Jan. 2021 82-86*

Power supply quality

An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T., +, TCSII June 2021 2092-2096*

Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation. *Singh, B., +, TCSII June 2021 1947-1951*

Power system CAD

A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid. *Wu, J., +, TCSII Aug. 2021 2907-2911*

On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D., +, TCSII July 2021 2468-2472*

Power system control

Closed-Form Operational Boundaries for Buck Converters With Constant On-Time Control. *Bizzarri, F., +, TCSII Oct. 2021 3331-3335*

Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J., +, TCSII March 2021 993-997*

Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM. *Xu, S., +, TCSII July 2021 2598-2602*

Power system economics

A Tutorial on Modeling and Analysis of Cascading Failure in Future Power Grids. *Liu, D., +, TCSII Jan. 2021 49-55*

Power system faults

Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM. *Xu, S., +, TCSII July 2021 2598-2602*

Power system harmonics

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K., +, TCSII Oct. 2021 3251-3255*

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Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J., +, TCSII March 2021 993-997*

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A Robust Method for Controlling Grid-Connected Inverters in Weak Grids. *Akhavan, A., +, TCSII April 2021 1333-1337*

A Tutorial on Modeling and Analysis of Cascading Failure in Future Power Grids. *Liu, D., +, TCSII Jan. 2021 49-55*

Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM. *Xu, S., +, TCSII July 2021 2598-2602*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X., +, TCSII April 2021 1477-1481*

Power system security

Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J., +, TCSII March 2021 993-997*

False Data Injection Cyber-Attacks Mitigation in Parallel DC/DC Converters Based on Artificial Neural Networks. *Habibi, M.R., +, TCSII Feb. 2021 717-721*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J., +, TCSII June 2021 2052-2056*

Vulnerability Assessment of Power Grids Against Cost-Constrained Hybrid Attacks. *Gao, X., +, TCSII April 2021 1477-1481*

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Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X., +, TCSII Jan. 2021 396-400*

On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D., +, TCSII July 2021 2468-2472*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J., +, TCSII June 2021 2052-2056*

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Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J., +, TCSII March 2021 993-997*

Power systems

A Theorem on Power Superposition in Resistive Networks. *Barbi, I., TCSII July 2021 2362-2363*

Power transformers

A MMC-Based Multiport Power Electronic Transformer With Shared Medium-Frequency Transformer. *Ma, D., +, TCSII Feb. 2021 727-731*

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A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid. *Wu, J., +, TCSII Aug. 2021 2907-2911*

Power transmission protection

A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid. *Wu, J., +, TCSII Aug. 2021 2907-2911*

Power utilization

A 0.6-to-1.8V CMOS Current Reference With Near-100% Power Utilization. *Fassio, L., +, TCSII Sept. 2021 3038-3042*

Precoding

A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R., +, TCSII Jan. 2021 246-250*

Channel Estimation for MmWave Massive MIMO With Hybrid Precoding Based on Log-Sum Sparse Constraints. *Zhang, A., +, TCSII June 2021 1882-1886*

Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J., +, TCSII April 2021 1183-1187*

Predator-prey systems

Bifurcation and Control for a Predator-Prey System With Two Delays. *Jiang, X., +, TCSII Jan. 2021 376-380*

Prediction algorithms

AI Technology for NoC Performance Evaluation. *Bhowmik, B., +, TCSII Dec. 2021 3483-3487*

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VLSI Implementation of Multi-Channel ECG Lossless Compression System. *Tsai, T., +, TCSII Aug. 2021 2962-2966*

Predictive control

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Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R., +, TCSII Jan. 2021 416-420*

Development of a Generalized Predictive Control System for Polynomial Reference Tracking. *Cordero, R., +, TCSII Aug. 2021 2875-2879*

Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J., TCSII July 2021 2568-2572*

Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z., +, TCSII Jan. 2021 426-430*

Ramp-Tracking Generalized Predictive Control System-Based on Second-Order Difference. *Cordero, R., +, TCSII April 2021 1283-1287*

Pressure sensors

Printed Organic Electronics on Flexible Foil: Circuit Design and Emerging Applications. *Ragonese, E., +, TCSII Jan. 2021 42-48*

Principal component analysis

Analysis of Worst-Case Data Dependent Temporal Approximation in Floating Point Units. *Jha, C.K., +, TCSII Feb. 2021 767-771*

Data-Driven Process Monitoring Using Structured Joint Sparse Canonical Correlation Analysis. *Xiu, X., +, TCSII Jan. 2021 361-365*

Hardware-Oriented Memory-Limited Online Artifact Subspace Reconstruction (HMO-ASR) Algorithm. *Van, L., +, TCSII Dec. 2021 3493-3497*

Printed circuits

Printed Organic Electronics on Flexible Foil: Circuit Design and Emerging Applications. *Ragonese, E., +, TCSII Jan. 2021 42-48*

Private key cryptography

Analog/RF IP Protection: Attack Models, Defense Techniques, and Challenges. *Sanabria-Borbon, A., +, TCSII Jan. 2021 36-41*

Probability

A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M., +, TCSII Jan. 2021 241-245*

Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B., +, TCSII April 2021 1198-1202*

Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L., +, TCSII Oct. 2021 3266-3270*

Information Weighted Consensus With Interacting Multiple Model Over Distributed Networks. *Hu, D., +, TCSII April 2021 1537-1541*

Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C., +, TCSII May 2021 1650-1654*

Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S., +, TCSII June 2021 1967-1971*

Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M., +, TCSII Jan. 2021 481-485*

Probes

A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S., +, TCSII Feb. 2021 607-611*

Process monitoring

A 5800 μm^2 Process Monitor Circuit for Measurement of in-Die Variation of V_{th} in 65nm. *Lisha, L., +, TCSII March 2021 863-867*

Data-Driven Process Monitoring Using Structured Joint Sparse Canonical Correlation Analysis. *Xiu, X., +, TCSII Jan. 2021 361-365*

Program debugging

HAMBug: A Hybrid CPU-FPGA System to Detect Race Conditions. *Almeida, D.D., +, TCSII Sept. 2021 3158-3162*

Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M., +, TCSII Jan. 2021 481-485*

SAT-Based Integrated Hardware Trojan Detection and Localization Approach Through Path-Delay Analysis. *Sabri, M., +, TCSII Aug. 2021 2850-2854*

Program testing

HAMBug: A Hybrid CPU-FPGA System to Detect Race Conditions. *Almeida, D.D., +, TCSII Sept. 2021 3158-3162*

Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M., +, TCSII Jan. 2021 481-485*

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Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M., +, TCSII Jan. 2021 481-485*

Programmable circuits

Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit. *Chithra, ., +, TCSII June 2021 1788-1792*

Programming

A Multi-Memristive Unit-Cell Array With Diagonal Interconnects for In-Memory Computing. *Khaddam-Aljameh, R., +, TCSII Dec. 2021 3522-3526*

Analog Self-Timed Programming Circuits for Aging Memristors. *Irmanova, A., +, TCSII April 2021 1133-1137*

Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H., +, TCSII Jan. 2021 211-215*

Projection algorithms

Affine Projection Algorithm for Censored Regression. *Zhao, H., +, TCSII Dec. 2021 3602-3606*

Prosthetics

Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X., +, TCSII June 2021 1807-1811*

TSV Based Orthogonal Coils With High Misalignment Tolerance for Inductive Power Transfer in Biomedical Implants. *Qian, L., +, TCSII June 2021 1832-1836*

Protocols

Event-Triggered Bipartite Consensus in Networked Euler-Lagrange Systems With External Disturbance. *Deng, Q., +, TCSII Aug. 2021 2870-2874*

Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism. *Xu, H., +, TCSII June 2021 2117-2121*

Quantum Multiparty Privacy Set Intersection Cardinality. *Shi, R., TCSII April 2021 1203-1207*

Public key cryptography

Analog/RF IP Protection: Attack Models, Defense Techniques, and Challenges. *Sanabria-Borbon, A., +, TCSII Jan. 2021 36-41*

Area-Time Efficient Hardware Architecture for Signature Based on Ed448. *Bisheh-Niasar, M.*, +, *TCSII Aug. 2021 2942-2946*

FPGA-Based Optimized Design of Montgomery Modular Multiplier. *Abd-Elkader, A.A.H.*, +, *TCSII June 2021 2137-2141*

Pulse amplitude modulation

A 112 Gb/s PAM-4 RX Front-End With Unclocked Decision Feedback Equalizer. *Petricli, I.*, +, *TCSII Jan. 2021 256-260*

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M.*, +, *TCSII March 2021 908-912*

Pulse generators

A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μm CMOS. *Zeng, X.*, +, *TCSII June 2021 1812-1816*

A 27 dB Sidelobe Suppression, 1.12 GHz $\text{BW}_{-10\text{dB}}$ UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*

A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV^2f . *Choi, K.*, +, *TCSII March 2021 858-862*

A Tunable CMOS IR-UWB Pulse Generator Based on Feedback Controlled Oscillator Switching. *Snelter, L.*, +, *TCSII June 2021 1902-1906*

Pulse shaping

A 27 dB Sidelobe Suppression, 1.12 GHz $\text{BW}_{-10\text{dB}}$ UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*

Pulse width modulation

A New Perspective on Constraints in the Optimization of PWM Waveform Synthesis in Inverters. *Cantoni, A.*, +, *TCSII Jan. 2021 371-375*

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y.*, +, *TCSII July 2021 2404-2408*

Pulsed power supplies

A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV^2f . *Choi, K.*, +, *TCSII March 2021 858-862*

PWM inverters

A 13-Level Switched-Capacitor-Based Boosting Inverter. *Sandeep, N.*, *TCSII March 2021 998-1002*

A Hybrid Nine-Level Inverter Topology With Boosting Capability and Reduced Component Count. *Naik, B.S.*, +, *TCSII Jan. 2021 316-320*

A New Perspective on Constraints in the Optimization of PWM Waveform Synthesis in Inverters. *Cantoni, A.*, +, *TCSII Jan. 2021 371-375*

A Robust Method for Controlling Grid-Connected Inverters in Weak Grids. *Akhavan, A.*, +, *TCSII April 2021 1333-1337*

Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM. *Xu, S.*, +, *TCSII July 2021 2598-2602*

Selective Lower Order Harmonic Elimination in DC-AC Converter Using Space Vector Approach. *Arumalla, R.T.*, +, *TCSII Aug. 2021 2890-2894*

PWM power converters

An Ultra-Low Quiescent Current Resistor-Less Power on Reset Circuit. *Guo, J.*, +, *TCSII Jan. 2021 146-150*

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y.*, +, *TCSII July 2021 2404-2408*

Stabilizing Effect of Load Converter in Cascaded System Considering Ripple Interaction. *Zhou, G.*, +, *TCSII Jan. 2021 296-300*

Q

Q factor

A New Class of Wideband MS-to-MS Vialess Vertical Transition With Function of Filtering Performance. *Feng, L.*, +, *TCSII June 2021 1877-1881*

An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B.*, +, *TCSII July 2021 2252-2256*

Analysis and Design Considerations for Achieving the Fundamental Limits of Phase Noise in mmWave Oscillators With On-Chip MEMS Resonator. *Srivastava, A.*, +, *TCSII April 2021 1108-1112*

Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency. *Nofresti, M.*, +, *TCSII Jan. 2021 171-175*

Design of Low Phase Noise VCO Considering C/L Ratio of LC Resonator in 0.18- μm CMOS Technology. *Jahan, N.*, +, *TCSII Dec. 2021 3513-3517*

Narrower Band Matching With Low Quality Factor Values. *Sengul, M.*, *TCSII July 2021 2434-2437*

On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D.*, +, *TCSII July 2021 2468-2472*

Quadrature amplitude modulation

Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*

High-Throughput and Improved-Convergent Design of Pipelined Adaptive DFE for 5G Communication. *Khan, M.T.*, +, *TCSII Feb. 2021 652-656*

Quantization (signal)

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*

A 96dB Dynamic Range 2kHz Bandwidth 2nd Order Delta-Sigma Modulator Using Modified Feed-Forward Architecture With Delayed Feedback. *Han, J.*, +, *TCSII May 2021 1645-1649*

A Memory-Efficient CNN Accelerator Using Segmented Logarithmic Quantization and Multi-Cluster Architecture. *Xu, J.*, +, *TCSII June 2021 2142-2146*

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y.*, +, *TCSII July 2021 2404-2408*

High-Throughput and Improved-Convergent Design of Pipelined Adaptive DFE for 5G Communication. *Khan, M.T.*, +, *TCSII Feb. 2021 652-656*

Performance Limits of Generalized Sampling Based 2-Channel Analog-to-Digital Converter. *Ghosh, S.*, +, *TCSII July 2021 2257-2261*

Quantum cellular automata

Accuracy Improved Low-Energy Multi-Bit Approximate Adders in QCA. *Perri, S.*, +, *TCSII Nov. 2021 3456-3460*

Quantum communication

Quantum Multiparty Privacy Set Intersection Cardinality. *Shi, R.*, *TCSII April 2021 1203-1207*

Quantum computing

High-Speed Modular Multiplier for Lattice-Based Cryptosystems. *Tan, W.*, +, *TCSII Aug. 2021 2927-2931*

Quantum Multiparty Privacy Set Intersection Cardinality. *Shi, R.*, *TCSII April 2021 1203-1207*

Quantum cryptography

Fault Detection Architectures for Inverted Binary Ring-LWE Construction Benchmarked on FPGA. *Sarker, A.*, +, *TCSII April 2021 1403-1407*

High-Speed Modular Multiplier for Lattice-Based Cryptosystems. *Tan, W.*, +, *TCSII Aug. 2021 2927-2931*

Quantum Multiparty Privacy Set Intersection Cardinality. *Shi, R.*, *TCSII April 2021 1203-1207*

Quantum dots

Spars: A Full Flow Quantum-Dot Cellular Automata Circuit Design Tool. *Peng, F.*, +, *TCSII April 2021 1233-1237*

Query processing

High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA. *Wu, W.*, +, *TCSII July 2021 2650-2654*

R

Radar signal processing

Separating Radar Signals From Impulsive Noise Using Atomic Norm Minimization. *Bayat, S.*, +, *TCSII June 2021 2212-2216*

Radiial basis function networks

Hierarchical Estimation Approach for RBF-AR Models With Regression Weights Based on the Increasing Data Length. *Zhou, Y.*, +, *TCSII Dec. 2021 3597-3601*

Radiation hardening (electronics)

An Extensive Soft Error Reliability Analysis of a Real Autonomous Vehicle Software Stack. *Bandeira, V.*, +, *TCSII Jan. 2021 446-450*

Highly Stable Low Power Radiation Hardened Memory-by-Design SRAM for Space Applications. *Pal, S.*, +, *TCSII June 2021 2147-2151*

Soft-Error-Aware Read-Decoupled SRAM With Multi-Node Recovery for Aerospace Applications. *Pal, S.*, +, *TCSII Oct. 2021 3336-3340*

Radio networks

Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*

Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y.*, +, *TCSII July 2021 2593-2597*

Radio receivers

2.4-GHz Low-Power Low-IF Receiver With a Quadrature Local Oscillator Buffer for Bluetooth Low Energy Applications. *Song, E.*, +, *TCSII July 2021 2369-2373*

A 0.99-pJ/b 15-Gb/s Counter-Based Adaptive Equalizer Using Single Comparator in 28-nm CMOS. *Choi, Y.*, +, *TCSII Oct. 2021 3189-3193*

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

A 92- μ W/Gbps Self-Biased SLVS Receiver for MIPI D-PHY Applications. *Kim, W.*, +, *TCSII Oct. 2021 3219-3223*

A Novel Complex Filter Design With Dual Feedback for High Frequency Wireless Receiver Applications. *Veerendranath, P.S.*, +, *TCSII June 2021 1748-1752*

A Robust Mixed-Signal Cancellation Approach for Even-Order Intermodulation Distortions in LTE-A/5G-Transceivers. *Paireder, T.*, +, *TCSII March 2021 923-927*

A Tunable CMOS IR-UWB Pulse Generator Based on Feedback Controlled Oscillator Switching. *Snelter, L.*, +, *TCSII June 2021 1902-1906*

Compact E-Band I/Q Receiver in SiGe BiCMOS for 5G Backhauling Applications. *Amendola, G.*, +, *TCSII Sept. 2021 3098-3102*

GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C.*, +, *TCSII April 2021 1313-1317*

M-PSK Demodulator With Joint Carrier and Timing Recovery. *Giardino, D.*, +, *TCSII June 2021 1912-1916*

Simplified Harmonic Rejection Mixer Analysis and Design Based on a Filtered Periodic Impulse Model. *de Boer, P.*, +, *TCSII July 2021 2292-2296*

Radio spectrum management

A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M.*, +, *TCSII Jan. 2021 241-245*

A Wideband 5G Cyclostationary Spectrum Sensing Method by Kernel Least Mean Square Algorithm for Cognitive Radio Networks. *Nouri, M.*, +, *TCSII July 2021 2700-2704*

Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*

Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*

Radio transceivers

A Duo-Binary Transceiver With Time-Based Receiver and Voltage-Mode Time-Interleaved Mixing Transmitter for DRAM Interface. *Chae, M.*, +, *TCSII July 2021 2409-2413*

A Robust Mixed-Signal Cancellation Approach for Even-Order Intermodulation Distortions in LTE-A/5G-Transceivers. *Paireder, T.*, +, *TCSII March 2021 923-927*

A Survey on Self-Interference Cancellation in Mobile LTE-A/5G FDD Transceivers. *Motz, C.*, +, *TCSII March 2021 823-829*

A Wideband Sliding Correlation Channel Sounder in 65 nm CMOS: Evaluation Board Performance. *Shakya, D.*, +, *TCSII Sept. 2021 3043-3047*

An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers. *Mariappan, S.*, +, *TCSII April 2021 1178-1182*

Radio transmitters

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

A 92- μ W/Gbps Self-Biased SLVS Receiver for MIPI D-PHY Applications. *Kim, W.*, +, *TCSII Oct. 2021 3219-3223*

A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R.*, +, *TCSII Jan. 2021 246-250*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X.*, +, *TCSII June 2021 1807-1811*

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y.*, +, *TCSII July 2021 2404-2408*

Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J.*, +, *TCSII April 2021 1183-1187*

Radiocommunication

Intelligent and Reconfigurable Architecture for KL Divergence-Based Multi-Armed Bandit Algorithms. *Santosh, S.V.S.*, +, *TCSII March 2021 1008-1012*

Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era. *Lei, K.*, +, *TCSII Jan. 2021 30-35*

Radiofrequency identification

A Low-Noise and Fast-Settling UHF RFID Receiver With Digitally Controlled Leakage Cancellation. *Kim, S.*, +, *TCSII Aug. 2021 2810-2814*

Printed Organic Electronics on Flexible Foil: Circuit Design and Emerging Applications. *Ragonese, E.*, +, *TCSII Jan. 2021 42-48*

Radiofrequency interference

A Robust Mixed-Signal Cancellation Approach for Even-Order Intermodulation Distortions in LTE-A/5G-Transceivers. *Paireder, T.*, +, *TCSII March 2021 923-927*

A Survey on Self-Interference Cancellation in Mobile LTE-A/5G FDD Transceivers. *Motz, C.*, +, *TCSII March 2021 823-829*

Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*

Joint Logarithmic Hyperbolic Cosine Robust Sparse Adaptive Algorithms. *Kumar, K.*, +, *TCSII Jan. 2021 526-530*

Radiofrequency power amplifiers

Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Fegghi, R.*, +, *TCSII April 2021 1193-1197*

Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J.*, +, *TCSII April 2021 1183-1187*

Single-Chip CMOS Reconfigurable Dual-Band Tri-Mode High-Efficiency RF Amplifier Design. *Zhai, C.*, +, *TCSII March 2021 868-872*

Random access memory

Analysis and Design of Reconfigurable Sense Amplifier for Compute SRAM With High-Speed Compute and Normal Read Access. *Chen, J.*, +, *TCSII Dec. 2021 3503-3507*

Random noise

Correlation-Based Background Calibration of Bit Weight in SAR ADCs Using DAS Algorithm. *Zhang, L.*, +, *TCSII April 2021 1063-1067*

Random number generation

A 50 Gb/s PAM-4 Transmitter With Feedforward Equalizer and Background Phase Error Calibration. *Lin, Y.*, +, *TCSII Aug. 2021 2820-2824*

Accelerating Stochastic Computing Using Deterministic Halton Sequences. *Lin, Z.*, +, *TCSII Oct. 2021 3351-3355*

Can Deep Learning Break a True Random Number Generator?. *Yu, Y.*, +, *TCSII May 2021 1710-1714*

One-Dimensional Pseudo-Chaotic Sequences Based on the Discrete Arnold's Cat Map Over Z_3^m . *Souza, C.E.C.*, +, *TCSII Jan. 2021 491-495*

Random processes

Multivaluedness in Networks: Exemplars. *van Wyk, M.A.*, +, *TCSII June 2021 2182-2186*

Random sequences

Correlation-Based Background Calibration of Bit Weight in SAR ADCs Using DAS Algorithm. *Zhang, L.*, +, *TCSII April 2021 1063-1067*

Random-access storage

A NAND-SPIN-Based Magnetic ADC. *Wu, B.*, +, *TCSII Feb. 2021 617-621*

Half-Select Disturb-Free 10T Tunnel FET SRAM Cell With Improved Noise Margin and Low Power Consumption. *Lin, Z.*, +, *TCSII July 2021 2628-2632*

Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V.*, *TCSII Feb. 2021 581-586*

Proposal of High Density Two-Bits-Cell Based NAND-Like Magnetic Random Access Memory. *Yu, Z.*, +, *TCSII May 2021 1665-1669*

STT-MRAM Sensing: A Review. *Na, T.*, +, *TCSII Jan. 2021 12-18*

Toward Energy-Efficient STT-MRAM Design With Multi-Modes Reconfiguration. *Cai, H.*, +, *TCSII July 2021 2633-2639*

Randomized algorithms

Robust Randomized Autoencoder and Correntropy Criterion-Based One-Class Classification. *Cui, X.*, +, *TCSII April 2021 1517-1521*

Rational functions

Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions. *Tavazoei, M.S.*, *TCSII July 2021 2374-2378*

Rayleigh channels

A High Data Rate Solution for Differential Chaos Shift Keying Based on Carrier Index Modulation. *Yang, H.*, +, *TCSII April 2021 1487-1491*

Hardware Implementation of Overlap-Save-Based Fading Channel Emulator. *Najam-Ul-Islam, M.*, +, *TCSII March 2021 918-922*

RC circuits

Realization of a Compact and High-Performance Power Divider Using Parallel RC Isolation Network. *Lin, Y.*, +, *TCSII April 2021 1368-1372*

X-Band 6-Bit SiGe BiCMOS Multifunctional Chip With +12 dBm IP1dB and Flat-Gain Response. *Burak, A.*, +, *TCSII Jan. 2021 126-130*

Reactive power

Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation. *Singh, B.*, +, *TCSII June 2021 1947-1951*

Reactive power control

Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021 1318-1322*

Readout electronics

A Full CMOS Quenching Circuit With Fuse Protection for InGaAs/InP Single Photon Detectors. *Li, Y.*, +, *TCSII Oct. 2021 3224-3228*

A Fully Integrated Low-Power Capacitive Sensor Frontend With Automatic Tuning Scheme. *Mojarad, M.*, +, *TCSII Dec. 2021 3498-3502*

Compensation of Signal-Dependent Readout Noise in Photon Transfer Curve Characterisation of CMOS Image Sensors. *Levski, D.*, +, *TCSII Jan. 2021 102-105*

Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L.*, +, *TCSII May 2021 1640-1644*

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Receivers

A 112 Gb/s PAM-4 RX Front-End With Unlocked Decision Feedback Equalizer. *Petricli, I.*, +, *TCSII Jan. 2021 256-260*

A 56-Gb/s PAM4 Receiver Analog Front-End With Fixed Peaking Frequency and Bandwidth in 40-nm CMOS. *Li, Z.*, +, *TCSII Sept. 2021 3058-3062*

A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces. *Lee, S.*, +, *TCSII June 2021 1862-1866*

Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips. *Goncalves, G.*, +, *TCSII Nov. 2021 3396-3400*

Reconfigurable architectures

A 55nm, 0.4V 5526-TOPS/W Compute-in-Memory Binarized CNN Accelerator for AIoT Applications. *Zhang, H.*, +, *TCSII May 2021 1695-1699*

An Optimal Algorithm for Enumerating Connected Convex Subgraphs in Acyclic Digraphs. *Xiao, C.*, +, *TCSII Jan. 2021 261-265*

Area-Delay-Power Efficient VLSI Architecture of FIR Filter for Processing Seismic Signal. *Bose, S.*, +, *TCSII Nov. 2021 3451-3455*

Intelligent and Reconfigurable Architecture for KL Divergence-Based Multi-Armed Bandit Algorithms. *Santosh, S.V.S.*, +, *TCSII March 2021 1008-1012*

Reconfigurable devices

A Fully Integrated Low-Power Capacitive Sensor Frontend With Automatic Tuning Scheme. *Mojarad, M.*, +, *TCSII Dec. 2021 3498-3502*

Analysis and Design of Reconfigurable Sense Amplifier for Compute SRAM With High-Speed Compute and Normal Read Access. *Chen, J.*, +, *TCSII Dec. 2021 3503-3507*

Recorders

An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking. *Palmer, D.M.*, +, *TCSII May 2021 1680-1684*

Rectifiers

An Asynchronous AC-DC Boost Converter With Event-Driven Voltage Regulator and 94% Efficiency for Low-Frequency Electromagnetic Energy Harvesting. *Gao, Z.*, +, *TCSII July 2021 2563-2567*

Transformer Secondary Voltage Based Resonant Frequency Tracking for LLC Converter. *Wei, Y.*, +, *TCSII April 2021 1243-1247*

Rectifying circuits

A Wide-PCE-Dynamic-Range CMOS Cross-Coupled Differential-Drive Rectifier for Ambient RF Energy Harvesting. *Chong, G.*, +, *TCSII June 2021 1743-1747*

Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B.*, +, *TCSII Jan. 2021 346-350*

Recurrent neural networks

A Novel Hardware-Oriented Recurrent Network of Asynchronous CA Neurons for a Neural Integrator. *Takeda, K.*, +, *TCSII Aug. 2021 2972-2976*

A Remaining Useful Life Prediction Method in the Early Stage of Stochastic Degradation Process. *Zhang, Y.*, +, *TCSII June 2021 2027-2031*

Attention Based Bidirectional Convolutional LSTM for High-Resolution Radio Tomographic Imaging. *Wu, H.*, +, *TCSII April 2021 1482-1486*

Recursive estimation

Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises. *Liang, T.*, +, *TCSII June 2021 2217-2221*

Recursive Constrained Adaptive Algorithm Under q -Rényi Kernel Function. *Liang, T.*, +, *TCSII June 2021 2227-2231*

Recursive filters

Simple Behavioral Model of Baseband Pulse Devices in the Form of a Second-Order Nonlinear Recursive Filter. *Semyonov, E.V.*, *TCSII June 2021 2192-2196*

Reduced instruction set computing

A High-Performance Core Micro-Architecture Based on RISC-V ISA for Low Power Applications. *Bora, S.*, +, *TCSII June 2021 2132-2136*

A Low-Power Asynchronous RISC-V Processor With Propagated Timing Constraints Method. *Li, Z.*, +, *TCSII Sept. 2021 3153-3157*

Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*

Reduced order systems

Laguerre Expansion Series Based Reduced Order Interval Systems. *Samuel, E.R.*, +, *TCSII June 2021 2022-2026*

Mixed Positive-Bounded Balanced Truncation. *Salehi, Z.*, +, *TCSII July 2021 2488-2492*

Stability Preserving Model Reduction Technique for Weighted and Limited Interval Discrete-Time Systems With Error Bound. *Batool, S.*, +, *TCSII Oct. 2021 3281-3285*

Redundancy

A Redundancy-Based Background Calibration for Comparator Offset/Threshold and DAC Gain in a Ping-Pong SAR ADC. *Bunsen, K.*, +, *TCSII Feb. 2021 592-596*

A Resource-Efficient Inference Accelerator for Binary Convolutional Neural Networks. *Kim, T.*, +, *TCSII Jan. 2021 451-455*

Correlation-Based Background Calibration of Bit Weight in SAR ADCs Using DAS Algorithm. *Zhang, L.*, +, *TCSII April 2021 1063-1067*

Reed-Solomon codes

Decoding Algorithm for Quadruple-Error-Correcting Reed-Solomon Codes and Its Derived Architectures. *Garcia-Herrero, F.*, +, *TCSII April 2021 1438-1442*

High Throughput Low Complexity and Low Power ePiBM RS Decoder Using Fractional Folding. *Liu, W.*, +, *TCSII Aug. 2021 2830-2834*

Reference circuits

A -40 °C to 140 °C Picowatt CMOS Voltage Reference With 0.25-V Power Supply. *Qiao, H.*, +, *TCSII Sept. 2021 3118-3122*

A 0.6-to-1.8V CMOS Current Reference With Near-100% Power Utilization. *Fassio, L.*, +, *TCSII Sept. 2021 3038-3042*

A 120 mV Supply, Triode-Regulated Femto-Watt CMOS Voltage Reference Design. *Olivera, F.*, +, *TCSII Feb. 2021 587-591*

- A 2.5 ppm/°C Voltage Reference Combining Traditional BGR and ZTC MOSFET High-Order Curvature Compensation. *Liu, X., +, TCSII April 2021 1093-1097*
- A 24.4 ppm/°C Voltage Mode Bandgap Reference With a 1.05V Supply. *Nagulapalli, R., +, TCSII April 2021 1088-1092*
- A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References. *Yang, C., +, TCSII July 2021 2312-2316*
- A 42nA I_Q , 1.5–6V V_{IN} , Self-Regulated CMOS Voltage Reference With –93dB PSR at 10 Hz for Energy Harvesting Systems. *Chen, Y., +, TCSII July 2021 2357-2361*
- A Sub-200nW All-in-One Bandgap Voltage and Current Reference Without Amplifiers. *Huang, W., +, TCSII Jan. 2021 121-125*
- Current Reference Circuits: A Tutorial. *Lee, S., +, TCSII March 2021 830-836*
- Regression analysis**
- Affine Projection Algorithm for Censored Regression. *Zhao, H., +, TCSII Dec. 2021 3602-3606*
- Hierarchical Estimation Approach for RBF-AR Models With Regression Weights Based on the Increasing Data Length. *Zhou, Y., +, TCSII Dec. 2021 3597-3601*
- Reliability**
- An Extensive Soft Error Reliability Analysis of a Real Autonomous Vehicle Software Stack. *Bandeira, V., +, TCSII Jan. 2021 446-450*
- Remaining life assessment**
- A Remaining Useful Life Prediction Method in the Early Stage of Stochastic Degradation Process. *Zhang, Y., +, TCSII June 2021 2027-2031*
- Remotely operated vehicles**
- Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R., +, TCSII Jan. 2021 416-420*
- Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S., +, TCSII Jan. 2021 436-440*
- Memory-Event-Triggered H_∞ Filtering of Unmanned Surface Vehicles With Communication Delays. *Yan, S., +, TCSII July 2021 2463-2467*
- Renewable energy sources**
- Blockchain-Based Electric Vehicle Incentive System for Renewable Energy Consumption. *Chen, X., +, TCSII Jan. 2021 396-400*
- Residue number systems**
- Efficient Incorporation of the RNS Datapath in Reverse Converter. *Taheri, M., +, TCSII April 2021 1388-1392*
- Evaluation of Mixed-Radix Digit Computation Techniques for the Three Moduli RNS $\{2n-1, 2n, 2n+1-1\}$. *Mohan, P.V.A., +, TCSII April 2021 1418-1422*
- Resistance**
- A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters. *Park, J., +, TCSII Nov. 2021 3386-3390*
- A Compact Single-Transistor Current Source for Analog Design in Nanometer Digital CMOS. *Bai, C., +, TCSII Dec. 2021 3508-3512*
- On The Equivalent Impedance of Two-Impedance Self-Similar Ladder Networks. *Elwakil, A.S., +, TCSII July 2021 2685-2689*
- Resistive RAM**
- An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks. *Kim, B., +, TCSII May 2021 1600-1604*
- An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *Zhou, K., +, TCSII Aug. 2021 2932-2936*
- Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L., +, TCSII May 2021 1640-1644*
- Power-Efficient Noise-Induced Reduction of ReRAM Cell's Temporal Variability Effects. *Ntinis, V., +, TCSII April 2021 1378-1382*
- Single Bit-Line Differential Sensing Based Real-Time NVSRAM for Low Power Applications. *Majumdar, S., TCSII July 2021 2623-2627*
- Structured Pruning of RRAM Crossbars for Efficient In-Memory Computing Acceleration of Deep Neural Networks. *Meng, J., +, TCSII May 2021 1576-1580*
- Resistors**
- A 56-Gb/s PAM4 Receiver Analog Front-End With Fixed Peaking Frequency and Bandwidth in 40-nm CMOS. *Li, Z., +, TCSII Sept. 2021 3058-3062*
- A Dual-Band Coupled Line Power Divider Using SISL Technology. *Feng, T., +, TCSII Feb. 2021 657-661*
- A Fully Integrated Low-Power Capacitive Sensor Frontend With Automatic Tuning Scheme. *Mojarad, M., +, TCSII Dec. 2021 3498-3502*
- A Theorem on Power Superposition in Resistive Networks. *Barbi, L., TCSII July 2021 2362-2363*
- All-Frequency Absorptive CL Dual-Band BPF With Complementary Lossy Bandstop Branches. *Zhang, Y., +, TCSII Dec. 2021 3532-3536*
- An Active Electrode for Vital Signal Acquisition With Accurately-Tunable Sub-Hz High-Pass-Corner Frequency and 164-mV_{pp} Linear-Input-Range. *Hao, Y., +, TCSII May 2021 1610-1614*
- Class AB Op-Amp With Accurate Static Current Control for Low and High Supply Voltages. *Padilla-Cantoya, I., +, TCSII Aug. 2021 2775-2779*
- Comparison Study of DAC Realizations in Current Input CTΣΔ Modulators. *Rajabzadeh, M., +, TCSII Jan. 2021 111-115*
- Conic Programming for Circuit Equations With Rational Current Controlled Resistors. *Jia, W., +, TCSII Jan. 2021 496-500*
- Dual-Band Filtering Power Divider Based on a Single Circular Patch Resonator With Improved Bandwidths and Good Isolation. *Zhang, Q., +, TCSII Nov. 2021 3411-3415*
- Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L., +, TCSII May 2021 1640-1644*
- On The Equivalent Impedance of Two-Impedance Self-Similar Ladder Networks. *Elwakil, A.S., +, TCSII July 2021 2685-2689*
- Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPD Technology. *Kong, M., +, TCSII July 2021 2414-2418*
- Resonant frequency**
- Dual-Band Filtering Power Divider Based on a Single Circular Patch Resonator With Improved Bandwidths and Good Isolation. *Zhang, Q., +, TCSII Nov. 2021 3411-3415*
- Resonant power converters**
- Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B., +, TCSII Jan. 2021 346-350*
- Equivalent Circuit Approach for Output Characteristic Design of Capacitive Power Transfer. *Pamungkas, L., +, TCSII July 2021 2513-2517*
- Transformer Secondary Voltage Based Resonant Frequency Tracking for LLC Converter. *Wei, Y., +, TCSII April 2021 1243-1247*
- Resonator filters**
- A 3.9GHz/63.6% FBW Multi-Mode Filtering Power Divider Using Self-Packaged SISL. *Xiao, J., +, TCSII June 2021 1842-1846*
- A BPF Integrated SP4T Switch Using Parallel Switched Fractal Common Feeding Line. *Xu, J., +, TCSII June 2021 1932-1936*
- A Dual Function Reconfigurable Bandpass Filter for Wideband and Tri-Band Operations. *Bandyopadhyay, A., +, TCSII June 2021 1892-1896*
- A Frequency Transformation for Co-Designed Multi-Passband/Multi-Embedded-Notch RF Filters. *Gomez-Garcia, R., +, TCSII July 2021 2429-2433*
- A Miniaturized Ka-Band Bandpass Filter Using Folded Hybrid Resonators Based on Monolithic Microwave Integrated Circuit Technology. *Shen, G., +, TCSII June 2021 1778-1782*
- A New Class of Wideband MS-to-MS Vialess Vertical Transition With Function of Filtering Performance. *Feng, L., +, TCSII June 2021 1877-1881*
- Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J., +, TCSII Jan. 2021 131-135*
- Compact Wideband Bandstop Filter With Directly Controlled Rejection. *Liu, L., +, TCSII July 2021 2282-2286*
- Dual-Band and Tri-Band Balanced-to-Single Ended Power Dividers With Wideband Common-Mode Suppression. *Zhu, H., +, TCSII July 2021 2332-2336*
- Dual-Band and Wide Stopband Coaxial Filters Using Open-Circuited-Stub-Loaded Resonators. *Xie, Y., +, TCSII June 2021 1872-1876*

- Frequency Tunable Non-Reciprocal Bandpass Filter Using Time-Modulated Microstrip $\lambda_g/2$ Resonators. *Wu, X.*, +, *TCSII Feb. 2021 667-671*
- High Performance Balanced Bandpass Filters With Wideband Common Mode Suppression. *Feng, W.*, +, *TCSII June 2021 1897-1901*
- Millimeter-Wave CMOS 30/80 GHz Sharp-Rejection Dual-Band Bandstop Filters Using TFMS Open-Stepped-Impedance Resonators. *Narayana Rao Vanukuru, V.*, +, *TCSII Jan. 2021 201-205*
- Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters. *Fu, W.*, +, *TCSII July 2021 2352-2356*
- Reconfigurable-Bandwidth DWB BPF With Fixed Operation Frequency and Controllable Stopband. *Bi, X.*, +, *TCSII Jan. 2021 141-145*
- Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q.*, +, *TCSII Jan. 2021 236-240*
- Switchable Diplexer Based on Coupling Control. *Xu, J.*, +, *TCSII Jan. 2021 166-170*
- Synthesis Design of Filtering Differential Phase Shifters of Independently Suppressed Harmonics. *Qiu, L.*, +, *TCSII Aug. 2021 2760-2764*
- Synthesis Design on Wideband Single-Ended and Differential Dual-Band Filtering Impedance Transformer. *Chen, W.*, +, *TCSII March 2021 913-917*
- Triple-Mode Substrate Integrated Coaxial Resonator Based Bandpass Filter Featuring Flexible Transmission Zeros and Adjustable Bandwidth. *Krishna, I.S.*, +, *TCSII April 2021 1223-1227*
- Tunable Reflectionless Filter With Independently Controllable Dual Passbands and Absorbed Harmonic Signals. *Cao, Z.*, +, *TCSII Nov. 2021 3416-3420*
- Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPD Technology. *Kong, M.*, +, *TCSII July 2021 2414-2418*
- Resonators**
- A Low Phase Noise Class-C Oscillator With Improved Resonator and Robust Start-Up. *Sheikhahmadi, S.*, +, *TCSII Jan. 2021 92-96*
- Design of 2×8 Filtering Butler Matrix With Arbitrary Power Distribution. *Shao, Q.*, +, *TCSII Dec. 2021 3527-3531*
- Simultaneous Wireless Power and Information Transfer Using Coupled Co-Existing Defected Ground Structure Resonators. *Barakat, A.*, +, *TCSII Feb. 2021 632-636*
- Resource allocation**
- A Resource-Efficient Inference Accelerator for Binary Convolutional Neural Networks. *Kim, T.*, +, *TCSII Jan. 2021 451-455*
- An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L.*, +, *TCSII Aug. 2021 2957-2961*
- Hardware Implementation of Overlap-Save-Based Fading Channel Emulator. *Najam-Ul-Islam, M.*, +, *TCSII March 2021 918-922*
- Resource-Aware Collaborative Allocation for CPU-FPGA Cloud Environments. *Jordan, M.G.*, +, *TCSII May 2021 1655-1659*
- Resource management**
- Optimizing Robustness of Core-Periphery Structure in Complex Networks. *Yang, B.*, +, *TCSII Dec. 2021 3572-3576*
- Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents. *Prospero, L.*, +, *TCSII Dec. 2021 3488-3492*
- Reviews**
- Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J.*, +, *TCSII Jan. 2021 19-23*
- Multimodal Neural Interface Circuits for Diverse Interaction With Neuronal Cell Population in Human Brain. *Lee, T.*, +, *TCSII Feb. 2021 574-580*
- Riccati equations**
- Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z.*, +, *TCSII Jan. 2021 336-340*
- Mixed Positive-Bounded Balanced Truncation. *Salehi, Z.*, +, *TCSII July 2021 2488-2492*
- Rician channels**
- A Physical Transmitter Implementation of a Quadrature Space Shift Keying MIMO System. *Hiari, O.*, +, *TCSII Jan. 2021 251-255*
- Rigidity**
- A Rigid Formation Control Approach for Multi-Agent Systems With Curvature Constraints. *Zhao, Y.*, +, *TCSII Nov. 2021 3431-3435*
- Ring oscillators**
- A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*
- Can Deep Learning Break a True Random Number Generator?. *Yu, Y.*, +, *TCSII May 2021 1710-1714*
- Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F.*, +, *TCSII March 2021 893-897*
- RLC circuits**
- Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function. *Ravelo, B.*, +, *TCSII July 2021 2364-2368*
- Robot dynamics**
- Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*
- Robot kinematics**
- Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*
- Robot vision**
- Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*
- Robust control**
- A General Fixed-Time Observer for Lower-Triangular Nonlinear Systems. *Gao, F.*, +, *TCSII June 2021 1992-1996*
- A Novel Non-Singular Terminal Sliding Mode Trajectory Tracking Control for Robotic Manipulators. *Zhai, J.*, +, *TCSII Jan. 2021 391-395*
- A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*
- A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y.*, +, *TCSII Jan. 2021 326-330*
- Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C.*, +, *TCSII Oct. 2021 3301-3305*
- Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S.*, +, *TCSII July 2021 2458-2462*
- Design of Indirect Fractional Order IMC Controller for Fractional Order Processes. *Trivedi, R.*, +, *TCSII March 2021 968-972*
- Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R.*, +, *TCSII Jan. 2021 416-420*
- Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J.*, *TCSII July 2021 2568-2572*
- GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q.*, +, *TCSII Feb. 2021 747-751*
- Interval State Estimator Design for Linear Parameter Varying (LPV) Systems. *Khan, A.*, +, *TCSII Aug. 2021 2865-2869*
- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K.*, +, *TCSII July 2021 2528-2532*
- Practical Sliding Mode Using State Depended Intermittent Control. *Xavier, N.*, +, *TCSII Jan. 2021 341-345*
- Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C.*, +, *TCSII Oct. 2021 3321-3325*
- Quantitative Feedback Design-Based Robust PID Control of Voltage Mode Controlled DC-DC Boost Converter. *Kobaku, T.*, +, *TCSII Jan. 2021 286-290*
- Quantitative Synthesis to Tracking Error Problem Based on Nominal Sensitivity Formulation. *Jeyasenthil, R.*, +, *TCSII July 2021 2483-2487*
- Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*
- Robust Finite-Time Dynamic Average Consensus With Exponential Convergence Rates. *Xu, K.*, +, *TCSII July 2021 2578-2582*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law. *Ma, H.*, +, *TCSII Feb. 2021 722-726*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*

Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*

Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*

Robustness

Optimizing Robustness of Core-Periphery Structure in Complex Networks. *Yang, B.*, +, *TCSII Dec. 2021 3572-3576*

Rotors

Impedance Modeling of DFIG Wind Farms With Various Rotor Speeds and Frequency Coupling. *Liu, B.*, +, *TCSII Jan. 2021 406-410*

S

S-parameters

A Dual-Band Coupled Line Power Divider Using SISL Technology. *Feng, T.*, +, *TCSII Feb. 2021 657-661*

Sampled data systems

A Note on Sampled-Data Synchronization of Memristor Networks Subject to Actuator Failures and Two Different Activations. *Ding, K.*, +, *TCSII June 2021 2097-2101*

Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K.*, +, *TCSII June 2021 2172-2176*

Formation Tracking of Second-Order Multi-Agent Systems With Multiple Leaders Based on Sampled Data. *Liu, C.*, +, *TCSII Jan. 2021 331-335*

Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L.*, +, *TCSII Jan. 2021 301-305*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*

Sampling methods

A Square Wave-Based Digital Foreground Calibration Algorithm of a Pipeline ADC Using Approximate Harmonic Sampling. *Chatterjee, S.*, +, *TCSII April 2021 1068-1072*

Satellite navigation

GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C.*, +, *TCSII April 2021 1313-1317*

Scheduling

Optimal Denial-of-Service Attack Strategy on State Estimation Over Infinite-Time Horizon. *Li, Y.*, +, *TCSII Aug. 2021 2860-2864*

Search problems

2-D Piecewise-Linear Neuron Model. *Bao, H.*, +, *TCSII April 2021 1453-1457*

Decoding Algorithm for Quadruple-Error-Correcting Reed-Solomon Codes and Its Derived Architectures. *Garcia-Herrero, F.*, +, *TCSII April 2021 1438-1442*

Neural-Network Based Self-Initializing Algorithm for Multi-Parameter Optimization of High-Speed ADCs. *Bansal, S.*, +, *TCSII Jan. 2021 106-110*

Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*

Secondary cells

A Remaining Useful Life Prediction Method in the Early Stage of Stochastic Degradation Process. *Zhang, Y.*, +, *TCSII June 2021 2027-2031*

Security

Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*

Security of data

A Power-Aware Toggling-Frequency Actuator in Data-Toggling SRAM for Secure Data Protection. *Ho, W.*, +, *TCSII June 2021 2122-2126*

Analog/RF IP Protection: Attack Models, Defense Techniques, and Challenges. *Sanabria-Borbon, A.*, +, *TCSII Jan. 2021 36-41*

Anti-Interpolation: An Attack Facilitator Hiding Adversaries Into Images. *Chen, J.*, +, *TCSII July 2021 2670-2674*

Robust Randomized Autoencoder and Correntropy Criterion-Based One-Class Classification. *Cui, X.*, +, *TCSII April 2021 1517-1521*

Side-Channel Gray-Box Attack for DNNs. *Xiang, Y.*, +, *TCSII Jan. 2021 501-505*

Seismology

Area-Delay-Power Efficient VLSI Architecture of FIR Filter for Processing Seismic Signal. *Bose, S.*, +, *TCSII Nov. 2021 3451-3455*

Seizure

Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*

Semiconductor device modeling

Analog Self-Timed Programming Circuits for Aging Memristors. *Irmanova, A.*, +, *TCSII April 2021 1133-1137*

Semiconductor device models

A Scalable, General Purpose Circuit Model for Vanadium Compensated, Semi-Insulating, Vertical 6H-SiC PCSS. *Zhao, Y.*, +, *TCSII March 2021 988-992*

Exploring Feasible Design Space for Multi-Octave Power Amplifier Using Nonlinear Embedding. *Aggrawal, E.*, +, *TCSII Aug. 2021 2800-2804*

Semiconductor device packaging

DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X.*, +, *TCSII June 2021 2077-2081*

Semiconductor device reliability

A Scalable, General Purpose Circuit Model for Vanadium Compensated, Semi-Insulating, Vertical 6H-SiC PCSS. *Zhao, Y.*, +, *TCSII March 2021 988-992*

Fast Gate Leakage Current Monitor With Large Dynamic Range. *Bhatheja, K.*, +, *TCSII May 2021 1690-1694*

Semiconductor industry

Circuit and System-Level Aspects of Phase Change Memory. *Pozidis, H.*, +, *TCSII March 2021 844-850*

Semiconductor materials

A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C.*, +, *TCSII April 2021 1158-1162*

A High-Linearity Adaptive-Bias SiGe Power Amplifier for 5G Communication. *Li, H.*, +, *TCSII Aug. 2021 2770-2774*

Semiconductor storage

A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces. *Lee, S.*, +, *TCSII June 2021 1862-1866*

Semiconductor switches

Multi-Stage DC-DC Converter Using Active LC2D Network With Minimum Component. *Kumar, G.G.*, +, *TCSII March 2021 943-947*

Sensor arrays

An Autonomous, Optically-Powered, Direct-to-Digital Sun-Angle Recorder for Honey Bee Flight Tracking. *Palmer, D.M.*, +, *TCSII May 2021 1680-1684*

Sensor fusion

Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*

Attention Based Bidirectional Convolutional LSTM for High-Resolution Radio Tomographic Imaging. *Wu, H.*, +, *TCSII April 2021 1482-1486*

Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*

How it Flies and Why it Flies? Volleyball Trajectory Segmentation and Classification. *Chen, C.*, +, *TCSII May 2021 1591-1595*

Information Weighted Consensus With Interacting Multiple Model Over Distributed Networks. *Hu, D.*, +, *TCSII April 2021 1537-1541*

Sensorless machine control

Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*

Sensors

State and Fault Estimations for Discrete-Time T-S Fuzzy Systems With Sensor and Actuator Faults. *Mu, Y.*, +, *TCSII Oct. 2021 3326-3330*

Sequences

A Novel Scheme for Real-Time Max/Min-Set-Selection Sorters on FPGA. *Yan, D.*, +, *TCSII July 2021 2665-2669*

Sequential circuits

A 73dB-A Audio VCO-ADC Based on a Maximum Length Sequence Generator in 130nm CMOS. *Perez, C.*, +, *TCSII Oct. 2021 3194-3198*

Probabilistic Analysis for Sequential Circuits Verification Using Markov Chains. *Zhang, M.*, +, *TCSII Jan. 2021 481-485*

Series (mathematics)

Floating-Point Inverse Square Root Algorithm Based on Taylor-Series Expansion. *Wei, J.*, +, *TCSII July 2021 2640-2644*

Service function chaining

Game Theoretic Approach for a Service Function Chain Routing in NFV With Coupled Constraints. *Le, S.*, +, *TCSII Dec. 2021 3557-3561*

Servomechanisms

A 4.5 GΩ-Input Impedance Chopper Amplifier With Embedded DC-Servo and Ripple Reduction Loops for Impedance Boosting to Sub-Hz. *Pham, X.T.*, +, *TCSII Jan. 2021 116-120*

Servomotors

Hybrid System Control for Robot Motors Based on a Reduced Component, Multi-Voltage Power Supply System. *Kim, T.*, +, *TCSII Dec. 2021 3582-3586*

Set theory

A Pairwise Convex Hull Approach for Effective Representation of Uncertainty for System Analysis and Its Application to Power Grids. *Zeng, L.*, +, *TCSII July 2021 2498-2502*

An Optimal Algorithm for Enumerating Connected Convex Subgraphs in Acyclic Digraphs. *Xiao, C.*, +, *TCSII Jan. 2021 261-265*

Event-Based Output Regulation of Boolean Control Networks With Time Delay. *Zhang, A.*, +, *TCSII June 2021 2007-2011*

On Set Stability of Finite-Field Networks. *Zhu, W.*, +, *TCSII Oct. 2021 3311-3315*

Shape

Design and FPGA Verification of Custom-Shaped Chaotic Attractors Using Rotation, Offset Boosting and Amplitude Control. *Sayed, W.S.*, +, *TCSII Nov. 2021 3466-3470*

Shift registers

A 38.6-fJ/Conv.-Step Inverter-Based Continuous-Time Bandpass $\Delta\Sigma$ ADC in 28 nm Using Asynchronous SAR Quantizer. *Ghaedrahmati, H.*, +, *TCSII Sept. 2021 3113-3117*

A 73dB-A Audio VCO-ADC Based on a Maximum Length Sequence Generator in 130nm CMOS. *Perez, C.*, +, *TCSII Oct. 2021 3194-3198*

Sigma-delta modulation

A 5800 μm^2 Process Monitor Circuit for Measurement of in-Die Variation of V_{th} in 65nm. *Lisha, L.*, +, *TCSII March 2021 863-867*

Comparison Study of DAC Realizations in Current Input CTE Δ Modulators. *Rajabzadeh, M.*, +, *TCSII Jan. 2021 111-115*

Signal classification

A 1.3 μW Event-Driven ANN Core for Cardiac Arrhythmia Classification in Wearable Sensors. *Cai, Q.*, +, *TCSII Sept. 2021 3123-3127*

A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*

A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*

Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*

On-Chip Fuzzy Logic Synthesis of a New Ischemic and Non-Ischemic Heartbeat Classifier. *De La Fuente-Cortes, G.*, +, *TCSII Jan. 2021 476-480*

Signal denoising

A Fractional-Order Adaptive Filtering Algorithm in Impulsive Noise Environments. *Luo, Y.*, +, *TCSII Oct. 2021 3376-3380*

A Robust Student's t -Based Kernel Adaptive Filter. *Wang, H.*, +, *TCSII Oct. 2021 3371-3375*

Minimax Design of Graph Filter Using Chebyshev Polynomial Approximation. *Tseng, C.*, +, *TCSII May 2021 1630-1634*

Real-Time Light Field Signal Processing Using 4D/5D Linear Digital Filter FPGA Circuits. *Edussooriya, C.U.S.*, +, *TCSII July 2021 2735-2741*

Time-Varying Graph Signal Denoising via Median Filters. *Tay, D.B.*, +, *TCSII March 2021 1053-1057*

Signal detection

A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M.*, +, *TCSII Jan. 2021 241-245*

A Stop Condition for Compressed Recovery of Random Modulated Signal. *Dao, X.*, +, *TCSII April 2021 1557-1561*

A Wideband 5G Cyclostationary Spectrum Sensing Method by Kernel Least Mean Square Algorithm for Cognitive Radio Networks. *Nouri, M.*, +, *TCSII July 2021 2700-2704*

Approximate Expectation Propagation Massive MIMO Detector With Weighted Neumann-Series. *Tan, X.*, +, *TCSII Feb. 2021 662-666*

Area-Efficient and Scalable Data-Fusion Based Cooperative Spectrum Sensor for Cognitive Radio. *Chaurasiya, R.B.*, +, *TCSII April 2021 1198-1202*

Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N.*, +, *TCSII July 2021 2399-2403*

Signal processing

2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*

A Distributed Algorithm for Tracking General Functions of Multiple Signals Not-Necessarily Having Steady States. *Wang, W.*, +, *TCSII June 2021 2107-2111*

A Memory-Reduced Frequency Estimator for the Measurement of Sinusoidal Signal. *Wang, J.*, +, *TCSII March 2021 1038-1042*

A Robust Generalized Proportionate Diffusion LMS Algorithm for Distributed Estimation. *Zayyani, H.*, +, *TCSII April 2021 1552-1556*

Compensation of Signal-Dependent Readout Noise in Photon Transfer Curve Characterisation of CMOS Image Sensors. *Levski, D.*, +, *TCSII Jan. 2021 102-105*

Dynamic Range Enhancement Via Linearized Output in Nanoelectromechanical Systems by Combining High-Order Harmonics. *Funayama, K.*, +, *TCSII Oct. 2021 3251-3255*

EMI Effect in Voltage-to-Time Converters. *Richelli, A.*, +, *TCSII April 2021 1078-1082*

Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. *Karunaratne, G.*, +, *TCSII May 2021 1725-1729*

Generalized Polyphase Digital Channelizer. *Jang, Y.*, +, *TCSII Oct. 2021 3366-3370*

Kernel Recursive Maximum Versoria Criterion Algorithm Using Random Fourier Features. *Jain, S.*, +, *TCSII July 2021 2725-2729*

Resilient Impulsive Control for Second-Order Consensus Under Malicious Nodes. *Yan, J.*, +, *TCSII June 2021 1962-1966*

Signal processing algorithms

Area-Delay-Power Efficient VLSI Architecture of FIR Filter for Processing Seismic Signal. *Bose, S.*, +, *TCSII Nov. 2021 3451-3455*

Efficient Hardware Implementation of DNN-Based Speech Enhancement Algorithm With Precise Sigmoid Activation Function. *Chiluveru, S.R.*, +, *TCSII Nov. 2021 3461-3465*

Signal reconstruction

FRI Sampling of Parametric Signals With Non-Ideal Sinc Kernel. *Huang, G.*, +, *TCSII Oct. 2021 3361-3365*

Parameters Measurement of Multiple Exponentially Damped Sinusoids With Sub-Nyquist Sampling. *Huang, G.*, +, *TCSII July 2021 2710-2714*

Signal resolution

Frequency-Division Multiplexing With Graphene Active Electrodes for Neurosensor Applications. *Kim, J.*, +, *TCSII May 2021 1735-1739*

Signal sampling

A New Fast Convergent Blind Timing Skew Error Correction Structure for TIADC. *Khakpour, A.*, +, *TCSII April 2021 1512-1516*

A TD-ADC for IR-UWB Radars With Equivalent Sampling Technology and 8-GS/s Effective Sampling Rate. *Zhu, Z.*, +, *TCSII March 2021 888-892*

FRI Sampling of Parametric Signals With Non-Ideal Sinc Kernel. *Huang, G.*, +, *TCSII Oct. 2021 3361-3365*

Parameters Measurement of Multiple Exponentially Damped Sinusoids With Sub-Nyquist Sampling. *Huang, G.*, +, *TCSII July 2021 2710-2714*

Performance Limits of Generalized Sampling Based 2-Channel Analog-to-Digital Converter. *Ghosh, S.*, +, *TCSII July 2021 2257-2261*

Signal to noise ratio

Adversarial Examples Detection of Radio Signals Based on Multifeature Fusion. *Xu, D.*, +, *TCSII Dec. 2021 3607-3611*

Silicon

A Configurable ULP Instrumentation Amplifier With Pareto-Optimal Power-Noise Trade-Off Achieving 1.93 NEF in 65nm CMOS. *Dekimpe, R.*, +, *TCSII July 2021 2272-2276*

- A Highly Integrated 3-Phase 4:1 Resonant Switched-Capacitor Converter With Parasitic Loss Reduction and Fast Pre-Charge Startup. *Wang, C.*, +, *TCSII July 2021 2608-2612*
- A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*
- An Adjustable Dual-Output Current Mode MOSFET-Only Filter. *Akbari, M.*, +, *TCSII June 2021 1817-1821*
- Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L.*, +, *TCSII May 2021 1640-1644*
- Silicon compounds**
- A Scalable, General Purpose Circuit Model for Vanadium Compensated, Semi-Insulating, Vertical 6H-SiC PCSS. *Zhao, Y.*, +, *TCSII March 2021 988-992*
- An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T.*, +, *TCSII June 2021 2092-2096*
- DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X.*, +, *TCSII June 2021 2077-2081*
- Multi-Stage DC-DC Converter Using Active LC2D Network With Minimum Component. *Kumar, G.G.*, +, *TCSII March 2021 943-947*
- Silicon-on-insulator**
- 28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*
- A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M.*, +, *TCSII Sept. 2021 3182-3186*
- A Versatile 200-V Capacitor-Coupled Level Shifter for Fully Floating Multi-MHz Gate Drivers. *Nguyen, V.H.*, +, *TCSII May 2021 1625-1629*
- Fully Differential Ultra-Wideband Amplifier With 46-dB Gain and Positive Feedback for Increased Bandwidth. *An, X.*, +, *TCSII April 2021 1083-1087*
- Millimeter-wave Frequency Reconfigurable Low Noise Amplifiers for 5G. *Shaheen, R.A.*, +, *TCSII Feb. 2021 642-646*
- SIMO communication**
- Blind Signal Estimation Using Structured Subspace Technique. *Lawal, A.*, +, *TCSII Aug. 2021 3007-3011*
- Simulated annealing**
- Placement and Routing Methods Considering Shape Constraints of JTL for RSFQ Circuits. *Zhai, J.*, +, *TCSII May 2021 1571-1575*
- Safeness-Based Community Penetration. *Yu, Z.*, +, *TCSII July 2021 2690-2694*
- Singular value decomposition**
- Circuit Synthesis of 3-D Rotation Orthonormalization. *Wu, J.*, +, *TCSII April 2021 1502-1506*
- Laguerre Expansion Series Based Reduced Order Interval Systems. *Samuel, E.R.*, +, *TCSII June 2021 2022-2026*
- Skin**
- A Low-Cost Bioimpedance Phase Angle Monitor for Portable Electrical Surface Stimulation Burn Prevention. *Burns, R.P.*, +, *TCSII April 2021 1118-1122*
- Sleep**
- A Graph-Temporal Fused Dual-Input Convolutional Neural Network for Detecting Sleep Stages from EEG Signals. *Cai, Q.*, +, *TCSII Feb. 2021 777-781*
- Sliding mode control**
- Implicit Discrete-Time Adaptive First-Order Sliding Mode Control With Predefined Convergence Time. *Xiong, X.*, +, *TCSII Dec. 2021 3562-3566*
- Slot antennas**
- A Novel Single-Feed Filtering Dielectric Resonator Antenna Using Slotline Stepped-Impedance Resonator. *Wang, C.*, +, *TCSII Nov. 2021 3426-3430*
- Slot line components**
- A New Class of Wideband MS-to-MS Vialess Vertical Transition With Function of Filtering Performance. *Feng, L.*, +, *TCSII June 2021 1877-1881*
- Slot lines**
- Dual-Band and Tri-Band Balanced-to-Single Ended Power Dividers With Wideband Common-Mode Suppression. *Zhu, H.*, +, *TCSII July 2021 2332-2336*
- Smart power grids**
- Distributed Continuous-Time Algorithm for Economic Dispatch Problem Over Switching Communication Topology. *Yan, J.*, +, *TCSII June 2021 2002-2006*
- Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J.*, +, *TCSII March 2021 993-997*
- Social networking (online)**
- Safeness-Based Community Penetration. *Yu, Z.*, +, *TCSII July 2021 2690-2694*
- Solar cells**
- Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved V-f Model. *Wang, Y.*, +, *TCSII Sept. 2021 3103-3107*
- Solar power**
- NS-MD: Near-Sensor Motion Detection With Energy Harvesting Image Sensor for Always-On Visual Perception. *Nazhamaiti, M.*, +, *TCSII Sept. 2021 3078-3082*
- Solar power stations**
- Adaptive Maximum Power Point Tracking With Model-Based Negative Feedback Control and Improved V-f Model. *Wang, Y.*, +, *TCSII Sept. 2021 3103-3107*
- Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation. *Singh, B.*, +, *TCSII June 2021 1947-1951*
- Somatosensory phenomena**
- A Low Power Multi-Class Migraine Detection Processor Based on Somatosensory Evoked Potentials. *Taufique, Z.*, +, *TCSII May 2021 1720-1724*
- Sorting**
- A Novel Scheme for Real-Time Max/Min-Set-Selection Sorters on FPGA. *Yan, D.*, +, *TCSII July 2021 2665-2669*
- High-Parallelism Hash-Merge Architecture for Accelerating Join Operation on FPGA. *Wu, W.*, +, *TCSII July 2021 2650-2654*
- Source code (software)**
- Low-Cost and Programmable CRC Implementation Based on FPGA. *Liu, H.*, +, *TCSII Jan. 2021 211-215*
- Space communication links**
- An Efficient NB-LDPC Decoder Architecture for Space Telecommand Links. *Alvarez, A.*, +, *TCSII April 2021 1213-1217*
- Space vehicle electronics**
- Highly Stable Low Power Radiation Hardened Memory-by-Design SRAM for Space Applications. *Pal, S.*, +, *TCSII June 2021 2147-2151*
- Space vehicles**
- Adaptive Finite-Time Attitude Tracking Control for State Constrained Rigid Spacecraft Systems. *Zhao, L.*, +, *TCSII Dec. 2021 3552-3556*
- Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities. *Dai, M.*, +, *TCSII Aug. 2021 2855-2859*
- Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*
- On Attitude Tracking Control With Communication-Saving: An Integrated Quantized and Event-Based Scheme. *Zhang, C.*, +, *TCSII June 2021 2012-2016*
- Space-time codes**
- Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C.*, +, *TCSII April 2021 1472-1476*
- Sparse matrices**
- 2-D Learned Proximal Gradient Algorithm for Fast Sparse Matrix Recovery. *Yang, C.*, +, *TCSII April 2021 1492-1496*
- Special issues and sections**
- Guest Editorial Special Issue on the 2021 IEEE International Symposium on Circuits and Systems. *Ha, Y.*, +, *TCSII May 2021 1565*
- Guest Editorial Special Issue on the 2021 ISICAS: A CAS Journal Track Symposium. *Ha, Y.*, +, *TCSII Sept. 2021 3037*
- Spectral analysis**
- Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y.*, +, *TCSII July 2021 2404-2408*
- Power-Weighted LPC Formant Estimation. *de Frein, R.*, *TCSII June 2021 2207-2211*

Spectral analyzers

Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y., +, TCSII July 2021 2404-2408*

Speech coding

Power-Weighted LPC Formant Estimation. *de Frein, R., TCSII June 2021 2207-2211*

Speech enhancement

Efficient Hardware Implementation of DNN-Based Speech Enhancement Algorithm With Precise Sigmoid Activation Function. *Chiluveru, S.R., +, TCSII Nov. 2021 3461-3465*

Speech processing

Parameters Measurement of Multiple Exponentially Damped Sinusoids With Sub-Nyquist Sampling. *Huang, G., +, TCSII July 2021 2710-2714*
Power-Weighted LPC Formant Estimation. *de Frein, R., TCSII June 2021 2207-2211*

Speech quality

Efficient Hardware Implementation of DNN-Based Speech Enhancement Algorithm With Precise Sigmoid Activation Function. *Chiluveru, S.R., +, TCSII Nov. 2021 3461-3465*

SPICE

A Scalable, General Purpose Circuit Model for Vanadium Compensated, Semi-Insulating, Vertical 6H-SiC PCSS. *Zhao, Y., +, TCSII March 2021 988-992*

Resonant Energy Recycling SRAM Architecture. *Islam, R., +, TCSII April 2021 1383-1387*

Splines (mathematics)

A Quick Method of Phase Fitting in RF Segmented Demodulation. *Zhang, L., TCSII July 2021 2730-2734*

Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A., +, TCSII June 2021 1887-1891*

Sport

How it Flies and Why it Flies? Volleyball Trajectory Segmentation and Classification. *Chen, C., +, TCSII May 2021 1591-1595*

SRAM cells

A Single-Ended Low Power 16-nm FinFET 6T SRAM Design With PDP Reduction Circuit. *Wang, C., +, TCSII Dec. 2021 3478-3482*

Analysis and Design of Reconfigurable Sense Amplifier for Compute SRAM With High-Speed Compute and Normal Read Access. *Chen, J., +, TCSII Dec. 2021 3503-3507*

SRAM chips

200-MHz Single-Ended 6T 1-kb SRAM With 0.2313 pJ Energy/Access Using 40-nm CMOS Logic Process. *Wang, C., +, TCSII Sept. 2021 3163-3166*

A 43.1TOPS/W Energy-Efficient Absolute-Difference-Accumulation Operation Computing-In-Memory With Computation Reuse. *Um, S., +, TCSII May 2021 1605-1609*

A Power-Aware Toggling-Frequency Actuator in Data-Toggling SRAM for Secure Data Protection. *Ho, W., +, TCSII June 2021 2122-2126*

A Sub- μ W Reversed-Body-Bias 8-bit Processor on 65-nm Silicon-on-Thin-Box (SOTB) for IoT Applications. *Sarmiento, M., +, TCSII Sept. 2021 3182-3186*

Enabling Lower-Power Charge-Domain Nonvolatile In-Memory Computing With Ferroelectric FETs. *Yin, G., +, TCSII July 2021 2262-2266*

Energy Efficient 0.5V 4.8pJ/SOP 0.93 μ W Leakage/Core Neuromorphic Processor Design. *Nambiar, V.P., +, TCSII Sept. 2021 3148-3152*

Half-Select Disturb-Free 10T Tunnel FET SRAM Cell With Improved Noise Margin and Low Power Consumption. *Lin, Z., +, TCSII July 2021 2628-2632*

Highly Stable Low Power Radiation Hardened Memory-by-Design SRAM for Space Applications. *Pal, S., +, TCSII June 2021 2147-2151*

Resonant Energy Recycling SRAM Architecture. *Islam, R., +, TCSII April 2021 1383-1387*

Reverse Bias Current Eliminated, Read-Separated, and Write-Enhanced Tunnel FET SRAM. *Peng, C., +, TCSII Jan. 2021 466-470*

Single Bit-Line Differential Sensing Based Real-Time NVSRAM for Low Power Applications. *Majumdar, S., TCSII July 2021 2623-2627*

Soft-Error-Aware Read-Decoupled SRAM With Multi-Node Recovery for Aerospace Applications. *Pal, S., +, TCSII Oct. 2021 3336-3340*

Stability

A Novel Self-Triggered MPC Scheme for Constrained Input-Affine Nonlinear Systems. *Li, P., +, TCSII Jan. 2021 306-310*

A Robust Method for Controlling Grid-Connected Inverters in Weak Grids. *Akhavan, A., +, TCSII April 2021 1333-1337*

A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y., +, TCSII Jan. 2021 326-330*

A Unified Finite-/Fixed-Time Synchronization Approach to Multi-Layer Networks. *Xu, Y., +, TCSII Jan. 2021 311-315*

Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C., +, TCSII Oct. 2021 3301-3305*

Angular Velocity Observer-Based Quadcopter Attitude Stabilization via Pole-Zero Cancellation Technique. *Kim, S., +, TCSII July 2021 2458-2462*

Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K., +, TCSII June 2021 2047-2051*

Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L., +, TCSII Oct. 2021 3266-3270*

Bifurcation and Control for a Predator-Prey System With Two Delays. *Jiang, X., +, TCSII Jan. 2021 376-380*

Bounded Real Lemmas for Singular Fractional-Order Systems: The $1 < \alpha < 2$ Case. *Zhang, Q., +, TCSII Feb. 2021 732-736*

Coefficient-Based Classes of Algebraic Conditions to Construct Positive Real Rational Functions. *Tavazoei, M.S., TCSII July 2021 2374-2378*

Discrete-Time Sliding Mode Control Design for Unicycle Robot With Bounded Inputs. *Thomas, M., +, TCSII Aug. 2021 2912-2916*

Distributed Dynamic Event-Based Control for Nonlinear Multi-Agent Systems. *Tan, X., +, TCSII Feb. 2021 687-691*

Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X., +, TCSII July 2021 2523-2527*

Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J., TCSII July 2021 2568-2572*

Event-Based Output Regulation of Boolean Control Networks With Time Delay. *Zhang, A., +, TCSII June 2021 2007-2011*

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S., +, TCSII Jan. 2021 436-440*

Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation. *Shi, X., +, TCSII March 2021 983-987*

Event-Triggered Policy to Spacecraft Attitude Stabilization With Actuator Output Nonlinearities. *Dai, M., +, TCSII Aug. 2021 2855-2859*

Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K., +, TCSII June 2021 2172-2176*

Finite-Time Bearing-Only Formation Tracking of Heterogeneous Mobile Robots With Collision Avoidance. *Wu, K., +, TCSII Oct. 2021 3316-3320*

Finite-Time Projective Synchronization Control of Variable-Order Fractional Chaotic Systems via Sliding Mode Approach. *Meng, X., +, TCSII July 2021 2503-2507*

Further Stability and Stabilization Condition for Sampled-Data Control Systems via Looped-Functional Method. *Shanmugam, L., +, TCSII Jan. 2021 301-305*

Fuzzy Adaptive Observer-Based Fault and Disturbance Reconstructions for T-S Fuzzy Systems. *Mu, Y., +, TCSII July 2021 2453-2457*

Global Fixed-Time Output Feedback Stabilization of Perturbed Planar Nonlinear Systems. *Gao, F., +, TCSII Feb. 2021 707-711*

Indefinite Lyapunov-Razumikhin Functions-Based Stability and Event-Triggered Control of Switched Nonlinear Time-Delay Systems. *Zhang, J., +, TCSII Oct. 2021 3286-3290*

Modeling, Analysis and Implementation of an Improved Interleaved Buck-Boost Converter. *Rana, N., +, TCSII July 2021 2588-2592*

Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X., +, TCSII June 2021 2187-2191*

- Observer-Based Incremental Predictive Control of Networked Multi-Agent Systems With Random Delays and Packet Dropouts. *Pang, Z.*, +, *TCSII Jan. 2021 426-430*
- Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S.*, +, *TCSII June 2021 1967-1971*
- Output-Feedback Control Under Hidden Markov Analog Fading and Redundant Channels. *Li, J.*, +, *TCSII Aug. 2021 2922-2926*
- Positive Consensus in Fractional-Order Interval Networked Systems. *Ye, Y.*, +, *TCSII July 2021 2538-2542*
- Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C.*, +, *TCSII Oct. 2021 3321-3325*
- Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Set Stabilization and Optimal Control of Switched Multi-Valued Logical Control Networks With State-Dependent Switching Signals. *Xu, N.*, +, *TCSII June 2021 1952-1956*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*
- Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N.*, +, *TCSII June 2021 1957-1961*
- Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*
- Stability Preserving Model Reduction Technique for Weighted and Limited Interval Discrete-Time Systems With Error Bound. *Batool, S.*, +, *TCSII Oct. 2021 3281-3285*
- Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method. *Liu, A.*, +, *TCSII July 2021 2553-2557*
- Stabilizing Effect of Load Converter in Cascaded System Considering Ripple Interaction. *Zhou, G.*, +, *TCSII Jan. 2021 296-300*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*
- Stability analysis**
- A Compact Single-Transistor Current Source for Analog Design in Nanometer Digital CMOS. *Bai, C.*, +, *TCSII Dec. 2021 3508-3512*
- Affine Projection Algorithm for Censored Regression. *Zhao, H.*, +, *TCSII Dec. 2021 3602-3606*
- Antisaturation Command Filtered Backstepping Control-Based Disturbance Rejection for a Quadrotor UAV. *Liu, K.*, +, *TCSII Dec. 2021 3577-3581*
- Implicit Discrete-Time Adaptive First-Order Sliding Mode Control With Predefined Convergence Time. *Xiong, X.*, +, *TCSII Dec. 2021 3562-3566*
- Stability criteria**
- A Note on Sampled-Data Synchronization of Memristor Networks Subject to Actuator Failures and Two Different Activations. *Ding, K.*, +, *TCSII June 2021 2097-2101*
- Lyapunov Stability Theory for Nonlinear Nabla Fractional Order Systems. *Wei, Y.*, *TCSII Oct. 2021 3246-3250*
- New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach. *Li, Y.*, +, *TCSII Feb. 2021 697-701*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*
- SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W.*, +, *TCSII June 2021 2032-2036*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*
- State estimation**
- A Novel Robust Nonlinear Kalman Filter Based on Multivariate Laplace Distribution. *Wang, G.*, +, *TCSII July 2021 2705-2709*
- Antisaturation Command Filtered Backstepping Control-Based Disturbance Rejection for a Quadrotor UAV. *Liu, K.*, +, *TCSII Dec. 2021 3577-3581*
- Cooperative Control for Nonlinear Multi-Agent Systems Based on Event-Triggered Scheme. *Shi, J.*, *TCSII June 2021 1977-1981*
- Distributed Data-Driven Intrusion Detection for Sparse Stealthy FDI Attacks in Smart Grids. *Shi, J.*, +, *TCSII March 2021 993-997*
- Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G.*, +, *TCSII Jan. 2021 356-360*
- GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C.*, +, *TCSII April 2021 1313-1317*
- H_∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y.*, +, *TCSII Jan. 2021 321-325*
- Information Weighted Consensus With Interacting Multiple Model Over Distributed Networks. *Hu, D.*, +, *TCSII April 2021 1537-1541*
- Interval State Estimator Design for Linear Parameter Varying (LPV) Systems. *Khan, A.*, +, *TCSII Aug. 2021 2865-2869*
- State feedback**
- Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L.*, +, *TCSII Oct. 2021 3266-3270*
- Bipartite Finite Time and Fixed Time Output Consensus of Heterogeneous Multiagent Systems Under State Feedback Control. *Hao, L.*, +, *TCSII June 2021 2067-2071*
- Bipartite Output Consensus for Heterogeneous Multi-Agent Systems via Output Regulation Approach. *Han, T.*, +, *TCSII Jan. 2021 281-285*
- Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Performance Residual Based Fault Detection for Feedback Control Systems. *Liu, R.*, +, *TCSII Oct. 2021 3291-3295*
- Prescribed Finite-Time H_∞ Control for Nonlinear Descriptor Systems. *Lu, X.*, +, *TCSII Aug. 2021 2917-2921*
- Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*
- Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*
- Stabilization of Delayed Boolean Control Networks With State Constraints: A Barrier Lyapunov Function Method. *Liu, A.*, +, *TCSII July 2021 2553-2557*
- Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*
- State-space methods**
- On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D.*, +, *TCSII July 2021 2468-2472*
- Static VAR compensators**
- Steepest Descent Laplacian Regression Based Neural Network Approach for Optimal Operation of Grid Supportive Solar PV Generation. *Singh, B.*, +, *TCSII June 2021 1947-1951*

Statistical analysis

Blind Signal Estimation Using Structured Subspace Technique. *Lawal, A.*, +, *TCSII Aug. 2021 3007-3011*

Key Performance Indicators Based Fault Detection and Isolation Using Data-Driven Approaches. *Liu, R.*, +, *TCSII Jan. 2021 291-295*

One-Dimensional Pseudo-Chaotic Sequences Based on the Discrete Arnold's Cat Map Over Z_3^m . *Souza, C.E.C.*, +, *TCSII Jan. 2021 491-495*

Statistical Graph Signal Recovery Using Variational Bayes. *Torkamani, R.*, +, *TCSII June 2021 2232-2236*

Statistical testing

One-Dimensional Pseudo-Chaotic Sequences Based on the Discrete Arnold's Cat Map Over Z_3^m . *Souza, C.E.C.*, +, *TCSII Jan. 2021 491-495*

Steady-state

Periodic Orbits of the Logistic Map in Single and Double Precision Implementations. *Galias, Z.*, *TCSII Nov. 2021 3471-3475*

Step response

On Determining of LTI Systems Having Nondecreasing Step Response. *Du, H.*, +, *TCSII June 2021 2087-2091*

Stepping motors

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Stereo image processing

Adaptive Filtering of 4-D Light Field Images for Depth-Based Image Enhancement. *Vorhies, J.T.*, +, *TCSII Feb. 2021 787-791*

Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F.*, +, *TCSII March 2021 893-897*

Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*

Stochastic processes

A Remaining Useful Life Prediction Method in the Early Stage of Stochastic Degradation Process. *Zhang, Y.*, +, *TCSII June 2021 2027-2031*

Binary Memristive Synapse Based Vector Neural Network Architecture and Its Application. *Liu, H.*, +, *TCSII Feb. 2021 772-776*

Memristive Stochastic Computing for Deep Learning Parameter Optimization. *Lammie, C.*, +, *TCSII May 2021 1650-1654*

Neural-Network Based Self-Initializing Algorithm for Multi-Parameter Optimization of High-Speed ADCs. *Bansal, S.*, +, *TCSII Jan. 2021 106-110*

Optimal Denial-of-Service Attack Strategy on State Estimation Over Infinite-Time Horizon. *Li, Y.*, +, *TCSII Aug. 2021 2860-2864*

Performance and Analysis of Recursive Constrained Least Lncosh Algorithm Under Impulsive Noises. *Liang, T.*, +, *TCSII June 2021 2217-2221*

Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*

Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*

Stochastic systems

Asynchronous Mean Stabilization of Positive Jump Systems With Piecewise-Homogeneous Markov Chain. *Wang, L.*, +, *TCSII Oct. 2021 3266-3270*

Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S.*, +, *TCSII June 2021 1967-1971*

SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W.*, +, *TCSII June 2021 2032-2036*

Stability Analysis of a Class of Fractional-Order Nonlinear Systems Under Unknown Stochastic Disturbance and Actuator Saturation. *Yu, Z.*, +, *TCSII Oct. 2021 3241-3245*

Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*

Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*

Storage management

A Novel, Efficient Implementation of a Local Binary Convolutional Neural Network. *Lin, I.*, +, *TCSII April 2021 1413-1417*

Substrate integrated waveguides

Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters. *Fu, W.*, +, *TCSII July 2021 2352-2356*

QMSIW-Based Single and Triple Band Bandpass Filters. *Iqbal, A.*, +, *TCSII July 2021 2443-2447*

Triple-Mode Substrate Integrated Coaxial Resonator Based Bandpass Filter Featuring Flexible Transmission Zeros and Adjustable Bandwidth. *Krishna, I.S.*, +, *TCSII April 2021 1223-1227*

Supercapacitors

A Battery-Less Energy Platform for Low-Power Energy Sources Powering Multiple Loads. *Umaz, R.*, *TCSII June 2021 2042-2046*

Design of a Single-Stage Power Converter Operating in Burst and Continuous Modes for Low-Power Energy Sources. *Umaz, R.*, *TCSII Jan. 2021 421-425*

Hybrid System Control for Robot Motors Based on a Reduced Component, Multi-Voltage Power Supply System. *Kim, T.*, +, *TCSII Dec. 2021 3582-3586*

Superconducting filters

Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J.*, +, *TCSII Jan. 2021 131-135*

Superconducting logic circuits

Placement and Routing Methods Considering Shape Constraints of JTL for RSFQ Circuits. *Zhai, J.*, +, *TCSII May 2021 1571-1575*

Superconducting thin films

Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J.*, +, *TCSII Jan. 2021 131-135*

Superconducting transmission lines

Placement and Routing Methods Considering Shape Constraints of JTL for RSFQ Circuits. *Zhai, J.*, +, *TCSII May 2021 1571-1575*

Support vector machines

A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M.*, +, *TCSII Jan. 2021 241-245*

Surface plasmon polaritons

Ultra-Wideband and Compact Terahertz Planar Load Based on Spoof Surface Plasmon Polaritons With Nickel. *Le Zhang, Q.*, +, *TCSII June 2021 1922-1926*

Surface plasmons

Spoof Surface Plasmon Polariton Filter With Reconfigurable Dual and Non-Linear Notched Characteristics. *Le Zhang, Q.*, +, *TCSII Aug. 2021 2815-2819*

Sustainable development

A Battery-Less Energy Platform for Low-Power Energy Sources Powering Multiple Loads. *Umaz, R.*, *TCSII June 2021 2042-2046*

Switched capacitor networks

A 13-Level Switched-Capacitor-Based Boosting Inverter. *Sandeep, N.*, *TCSII March 2021 998-1002*

A 15.4V Fully-Integrated Energy-Efficient Pulse Generator in Standard 0.18 μm CMOS. *Zeng, X.*, +, *TCSII June 2021 1812-1816*

A 30–36 GHz Passive Hybrid Phase Shifter With a Transformer-Based High-Resolution Reflect-Type Phase Shifting Technique. *Li, X.*, +, *TCSII July 2021 2419-2423*

A Highly Integrated 3-Phase 4:1 Resonant Switched-Capacitor Converter With Parasitic Loss Reduction and Fast Pre-Charge Startup. *Wang, C.*, +, *TCSII July 2021 2608-2612*

A Reduced Device Count Single DC Hybrid Switched-Capacitor Self-Balanced Inverter. *Panda, K.P.*, +, *TCSII March 2021 978-982*

A Switched Capacitor Memristive Emulator. *Svetoslavov, G.*, +, *TCSII April 2021 1463-1466*

A Wide Voltage Gain Bidirectional DC–DC Converter Based on Quasi Z-Source and Switched Capacitor Network. *Kumar, A.*, +, *TCSII April 2021 1353-1357*

Circuit Techniques for High Efficiency Fully-Integrated Switched-Capacitor Converters. *Jiang, J.*, +, *TCSII Feb. 2021 556-561*

Compact Seven-Level Boost Type Inverter Topology. *Sathik, M.J.*, +, *TCSII April 2021 1358-1362*

Comparison Study of DAC Realizations in Current Input CTE Δ Modulators. *Rajabzadeh, M.*, +, *TCSII Jan. 2021 111-115*

Single-Chip CMOS Reconfigurable Dual-Band Tri-Mode High-Efficiency RF Amplifier Design. *Zhai, C.*, +, *TCSII March 2021 868-872*

Switches

A 7-Level Switched Capacitor Multilevel Inverter With Reduced Switches and Voltage Stresses. *Roy, T.*, +, *TCSII Dec. 2021 3587-3591*

Switching circuits

An Accurate Zero-Current-Switching Circuit for Ultra-Low-Voltage Boost Converters. *Radin, R.L.*, +, *TCSII June 2021 1773-1777*

Analog Self-Timed Programming Circuits for Aging Memristors. *Irmanova, A.*, +, *TCSII April 2021 1133-1137*

Half-Select Disturb-Free 10T Tunnel FET SRAM Cell With Improved Noise Margin and Low Power Consumption. *Lin, Z.*, +, *TCSII July 2021 2628-2632*

Switching converters

A 13-Level Switched-Capacitor-Based Boosting Inverter. *Sandeep, N.*, *TCSII March 2021 998-1002*

A Hybrid Nine-Level Inverter Topology With Boosting Capability and Reduced Component Count. *Naik, B.S.*, +, *TCSII Jan. 2021 316-320*

A Multilevel Inverter for Contactless Power Transfer System. *Lee, J.*, +, *TCSII Jan. 2021 401-405*

An Accurate Zero-Current-Switching Circuit for Ultra-Low-Voltage Boost Converters. *Radin, R.L.*, +, *TCSII June 2021 1773-1777*

An Improved Single-Phase Asymmetrical Multilevel Inverter Structure With Reduced Number of Switches and Higher Power Quality. *Maamar, A.E.T.*, +, *TCSII June 2021 2092-2096*

Compact Seven-Level Boost Type Inverter Topology. *Sathik, M.J.*, +, *TCSII April 2021 1358-1362*

Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B.*, +, *TCSII Jan. 2021 346-350*

Design of a Single-Stage Power Converter Operating in Burst and Continuous Modes for Low-Power Energy Sources. *Umaz, R.*, *TCSII Jan. 2021 421-425*

Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM. *Xu, S.*, +, *TCSII July 2021 2598-2602*

Selective Lower Order Harmonic Elimination in DC-AC Converter Using Space Vector Approach. *Arumalla, R.T.*, +, *TCSII Aug. 2021 2890-2894*

Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators. *Han, S.*, +, *TCSII Aug. 2021 2902-2906*

Switching networks

A 3 mW 6-bit 4 GS/s Subranging ADC With Subrange-Dependent Embedded References. *Yang, C.*, +, *TCSII July 2021 2312-2316*

Switching systems (control)

Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K.*, +, *TCSII June 2021 2172-2176*

Exponential Stability of Impulsive Fractional Switched Systems With Time Delays. *He, D.*, +, *TCSII June 2021 1972-1976*

Global Adaptive Leader-Following Consensus for Second-Order Nonlinear Multiagent Systems With Switching Topologies. *Zou, W.*, +, *TCSII Feb. 2021 702-706*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*

Set Stabilization and Optimal Control of Switched Multi-Valued Logical Control Networks With State-Dependent Switching Signals. *Xu, N.*, +, *TCSII June 2021 1952-1956*

Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*

Synchronization

A Note on Sampled-Data Synchronization of Memristor Networks Subject to Actuator Failures and Two Different Activations. *Ding, K.*, +, *TCSII June 2021 2097-2101*

A Unified Finite-/Fixed-Time Synchronization Approach to Multi-Layer Networks. *Xu, Y.*, +, *TCSII Jan. 2021 311-315*

Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control. *Li, W.*, +, *TCSII April 2021 1338-1342*

Constant-Time Synchronous Binary Counter With Minimal Clock Period. *Hyun, Y.*, +, *TCSII July 2021 2645-2649*

Event-Based Leader-Following Synchronization of Coupled Harmonic Oscillators Under Jointly Connected Switching Topologies. *Cai, J.*, +, *TCSII March 2021 958-962*

Event-Triggered Synchronization for Discrete-Time Neural Networks With Unknown Delays. *Rong, N.*, +, *TCSII Oct. 2021 3296-3300*

Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K.*, +, *TCSII June 2021 2172-2176*

Finite-Time Projective Synchronization Control of Variable-Order Fractional Chaotic Systems via Sliding Mode Approach. *Meng, X.*, +, *TCSII July 2021 2503-2507*

Insights Into the Dynamics of Coupled VO₂ Oscillators for ONNs. *Nunez, J.*, +, *TCSII Oct. 2021 3356-3360*

Lane Shared Bit-Pragmatic Deep Neural Network Computing Architecture and Circuit. *Yang, S.*, +, *TCSII Jan. 2021 486-490*

M-PSK Demodulator With Joint Carrier and Timing Recovery. *Giardino, D.*, +, *TCSII June 2021 1912-1916*

Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur'e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*

Parameter Identification of Memristor-Based Chaotic Systems via the Drive-Response Synchronization Method. *Liu, H.*, +, *TCSII June 2021 2082-2086*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*

Spanning-Tree-Based Synchronization Conditions for Second-Order Kuramoto Networks. *Wu, L.*, +, *TCSII April 2021 1448-1452*

Synchronization in Dynamical Systems Coupled via Multiple Directed Networks. *Wu, C.W.*, *TCSII May 2021 1660-1664*

Synchronous machines

A Generalized Interpretation of Three Types of Disturbance-Based Controllers for Perturbed Integral Systems in Frequency Domain. *Lin, P.*, +, *TCSII April 2021 1328-1332*

Synchronous motor drives

Variable-Performance Proportional-Type Angle-Filtering System for Motor Drives. *Kim, Y.*, +, *TCSII Jan. 2021 511-515*

Synchronous motors

Energy-Shaping Speed Controller With Time-Varying Damping Injection for Permanent-Magnet Synchronous Motors. *Kim, S.*, +, *TCSII Jan. 2021 381-385*

GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q.*, +, *TCSII Feb. 2021 747-751*

System buses

Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B.*, +, *TCSII July 2021 2583-2587*

System identification

Affine Projection Algorithm for Censored Regression. *Zhao, H.*, +, *TCSII Dec. 2021 3602-3606*

System-on-chip

A 0.5GHz 0.35mW LDO-Powered Constant-Slope Phase Interpolator With 0.22% INL. *Elnaqib, A.*, +, *TCSII Jan. 2021 156-160*

A 0.82 μ W CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J.*, +, *TCSII May 2021 1700-1704*

A 64K-Neuron 64M-1b-Synapse 2.64pJ/SOP Neuromorphic Chip With All Memory on Chip for Spike-Based Models in 65nm CMOS. *Kuang, Y.*, +, *TCSII July 2021 2655-2659*

Capacitor-Less Dual-Mode All-Digital LDO With $\Delta\Sigma$ -Modulation-Based Ripple Reduction. *Akram, M.A.*, +, *TCSII May 2021 1620-1624*

Guest Editorial Special Issue on the 2021 ISICAS: A CAS Journal Track Symposium. *Ha, Y.*, +, *TCSII Sept. 2021 3037*

High Throughput Low Complexity and Low Power ePiBM RS Decoder Using Fractional Folding. *Liu, W.*, +, *TCSII Aug. 2021 2830-2834*

Intelligent and Reconfigurable Architecture for KL Divergence-Based Multi-Armed Bandit Algorithms. *Santosh, S.V.S., +, TCSII March 2021 1008-1012*

Systolic arrays

A High-Performance VLSI Architecture for a Self-Feedback Convolutional Neural Network. *Parmar, Y., +, TCSII Jan. 2021 456-460*

T

Table lookup

A High-Performance Core Micro-Architecture Based on RISC-V ISA for Low Power Applications. *Bora, S., +, TCSII June 2021 2132-2136*

A Low-Cost High-Throughput Digital Design of Biorealistic Spiking Neuron. *Pu, J., +, TCSII April 2021 1398-1402*

A Miniaturized LDPC Encoder: Two-Layer Architecture for CCSDS Near-Earth Standard. *Liu, J., +, TCSII July 2021 2384-2388*

AxBMs: Approximate Radix-8 Booth Multipliers for High-Performance FPGA-Based Accelerators. *Waris, H., +, TCSII May 2021 1566-1570*

Data Retention-Based Low Leakage Power TCAM for Network Packet Routing. *Chang, Y., +, TCSII Feb. 2021 757-761*

Floating-Point Inverse Square Root Algorithm Based on Taylor-Series Expansion. *Wei, J., +, TCSII July 2021 2640-2644*

Partial-LUT Designs for Low-Complexity Realization of DA-Based BLMS Adaptive Filter. *Khan, M.T., +, TCSII April 2021 1188-1192*

Target tracking

Information Weighted Consensus With Interacting Multiple Model Over Distributed Networks. *Hu, D., +, TCSII April 2021 1537-1541*

Interacting Multiple Model Based on Maximum Correntropy Kalman Filter. *Fan, X., +, TCSII Aug. 2021 3017-3021*

Kalman Filter Based on Multiple Scaled Multivariate Skew Normal Variance Mean Mixture Distributions With Application to Target Tracking. *Lu, C., +, TCSII Feb. 2021 802-806*

Time-Varying Formation Tracking for Multiple Dynamic Targets: Finite- and Fixed-Time Convergence. *Zhang, W., +, TCSII April 2021 1323-1327*

Telecommunication computing

A Fast Soft Decision Algorithm for Cooperative Spectrum Sensing. *Golvaei, M., +, TCSII Jan. 2021 241-245*

Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C., +, TCSII April 2021 1472-1476*

Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y., +, TCSII July 2021 2593-2597*

Performance of Clustered Multitask Diffusion LMS Suffering From Inter-Node Communication Delays. *Gogineni, V.C., +, TCSII July 2021 2695-2699*

Telecommunication control

Optimal DoS Attack Against LQR Control Channels. *Zhou, J., +, TCSII April 2021 1348-1352*

Telecommunication network routing

Data Retention-Based Low Leakage Power TCAM for Network Packet Routing. *Chang, Y., +, TCSII Feb. 2021 757-761*

Telecommunication network topology

Searching Better Rewiring Strategies and Objective Functions for Stronger Controllability Robustness. *Lou, Y., +, TCSII June 2021 2112-2116*

Telecommunication power management

A Low-Power 28-Gb/s PAM-4MZM Driver With Level Pre-Distortion. *Kim, M., +, TCSII March 2021 908-912*

An Impedance Matching Strategy for Micro-Scale RF Energy Harvesting Systems. *Mohan, A., +, TCSII April 2021 1458-1462*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H., +, TCSII Jan. 2021 206-210*

Power Efficiency Model for MIMO Transmitters Including Memory Polynomial Digital Predistortion. *Zanen, J., +, TCSII April 2021 1183-1187*

Startup Time and Energy-Reduction Techniques for Crystal Oscillators in the IoT Era. *Lei, K., +, TCSII Jan. 2021 30-35*

Telecommunication scheduling

Hardware-Efficient and High-Throughput LLRC Segregation Based Binary QC-LDPC Decoding Algorithm and Architecture. *Verma, A., +, TCSII Aug. 2021 2835-2839*

Telecommunication signaling

A 92- μ W/Gbps Self-Biased SLVS Receiver for MIPI D-PHY Applications. *Kim, W., +, TCSII Oct. 2021 3219-3223*

Temperature measurement

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T., +, TCSII Jan. 2021 196-200*

Temperature sensors

A BJT-Based CMOS Temperature Sensor With Duty-Cycle-Modulated Output and $\pm 0.5^\circ\text{C}$ (3σ) Inaccuracy From -40°C to 125°C . *Huang, Z., +, TCSII Aug. 2021 2780-2784*

A Pre-Concentration System Design for Electronic Nose via Finite Element Method. *Qian, J., +, TCSII Dec. 2021 3592-3596*

An Accuracy-Improved and Internal Regulator-Free Temperature Sensor With a Non-Linear Current Mode Feedback Pseudo-PLL. *Li, F., +, TCSII April 2021 1138-1142*

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T., +, TCSII Jan. 2021 196-200*

Tensors

Criteria for Observability and Reconstructibility of Boolean Control Networks via Set Controllability. *Zhang, X., +, TCSII April 2021 1263-1267*

Event-Based Output Regulation of Boolean Control Networks With Time Delay. *Zhang, A., +, TCSII June 2021 2007-2011*

Steady-State Mean-Square Error Performance Analysis of the Tensor LMS Algorithm. *Zhang, N., +, TCSII March 2021 1043-1047*

Terahertz wave devices

Ultra-Wideband and Compact Terahertz Planar Load Based on Spoof Surface Plasmon Polaritons With Nickel. *Le Zhang, Q., +, TCSII June 2021 1922-1926*

Ternary logic

Low-Power Ternary Multiplication Using Approximate Computing. *Kim, S., +, TCSII Aug. 2021 2947-2951*

Ultra-Compact Ternary Logic Gates Based on Negative Capacitance Carbon Nanotube FETs. *Jooq, M.K.Q., +, TCSII June 2021 2162-2166*

Thermal noise

A Pseudo-Pseudo-Differential ADC Achieving 105dB SNDR in 10kHz Bandwidth Using Ring Amplifier Based Integrators. *Lee, C.Y., +, TCSII July 2021 2327-2331*

Thermometers

A 65nm Thermometer-Encoded Time/Charge-Based Compute-in-Memory Neural Network Accelerator at 0.735pJ/MAC and 0.41pJ/Update. *Gong, M., +, TCSII April 2021 1408-1412*

A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization. *Sengupta, S., +, TCSII April 2021 1073-1077*

The XOR-MAJ Thermometer-to-Binary Encoder Structure Stable to Bubble Errors. *Pilipko, M.M., +, TCSII July 2021 2613-2617*

Thermostats

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T., +, TCSII Jan. 2021 196-200*

Thin film circuits

Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPD Technology. *Kong, M., +, TCSII July 2021 2414-2418*

Thin film transistors

High-Speed Dynamic Level Shifter for High-Side Bootstrapped Gate Driver in High-Voltage Buck Regulators. *Yuan, B., +, TCSII Sept. 2021 3083-3087*

Printed Organic Electronics on Flexible Foil: Circuit Design and Emerging Applications. *Ragonese, E., +, TCSII Jan. 2021 42-48*

Three-dimensional integrated circuits

A 0.166 pJ/b/pF, 3.5–5 Gb/s TSV I/O Interface With VOH Drift Control. *Kim, J., +, TCSII June 2021 1822-1826*

An Efficient 3D ReRAM Convolution Processor Design for Binarized Weight Networks. *Kim, B., +, TCSII May 2021 1600-1604*

Fast Buffer Count Estimation in 3D IC Floorplanning. *Mohapatra, S., +, TCSII Jan. 2021 271-275*

- Low Power Program Scheme With Capacitance-Less Charge Recycling for 3D NAND Flash Memory. *Huang, C.*, +, *TCSII July 2021 2478-2482*
- Monolithic 3D Integrated Circuits: Recent Trends and Future Prospects. *Dhananjay, K.*, +, *TCSII March 2021 837-843*
- TSV Based Orthogonal Coils With High Misalignment Tolerance for Inductive Power Transfer in Biomedical Implants. *Qian, L.*, +, *TCSII June 2021 1832-1836*
- Three-term control**
- Design of Indirect Fractional Order IMC Controller for Fractional Order Processes. *Trivedi, R.*, +, *TCSII March 2021 968-972*
- Quantitative Feedback Design-Based Robust PID Control of Voltage Mode Controlled DC-DC Boost Converter. *Kobaku, T.*, +, *TCSII Jan. 2021 286-290*
- Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C.*, +, *TCSII July 2021 2558-2562*
- Threshold voltage**
- A 5.02nW 32-kHz Self-Reference Power Gating XO With Fast Startup Time Assisted by Negative Resistance and Initial Noise Boosters. *Park, J.*, +, *TCSII Nov. 2021 3386-3390*
- Through-silicon vias**
- Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips. *Goncalves, G.*, +, *TCSII Nov. 2021 3396-3400*
- Time measurement**
- GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C.*, +, *TCSII April 2021 1313-1317*
- Time series**
- A Novel Non-Autonomous Chaotic System With Infinite 2-D Lattice of Attractors and Bursting Oscillations. *Wang, M.*, +, *TCSII March 2021 1023-1027*
- Time-digital conversion**
- Auto-Zeroing Static Phase Offset in DLLs Using a Digitally Programmable Sensing Circuit. *Chithra, .*, +, *TCSII June 2021 1788-1792*
- Peak-SNR Analysis of CMOS TDCs for SPAD-Based TCSPC 3D Imaging Applications. *Arvani, F.*, +, *TCSII March 2021 893-897*
- Time-domain analysis**
- Analysis of Stable Modes of a Scalable Coupled Oscillator Array. *He, R.*, +, *TCSII Feb. 2021 647-651*
- Clean Bandwidth Improvement of MPWM Encoding Method for RF All-Digital Transmitter. *Yang, S.Y.*, +, *TCSII July 2021 2404-2408*
- On the Marginal Stability/Instability of Power Island Following Unintentional Islanding: A Modal Analysis Based Approach. *Pal, D.*, +, *TCSII July 2021 2468-2472*
- Time-varying systems**
- A Novel Variable Exponential Discrete Time Sliding Mode Reaching Law. *Chen, X.*, +, *TCSII July 2021 2518-2522*
- A Unified Finite-/Fixed-Time Synchronization Approach to Multi-Layer Networks. *Xu, Y.*, +, *TCSII Jan. 2021 311-315*
- Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model. *Li, Z.*, +, *TCSII Oct. 2021 3256-3260*
- Cluster Synchronization of Two-Layer Networks via Aperiodically Intermittent Pinning Control. *Li, W.*, +, *TCSII April 2021 1338-1342*
- Distance- and Velocity-Based Collision Avoidance for Time-Varying Formation Control of Second-Order Multi-Agent Systems. *Pang, Z.*, +, *TCSII April 2021 1253-1257*
- Dynamic Event-Triggered Output Feedback Control for a Class of High-Order Feedforward Nonlinear Time-Delay Systems. *Yuan, M.*, *TCSII Nov. 2021 3436-3440*
- Dynamic Output Feedback Control of Discrete-Time Switched Affine Systems. *Xu, X.*, +, *TCSII July 2021 2523-2527*
- Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J.*, *TCSII July 2021 2568-2572*
- Event-Triggered Synchronization for Discrete-Time Neural Networks With Unknown Delays. *Rong, N.*, +, *TCSII Oct. 2021 3296-3300*
- Generalized Dissipativity State Estimation of Delayed Static Neural Networks Based on a Proportional-Integral Estimator With Exponential Gain Term. *Tan, G.*, +, *TCSII Jan. 2021 356-360*
- H_∞ Performance State Estimation for Static Neural Networks With Time-Varying Delays via Two Improved Inequalities. *Tian, Y.*, +, *TCSII Jan. 2021 321-325*
- Indefinite Lyapunov–Razumikhin Functions–Based Stability and Event-Triggered Control of Switched Nonlinear Time-Delay Systems. *Zhang, J.*, +, *TCSII Oct. 2021 3286-3290*
- Interval State Estimator Design for Linear Parameter Varying (LPV) Systems. *Khan, A.*, +, *TCSII Aug. 2021 2865-2869*
- Leader–Follower Affine Formation Control of Second-Order Nonlinear Uncertain Multi-Agent Systems. *Zhi, H.*, +, *TCSII Dec. 2021 3547-3551*
- New Results on Stability Analysis and Estimator Design for Switched Positive Linear Systems: A Reverse-Timer-Dependent Linear Co-Positive Lyapunov Function Approach. *Li, Y.*, +, *TCSII Feb. 2021 697-701*
- Novel Master-Slave Synchronization Conditions for Chaotic Fractional-Order Lur’e Systems Based on Small Gain Theorem. *Jin, X.*, +, *TCSII June 2021 2187-2191*
- Optimal FIR Filter for Discrete-Time LTV Systems and Fast Iterative Algorithm. *Zhao, S.*, +, *TCSII April 2021 1527-1531*
- Robust Finite-Time Dynamic Average Consensus With Exponential Convergence Rates. *Xu, K.*, +, *TCSII July 2021 2578-2582*
- Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*
- Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*
- SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W.*, +, *TCSII June 2021 2032-2036*
- Stability Analysis of Discrete-Time Switched Positive Nonlinear Systems With Unstable Subsystems Under Different Switching Strategies. *Zhang, N.*, +, *TCSII June 2021 1957-1961*
- Stability Analysis of Discrete-Time Switched Systems With Unstable Modes: An Improved Ratio-Based Tradeoff Approach. *Wang, Z.*, +, *TCSII Jan. 2021 431-435*
- Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*
- Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*
- Time-Varying Formation Tracking for Multiple Dynamic Targets: Finite- and Fixed-Time Convergence. *Zhang, W.*, +, *TCSII April 2021 1323-1327*
- Timing jitter**
- A 0.32–2.7 Gb/s Reference-Less Continuous-Rate Clock and Data Recovery Circuit With Unrestricted and Fast Frequency Acquisition. *Tho, N.H.*, +, *TCSII July 2021 2347-2351*
- A 26GHz Fractional-N Digital Frequency Synthesizer Leveraging Noise Profiles of Three Functional Stages. *Bae, S.*, +, *TCSII Sept. 2021 3063-3067*
- A 3.36-GHz Locking-Tuned Type-I Sampling PLL With –78.6-dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y.*, +, *TCSII Sept. 2021 3093-3097*
- EMI Effect in Voltage-to-Time Converters. *Richelli, A.*, +, *TCSII April 2021 1078-1082*
- Toeplitz matrices**
- Time Complexity of In-Memory Matrix-Vector Multiplication. *Sun, Z.*, +, *TCSII Aug. 2021 2785-2789*
- Topology**
- A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S.*, +, *TCSII July 2021 2493-2497*
- A Rigid Formation Control Approach for Multi-Agent Systems With Curvature Constraints. *Zhao, Y.*, +, *TCSII Nov. 2021 3431-3435*
- Analysis and Design of Reconfigurable Sense Amplifier for Compute SRAM With High-Speed Compute and Normal Read Access. *Chen, J.*, +, *TCSII Dec. 2021 3503-3507*
- Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips. *Goncalves, G.*, +, *TCSII Nov. 2021 3396-3400*
- Event-Based Leader-Following Synchronization of Coupled Harmonic Oscillators Under Jointly Connected Switching Topologies. *Cai, J.*, +, *TCSII March 2021 958-962*

- Event-Triggered Synchronization of Switching Dynamical Networks With Periodic Sampling. *Ayepah, K.*, +, *TCSII June 2021 2172-2176*
- Formation Tracking of Second-Order Multi-Agent Systems With Multiple Leaders Based on Sampled Data. *Liu, C.*, +, *TCSII Jan. 2021 331-335*
- Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z.*, +, *TCSII Jan. 2021 336-340*
- Global Adaptive Leader-Following Consensus for Second-Order Nonlinear Multiagent Systems With Switching Topologies. *Zou, W.*, +, *TCSII Feb. 2021 702-706*
- On Set Stability of Finite-Field Networks. *Zhu, W.*, +, *TCSII Oct. 2021 3311-3315*
- Open-Switch Fault-Tolerant Operation of T-Type Active Neutral-Point-Clamped Converter Using Level-Shifted PWM. *Xu, S.*, +, *TCSII July 2021 2598-2602*
- Resilient Consensus of Multi-Agent Systems With Switching Topologies: A Trusted-Region-Based Sliding-Window Weighted Approach. *Zhai, Y.*, +, *TCSII July 2021 2448-2452*
- Resilient Impulsive Control for Second-Order Consensus Under Malicious Nodes. *Yan, J.*, +, *TCSII June 2021 1962-1966*
- Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*
- Torque**
- Toward Energy-Efficient STT-MRAM Design With Multi-Modes Reconfiguration. *Cai, H.*, +, *TCSII July 2021 2633-2639*
- Torque control**
- A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S.*, +, *TCSII July 2021 2493-2497*
- Tracking**
- A Distributed Algorithm for Tracking General Functions of Multiple Signals Not-Necessarily Having Steady States. *Wang, W.*, +, *TCSII June 2021 2107-2111*
- Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K.*, +, *TCSII June 2021 2047-2051*
- Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation. *Shi, X.*, +, *TCSII March 2021 983-987*
- Formation Tracking of Second-Order Multi-Agent Systems With Multiple Leaders Based on Sampled Data. *Liu, C.*, +, *TCSII Jan. 2021 331-335*
- Quantitative Synthesis to Tracking Error Problem Based on Nominal Sensitivity Formulation. *Jeyasenthil, R.*, +, *TCSII July 2021 2483-2487*
- Ramp-Tracking Generalized Predictive Control System-Based on Second-Order Difference. *Cordero, R.*, +, *TCSII April 2021 1283-1287*
- Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*
- Trajectory**
- Periodic Orbits of the Logistic Map in Single and Double Precision Implementations. *Galias, Z.*, *TCSII Nov. 2021 3471-3475*
- Trajectory control**
- Trajectory Optimization of 5-Link Biped Robot Using Beetle Antennae Search. *Khan, A.T.*, +, *TCSII Oct. 2021 3276-3280*
- Transceivers**
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- New Charge-Steering DFEs in 55-nm CMOS. *Pike, J.*, +, *TCSII Jan. 2021 231-235*
- Transconductance**
- A 1.7-to-2.7GHz 35–38% PAE Multiband CMOS Power Amplifier Employing a Digitally-Assisted Analog Pre-Distorter (DAAPD) Reconfigurable Linearization Technique. *Mariappan, S.*, +, *TCSII Nov. 2021 3381-3385*
- Transfer functions**
- A Frequency Transformation for Co-Designed Multi-Passband/Multi-Embedded-Notch RF Filters. *Gomez-Garcia, R.*, +, *TCSII July 2021 2429-2433*
- A Simple, Accurate Small-Signal Model of a Coupled-Inductor-Based DC-DC Converter Including the Leakage Inductance Effect. *Schmitz, L.*, +, *TCSII July 2021 2533-2537*
- A Widely Reconfigurable Piecewise-Linear ADC for Information-Aware Quantization. *Sengupta, S.*, +, *TCSII April 2021 1073-1077*
- Approximation of Fractional-Order Butterworth Filter Using Pole-Placement in *W*-Plane. *Mishra, S.K.*, +, *TCSII Oct. 2021 3229-3233*
- Design of a Pseudo-Wide Dynamic Range CMOS Image Sensor by Using the Bidirectional Gamma Curvature Technique. *Im, H.*, +, *TCSII May 2021 1596-1599*
- Expressions for the Harmonic Transfer Functions of N-Path Filters With Arbitrary Source and Load Impedances. *Rizwan, S.*, +, *TCSII March 2021 903-907*
- Modeling, Analysis and Implementation of an Improved Interleaved Buck-Boost Converter. *Rana, N.*, +, *TCSII July 2021 2588-2592*
- Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*
- Resonance Effect Reduction With Bandpass Negative Group Delay Fully Passive Function. *Ravelo, B.*, +, *TCSII July 2021 2364-2368*
- Transformers**
- A 21-to-41-GHz High-Gain Low Noise Amplifier With Triple-Coupled Technique for Multiband Wireless Applications. *Yu, Y.*, +, *TCSII June 2021 1857-1861*
- A 28-GHz Doherty Power Amplifier With a Compact Transformer-Based Quadrature Hybrid in 65-nm CMOS. *Yu, C.*, +, *TCSII Aug. 2021 2790-2794*
- A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS. *Liu, H.*, +, *TCSII June 2021 1847-1851*
- Doubly-Tuned Transformer Networks: A Tutorial. *Bevilacqua, A.*, +, *TCSII Feb. 2021 550-555*
- Transforms**
- An Optimized FPGA-Based Real-Time NDT for 3D-LiDAR Localization in Smart Vehicles. *Deng, Q.*, +, *TCSII Sept. 2021 3167-3171*
- Transient response**
- A Low-Ripple Charge Pump With Novel Compensator for Transient-Response Improvement in CMOS Image Sensors. *Gao, J.*, +, *TCSII April 2021 1113-1117*
- An Impedance Adapting Compensation Scheme for High Current NMOS LDO Design. *Cao, H.*, +, *TCSII July 2021 2287-2291*
- Modeling, Analysis and Implementation of an Improved Interleaved Buck-Boost Converter. *Rana, N.*, +, *TCSII July 2021 2588-2592*
- Optimal FIR Filter for Discrete-Time LTV Systems and Fast Iterative Algorithm. *Zhao, S.*, +, *TCSII April 2021 1527-1531*
- Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*
- Review of Analog-Assisted-Digital and Digital-Assisted-Analog Low Dropout Regulators. *Huang, M.*, +, *TCSII Jan. 2021 24-29*
- Transistor circuits**
- A 120 mV Supply, Triode-Regulated Femto-Watt CMOS Voltage Reference Design. *Olivera, F.*, +, *TCSII Feb. 2021 587-591*
- Design of the Class-E Power Amplifier Considering the Temperature Effect of the Transistor On-Resistance for Sensor Applications. *Liu, C.*, +, *TCSII May 2021 1705-1709*
- Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *Wang, L.*, +, *TCSII May 2021 1640-1644*
- Linearization of Voltage-Controlled Oscillators Using Floating-Gate Transistors. *Andryczuk, S.*, +, *TCSII July 2021 2337-2341*
- Transistors**
- A Compact Single-Transistor Current Source for Analog Design in Nanometer Digital CMOS. *Bai, C.*, +, *TCSII Dec. 2021 3508-3512*
- A Low Phase Noise Class-C Oscillator With Improved Resonator and Robust Start-Up. *Sheikhahmadi, S.*, +, *TCSII Jan. 2021 92-96*
- A Multi-Memristive Unit-Cell Array With Diagonal Interconnects for In-Memory Computing. *Khaddam-Aljameh, R.*, +, *TCSII Dec. 2021 3522-3526*

Analog Self-Timed Programming Circuits for Aging Memristors. *Irmanova, A.*, +, *TCSII April 2021 1133-1137*

Transmission lines

Dual Q/V -Band SiGe BiCMOS Low Noise Amplifiers Using Q-Enhanced Metamaterial Transmission Lines. *Lee, D.*, +, *TCSII March 2021 898-902*

Parasitic Compensation and Hence Isolation Improvement of PIN Diode-Based Switches. *Singh, A.*, +, *TCSII Jan. 2021 97-101*

Realization of a Compact and High-Performance Power Divider Using Parallel RC Isolation Network. *Lin, Y.*, +, *TCSII April 2021 1368-1372*

Single-Layer Dual-Band Bandwidth-Enhanced Filtering Phase Shifter With Two Different Predetermined Phase-Shifting Values. *Dong, Q.*, +, *TCSII Jan. 2021 236-240*

Synthetic Transmission Lines in Cutoff Operation for Wideband High-Impedance DC Supplies. *Testa, P.V.*, +, *TCSII March 2021 928-932*

Transmission networks

Ensuring Network Connectedness in Optimal Transmission Switching Problems. *Han, T.*, +, *TCSII July 2021 2603-2607*

Transmitters

A 0.166 pJ/b/pF, 3.5–5 Gb/s TSV I/O Interface With VOH Drift Control. *Kim, J.*, +, *TCSII June 2021 1822-1826*

A DFE-Enhanced Phase-Difference Modulation Signaling for Multi-Drop Memory Interfaces. *Lee, S.*, +, *TCSII June 2021 1862-1866*

Design of a Transmitter for Inductively-Coupled High-Bitrate Communication in Stacked Chips. *Goncalves, G.*, +, *TCSII Nov. 2021 3396-3400*

Hybrid Harmonic Cancellation Digital Predistortion With a Feedback Loop Compensation. *Chen, L.*, +, *TCSII June 2021 2222-2226*

Trees (mathematics)

Bipartite Tracking of Linear Multi-Agent Systems Under Actuator Saturation With Relative Output Feedback. *Bhowmick, S.*, +, *TCSII Jan. 2021 386-390*

Spanning-Tree-Based Synchronization Conditions for Second-Order Kuramoto Networks. *Wu, L.*, +, *TCSII April 2021 1448-1452*

Synchronization in Dynamical Systems Coupled via Multiple Directed Networks. *Wu, C.W.*, *TCSII May 2021 1660-1664*

Trellis codes

Chaos-Based Space-Time Trellis Codes With Deep Learning Decoding. *Souza, C.E.C.*, +, *TCSII April 2021 1472-1476*

Minimal-Set Trellis Min-Max Decoder Architecture for Nonbinary LDPC Codes. *Pham, T.X.*, +, *TCSII Jan. 2021 216-220*

Trigger circuits

Analysis and Design of the Three-Inverter Schmitt Trigger for Supply Voltages Down to 50 mV. *Daros Fernandes, T.*, +, *TCSII July 2021 2302-2306*

Half-Select Disturb-Free 10T Tunnel FET SRAM Cell With Improved Noise Margin and Low Power Consumption. *Lin, Z.*, +, *TCSII July 2021 2628-2632*

Triodes

A 120 mV Supply, Triode-Regulated Femto-Watt CMOS Voltage Reference Design. *Olivera, F.*, +, *TCSII Feb. 2021 587-591*

Trusted computing

Hardware Trojan Designs Based on High-Low Probability and Partitioned Combinational Logic With a Malicious Reset Signal. *Shi, J.*, +, *TCSII June 2021 2152-2156*

Tuning

A 1.7-to-2.7GHz 35–38% PAE Multiband CMOS Power Amplifier Employing a Digitally-Assisted Analog Pre-Distorter (DAAPD) Reconfigurable Linearization Technique. *Mariappan, S.*, +, *TCSII Nov. 2021 3381-3385*

A Fully Integrated Low-Power Capacitive Sensor Frontend With Automatic Tuning Scheme. *Mojarad, M.*, +, *TCSII Dec. 2021 3498-3502*

Tunable Reflectionless Filter With Independently Controllable Dual Passbands and Absorbed Harmonic Signals. *Cao, Z.*, +, *TCSII Nov. 2021 3416-3420*

Tunneling magnetoresistance

A NAND-SPIN-Based Magnetic ADC. *Wu, B.*, +, *TCSII Feb. 2021 617-621*

Two-phase flow

Characterization of Two-Phase Flow Structure by Deep Learning-Based Super Resolution. *Gao, Z.*, +, *TCSII Feb. 2021 782-786*

U

UHF amplifiers

An Inductorless Wideband Gm-Boosted Balun LNA With nMOS-pMOS Configuration and Capacitively Coupled Loads for Sub-GHz IoT Applications. *Tiwari, S.*, +, *TCSII Oct. 2021 3204-3208*

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*

UHF antennas

A Differentially Fed Dual-Polarized Filtering Patch Antenna With Good Stopband Suppression. *Xun, M.*, +, *TCSII April 2021 1228-1232*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Isolation Enhancement in Dual-Band Monopole Antenna for 5G Applications. *Wang, W.*, +, *TCSII June 2021 1867-1871*

UHF couplers

Accurate Isolation Networks in Quadrature Couplers and Power Dividers. *Sutbas, B.*, +, *TCSII April 2021 1148-1152*

Synthesis of Wideband Filtering Couplers for Arbitrary High Power-Division Ratios Based on Three Different Types of Coupled-Line Sections. *Zheng, Y.*, +, *TCSII April 2021 1218-1222*

UHF filters

A Type-I PLL With Foreground Loop Bandwidth Calibration. *Chou, M.*, +, *TCSII April 2021 1103-1107*

Direct Synthesis Method for Dual-Band Bandpass Filters With Wide Fractional Bandwidth Range and Center Frequency Ratio. *Dai, X.*, +, *TCSII Aug. 2021 2755-2759*

Frequency Tunable Non-Reciprocal Bandpass Filter Using Time-Modulated Microstrip $\lambda_g/2$ Resonators. *Wu, X.*, +, *TCSII Feb. 2021 667-671*

High Performance Balanced Bandpass Filters With Wideband Common Mode Suppression. *Feng, W.*, +, *TCSII June 2021 1897-1901*

Millimeter-Wave CMOS 30/80 GHz Sharp-Rejection Dual-Band Bandstop Filters Using TFMS Open-Stepped-Impedance Resonators. *Narayana Rao Vanukuru, V.*, +, *TCSII Jan. 2021 201-205*

Reconfigurable Bandpass Filter With Wide-Range Bandwidth and Frequency Control. *Fan, M.*, +, *TCSII June 2021 1758-1762*

UHF integrated circuits

28nm FDSOI Ultra Low Power 1.5–2.0 GHz Factorial-DLL Frequency Synthesizer. *Asprilla, A.*, +, *TCSII Feb. 2021 602-606*

A +7.6 dBm IIP3 2.4-GHz Double-Balanced Mixer With 10.5 dB NF in 65-nm CMOS. *Kashani, M.H.*, +, *TCSII Oct. 2021 3214-3218*

A 27 dB Sidelobe Suppression, 1.12 GHz BW_{-10dB} UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*

A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*

A Type-I PLL With Foreground Loop Bandwidth Calibration. *Chou, M.*, +, *TCSII April 2021 1103-1107*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X.*, +, *TCSII June 2021 1807-1811*

Direct Synthesis Method for Dual-Band Bandpass Filters With Wide Fractional Bandwidth Range and Center Frequency Ratio. *Dai, X.*, +, *TCSII Aug. 2021 2755-2759*

Single-Chip CMOS Reconfigurable Dual-Band Tri-Mode High-Efficiency RF Amplifier Design. *Zhai, C.*, +, *TCSII March 2021 868-872*

UHF mixers

A +7.6 dBm IIP3 2.4-GHz Double-Balanced Mixer With 10.5 dB NF in 65-nm CMOS. *Kashani, M.H.*, +, *TCSII Oct. 2021 3214-3218*

UHF oscillators

2.4-GHz Low-Power Low-IF Receiver With a Quadrature Local Oscillator Buffer for Bluetooth Low Energy Applications. *Song, E.*, +, *TCSII July 2021 2369-2373*

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Monolithic CMOS Microwave Heater With Programmable Thermostat Function for Thermotherapy. *Tseng, T.*, +, *TCSII Jan. 2021 196-200*

UHF power amplifiers

An 800 MHz-to-3.3 GHz 20-MHz Channel Bandwidth WPD CMOS Power Amplifier For Multiband Uplink Radio Transceivers. *Mariappan, S.*, +, *TCSII April 2021 1178-1182*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A.*, +, *TCSII June 2021 1887-1891*

Design and Analysis of Continuous-Mode Doherty Power Amplifier With Second Harmonic Control. *Shi, W.*, +, *TCSII July 2021 2247-2251*

Design of 74% Fractional Bandwidth Continuous-Mode Doherty Power Amplifier Using Compensation Susceptance. *Sun, J.X.*, +, *TCSII June 2021 1827-1831*

Design of the Class-E Power Amplifier Considering the Temperature Effect of the Transistor On-Resistance for Sensor Applications. *Liu, C.*, +, *TCSII May 2021 1705-1709*

Exploring Feasible Design Space for Multi-Octave Power Amplifier Using Nonlinear Embedding. *Aggrawal, E.*, +, *TCSII Aug. 2021 2800-2804*

Ultra wideband antennas

Spoof Surface Plasmon Polariton Filter With Reconfigurable Dual and Non-Linear Notched Characteristics. *Le Zhang, Q.*, +, *TCSII Aug. 2021 2815-2819*

Ultra wideband communication

A TD-ADC for IR-UWB Radars With Equivalent Sampling Technology and 8-GS/s Effective Sampling Rate. *Zhu, Z.*, +, *TCSII March 2021 888-892*

A Tunable CMOS IR-UWB Pulse Generator Based on Feedback Controlled Oscillator Switching. *Snelter, L.*, +, *TCSII June 2021 1902-1906*

Area- and Energy-Efficient Sub-GHz Impulse Radio UWB Transmitter With Output Amplitude Enhancement for Biomedical Implants. *Tong, X.*, +, *TCSII June 2021 1807-1811*

Ultra wideband radar

A TD-ADC for IR-UWB Radars With Equivalent Sampling Technology and 8-GS/s Effective Sampling Rate. *Zhu, Z.*, +, *TCSII March 2021 888-892*

Ultra wideband technology

A 27 dB Sidelobe Suppression, 1.12 GHz $\text{BW}_{-10\text{dB}}$ UWB Pulse Generator With Process Compensation. *Mahmood, H.U.*, +, *TCSII Aug. 2021 2805-2809*

A Low-Noise and High-Gain Folded Mixer for a UWB System in 0.18- μm SiGe Bi-CMOS Technology. *Chen, J.*, +, *TCSII Feb. 2021 612-616*

Fully Differential Ultra-Wideband Amplifier With 46-dB Gain and Positive Feedback for Increased Bandwidth. *An, X.*, +, *TCSII April 2021 1083-1087*

Miniaturized Ultra-Wideband Bandpass Filter With Ultra-Wide Stopband Using π -Type Unit With Inductive Loading on Integrated Passive Device. *Liu, B.*, +, *TCSII Nov. 2021 3406-3410*

Ultra-Miniaturized Wideband Input-Absorptive Bandstop Filter Based on TFIPT Technology. *Kong, M.*, +, *TCSII July 2021 2414-2418*

Ultrasonic imaging

A Low Power, Low Noise, Single-Ended to Differential TIA for Ultrasound Imaging Probes. *Firouz, S.*, +, *TCSII Feb. 2021 607-611*

Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J.*, +, *TCSII Jan. 2021 19-23*

Ultrasonic transducers

A 28.7V Modular Supply Multiplying Pulser With 75.4% Power Reduction Relative to CV^2f . *Choi, K.*, +, *TCSII March 2021 858-862*

Energy-Efficient High-Voltage Pulsers for Ultrasound Transducers. *Choi, J.*, +, *TCSII Jan. 2021 19-23*

Uncertain systems

A Novel Non-Singular Terminal Sliding Mode Trajectory Tracking Control for Robotic Manipulators. *Zhai, J.*, +, *TCSII Jan. 2021 391-395*

A Novel Variable Exponential Discrete Time Sliding Mode Reaching Law. *Chen, X.*, +, *TCSII July 2021 2518-2522*

A Simple Unified Control for Output Feedback Finite-Time Stabilization of Uncertain Planar Systems Without Controllable/Observable Linearization. *Su, Y.*, +, *TCSII Jan. 2021 326-330*

Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C.*, +, *TCSII Oct. 2021 3301-3305*

Almost Output Regulation of Switched Affine Systems and Its Application to a Circuit Model. *Li, Z.*, +, *TCSII Oct. 2021 3256-3260*

Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K.*, +, *TCSII June 2021 2047-2051*

Bounded Real Lemmas for Singular Fractional-Order Systems: The $1 < \alpha < 2$ Case. *Zhang, Q.*, +, *TCSII Feb. 2021 732-736*

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R.*, +, *TCSII Jan. 2021 416-420*

Distributed Consensus of Nonlinear Multi-Agent Systems With Mismatched Uncertainties and Unknown High-Frequency Gains. *Wang, G.*, +, *TCSII March 2021 938-942*

Dynamic Output Feedback MPC of Polytopic Uncertain Systems: Efficient LMI Conditions. *Hu, J.*, *TCSII July 2021 2568-2572*

Event-Triggered Adaptive Practical Fixed-Time Trajectory Tracking Control for Unmanned Surface Vehicle. *Song, S.*, +, *TCSII Jan. 2021 436-440*

Event-Triggered Fixed-Time Adaptive Trajectory Tracking for a Class of Uncertain Nonlinear Systems With Input Saturation. *Shi, X.*, +, *TCSII March 2021 983-987*

Leader-Following Tracking Control of Discrete-Time Uncertain Nonlinear MASs With Parametric and Nonparametric State Couplings. *Li, S.*, +, *TCSII June 2021 2037-2041*

Observer-Based Finite-Time Attitude Containment Control of Multiple Spacecraft Systems. *Chen, X.*, +, *TCSII April 2021 1273-1277*

On Designing Event-Triggered Output Feedback Tracking Controller for Feedforward Nonlinear Systems. *Li, H.*, +, *TCSII Feb. 2021 677-681*

Performance Residual Based Fault Detection for Feedback Control Systems. *Liu, R.*, +, *TCSII Oct. 2021 3291-3295*

Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C.*, +, *TCSII Oct. 2021 3321-3325*

Quantitative Synthesis to Tracking Error Problem Based on Nominal Sensitivity Formulation. *Jeyasenthil, R.*, +, *TCSII July 2021 2483-2487*

Robust H_2 Consensus for Multi-Agent Systems With Parametric Uncertainties. *Zhang, S.*, +, *TCSII July 2021 2473-2477*

Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H.*, +, *TCSII June 2021 1982-1986*

Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A.*, +, *TCSII March 2021 948-952*

Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law. *Ma, H.*, +, *TCSII Feb. 2021 722-726*

Stability and Stabilization of the Fractional-Order Power System With Time Delay. *Yu, Z.*, +, *TCSII Nov. 2021 3446-3450*

Switching-Like Event-Triggered Control for Networked Markovian Jump Systems Under Deception Attack. *Lian, J.*, +, *TCSII Oct. 2021 3271-3275*

Tracking-Based Control for Constrained Nonlinear Systems Under Parametric Uncertainties. *Min, H.*, +, *TCSII March 2021 973-977*

Variable-Performance Positioning Law for Hybrid-Type Stepper Motors via Active Damping Injection and Disturbance Observer. *Kim, S.*, +, *TCSII April 2021 1308-1312*

Uncertainty

Leader-Follower Affine Formation Control of Second-Order Nonlinear Uncertain Multi-Agent Systems. *Zhi, H.*, +, *TCSII Dec. 2021 3547-3551*

Resource Sharing in the Internet of Things and Selfish Behaviors of the Agents. *Prospero, L.*, +, *TCSII Dec. 2021 3488-3492*

Underwater vehicles

Design of Line-of-Sight Guidance Law and a Constrained Optimal Controller for an Autonomous Underwater Vehicle. *Rout, R., +, TCSII Jan. 2021 416-420*

Unmanned aerial vehicles

Antisaturation Command Filtered Backstepping Control-Based Disturbance Rejection for a Quadrotor UAV. *Liu, K., +, TCSII Dec. 2021 3577-3581*
Leader-Follower Affine Formation Control of Second-Order Nonlinear Uncertain Multi-Agent Systems. *Zhi, H., +, TCSII Dec. 2021 3547-3551*

V**Vanadium**

A Scalable, General Purpose Circuit Model for Vanadium Compensated, Semi-Insulating, Vertical 6H-SiC PCSS. *Zhao, Y., +, TCSII March 2021 988-992*

Varactors

A 3.36-GHz Locking-Tuned Type-I Sampling PLL With -78.6 -dBc Reference Spur Merging Single-Path Reference-Feedthrough-Suppression and Narrow-Pulse-Shielding Techniques. *Huang, Y., +, TCSII Sept. 2021 3093-3097*

A $600\text{-}\mu\text{m}^2$ Ring-VCO-Based Hybrid PLL Using a $30\text{-}\mu\text{W}$ Charge-Sharing Integrator in 28-nm CMOS. *Yang, S., +, TCSII Sept. 2021 3108-3112*

Design Method for Tunable Planar Bandpass Filters With Single-Bias Control and Wide Tunable Frequency Range. *Lim, T., +, TCSII Jan. 2021 221-225*

Frequency-Reconfigurable Input-Reflectionless Bandpass Filter and Filtering Power Divider With Constant Absolute Bandwidth. *Fan, M., +, TCSII July 2021 2424-2428*

Spoof Surface Plasmon Polariton Filter With Reconfigurable Dual and Non-Linear Notched Characteristics. *Le Zhang, Q., +, TCSII Aug. 2021 2815-2819*

Variable speed drives

A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S., +, TCSII July 2021 2493-2497*

Variable structure systems

A Novel Non-Singular Terminal Sliding Mode Trajectory Tracking Control for Robotic Manipulators. *Zhai, J., +, TCSII Jan. 2021 391-395*

A Novel Variable Exponential Discrete Time Sliding Mode Reaching Law. *Chen, X., +, TCSII July 2021 2518-2522*

Adaptive Barrier Sliding-Mode Control Considering State-Dependent Uncertainty. *Liu, C., +, TCSII Oct. 2021 3301-3305*

Antisaturation Finite-Time Attitude Tracking Control Based Observer for a Quadrotor. *Liu, K., +, TCSII June 2021 2047-2051*

Design of Discrete-Time Sliding Mode Control With Disturbance Compensator-Based Switching Function. *Ma, H., +, TCSII April 2021 1268-1272*

Discrete-Time Adaptive Super-Twisting Observer With Predefined Arbitrary Convergence Time. *Xiong, X., +, TCSII June 2021 2057-2061*

Discrete-Time Sliding Mode Control Design for Unicycle Robot With Bounded Inputs. *Thomas, M., +, TCSII Aug. 2021 2912-2916*

Discrete-Time Super-Twisting Fractional-Order Differentiator With Implicit Euler Method. *Sharma, R.K., +, TCSII April 2021 1238-1242*

Discrete-Time Super-Twisting Observer With Implicit Euler Method. *Xiong, X., +, TCSII April 2021 1288-1292*

Finite-Time Projective Synchronization Control of Variable-Order Fractional Chaotic Systems via Sliding Mode Approach. *Meng, X., +, TCSII July 2021 2503-2507*

Fully Distributed Control of Linear Systems With Optimal Cost on Directed Topologies. *Zhang, Z., +, TCSII Jan. 2021 336-340*

GPIO Based Super-Twisting Sliding Mode Control for PMSM. *Hou, Q., +, TCSII Feb. 2021 747-751*

Implicit Discrete-Time Terminal Sliding Mode Control for Second-Order Systems. *Xiong, X., +, TCSII July 2021 2508-2512*

Invariant Manifold Based Output-Feedback Sliding Mode Control for Systems With Mismatched Disturbances. *Zhang, L., +, TCSII March 2021 933-937*

Observer-Based Sliding Mode Control for Markov Jump Systems With Actuator Failures and Asynchronous Modes. *Dong, S., +, TCSII June 2021 1967-1971*

Practical Sliding Mode Using State Depended Intermittent Control. *Xavier, N., +, TCSII Jan. 2021 341-345*

Predefined-Time Attitude Stabilization of Receiver Aircraft in Aerial Refueling. *Wu, C., +, TCSII Oct. 2021 3321-3325*

Robust Output Feedback Tracking Control for Flexible-Joint Robots Based on CTSMC Technique. *Wang, H., +, TCSII June 2021 1982-1986*

Second-Order Sliding Mode Control Design Subject to an Asymmetric Output Constraint. *Liu, L., +, TCSII April 2021 1278-1282*

Sliding Mode Control for Lipschitz Nonlinear Systems in Reciprocal State Space: Synthesis and Experimental Validation. *Thabet, A., +, TCSII March 2021 948-952*

Sliding Mode Control for Uncertain Discrete-Time Systems Using an Adaptive Reaching Law. *Ma, H., +, TCSII Feb. 2021 722-726*

SMC for Nonlinear Stochastic Switching Systems With Quantization. *Qi, W., +, TCSII June 2021 2032-2036*

Variational techniques

Kalman Filter Based on Multiple Scaled Multivariate Skew Normal Variance Mean Mixture Distributions With Application to Target Tracking. *Lu, C., +, TCSII Feb. 2021 802-806*

Vectors

Can Deep Learning Break a True Random Number Generator?. *Yu, Y., +, TCSII May 2021 1710-1714*

Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. *Saxena, V., TCSII Feb. 2021 581-586*

Time Complexity of In-Memory Matrix-Vector Multiplication. *Sun, Z., +, TCSII Aug. 2021 2785-2789*

Velocity control

Distance- and Velocity-Based Collision Avoidance for Time-Varying Formation Control of Second-Order Multi-Agent Systems. *Pang, Z., +, TCSII April 2021 1253-1257*

Velocity measurement

GNSS Vector Tracking Method Using Graph Optimization. *Jiang, C., +, TCSII April 2021 1313-1317*

Output-Feedback Speed-Tracking Control Without Current Feedback for BLDCMs Based on Active-Damping and Invariant Surface Approach. *Park, J.K., +, TCSII July 2021 2528-2532*

Video coding

Display Stream Compression Decoders for Fine-Grained Many-Core Processor Arrays. *Wu, S., +, TCSII May 2021 1730-1734*

Video signal processing

A $0.82\text{ }\mu\text{W}$ CIS-Based Action Recognition SoC With Self-Adjustable Frame Resolution for Always-on IoT Devices. *Ryu, J., +, TCSII May 2021 1700-1704*

Adaptive Filtering of 4-D Light Field Images for Depth-Based Image Enhancement. *Vorhies, J.T., +, TCSII Feb. 2021 787-791*

An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L., +, TCSII Aug. 2021 2957-2961*

How it Flies and Why it Flies? Volleyball Trajectory Segmentation and Classification. *Chen, C., +, TCSII May 2021 1591-1595*

Video surveillance

An Energy-Efficient Accelerator for Rain Removal Based on Convolutional Neural Network. *Rao, L., +, TCSII Aug. 2021 2957-2961*

Visual perception

MACSen: A Processing-In-Sensor Architecture Integrating MAC Operations Into Image Sensor for Ultra-Low-Power BNN-Based Intelligent Visual Perception. *Xu, H., +, TCSII Feb. 2021 627-631*

Visual servoing

Visual Servoing of Flying Robot Based on Fuzzy Adaptive Linear Active Disturbance Rejection Control. *Sun, C., +, TCSII July 2021 2558-2562*

VLSI

A High-Performance VLSI Architecture for a Self-Feedback Convolutional Neural Network. *Parmar, Y., +, TCSII Jan. 2021 456-460*

A Low-Cost High-Speed Object Tracking VLSI System Based on Unified Textural and Dynamic Compressive Features. *He, W., +, TCSII March 2021 1013-1017*

Constant-Time Synchronous Binary Counter With Minimal Clock Period. *Hyun, Y.*, +, *TCSII July 2021 2645-2649*

Fast Gate Leakage Current Monitor With Large Dynamic Range. *Bhatheja, K.*, +, *TCSII May 2021 1690-1694*

High Throughput Low Complexity and Low Power ePiBM RS Decoder Using Fractional Folding. *Liu, W.*, +, *TCSII Aug. 2021 2830-2834*

Improvement of Accuracy of Fixed-Width Booth Multipliers Using Data Scaling Technology. *Chen, Y.*, *TCSII March 2021 1018-1022*

Memory Efficient Architecture for Lifting-Based Discrete Wavelet Packet Transform. *Gyanendra, .*, +, *TCSII April 2021 1373-1377*

VLSI Implementation of Multi-Channel ECG Lossless Compression System. *Tsai, T.*, +, *TCSII Aug. 2021 2962-2966*

Volatile organic compounds

A Pre-Concentration System Design for Electronic Nose via Finite Element Method. *Qian, J.*, +, *TCSII Dec. 2021 3592-3596*

Voltage control

A 1.7-to-2.7GHz 35–38% PAE Multiband CMOS Power Amplifier Employing a Digitally-Assisted Analog Pre-Distorter (DAAPD) Reconfigurable Linearization Technique. *Mariappan, S.*, +, *TCSII Nov. 2021 3381-3385*

A Modified Modular Multilevel Converter for Motor Drives Capable of High-Torque Operation at Zero/Low Motor Speeds. *Zhou, S.*, +, *TCSII July 2021 2493-2497*

A Wide Voltage Gain Bidirectional DC–DC Converter Based on Quasi Z-Source and Switched Capacitor Network. *Kumar, A.*, +, *TCSII April 2021 1353-1357*

An Asynchronous AC-DC Boost Converter With Event-Driven Voltage Regulator and 94% Efficiency for Low-Frequency Electromagnetic Energy Harvesting. *Gao, Z.*, +, *TCSII July 2021 2563-2567*

Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B.*, +, *TCSII Jan. 2021 346-350*

Hybrid System Control for Robot Motors Based on a Reduced Component, Multi-Voltage Power Supply System. *Kim, T.*, +, *TCSII Dec. 2021 3582-3586*

Online Learning Based Voltage and Power Regulator for AC Microgrids. *Yu, Y.*, +, *TCSII April 2021 1318-1322*

Proportional-Derivative Voltage Control With Active Damping for DC/DC Boost Converters via Current Sensorless Approach. *Kim, S.*, +, *TCSII Feb. 2021 737-741*

Quantitative Feedback Design-Based Robust PID Control of Voltage Mode Controlled DC-DC Boost Converter. *Kobaku, T.*, +, *TCSII Jan. 2021 286-290*

Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*

Resilient Distributed Voltage Synchronization of CI Networks Under Denial of Service Attacks. *Lai, J.*, +, *TCSII June 2021 2052-2056*

Selective Lower Order Harmonic Elimination in DC-AC Converter Using Space Vector Approach. *Arumalla, R.T.*, +, *TCSII Aug. 2021 2890-2894*

Sensorless Voltage Estimation for Total Harmonic Distortion Calculation Using Artificial Neural Networks in Microgrids. *Adineh, B.*, +, *TCSII July 2021 2583-2587*

Transformer Secondary Voltage Based Resonant Frequency Tracking for LLC Converter. *Wei, Y.*, +, *TCSII April 2021 1243-1247*

Two-Layer Cooperative Control for Multiple Converter-Network Clusters. *Lu, X.*, +, *TCSII Feb. 2021 682-686*

Voltage measurement

A 5800 μm^2 Process Monitor Circuit for Measurement of in-Die Variation of V_{th} in 65nm. *Lisha, L.*, +, *TCSII March 2021 863-867*

Voltage regulators

A 65nm 0.6–1.2V Low-Dropout Regulator Using Voltage-Difference-to-Time Converter With Direct Output Feedback. *Shin, K.*, +, *TCSII Jan. 2021 67-71*

An Asynchronous AC-DC Boost Converter With Event-Driven Voltage Regulator and 94% Efficiency for Low-Frequency Electromagnetic Energy Harvesting. *Gao, Z.*, +, *TCSII July 2021 2563-2567*

An Impedance Adapting Compensation Scheme for High Current NMOS LDO Design. *Cao, H.*, +, *TCSII July 2021 2287-2291*

Capacitor-Less Dual-Mode All-Digital LDO With $\Delta\Sigma$ -Modulation-Based Ripple Reduction. *Akram, M.A.*, +, *TCSII May 2021 1620-1624*

Low-Power Area-Efficient LDO With Loop-Gain and Bandwidth Enhancement Using Non-Dominant Pole Movement Technique for IoT Applications. *Nakhlestani, A.*, +, *TCSII Feb. 2021 692-696*

Recent Advances on Linear Low-Dropout Regulators. *Silva-Martinez, J.*, +, *TCSII Feb. 2021 568-573*

Review of Analog-Assisted-Digital and Digital-Assisted-Analog Low Dropout Regulators. *Huang, M.*, +, *TCSII Jan. 2021 24-29*

Voltage-controlled oscillators

A 2.4-GHz Crystal-Less GFSK Receiver Using an Auxiliary Multiphase BBPLL for Digital Output Demodulation With Enhanced Frequency Scaling. *Zhao, J.*, +, *TCSII April 2021 1143-1147*

A 600- μm^2 Ring-VCO-Based Hybrid PLL Using a 30- μW Charge-Sharing Integrator in 28-nm CMOS. *Yang, S.*, +, *TCSII Sept. 2021 3108-3112*

A 73dB-A Audio VCO-ADC Based on a Maximum Length Sequence Generator in 130nm CMOS. *Perez, C.*, +, *TCSII Oct. 2021 3194-3198*

A Charge Pump Current Mismatch Compensation Design for Sub-Sampling PLL. *Wang, H.*, +, *TCSII June 2021 1852-1856*

A Low Phase Noise Class-C Oscillator With Improved Resonator and Robust Start-Up. *Sheikhahmadi, S.*, +, *TCSII Jan. 2021 92-96*

An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H.*, +, *TCSII Jan. 2021 206-210*

Design of Low Phase Noise VCO Considering C/L Ratio of LC Resonator in 0.18- μm CMOS Technology. *Jahan, N.*, +, *TCSII Dec. 2021 3513-3517*

Input Referred Noise of VCO-Based Comparators. *Luo, Y.*, +, *TCSII Jan. 2021 82-86*

Linearization of Voltage-Controlled Oscillators Using Floating-Gate Transistors. *Andryzcik, S.*, +, *TCSII July 2021 2337-2341*

Voltage-source converters

A Multiterminal Active Resonance Circuit Breaker for Modular Multilevel Converter Based DC Grid. *Wu, J.*, +, *TCSII Aug. 2021 2907-2911*

A Novel Diagnostic Method for Multiple Open-Circuit Faults of Voltage-Source Inverters Based on Output Line Voltage Residuals Analysis. *Chen, T.*, +, *TCSII April 2021 1343-1347*

Switching Signals Based Condition Monitoring for Submodule Capacitors in Modular Multilevel Converters. *Geng, Z.*, +, *TCSII June 2021 2017-2021*

W

Waveguide couplers

Design of Balanced Filtering Rat-Race Coupler Based on Quad-Mode Dielectric Resonator. *Xu, J.*, +, *TCSII July 2021 2267-2271*

Waveguide filters

Design Method for Tunable Planar Bandpass Filters With Single-Bias Control and Wide Tunable Frequency Range. *Lim, T.*, +, *TCSII Jan. 2021 221-225*

Modeling and Analysis of Novel CSRRs-Loaded Dual-Band Bandpass SIW Filters. *Fu, W.*, +, *TCSII July 2021 2352-2356*

Waveguide transitions

Compact Planar W-Band Front-End Module Based on EBG Packaging and LTCC Circuits. *Shi, Y.*, +, *TCSII March 2021 878-882*

Wavelet transforms

An Energy-Efficient Haar Wavelet Transform Architecture for Respiratory Signal Processing. *da Rosa, M.M.*, +, *TCSII Feb. 2021 597-601*

Epileptic State Classification by Fusing Hand-Crafted and Deep Learning EEG Features. *Hu, D.*, +, *TCSII April 2021 1542-1546*

Memory Efficient Architecture for Lifting-Based Discrete Wavelet Packet Transform. *Gyanendra, .*, +, *TCSII April 2021 1373-1377*

Whispering gallery modes

Controllable Orthogonal Mode Rejection for Smart Polarization Diversity at Millimeter-Wave Frequency. *Noferesti, M.*, +, *TCSII Jan. 2021 171-175*

White noise

Time-Varying Formation Control of General Linear Multi-Agent Systems Under Markovian Switching Topologies and Communication Noises. *Li, B.*, +, *TCSII April 2021 1303-1307*

Transient Performance Analysis of Geometric Algebra Least Mean Square Adaptive Filter. *Wang, W.*, +, *TCSII Aug. 2021 3027-3031*

Wide band gap semiconductors

- A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R., +, TCSII Jan. 2021 246-250*
- A Scalable, General Purpose Circuit Model for Vanadium Compensated, Semi-Insulating, Vertical 6H-SiC PCSS. *Zhao, Y., +, TCSII March 2021 988-992*
- Accurate Isolation Networks in Quadrature Couplers and Power Dividers. *Sutbas, B., +, TCSII April 2021 1148-1152*
- An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B., +, TCSII July 2021 2252-2256*
- Automated Driving of GaN Chireix Power Amplifier for the Digital Pre-distortion Linearization. *Galaviz-Aguilar, J.A., +, TCSII June 2021 1887-1891*
- Design and Analysis of Continuous-Mode Doherty Power Amplifier With Second Harmonic Control. *Shi, W., +, TCSII July 2021 2247-2251*
- DM Interference Propagation Mathematical Modeling in SiC Wirebond Multichip Power Module. *Chen, X., +, TCSII June 2021 2077-2081*
- Exploring Feasible Design Space for Multi-Octave Power Amplifier Using Nonlinear Embedding. *Aggrawal, E., +, TCSII Aug. 2021 2800-2804*
- Odd-Mode Instability Analysis of f_T -Doubler Hybrid Power Amplifiers Based on GaN-HEMT. *Fegghi, R., +, TCSII April 2021 1193-1197*

Wideband

- Design of Wideband Butler Matrix With Equal/Unequal Phase Differences for Flexible Beam-Controllability. *Ma, L., +, TCSII Dec. 2021 3537-3541*

Wideband amplifiers

- A 24–30 GHz 31.7% Fractional Bandwidth Power Amplifier With an Adaptive Capacitance Linearizer. *Lee, J., +, TCSII April 2021 1163-1167*
- A 30-to-41 GHz SiGe Power Amplifier With Optimized Cascode Transistors Achieving 22.8 dBm Output Power and 27% PAE. *Wan, C., +, TCSII April 2021 1158-1162*
- A Fully Integrated GaN Dual-Channel Power Amplifier With Crosstalk Suppression for 5G Massive MIMO Transmitters. *Nikandish, G.R., +, TCSII Jan. 2021 246-250*
- An Inductorless Wideband Gm-Boosted Balun LNA With nMOS-pMOS Configuration and Capacitively Coupled Loads for Sub-GHz IoT Applications. *Tiwari, S., +, TCSII Oct. 2021 3204-3208*
- Design and Analysis of Continuous-Mode Doherty Power Amplifier With Second Harmonic Control. *Shi, W., +, TCSII July 2021 2247-2251*
- Exploring Feasible Design Space for Multi-Octave Power Amplifier Using Nonlinear Embedding. *Aggrawal, E., +, TCSII Aug. 2021 2800-2804*
- Fully Differential Ultra-Wideband Amplifier With 46-dB Gain and Positive Feedback for Increased Bandwidth. *An, X., +, TCSII April 2021 1083-1087*

Wind power plants

- Impedance Modeling of DFIG Wind Farms With Various Rotor Speeds and Frequency Coupling. *Liu, B., +, TCSII Jan. 2021 406-410*

Wind turbines

- Impedance Modeling of DFIG Wind Farms With Various Rotor Speeds and Frequency Coupling. *Liu, B., +, TCSII Jan. 2021 406-410*

Wireless channels

- Design and Implementation of Low Complexity Reconfigurable Filtered-OFDM-Based LDACS. *Agrawal, N., +, TCSII July 2021 2399-2403*

- Jamming on Remote Estimation Over Wireless Links Under Faded Uncertainty: A Stackelberg Game Approach. *Feng, Y., +, TCSII July 2021 2593-2597*

Wireless LAN

- A 60 GHz 8-Way Combined Power Amplifier in 0.18 μm SiGe BiCMOS. *Liu, H., +, TCSII June 2021 1847-1851*
- A Dual-Band Coupled Line Power Divider Using SISL Technology. *Feng, T., +, TCSII Feb. 2021 657-661*
- A Physical Transmitter Implementation of a Quadrature Space Shift Keying MIMO System. *Hiari, O., +, TCSII Jan. 2021 251-255*
- An Active Bandpass Filter for LTE/WLAN Applications Using Robust Active Inductors in Gallium Nitride. *Herbert, T.B., +, TCSII July 2021 2252-2256*

Wireless sensor networks

- An Impedance Matching Strategy for Micro-Scale RF Energy Harvesting Systems. *Mohan, A., +, TCSII April 2021 1458-1462*
- An Ultra-Low Power 2.4 GHz Transmitter for Energy Harvested Wireless Sensor Nodes and Biomedical Devices. *Bhamra, H., +, TCSII Jan. 2021 206-210*
- Attention Based Bidirectional Convolutional LSTM for High-Resolution Radio Tomographic Imaging. *Wu, H., +, TCSII April 2021 1482-1486*
- Design of the Class-E Power Amplifier Considering the Temperature Effect of the Transistor On-Resistance for Sensor Applications. *Liu, C., +, TCSII May 2021 1705-1709*
- Efficient Power Transfers in Piezoelectric Energy-Harvesting Switched-Inductor Chargers. *Yang, S., +, TCSII April 2021 1248-1252*
- Information Weighted Consensus With Interacting Multiple Model Over Distributed Networks. *Hu, D., +, TCSII April 2021 1537-1541*
- MACSen: A Processing-In-Sensor Architecture Integrating MAC Operations Into Image Sensor for Ultra-Low-Power BNN-Based Intelligent Visual Perception. *Xu, H., +, TCSII Feb. 2021 627-631*
- Privacy-Preserving Leader-Following Consensus via Node-Augment Mechanism. *Xu, H., +, TCSII June 2021 2117-2121*

Y**Yttrium compounds**

- Balanced Dual-Band Superconducting Filter Using Stepped-Impedance Resonators With High Band-to-Band Isolation and Wide Stopband. *Tang, J., +, TCSII Jan. 2021 131-135*

Z**Zero current switching**

- An Accurate Zero-Current-Switching Circuit for Ultra-Low-Voltage Boost Converters. *Radin, R.L., +, TCSII June 2021 1773-1777*
- Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators. *Han, S., +, TCSII Aug. 2021 2902-2906*

Zero voltage switching

- Comparison of Phase-Shift and Modified Gating Schemes on Working of DC-DC LCL-T Resonant Power Converter. *Reddy, V.B., +, TCSII Jan. 2021 346-350*
- Ultrahigh Step-Up Coupled-Inductor DC-DC Converter With Soft-Switching for Driving Piezoelectric Actuators. *Han, S., +, TCSII Aug. 2021 2902-2906*