2019 Index IEEE Transactions on Signal Processing Vol. 67

This index covers all technical items—papers, correspondence, reviews, etc.—that appeared in this periodical during 2019, and items from previous years that were commented upon or corrected in 2019. 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.

AUTHOR INDEX

Α

Abbott, D., see Duan, F., TSP Sept. 1, 2019 4611-4623

Abdoush, Y., Pojani, G., and Corazza, G.E., Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms; TSP June 15, 2019 3100-3112

Abreu, L.D., see Holighaus, N., TSP Aug. 1, 2019 3894-3908

Abry, P., see Leonarduzzi, R., TSP Jan. 1, 2019 110-119

Abry, P., see Granero-Belinchon, C., TSP July 15, 2019 3796-3805

Addabbo, P., see Liu, J., TSP March 1, 2019 1382-1392

Addabbo, P., Besson, O., Orlando, D., and Ricci, G., Adaptive Detection of Coherent Radar Targets in the Presence of Noise Jamming; TSP Dec. 15, 2019 6498-6510

Adibi, A., see Naghsh, M.M., TSP Sept. 15, 2019 4707-4719

Aftab, H., see Rehman, N.u., TSP Dec. 1, 2019 6039-6052

Agrawal, M., see Gupta, P., TSP Jan. 15, 2019 460-473

Alaee-Kerahroodi, M., Modarres-Hashemi, M., and Naghsh, M.M., Designing Sets of Binary Sequences for MIMO Radar Systems; TSP July 1, 2019 3347-3360

Alenlov, J., and Olsson, J., Particle-Based Adaptive-Lag Online Marginal Smoothing in General State-Space Models; TSP Nov. 1, 2019 5571-5582

Alghamdi, W., see Luo, W., TSP May 1, 2019 2347-2356

Alhujaili, K., Monga, V., and Rangaswamy, M., Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold; TSP July 1, 2019 3561-3575

Alippi, C., see Zambon, D., TSP Dec. 15, 2019 6327-6341

Altabbaa, M.T., see Panayirci, E., TSP March 15, 2019 1550-1565

Ameri, A., Bose, A., Li, J., and Soltanalian, M., One-Bit Radar Processing With Time-Varying Sampling Thresholds; TSP Oct. 15, 2019 5297-5308

Amin, M.G., see Qin, G., TSP June 1, 2019 3013-3027

Amin, M.G., see Hamza, S.A., TSP Dec. 15, 2019 6215-6226

Amini, A., see Daei, S., TSP Oct. 1, 2019 5093-5102

Amini, A., see Valiulahi, I., TSP Dec. 1, 2019 5998-6008

Amini, S., and Ghaemmaghami, S., A New Framework to Train Autoencoders Through Non-Smooth Regularization; *TSP April 1, 2019 1860-1874*

Amiri, M.M., and Gunduz, D., Computation Scheduling for Distributed Machine Learning With Straggling Workers; *TSP Dec. 15*, 2019 6270-6284

An, J., see Shen, W., TSP Aug. 15, 2019 4204-4217

Anden, J., Lostanlen, V., and Mallat, S., Joint Time–Frequency Scattering; TSP July 15, 2019 3704-3718

Anglea, T., and Wang, Y., Pulse-Coupled Synchronization With Guaranteed Clock Continuity; TSP March 15, 2019 1596-1609

Aravkin, A., see Baraldi, R., TSP Nov. 15, 2019 5811-5823

Arbabian, A., see Gupta, A., TSP Dec. 15, 2019 6483-6497

Arguello, H., see Pinilla, S., TSP Dec. 1, 2019 6121-6132

Arikan, O., see Goken, C., TSP Aug. 15, 2019 4302-4316

Arulampalam, S., see Badriasl, L., TSP July 1, 2019 3576-3591

Ascheid, G., see Srivastava, S., TSP March 1, 2019 1251-1266

Ashraphijuo, M., Wang, X., and Zhang, J., Low-Rank Data Completion With Very Low Sampling Rate Using Newton's Method; TSP April 1, 2019 1849-1859

Assaad, M., see Maatouk, A., TSP Feb. 15, 2019 1006-1021

Assaad, M., see Li, W., TSP June 15, 2019 3140-3153

Atto, A.M., see Mian, A., TSP Jan. 15, 2019 520-534

Aubry, A., Carotenuto, V., De Maio, A., and Govoni, M.A., Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation; TSP March 15, 2019 1396-1406

Avestimehr, A.S., see Azizan-Ruhi, N., TSP July 15, 2019 3806-3817

Azizan-Ruhi, N., Lahouti, F., Avestimehr, A.S., and Hassibi, B., Distributed Solution of Large-Scale Linear Systems via Accelerated Projection-Based Consensus; TSP July 15, 2019 3806-3817

Aziznejad, S., see Debarre, T., TSP Nov. 15, 2019 5824-5836

I

Bach, F., see Rencker, L., TSP Nov. 1, 2019 5659-5670

Bacharach, L., Korso, M.N.E., Renaux, A., and Tourneret, J., A Hybrid Lower Bound for Parameter Estimation of Signals With Multiple Change-Points; TSP March 1, 2019 1267-1279

Badriasl, L., Arulampalam, S., van der Hoek, J., and Finn, A., Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints; TSP July 1, 2019 3576-3591

Baechler, G., Krekovic, M., Ranieri, J., Chebira, A., Lu, Y.M., and Vetterli, M., Super Resolution Phase Retrieval for Sparse Signals; TSP Sept. 15, 2019 4839-4854

Baingana, B., see Shen, Y., TSP Oct. 15, 2019 5325-5339

Balda, E.R., Behboodi, A., and Mathar, R., Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression; TSP Dec. 1, 2019 6078-6091

Balleri, A., see Benavoli, A., TSP Aug. 15, 2019 4357-4369

Bandiera, F., see Carlino, L., TSP July 1, 2019 3412-3423

Bank, B., see Liski, J., TSP July 15, 2019 3785-3795

Baraldi, R., Kumar, R., and Aravkin, A., Basis Pursuit Denoise With Nonsmooth Constraints; TSP Nov. 15, 2019 5811-5823

Barbarossa, S., see Sardellitti, S., TSP April 1, 2019 1712-1727

Barik, S., and Vikalo, H., Matrix Completion and Performance Guarantees for Single Individual Haplotyping; TSP Sept. 15, 2019 4782-4794

Baron, D., see Ma, A., TSP April 1, 2019 1875-1888

Bartan, B., see Koc, A., TSP May 1, 2019 2237-2248

Barzel, B., see Wai, H., TSP Sept. 1, 2019 4582-4596

Basar, E., see Yigit, Z., TSP May 1, 2019 2389-2398

Basar, T., see Koppel, A., TSP May 15, 2019 2528-2542

Basu, S., Li, X., and Michailidis, G., Corrections to "Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions" [Mar 19 1207-1222]; TSP April 1, 2019 1960

Basu, S., Li, X., and Michailidis, G., Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions; TSP March 1, 2019 1207-1222

Battistelli, G., see Li, S., TSP Jan. 1, 2019 260-275

Baum, M., see Yang, S., TSP Sept. 15, 2019 4720-4729

Baumert, M., see Karisik, F., TSP Dec. 1, 2019 6067-6077

Baur, S., see Boche, H., TSP Sept. 1, 2019 4636-4648

Bautista, R., and Buck, J.R., Detecting Gaussian Signals Using Coprime Sensor Arrays in Spatially Correlated Gaussian Noise; TSP March 1, 2019 1296-1306

Bay, A., see Emambakhsh, M., TSP Sept. 1, 2019 4545-4555

Beard, M., see Vo, B., TSP Dec. 1, 2019 5952-5967

Bedi, A.S., Koppel, A., and Rajawat, K., Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks; TSP April 1, 2019 1742-1757

Bedi, A.S., see Dixit, R., TSP March 1, 2019 1338-1352

Beferull-Lozano, B., see Teganya, Y., TSP Aug. 1, 2019 4013-4026

Behboodi, A., see Balda, E.R., TSP Dec. 1, 2019 6078-6091

Behjat, H., Dogan, Z., Van De Ville, D., and Sornmo, L., Domain-Informed Spline Interpolation; *TSP Aug. 1*, 2019 3909-3921

Behroozi, H., see Tohidi, E., TSP Feb. 1, 2019 579-593

Belmega, E.V., see Marcastel, A., TSP June 1, 2019 2987-3000

Ben-Chen, M., see Yair, O., TSP April 1, 2019 1797-1811

Benavoli, A., Balleri, A., and Farina, A., Joint Waveform and Guidance Control Optimization for Target Rendezvous; *TSP Aug. 15, 2019 4357-4369*

Bendory, T., see Pinilla, S., TSP Dec. 1, 2019 6121-6132

Berberidis, D., Nikolakopoulos, A.N., and Giannakis, G.B., Adaptive Diffusions for Scalable Learning Over Graphs; *TSP March 1*, 2019 1307-1321

Berberidis, D., see Lee, D., TSP April 15, 2019 1964-1977

Bernard, S., see Xu, K., TSP Jan. 1, 2019 4-16

Bernstein, A., Dall'Anese, E., and Simonetto, A., Online Primal-Dual Methods With Measurement Feedback for Time-Varying Convex Optimization; TSP April 15, 2019 1978-1991

Bernstein, A., see Ramakrishna, R., TSP Dec. 15, 2019 6368-6383

Besson, O., see Coluccia, A., TSP Oct. 1, 2019 5118-5129

Besson, O., see Addabbo, P., TSP Dec. 15, 2019 6498-6510

Bhandari, A., and Eldar, Y.C., Sampling and Super Resolution of Sparse Signals Beyond the Fourier Domain; *TSP March 15, 2019 1508-1521*

Bharadwaj, P., Demanet, L., and Fournier, A., Focused Blind Deconvolution; *TSP June 15*, 2019 3168-3180

Biswas, S.K., and Dempster, A.G., Approximating Sample State Vectors Using the ESPT for Computationally Efficient Particle Filtering; TSP April 1, 2019 1918-1928

Blum, R.S., see Chen, Y., TSP Jan. 15, 2019 431-443

Blum, R.S., see Li, Y., TSP June 15, 2019 3258-3271

Blum, R.S., see Chen, Y., TSP Oct. 15, 2019 5391-5401

Boche, H., Monich, U.J., and Meinerzhagen, B., Non-Existence of Convolution Sum System Representations; TSP May 15, 2019 2649-2664

Boche, H., Schaefer, R.F., Baur, S., and Poor, H.V., On the Algorithmic Computability of the Secret Key and Authentication Capacity Under Channel, Storage, and Privacy Leakage Constraints; TSP Sept. 1, 2019 4636-4648

Boche, H., and Monich, U.J., Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability; *TSP Dec.* 15, 2019 6424-6439

Bockelmann, C., see Schnier, T., TSP Sept. 1, 2019 4521-4534

Bocquet, S., see Zuk, J., TSP April 15, 2019 2221-2233

Boddeti, V.N., see Sadeghi, B., TSP Aug. 15, 2019 4218-4230

Bodnar, T., Dmytriv, S., Parolya, N., and Schmid, W., Tests for the Weights of the Global Minimum Variance Portfolio in a High-Dimensional Setting; TSP Sept. 1, 2019 4479-4493

Boloix-Tortosa, R., Murillo-Fuentes, J.J., and Tsaftaris, S.A., The Generalized Complex Kernel Least-Mean-Square Algorithm; TSP Oct. 15, 2019 5213-5222

Bose, A., see Ameri, A., TSP Oct. 15, 2019 5297-5308

Bouzerdoum, A., see Nguyen, T.N.A., TSP June 1, 2019 3042-3057

Braca, P., see Soldi, G., TSP Aug. 1, 2019 3922-3937

Bramstang, J., see Granstrom, K., TSP July 15, 2019 3732-3742

Breloy, A., see Draskovic, G., TSP Oct. 1, 2019 4964-4975

Bresler, Y., see Pfister, L., TSP Feb. 1, 2019 700-707

Bresler, Y., see Pfister, L., TSP Jan. 15, 2019 504-519

Bresson, X., see Levie, R., TSP Jan. 1, 2019 97-109

Bronstein, M.M., see Levie, R., TSP Jan. 1, 2019 97-109

Bu, X., see Shen, W., TSP Dec. 15, 2019 6301-6313

Bu, Y., Zou, S., and Veeravalli, V.V., Linear-Complexity Exponentially-Consistent Tests for Universal Outlying Sequence Detection; TSP April 15, 2019 2115-2128

Bucci, D.J., see Wang, T., TSP April 15, 2019 2093-2106

Bucci, D.J., see Sharma, P., TSP Nov. 15, 2019 5896-5911

Buck, J.R., see Bautista, R., TSP March 1, 2019 1296-1306

Budisin, S., see Das, S., TSP May 15, 2019 2639-2648

Byrne, E., see Schniter, P., TSP July 1, 2019 3439-3454

Byrne, E., Chatalic, A., Gribonval, R., and Schniter, P., Sketched Clustering via Hybrid Approximate Message Passing; TSP Sept. 1, 2019 4556-4569

C

Cai, S., see Yu, M., TSP March 15, 2019 1537-1549

Cai, X., and Ye, Z., Gaussian Weighting Reversion Strategy for Accurate Online Portfolio Selection; TSP Nov. 1, 2019 5558-5570

Cai, Y., and Shen, Y., An Integrated Localization and Control Framework for Multi-Agent Formation; TSP April 1, 2019 1941-1956

Cai, Y., see Chen, X., TSP Aug. 15, 2019 4152-4167

Camcioglu, E., see Kayran, A.H., TSP Sept. 1, 2019 4507-4520

Cao, X., and Lai, L., Distributed Gradient Descent Algorithm Robust to an Arbitrary Number of Byzantine Attackers; TSP Nov. 15, 2019 5850-5864

Cao, Z., see Chen, P., TSP Jan. 1, 2019 208-220

Carlino, L., Bandiera, F., Coluccia, A., and Ricci, G., Improving Localization by Testing Mobility; TSP July 1, 2019 3412-3423

Carotenuto, V., see Aubry, A., TSP March 15, 2019 1396-1406

Castanheira, D., and Gameiro, A., Low Complexity and High-Resolution Line Spectral Estimation Using Cyclic Minimization; TSP Dec. 15, 2019 6285-6300

Castella, M., Pesquet, J., and Marmin, A., Rational Optimization for Nonlinear Reconstruction With Approximate ℓ_0 Penalization; *TSP March 15, 2019* 1407-1417

Cavalcante, R.L.G., Liao, Q., and Stanczak, S., Connections Between Spectral Properties of Asymptotic Mappings and Solutions to Wireless Network Problems; TSP May 15, 2019 2747-2760

Cavallaro, J.R., see Jeon, C., TSP Sept. 1, 2019 4418-4432

Chae, C., see Xie, T., TSP Sept. 15, 2019 4730-4744

Chai, S., and Lau, V.K.N., Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient; TSP Sept. 1, 2019 4570-4581

Chainais, P., see Vono, M., TSP March 15, 2019 1648-1661

Chambers, J.A., see Huang, Y., TSP July 1, 2019 3606-3620

Chambers, J.A., see Huang, Y., TSP Oct. 15, 2019 5417-5432

Chamon, L.F.O., see Eisen, M., TSP May 15, 2019 2775-2790

Chandrasekher, K., see Lee, K., TSP Sept. 1, 2019 4649-4664 Chanussot, J., see Wu, Z., TSP July 15, 2019 3858-3869

Chapeau-Blondeau, F., see Duan, F., TSP Sept. 1, 2019 4611-4623

Chatalic, A., see Byrne, E., TSP Sept. 1, 2019 4556-4569

Chatzinotas, S., see Yang, Y., TSP Aug. 1, 2019 4107-4121

Chawla, A., Patel, A., Jagannatham, A.K., and Varshney, P.K., Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI; TSP Aug. 1, 2019 4055-4068

Chebira, A., see Baechler, G., TSP Sept. 15, 2019 4839-4854

Chen, B., see Wang, T., TSP April 15, 2019 2093-2106

Chen, B., see Yang, C., TSP Oct. 1, 2019 5046-5061

Chen, C., Liu, J., Hsiao, Y., Tsao, H., and Lin, C., Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties; TSP March 15, 2019 1477-1492

Chen, C., see Chen, C., TSP March 15, 2019 1477-1492

Chen, C., see Tang, M., TSP Nov. 1, 2019 5671-5685

Chen, J., see Wang, X., TSP Jan. 1, 2019 221-233

Chen, J., Wang, G., and Giannakis, G.B., Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets; TSP Feb. 1, 2019 740-752

Chen, J., and Mitra, U., Unimodality-Constrained Matrix Factorization for Non-Parametric Source Localization; TSP May 1, 2019 2371-2386

Chen, J., see Wang, G., TSP May 1, 2019 2357-2370

Chen, J., Wang, G., and Giannakis, G.B., Graph Multiview Canonical Correlation Analysis; TSP June 1, 2019 2826-2838

Chen, J., Chen, S., Qi, Y., and Fu, S., Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search; TSP Oct. 15, 2019 5380-5390

Chen, K., Dobhakhshari, D.G., Gupta, V., and Huang, Y., An Incentive Scheme for Sensor Fusion With Strategic Sensors; TSP Dec. 15, 2019 6342-6351 Chen, P., Cao, Z., Chen, Z., and Wang, X., Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling; TSP Jan. 1, 2019 208-220

Chen, S., see Chen, J., TSP Oct. 15, 2019 5380-5390

Chen, T., see Zhao, Y., TSP Dec. 1, 2019 5936-5951

Chen, T., see Li, B., TSP Dec. 1, 2019 5922-5935

Chen, W., Gong, X., and Song, N., Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method; TSP Nov. 15, 2019 5785-5797

Chen, X., see Liu, A., TSP May 1, 2019 2484-2498

Chen, X., Liu, A., Cai, Y., Lau, V.K.N., and Zhao, M., Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems; TSP Aug. 15, 2019 4152-4167

Chen, Y., see Sun, W., TSP March 15, 2019 1636-1647

Chen, Y., and Blum, R.S., On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation; TSP Jan. 15, 2019 431-443

Chen, Y., Kar, S., and Moura, J.M.F., Resilient Distributed Parameter Estimation With Heterogeneous Data; TSP Oct. 1, 2019 4918-4933

Chen, Y., Blum, R.S., Sadler, B.M., and Zhang, J., Testing the Structure of a Gaussian Graphical Model With Reduced Transmissions in a Distributed Setting; TSP Oct. 15, 2019 5391-5401

Chen, Y., see Chi, Y., TSP Oct. 15, 2019 5239-5269

Chen, Z., see Chen, P., TSP Jan. 1, 2019 208-220

Chen, Z., see Jiang, C., TSP May 1, 2019 2249-2262

Chen, Z., see Li, X., TSP Sept. 1, 2019 4402-4417

Chen, Z., see Zhang, R., TSP Sept. 15, 2019 4899-4914

Cheng, C., see Jiang, J., TSP Aug. 1, 2019 3938-3953

Cheng, L., Wang, K., Ren, M., and Yan, G., Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment; TSP Nov. 15, 2019 5798-5810

Cheng, P., see Wang, X., TSP Jan. 1, 2019 221-233

Cheng, P., see Zhang, R., TSP Sept. 15, 2019 4899-4914

Cheng, Z., Liao, B., Shi, S., He, Z., and Li, J., Co-Design for Overlaid MIMO Radar and Downlink MISO Communication Systems via Cramér–Rao Bound Minimization; TSP Dec. 15, 2019 6227-6240

Chepuri, S.P., see Tohidi, E., TSP Feb. 1, 2019 579-593

Chepuri, S.P., see Ortiz-Jimenez, G., TSP June 15, 2019 3272-3286

Cheung, G., see Wang, F., TSP Nov. 1, 2019 5511-5526

Chi, Y., see Liu, L., TSP April 1, 2019 1758-1773

Chi, Y., Lu, Y.M., and Chen, Y., Nonconvex Optimization Meets Low-Rank Matrix Factorization: An Overview; TSP Oct. 15, 2019 5239-5269

Chisci, L., see Li, S., TSP Jan. 1, 2019 260-275

Choi, J., Lee, G., and Evans, B.L., Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs; TSP May 1, 2019 2410-2425

Choi, S., see Zhang, S., TSP April 15, 2019 2066-2079

Cichocki, A., see Phan, A., TSP March 1, 2019 1175-1190

Ciolek, M., see Niedzwiecki, M., TSP Feb. 1, 2019 769-782

Coates, M.J., see Li, Y., TSP May 1, 2019 2499-2512

Cohen, K., see Gurevich, A., TSP July 15, 2019 3689-3703

Cola, T.d., see Lin, Z., TSP Dec. 15, 2019 6384-6396

Coluccia, A., see Carlino, L., TSP July 1, 2019 3412-3423

Coluccia, A., Ricci, G., and Besson, O., Design of Robust Radar Detectors Through Random Perturbation of the Target Signature; TSP Oct. 1, 2019 5118-5129

Condo, C., see Hashemi, S.A., TSP Nov. 15, 2019 5689-5701

Corazza, G.E., see Abdoush, Y., TSP June 15, 2019 3100-3112

Couillet, R., see Liao, Z., TSP Feb. 15, 2019 1065-1074

Coutino, M., see Tohidi, E., TSP Feb. 1, 2019 579-593

Coutino, M., Isufi, E., and Leus, G., Advances in Distributed Graph Filtering; TSP May 1, 2019 2320-2333

Coutino, M., see Ortiz-Jimenez, G., TSP June 15, 2019 3272-3286

Craigmile, P.F., see Tang, S., TSP Oct. 1, 2019 4992-5003

Cui, G., see Yu, X., TSP July 1, 2019 3487-3501

Cui, G., see Li, X., TSP April 1, 2019 1902-1917

Cui, W., see Shen, Q., TSP July 1, 2019 3502-3515

Cui, W., Zhang, X., and Liu, Y., Covariance Matrix Estimation From Linearly-Correlated Gaussian Samples; TSP April 15, 2019 2187-2195

D

D'yachkov, A., Polyanskii, N., Shchukin, V., and Vorobyev, I., Hypothesis Test for Bounds on the Size of Random Defective Set; TSP Nov. 15, 2019 5775-5784

Daei, S., see Valiulahi, I., TSP July 1, 2019 3372-3382

Daei, S., Haddadi, F., and Amini, A., Exploiting Prior Information in Block-Sparse Signals; TSP Oct. 1, 2019 5093-5102

Dai, J., Liu, A., and Lau, V.K.N., Joint Channel Estimation and User Grouping for Massive MIMO Systems; TSP Feb. 1, 2019 622-637

Dai, J., Liu, A., and So, H.C., Non-Uniform Burst-Sparsity Learning for Massive MIMO Channel Estimation; TSP Feb. 15, 2019 1075-1087

Dai, L., see Shen, W., TSP Aug. 15, 2019 4204-4217

Dai, L., see Gao, X., TSP Sept. 15, 2019 4809-4824

Dai, L., see Xie, T., TSP Sept. 15, 2019 4730-4744

Dai, W., see Lu, Y., TSP June 1, 2019 2947-2959

Dall'Anese, E., see Bernstein, A., TSP April 15, 2019 1978-1991

Dall'Anese, E., see Ramakrishna, R., TSP Dec. 15, 2019 6368-6383

Daneshpajooh, V., see Narayanamurthy, P., TSP Aug. 15, 2019 4245-4260

Dantas, C.F., and Gribonval, R., Stable Safe Screening and Structured Dictionaries for Faster ℓ_1 Regularization; *TSP July 15, 2019 3756-3769*

Das, S., Majhi, S., Budisin, S., and Liu, Z., A New Construction Framework for Polyphase Complete Complementary Codes With Various Lengths; TSP May 15, 2019 2639-2648

Das, U., see Dhar, S.S., TSP Aug. 15, 2019 4291-4301

Dauwels, J., see Yu, H., TSP Dec. 15, 2019 6468-6482

Davidson, T.N., see Medra, M., TSP Jan. 1, 2019 70-82

Dawson, R.M.A., see Rapp, J., TSP July 1, 2019 3424-3438

Dawson, R.M.A., see Rapp, J., TSP July 1, 2019 3471-3486

de Lamare, R.C., see Yu, Y., TSP March 15, 2019 1566-1581

de Lamare, R.C., see Ruan, H., TSP Dec. 15, 2019 6411-6423

De Maio, A., see Aubry, A., TSP March 15, 2019 1396-1406

De Maio, A., see Tang, M., TSP Nov. 1, 2019 5671-5685

De Melo, F.E., and Maskell, S., A CPHD Approximation Based on a Discrete-Gamma Cardinality Model; *TSP Jan. 15, 2019 336-350*

Debarre, T., Aziznejad, S., and Unser, M., Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems; TSP Nov. 15, 2019 5824-5836

Dekorsy, A., see Schnier, T., TSP Sept. 1, 2019 4521-4534

Demanet, L., see Bharadwaj, P., TSP June 15, 2019 3168-3180

Dempster, A.G., see Biswas, S.K., TSP April 1, 2019 1918-1928

Deng, W., see Liu, K., TSP July 1, 2019 3455-3470

Dhar, S.S., Kundu, D., and Das, U., Tests For the Parameters of Chirp Signal Model; *TSP Aug. 15, 2019 4291-4301*

Di Viesti, P., see Vitetta, G.M., TSP March 15, 2019 1522-1536

Di Viesti, P., Vitetta, G.M., and Sirignano, E., Double Bayesian Smoothing as Message Passing; *TSP Nov. 1*, 2019 5495-5510

Ding, J., see Xiang, Y., TSP March 1, 2019 1353-1365

Ding, Z., see Yang, K., TSP June 15, 2019 3087-3099

Ding, Z., see You, P., TSP Oct. 15, 2019 5433-5446

Diskin, T., see Samuel, N., TSP May 15, 2019 2554-2564

Dixit, R., Bedi, A.S., Tripathi, R., and Rajawat, K., Online Learning With Inexact Proximal Online Gradient Descent Algorithms; TSP March 1, 2019 1338-1352

Djermoune, E., see Nguyen, T.T., TSP Nov. 1, 2019 5643-5658

Djuric, P.M., see Santos, I., TSP March 1, 2019 1152-1162

Dmytriv, S., see Bodnar, T., TSP Sept. 1, 2019 4479-4493

Dobakhshari, D.G., Naghizadeh, P., Liu, M., and Gupta, V., A Reputation-Based Contract for Repeated Crowdsensing With Costly Verification; TSP Dec. 1, 2019 6092-6104

Dobhakhshari, D.G., see Chen, K., TSP Dec. 15, 2019 6342-6351

Dobigeon, N., see Vono, M., TSP March 15, 2019 1648-1661

Dogan, Z., see Behjat, H., TSP Aug. 1, 2019 3909-3921

Dogancay, K., see Nguyen, N.H., TSP Sept. 15, 2019 4795-4808

Dong, X., see Xing, C., TSP July 1, 2019 3531-3546

Dorffer, C., see Herzet, C., TSP June 15, 2019 3300-3315

Dougherty, E.R., see Zollanvari, A., TSP June 15, 2019 3073-3086

Douik, A., and Hassibi, B., Manifold Optimization Over the Set of Doubly Stochastic Matrices: A Second-Order Geometry; TSP Nov. 15, 2019 5761-5774

Doyle, L., see Sabeti, P., TSP June 1, 2019 2973-2986

Draper, S.C., see Wasson, M., TSP Oct. 1, 2019 4976-4991

Draskovic, G., Breloy, A., and Pascal, F., On the Asymptotics of Maronna's Robust PCA; TSP Oct. 1, 2019 4964-4975

Dremeau, A., see Herzet, C., TSP June 15, 2019 3300-3315

Duan, F., Pan, Y., Chapeau-Blondeau, F., and Abbott, D., Noise Benefits in Combined Nonlinear Bayesian Estimators; *TSP Sept. 1*, 2019 4611-4623

Duan, H., see Li, X., TSP Sept. 1, 2019 4402-4417

Dunik, J., and Straka, O., Design of Rao–Blackwellized Point-Mass Smoother for Conditionally Linear and Gaussian Models; TSP Dec. 1, 2019 6053-6066

Dunson, D., see Wang, L., TSP April 1, 2019 1929-1940

Duong, T.Q., see Nguyen, L.D., TSP June 1, 2019 2839-2853

Dytso, A., Faus, M., Zoubir, A.M., and Poor, H.V., MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution; TSP Dec. 15, 2019 6352-6367

E

Eisen, M., Zhang, C., Chamon, L.F.O., Lee, D.D., and Ribeiro, A., Learning Optimal Resource Allocations in Wireless Systems; *TSP May 15*, 2019 2775-2790

Eisen, M., Gatsis, K., Pappas, G.J., and Ribeiro, A., Learning in Wireless Control Systems Over Nonstationary Channels; *TSP March 1*, 2019 1123-1137

Eisen, M., Mokhtari, A., and Ribeiro, A., A Primal-Dual Quasi-Newton Method for Exact Consensus Optimization; *TSP Dec. 1, 2019 5983-5997*

Elad, M., see Yankelevsky, Y., TSP April 1, 2019 1889-1901

Elad, M., see Simon, D., TSP Sept. 1, 2019 4597-4610

Eldar, Y.C., see Bhandari, A., TSP March 15, 2019 1508-1521

Eldar, Y.C., see Ioushua, S.S., TSP June 15, 2019 3243-3257

Eldar, Y.C., see Lu, Y., TSP June 1, 2019 2947-2959

Eldar, Y.C., see Shlezinger, N., TSP Aug. 1, 2019 3995-4012

Eldar, Y.C., see Shlezinger, N., TSP Oct. 15, 2019 5223-5238

Eldar, Y.C., see Jung, A., TSP Dec. 15, 2019 6256-6269

Eldar, Y.C., see Pinilla, S., TSP Dec. 1, 2019 6121-6132

Emambakhsh, M., Bay, A., and Vazquez, E., Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking; TSP Sept. 1, 2019 4545-4555

Enzner, G., see Yang, F., TSP April 1, 2019 1785-1796

Enzner, G., see Vogt, H., TSP June 1, 2019 2810-2825

Erdogan, A.T., see Yilmaz, B.B., TSP March 1, 2019 1191-1206

Eriksson, M., and Olofsson, T., Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series; *TSP Jan. 1, 2019 149-163*

Escudero, J., see Smith, K., TSP Jan. 15, 2019 293-305

Evans, B.L., see Choi, J., TSP May 1, 2019 2410-2425

Eweda, E., Stability Bound of the Initial Mean-Square Deviation of High-Order Stochastic Gradient Adaptive Filtering Algorithms; TSP Aug. 15, 2019 4168-4176

F

Fan, P., see Shen, W., TSP Aug. 15, 2019 4204-4217

Fan, W., Liang, J., Yu, G., So, H.C., and Lu, G., MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization; TSP July 1, 2019 3397-3411

Fang, J., see Li, X., TSP Sept. 1, 2019 4402-4417

Farhang, A., see Sabeti, P., TSP June 1, 2019 2973-2986

Farina, A., see Benavoli, A., TSP Aug. 15, 2019 4357-4369

Faus, M., see Dytso, A., TSP Dec. 15, 2019 6352-6367

Feng, S., see Tang, W., TSP May 1, 2019 2426-2438

Ferrari, D., see Seghouane, A., TSP April 1, 2019 1838-1848

Fijalkow, I., see Marcastel, A., TSP June 1, 2019 2987-3000

Finn, A., see Badriasl, L., TSP July 1, 2019 3576-3591

Fletcher, A.K., see Sarkar, S., TSP July 1, 2019 3383-3396

Florea, M.I., and Vorobyov, S.A., An Accelerated Composite Gradient Method for Large-Scale Composite Objective Problems; TSP Jan. 15, 2019 444-459

Fortunati, S., Gini, F., Greco, M.S., Zoubir, A.M., and Rangaswamy, M., Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions; *TSP Jan. 1*, 2019 164-177

Fortunati, S., Gini, F., Greco, M.S., Zoubir, A.M., and Rangaswamy, M., Semi-parametric CRB and Slepian-Bangs Formulas for Complex Elliptically Symmetric Distributions; TSP Oct. 15, 2019 5352-5364

Fournier, A., see Bharadwaj, P., TSP June 15, 2019 3168-3180

Friedlander, B., Polarization Sensitivity of Antenna Arrays; TSP Jan. 1, 2019 234-244

Friedlander, B., Localization of Signals in the Near-Field of an Antenna Array; TSP Aug. 1, 2019 3885-3893

Fritsche, C., see Zhao, Y., TSP Dec. 1, 2019 5936-5951

Fu, S., see Chen, J., TSP Oct. 15, 2019 5380-5390

Fu, X., see Kanatsoulis, C.I., TSP Jan. 15, 2019 306-319

G

Galleani, L., Time–Frequency Analysis of the Impulse Response; TSP March 1, 2019 1280-1295

Gama, F., Marques, A.G., Leus, G., and Ribeiro, A., Convolutional Neural Network Architectures for Signals Supported on Graphs; TSP Feb. 15, 2019 1034-1049

Gama, F., and Ribeiro, A., Ergodicity in Stationary Graph Processes: A Weak Law of Large Numbers; TSP May 15, 2019 2761-2774

Gama, F., Isufi, E., Ribeiro, A., and Leus, G., Controllability of Bandlimited Graph Processes Over Random Time Varying Graphs; TSP Dec. 15, 2019 6440-6454

Gameiro, A., see Castanheira, D., TSP Dec. 15, 2019 6285-6300

Gan, L., see Li, C., TSP June 1, 2019 2898-2910

Gan, L., see Li, C., TSP June 1, 2019 2911-2922

Gannot, S., see Schwartz, B., TSP March 1, 2019 1366-1381

Gao, F., see Ge, Y., TSP April 15, 2019 2143-2158

Gao, F., see Wang, B., TSP Nov. 1, 2019 5479-5494

Gao, F., see Wang, B., TSP Dec. 1, 2019 5893-5908

Gao, R., Tronarp, F., and Sarkka, S., Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation; *TSP Oct. 1, 2019 5078-5092*

Gao, X., Dai, L., Zhou, S., Sayeed, A.M., and Hanzo, L., Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays; TSP Sept. 15, 2019 4809-4824

Gao, X., see Su, D., TSP Sept. 15, 2019 4761-4771

Gao, X., see Su, D., TSP Sept. 15, 2019 4772-4781

Gao, X., see Shen, W., TSP Dec. 15, 2019 6301-6313

Garcia-Fernandez, A.F., Tronarp, F., and Sarkka, S., Gaussian Target Tracking With Direction-of-Arrival von Mises–Fisher Measurements; TSP June 1, 2019 2960-2972

Garcia-Fernandez, A.F., and Svensson, L., Trajectory PHD and CPHD Filters; TSP Nov. 15, 2019 5702-5714

Garfinkle, C.J., and Hillar, C.J., On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals; TSP Dec. 1, 2019 5884-5892

Garg, V., Santamaria, I., Ramirez, D., and Scharf, L.L., Subspace Averaging and Order Determination for Source Enumeration; TSP June 1, 2019 3028-3041

Garnier, N.B., see Granero-Belinchon, C., TSP July 15, 2019 3796-3805

Gatsis, K., see Eisen, M., TSP March 1, 2019 1123-1137

Ge, Y., Zhang, W., Gao, F., and Li, G.Y., Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain; TSP April 15, 2019 2143-2158

Geng, J., Zhang, B., Huie, L.M., and Lai, L., Online Change-Point Detection of Linear Regression Models; TSP June 15, 2019 3316-3329

Gera, I., see Grotas, S., TSP April 15, 2019 2036-2051

Gezici, S., see Goken, C., TSP Aug. 15, 2019 4302-4316

Gezici, S., see Saritas, S., TSP Oct. 1, 2019 5169-5183

Gezici, S., see Goken, C., TSP Dec. 1, 2019 6105-6120

Ghadermarzy, N., Plan, Y., and Yilmaz, O., Learning Tensors From Partial Binary Measurements; TSP Jan. 1, 2019 29-40 Ghaemmaghami, S., see Amini, S., TSP April 1, 2019 1860-1874

Giampouras, P.V., Rontogiannis, A.A., and Koutroumbas, K.D., Alternating Iteratively Reweighted Least Squares Minimization for Low-Rank Matrix Factorization; TSP Jan. 15, 2019 490-503

Giannakis, G.B., see Chen, J., TSP Feb. 1, 2019 740-752

Giannakis, G.B., see Berberidis, D., TSP March 1, 2019 1307-1321

Giannakis, G.B., see Lee, D., TSP April 15, 2019 1964-1977

Giannakis, G.B., see Wang, G., TSP May 1, 2019 2357-2370

Giannakis, G.B., see Ioannidis, V.N., TSP May 1, 2019 2263-2274

Giannakis, G.B., see Shen, Y., TSP May 1, 2019 2471-2483

Giannakis, G.B., see Chen, J., TSP June 1, 2019 2826-2838

Giannakis, G.B., see Zhang, L., TSP Aug. 1, 2019 4069-4077

Giannakis, G.B., see Gimenez-Febrer, P., TSP Oct. 1, 2019 5004-5017

Giannakis, G.B., see Shen, Y., TSP Oct. 15, 2019 5325-5339

Giannakis, G.B., see Li, B., TSP Dec. 1, 2019 5922-5935

Gimenez-Febrer, P., Pages-Zamora, A., and Giannakis, G.B., Matrix Completion and Extrapolation via Kernel Regression; TSP Oct. 1, 2019 5004-5017

Gini, F., see Fortunati, S., TSP Jan. 1, 2019 164-177

Gini, F., see Fortunati, S., TSP Oct. 15, 2019 5352-5364

Ginolhac, G., see Mian, A., TSP Jan. 15, 2019 520-534

Gokcesu, H., see Gokcesu, K., TSP Feb. 15, 2019 993-1005

Gokcesu, H., see Vural, N.M., TSP Aug. 15, 2019 4383-4398

Gokcesu, K., Neyshabouri, M.M., Gokcesu, H., and Kozat, S.S., Sequential Outlier Detection Based on Incremental Decision Trees; TSP Feb. 15, 2019 993-1005

Gokcesu, K., see Vural, N.M., TSP Aug. 15, 2019 4383-4398

Goken, C., Gezici, S., and Arikan, O., Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters; TSP Aug. 15, 2019 4302-4316

Goken, C., and Gezici, S., Estimation Theoretic Secure Communication via Encoder Randomization; TSP Dec. 1, 2019 6105-6120

Gomez-Tornero, J., see Verdu-Monedero, R., TSP May 1, 2019 2275-2290

Gong, S., Ma, S., Xing, C., and Yang, G., Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT; TSP June 15, 2019 3197-3212

Gong, X., see Chen, W., TSP Nov. 15, 2019 5785-5797

Govoni, M.A., see Wang, F., TSP July 15, 2019 3818-3831

Govoni, M.A., see Aubry, A., TSP March 15, 2019 1396-1406

Goyal, V.K., see Rapp, J., TSP July 1, 2019 3424-3438

Goyal, V.K., see Rapp, J., TSP July 1, 2019 3471-3486

Goyal, V.K., see Seo, D., TSP Oct. 1, 2019 5103-5117

Grajal, J., see Yeste Ojeda, O.A., TSP Aug. 15, 2019 4333-4341

Granero-Belinchon, C., Roux, S.G., Abry, P., and Garnier, N.B., Probing High-Order Dependencies With Information Theory; TSP July 15, 2019

Granstrom, K., and Bramstang, J., Bayesian Smoothing for the Extended Object Random Matrix Model; TSP July 15, 2019 3732-3742

Greco, M.S., see Fortunati, S., TSP Jan. 1, 2019 164-177

Greco, M.S., see Fortunati, S., TSP Oct. 15, 2019 5352-5364

Gribonval, R., see Dantas, C.F., TSP July 15, 2019 3756-3769

Gribonval, R., see Byrne, E., TSP Sept. 1, 2019 4556-4569

Grimal, Q., see Xu, K., TSP Jan. 1, 2019 4-16

Gross, W.J., see Han, K., TSP March 1, 2019 1138-1151

Gross, W.J., see Hashemi, S.A., TSP Nov. 15, 2019 5689-5701

Grotas, S., Yakoby, Y., Gera, I., and Routtenberg, T., Power Systems Topology and State Estimation by Graph Blind Source Separation; TSP April 15, 2019

Gu, Y., and Zhang, Y.D., Information-Theoretic Pilot Design for Downlink Channel Estimation in FDD Massive MIMO Systems; TSP May 1, 2019 2334-2346

Gu, Y., see Yang, C., TSP Oct. 1, 2019 5046-5061

Guan, Y.L., see Liu, L., TSP April 1, 2019 1758-1773

Guerrier, S., see Xu, H., TSP Oct. 1, 2019 5143-5152

Gulak, G., see Wasson, M., TSP Oct. 1, 2019 4976-4991

Gultekin, S., and Paisley, J., Online Forecasting Matrix Factorization; TSP March 1, 2019 1223-1236

Gunduz, D., see Amiri, M.M., TSP Dec. 15, 2019 6270-6284

Gunnarsson, F., see Zhao, Y., TSP Dec. 1, 2019 5936-5951

Guo, Z., Shi, D., Quevedo, D.E., and Shi, L., Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach; TSP Jan. 1, 2019

Gupta, A., Madhow, U., Arbabian, A., and Sadri, A., Design of Large Effective Apertures for Millimeter Wave Systems Using a Sparse Array of Subarrays; TSP Dec. 15, 2019 6483-6497

Gupta, P., and Agrawal, M., Design And Analysis of the Sparse Array for DoA Estimation of Noncircular Signals; TSP Jan. 15, 2019 460-473

Gupta, V., see Chen, K., TSP Dec. 15, 2019 6342-6351

Gupta, V., see Dobakhshari, D.G., TSP Dec. 1, 2019 6092-6104

Gurevich, A., Cohen, K., and Zhao, Q., Sequential Anomaly Detection Under a Nonlinear System Cost; TSP July 15, 2019 3689-3703

Gutierrez, D., see Piotrowski, T., TSP Feb. 1, 2019 553-567

Habets, E.A.P., see Schwartz, B., TSP March 1, 2019 1366-1381

Habets, E.A.P., see Schlecht, S.J., TSP Oct. 15, 2019 5340-5351

Haddadi, F., see Valiulahi, I., TSP July 1, 2019 3372-3382

Haddadi, F., see Daei, S., TSP Oct. 1, 2019 5093-5102

Haddadi, F., see Valiulahi, I., TSP Dec. 1, 2019 5998-6008

Hajri, S.E., see Maatouk, A., TSP Feb. 15, 2019 1006-1021

Hamaoui, M., Non-Iterative MDS Method for Collaborative Network Localization With Sparse Range and Pointing Measurements; TSP Feb. 1, 2019 568-578

Hamza, S.A., and Amin, M.G., Hybrid Sparse Array Beamforming Design for General Rank Signal Models; TSP Dec. 15, 2019 6215-6226

Han, J., Zhang, L., Zhang, Q., and Leus, G., Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels; TSP Feb. 15, 2019 915-929

Han, K., Wang, J., Gross, W.J., and Hu, J., Stochastic Bit-Wise Iterative Decoding of Polar Codes; TSP March 1, 2019 1138-1151

Handel, P., see Ronnow, D., TSP Oct. 15, 2019 5203-5212

Hanzo, L., see Gao, X., TSP Sept. 15, 2019 4809-4824

Hanzo, L., see Shen, W., TSP Dec. 15, 2019 6301-6313

Hashemi, S.A., Condo, C., Mondelli, M., and Gross, W.J., Rate-Flexible Fast Polar Decoders; TSP Nov. 15, 2019 5689-5701

Hassani, H., see Reisizadeh, A., TSP Oct. 1, 2019 4934-4947

Hassibi, B., see Azizan-Ruhi, N., TSP July 15, 2019 3806-3817

Hassibi, B., see Jaganathan, K., TSP June 1, 2019 2937-2946

Hassibi, B., see Douik, A., TSP Nov. 15, 2019 5761-5774

Hayes, C.E., see Ruble, M., TSP July 15, 2019 3719-3731

He, J., see Wang, X., TSP Jan. 1, 2019 221-233

He, Q., see Li, Y., TSP June 15, 2019 3258-3271

He, Z., see Zhang, X., TSP Feb. 1, 2019 652-667

He, Z., see Zhang, X., TSP Feb. 1, 2019 668-683

He, Z., see Zhang, X., TSP June 15, 2019 3126-3139 He, Z., see Cheng, Z., TSP Dec. 15, 2019 6227-6240

Heath, R.W., see Myers, N.J., TSP Feb. 15, 2019 1104-1119

Heath, R.W., see Shen, W., TSP Aug. 15, 2019 4204-4217

Heather, R.W., see Sun, P., TSP Feb. 15, 2019 899-914

Hegde, C., see Soltani, M., TSP July 1, 2019 3361-3371

Heimowitz, A., see Jung, A., TSP Dec. 15, 2019 6256-6269

Hendeby, G., see Zhao, Y., TSP Dec. 1, 2019 5936-5951

Hero, A.O., see Hou, E., TSP March 15, 2019 1461-1476 Hero III, A.O., see Jung, A., TSP Dec. 15, 2019 6256-6269

Herzet, C., Dorffer, C., and Dremeau, A., Gather and Conquer: Region-Based Strategies to Accelerate Safe Screening Tests; TSP June 15, 2019 3300-3315

Heydari, J., and Tajer, A., Quickest Search and Learning Over Correlated Sequences: Theory and Application; TSP Feb. 1, 2019 638-651

Hillar, C.J., see Garfinkle, C.J., TSP Dec. 1, 2019 5884-5892

Hirche, S., see Xue, D., TSP March 1, 2019 1163-1174

Hlawatsch, F., see Soldi, G., TSP Aug. 1, 2019 3922-3937

Ho, D.K.W., and Rao, B.D., Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML; TSP May 1, 2019 2291-2303

Ho, J., see Hwang, W., TSP June 15, 2019 3330-3343

Ho, K.C., see Sun, Y., TSP Jan. 15, 2019 320-335

Ho, K.C., see Le, T., TSP May 15, 2019 2665-2678

Ho, K.C., see Zhang, Y., TSP Sept. 15, 2019 4745-4760

Ho, K.C., see Jia, T., TSP Nov. 15, 2019 5881-5895

Hoang, L.M., Kim, M., and Kong, S., Automatic Recognition of General LPI Radar Waveform Using SSD and Supplementary Classifier; TSP July 1, 2019 3516-3530

Holighaus, N., Koliander, G., Prusa, Z., and Abreu, L.D., Characterization of Analytic Wavelet Transforms and a New Phaseless Reconstruction Algorithm; TSP Aug. 1, 2019 3894-3908

Hong, M., see Kanatsoulis, C.I., TSP Jan. 15, 2019 306-319

Hong, M., see Sun, H., TSP Nov. 15, 2019 5912-5928

Horlin, F., see Rottenberg, F., TSP Nov. 1, 2019 5583-5595

Host-Madsen, A., see Young, J., TSP Feb. 15, 2019 885-898

Hou, E., Yilmaz, Y., and Hero, A.O., Anomaly Detection in Partially Observed Traffic Networks; TSP March 15, 2019 1461-1476

Hsiao, Y., Wu, Y., and Lin, C., Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks; TSP July 15, 2019 3770-3784

Hsiao, Y., see Chen, C., TSP March 15, 2019 1477-1492

Hu, D., see Liu, Y., TSP Aug. 15, 2019 4370-4382

Hu, J., see Han, K., TSP March 1, 2019 1138-1151

Hu, J., see Zhou, X., TSP Aug. 15, 2019 4276-4290

Hu, R., see Zhou, Y., TSP July 15, 2019 3676-3688

Hua, Y., Advanced Properties of Full-Duplex Radio for Securing Wireless Network; TSP Jan. 1, 2019 120-135

Hua, Y., see Sohrabi, R., TSP Dec. 1, 2019 5968-5982

Huang, C., Liu, L., Yuen, C., and Sun, S., Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems; TSP Jan. 1, 2019 245-259

Huang, P., see Hwang, W., TSP June 15, 2019 3330-3343

Huang, S., and Tran, T.D., Sparse Signal Recovery via Generalized Entropy Functions Minimization; *TSP March 1, 2019 1322-1337*

Huang, T., see Li, X., TSP April 1, 2019 1824-1837

Huang, Y., see Medra, M., TSP Jan. 1, 2019 70-82

Huang, Y., Zhou, M., and Vorobyov, S.A., New Designs on MVDR Robust Adaptive Beamforming Based on Optimal Steering Vector Estimation; TSP July 15, 2019 3624-3638

Huang, Y., Zhang, Y., Zhao, Y., and Chambers, J.A., A Novel Robust Gaussian–Student's *t* Mixture Distribution Based Kalman Filter; *TSP July 1*, 2019 3606-3620

Huang, Y., see Wang, Z., TSP Aug. 15, 2019 4342-4356

Huang, Y., Zhang, Y., and Chambers, J.A., A Novel Kullback–Leibler Divergence Minimization-Based Adaptive Student's t-Filter; TSP Oct. 15, 2019 5417-5432

Huang, Y., see Lin, Z., TSP Dec. 15, 2019 6384-6396

Huang, Y., see Chen, K., TSP Dec. 15, 2019 6342-6351

Huie, L.M., see Geng, J., TSP June 15, 2019 3316-3329

Hwang, W., Huang, P., Kung, B., Ho, J., and Jong, T., Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD; TSP June 15, 2019 3330-3343

Ι

Idier, J., see Nguyen, T.T., TSP Nov. 1, 2019 5643-5658

Ioana, C., see Saulig, N., TSP June 15, 2019 3154-3167

Ioannidis, V.N., Shen, Y., and Giannakis, G.B., Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs; TSP May 1, 2019 2263-2274

Ioushua, S.S., and Eldar, Y.C., A Family of Hybrid Analog-Digital Beamforming Methods for Massive MIMO Systems; TSP June 15, 2019 3243-3257

Isufi, E., see Coutino, M., TSP May 1, 2019 2320-2333

Isufi, E., Loukas, A., Perraudin, N., and Leus, G., Forecasting Time Series With VARMA Recursions on Graphs; TSP Sept. 15, 2019 4870-4885

Isufi, E., see Gama, F., TSP Dec. 15, 2019 6440-6454

Ito, D., Takabe, S., and Wadayama, T., Trainable ISTA for Sparse Signal Recovery; TSP June 15, 2019 3113-3125

J

Jacob, M., see Zou, Q., TSP Dec. 15, 2019 6455-6467

Jacob, M., see Poddar, S., TSP Nov. 15, 2019 5865-5880

Jaffard, S., see Leonarduzzi, R., TSP Jan. 1, 2019 110-119

Jaganathan, K., and Hassibi, B., Reconstruction of Signals From Their Autocorrelation and Cross-Correlation Vectors, With Applications to Phase Retrieval and Blind Channel Estimation; TSP June 1, 2019 2937-2946

Jagannatham, A.K., see Srivastava, S., TSP March 1, 2019 1251-1266

Jagannatham, A.K., see Chawla, A., TSP Aug. 1, 2019 4055-4068

Jagannatham, A.K., see Singh, P., TSP Sept. 15, 2019 4668-4682

Jahromi, S., see Jung, A., TSP Dec. 15, 2019 6256-6269

Jeon, C., Li, K., Cavallaro, J.R., and Studer, C., Decentralized Equalization With Feedforward Architectures for Massive MU-MIMO; TSP Sept. 1, 2019 4418-4432

Ji, F., Tang, W., and Tay, W.P., On the Properties of Gromov Matrices and Their Applications in Network Inference; TSP May 15, 2019 2624-2638

Ji, F., and Tay, W.P., A Hilbert Space Theory of Generalized Graph Signal Processing; TSP Dec. 15, 2019 6188-6203

Jia, T., Ho, K.C., Wang, H., and Shen, X., Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution; TSP Nov. 15, 2019 5881-5895

Jian, M., see Wang, B., TSP Dec. 1, 2019 5893-5908

Jiang, C., Chen, Z., Su, R., and Soh, Y.C., Group Greedy Method for Sensor Placement; TSP May 1, 2019 2249-2262

Jiang, J., Cheng, C., and Sun, Q., Nonsubsampled Graph Filter Banks: Theory and Distributed Algorithms; TSP Aug. 1, 2019 3938-3953

Jiang, Y., see Su, D., TSP Sept. 15, 2019 4761-4771

Jiang, Y., see Su, D., TSP Sept. 15, 2019 4772-4781

Jin, M., see Zhao, W., TSP Nov. 15, 2019 5746-5760

Jin, Y., see Li, S., TSP Aug. 1, 2019 3954-3969

Johansson, M., see Mai, V.V., TSP June 15, 2019 3287-3299

Jong, T., see Hwang, W., TSP June 15, 2019 3330-3343

Jorswieck, E.A., see Matthiesen, B., TSP Nov. 1, 2019 5612-5627

Joseph, G., and Murthy, C.R., Measurement Bounds for Observability of Linear Dynamical Systems Under Sparsity Constraints; TSP April 15, 2019 1992-2006

Jung, A., Hero III, A.O., Mara, A.C., Jahromi, S., Heimowitz, A., and Eldar, Y.C., Semi-Supervised Learning in Network-Structured Data via Total Variation Minimization; TSP Dec. 15, 2019 6256-6269

Jutten, C., see Lahat, D., TSP Feb. 1, 2019 684-699

 \mathbf{K}

Kailkhura, B., see Li, C., TSP Sept. 15, 2019 4696-4706

Kallummil, S., and Kalyani, S., Residual Ratio Thresholding for Linear Model Order Selection; TSP Feb. 15, 2019 838-853

Kallummil, S., and Kalyani, S., Noise Statistics Oblivious GARD For Robust Regression With Sparse Outliers; TSP Jan. 15, 2019 383-398

Kalyani, S., see Kallummil, S., TSP Feb. 15, 2019 838-853

Kalyani, S., see Kallummil, S., TSP Jan. 15, 2019 383-398

Kalyani, S., see Menon, V., TSP May 1, 2019 2439-2452

Kananian, B., see Liu, A., TSP Aug. 15, 2019 4189-4203

Kanatsoulis, C.I., Fu, X., Sidiropoulos, N.D., and Hong, M., Structured SUM-COR Multiview Canonical Correlation Analysis for Large-Scale Data; TSP Jan. 15, 2019 306-319

Kar, S., see Chen, Y., TSP Oct. 1, 2019 4918-4933

Karemera, M., see Xu, H., TSP Oct. 1, 2019 5143-5152

Karisik, F., and Baumert, M., Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals; TSP Dec. 1, 2019 6067-6077

Kay, S., see Zhou, X., TSP April 15, 2019 2107-2114

Kayran, A.H., and Camcioglu, E., Fully Orthogonal 2-D Lattice Structures for Quarter-Plane and Asymmetric Half-Plane Autoregressive Modeling of Random Fields; TSP Sept. 1, 2019 4507-4520 Khanduri, P., Theagarajan, L.N., and Varshney, P.K., Online Design of Optimal Precoders for High Dimensional Signal Detection; TSP Aug. 1, 2019 4122-4135

Khanduri, P., Pastor, D., Sharma, V., and Varshney, P.K., Truncated Sequential Non-Parametric Hypothesis Testing Based on Random Distortion Testing; TSP Aug. 1, 2019 4027-4042

Khanduri, P., Pastor, D., Sharma, V., and Varshney, P.K., Sequential Random Distortion Testing of Non-Stationary Processes; TSP Nov. 1, 2019 5450-5462

Khanna, S., and Murthy, C.R., Corrections to "On the Restricted Isometry of the Columnwise Khatri–Rao Product" [Mar 18 1170-1183]; TSP May 1, 2019 2387-2388

Khayambashi, M., and Swindlehurst, A.L., Estimation of Sparse Directional Connectivity With Expectation Maximization; TSP Feb. 15, 2019 854-869

Khodabakhsh, A., see Shafipour, R., TSP Feb. 15, 2019 946-960

Kim, J., Wang, J., and Shim, B., Nearly Optimal Restricted Isometry Condition for Rank Aware Order Recursive Matching Pursuit; TSP Sept. 1, 2019 4449-4463

Kim, M., see Hoang, L.M., TSP July 1, 2019 3516-3530

Kirubarajan, T., see Tang, X., TSP Sept. 15, 2019 4825-4838

Kobayashi, M., see Nitta, T., TSP Aug. 1, 2019 3985-3994

Koc, A., Bartan, B., and Ozaktas, H.M., Discrete Linear Canonical Transform Based on Hyperdifferential Operators; TSP May 1, 2019 2237-2248

Koldovsky, Z., and Tichavsky, P., Gradient Algorithms for Complex Non-Gaussian Independent Component/Vector Extraction, Question of Convergence; TSP Feb. 15, 2019 1050-1064

Koliander, G., see Holighaus, N., TSP Aug. 1, 2019 3894-3908

Kong, L., see Li, S., TSP Jan. 1, 2019 260-275

Kong, L., Qi, C., and Qi, H., Classical Multidimensional Scaling: A Subspace Perspective, Over-Denoising, and Outlier Detection; TSP July 15, 2019 3842-3857

Kong, L., see Yu, X., TSP July 1, 2019 3487-3501

Kong, L., see Li, X., TSP April 1, 2019 1902-1917

Kong, S., see Hoang, L.M., TSP July 1, 2019 3516-3530

Kong, Y., see Zheng, Z., TSP April 1, 2019 1728-1741

Koppel, A., see Bedi, A.S., TSP April 1, 2019 1742-1757

Koppel, A., Zhang, K., Zhu, H., and Basar, T., Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels; TSP May 15, 2019 2528-2542

Korso, M.N.E., see Bacharach, L., TSP March 1, 2019 1267-1279

Koutroumbas, K.D., see Giampouras, P.V., TSP Jan. 15, 2019 490-503

Kozat, S.S., see Gokcesu, K., TSP Feb. 15, 2019 993-1005

Kozat, S.S., see Vural, N.M., TSP Aug. 15, 2019 4383-4398

Krekovic, M., see Baechler, G., TSP Sept. 15, 2019 4839-4854

Krishnamurthy, V., and Rangaswamy, M., How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems; *TSP Dec.* 15, 2019 6511-6525

Krunz, M., see Siyari, P., TSP Feb. 1, 2019 594-608

Kukuk, M., and Spicher, N., Parameter Estimation Based on Scale-Dependent Algebraic Expressions and Scale-Space Fitting; TSP March 15, 2019 1431-1446

Kumar, M.G., see Sebastian, J., TSP June 1, 2019 2923-2936

Kumar, R., see Baraldi, R., TSP Nov. 15, 2019 5811-5823

Kumar, S., see Liu, J., TSP April 15, 2019 2159-2172

Kumar, S., see Zhao, L., TSP Aug. 15, 2019 4231-4244

Kundu, D., see Dhar, S.S., TSP Aug. 15, 2019 4291-4301

Kung, B., see Hwang, W., TSP June 15, 2019 3330-3343

Kuruoglu, E.E., see Nguyen, N.H., TSP Sept. 15, 2019 4795-4808

L

Lahat, D., and Jutten, C., Joint Independent Subspace Analysis: Uniqueness and Identifiability; TSP Feb. 1, 2019 684-699

Lahouti, F., see Azizan-Ruhi, N., TSP July 15, 2019 3806-3817

Lahouti, F., see Majzoobi, L., TSP April 1, 2019 1774-1784

Lai, H., see Martinez-Nuevo, P., TSP May 15, 2019 2516-2527

Lai, L., see Geng, J., TSP June 15, 2019 3316-3329

Lai, L., see Cao, X., TSP Nov. 15, 2019 5850-5864

Lameiro, C., Santamaria, I., Schreier, P.J., and Utschick, W., Maximally Improper Signaling in Underlay MIMO Cognitive Radio Networks; TSP Dec. 15, 2019 6241-6255

Lan, J., and Li, X.R., Extended-Object or Group-Target Tracking Using Random Matrix With Nonlinear Measurements; TSP Oct. 1, 2019 5130-5142

Larsson, E.G., see Mishra, D., TSP March 15, 2019 1662-1677

Lau, T.S., Tay, W.P., and Veeravalli, V.V., A Binning Approach to Quickest Change Detection With Unknown Post-Change Distribution; TSP Feb. 1, 2019 609-621

Lau, T.S., and Tay, W.P., Quickest Change Detection in the Presence of a Nuisance Change; TSP Oct. 15, 2019 5281-5296

Lau, V., see Zhou, B., TSP March 15, 2019 1620-1635

Lau, V.K.N., see Dai, J., TSP Feb. 1, 2019 622-637

Lau, V.K.N., see Yu, M., TSP March 15, 2019 1537-1549

Lau, V.K.N., see Lian, L., TSP April 15, 2019 2007-2021

Lau, V.K.N., see Liu, A., TSP May 1, 2019 2484-2498

Lau, V.K.N., see Chen, X., TSP Aug. 15, 2019 4152-4167

Lau, V.K.N., see Liu, A., TSP Aug. 15, 2019 4189-4203

Lau, V.K.N., see Chai, S., TSP Sept. 1, 2019 4570-4581

Lau, V.K.N., see Lian, L., TSP Nov. 1, 2019 5628-5642

Le, T., and Ho, K.C., Uncovering Source Ranges From Range Differences Observed by Sensors at Unknown Positions: Fundamental Theory; TSP May 15, 2019 2665-2678

Lee, D., Berberidis, D., and Giannakis, G.B., Adaptive Bayesian Radio Tomography; TSP April 15, 2019 1964-1977

Lee, D.D., see Eisen, M., TSP May 15, 2019 2775-2790

Lee, D.G., Pfander, G.E., and Pohl, V., Sampling and Reconstruction of Multiple-Input Multiple-Output Channels; TSP Feb. 15, 2019 961-976

Lee, G., see Choi, J., TSP May 1, 2019 2410-2425

Lee, K., Chandrasekher, K., Pedarsani, R., and Ramchandran, K., SAFFRON: A Fast, Efficient, and Robust Framework for Group Testing Based on Sparse-Graph Codes; TSP Sept. 1, 2019 4649-4664

Lee, S., and McBride, J., Extended Object Tracking via Positive and Negative Information Fusion; TSP April 1, 2019 1812-1823

Lei, H., see Zhang, H., TSP April 15, 2019 2196-2209

Leonarduzzi, R., Abry, P., Wendt, H., Jaffard, S., and Touchette, H., A Generalized Multifractal Formalism for the Estimation of Nonconcave Multifractal Spectra; *TSP Jan. 1*, 2019 110-119

Lerga, J., see Saulig, N., TSP June 15, 2019 3154-3167

Leshem, A., see Wai, H., TSP Sept. 1, 2019 4582-4596

Leus, G., see Tohidi, E., TSP Feb. 1, 2019 579-593

Leus, G., see Gama, F., TSP Feb. 15, 2019 1034-1049

Leus, G., see Han, J., TSP Feb. 15, 2019 915-929

Leus, G., see Coutino, M., TSP May 1, 2019 2320-2333

Leus, G., see Shen, Y., TSP May 1, 2019 2471-2483

Leus, G., see Ortiz-Jimenez, G., TSP June 15, 2019 3272-3286

Leus, G., see Isufi, E., TSP Sept. 15, 2019 4870-4885

Leus, G., see Gama, F., TSP Dec. 15, 2019 6440-6454

Levie, R., Monti, F., Bresson, X., and Bronstein, M.M., CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters; TSP Jan. 1, 2019 97-109

Li, B., and Wu, Y., Convergence Analysis of Gaussian Belief Propagation Under High-Order Factorization and Asynchronous Scheduling; TSP June 1, 2019 2884-2897

Li, B., Chen, T., and Giannakis, G.B., Secure Mobile Edge Computing in IoT via Collaborative Online Learning; *TSP Dec. 1, 2019 5922-5935*

Li, B., Su, Q., and Wu, Y., Fixed Points of Gaussian Belief Propagation and Relation to Convergence; TSP Dec. 1, 2019 6025-6038

Li, C., Gan, L., and Ling, C., Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part I: Array Designs; TSP June 1, 2019 2898-2910

Li, C., Gan, L., and Ling, C., Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part II: Generalizations and Applications; TSP June 1, 2019 2911-2922

Li, C., see Zhang, X., TSP Aug. 1, 2019 3970-3984

- Li, C., Li, G., Kailkhura, B., and Varshney, P.K., Secure Distributed Detection of Sparse Signals via Falsification of Local Compressive Measurements; TSP Sept. 15, 2019 4696-4706
- Li, G., see Wang, X., TSP April 15, 2019 2210-2220
- Li, G., see Wang, X., TSP Sept. 15, 2019 4886-4898
- Li, G., see Li, C., TSP Sept. 15, 2019 4696-4706
- Li, G.Y., see Xing, C., TSP July 1, 2019 3531-3546
- Li, G.Y., see Ge, Y., TSP April 15, 2019 2143-2158
- Li, G.Y., see Wang, B., TSP Nov. 1, 2019 5479-5494
- Li, G.Y., see Wang, B., TSP Dec. 1, 2019 5893-5908
- Li, H., see Wang, F., TSP July 15, 2019 3818-3831
- Li, H., and Zhang, L., Quaternion-Based Multiscale Analysis for Feature Extraction of Hyperspectral Images; TSP March 15, 2019 1418-1430
- Li, H., see Li, H., TSP March 15, 2019 1418-1430
- Li, H., see Li, X., TSP Sept. 1, 2019 4402-4417
- **Li, J.,** see Tang, B., TSP Feb. 1, 2019 821-834
- Li, J., see Liu, J., TSP March 15, 2019 1610-1619
- Li, J., see Yu, X., TSP July 1, 2019 3487-3501
- Li, J., see Ren, J., TSP April 15, 2019 2173-2186
- Li, J., see Liu, J., TSP June 1, 2019 3058-3069
- Li, J., see Zhou, X., TSP Aug. 15, 2019 4276-4290
- Li, J., see Xiao, P., TSP Aug. 15, 2019 4139-4151
- Li, J., see Liu, J., TSP Oct. 15, 2019 5270-5280
- Li, J., see Ameri, A., TSP Oct. 15, 2019 5297-5308
- Li, J., see Cheng, Z., TSP Dec. 15, 2019 6227-6240
- Li, J., see Lin, R., TSP Dec. 15, 2019 6397-6410
- **Li, K.,** see Jeon, C., TSP Sept. 1, 2019 4418-4432
- Li, M., see Tang, X., TSP Sept. 15, 2019 4825-4838
- Li, M., see You, P., TSP Oct. 15, 2019 5433-5446
- Li, Q., see Wang, T., TSP April 15, 2019 2093-2106
- Li, Q., Joint Decoder Design for SSDs; TSP May 1, 2019 2399-2409
- Li, Q., see Shao, M., TSP Oct. 15, 2019 5309-5324
- Li, S., Battistelli, G., Chisci, L., Yi, W., Wang, B., and Kong, L., Computationally Efficient Multi-Agent Multi-Object Tracking With Labeled Random Finite Sets; TSP Jan. 1, 2019 260-275
- Li, S., Jin, Y., and Shuman, D.I., Scalable M-Channel Critically Sampled Filter Banks for Graph Signals; TSP Aug. 1, 2019 3954-3969
- Li, W., and Assaad, M., Matrix Exponential Learning Schemes With Low Informational Exchange; TSP June 15, 2019 3140-3153
- Li, X., Sun, Z., Yeo, T.S., Zhang, T., Yi, W., Cui, G., and Kong, L., STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models; TSP April 1, 2019 1902-1917
- Li, X., Huang, T., Liao, Q., and Xia, X., Optimal Estimates of Two Common Remainders for a Robust Generalized Chinese Remainder Theorem; TSP April 1, 2019 1824-1837
- Li, X., see Basu, S., TSP April 1, 2019 1960
- Li, X., see Basu, S., TSP March 1, 2019 1207-1222
- Li, X., Fang, J., Duan, H., Chen, Z., and Li, H., Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach; TSP Sept. 1, 2019 4402-4417
- Li, X., see Wang, B., TSP Nov. 1, 2019 5479-5494
- Li, X.R., see Tang, M., TSP Jan. 15, 2019 279-292
- Li, X.R., see Lan, J., TSP Oct. 1, 2019 5130-5142
- Li, Y., see Liu, L., TSP April 1, 2019 1758-1773
- Li, Y., Pal, S., and Coates, M.J., Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models; TSP May 1, 2019 2499-2512
- Li, Y., He, Q., and Blum, R.S., Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection; TSP June 15, 2019 3258-3271
- Li, Y., see Zhang, R., TSP Sept. 15, 2019 4899-4914
- Li, Y., see Wei, D., TSP Dec. 1, 2019 6009-6024
- Li, Z., see Xia, Y., TSP Aug. 1, 2019 4093-4106
- Li, Z., Shi, W., and Yan, M., A Decentralized Proximal-Gradient Method With Network Independent Step-Sizes and Separated Convergence Rates; TSP Sept. 1, 2019 4494-4506
- Lian, L., Liu, A., and Lau, V.K.N., Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking; TSP April 15, 2019 2007-2021

- Lian, L., Liu, A., and Lau, V.K.N., User Location Tracking in Massive MIMO Systems via Dynamic Variational Bayesian Inference; TSP Nov. 1, 2019 5628-5642
- Liang, J., see Fan, W., TSP July 1, 2019 3397-3411
- Liang, Y., see Wang, T., TSP April 15, 2019 2093-2106
- Liao, B., see Zhang, X., TSP Feb. 1, 2019 652-667
- Liao, B., see Zhang, X., TSP Feb. 1, 2019 668-683
- Liao, B., see Zhang, X., TSP June 15, 2019 3126-3139
- **Liao, B.,** see Xiao, P., TSP Aug. 15, 2019 4139-4151
- Liao, B., see Cheng, Z., TSP Dec. 15, 2019 6227-6240
- **Liao, Q.,** see Li, X., TSP April 1, 2019 1824-1837
- Liao, Q., see Cavalcante, R.L.G., TSP May 15, 2019 2747-2760
- Liao, Z., and Couillet, R., A Large Dimensional Analysis of Least Squares Support Vector Machines; TSP Feb. 15, 2019 1065-1074
- Lin, C., see Hsiao, Y., TSP July 15, 2019 3770-3784
- Lin, C., see Chen, C., TSP March 15, 2019 1477-1492
- Lin, H., see Wang, B., TSP Dec. 1, 2019 5893-5908
- Lin, M., see Lin, Z., TSP Dec. 15, 2019 6384-6396
- Lin, R., Soltanalian, M., Tang, B., and Li, J., Efficient Design of Binary Sequences With Low Autocorrelation Sidelobes; TSP Dec. 15, 2019 6397-6410
- Lin, Z., Lin, M., Huang, Y., Cola, T.d., and Zhu, W., Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information; TSP Dec. 15, 2019 6384-6396
- Lindsten, F., see Naesseth, C.A., TSP Aug. 15, 2019 4177-4188
- Ling, C., see Lyu, S., TSP Jan. 1, 2019 178-193
- Ling, C., see Li, C., TSP June 1, 2019 2898-2910
- Ling, C., see Li, C., TSP June 1, 2019 2911-2922
- Ling, Q., see Liu, Y., TSP May 15, 2019 2565-2579
- Liski, J., Bank, B., Smith, J.O., and Valimaki, V., Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers; TSP July 15, 2019 3785-3795
- Liu, A., see Dai, J., TSP Feb. 1, 2019 622-637
- Liu, A., see Zhou, B., TSP March 15, 2019 1620-1635
- Liu, A., see Dai, J., TSP Feb. 15, 2019 1075-1087
- Liu, A., see Lian, L., TSP April 15, 2019 2007-2021
- Liu, A., Chen, X., Yu, W., Lau, V.K.N., and Zhao, M., Two-Timescale Hybrid Compression and Forward for Massive MIMO Aided C-RAN; TSP May 1, 2019 2484-2498
- Liu, A., see Chen, X., TSP Aug. 15, 2019 4152-4167
- Liu, A., Lau, V.K.N., and Kananian, B., Stochastic Successive Convex Approximation for Non-Convex Constrained Stochastic Optimization; TSP Aug. 15, 2019 4189-4203
- Liu, A., see Lian, L., TSP Nov. 1, 2019 5628-5642
- Liu, C., and Vaidyanathan, P.P., Robustness of Difference Coarrays of Sparse Arrays to Sensor Failures—Part II: Array Geometries; *TSP June 15*, 2019
- Liu, C., and Vaidyanathan, P.P., Robustness of Difference Coarrays of Sparse Arrays to Sensor Failures—Part I: A Theory Motivated by Coarray MUSIC; TSP June 15, 2019 3213-3226
- Liu, C., see Liu, Y., TSP Aug. 15, 2019 4370-4382
- Liu, H., Yuan, X., and Zhang, Y.J., Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array; TSP Sept. 1, 2019 4433-4448
- Liu, J., Sun, S., and Liu, W., One-Step Persymmetric GLRT for Subspace Signals; TSP July 15, 2019 3639-3648
- Liu, J., see Chen, C., TSP March 15, 2019 1477-1492
- Liu, J., and Li, J., Mismatched Signal Rejection Performance of the Persymmetric GLRT Detector; TSP March 15, 2019 1610-1619
- Liu, J., Liu, W., Tang, B., Zheng, J., and Xu, S., Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter; TSP Feb. 15, 2019 1022-1033
- **Liu, J.,** and Rao, B.D., Robust PCA via ℓ_0 - ℓ_1 Regularization; *TSP Jan. 15*, 2019 535-549
- Liu, J., see Yuan, K., TSP Jan. 15, 2019 351-366
- Liu, J., Orlando, D., Addabbo, P., and Liu, W., SINR Distribution for the Persymmetric SMI Beamformer With Steering Vector Mismatches; TSP March 1, 2019 1382-1392

Liu, J., Kumar, S., and Palomar, D.P., Parameter Estimation of Heavy-Tailed AR Model With Missing Data Via Stochastic EM; TSP April 15, 2019 2159-2172

Liu, J., and Li, J., False Alarm Rate of the GLRT for Subspace Signals in Subspace Interference Plus Gaussian Noise; *TSP June 1, 2019 3058-3069*

Liu, J., and Li, J., Robust Detection in MIMO Radar With Steering Vector Mismatches; TSP Oct. 15, 2019 5270-5280

Liu, J., and Rao, B.D., Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses; TSP Nov. 15, 2019 5837-5849

Liu, K., Deng, W., and Liu, Y., Theoretical Analysis of the Peak-to-Average Power Ratio and Optimal Pulse Shaping Filter Design for GFDM Systems; TSP July 1, 2019 3455-3470

Liu, L., see Huang, C., TSP Jan. 1, 2019 245-259

Liu, L., Chi, Y., Yuen, C., Guan, Y.L., and Li, Y., Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection, TSP April 1, 2019 1758-1773

Liu, M., see Dobakhshari, D.G., TSP Dec. 1, 2019 6092-6104

Liu, P., see Wen, F., TSP Oct. 15, 2019 5402-5416

Liu, S., see You, P., TSP Oct. 15, 2019 5433-5446

Liu, W., see Liu, J., TSP July 15, 2019 3639-3648

Liu, W., see Liu, J., TSP Feb. 15, 2019 1022-1033

Liu, W., see Shen, Q., TSP July 1, 2019 3502-3515

Liu, W., see Zuo, W., TSP Jan. 15, 2019 415-430

Liu, W., see Liu, J., TSP March 1, 2019 1382-1392

Liu, W., see Raza, A., TSP April 15, 2019 2052-2065

Liu, W., see You, P., TSP Oct. 15, 2019 5433-5446

Liu, W., see Zhao, W., TSP Nov. 15, 2019 5746-5760

Liu, X., see Zhou, Y., TSP July 15, 2019 3676-3688

Liu, Y., see Zhou, Y., TSP July 15, 2019 3676-3688

Liu, Y., see Liu, K., TSP July 1, 2019 3455-3470

Liu, Y., Xu, W., Wu, G., Tian, Z., and Ling, Q., Communication-Censored ADMM for Decentralized Consensus Optimization; TSP May 15, 2019 2565-2579

Liu, Y., Zhang, Y., and Zeng, M., Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping; TSP April 15, 2019 2129-2142

Liu, Y., see Cui, W., TSP April 15, 2019 2187-2195

Liu, Y., see Zhang, H., TSP April 15, 2019 2196-2209

Liu, Y., Liu, C., Hu, D., and Zhao, Y., Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution; *TSP Aug. 15, 2019 4370-4382*

Liu, Z., see Das, S., TSP May 15, 2019 2639-2648

Livi, L., see Zambon, D., TSP Dec. 15, 2019 6327-6341

Lopes, C.G., see Lopes, W.B., TSP July 15, 2019 3649-3662

Lopes, C.G., see Pinheiro, F.C., TSP Nov. 1, 2019 5463-5478

Lopes, W.B., and Lopes, C.G., Geometric-Algebra Adaptive Filters; TSP July 15, 2019 3649-3662

Lorenzo, P.D., see Sardellitti, S., TSP April 1, 2019 1712-1727

Lostanlen, V., see Anden, J., TSP July 15, 2019 3704-3718

Loukas, A., see Isufi, E., TSP Sept. 15, 2019 4870-4885

Loulou, A., Yli-Kaakinen, J., and Renfors, M., Advanced Low-Complexity Multicarrier Schemes Using Fast-Convolution Processing and Circular Convolution Decomposition; TSP May 1, 2019 2304-2319

Louveaux, J., see Rottenberg, F., TSP Nov. 1, 2019 5583-5595

Lu, G., see Fan, W., TSP July 1, 2019 3397-3411

Lu, K., and Ortega, A., Fast Graph Fourier Transforms Based on Graph Symmetry and Bipartition; TSP Sept. 15, 2019 4855-4869

Lu, L., see Yu, Y., TSP March 15, 2019 1566-1581

Lu, Y., Dai, W., and Eldar, Y.C., Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR; TSP June 1, 2019 2947-2959

Lu, Y.M., see Luo, W., TSP May 1, 2019 2347-2356

Lu, Y.M., see Simon, D., TSP Sept. 1, 2019 4597-4610

Lu, Y.M., see Baechler, G., TSP Sept. 15, 2019 4839-4854

Lu, Y.M., see Chi, Y., TSP Oct. 15, 2019 5239-5269

Lunglmayr, M., see Moser, B.A., TSP July 15, 2019 3832-3841

Luo, W., Alghamdi, W., and Lu, Y.M., Optimal Spectral Initialization for Signal Recovery With Applications to Phase Retrieval; TSP May 1, 2019 2347-2356

Lyu, S., and Ling, C., Hybrid Vector Perturbation Precoding: The Blessing of Approximate Message Passing; TSP Jan. 1, 2019 178-193

Lyu, S., see Wang, Z., TSP Aug. 15, 2019 4342-4356

M

Ma, A., Zhou, Y., Rush, C., Baron, D., and Needell, D., An Approximate Message Passing Framework for Side Information; *TSP April 1*, 2019 1875-1888

Ma, H., see Yang, C., TSP Oct. 1, 2019 5046-5061

Ma, J., see Xue, Z., TSP Nov. 15, 2019 5730-5745

Ma, K., see Zeng, J., TSP Aug. 15, 2019 4261-4275

Ma, S., see Gong, S., TSP June 15, 2019 3197-3212

Ma, W., see Shao, M., TSP Oct. 15, 2019 5309-5324

Ma, Y., see Rapp, J., TSP July 1, 2019 3471-3486

Ma, Y., see Xue, Z., TSP Nov. 15, 2019 5730-5745

Maatouk, A., Hajri, S.E., Assaad, M., and Sari, H., On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO; TSP Feb. 15, 2019 1006-1021

Madhow, U., see Gupta, A., TSP Dec. 15, 2019 6483-6497

Mai, V.V., and Johansson, M., Noisy Accelerated Power Method for Eigenproblems With Applications; TSP June 15, 2019 3287-3299

Majhi, S., see Das, S., TSP May 15, 2019 2639-2648

Majzoobi, L., Lahouti, F., and Shah-Mansouri, V., Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error; TSP April 1, 2019 1774-1784

Maleki, M., Mohamed-Pour, K., and Soltanalian, M., Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI; TSP March 1, 2019 1237-1250

Mallat, S., see Anden, J., TSP July 15, 2019 3704-3718

Mandic, D., and Took, C.C., Reply to "Comments on 'The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes" TSP April 1, 2019 1959

Mandic, D.P., see Zhang, X., TSP Aug. 1, 2019 3970-3984

Mandic, D.P., see Nitta, T., TSP Aug. 1, 2019 3985-3994

Mandic, D.P., see Xia, Y., TSP Aug. 1, 2019 4093-4106

Mao, G., see Wang, S., TSP July 15, 2019 3743-3755

Mara, A.C., see Jung, A., TSP Dec. 15, 2019 6256-6269

Marano, S., and Willett, P.K., Algorithms and Fundamental Limits for Unlabeled Detection Using Types; TSP April 15, 2019 2022-2035

Marcastel, A., Belmega, E.V., Mertikopoulos, P., and Fijalkow, I., Online Power Optimization in Feedback-Limited, Dynamic and Unpredictable IoT Networks; TSP June 1, 2019 2987-3000

Marchetti, N., see Sabeti, P., TSP June 1, 2019 2973-2986

Marmin, A., see Castella, M., TSP March 15, 2019 1407-1417

Marques, A.G., see Gama, F., TSP Feb. 15, 2019 1034-1049

Marrelec, G., see Xu, K., TSP Jan. 1, 2019 4-16

Martinez-Nuevo, P., Lai, H., and Oppenheim, A.V., Delta-Ramp Encoder for Amplitude Sampling and Its Interpretation as Time Encoding: TSP May 15, 2019 2516-2527

Masjedi, M., see Naghsh, M.M., TSP Sept. 15, 2019 4707-4719

Maskell, S., see De Melo, F.E., TSP Jan. 15, 2019 336-350

Mateos, G., see Shafipour, R., TSP Feb. 15, 2019 946-960

Mathar, R., see Balda, E.R., TSP Dec. 1, 2019 6078-6091

Matthiesen, B., and Jorswieck, E.A., Efficient Global Optimal Resource Allocation in Non-Orthogonal Interference Networks; *TSP Nov. 1*, 2019 5612-5627

McBride, J., see Lee, S., TSP April 1, 2019 1812-1823

Medra, M., Huang, Y., and Davidson, T.N., Offset-Based Beamforming: A New Approach to Robust Downlink Transmission; TSP Jan. 1, 2019 70-82

Meinerzhagen, B., see Boche, H., TSP May 15, 2019 2649-2664

Menon, V., and Kalyani, S., Structured and Unstructured Outlier Identification for Robust PCA: A Fast Parameter Free Algorithm; TSP May 1, 2019 2439-2452

Mertikopoulos, P., see Marcastel, A., TSP June 1, 2019 2987-3000

Mestre, X., see Rottenberg, F., TSP Nov. 1, 2019 5583-5595

Meyer, F., see Soldi, G., TSP Aug. 1, 2019 3922-3937

Mezghani, A., see Myers, N.J., TSP Feb. 15, 2019 1104-1119

Mian, A., Ginolhac, G., Ovarlez, J., and Atto, A.M., New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images; TSP Jan. 15, 2019 520-534

Miao, H., Zhang, F., and Tao, R., Fractional Fourier Analysis Using the Möbius Inversion Formula; *TSP June 15*, 2019 3181-3196

Miao, H., Zhang, F., and Tao, R., New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications; TSP Nov. 1, 2019 5543-5557

Michailidis, G., see Basu, S., TSP April 1, 2019 1960

Michailidis, G., see Basu, S., TSP March 1, 2019 1207-1222

Milanovic, Z., see Saulig, N., TSP June 15, 2019 3154-3167

Mili, L., see Zhao, J., TSP May 15, 2019 2734-2746

Milicevic, M., see Wasson, M., TSP Oct. 1, 2019 4976-4991

Mishra, A., see Srivastava, S., TSP March 1, 2019 1251-1266

Mishra, D., and Larsson, E.G., Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader; TSP March 15, 2019 1662-1677

Mishra, H.B., see Singh, P., TSP Sept. 15, 2019 4668-4682

Mitra, U., see Chen, J., TSP May 1, 2019 2371-2386

Mizoguchi, T., and Yamada, I., Hypercomplex Tensor Completion via Convex Optimization; *TSP Aug. 1, 2019 4078-4092*

Modarres-Hashemi, M., see Alaee-Kerahroodi, M., TSP July 1, 2019 3347-3360

Mohamed-Pour, K., see Maleki, M., TSP March 1, 2019 1237-1250

Mokhtari, A., see Reisizadeh, A., TSP Oct. 1, 2019 4934-4947

Mokhtari, A., see Eisen, M., TSP Dec. 1, 2019 5983-5997

Molinari, R.C., see Xu, H., TSP Oct. 1, 2019 5143-5152

Wiomari, R.C., see Au, 11., 151 Oct. 1, 2017 5145-5152

Mondelli, M., see Hashemi, S.A., TSP Nov. 15, 2019 5689-5701

Monga, V., see Alhujaili, K., TSP July 1, 2019 3561-3575

Monich, U.J., see Boche, H., TSP May 15, 2019 2649-2664

Monich, U.J., see Boche, H., TSP Dec. 15, 2019 6424-6439

Monti, F., see Levie, R., TSP Jan. 1, 2019 97-109

Montorsi, F., see Vitetta, G.M., TSP March 15, 2019 1522-1536

Moser, B.A., and Lunglmayr, M., On Quasi-Isometry of Threshold-Based Sampling; TSP July 15, 2019 3832-3841

Motahari, S.A., see Tavassolipour, M., TSP Jan. 1, 2019 17-28

Moura, J.M.F., see Chen, Y., TSP Oct. 1, 2019 4918-4933

Murillo-Fuentes, J.J., see Santos, I., TSP March 1, 2019 1152-1162

Murillo-Fuentes, J.J., see Boloix-Tortosa, R., TSP Oct. 15, 2019 5213-5222

Murthy, C.R., see Joseph, G., TSP April 15, 2019 1992-2006

Murthy, C.R., see Khanna, S., TSP May 1, 2019 2387-2388

Murthy, H.A., see Sebastian, J., TSP June 1, 2019 2923-2936

Myers, N.J., Mezghani, A., and Heath, R.W., Swift-Link: A Compressive Beam Alignment Algorithm for Practical mmWave Radios; TSP Feb. 15, 2019 1104-1119

N

Naesseth, C.A., Lindsten, F., and Schon, T.B., High-Dimensional Filtering Using Nested Sequential Monte Carlo; *TSP Aug. 15*, 2019 4177-4188

Nagar, R., and Raman, S., Detecting Approximate Reflection Symmetry in a Point Set Using Optimization on Manifold; TSP March 15, 2019 1582-1595

Naghizadeh, P., see Dobakhshari, D.G., TSP Dec. 1, 2019 6092-6104

Naghsh, M.M., see Alaee-Kerahroodi, M., TSP July 1, 2019 3347-3360

Naghsh, M.M., Masjedi, M., Adibi, A., and Stoica, P., Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach; TSP Sept. 15, 2019 4707-4719

Narayanamurthy, P., Daneshpajooh, V., and Vaswani, N., Provable Subspace Tracking From Missing Data and Matrix Completion; TSP Aug. 15, 2019 4245-4260

Nayebi, M.M., see Tohidi, E., TSP Feb. 1, 2019 579-593

Needell, D., see Ma, A., TSP April 1, 2019 1875-1888

Nehorai, A., see Wang, M., TSP March 15, 2019 1493-1507

Neyshabouri, M.M., see Gokcesu, K., TSP Feb. 15, 2019 993-1005

Ng, D.W.K., see Xie, T., TSP Sept. 15, 2019 4730-4744

Nguyen, D.N., see Siyari, P., TSP Feb. 1, 2019 594-608

Nguyen, H.V., Rezatofighi, H., Vo, B., and Ranasinghe, D.C., Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects; TSP Oct. 15, 2019 5365-5379

Nguyen, L.D., Tuan, H.D., Duong, T.Q., and Poor, H.V., Multi-User Regularized Zero-Forcing Beamforming; TSP June 1, 2019 2839-2853

Nguyen, N.H., Dogancay, K., and Kuruoglu, E.E., An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise; TSP Sept. 15, 2019 4795-4808

Nguyen, T.N.A., Bouzerdoum, A., and Phung, S.L., A Scalable Hierarchical Gaussian Process Classifier; *TSP June 1, 2019 3042-3057*

Nguyen, T.T., Idier, J., Soussen, C., and Djermoune, E., Non-Negative Orthogonal Greedy Algorithms; TSP Nov. 1, 2019 5643-5658

Niedzwiecki, M., and Ciolek, M., On Noncausal Identification of Nonstationary Multivariate Autoregressive Processes; TSP Feb. 1, 2019 769-782

Niesen, U., and Unnikrishnan, J., Joint Beamforming and Association Design for MIMO Radar; TSP July 15, 2019 3663-3675

Nikadon, J., see Piotrowski, T., TSP Feb. 1, 2019 553-567

Nikolakopoulos, A.N., see Berberidis, D., TSP March 1, 2019 1307-1321

Nikolova, E., see Shafipour, R., TSP Feb. 15, 2019 946-960

Nitta, T., Kobayashi, M., and Mandic, D.P., Hypercomplex Widely Linear Estimation Through the Lens of Underpinning Geometry; TSP Aug. 1, 2019 3985-3994

Nitzan, E., Routtenberg, T., and Tabrikian, J., Cramér-Rao Bound for Constrained Parameter Estimation Using Lehmann-Unbiasedness; *TSP Feb. 1*, 2019 753-768

Niu, D., see Zhang, L., TSP May 1, 2019 2453-2468

Noam, Y., and Zaidel, B.M., On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction; *TSP May 15, 2019 2608-2623*

Noam, Y., see Schwartz, B., TSP March 1, 2019 1366-1381

Nolan, J.P., see Tzagkarakis, G., TSP Feb. 1, 2019 808-820

Nosal, E., see Young, J., TSP Feb. 15, 2019 885-898

0

Ogunfunmi, T., and Safarian, C., The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems; TSP Dec. 1, 2019 5909-5921

Ohmori, H., see Zuo, W., TSP Jan. 15, 2019 415-430

Ollila, E., and Raninen, E., Optimal Shrinkage Covariance Matrix Estimation Under Random Sampling From Elliptical Distributions; TSP May 15, 2019 2707-2719

Olofsson, T., see Eriksson, M., TSP Jan. 1, 2019 149-163

Olsson, J., see Alenlov, J., TSP Nov. 1, 2019 5571-5582

Oppenheim, A.V., see Martinez-Nuevo, P., TSP May 15, 2019 2516-2527

Orlando, D., see Liu, J., TSP March 1, 2019 1382-1392

Orlando, D., see Addabbo, P., TSP Dec. 15, 2019 6498-6510

Ortega, A., see Sakiyama, A., TSP March 15, 2019 1447-1460

Ortega, A., see Sakiyama, A., TSP May 15, 2019 2679-2692

Ortega, A., see Lu, K., TSP Sept. 15, 2019 4855-4869

Ortiz-Jimenez, G., Coutino, M., Chepuri, S.P., and Leus, G., Sparse Sampling for Inverse Problems With Tensors; TSP June 15, 2019 3272-3286

Osher, S., see Wu, Z., TSP July 15, 2019 3858-3869

Ottersten, B., see Yang, Y., TSP Aug. 1, 2019 4107-4121

Ou, Y., see Xu, S., TSP Oct. 1, 2019 5018-5031

Oudre, L., see Truong, C., TSP Dec. 15, 2019 6204-6214

Ovarlez, J., see Mian, A., TSP Jan. 15, 2019 520-534

Ozaktas, H.M., see Koc, A., TSP May 1, 2019 2237-2248

P

Pages-Zamora, A., see Gimenez-Febrer, P., TSP Oct. 1, 2019 5004-5017

Paisley, J., see Gultekin, S., TSP March 1, 2019 1223-1236

Pal, P., see Shen, Q., TSP July 1, 2019 3502-3515

Pal, P., see Qiao, H., TSP Nov. 15, 2019 5715-5729 **Pal, S.,** see Li, Y., TSP May 1, 2019 2499-2512

Palomar, D.P., see Zhao, Z., TSP April 1, 2019 1681-1695

Palomar, D.P., see Liu, J., TSP April 15, 2019 2159-2172

Palomar, D.P., see Zhao, L., TSP Aug. 15, 2019 4231-4244

Palomar, D.P., see Wu, L., TSP Sept. 15, 2019 4683-4695

Pan, X., see Wang, H., TSP Aug. 1, 2019 4043-4054

Pan, Y., see Duan, F., TSP Sept. 1, 2019 4611-4623

Panayirci, E., Altabbaa, M.T., Uysal, M., and Poor, H.V., Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm; TSP March 15, 2019 1550-1565

Pappas, G.J., see Eisen, M., TSP March 1, 2019 1123-1137

Parekh, A., see Yin, L., TSP May 15, 2019 2595-2607

Parolya, N., see Bodnar, T., TSP Sept. 1, 2019 4479-4493

Parvaresh, F., see Taghavi, I., TSP Jan. 1, 2019 136-148

Parvaresh, F., see Valiulahi, I., TSP July 1, 2019 3372-3382

Pascal, F., see Draskovic, G., TSP Oct. 1, 2019 4964-4975

Pastor, D., see Khanduri, P., TSP Aug. 1, 2019 4027-4042

Pastor, D., see Khanduri, P., TSP Nov. 1, 2019 5450-5462

Patel, A., see Chawla, A., TSP Aug. 1, 2019 4055-4068

Patel, V.M., see Wang, S., TSP Jan. 1, 2019 54-69

Pedarsani, R., see Lee, K., TSP Sept. 1, 2019 4649-4664

Pedarsani, R., see Reisizadeh, A., TSP Oct. 1, 2019 4934-4947

Pei, W., see Xia, Y., TSP Aug. 1, 2019 4093-4106

Perraudin, N., see Isufi, E., TSP Sept. 15, 2019 4870-4885

Pesavento, M., see Yang, Y., TSP Aug. 1, 2019 4107-4121

Pesquet, J., see Castella, M., TSP March 15, 2019 1407-1417

Petropulu, A., see Wang, S., TSP Jan. 1, 2019 54-69

Pfander, G.E., see Lee, D.G., TSP Feb. 15, 2019 961-976

Pfister, L., and Bresler, Y., Bounding Multivariate Trigonometric Polynomials; TSP Feb. 1, 2019 700-707

Pfister, L., and Bresler, Y., Learning Filter Bank Sparsifying Transforms; TSP Jan. 15, 2019 504-519

Phan, A., Tichavsky, P., and Cichocki, A., Error Preserving Correction: A Method for CP Decomposition at a Target Error Bound; TSP March 1, 2019 1175-1190

Phung, S.L., see Nguyen, T.N.A., TSP June 1, 2019 3042-3057

Picard, J.S., and Weiss, A.J., Direct Position Determination Sensitivity to NLOS Propagation Effects on Doppler-Shift; TSP July 15, 2019 3870-3881

Pinheiro, F.C., and Lopes, C.G., A Low-Complexity Nonlinear Least Mean Squares Filter Based on a Decomposable Volterra Model; TSP Nov. 1, 2019 5463-5478

Pinilla, S., Bendory, T., Eldar, Y.C., and Arguello, H., Frequency-Resolved Optical Gating Recovery via Smoothing Gradient; TSP Dec. 1, 2019 6121-6132

Piotrowski, T., Nikadon, J., and Gutierrez, D., MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction; TSP Feb. 1, 2019 553-567

Pitruzzello, A.M., see Ruble, M., TSP July 15, 2019 3719-3731

Plan, Y., see Ghadermarzy, N., TSP Jan. 1, 2019 29-40

Plumbley, M.D., see Rencker, L., TSP Nov. 1, 2019 5659-5670

Poddar, S., see Zou, Q., TSP Dec. 15, 2019 6455-6467

Poddar, S., and Jacob, M., Clustering of Data With Missing Entries Using Non-Convex Fusion Penalties; TSP Nov. 15, 2019 5865-5880

Pohl, V., see Lee, D.G., TSP Feb. 15, 2019 961-976

Pojani, G., see Abdoush, Y., TSP June 15, 2019 3100-3112

Polyanskii, N., see D'yachkov, A., TSP Nov. 15, 2019 5775-5784

Poor, H.V., see Panayirci, E., TSP March 15, 2019 1550-1565

Poor, H.V., see Nguyen, L.D., TSP June 1, 2019 2839-2853

Poor, H.V., see Boche, H., TSP Sept. 1, 2019 4636-4648

Poor, H.V., see Dytso, A., TSP Dec. 15, 2019 6352-6367

Prusa, Z., see Holighaus, N., TSP Aug. 1, 2019 3894-3908

Prvulovic, M., see Ruble, M., TSP July 15, 2019 3719-3731

0

Qi, C., see Kong, L., TSP July 15, 2019 3842-3857

Qi, H., see Kong, L., TSP July 15, 2019 3842-3857

Qi, Y., see Chen, J., TSP Oct. 15, 2019 5380-5390

Qian, L., see You, P., TSP Oct. 15, 2019 5433-5446

Qiao, H., and Pal, P., Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays; TSP Nov. 15, 2019 5715-5729

Qin, G., Amin, M.G., and Zhang, Y.D., DOA Estimation Exploiting Sparse Array Motions; TSP June 1, 2019 3013-3027

Quan, C., see Wang, X., TSP Sept. 15, 2019 4886-4898

Quevedo, D.E., see Guo, Z., TSP Jan. 1, 2019 194-207

R

Raghavan, R.S., False Alarm Analysis of the AMF Algorithm for Mismatched Training; *TSP Jan. 1, 2019 83-96*

Raghavan, R.S., A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix; *TSP Sept. 1, 2019 4624-4635*

Raghavan, R.S., Corrections to "A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix" [Sep 19 4624-4635]; TSP Nov. 1, 2019 5611

Rajabzadeh, M., see Towliat, M., TSP Feb. 1, 2019 798-807

Rajawat, K., see Bedi, A.S., TSP April 1, 2019 1742-1757

Rajawat, K., see Dixit, R., TSP March 1, 2019 1338-1352

Rajoriya, A., see Srivastava, S., TSP March 1, 2019 1251-1266

Ramakrishna, R., Scaglione, A., Vittal, V., Dall'Anese, E., and Bernstein, A., A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature; TSP Dec. 15, 2019 6368-6383

Raman, R.K., see Seo, D., TSP Oct. 1, 2019 5103-5117

Raman, S., see Nagar, R., TSP March 15, 2019 1582-1595

Ramchandran, K., see Lee, K., TSP Sept. 1, 2019 4649-4664

Ramirez, D., see Garg, V., TSP June 1, 2019 3028-3041

Ramos, L.M.L., see Teganya, Y., TSP Aug. 1, 2019 4013-4026

Ranasinghe, D.C., see Nguyen, H.V., TSP Oct. 15, 2019 5365-5379

Rangan, S., see Sarkar, S., TSP July 1, 2019 3383-3396

Rangaswamy, M., see Fortunati, S., TSP Jan. 1, 2019 164-177

Rangaswamy, M., see Alhujaili, K., TSP July 1, 2019 3561-3575

Rangaswamy, M., see Fortunati, S., TSP Oct. 15, 2019 5352-5364

Rangaswamy, M., see Krishnamurthy, V., TSP Dec. 15, 2019 6511-6525

Ranieri, J., see Baechler, G., TSP Sept. 15, 2019 4839-4854

Raninen, E., see Ollila, E., TSP May 15, 2019 2707-2719

Ranjan, S., and Vidyasagar, M., Tight Performance Bounds for Compressed Sensing With Conventional and Group Sparsity; TSP June 1, 2019 2854-2867

Rao, B.D., see Liu, J., TSP Jan. 15, 2019 535-549

Rao, B.D., see Ho, D.K.W., TSP May 1, 2019 2291-2303

Rao, B.D., see Liu, J., TSP Nov. 15, 2019 5837-5849

Rapp, J., Dawson, R.M.A., and Goyal, V.K., Estimation From Quantized Gaussian Measurements: When and How to Use Dither; TSP July 1, 2019 3424-3438

Rapp, J., Ma, Y., Dawson, R.M.A., and Goyal, V.K., Dead Time Compensation for High-Flux Ranging; TSP July 1, 2019 3471-3486

Raza, A., Liu, W., and Shen, Q., Thinned Coprime Array for Second-Order Difference Co-Array Generation With Reduced Mutual Coupling; TSP April 15, 2019 2052-2065

Rehman, N.u., and Aftab, H., Multivariate Variational Mode Decomposition; *TSP Dec.* 1, 2019 6039-6052

Reisizadeh, A., Mokhtari, A., Hassani, H., and Pedarsani, R., An Exact Quantized Decentralized Gradient Descent Algorithm; TSP Oct. 1, 2019 4934-4947

Ren, J., Zhang, T., Li, J., and Stoica, P., Sinusoidal Parameter Estimation From Signed Measurements Via Majorization–Minimization Based RELAX; TSP April 15, 2019 2173-2186

Ren, M., see Cheng, L., TSP Nov. 15, 2019 5798-5810

Renaux, A., see Bacharach, L., TSP March 1, 2019 1267-1279

Rencker, L., Bach, F., Wang, W., and Plumbley, M.D., Sparse Recovery and Dictionary Learning From Nonlinear Compressive Measurements; *TSP Nov.* 1, 2019 5659-5670

Renfors, M., see Loulou, A., TSP May 1, 2019 2304-2319

Rezatofighi, H., see Nguyen, H.V., TSP Oct. 15, 2019 5365-5379

Rhim, J.B., see Seo, D., TSP Oct. 1, 2019 5103-5117

Ribeiro, A., see Gama, F., TSP Feb. 15, 2019 1034-1049

Ribeiro, A., see Eisen, M., TSP May 15, 2019 2775-2790

Ribeiro, A., see Gama, F., TSP May 15, 2019 2761-2774

Ribeiro, A., see Eisen, M., TSP March 1, 2019 1123-1137

Ribeiro, A., see Gama, F., TSP Dec. 15, 2019 6440-6454

Ribeiro, A., see Eisen, M., TSP Dec. 1, 2019 5983-5997 **Ricci, G.,** see Carlino, L., TSP July 1, 2019 3412-3423

Ricci, G., see Coluccia, A., TSP Oct. 1, 2019 5118-5129

Ricci, G., see Addabbo, P., TSP Dec. 15, 2019 6498-6510

Roberts, S., see Zhang, Z., TSP June 1, 2019 3001-3012

Rodrigues, M.R.D., see Shlezinger, N., TSP Aug. 1, 2019 3995-4012

Rodrigues, M.R.D., see Shlezinger, N., TSP Oct. 15, 2019 5223-5238

Romano, Y., see Simon, D., TSP Sept. 1, 2019 4597-4610

Romero, D., see Teganya, Y., TSP Aug. 1, 2019 4013-4026

Rong, Y., see Su, Q., TSP Feb. 15, 2019 930-945

Rong, Y., see Tang, M., TSP Jan. 15, 2019 279-292

Rong, Y., see Tang, M., TSP Nov. 1, 2019 5671-5685

Ronnow, D., and Handel, P., Nonlinear Distortion Noise and Linear Attenuation in MIMO Systems—Theory and Application to Multiband Transmitters; TSP Oct. 15, 2019 5203-5212

Rontogiannis, A.A., see Giampouras, P.V., TSP Jan. 15, 2019 490-503

Roonizi, A.K., A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design; *TSP Sept. 1*, 2019 4535-4544

Rosenberg, L., see Zuk, J., TSP April 15, 2019 2221-2233

Rottenberg, F., Mestre, X., Horlin, F., and Louveaux, J., Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems; TSP Nov. 1, 2019 5583-5595

Routtenberg, T., see Nitzan, E., TSP Feb. 1, 2019 753-768

Routtenberg, T., see Grotas, S., TSP April 15, 2019 2036-2051

Roux, S.G., see Granero-Belinchon, C., TSP July 15, 2019 3796-3805

Ruan, H., and de Lamare, R.C., Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis; TSP Dec. 15, 2019 6411-6423

Ruble, M., Hayes, C.E., Welborn, M., Zajic, A., Prvulovic, M., and Pitruzzello, A.M., Hyperdimensional Bayesian Time Mapping (HyperBaT): A Probabilistic Approach to Time Series Mapping of Non-Identical Sequences; TSP July 15, 2019 3719-3731

Rush, C., see Ma, A., TSP April 1, 2019 1875-1888

S

Sabahi, M.F., see Taghavi, I., TSP Jan. 1, 2019 136-148

Sabeti, P., Farhang, A., Marchetti, N., and Doyle, L., Frequency Synchronization for OFDM-Based Massive MIMO Systems; TSP June 1, 2019 2973-2986

Sadeghi, B., Yu, R., and Boddeti, V.N., Constrained Sampling: Optimum Reconstruction in Subspace With Minimax Regret Constraint; TSP Aug. 15, 2019 4218-4230

Sadler, B.M., see Chen, Y., TSP Oct. 15, 2019 5391-5401

Sadri, A., see Gupta, A., TSP Dec. 15, 2019 6483-6497

Safarian, C., see Ogunfunmi, T., TSP Dec. 1, 2019 5909-5921

Sakiyama, A., Watanabe, K., Tanaka, Y., and Ortega, A., Two-Channel Critically Sampled Graph Filter Banks With Spectral Domain Sampling; TSP March 15, 2019 1447-1460

Sakiyama, A., Tanaka, Y., Tanaka, T., and Ortega, A., Eigendecomposition-Free Sampling Set Selection for Graph Signals; *TSP May 15*, 2019 2679-2692

Samuel, N., Diskin, T., and Wiesel, A., Learning to Detect; *TSP May 15*, 2019 2554-2564

Sandbichler, M., and Schnass, K., Online and Stable Learning of Analysis Operators; TSP Jan. 1, 2019 41-53

Sano, A., see Zuo, W., TSP Jan. 15, 2019 415-430

Santamaria, I., see Garg, V., TSP June 1, 2019 3028-3041

Santamaria, I., see Lameiro, C., TSP Dec. 15, 2019 6241-6255

Santos, I., Murillo-Fuentes, J.J., and Djuric, P.M., Recursive Estimation of Dynamic RSS Fields Based on Crowdsourcing and Gaussian Processes; TSP March 1, 2019 1152-1162

Sardellitti, S., Barbarossa, S., and Lorenzo, P.D., Graph Topology Inference Based on Sparsifying Transform Learning; TSP April 1, 2019 1712-1727

Sari, H., see Maatouk, A., TSP Feb. 15, 2019 1006-1021

Saritas, S., Gezici, S., and Yuksel, S., Hypothesis Testing Under Subjective Priors and Costs as a Signaling Game; TSP Oct. 1, 2019 5169-5183

Sarkar, S., Fletcher, A.K., Rangan, S., and Schniter, P., Bilinear Recovery Using Adaptive Vector-AMP; TSP July 1, 2019 3383-3396

Sarkka, S., see Garcia-Fernandez, A.F., TSP June 1, 2019 2960-2972

Sarkka, S., see Gao, R., TSP Oct. 1, 2019 5078-5092

Saucan, A., see Sharma, P., TSP Nov. 15, 2019 5896-5911

Saulig, N., Lerga, J., Milanovic, Z., and Ioana, C., Extraction of Useful Information Content From Noisy Signals Based on Structural Affinity of Clustered TFDs' Coefficients; TSP June 15, 2019 3154-3167

Sayed, A.H., see Yuan, K., TSP Feb. 1, 2019 724-739

Sayed, A.H., see Yuan, K., TSP Feb. 1, 2019 708-723

Sayed, A.H., see Ying, B., TSP Feb. 15, 2019 977-992

Sayed, A.H., see Yuan, K., TSP Jan. 15, 2019 351-366

Sayed, A.H., see Ying, B., TSP Jan. 15, 2019 474-489

Sayeed, A.M., see Gao, X., TSP Sept. 15, 2019 4809-4824

Scaglione, A., see Wai, H., TSP Sept. 1, 2019 4582-4596

Scaglione, A., see Ramakrishna, R., TSP Dec. 15, 2019 6368-6383

Schaefer, R.F., see Boche, H., TSP Sept. 1, 2019 4636-4648

Scharf, L.L., see Garg, V., TSP June 1, 2019 3028-3041

Schlecht, S.J., and Habets, E.A.P., Modal Decomposition of Feedback Delay Networks; TSP Oct. 15, 2019 5340-5351

Schmid, W., see Bodnar, T., TSP Sept. 1, 2019 4479-4493

Schnass, K., see Sandbichler, M., TSP Jan. 1, 2019 41-53

Schnier, T., Bockelmann, C., and Dekorsy, A., Modeling the Active Neuron Separation in the Compressed Sensing and Finite Rate of Innovation Framework; TSP Sept. 1, 2019 4521-4534

Schniter, P., see Sun, P., TSP Feb. 15, 2019 899-914

Schniter, P., see Sarkar, S., TSP July 1, 2019 3383-3396

Schniter, P., and Byrne, E., Adaptive Detection of Structured Signals in Low-Rank Interference; TSP July 1, 2019 3439-3454

Schniter, P., see Byrne, E., TSP Sept. 1, 2019 4556-4569

Schon, T.B., see Naesseth, C.A., TSP Aug. 15, 2019 4177-4188

Schreier, P.J., see Lameiro, C., TSP Dec. 15, 2019 6241-6255

Schwartz, B., Gannot, S., Habets, E.A.P., and Noam, Y., Recursive Maximum Likelihood Algorithm for Dependent Observations; *TSP March 1, 2019* 1366-1381

Sebastian, J., Kumar, M.G., Viraraghavan, V.S., Sur, M., and Murthy, H.A., Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay; TSP June 1, 2019 2923-2936

Seghouane, A., and Ferrari, D., Robust Hemodynamic Response Function Estimation From fNIRS Signals; TSP April 1, 2019 1838-1848

Selesnick, I., see Yin, L., TSP May 15, 2019 2595-2607

Seo, D., Raman, R.K., Rhim, J.B., Goyal, V.K., and Varshney, L.R., Beliefs in Decision-Making Cascades; *TSP Oct. 1, 2019 5103-5117*

Sevuktekin, N.C., and Singer, A.C., Representation and Reconstruction of Finite-Energy Band-Limited Signals via Pulse-Width Modulation; *TSP Oct.* 1, 2019 5153-5168

Sezgin, A., see Vogt, H., TSP June 1, 2019 2810-2825

Shafipour, R., Khodabakhsh, A., Mateos, G., and Nikolova, E., A Directed Graph Fourier Transform With Spread Frequency Components; TSP Feb. 15, 2019 946-960

Shah-Mansouri, V., see Majzoobi, L., TSP April 1, 2019 1774-1784

Shalmani, M.M., see Tavassolipour, M., TSP Jan. 1, 2019 17-28

Shao, M., Li, Q., Ma, W., and So, A.M., A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels; TSP Oct. 15, 2019 5309-5324

Shapiro, A., Xie, Y., and Zhang, R., Matrix Completion With Deterministic Pattern: A Geometric Perspective; TSP Feb. 15, 2019 1088-1103

Sharma, P., Saucan, A., Bucci, D.J., and Varshney, P.K., Decentralized Gaussian Filters for Cooperative Self-Localization and Multi-Target Tracking; TSP Nov. 15, 2019 5896-5911

Sharma, V., see Khanduri, P., TSP Aug. 1, 2019 4027-4042

Sharma, V., see Khanduri, P., TSP Nov. 1, 2019 5450-5462

Shchukin, V., see D'yachkov, A., TSP Nov. 15, 2019 5775-5784

Shen, C., Universal Best Arm Identification; TSP Sept. 1, 2019 4464-4478

Shen, Q., Liu, W., Cui, W., Wu, S., and Pal, P., Simplified and Enhanced Multiple Level Nested Arrays Exploiting High-Order Difference Co-Arrays; TSP July 1, 2019 3502-3515

Shen, Q., see Raza, A., TSP April 15, 2019 2052-2065

Shen, W., Dai, L., An, J., Fan, P., and Heath, R.W., Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO; TSP Aug. 15, 2019 4204-4217 Shen, W., Bu, X., Gao, X., Xing, C., and Hanzo, L., Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays; *TSP Dec.* 15, 2019 6301-6313

Shen, X., see Yang, C., TSP Oct. 1, 2019 5046-5061

Shen, X., see Jia, T., TSP Nov. 15, 2019 5881-5895

Shen, Y., see Wang, Y., TSP Feb. 1, 2019 783-797

Shen, Y., see Cai, Y., TSP April 1, 2019 1941-1956

Shen, Y., see Ioannidis, V.N., TSP May 1, 2019 2263-2274

Shen, Y., Leus, G., and Giannakis, G.B., Online Graph-Adaptive Learning With Scalability and Privacy; TSP May 1, 2019 2471-2483

Shen, Y., Giannakis, G.B., and Baingana, B., Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks; TSP Oct. 15, 2019 5325-5339

Shi, D., see Guo, Z., TSP Jan. 1, 2019 194-207

Shi, L., see Guo, Z., TSP Jan. 1, 2019 194-207

Shi, Q., see Wang, Y., TSP Jan. 15, 2019 399-414

Shi, Q., see Zhang, L., TSP May 1, 2019 2453-2468

Shi, S., see Cheng, Z., TSP Dec. 15, 2019 6227-6240

Shi, W., see Li, Z., TSP Sept. 1, 2019 4494-4506

Shi, Y., see Yang, K., TSP June 15, 2019 3087-3099

Shim, B., see Kim, J., TSP Sept. 1, 2019 4449-4463

Shlezinger, N., Eldar, Y.C., and Rodrigues, M.R.D., Asymptotic Task-Based Quantization With Application to Massive MIMO; TSP Aug. 1, 2019 3995-4012

Shlezinger, N., Eldar, Y.C., and Rodrigues, M.R.D., Hardware-Limited Task-Based Quantization; *TSP Oct. 15*, 2019 5223-5238

Shu, F., see Zhou, X., TSP Aug. 15, 2019 4276-4290

Shuman, D.I., see Li, S., TSP Aug. 1, 2019 3954-3969

Sidiropoulos, N.D., see Kanatsoulis, C.I., TSP Jan. 15, 2019 306-319

Simoes, A., and Xavier, J., FADE: Fast and Asymptotically Efficient Distributed Estimator for Dynamic Networks; *TSP April* 15, 2019 2080-2092

Simon, D., Sulam, J., Romano, Y., Lu, Y.M., and Elad, M., MMSE Approximation For Sparse Coding Algorithms Using Stochastic Resonance; TSP Sept. 1, 2019 4597-4610

Simonetto, A., see Bernstein, A., TSP April 15, 2019 1978-1991

Singer, A.C., see Sevuktekin, N.C., TSP Oct. 1, 2019 5153-5168

Singh, P., Mishra, H.B., Jagannatham, A.K., and Vasudevan, K., Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems; TSP Sept. 15, 2019 4668-4682

Sirignano, E., see Vitetta, G.M., TSP March 15, 2019 1522-1536

Sirignano, E., see Di Viesti, P., TSP Nov. 1, 2019 5495-5510

Siyari, P., Krunz, M., and Nguyen, D.N., Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers; TSP Feb. 1, 2019 594-608

Slavakis, K., The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS; TSP June 1, 2019 2868-2883

Smith, J.O., see Liski, J., TSP July 15, 2019 3785-3795

Smith, K., Spyrou, L., and Escudero, J., Graph-Variate Signal Analysis; TSP Jan. 15, 2019 293-305

Snoussi, H., see Zhou, Y., TSP July 15, 2019 3676-3688

So, A.M., see Shao, M., TSP Oct. 15, 2019 5309-5324

So, H.C., see Dai, J., TSP Feb. 15, 2019 1075-1087

So, H.C., see Fan, W., TSP July 1, 2019 3397-3411

So, H.C., see Zhang, S., TSP July 1, 2019 3592-3605

So, H.C., see Yang, C., TSP Oct. 1, 2019 5046-5061

Soh, Y.C., see Jiang, C., TSP May 1, 2019 2249-2262

Sohrabi, R., Zhu, Q., and Hua, Y., Secrecy Analyses of a Full-Duplex MIMOME Network; TSP Dec. 1, 2019 5968-5982

Sola, M., see Vitetta, G.M., TSP March 15, 2019 1522-1536

Soldi, G., Meyer, F., Braca, P., and Hlawatsch, F., Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation; TSP Aug. 1, 2019 3922-3937

Soltanalian, M., see Maleki, M., TSP March 1, 2019 1237-1250

Soltanalian, M., see Ameri, A., TSP Oct. 15, 2019 5297-5308

Soltanalian, M., see Lin, R., TSP Dec. 15, 2019 6397-6410

Soltani, M., and Hegde, C., Fast and Provable Algorithms for Learning Two-Layer Polynomial Neural Networks; *TSP July 1, 2019 3361-3371* Song, E., see Zhang, L., TSP May 1, 2019 2453-2468

Song, N., see Chen, W., TSP Nov. 15, 2019 5785-5797

Sornmo, L., see Behjat, H., TSP Aug. 1, 2019 3909-3921

Soussen, C., see Nguyen, T.T., TSP Nov. 1, 2019 5643-5658

Spicher, N., see Kukuk, M., TSP March 15, 2019 1431-1446

Spyrou, L., see Smith, K., TSP Jan. 15, 2019 293-305

Srivastava, S., Mishra, A., Rajoriya, A., Jagannatham, A.K., and Ascheid, G., Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches; TSP March 1, 2019 1251-1266

Stanczak, S., see Cavalcante, R.L.G., TSP May 15, 2019 2747-2760

Stoica, P., see Yang, Z., TSP May 15, 2019 2543-2553

Stoica, P., see Ren, J., TSP April 15, 2019 2173-2186

Stoica, P., see Naghsh, M.M., TSP Sept. 15, 2019 4707-4719

Straka, O., see Dunik, J., TSP Dec. 1, 2019 6053-6066

Studer, C., see Jeon, C., TSP Sept. 1, 2019 4418-4432

Su, D., Jiang, Y., Wang, X., and Gao, X., Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part I: Complementary Codes-Based Schemes; TSP Sept. 15, 2019 4761-4771

Su, D., Jiang, Y., Wang, X., and Gao, X., Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes; TSP Sept. 15, 2019 4772-4781

Su, H., see Zhou, Y., TSP July 15, 2019 3676-3688

Su, Q., and Rong, Y., Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node; TSP Feb. 15, 2019 930-945

Su, Q., see Li, B., TSP Dec. 1, 2019 6025-6038

Su, R., see Jiang, C., TSP May 1, 2019 2249-2262

Sulam, J., see Simon, D., TSP Sept. 1, 2019 4597-4610

Sun, H., and Hong, M., Distributed Non-Convex First-Order Optimization and Information Processing: Lower Complexity Bounds and Rate Optimal Algorithms; TSP Nov. 15, 2019 5912-5928

Sun, J., see Zhou, X., TSP Aug. 15, 2019 4276-4290

Sun, P., Wang, Z., Heather, R.W., and Schniter, P., Joint Channel-Estimation/ Decoding With Frequency-Selective Channels and Few-Bit ADCs; TSP Feb. 15, 2019 899-914

Sun, Q., see Jiang, J., TSP Aug. 1, 2019 3938-3953

Sun, S., see Huang, C., TSP Jan. 1, 2019 245-259

Sun, S., see Liu, J., TSP July 15, 2019 3639-3648

Sun, W., Chen, Y., Yang, C., and Ueng, Y., Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems; TSP March 15, 2019 1636-1647

Sun, Y., Ho, K.C., and Wan, Q., Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form; TSP Jan. 15, 2019 320-335

Sun, Z., see Li, X., TSP April 1, 2019 1902-1917

Suo, J., see Zhou, Y., TSP July 15, 2019 3676-3688

Sur, M., see Sebastian, J., TSP June 1, 2019 2923-2936

Svensson, L., see Garcia-Fernandez, A.F., TSP Nov. 15, 2019 5702-5714

Swindlehurst, A.L., see Khayambashi, M., TSP Feb. 15, 2019 854-869

T

Tabatabaee, S.M.J.A., see Towliat, M., TSP Feb. 1, 2019 798-807

Tabrikian, J., see Nitzan, E., TSP Feb. 1, 2019 753-768

Taghavi, I., Sabahi, M.F., and Parvaresh, F., High Resolution Compressed Sensing Radar Using Difference Set Codes; TSP Jan. 1, 2019 136-148

Tajer, A., see Heydari, J., TSP Feb. 1, 2019 638-651

Takabe, S., see Ito, D., TSP June 15, 2019 3113-3125

Talmon, R., see Yair, O., TSP April 1, 2019 1797-1811

Tanaka, T., see Sakiyama, A., TSP May 15, 2019 2679-2692

Tanaka, Y., see Sakiyama, A., TSP March 15, 2019 1447-1460

Tanaka, Y., see Sakiyama, A., TSP May 15, 2019 2679-2692

Tang, B., and Li, J., Spectrally Constrained MIMO Radar Waveform Design Based on Mutual Information; TSP Feb. 1, 2019 821-834

Tang, B., see Liu, J., TSP Feb. 15, 2019 1022-1033

Tang, B., see Lin, R., TSP Dec. 15, 2019 6397-6410

Tang, G., see Xie, Y., TSP Oct. 1, 2019 5184-5199

Tang, J., see Yang, Z., TSP May 15, 2019 2543-2553

Tang, M., Rong, Y., Zhou, J., and Li, X.R., Information Geometric Approach to Multisensor Estimation Fusion; TSP Jan. 15, 2019 279-292

Tang, M., Rong, Y., De Maio, A., Chen, C., and Zhou, J., Adaptive Radar Detection in Gaussian Disturbance With Structured Covariance Matrix via Invariance Theory; TSP Nov. 1, 2019 5671-5685

Tang, S., Craigmile, P.F., and Zhu, Y., Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty; *TSP Oct. 1, 2019 4992-5003*

Tang, W., see Ji, F., TSP May 15, 2019 2624-2638

Tang, W., and Feng, S., User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks; TSP May 1, 2019 2426-2438

Tang, X., Li, M., Tharmarasa, R., and Kirubarajan, T., Seamless Tracking of Apparent Point and Extended Targets Using Gaussian Process PMHT; TSP Sept. 15, 2019 4825-4838

Tang, Y.Y., see Zheng, X., TSP April 1, 2019 1696-1711

Tao, R., see Miao, H., TSP June 15, 2019 3181-3196

Tao, R., see Miao, H., TSP Nov. 1, 2019 5543-5557

Tao, S., see Xia, Y., TSP Aug. 1, 2019 4093-4106

Tarokh, V., see Xiang, Y., TSP March 1, 2019 1353-1365

Tavassolipour, M., Motahari, S.A., and Shalmani, M.M., Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints; TSP Jan. 1, 2019 17-28

Tay, W.P., see Lau, T.S., TSP Feb. 1, 2019 609-621

Tay, W.P., see Ji, F., TSP May 15, 2019 2624-2638

Tay, W.P., see Lau, T.S., TSP Oct. 15, 2019 5281-5296

Tay, W.P., see Ji, F., TSP Dec. 15, 2019 6188-6203

Teganya, Y., Romero, D., Ramos, L.M.L., and Beferull-Lozano, B., Location-Free Spectrum Cartography; TSP Aug. 1, 2019 4013-4026

Teke, O., and Vaidyanathan, P.P., Random Node-Asynchronous Updates on Graphs; TSP June 1, 2019 2794-2809

Tenneti, S.V., and Vaidyanathan, P.P., iMUSIC: A Family of MUSIC-Like Algorithms for Integer Period Estimation; *TSP Jan. 15, 2019 367-382*

Tharmarasa, R., see Tang, X., TSP Sept. 15, 2019 4825-4838

Theagarajan, L.N., see Zhang, S., TSP April 15, 2019 2066-2079

Theagarajan, L.N., see Khanduri, P., TSP Aug. 1, 2019 4122-4135

Tian, Z., see Liu, Y., TSP May 15, 2019 2565-2579

Tichavsky, P., see Koldovsky, Z., TSP Feb. 15, 2019 1050-1064

Tichavsky, P., see Phan, A., TSP March 1, 2019 1175-1190

Tohidi, E., Coutino, M., Chepuri, S.P., Behroozi, H., Nayebi, M.M., and Leus, G., Sparse Antenna and Pulse Placement for Colocated MIMO Radar; TSP Feb. 1, 2019 579-593

Took, C.C., see Mandic, D., TSP April 1, 2019 1959

Touchette, H., see Leonarduzzi, R., TSP Jan. 1, 2019 110-119

Tourneret, J., see Bacharach, L., TSP March 1, 2019 1267-1279

Towliat, M., Tabatabaee, S.M.J.A., and Rajabzadeh, M., A Simple ML Detection for Coded Generalized Frequency Division Multiplexing in MIMO Channels; *TSP Feb. 1*, 2019 798-807

Tran, T.D., see Huang, S., TSP March 1, 2019 1322-1337

Tripathi, R., see Dixit, R., TSP March 1, 2019 1338-1352

Tronarp, F., see Garcia-Fernandez, A.F., TSP June 1, 2019 2960-2972

Tronarp, F., see Gao, R., TSP Oct. 1, 2019 5078-5092

Truong, C., Oudre, L., and Vayatis, N., Greedy Kernel Change-Point Detection; TSP Dec. 15, 2019 6204-6214

Truong, T., see Wen, F., TSP Oct. 15, 2019 5402-5416

Tsaftaris, S.A., see Boloix-Tortosa, R., TSP Oct. 15, 2019 5213-5222

Tsakalides, P., see Tzagkarakis, G., TSP Feb. 1, 2019 808-820

Tsao, H., see Chen, C., TSP March 15, 2019 1477-1492

Tuan, H.D., see Nguyen, L.D., TSP June 1, 2019 2839-2853

Tugnait, J.K., On Multisensor Detection of Improper Signals; TSP Feb. 15, 2019 870-884

Tugnait, J.K., Edge Exclusion Tests for Improper Complex Gaussian Graphical Model Selection; *TSP July 1, 2019 3547-3560*

Tugnait, J.K., Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series; TSP Oct. 1, 2019 5062-5077

Tzagkarakis, G., Nolan, J.P., and Tsakalides, P., Compressive Sensing Using Symmetric Alpha-Stable Distributions for Robust Sparse Signal Reconstruction; *TSP Feb. 1, 2019 808-820*

U

Ueng, Y., see Sun, W., TSP March 15, 2019 1636-1647

Unnikrishnan, J., see Niesen, U., TSP July 15, 2019 3663-3675

Unser, M., see Debarre, T., TSP Nov. 15, 2019 5824-5836

Ushio, A., and Yukawa, M., Projection-Based Regularized Dual Averaging for Stochastic Optimization; TSP May 15, 2019 2720-2733

Utschick, W., see Lameiro, C., TSP Dec. 15, 2019 6241-6255

Uysal, M., see Panayirci, E., TSP March 15, 2019 1550-1565

V

Vaidyanathan, P.P., see Tenneti, S.V., TSP Jan. 15, 2019 367-382

Vaidyanathan, P.P., see Liu, C., TSP June 15, 2019 3227-3242

Vaidyanathan, P.P., see Liu, C., TSP June 15, 2019 3213-3226

Vaidyanathan, P.P., see Teke, O., TSP June 1, 2019 2794-2809

Valimaki, V., see Liski, J., TSP July 15, 2019 3785-3795

Valiulahi, I., Daei, S., Haddadi, F., and Parvaresh, F., Two-Dimensional Super-Resolution via Convex Relaxation; TSP July 1, 2019 3372-3382

Valiulahi, I., Haddadi, F., and Amini, A., Robustness of Two-Dimensional Line Spectral Estimation Against Spiky Noise; TSP Dec. 1, 2019 5998-6008

Van De Ville, D., see Behjat, H., TSP Aug. 1, 2019 3909-3921

van der Hoek, J., see Badriasl, L., TSP July 1, 2019 3576-3591

Varshney, L.R., see Seo, D., TSP Oct. 1, 2019 5103-5117

Varshney, P.K., see Wang, T., TSP April 15, 2019 2093-2106

Varshney, P.K., see Wang, X., TSP April 15, 2019 2210-2220

Varshney, P.K., see Zhang, S., TSP April 15, 2019 2066-2079

Varshney, P.K., see Khanduri, P., TSP Aug. 1, 2019 4122-4135

Varshney, P.K., see Khanduri, P., TSP Aug. 1, 2019 4027-4042

Varshney, P.K., see Chawla, A., TSP Aug. 1, 2019 4055-4068

Varshney, P.K., see Wang, X., TSP Sept. 15, 2019 4886-4898 Varshney, P.K., see Li, C., TSP Sept. 15, 2019 4696-4706

Varshney, P.K., see Khanduri, P., TSP Nov. 1, 2019 5450-5462

Varshney, P.K., see Sharma, P., TSP Nov. 15, 2019 5896-5911

Vasudevan, K., see Singh, P., TSP Sept. 15, 2019 4668-4682

Vaswani, N., see Narayanamurthy, P., TSP Aug. 15, 2019 4245-4260

Vayatis, N., see Truong, C., TSP Dec. 15, 2019 6204-6214

Vazquez, E., see Emambakhsh, M., TSP Sept. 1, 2019 4545-4555

Veeravalli, V.V., see Lau, T.S., TSP Feb. 1, 2019 609-621

Veeravalli, V.V., see Bu, Y., TSP April 15, 2019 2115-2128

Verdu-Monedero, R., and Gomez-Tornero, J., On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays; *TSP May 1, 2019 2275-2290*

Vetterli, M., see Baechler, G., TSP Sept. 15, 2019 4839-4854

Vidyasagar, M., see Ranjan, S., TSP June 1, 2019 2854-2867

Vikalo, H., see Barik, S., TSP Sept. 15, 2019 4782-4794

Viraraghavan, V.S., see Sebastian, J., TSP June 1, 2019 2923-2936

Vitetta, G.M., Sirignano, E., Di Viesti, P., Montorsi, F., and Sola, M., Marginalized Particle Filtering and Related Filtering Techniques as Message Passing; TSP March 15, 2019 1522-1536

Vitetta, G.M., see Di Viesti, P., TSP Nov. 1, 2019 5495-5510

Vittal, V., see Ramakrishna, R., TSP Dec. 15, 2019 6368-6383

Vlaski, S., see Ying, B., TSP Jan. 15, 2019 474-489

Vo, B., A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation; TSP Oct. 1, 2019 4948-4963

Vo, B., see Vo, B., TSP Oct. 1, 2019 4948-4963

Vo, B., see Nguyen, H.V., TSP Oct. 15, 2019 5365-5379

Vo, B., and Beard, M., Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter; TSP Dec. 1, 2019 5952-5967

Vo, B., see Vo, B., TSP Dec. 1, 2019 5952-5967

Vogt, H., Enzner, G., and Sezgin, A., State-Space Adaptive Nonlinear Self-Interference Cancellation for Full-Duplex Communication; TSP June 1, 2019 2810-2825

Vono, M., Dobigeon, N., and Chainais, P., Split-and-Augmented Gibbs Sampler—Application to Large-Scale Inference Problems; TSP March 15, 2019 1648-1661

Vorobyev, I., see D'yachkov, A., TSP Nov. 15, 2019 5775-5784

Vorobyov, S.A., see Huang, Y., TSP July 15, 2019 3624-3638

Vorobyov, S.A., see Florea, M.I., TSP Jan. 15, 2019 444-459

Vucetic, B., see Zhang, R., TSP Sept. 15, 2019 4899-4914

Vural, N.M., Gokcesu, H., Gokcesu, K., and Kozat, S.S., Minimax Optimal Algorithms for Adversarial Bandit Problem With Multiple Plays; TSP Aug. 15, 2019 4383-4398

W

Wadayama, T., see Ito, D., TSP June 15, 2019 3113-3125

Wai, H., Scaglione, A., Barzel, B., and Leshem, A., Joint Network Topology and Dynamics Recovery From Perturbed Stationary Points; TSP Sept. 1, 2019 4582-4596

Wakin, M.B., see Xie, Y., TSP Oct. 1, 2019 5184-5199

Wan, Q., see Sun, Y., TSP Jan. 15, 2019 320-335

Wang, B., see Li, S., TSP Jan. 1, 2019 260-275

Wang, B., Li, X., Gao, F., and Li, G.Y., Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach; TSP Nov. 1, 2019 5479-5494

Wang, B., Jian, M., Gao, F., Li, G.Y., and Lin, H., Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems; TSP Dec. 1, 2019 5893-5908

Wang, F., Li, H., and Govoni, M.A., Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence; TSP July 15, 2019 3818-3831

Wang, F., Cheung, G., and Wang, Y., Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series; TSP Nov. 1, 2019 5511-5526

Wang, G., see Chen, J., TSP Feb. 1, 2019 740-752

Wang, G., and Xue, R., Comments on "The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes" TSP April 1, 2019 1957-1958

Wang, G., Giannakis, G.B., and Chen, J., Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization; TSP May 1, 2019 2357-2370

Wang, G., see Chen, J., TSP June 1, 2019 2826-2838

Wang, G., see Zhang, L., TSP Aug. 1, 2019 4069-4077

Wang, H., Pan, X., and Xu, Y., Simultaneous Safe Feature and Sample Elimination for Sparse Support Vector Regression; TSP Aug. 1, 2019 4043-4054

Wang, H., see Jia, T., TSP Nov. 15, 2019 5881-5895

Wang, J., see Han, K., TSP March 1, 2019 1138-1151

Wang, J., and Wang, Y., On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach; TSP Aug. 15, 2019 4317-4332

Wang, J., see Kim, J., TSP Sept. 1, 2019 4449-4463

Wang, K., see Cheng, L., TSP Nov. 15, 2019 5798-5810

Wang, L., Zhang, Z., and Dunson, D., Symmetric Bilinear Regression for Signal Subgraph Estimation; TSP April 1, 2019 1929-1940

Wang, L., see Zhou, G., TSP Nov. 1, 2019 5596-5610

Wang, M., Zhang, Z., and Nehorai, A., Further Results on the Cramér–Rao Bound for Sparse Linear Arrays; *TSP March 15*, 2019 1493-1507

Wang, M., see Zhang, S., TSP May 15, 2019 2580-2594

Wang, S., Patel, V.M., and Petropulu, A., Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem; TSP Jan. 1, 2019 54-69

Wang, S., Mao, G., and Zhang, J.A., Joint Time-of-Arrival Estimation for Coherent UWB Ranging in Multipath Environment With Multi-User Interference; TSP July 15, 2019 3743-3755

Wang, T., see Zhou, Y., TSP July 15, 2019 3676-3688

Wang, T., Li, Q., Bucci, D.J., Liang, Y., Chen, B., and Varshney, P.K., K-Medoids Clustering of Data Sequences With Composite Distributions; TSP April 15, 2019 2093-2106

Wang, W., see Zheng, Z., TSP April 1, 2019 1728-1741

Wang, W., see Rencker, L., TSP Nov. 1, 2019 5659-5670

Wang, X., see Chen, P., TSP Jan. 1, 2019 208-220

Wang, X., He, J., Cheng, P., and Chen, J., Privacy Preserving Collaborative Computing: Heterogeneous Privacy Guarantee and Efficient Incentive Mechanism; TSP Jan. 1, 2019 221-233

Wang, X., see Ashraphijuo, M., TSP April 1, 2019 1849-1859

Wang, X., Hole Identification and Filling ink-Times Extended Co-Prime Arrays for Highly Efficient DOA Estimation; TSP May 15, 2019 2693-2706

Wang, X., see Wang, X., TSP May 15, 2019 2693-2706

Wang, X., Li, G., and Varshney, P.K., Detection of Sparse Stochastic Signals With Quantized Measurements in Sensor Networks; TSP April 15, 2019 2210-2220

Wang, X., Li, G., Quan, C., and Varshney, P.K., Distributed Detection of Sparse Stochastic Signals With Quantized Measurements: The Generalized Gaussian Case; TSP Sept. 15, 2019 4886-4898

Wang, X., see Su, D., TSP Sept. 15, 2019 4761-4771

Wang, X., see Su, D., TSP Sept. 15, 2019 4772-4781

Wang, Y., Wu, Y., and Shen, Y., Joint Spatiotemporal Multipath Mitigation in Large-Scale Array Localization; TSP Feb. 1, 2019 783-797

Wang, Y., see Anglea, T., TSP March 15, 2019 1596-1609

Wang, Y., and Shi, Q., Optimized Signal Distortion for PAPR Reduction of OFDM Signals With IFFT/FFT Complexity Via ADMM Approaches; TSP Jan. 15, 2019 399-414

Wang, Y., see Wang, Y., TSP Jan. 15, 2019 399-414

Wang, Y., see Zhao, L., TSP Aug. 15, 2019 4231-4244

Wang, Y., see Wang, J., TSP Aug. 15, 2019 4317-4332

Wang, Y., see Wang, F., TSP Nov. 1, 2019 5511-5526

Wang, Z., see Sun, P., TSP Feb. 15, 2019 899-914

Wang, Z., Huang, Y., and Lyu, S., Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization; TSP Aug. 15, 2019 4342-4356

Wasson, M., Milicevic, M., Draper, S.C., and Gulak, G., Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers; TSP Oct. 1, 2019 4976-4991

Watanabe, K., see Sakiyama, A., TSP March 15, 2019 1447-1460

Wei, D., and Li, Y., Convolution and Multichannel Sampling for the Offset Linear Canonical Transform and Their Applications; TSP Dec. 1, 2019 6009-6024

Weiss, A., and Yeredor, A., A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures; *TSP Oct. 1, 2019 5032-5045*

Weiss, A.J., see Picard, J.S., TSP July 15, 2019 3870-3881

Welborn, M., see Ruble, M., TSP July 15, 2019 3719-3731

Wen, F., Ying, R., Liu, P., and Truong, T., Nonconvex Regularized Robust PCA Using the Proximal Block Coordinate Descent Algorithm; TSP Oct. 15, 2019 5402-5416

Wendt, H., see Leonarduzzi, R., TSP Jan. 1, 2019 110-119

Wiesel, A., see Samuel, N., TSP May 15, 2019 2554-2564

Willett, P.K., see Marano, S., TSP April 15, 2019 2022-2035

Worley, B., Scalable Mean-Field Sparse Bayesian Learning; TSP Dec. 15, 2019 6314-6326

Wu, G., see Liu, Y., TSP May 15, 2019 2565-2579

Wu, L., and Palomar, D.P., Sequence Design for Spectral Shaping via Minimization of Regularized Spectral Level Ratio; TSP Sept. 15, 2019 4683-4695

Wu, S., see Shen, Q., TSP July 1, 2019 3502-3515

Wu, X., see Xu, S., TSP Oct. 1, 2019 5018-5031

Wu, Y., see Hsiao, Y., TSP July 15, 2019 3770-3784

Wu, Y., see Wang, Y., TSP Feb. 1, 2019 783-797

Wu, Y., see Li, B., TSP June 1, 2019 2884-2897

Wu, Y., see Li, B., TSP Dec. 1, 2019 6025-6038

Wu, Z., Zhu, W., Chanussot, J., Xu, Y., and Osher, S., Hyperspectral Anomaly Detection via Global and Local Joint Modeling of Background; TSP July 15, 2019 3858-3869

\mathbf{X}

Xavier, J., see Simoes, A., TSP April 15, 2019 2080-2092

Xia, X., see Zhang, X., TSP Feb. 1, 2019 652-667

Xia, X., see Zhang, X., TSP Feb. 1, 2019 668-683

Xia, X., see Li, X., TSP April 1, 2019 1824-1837

Xia, Y., see Zhang, X., TSP Aug. 1, 2019 3970-3984

Xia, Y., Tao, S., Li, Z., Xiang, M., Pei, W., and Mandic, D.P., Full Mean Square Performance Bounds on Quaternion Estimators for Improper Data; TSP Aug. 1, 2019 4093-4106

Xiang, M., see Xia, Y., TSP Aug. 1, 2019 4093-4106

Xiang, Y., Ding, J., and Tarokh, V., Estimation of the Evolutionary Spectra With Application to Stationarity Test; TSP March 1, 2019 1353-1365

Xiao, P., Liao, B., and Li, J., One-Bit Compressive Sensing via Schur-Concave Function Minimization; *TSP Aug. 15, 2019 4139-4151*

Xie, T., Dai, L., Ng, D.W.K., and Chae, C., On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays; TSP Sept. 15, 2019 4730-4744

Xie, Y., see Shapiro, A., TSP Feb. 15, 2019 1088-1103

Xie, Y., Wakin, M.B., and Tang, G., Simultaneous Sparse Recovery and Blind Demodulation; *TSP Oct. 1, 2019 5184-5199*

Xin, J., see Zuo, W., TSP Jan. 15, 2019 415-430

Xin, L., see Yu, H., TSP Dec. 15, 2019 6468-6482

Xing, C., Zhao, X., Xu, W., Dong, X., and Li, G.Y., A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization; TSP July 1, 2019 3531-3546

Xing, C., see Gong, S., TSP June 15, 2019 3197-3212

Xing, C., see Shen, W., TSP Dec. 15, 2019 6301-6313

Xu, H., Guerrier, S., Molinari, R.C., and Karemera, M., Multivariate Signal Modeling With Applications to Inertial Sensor Calibration; TSP Oct. 1, 2019 5143-5152

Xu, K., Marrelec, G., Bernard, S., and Grimal, Q., Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum; TSP Jan. 1, 2019 4-16

Xu, S., see Liu, J., TSP Feb. 15, 2019 1022-1033

Xu, S., Ou, Y., and Wu, X., Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization; *TSP Oct. 1, 2019 5018-5031*

Xu, W., see Xing, C., TSP July 1, 2019 3531-3546

Xu, W., see Liu, Y., TSP May 15, 2019 2565-2579

Xu, Y., see Wu, Z., TSP July 15, 2019 3858-3869

Xu, Y., see Wang, H., TSP Aug. 1, 2019 4043-4054

Xue, D., and Hirche, S., Distributed Topology Manipulation to Control Epidemic Spreading Over Networks; TSP March 1, 2019 1163-1174

Xue, R., see Wang, G., TSP April 1, 2019 1957-1958

Xue, Z., Yuan, X., Ma, J., and Ma, Y., TARM: A Turbo-Type Algorithm for Affine Rank Minimization; TSP Nov. 15, 2019 5730-5745

Y

Yair, O., Ben-Chen, M., and Talmon, R., Parallel Transport on the Cone Manifold of SPD Matrices for Domain Adaptation; TSP April 1, 2019 1797-1811

Yakoby, Y., see Grotas, S., TSP April 15, 2019 2036-2051

Yamada, I., see Mizoguchi, T., TSP Aug. 1, 2019 4078-4092

Yan, G., see Cheng, L., TSP Nov. 15, 2019 5798-5810

Yan, M., see Li, Z., TSP Sept. 1, 2019 4494-4506

Yan, S., see Zhou, X., TSP Aug. 15, 2019 4276-4290

Yang, C., see Sun, W., TSP March 15, 2019 1636-1647

Yang, C., Shen, X., Ma, H., Chen, B., Gu, Y., and So, H.C., Weakly Convex Regularized Robust Sparse Recovery Methods With Theoretical Guarantees; TSP Oct. 1, 2019 5046-5061

Yang, F., Enzner, G., and Yang, J., A Unified Approach to the Statistical Convergence Analysis of Frequency-Domain Adaptive Filters; TSP April 1, 2019 1785-1796

Yang, G., see Gong, S., TSP June 15, 2019 3197-3212

Yang, J., see Yu, X., TSP July 1, 2019 3487-3501

Yang, J., see Yang, F., TSP April 1, 2019 1785-1796

Yang, K., Shi, Y., and Ding, Z., Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization; TSP June 15, 2019 3087-3099

Yang, L., see Zhang, X., TSP Aug. 1, 2019 3970-3984

Yang, S., and Baum, M., Tracking the Orientation and Axes Lengths of an Elliptical Extended Object; TSP Sept. 15, 2019 4720-4729

Yang, Y., see Zhang, X., TSP Feb. 1, 2019 652-667

Yang, Y., see Zhang, X., TSP Feb. 1, 2019 668-683

Yang, Y., see Zhang, X., TSP June 15, 2019 3126-3139

Yang, Y., Pesavento, M., Chatzinotas, S., and Ottersten, B., Energy Efficiency Optimization in MIMO Interference Channels: A Successive Pseudoconvex Approximation Approach; TSP Aug. 1, 2019 4107-4121

Yang, Z., Stoica, P., and Tang, J., Source Resolvability of Spatial-Smoothing-Based Subspace Methods: A Hadamard Product Perspective; TSP May 15, 2019 2543-2553

Yankelevsky, Y., and Elad, M., Finding GEMS: Multi-Scale Dictionaries For High-Dimensional Graph Signals; *TSP April 1, 2019 1889-1901*

Yao, Y., see Zeng, J., TSP Aug. 15, 2019 4261-4275

Ye, Z., see Cai, X., TSP Nov. 1, 2019 5558-5570

Yeo, T.S., see Li, X., TSP April 1, 2019 1902-1917

Yeredor, A., see Weiss, A., TSP Oct. 1, 2019 5032-5045

Yeste Ojeda, O.A., and Grajal, J., The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers; TSP Aug. 15, 2019 4333-4341

Yi, W., see Li, S., TSP Jan. 1, 2019 260-275

Yi, W., see Li, X., TSP April 1, 2019 1902-1917

Yigit, Z., and Basar, E., Space-Time Media-Based Modulation; TSP May 1, 2019 2389-2398

Yilmaz, B.B., and Erdogan, A.T., Compressed Training Based Massive MIMO; TSP March 1, 2019 1191-1206

Yilmaz, O., see Ghadermarzy, N., TSP Jan. 1, 2019 29-40

Yilmaz, Y., see Hou, E., TSP March 15, 2019 1461-1476

Yin, F., see Zhao, Y., TSP Dec. 1, 2019 5936-5951

Yin, L., Parekh, A., and Selesnick, I., Stable Principal Component Pursuit via Convex Analysis; TSP May 15, 2019 2595-2607

Ying, B., see Yuan, K., TSP Feb. 1, 2019 724-739

Ying, B., see Yuan, K., TSP Feb. 1, 2019 708-723

Ying, B., Yuan, K., and Sayed, A.H., Supervised Learning Under Distributed Features; TSP Feb. 15, 2019 977-992

Ying, B., see Yuan, K., TSP Jan. 15, 2019 351-366

Ying, B., Yuan, K., Vlaski, S., and Sayed, A.H., Stochastic Learning Under Random Reshuffling With Constant Step-Sizes; TSP Jan. 15, 2019 474-489

Ying, R., see Wen, F., TSP Oct. 15, 2019 5402-5416

Yli-Kaakinen, J., see Loulou, A., TSP May 1, 2019 2304-2319

You, P., Ding, Z., Qian, L., Li, M., Zhou, X., Liu, W., and Liu, S., A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter; TSP Oct. 15, 2019 5433-5446

Young, J., Host-Madsen, A., and Nosal, E., Deinterleaving of Mixtures of Renewal Processes; TSP Feb. 15, 2019 885-898

Yu, G., see Fan, W., TSP July 1, 2019 3397-3411

Yu, H., Xin, L., and Dauwels, J., Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models; TSP Dec. 15, 2019 6468-6482

Yu, M., Cai, S., and Lau, V.K.N., Event-Driven Sensor Scheduling for Mission-Critical Control Applications; *TSP March 15*, 2019 1537-1549

Yu, R., see Sadeghi, B., TSP Aug. 15, 2019 4218-4230

Yu, W., see Liu, A., TSP May 1, 2019 2484-2498

Yu, X., Cui, G., Yang, J., Kong, L., and Li, J., Wideband MIMO Radar Waveform Design; TSP July 1, 2019 3487-3501

Yu, Y., Zhao, H., de Lamare, R.C., Zakharov, Y., and Lu, L., Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks; TSP March 15, 2019 1566-1581

Yuan, K., Ying, B., Zhao, X., and Sayed, A.H., Exact Diffusion for Distributed Optimization and Learning—Part II: Convergence Analysis; TSP Feb. 1, 2019 724-739

Yuan, K., Ying, B., Zhao, X., and Sayed, A.H., Exact Diffusion for Distributed Optimization and Learning—Part I: Algorithm Development; TSP Feb. 1, 2019 708-723

Yuan, K., see Ying, B., TSP Feb. 15, 2019 977-992

Yuan, K., Ying, B., Liu, J., and Sayed, A.H., Variance-Reduced Stochastic Learning by Networked Agents Under Random Reshuffling; TSP Jan. 15, 2019 351-366

Yuan, K., see Ying, B., TSP Jan. 15, 2019 474-489

Yuan, X., see Liu, H., TSP Sept. 1, 2019 4433-4448

Yuan, X., see Xue, Z., TSP Nov. 15, 2019 5730-5745

Yuen, C., see Huang, C., TSP Jan. 1, 2019 245-259

Yuen, C., see Liu, L., TSP April 1, 2019 1758-1773

Yukawa, M., see Ushio, A., TSP May 15, 2019 2720-2733

Yuksel, S., see Saritas, S., TSP Oct. 1, 2019 5169-5183

Z

Zaidel, B.M., see Noam, Y., TSP May 15, 2019 2608-2623

Zajic, A., see Ruble, M., TSP July 15, 2019 3719-3731

Zakharov, Y., see Yu, Y., TSP March 15, 2019 1566-1581

Zambon, D., Alippi, C., and Livi, L., Change-Point Methods on a Sequence of Graphs; TSP Dec. 15, 2019 6327-6341

Zeng, J., Ma, K., and Yao, Y., On Global Linear Convergence in Stochastic Nonconvex Optimization for Semidefinite Programming; TSP Aug. 15, 2019 4261-4275

Zeng, M., see Liu, Y., TSP April 15, 2019 2129-2142

Zhang, B., see Geng, J., TSP June 15, 2019 3316-3329

Zhang, C., see Eisen, M., TSP May 15, 2019 2775-2790

Zhang, F., see Miao, H., TSP June 15, 2019 3181-3196

Zhang, F., see Miao, H., TSP Nov. 1, 2019 5543-5557

Zhang, H., Liu, Y., and Lei, H., Localization From Incomplete Euclidean Distance Matrix: Performance Analysis for the SVD–MDS Approach; TSP April 15, 2019 2196-2209

Zhang, J., see Zhang, S., TSP July 1, 2019 3592-3605

Zhang, J., see Ashraphijuo, M., TSP April 1, 2019 1849-1859

Zhang, J., see Zhang, X., TSP June 15, 2019 3126-3139

Zhang, J., see Chen, Y., TSP Oct. 15, 2019 5391-5401

Zhang, J.A., see Wang, S., TSP July 15, 2019 3743-3755

Zhang, K., see Koppel, A., TSP May 15, 2019 2528-2542

Zhang, L., see Li, H., TSP March 15, 2019 1418-1430

Zhang, L., see Han, J., TSP Feb. 15, 2019 915-929

Zhang, L., Niu, D., Song, E., Zhou, J., Shi, Q., and Zhu, Y., Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion; *TSP May 1*, 2019 2453-2468

Zhang, L., Wang, G., and Giannakis, G.B., Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks; TSP Aug. 1, 2019 4069-4077

Zhang, Q., see Han, J., TSP Feb. 15, 2019 915-929

Zhang, R., see Shapiro, A., TSP Feb. 15, 2019 1088-1103

Zhang, R., Cheng, P., Chen, Z., Li, Y., and Vucetic, B., A Learning-Based Two-Stage Spectrum Sharing Strategy With Multiple Primary Transmit Power Levels; TSP Sept. 15, 2019 4899-4914

Zhang, S., Zhang, J., Zheng, W.X., and So, H.C., Widely Linear Complex-Valued Estimated-Input LMS Algorithm for Bias-Compensated Adaptive Filtering With Noisy Measurements; TSP July 1, 2019 3592-3605

Zhang, S., and Wang, M., Correction of Corrupted Columns Through Fast Robust Hankel Matrix Completion; TSP May 15, 2019 2580-2594

Zhang, S., Theagarajan, L.N., Choi, S., and Varshney, P.K., Fusion of Correlated Decisions Using Regular Vine Copulas; *TSP April 15*, 2019 2066-2079

Zhang, T., see Li, X., TSP April 1, 2019 1902-1917

Zhang, T., see Ren, J., TSP April 15, 2019 2173-2186

Zhang, W., see Ge, Y., TSP April 15, 2019 2143-2158

Zhang, X., He, Z., Xia, X., Liao, B., and Yang, Y., OPARC: Optimal and Precise Array Response Control Algorithm—Part I: Fundamentals; TSP Feb. 1, 2019 652-667

Zhang, X., see Zhang, X., TSP Feb. 1, 2019 652-667

Zhang, X., He, Z., Xia, X., Liao, B., and Yang, Y., OPARC: Optimal and Precise Array Response Control Algorithm—Part II: Multi-Points and Applications; TSP Feb. 1, 2019 668-683

Zhang, X., see Zhang, X., TSP Feb. 1, 2019 668-683

Zhang, X., see Cui, W., TSP April 15, 2019 2187-2195

Zhang, X., He, Z., Liao, B., Yang, Y., and Zhang, J., Flexible Array Response Control via Oblique Projection; *TSP June 15*, 2019 3126-3139

Zhang, X., see Zhang, X., TSP June 15, 2019 3126-3139

Zhang, X., Xia, Y., Li, C., Yang, L., and Mandic, D.P., Analysis of the Unconstrained Frequency-Domain Block LMS for Second-Order Noncircular Inputs; TSP Aug. 1, 2019 3970-3984

Zhang, Y., see Huang, Y., TSP July 1, 2019 3606-3620

Zhang, Y., see Liu, Y., TSP April 15, 2019 2129-2142

Zhang, Y., and Ho, K.C., Multistatic Localization in the Absence of Transmitter Position; TSP Sept. 15, 2019 4745-4760

Zhang, Y., see Huang, Y., TSP Oct. 15, 2019 5417-5432

Zhang, Y.D., see Zheng, Z., TSP April 1, 2019 1728-1741

Zhang, Y.D., see Gu, Y., TSP May 1, 2019 2334-2346

Zhang, Y.D., see Qin, G., TSP June 1, 2019 3013-3027

Zhang, Y.J., see Liu, H., TSP Sept. 1, 2019 4433-4448

Zhang, Z., see Wang, M., TSP March 15, 2019 1493-1507

Zhang, Z., see Wang, L., TSP April 1, 2019 1929-1940

Zhang, Z., Zohren, S., and Roberts, S., DeepLOB: Deep Convolutional Neural Networks for Limit Order Books; TSP June 1, 2019 3001-3012

Zhang, Z., Linear Canonical Wigner Distribution Based Noisy LFM Signals Detection Through the Output SNR Improvement Analysis; *TSP Nov. 1, 2019 5527-5542*

Zhao, H., see Yu, Y., TSP March 15, 2019 1566-1581

Zhao, J., and Mili, L., A Theoretical Framework of Robust H-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation; TSP May 15, 2019 2734-2746

Zhao, L., Wang, Y., Kumar, S., and Palomar, D.P., Optimization Algorithms for Graph Laplacian Estimation via ADMM and MM; *TSP Aug. 15*, 2019 4231-

Zhao, M., see Liu, A., TSP May 1, 2019 2484-2498

Zhao, M., see Chen, X., TSP Aug. 15, 2019 4152-4167

Zhao, Q., see Gurevich, A., TSP July 15, 2019 3689-3703

Zhao, W., Liu, W., and Jin, M., Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection; TSP Nov. 15, 2019 5746-5760

Zhao, X., see Yuan, K., TSP Feb. 1, 2019 724-739

Zhao, X., see Yuan, K., TSP Feb. 1, 2019 708-723

Zhao, X., see Xing, C., TSP July 1, 2019 3531-3546

Zhao, Y., see Huang, Y., TSP July 1, 2019 3606-3620

Zhao, Y., see Liu, Y., TSP Aug. 15, 2019 4370-4382

Zhao, Y., Fritsche, C., Hendeby, G., Yin, F., Chen, T., and Gunnarsson, F., Cramér–Rao Bounds for Filtering Based on Gaussian Process State-Space Models; TSP Dec. 1, 2019 5936-5951

Zhao, Z., Zhou, R., and Palomar, D.P., Optimal Mean-Reverting Portfolio With Leverage Constraint for Statistical Arbitrage in Finance; TSP April 1, 2019 1681-1695

Zheng, J., see Liu, J., TSP Feb. 15, 2019 1022-1033

Zheng, N., see Zuo, W., TSP Jan. 15, 2019 415-430

Zheng, W.X., see Zhang, S., TSP July 1, 2019 3592-3605

Zheng, X., Tang, Y.Y., and Zhou, J., A Framework of Adaptive Multiscale Wavelet Decomposition for Signals on Undirected Graphs; TSP April 1, 2019 1696-1711

Zheng, Z., Wang, W., Kong, Y., and Zhang, Y.D., MISC Array: A New Sparse Array Design Achieving Increased Degrees of Freedom and Reduced Mutual Coupling Effect; TSP April 1, 2019 1728-1741

Zhou, B., Liu, A., and Lau, V., Successive Localization and Beamforming in 5G mmWave MIMO Communication Systems; TSP March 15, 2019 1620-1635

Zhou, G., and Wang, L., Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain; TSP Nov. 1, 2019 5596-5610

Zhou, J., see Tang, M., TSP Jan. 15, 2019 279-292

Zhou, J., see Zheng, X., TSP April 1, 2019 1696-1711

Zhou, J., see Zhang, L., TSP May 1, 2019 2453-2468

Zhou, J., see Tang, M., TSP Nov. 1, 2019 5671-5685

Zhou, M., see Huang, Y., TSP July 15, 2019 3624-3638

Zhou, R., see Zhao, Z., TSP April 1, 2019 1681-1695

Zhou, S., see Gao, X., TSP Sept. 15, 2019 4809-4824

Zhou, X., and Kay, S., A Robust Spectral Estimator With Application to a Noise-Corrupted Process; TSP April 15, 2019 2107-2114

Zhou, X., Yan, S., Hu, J., Sun, J., Li, J., and Shu, F., Joint Optimization of a UAV's Trajectory and Transmit Power for Covert Communications; TSP Aug. 15, 2019 4276-4290

Zhou, X., see You, P., TSP Oct. 15, 2019 5433-5446

Zhou, Y., Wang, T., Hu, R., Su, H., Liu, Y., Liu, X., Suo, J., and Snoussi, H., Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using *X*-Band Marine Radar Data; *TSP July 15*, 2019 3676-3688

Zhou, Y., see Ma, A., TSP April 1, 2019 1875-1888

Zhu, H., see Koppel, A., TSP May 15, 2019 2528-2542

Zhu, Q., see Sohrabi, R., TSP Dec. 1, 2019 5968-5982

Zhu, W., see Wu, Z., TSP July 15, 2019 3858-3869

Zhu, W., see Lin, Z., TSP Dec. 15, 2019 6384-6396

Zhu, Y., see Zhang, L., TSP May 1, 2019 2453-2468

Zhu, Y., see Tang, S., TSP Oct. 1, 2019 4992-5003

Zohren, S., see Zhang, Z., TSP June 1, 2019 3001-3012

Zollanvari, A., and Dougherty, E.R., Optimal Bayesian Classification With Vector Autoregressive Data Dependency; TSP June 15, 2019 3073-3086

Zou, Q., Poddar, S., and Jacob, M., Sampling of Planar Curves: Theory and Fast Algorithms; TSP Dec. 15, 2019 6455-6467

Zou, S., see Bu, Y., TSP April 15, 2019 2115-2128

Zoubir, A.M., see Fortunati, S., TSP Jan. 1, 2019 164-177

Zoubir, A.M., see Fortunati, S., TSP Oct. 15, 2019 5352-5364

Zoubir, A.M., see Dytso, A., TSP Dec. 15, 2019 6352-6367

Zuk, J., Bocquet, S., and Rosenberg, L., New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle; TSP April 15, 2019 2221-2233

Zuo, W., Xin, J., Liu, W., Zheng, N., Ohmori, H., and Sano, A., Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator; TSP Jan. 15, 2019 415-430

SUBJECT INDEX

Numeric

5G mobile communication

Rate-Flexible Fast Polar Decoders. Hashemi, S.A., +, TSP Nov. 15, 2019 5689-5701

Space-Time Media-Based Modulation. *Yigit, Z.*, +, *TSP May 1, 2019 2389-2398*

Successive Localization and Beamforming in 5G mmWave MIMO Communication Systems. Zhou, B., +, TSP March 15, 2019 1620-1635

User Location Tracking in Massive MIMO Systems via Dynamic Variational Bayesian Inference. *Lian, L.*, +, *TSP Nov. 1*, 2019 5628-5642

A

Access protocols

Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. Chen, C., +, TSP March 15, 2019 1477-1492

Ad hoc networks

Design of Robust Radar Detectors Through Random Perturbation of the Target Signature. *Coluccia, A.*, +, *TSP Oct. 1, 2019 5118-5129*

Localization From Incomplete Euclidean Distance Matrix: Performance Analysis for the SVD–MDS Approach. *Zhang, H.*, +, *TSP April 15*, 2019 2196-2209

Adaptive antenna arrays

On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290

Adaptive estimation

Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June* 15, 2019 3100-3112

Adaptive filters

A Low-Complexity Nonlinear Least Mean Squares Filter Based on a Decomposable Volterra Model. *Pinheiro, F.C.*, +, TSP Nov. 1, 2019 5463-5478

A Unified Approach to the Statistical Convergence Analysis of Frequency-Domain Adaptive Filters. *Yang, F., +, TSP April 1, 2019 1785-1796*

Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810

Analysis of the Unconstrained Frequency-Domain Block LMS for Second-Order Noncircular Inputs. Zhang, X., +, TSP Aug. 1, 2019 3970-3984

Comments on "The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". Wang, G., +, TSP April 1, 2019 1957-1958

False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. *Ge, Y., +, TSP April 15, 2019 2143-2158*

Geometric-Algebra Adaptive Filters. Lopes, W.B., +, TSP July 15, 2019 3649-3662

Projection-Based Regularized Dual Averaging for Stochastic Optimization. Ushio, A., +, TSP May 15, 2019 2720-2733

Reply to "Comments on 'The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes'". *Mandic, D.*, +, *TSP April 1, 2019* 1959

Stability Bound of the Initial Mean-Square Deviation of High-Order Stochastic Gradient Adaptive Filtering Algorithms. *Eweda, E., TSP Aug. 15*, 2019 4168-4176

The Generalized Complex Kernel Least-Mean-Square Algorithm. Boloix-Tortosa, R., +, TSP Oct. 15, 2019 5213-5222

The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunmi*, *T.*, +, *TSP Dec. 1*, 2019 5909-5921

Widely Linear Complex-Valued Estimated-Input LMS Algorithm for Bias-Compensated Adaptive Filtering With Noisy Measurements. *Zhang*, S., +, TSP July 1, 2019 3592-3605

Adaptive radar

Adaptive Radar Detection in Gaussian Disturbance With Structured Covariance Matrix via Invariance Theory. *Tang, M.*, +, *TSP Nov. 1, 2019 5671-5685*

Adaptive signal detection

A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix. Raghavan, R.S., TSP Sept. 1, 2019 4624-4635

Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter. Liu, J., +, TSP Feb. 15, 2019 1022-1033

False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96

One-Step Persymmetric GLRT for Subspace Signals. Liu, J., +, TSP July 15, 2019 3639-3648

Robust Detection in MIMO Radar With Steering Vector Mismatches. *Liu*, *J.*, +, *TSP Oct. 15*, 2019 5270-5280

Adaptive signal processing

Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals. *Karisik, F., +, TSP Dec. 1, 2019 6067-6077*

Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution. *Liu, Y., +, TSP Aug. 15, 2019 4370-4382*

Affine transforms

Sampling and Super Resolution of Sparse Signals Beyond the Fourier Domain. *Bhandari*, A., +, *TSP March 15*, 2019 1508-1521

Airborne radar

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk*, *J.*, +, *TSP April 15*, 2019 2221-2233

Aircraft communication

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379

Algebra

Distributed Topology Manipulation to Control Epidemic Spreading Over Networks. *Xue, D., +, TSP March 1, 2019 1163-1174*

Hypercomplex Widely Linear Estimation Through the Lens of Underpinning Geometry. *Nitta*, T., +, TSP Aug. 1, 2019 3985-3994

Online Primal-Dual Methods With Measurement Feedback for Time-Varying Convex Optimization. Bernstein, A., +, TSP April 15, 2019 1978-1991

Rational Optimization for Nonlinear Reconstruction With Approximate ℓ_0 Penalization. Castella, M., +, TSP March 15, 2019 1407-1417

Algorithm theory

Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. Li, Y., +, TSP May 1, 2019 2499-2512

Amplify and forward communication

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Analog-digital conversion

- Asymptotic Task-Based Quantization With Application to Massive MIMO. Shlezinger, N., +, TSP Aug. 1, 2019 3995-4012
- Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914
- One-Bit Radar Processing With Time-Varying Sampling Thresholds. *Ameri*, A., +, TSP Oct. 15, 2019 5297-5308
- Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, *J.*, +, *TSP May 1*, 2019 2410-2425

Antenna arrays

- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua*, S.S., +, TSP June 15, 2019 3243-3257
- A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. *Shao*, M., +, TSP Oct. 15, 2019 5309-5324
- Advanced Properties of Full-Duplex Radio for Securing Wireless Network. Hua, Y., TSP Jan. 1, 2019 120-135
- Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays. Shen, W., +, TSP Dec. 15, 2019 6301-6313
- Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. Liu, L., +, TSP April 1, 2019 1758-1773
- Compressed Training Based Massive MIMO. Yilmaz, B.B., +, TSP March 1, 2019 1191-1206
- Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part I: Array Designs. *Li*, *C*., +, *TSP June 1*, 2019 2898-2910
- Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. *Chawla, A.*, +, *TSP Aug. 1, 2019 4055-4068*
- Joint Spatiotemporal Multipath Mitigation in Large-Scale Array Localization. Wang, Y., +, TSP Feb. 1, 2019 783-797
- Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. *Li*, *Y*, +, *TSP June 15*, 2019 3258-3271
- Localization of Signals in the Near-Field of an Antenna Array. *Friedlander, B., TSP Aug. 1, 2019 3885-3893*
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. Chen, P., +, TSP Jan. 1, 2019 208-220
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part I: Complementary Codes-Based Schemes. Su, D., +, TSP Sept. 15, 2019 4761-4771
- Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, TSP March 15, 2019 1662-1677
- Polarization Sensitivity of Antenna Arrays. Friedlander, B., TSP Jan. 1, 2019 234-244
- Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B.*, +, *TSP Nov. 1*, 2019 5479-5494
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250

Antenna phased arrays

On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290

Antenna radiation patterns

- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part I: Complementary Codes-Based Schemes. Su, D., +, TSP Sept. 15, 2019 4761-4771
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes. Su, D., +, TSP Sept. 15, 2019 4772-4781

- On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290
- Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1, 2019 3561-3575*

Apertures

Design of Large Effective Apertures for Millimeter Wave Systems Using a Sparse Array of Subarrays. *Gupta*, *A.*, +, *TSP Dec. 15*, 2019 6483-6497 Hybrid Sparse Array Beamforming Design for General Rank Signal Models. *Hamza*, *S.A.*, +, *TSP Dec. 15*, 2019 6215-6226

Application specific integrated circuits

Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. *Wasson*, M., +, TSP Oct. 1, 2019 4976-4991

Approximation algorithms

Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models. Yu, H., +, TSP Dec. 15, 2019 6468-6482

Approximation theory

- A CPHD Approximation Based on a Discrete-Gamma Cardinality Model. De Melo, F.E., +, TSP Jan. 15, 2019 336-350
- A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960
- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua, S.S.*, +, *TSP June 15, 2019 3243-3257*
- A Framework of Adaptive Multiscale Wavelet Decomposition for Signals on Undirected Graphs. *Zheng, X.*, +, *TSP April 1, 2019 1696-1711*
- A Novel Kullback–Leibler Divergence Minimization-Based Adaptive Student's t-Filter. *Huang, Y., +, TSP Oct. 15, 2019 5417-5432*
- A Primal-Dual Quasi-Newton Method for Exact Consensus Optimization. Eisen, M., +, TSP Dec. 1, 2019 5983-5997
- A Scalable Hierarchical Gaussian Process Classifier. Nguyen, T.N.A., +, TSP June 1, 2019 3042-3057
- Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142
- Algorithms and Fundamental Limits for Unlabeled Detection Using Types. Marano, S., +, TSP April 15, 2019 2022-2035
- Approximating Sample State Vectors Using the ESPT for Computationally Efficient Particle Filtering. *Biswas, S.K.*, +, *TSP April 1, 2019 1918-1928*
- Efficient Global Optimal Resource Allocation in Non-Orthogonal Interference Networks. *Matthiesen, B., +, TSP Nov. 1, 2019 5612-5627*
- Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao*, Y., +, TSP July 15, 2019 3770-3784
- Hypercomplex Tensor Completion via Convex Optimization. *Mizoguchi, T.*, +, *TSP Aug. 1*, 2019 4078-4092
- Joint Optimization of a UAV's Trajectory and Transmit Power for Covert Communications. Zhou, X., +, TSP Aug. 15, 2019 4276-4290
- Learning in Wireless Control Systems Over Nonstationary Channels. *Eisen*, M., +, TSP March 1, 2019 1123-1137
- Matrix Completion With Deterministic Pattern: A Geometric Perspective. Shapiro, A., +, TSP Feb. 15, 2019 1088-1103
- MMSE Approximation For Sparse Coding Algorithms Using Stochastic Resonance. Simon, D., +, TSP Sept. 1, 2019 4597-4610
- New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. Zuk, J., +, TSP April 15, 2019 2221-2233
- Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299
- Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method. Chen, W., +, TSP Nov. 15, 2019 5785-5797
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, TSP March 15, 2019 1662-1677
- Optimal Mean-Reverting Portfolio With Leverage Constraint for Statistical Arbitrage in Finance. Zhao, Z., +, TSP April 1, 2019 1681-1695
- Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR. Lu, Y., +, TSP June 1, 2019 2947-2959

- Optimal Spectral Initialization for Signal Recovery With Applications to Phase Retrieval. *Luo*, W., +, *TSP May 1*, 2019 2347-2356
- Parameter Estimation of Heavy-Tailed AR Model With Missing Data Via Stochastic EM. Liu, J., +, TSP April 15, 2019 2159-2172
- Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels. *Koppel, A., +, TSP May 15, 2019 2528-2542*
- Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava*, S., +, TSP March 1, 2019 1251-1266
- Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. Chen, X., +, TSP Aug. 15, 2019 4152-4167
- Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381
- Representation and Reconstruction of Finite-Energy Band-Limited Signals via Pulse-Width Modulation. Sevuktekin, N.C., +, TSP Oct. 1, 2019 5153-5168
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C., +, TSP March 15, 2019 1477-1492*
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Sketched Clustering via Hybrid Approximate Message Passing. Byrne, E., +, TSP Sept. 1, 2019 4556-4569
- Spectrally Constrained MIMO Radar Waveform Design Based on Mutual Information. *Tang, B., +, TSP Feb. 1, 2019 821-834*
- Stable Safe Screening and Structured Dictionaries for Faster ℓ_1 Regularization. Dantas, C.F., +, TSP July 15, 2019 3756-3769
- Stochastic Successive Convex Approximation for Non-Convex Constrained Stochastic Optimization. *Liu*, A., +, *TSP Aug. 15*, 2019 4189-4203

Array signal processing

- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua*, S.S., +, TSP June 15, 2019 3243-3257
- Adaptive Detection of Structured Signals in Low-Rank Interference. Schniter, P., +, TSP July 1, 2019 3439-3454
- Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part II: Generalizations and Applications. *Li*, *C.*, +, *TSP June 1*, 2019 2911-2922
- Design And Analysis of the Sparse Array for DoA Estimation of Noncircular Signals. *Gupta*, P., +, TSP Jan. 15, 2019 460-473
- Detecting Gaussian Signals Using Coprime Sensor Arrays in Spatially Correlated Gaussian Noise. *Bautista, R.*, +, *TSP March 1*, 2019 1296-1306
- Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis. *Ruan, H.*, +, *TSP Dec. 15*, 2019 6411-6423
- DOA Estimation Exploiting Sparse Array Motions. *Qin, G.*, +, *TSP June 1*, 2019 3013-3027
- Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao*, Y., +, TSP July 15, 2019 3770-3784
- Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417
- Flexible Array Response Control via Oblique Projection. Zhang, X., +, TSP June 15, 2019 3126-3139
- Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158
- Further Results on the Cramér–Rao Bound for Sparse Linear Arrays. Wang, M., +, TSP March 15, 2019 1493-1507
- Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays. *Qiao*, H., +, TSP Nov. 15, 2019 5715-5729
- Hole Identification and Filling ink-Times Extended Co-Prime Arrays for Highly Efficient DOA Estimation. Wang, X., +, TSP May 15, 2019 2693-2706
- Hybrid Sparse Array Beamforming Design for General Rank Signal Models. Hamza, S.A., +, TSP Dec. 15, 2019 6215-6226
- Joint Beamforming and Association Design for MIMO Radar. Niesen, U., +, TSP July 15, 2019 3663-3675

- Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914
- Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator. Zuo, W., +, TSP Jan. 15, 2019 415-430
- Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach. *Naghsh, M.M.*, +, *TSP Sept. 15*, 2019 4707-4719
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- MISC Array: A New Sparse Array Design Achieving Increased Degrees of Freedom and Reduced Mutual Coupling Effect. *Zheng, Z.*, +, *TSP April 1*, 2019 1728-1741
- Modeling the Active Neuron Separation in the Compressed Sensing and Finite Rate of Innovation Framework. *Schnier, T.*, +, *TSP Sept. 1, 2019 4521-4534*
- Multi-User Regularized Zero-Forcing Beamforming. Nguyen, L.D., +, TSP June 1, 2019 2839-2853
- Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. Wang, S., +, TSP Jan. 1, 2019 54-69
- New Designs on MVDR Robust Adaptive Beamforming Based on Optimal Steering Vector Estimation. *Huang, Y., +, TSP July 15, 2019 3624-3638*
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO. *Maatouk*, A., +, TSP Feb. 15, 2019 1006-1021
- On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. *Xie*, *T.*, +, *TSP Sept. 15*, 2019 4730-4744
- On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam*, *Y.*, +, *TSP May 15*, 2019 2608-2623
- OPARC: Optimal and Precise Array Response Control Algorithm—Part I: Fundamentals. *Zhang, X.*, +, *TSP Feb. 1, 2019 652-667*
- OPARC: Optimal and Precise Array Response Control Algorithm—Part II: Multi-Points and Applications. *Zhang, X.*, +, *TSP Feb. 1*, 2019 668-683
- Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15*, 2019 3197-3212
- Polarization Sensitivity of Antenna Arrays. Friedlander, B., TSP Jan. 1, 2019 234-244
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250
- Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution. *Liu, Y., +, TSP Aug. 15, 2019 4370-4382*
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C.*, +, *TSP March 15*, 2019 1477-1492
- Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information. *Lin*, *Z*., +, *TSP Dec. 15*, 2019 6384-6396
- Robustness of Difference Coarrays of Sparse Arrays to Sensor Failures— Part I: A Theory Motivated by Coarray MUSIC. *Liu*, C., +, TSP June 15, 2019 3213-3226
- Robustness of Difference Coarrays of Sparse Arrays to Sensor Failures— Part II: Array Geometries. *Liu, C.*, +, *TSP June 15*, 2019 3227-3242
- Semiparametric CRB and Slepian-Bangs Formulas for Complex Elliptically Symmetric Distributions. *Fortunati*, S., +, TSP Oct. 15, 2019 5352-5364
- Simplified and Enhanced Multiple Level Nested Arrays Exploiting High-Order Difference Co-Arrays. Shen, Q., +, TSP July 1, 2019 3502-3515
- SINR Distribution for the Persymmetric SMI Beamformer With Steering Vector Mismatches. *Liu, J., +, TSP March 1, 2019 1382-1392*
- Subspace Averaging and Order Determination for Source Enumeration. *Garg, V., +, TSP June 1, 2019 3028-3041*
- Successive Localization and Beamforming in 5G mmWave MIMO Communication Systems. Zhou, B., +, TSP March 15, 2019 1620-1635
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu*, *H*., +, *TSP Sept. 1*, 2019 4433-

- Swift-Link: A Compressive Beam Alignment Algorithm for Practical mmWave Radios. Myers, N.J., +, TSP Feb. 15, 2019 1104-1119
- Thinned Coprime Array for Second-Order Difference Co-Array Generation With Reduced Mutual Coupling. *Raza, A.*, +, *TSP April 15, 2019 2052-2065*
- Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1*, 2019 3561-3575
- Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, *J.*, +, *TSP May 1*, 2019 2410-2425
- User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1*, 2019 2426-2438
- Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays. *Gao*, X., +, *TSP Sept. 15*, 2019 4809-4824
- Wideband MIMO Radar Waveform Design. Yu, X., +, TSP July 1, 2019 3487-3501

Asset management

Optimal Mean-Reverting Portfolio With Leverage Constraint for Statistical Arbitrage in Finance. Zhao, Z., +, TSP April 1, 2019 1681-1695

Audio signal processing

Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers. *Liski*, *J.*, +, *TSP July 15*, 2019 3785-3795

Joint Time-Frequency Scattering. Anden, J., +, TSP July 15, 2019 3704-3718

Autonomous aerial vehicles

- Joint Optimization of a UAV's Trajectory and Transmit Power for Covert Communications. Zhou, X., +, TSP Aug. 15, 2019 4276-4290
- Non-Iterative MDS Method for Collaborative Network Localization With Sparse Range and Pointing Measurements. *Hamaoui*, M., TSP Feb. 1, 2019 568-578
- Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379

Autoregressive moving average processes

- A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*
- A Robust Spectral Estimator With Application to a Noise-Corrupted Process. *Zhou, X.*, +, *TSP April 15, 2019 2107-2114*

Autoregressive processes

- Corrections to "Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions" [Mar 19 1207-1222]. *Basu, S., +, TSP April 1, 2019 1960*
- Estimation of Sparse Directional Connectivity With Expectation Maximization. Khayambashi, M., +, TSP Feb. 15, 2019 854-869
- Forecasting Time Series With VARMA Recursions on Graphs. *Isufi, E., +, TSP Sept. 15, 2019 4870-4885*
- Fully Orthogonal 2-D Lattice Structures for Quarter-Plane and Asymmetric Half-Plane Autoregressive Modeling of Random Fields. *Kayran, A.H.*, +, *TSP Sept. 1, 2019 4507-4520*
- Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. Basu, S., +, TSP March 1, 2019 1207-1222
- Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks. *Shen, Y., +, TSP Oct. 15, 2019 5325-5339*
- On Noncausal Identification of Nonstationary Multivariate Autoregressive Processes. *Niedzwiecki, M.*, +, *TSP Feb. 1, 2019 769-782*
- Online Forecasting Matrix Factorization. Gultekin, S., +, TSP March 1, 2019 1223-1236
- Optimal Bayesian Classification With Vector Autoregressive Data Dependency. *Zollanvari*, A., +, *TSP June 15*, 2019 3073-3086
- Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs. *Ioannidis, V.N.*, +, *TSP May 1, 2019 2263-2274*

Awards

Awards for the IEEE Transactions on Signal Processing. TSP May 1, 2019 2469-2470

AWGN

Adaptive Detection of Structured Signals in Low-Rank Interference. Schniter, P., +, TSP July 1, 2019 3439-3454

В

Backscatter

Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, TSP March 15, 2019 1662-1677

Band-pass filters

A Hilbert Space Theory of Generalized Graph Signal Processing. *Ji*, *F*, +, *TSP Dec. 15*, 2019 6188-6203

Bandlimited signals

Delta-Ramp Encoder for Amplitude Sampling and Its Interpretation as Time Encoding. *Martinez-Nuevo*, P., +, TSP May 15, 2019 2516-2527

Bandwidth

- Controllability of Bandlimited Graph Processes Over Random Time Varying Graphs. Gama, F., +, TSP Dec. 15, 2019 6440-6454
- Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability. *Boche, H.*, +, *TSP Dec.* 15, 2019 6424-6439
- Sampling of Planar Curves: Theory and Fast Algorithms. Zou, Q., +, TSP Dec. 15, 2019 6455-6467

Bayes methods

- A CPHD Approximation Based on a Discrete-Gamma Cardinality Model. De Melo, F.E., +, TSP Jan. 15, 2019 336-350
- A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation. Vo, B., +, TSP Oct. 1, 2019 4948-4963
- A Novel Robust Gaussian–Student's t Mixture Distribution Based Kalman Filter. Huang, Y., +, TSP July 1, 2019 3606-3620
- A Scalable Hierarchical Gaussian Process Classifier. Nguyen, T.N.A., +, TSP June 1, 2019 3042-3057
- Adaptive Bayesian Radio Tomography. Lee, D., +, TSP April 15, 2019 1964-1977
- Anomaly Detection in Partially Observed Traffic Networks. *Hou, E., +, TSP March 15, 2019 1461-1476*
- Bayesian Smoothing for the Extended Object Random Matrix Model. Granstrom, K., +, TSP July 15, 2019 3732-3742
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Beliefs in Decision-Making Cascades. Seo, D., +, TSP Oct. 1, 2019 5103-5117
- Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson, M.*, +, *TSP Jan. 1, 2019 149-163*
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, *M.*, +, *TSP Sept. 1*, 2019 4545-4555 Double Bayesian Smoothing as Message Passing. *Di Viesti*, *P.*, +, *TSP Nov. 1*, 2019 5495-5510
- Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823
- Extended-Object or Group-Target Tracking Using Random Matrix With Nonlinear Measurements. Lan, J., +, TSP Oct. 1, 2019 5130-5142
- Gaussian Target Tracking With Direction-of-Arrival von Mises–Fisher Measurements. *Garcia-Fernandez, A.F.*, +, *TSP June 1*, 2019 2960-2972
- Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays. *Qiao*, H., +, TSP Nov. 15, 2019 5715-5729
- High-Dimensional Filtering Using Nested Sequential Monte Carlo. *Naesseth, C.A.*, +, *TSP Aug. 15*, 2019 4177-4188
- How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems. *Krishnamurthy, V.*, +, *TSP Dec. 15, 2019 6511-6525*
- Hyperdimensional Bayesian Time Mapping (HyperBaT): A Probabilistic Approach to Time Series Mapping of Non-Identical Sequences. *Ruble, M.*, +, *TSP July 15*, 2019 3719-3731
- Hypothesis Testing Under Subjective Priors and Costs as a Signaling Game. Saritas, S., +, TSP Oct. 1, 2019 5169-5183
- Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. Li, Y., +, TSP May 1, 2019 2499-2512
- Joint Channel Estimation and User Grouping for Massive MIMO Systems. Dai, J., +, TSP Feb. 1, 2019 622-637

Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16

MMSE Approximation For Sparse Coding Algorithms Using Stochastic Resonance. Simon, D., +, TSP Sept. 1, 2019 4597-4610

Non-Uniform Burst-Sparsity Learning for Massive MIMO Channel Estimation. *Dai*, *J.*, +, *TSP Feb. 15*, 2019 1075-1087

Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method. Chen, W., +, TSP Nov. 15, 2019 5785-5797

Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. Chen, P., +, TSP Jan. 1, 2019 208-220

Online Change-Point Detection of Linear Regression Models. Geng, J., +, TSP June 15, 2019 3316-3329

Optimal Bayesian Classification With Vector Autoregressive Data Dependency. Zollanvari, A., +, TSP June 15, 2019 3073-3086

Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava*, S., +, TSP March 1, 2019 1251-1266

Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari*, *J.*, +, *TSP Feb. 1*, 2019 638-651

Recursive Estimation of Dynamic RSS Fields Based on Crowdsourcing and Gaussian Processes. Santos, I., +, TSP March 1, 2019 1152-1162

Residual Ratio Thresholding for Linear Model Order Selection. *Kallummil*, S., +, TSP Feb. 15, 2019 838-853

Scalable Mean-Field Sparse Bayesian Learning. Worley, B., TSP Dec. 15, 2019 6314-6326

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu*, *J.*, +, *TSP Nov. 15*, 2019 5837-5849

Split-and-Augmented Gibbs Sampler—Application to Large-Scale Inference Problems. Vono, M., +, TSP March 15, 2019 1648-1661

Testing the Structure of a Gaussian Graphical Model With Reduced Transmissions in a Distributed Setting. *Chen, Y., +, TSP Oct. 15, 2019 5391-5401*

User Location Tracking in Massive MIMO Systems via Dynamic Variational Bayesian Inference. *Lian, L.*, +, *TSP Nov. 1*, 2019 5628-5642

Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models. Yu, H., +, TSP Dec. 15, 2019 6468-6482

Beam steering

New Designs on MVDR Robust Adaptive Beamforming Based on Optimal Steering Vector Estimation. *Huang*, Y., +, TSP July 15, 2019 3624-3638

Belief networks

Hyperdimensional Bayesian Time Mapping (HyperBaT): A Probabilistic Approach to Time Series Mapping of Non-Identical Sequences. *Ruble, M.*, +, *TSP July 15*, 2019 3719-3731

Noise Benefits in Combined Nonlinear Bayesian Estimators. *Duan, F.*, +, *TSP Sept. 1, 2019 4611-4623*

Big Data applications

Semi-Supervised Learning in Network-Structured Data via Total Variation Minimization. *Jung, A.*, +, *TSP Dec. 15, 2019 6256-6269*

Binary codes

Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. Wasson, M., +, TSP Oct. 1, 2019 4976-4991

Binary sequences

Designing Sets of Binary Sequences for MIMO Radar Systems. Alaee-Kerahroodi, M., +, TSP July 1, 2019 3347-3360

Bioelectric phenomena

Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. Sebastian, J., +, TSP June 1, 2019 2923-2936

Biological tissues

Domain-Informed Spline Interpolation. Behjat, H., +, TSP Aug. 1, 2019 3909-3921

Biology computing

Joint Network Topology and Dynamics Recovery From Perturbed Stationary Points. Wai, H., +, TSP Sept. 1, 2019 4582-4596

Matrix Completion and Performance Guarantees for Single Individual Haplotyping. Barik, S., +, TSP Sept. 15, 2019 4782-4794

Biomedical MRI

Domain-Informed Spline Interpolation. Behjat, H., +, TSP Aug. 1, 2019 3909-3921

Biomedical optical imaging

Robust Hemodynamic Response Function Estimation From fNIRS Signals. Seghouane, A., +, TSP April 1, 2019 1838-1848

Blind source separation

A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures. *Weiss, A., +, TSP Oct. 1, 2019 5032-5045*

Focused Blind Deconvolution. Bharadwaj, P., +, TSP June 15, 2019 3168-3180

Gradient Algorithms for Complex Non-Gaussian Independent Component/ Vector Extraction, Question of Convergence. *Koldovsky, Z.*, +, *TSP Feb.* 15, 2019 1050-1064

Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*

Simultaneous Sparse Recovery and Blind Demodulation. *Xie, Y., +, TSP Oct.* 1, 2019 5184-5199

Bootstrapping

Subspace Averaging and Order Determination for Source Enumeration. *Garg, V., +, TSP June 1, 2019 3028-3041*

Boundary-value problems

Cramér-Rao Bound for Constrained Parameter Estimation Using Lehmann-Unbiasedness. Nitzan, E., +, TSP Feb. 1, 2019 753-768

Brain

Domain-Informed Spline Interpolation. Behjat, H., +, TSP Aug. 1, 2019 3909-3921

Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727

Robust Hemodynamic Response Function Estimation From fNIRS Signals. Seghouane, A., +, TSP April 1, 2019 1838-1848

Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. Sebastian, J., +, TSP June 1, 2019 2923-2936

Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L., +, TSP April 1, 2019 1929-1940

Broadband antennas

Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays. *Gao, X.*, +, *TSP Sept. 15*, 2019 4809-4824

C

Calcium

Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. Sebastian, J., +, TSP June 1, 2019 2923-2936

Calibration

How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems. *Krishnamurthy, V.*, +, *TSP Dec. 15*, 2019 6511-6525

Multivariate Signal Modeling With Applications to Inertial Sensor Calibration. Xu, H., +, TSP Oct. 1, 2019 5143-5152

Cartography

Location-Free Spectrum Cartography. Teganya, Y., +, TSP Aug. 1, 2019 4013-4026

Causality

Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. Basu, S., +, TSP March 1, 2019 1207-1222

Cellular radio

Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647

Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X.*, +, *TSP Aug. 15, 2019 4152-4167*

Channel allocation

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Channel bank filters

A Framework of Adaptive Multiscale Wavelet Decomposition for Signals on Undirected Graphs. *Zheng*, *X.*, +, *TSP April 1*, 2019 1696-1711

- Advanced Low-Complexity Multicarrier Schemes Using Fast-Convolution Processing and Circular Convolution Decomposition. *Loulou, A.*, +, *TSP May 1*, 2019 2304-2319
- Learning Filter Bank Sparsifying Transforms. *Pfister, L.*, +, *TSP Jan. 15*, 2019 504-519
- Nonsubsampled Graph Filter Banks: Theory and Distributed Algorithms. Jiang, J., +, TSP Aug. 1, 2019 3938-3953
- Scalable M-Channel Critically Sampled Filter Banks for Graph Signals. Li, S., +, TSP Aug. 1, 2019 3954-3969
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Two-Channel Critically Sampled Graph Filter Banks With Spectral Domain Sampling. Sakiyama, A., +, TSP March 15, 2019 1447-1460

Channel capacity

- Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search. Chen, J., +, TSP Oct. 15, 2019 5380-5390
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250
- Sampling and Reconstruction of Multiple-Input Multiple-Output Channels. Lee, D.G., +, TSP Feb. 15, 2019 961-976

Channel coding

- Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908
- Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914
- Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, TSP March 15, 2019 1662-1677
- Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Channel estimation

- Advanced Properties of Full-Duplex Radio for Securing Wireless Network. Hua, Y., TSP Jan. 1, 2019 120-135
- An Approximate Message Passing Framework for Side Information. *Ma*, *A*., +, *TSP April 1*, 2019 1875-1888
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May 1, 2019 2291-2303*
- Asymptotic Task-Based Quantization With Application to Massive MIMO. Shlezinger, N., +, TSP Aug. 1, 2019 3995-4012
- Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908
- Bilinear Recovery Using Adaptive Vector-AMP. Sarkar, S., +, TSP July 1, 2019 3383-3396
- Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO. Shen, W., +, TSP Aug. 15, 2019 4204-4217
- Compressed Training Based Massive MIMO. Yilmaz, B.B., +, TSP March 1, 2019 1191-1206
- Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis. *Ruan, H.*, +, *TSP Dec. 15, 2019 6411-6423*
- Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking. Lian, L., +, TSP April 15, 2019 2007-2021
- Hardware-Limited Task-Based Quantization. Shlezinger, N., +, TSP Oct. 15, 2019 5223-5238
- Information-Theoretic Pilot Design for Downlink Channel Estimation in FDD Massive MIMO Systems. *Gu, Y., +, TSP May 1, 2019 2334-2346*
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1, 2019 245-259*
- Joint Channel Estimation and User Grouping for Massive MIMO Systems. Dai, J., +, TSP Feb. 1, 2019 622-637
- Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914
- Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels. *Han, J., +, TSP Feb. 15, 2019 915-929*

- Non-Uniform Burst-Sparsity Learning for Massive MIMO Channel Estimation. *Dai*, *J.*, +, *TSP Feb. 15*, 2019 1075-1087
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO. *Maatouk*, A., +, TSP Feb. 15, 2019 1006-1021
- On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam*, *Y*., +, *TSP May 15*, 2019 2608-2623
- Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, *TSP March 15*, 2019 1662-1677
- Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B., +, TSP Nov. 1, 2019 5479-5494*
- Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava*, S., +, TSP March 1, 2019 1251-1266
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250
- Reconstruction of Signals From Their Autocorrelation and Cross-Correlation Vectors, With Applications to Phase Retrieval and Blind Channel Estimation. *Jaganathan, K.*, +, *TSP June 1*, 2019 2937-2946
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C.*, +, *TSP March 15*, 2019 1477-1492
- Sampling and Reconstruction of Multiple-Input Multiple-Output Channels. *Lee, D.G.*, +, *TSP Feb. 15, 2019 961-976*
- Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*
- Super Resolution Phase Retrieval for Sparse Signals. *Baechler, G.*, +, *TSP Sept. 15*, 2019 4839-4854
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*
- Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays. Gao, X., +, TSP Sept. 15, 2019 4809-4824

Chirp modulation

Tests For the Parameters of Chirp Signal Model. *Dhar, S.S.*, +, *TSP Aug. 15*, 2019 4291-4301

Clocks

Pulse-Coupled Synchronization With Guaranteed Clock Continuity. *Anglea*, *T.*, +, *TSP March 15*, 2019 1596-1609

Cloud computing

- Privacy Preserving Collaborative Computing: Heterogeneous Privacy Guarantee and Efficient Incentive Mechanism. Wang, X., +, TSP Jan. 1, 2019 221-233
- Secure Mobile Edge Computing in IoT via Collaborative Online Learning. Li, B., +, TSP Dec. 1, 2019 5922-5935
- User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W., +, TSP May 1, 2019 2426-2438*

Clutter

- Adaptive Detection of Coherent Radar Targets in the Presence of Noise Jamming. Addabbo, P., +, TSP Dec. 15, 2019 6498-6510
- On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation. *Chen, Y., +, TSP Jan. 15, 2019 431-443*

CMOS integrated circuits

Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647

Code division multiple access

A New Construction Framework for Polyphase Complete Complementary Codes With Various Lengths. Das, S., +, TSP May 15, 2019 2639-2648

Codes

A New Construction Framework for Polyphase Complete Complementary Codes With Various Lengths. *Das*, S., +, *TSP May 15*, 2019 2639-2648

Cognition

Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L., +, TSP April 1, 2019 1929-1940

Cognitive radar

Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation. Aubry, A., +, TSP March 15, 2019 1396-1406

Cognitive radio

A Learning-Based Two-Stage Spectrum Sharing Strategy With Multiple Primary Transmit Power Levels. *Zhang, R.*, +, *TSP Sept. 15, 2019 4899-4914* Maximally Improper Signaling in Underlay MIMO Cognitive Radio Networks. *Lameiro, C.*, +, *TSP Dec. 15, 2019 6241-6255*

Communication complexity

A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization. Xing, C., +, TSP July 1, 2019 3531-3546

Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. *Liu*, *L.*, +, *TSP April 1*, 2019 1758-1773

Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Complex networks

Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. Basu, S., +, TSP March 1, 2019 1207-1222

Complexity theory

Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability. *Boche, H.*, +, *TSP Dec.* 15, 2019 6424-6439

Greedy Kernel Change-Point Detection. Truong, C., +, TSP Dec. 15, 2019 6204-6214

Low Complexity and High-Resolution Line Spectral Estimation Using Cyclic Minimization. Castanheira, D., +, TSP Dec. 15, 2019 6285-6300

Compressed sensing

Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908

Bilinear Recovery Using Adaptive Vector-AMP. Sarkar, S., +, TSP July 1, 2019 3383-3396

Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO. Shen, W., +, TSP Aug. 15, 2019 4204-4217

Compressive Sensing Using Symmetric Alpha-Stable Distributions for Robust Sparse Signal Reconstruction. *Tzagkarakis*, G., +, TSP Feb. 1, 2019 808-820

Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part I: Array Designs. *Li*, *C.*, +, *TSP June 1*, 2019 2898-2910

Corrections to "On the Restricted Isometry of the Columnwise Khatri–Rao Product" [Mar 18 1170-1183]. Khanna, S., +, TSP May 1, 2019 2387-2388

Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417

High Resolution Compressed Sensing Radar Using Difference Set Codes. Taghavi, I., +, TSP Jan. 1, 2019 136-148

Measurement Bounds for Observability of Linear Dynamical Systems Under Sparsity Constraints. *Joseph, G.*, +, *TSP April 15*, 2019 1992-2006

MMSE Approximation For Sparse Coding Algorithms Using Stochastic Resonance. Simon, D., +, TSP Sept. 1, 2019 4597-4610

Modeling the Active Neuron Separation in the Compressed Sensing and Finite Rate of Innovation Framework. *Schnier, T.*, +, *TSP Sept. 1, 2019 4521-4534*

Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658

Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. Chen, P., +, TSP Jan. 1, 2019 208-220

One-Bit Compressive Sensing via Schur-Concave Function Minimization. *Xiao*, P., +, *TSP Aug. 15*, 2019 4139-4151

Scalable Mean-Field Sparse Bayesian Learning. Worley, B., TSP Dec. 15, 2019 6314-6326

Secure Distributed Detection of Sparse Signals via Falsification of Local Compressive Measurements. *Li*, *C.*, +, *TSP Sept. 15*, 2019 4696-4706

Sparse Recovery and Dictionary Learning From Nonlinear Compressive Measurements. Rencker, L., +, TSP Nov. 1, 2019 5659-5670

Sparse Signal Recovery via Generalized Entropy Functions Minimization. Huang, S., +, TSP March 1, 2019 1322-1337

Swift-Link: A Compressive Beam Alignment Algorithm for Practical mmWave Radios. Myers, N.J., +, TSP Feb. 15, 2019 1104-1119

TARM: A Turbo-Type Algorithm for Affine Rank Minimization. *Xue*, Z., +, *TSP Nov. 15*, 2019 5730-5745

Thinned Coprime Array for Second-Order Difference Co-Array Generation With Reduced Mutual Coupling. *Raza, A.*, +, *TSP April 15, 2019 2052-2065*

Tight Performance Bounds for Compressed Sensing With Conventional and Group Sparsity. *Ranjan*, S., +, *TSP June 1*, 2019 2854-2867

Computational complexity

A CPHD Approximation Based on a Discrete-Gamma Cardinality Model. De Melo, F.E., +, TSP Jan. 15, 2019 336-350

A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960

A Low-Complexity Nonlinear Least Mean Squares Filter Based on a Decomposable Volterra Model. *Pinheiro, F.C.*, +, *TSP Nov. 1*, 2019 5463-5478

A Novel Kullback–Leibler Divergence Minimization-Based Adaptive Student's t-Filter. *Huang*, Y., +, TSP Oct. 15, 2019 5417-5432

A Simple ML Detection for Coded Generalized Frequency Division Multiplexing in MIMO Channels. *Towliat, M.*, +, *TSP Feb. 1*, 2019 798-807

Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142

Advanced Low-Complexity Multicarrier Schemes Using Fast-Convolution Processing and Circular Convolution Decomposition. *Loulou, A.*, +, *TSP May 1*, 2019 2304-2319

Algorithms and Fundamental Limits for Unlabeled Detection Using Types. Marano, S., +, TSP April 15, 2019 2022-2035

Alternating Iteratively Reweighted Least Squares Minimization for Low-Rank Matrix Factorization. *Giampouras, P.V.*, +, *TSP Jan. 15, 2019 490-503*

An Accelerated Composite Gradient Method for Large-Scale Composite Objective Problems. Florea, M.I., +, TSP Jan. 15, 2019 444-459

Bounding Multivariate Trigonometric Polynomials. *Pfister, L.*, +, *TSP Feb.* 1, 2019 700-707

CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. *Levie, R.*, +, *TSP Jan. 1, 2019 97-109*

Computationally Efficient Multi-Agent Multi-Object Tracking With Labeled Random Finite Sets. *Li, S.*, +, *TSP Jan. 1, 2019 260-275*

Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555

Corrections to "On the Restricted Isometry of the Columnwise Khatri–Rao Product" [Mar 18 1170-1183]. *Khanna*, S., +, TSP May 1, 2019 2387-2388

Decentralized Equalization With Feedforward Architectures for Massive MU-MIMO. Jeon, C., +, TSP Sept. 1, 2019 4418-4432

Distributed Non-Convex First-Order Optimization and Information Processing: Lower Complexity Bounds and Rate Optimal Algorithms. *Sun*, *H*., +, *TSP Nov. 15*, 2019 5912-5928

Distributed Topology Manipulation to Control Epidemic Spreading Over Networks. *Xue*, *D.*, +, *TSP March 1*, 2019 1163-1174

Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series. *Tugnait, J.K., TSP Oct. 1, 2019 5062-5077*

Efficient Global Optimal Resource Allocation in Non-Orthogonal Interference Networks. *Matthiesen, B., +, TSP Nov. 1, 2019 5612-5627*

Extraction of Useful Information Content From Noisy Signals Based on Structural Affinity of Clustered TFDs' Coefficients. Saulig, N., +, TSP June 15, 2019 3154-3167

Fast and Provable Algorithms for Learning Two-Layer Polynomial Neural Networks. *Soltani, M.*, +, *TSP July 1, 2019 3361-3371*

Fast Graph Fourier Transforms Based on Graph Symmetry and Bipartition. Lu, K., +, TSP Sept. 15, 2019 4855-4869

- Flexible Array Response Control via Oblique Projection. Zhang, X., +, TSP June 15, 2019 3126-3139
- Frequency Synchronization for OFDM-Based Massive MIMO Systems. Sabeti, P., +, TSP June 1, 2019 2973-2986
- Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. *Ge, Y., +, TSP April 15, 2019 2143-2158*
- Fusion of Correlated Decisions Using Regular Vine Copulas. Zhang, S., +, TSP April 15, 2019 2066-2079
- Gather and Conquer: Region-Based Strategies to Accelerate Safe Screening Tests. *Herzet, C.*, +, *TSP June 15*, 2019 3300-3315
- Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation. *Gao. R.*, +, *TSP Oct. 1, 2019 5078-5092*
- Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647
- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- Learning Tensors From Partial Binary Measurements. *Ghadermarzy, N.*, +, *TSP Jan. 1, 2019 29-40*
- Learning to Detect. Samuel, N., +, TSP May 15, 2019 2554-2564
- Linear-Complexity Exponentially-Consistent Tests for Universal Outlying Sequence Detection. Bu, Y., +, TSP April 15, 2019 2115-2128
- Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach. *Naghsh*, *M.M.*, +, *TSP Sept. 15*, 2019 4707-4710
- Minimax Optimal Algorithms for Adversarial Bandit Problem With Multiple Plays. *Vural*, *N.M.*, +, *TSP Aug.* 15, 2019 4383-4398
- Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967
- Multi-User Regularized Zero-Forcing Beamforming. Nguyen, L.D., +, TSP June 1, 2019 2839-2853
- Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. Wang, S., +, TSP Jan. 1, 2019 54-69
- Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299
- Non-Iterative MDS Method for Collaborative Network Localization With Sparse Range and Pointing Measurements. *Hamaoui*, M., TSP Feb. 1, 2019 568-578
- Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. Chen, P., +, TSP Jan. 1, 2019 208-220
- On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO. *Maatouk*, A., +, TSP Feb. 15, 2019 1006-1021
- On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. *Wang, J., +, TSP Aug. 15, 2019 4317-4332*
- Online Change-Point Detection of Linear Regression Models. Geng, J., +, TSP June 15, 2019 3316-3329
- Online Learning With Inexact Proximal Online Gradient Descent Algorithms. *Dixit, R.*, +, *TSP March 1*, 2019 1338-1352
- Optimal Estimates of Two Common Remainders for a Robust Generalized Chinese Remainder Theorem. Li, X., +, TSP April 1, 2019 1824-1837
- Optimized Signal Distortion for PAPR Reduction of OFDM Signals With IFFT/FFT Complexity Via ADMM Approaches. *Wang, Y.*, +, *TSP Jan. 15*, 2019 399-414
- Particle-Based Adaptive-Lag Online Marginal Smoothing in General State-Space Models. Alenlov, J., +, TSP Nov. 1, 2019 5571-5582
- SAFFRON: A Fast, Efficient, and Robust Framework for Group Testing Based on Sparse-Graph Codes. Lee, K., +, TSP Sept. 1, 2019 4649-4664
- Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs. *Ioannidis*, V.N., +, TSP May 1, 2019 2263-2274
- Sketched Clustering via Hybrid Approximate Message Passing. Byrne, E., +, TSP Sept. 1, 2019 4556-4569
- Stable Safe Screening and Structured Dictionaries for Faster ℓ_1 Regularization. Dantas, C.F., +, TSP July 15, 2019 3756-3769
- State-Space Adaptive Nonlinear Self-Interference Cancellation for Full-Duplex Communication. *Vogt, H.*, +, *TSP June 1, 2019 2810-2825*
- Super Resolution Phase Retrieval for Sparse Signals. *Baechler, G.*, +, *TSP Sept. 15*, 2019 4839-4854

- TARM: A Turbo-Type Algorithm for Affine Rank Minimization. *Xue*, Z., +, *TSP Nov. 15*, 2019 5730-5745
- The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunmi*, T., +, TSP Dec. 1, 2019 5909-5921
- Wideband MIMO Radar Waveform Design. Yu, X., +, TSP July 1, 2019 3487-3501

Computational geometry

- Low-Rank Data Completion With Very Low Sampling Rate Using Newton's Method. *Ashraphijuo*, M., +, TSP April 1, 2019 1849-1859
- Matrix Completion With Deterministic Pattern: A Geometric Perspective. Shapiro, A., +, TSP Feb. 15, 2019 1088-1103

Computational modeling

- Computation Scheduling for Distributed Machine Learning With Straggling Workers. *Amiri*, M.M., +, TSP Dec. 15, 2019 6270-6284
- Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability. *Boche, H.*, +, *TSP Dec.* 15, 2019 6424-6439

Computer aided instruction

Secure Mobile Edge Computing in IoT via Collaborative Online Learning. *Li*, *B.*, +, *TSP Dec. 1*, 2019 5922-5935

Computer network security

- Anomaly Detection in Partially Observed Traffic Networks. *Hou*, E., +, *TSP March 15*, 2019 1461-1476
- Resilient Distributed Parameter Estimation With Heterogeneous Data. *Chen*, *Y.*, +, *TSP Oct. 1*, 2019 4918-4933
- Secure Mobile Edge Computing in IoT via Collaborative Online Learning. Li, B., +, TSP Dec. 1, 2019 5922-5935

Concave programming

- Correction of Corrupted Columns Through Fast Robust Hankel Matrix Completion. Zhang, S., +, TSP May 15, 2019 2580-2594
- Distributed Non-Convex First-Order Optimization and Information Processing: Lower Complexity Bounds and Rate Optimal Algorithms. *Sun, H.*, +, *TSP Nov. 15, 2019 5912-5928*
- Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari*, *P.*, +, *TSP Feb.* 1, 2019 594-608
- Efficient Global Optimal Resource Allocation in Non-Orthogonal Interference Networks. *Matthiesen, B., +, TSP Nov. 1, 2019 5612-5627*
- Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao*, Y., +, TSP July 15, 2019 3770-3784
- Event-Driven Sensor Scheduling for Mission-Critical Control Applications. *Yu, M.*, +, *TSP March 15*, 2019 1537-1549
- Manifold Optimization Over the Set of Doubly Stochastic Matrices: A Second-Order Geometry. *Douik, A.*, +, *TSP Nov. 15*, 2019 5761-5774
- Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach. Naghsh, M.M., +, TSP Sept. 15, 2019 4707-4719
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- New Designs on MVDR Robust Adaptive Beamforming Based on Optimal Steering Vector Estimation. *Huang, Y., +, TSP July 15, 2019 3624-3638*
- Nonconvex Optimization Meets Low-Rank Matrix Factorization: An Overview. Chi, Y., +, TSP Oct. 15, 2019 5239-5269
- Nonconvex Regularized Robust PCA Using the Proximal Block Coordinate Descent Algorithm. Wen, F., +, TSP Oct. 15, 2019 5402-5416
- On Global Linear Convergence in Stochastic Nonconvex Optimization for Semidefinite Programming. Zeng, J., +, TSP Aug. 15, 2019 4261-4275
- On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. *Wang, J.*, +, *TSP Aug. 15, 2019 4317-4332*
- One-Bit Compressive Sensing via Schur-Concave Function Minimization. *Xiao, P., +, TSP Aug. 15, 2019 4139-4151*
- Optimal Spectral Initialization for Signal Recovery With Applications to Phase Retrieval. *Luo*, *W*., +, *TSP May 1*, 2019 2347-2356
- Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. *Wang, F.*, +, *TSP July 15, 2019 3818-*

- Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X., +, TSP Aug. 15, 2019 4152-4167*
- Rational Optimization for Nonlinear Reconstruction With Approximate ℓ_0 Penalization. Castella, M., +, TSP March 15, 2019 1407-1417
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C., +, TSP March 15, 2019 1477-1492*
- Robust PCA via ℓ_0 - ℓ_1 Regularization. Liu, J., +, TSP Jan. 15, 2019 535-549
- Sequence Design for Spectral Shaping via Minimization of Regularized Spectral Level Ratio. Wu, L., +, TSP Sept. 15, 2019 4683-4695
- Spectrally Constrained MIMO Radar Waveform Design Based on Mutual Information. *Tang, B., +, TSP Feb. 1, 2019 821-834*
- Stable Principal Component Pursuit via Convex Analysis. Yin, L., +, TSP May 15, 2019 2595-2607
- Stochastic Successive Convex Approximation for Non-Convex Constrained Stochastic Optimization. *Liu*, A., +, *TSP Aug. 15*, 2019 4189-4203
- Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1*, 2019 3561-3575
- Weakly Convex Regularized Robust Sparse Recovery Methods With Theoretical Guarantees. Yang, C., +, TSP Oct. 1, 2019 5046-5061
- Wideband MIMO Radar Waveform Design. Yu, X., +, TSP July 1, 2019 3487-3501

Contracts

A Reputation-Based Contract for Repeated Crowdsensing With Costly Verification. *Dobakhshari*, D.G., +, TSP Dec. 1, 2019 6092-6104

Control charts

Quickest Change Detection in the Presence of a Nuisance Change. *Lau*, *T.S.*, +, *TSP Oct. 15*, 2019 5281-5296

Control engineering computing

A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746

Controllability

Controllability of Bandlimited Graph Processes Over Random Time Varying Graphs. Gama, F., +, TSP Dec. 15, 2019 6440-6454

Convergence

- A Primal-Dual Quasi-Newton Method for Exact Consensus Optimization. Eisen, M., +, TSP Dec. 1, 2019 5983-5997
- A Unified Approach to the Statistical Convergence Analysis of Frequency-Domain Adaptive Filters. *Yang*, F., +, TSP April 1, 2019 1785-1796
- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L.*, +, *TSP April 1, 2019 1774-1784*
- Convergence Analysis of Gaussian Belief Propagation Under High-Order Factorization and Asynchronous Scheduling. *Li*, *B*., +, *TSP June 1*, 2019 2884-2897
- Distributed Gradient Descent Algorithm Robust to an Arbitrary Number of Byzantine Attackers. Cao, X., +, TSP Nov. 15, 2019 5850-5864
- Efficient Design of Binary Sequences With Low Autocorrelation Sidelobes. Lin, R., +, TSP Dec. 15, 2019 6397-6410
- Exact Diffusion for Distributed Optimization and Learning—Part I: Algorithm Development. *Yuan, K.*, +, *TSP Feb. 1, 2019 708-723*
- Exact Diffusion for Distributed Optimization and Learning—Part II: Convergence Analysis. *Yuan, K., +, TSP Feb. 1, 2019 724-739*
- K-Medoids Clustering of Data Sequences With Composite Distributions. Wang, T., +, TSP April 15, 2019 2093-2106
- Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. Wang, Z., +, TSP Aug. 15, 2019 4342-4356
- Low Complexity and High-Resolution Line Spectral Estimation Using Cyclic Minimization. Castanheira, D., +, TSP Dec. 15, 2019 6285-6300
- On Global Linear Convergence in Stochastic Nonconvex Optimization for Semidefinite Programming. Zeng, J., +, TSP Aug. 15, 2019 4261-4275
- Online Primal-Dual Methods With Measurement Feedback for Time-Varying Convex Optimization. *Bernstein, A.*, +, *TSP April 15, 2019 1978-1991* Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. *Ying, B.*, +, *TSP Jan. 15, 2019 474-489*
- Supervised Learning Under Distributed Features. Ying, B., +, TSP Feb. 15, 2019 977-992

Variance-Reduced Stochastic Learning by Networked Agents Under Random Reshuffling. Yuan, K., +, TSP Jan. 15, 2019 351-366

Convergence of numerical methods

- A Decentralized Proximal-Gradient Method With Network Independent Step-Sizes and Separated Convergence Rates. *Li*, *Z.*, +, *TSP Sept. 1*, 2019 4494-4506
- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L.*, +, *TSP April 1, 2019 1774-1784*
- Communication-Censored ADMM for Decentralized Consensus Optimization. *Liu*, *Y*., +, *TSP May 15*, 2019 2565-2579
- Distributed Solution of Large-Scale Linear Systems via Accelerated Projection-Based Consensus. *Azizan-Ruhi*, N., +, TSP July 15, 2019 3806-3817
- Fixed Points of Gaussian Belief Propagation and Relation to Convergence. *Li*, *B*., +, *TSP Dec. 1*, 2019 6025-6038
- Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153
- Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299
- Nonconvex Regularized Robust PCA Using the Proximal Block Coordinate Descent Algorithm. Wen, F., +, TSP Oct. 15, 2019 5402-5416
- On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. *Wang, J., +, TSP Aug, 15, 2019 4317-4332*
- Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels. Koppel, A., +, TSP May 15, 2019 2528-2542
- Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks. *Yu, Y., +, TSP March 15, 2019 1566-1581*
- The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. *Slavakis, K., TSP June 1, 2019 2868-2883*

Convex programming

- Alternating Iteratively Reweighted Least Squares Minimization for Low-Rank Matrix Factorization. *Giampouras, P.V.*, +, *TSP Jan. 15, 2019 490-503*
- An Accelerated Composite Gradient Method for Large-Scale Composite Objective Problems. *Florea, M.I.*, +, *TSP Jan. 15*, 2019 444-459
- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L., +, TSP April 1, 2019 1774-1784*
- Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks. *Bedi, A.S.*, +, *TSP April 1, 2019 1742-1757*
- Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823
- Communication-Censored ADMM for Decentralized Consensus Optimization. *Liu*, *Y*, +, *TSP May 15*, 2019 2565-2579
- Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization. Yang, K., +, TSP June 15, 2019 3087-3099
- Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution. *Jia*, T., +, TSP Nov. 15, 2019 5881-5895
- Efficient Global Optimal Resource Allocation in Non-Orthogonal Interference Networks. *Matthiesen, B., +, TSP Nov. 1, 2019 5612-5627*
- Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao*, Y., +, TSP July 15, 2019 3770-3784
- Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727
- Hypercomplex Tensor Completion via Convex Optimization. *Mizoguchi, T.*, +, *TSP Aug. 1, 2019 4078-4092*
- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- Manifold Optimization Over the Set of Doubly Stochastic Matrices: A Second-Order Geometry. *Douik, A., +, TSP Nov. 15, 2019 5761-5774*
- Max-Min Fairness Design for MIMO Interference Channels: A Minorization-Maximization Approach. *Naghsh, M.M.*, +, *TSP Sept. 15*, 2019 4707-4719
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411

- Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299
- Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method. Chen, W., +, TSP Nov. 15, 2019 5785-5797
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- On the Properties of Gromov Matrices and Their Applications in Network Inference. *Ji*, *F*., +, *TSP May 15*, 2019 2624-2638
- Online Primal-Dual Methods With Measurement Feedback for Time-Varying Convex Optimization. Bernstein, A., +, TSP April 15, 2019 1978-1991
- Optimal Mean-Reverting Portfolio With Leverage Constraint for Statistical Arbitrage in Finance. Zhao, Z., +, TSP April 1, 2019 1681-1695
- Optimal Spectral Initialization for Signal Recovery With Applications to Phase Retrieval. *Luo*, W., +, *TSP May 1*, 2019 2347-2356
- Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression. *Balda, E.R.*, +, *TSP Dec. 1, 2019 6078-6091*
- Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. *Wang, F.*, +, *TSP July 15, 2019 3818-3831*
- Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*
- Projection-Based Regularized Dual Averaging for Stochastic Optimization. Ushio, A., +, TSP May 15, 2019 2720-2733
- Reconstruction of Signals From Their Autocorrelation and Cross-Correlation Vectors, With Applications to Phase Retrieval and Blind Channel Estimation. *Jaganathan*, K., +, TSP June 1, 2019 2937-2946
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C., +, TSP March 15, 2019 1477-1492*
- Robustness of Two-Dimensional Line Spectral Estimation Against Spiky Noise. Valiulahi, I., +, TSP Dec. 1, 2019 5998-6008
- Sparse Recovery and Dictionary Learning From Nonlinear Compressive Measurements. Rencker, L., +, TSP Nov. 1, 2019 5659-5670
- Stable Principal Component Pursuit via Convex Analysis. Yin, L., +, TSP May 15, 2019 2595-2607
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. Ying, B., +, TSP Jan. 15, 2019 474-489
- Stochastic Successive Convex Approximation for Non-Convex Constrained Stochastic Optimization. *Liu*, A., +, *TSP Aug. 15*, 2019 4189-4203
- Supervised Learning Under Distributed Features. Ying, B., +, TSP Feb. 15, 2019 977-992
- Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L., +, TSP April 1, 2019 1929-1940
- The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. *Slavakis, K., TSP June 1, 2019 2868-2883*
- Tight Performance Bounds for Compressed Sensing With Conventional and Group Sparsity. *Ranjan, S.*, +, *TSP June 1*, 2019 2854-2867
- Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1, 2019 3561-3575*
- Two-Dimensional Super-Resolution via Convex Relaxation. *Valiulahi, I.,* +, *TSP July 1, 2019 3372-3382*
- Weakly Convex Regularized Robust Sparse Recovery Methods With Theoretical Guarantees. *Yang*, C., +, TSP Oct. 1, 2019 5046-5061
- Wideband MIMO Radar Waveform Design. Yu, X., +, TSP July 1, 2019 3487-3501

Convolution

- A Hilbert Space Theory of Generalized Graph Signal Processing. *Ji*, F, +, *TSP Dec. 15*, 2019 6188-6203
- Advanced Low-Complexity Multicarrier Schemes Using Fast-Convolution Processing and Circular Convolution Decomposition. *Loulou, A.*, +, *TSP May 1*, 2019 2304-2319
- CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. Levie, R., +, TSP Jan. 1, 2019 97-109
- Convolution and Multichannel Sampling for the Offset Linear Canonical Transform and Their Applications. *Wei*, *D*., +, *TSP Dec. 1*, 2019 6009-6024
- Convolutional Neural Network Architectures for Signals Supported on Graphs. Gama, F., +, TSP Feb. 15, 2019 1034-1049

- Non-Existence of Convolution Sum System Representations. *Boche, H.*, +, TSP May 15, 2019 2649-2664
- Simultaneous Sparse Recovery and Blind Demodulation. *Xie, Y., +, TSP Oct.* 1, 2019 5184-5199

Convolutional neural nets

- Convolutional Neural Network Architectures for Signals Supported on Graphs. Gama, F., +, TSP Feb. 15, 2019 1034-1049
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555
- DeepLOB: Deep Convolutional Neural Networks for Limit Order Books. Zhang, Z., +, TSP June 1, 2019 3001-3012
- Joint Time-Frequency Scattering. Anden, J., +, TSP July 15, 2019 3704-3718

Cooperative communication

- Decentralized Gaussian Filters for Cooperative Self-Localization and Multi-Target Tracking. Sharma, P., +, TSP Nov. 15, 2019 5896-5911
- Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. *Wang, F.*, +, *TSP July 15, 2019 3818-3831*

Correlation

Efficient Design of Binary Sequences With Low Autocorrelation Sidelobes. Lin, R., +, TSP Dec. 15, 2019 6397-6410

Correlation methods

- Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810
- Correction of Corrupted Columns Through Fast Robust Hankel Matrix Completion. Zhang, S., +, TSP May 15, 2019 2580-2594
- Covariance Matrix Estimation From Linearly-Correlated Gaussian Samples. Cui, W., +, TSP April 15, 2019 2187-2195
- Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486
- DOA Estimation Exploiting Sparse Array Motions. Qin, G., +, TSP June 1, 2019 3013-3027
- Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. Wang, Z., +, TSP Aug. 15, 2019 4342-4356
- Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688
- On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. *Wang, J., +, TSP Aug, 15, 2019 4317-4332*
- Structured SUMCOR Multiview Canonical Correlation Analysis for Large-Scale Data. Kanatsoulis, C.I., +, TSP Jan. 15, 2019 306-319

Correlation theory

- Graph Multiview Canonical Correlation Analysis. Chen, J., +, TSP June 1, 2019 2826-2838
- New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications. *Miao, H.*, +, *TSP Nov. 1, 2019 5543-5557*

Covariance analysis

- Information Geometric Approach to Multisensor Estimation Fusion. *Tang*, M., +, TSP Jan. 15, 2019 279-292
- Multivariate Signal Modeling With Applications to Inertial Sensor Calibration. *Xu*, *H*., +, *TSP Oct. 1*, 2019 5143-5152
- Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach. Guo, Z., +, TSP Jan. 1, 2019 194-207

Covariance matrices

- A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix. Raghavan, R.S., TSP Sept. 1, 2019 4624-4635
- A Unified Approach to the Statistical Convergence Analysis of Frequency-Domain Adaptive Filters. *Yang*, F., +, TSP April 1, 2019 1785-1796
- Adaptive Radar Detection in Gaussian Disturbance With Structured Covariance Matrix via Invariance Theory. *Tang, M.*, +, *TSP Nov. 1, 2019 5671-5695*

- An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908
- Corrections to "A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix" [Sep 19 4624-4635]. *Raghavan, R.S., TSP Nov. 1, 2019 5611*
- Corrections to "On the Restricted Isometry of the Columnwise Khatri–Rao Product" [Mar 18 1170-1183]. *Khanna*, S., +, TSP May 1, 2019 2387-2388
- Covariance Matrix Estimation From Linearly-Correlated Gaussian Samples. Cui, W., +, TSP April 15, 2019 2187-2195
- Design of Robust Radar Detectors Through Random Perturbation of the Target Signature. *Coluccia*, A., +, TSP Oct. 1, 2019 5118-5129
- Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis. *Ruan, H.*, +, *TSP Dec. 15, 2019 6411-6423*
- Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter. Liu, J., +, TSP Feb. 15, 2019 1022-1033
- Energy Efficiency Optimization in MIMO Interference Channels: A Successive Pseudoconvex Approximation Approach. Yang, Y., +, TSP Aug. 1, 2019 4107-4121
- False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96
- False Alarm Rate of the GLRT for Subspace Signals in Subspace Interference Plus Gaussian Noise. Liu, J., +, TSP June 1, 2019 3058-3069
- Information-Theoretic Pilot Design for Downlink Channel Estimation in FDD Massive MIMO Systems. Gu, Y., +, TSP May 1, 2019 2334-2346
- Joint Independent Subspace Analysis: Uniqueness and Identifiability. *Lahat*, D., +, TSP Feb. 1, 2019 684-699
- Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator. Zuo, W., +, TSP Jan. 15, 2019 415-430
- Max-Min Fairness Design for MIMO Interference Channels: A Minorization-Maximization Approach. *Naghsh, M.M.*, +, *TSP Sept. 15*, 2019 4707-4719
- Mismatched Signal Rejection Performance of the Persymmetric GLRT Detector. Liu, J., +, TSP March 15, 2019 1610-1619
- MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution. *Dytso, A.*, +, *TSP Dec. 15*, 2019 6352-6367
- Nonlinear Distortion Noise and Linear Attenuation in MIMO Systems— Theory and Application to Multiband Transmitters. *Ronnow, D.*, +, *TSP Oct. 15*, 2019 5203-5212
- On the Asymptotics of Maronna's Robust PCA. *Draskovic*, G., +, TSP Oct. 1, 2019 4964-4975
- One-Step Persymmetric GLRT for Subspace Signals. Liu, J., +, TSP July 15, 2019 3639-3648
- OPARC: Optimal and Precise Array Response Control Algorithm—Part II: Multi-Points and Applications. *Zhang, X.*, +, *TSP Feb. 1, 2019 668-683*
- Optimal Bayesian Classification With Vector Autoregressive Data Dependency. *Zollanvari*, A., +, *TSP June 15*, 2019 3073-3086
- Optimal Shrinkage Covariance Matrix Estimation Under Random Sampling From Elliptical Distributions. *Ollila, E., +, TSP May 15, 2019 2707-2719*
- Optimization Algorithms for Graph Laplacian Estimation via ADMM and MM. Zhao, L., +, TSP Aug. 15, 2019 4231-4244
- Parallel Transport on the Cone Manifold of SPD Matrices for Domain Adaptation. Yair, O., +, TSP April 1, 2019 1797-1811
- Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution. Liu, Y., +, TSP Aug. 15, 2019 4370-4382
- Robust Detection in MIMO Radar With Steering Vector Mismatches. *Liu*, *J.*, +, *TSP Oct. 15*, 2019 5270-5280
- Source Resolvability of Spatial-Smoothing-Based Subspace Methods: A Hadamard Product Perspective. *Yang*, Z., +, *TSP May 15*, 2019 2543-2553
- Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection. Zhao, W., +, TSP Nov. 15, 2019 5746-5760

- Subspace Averaging and Order Determination for Source Enumeration. Garg, V., +, TSP June 1, 2019 3028-3041
- Testing the Structure of a Gaussian Graphical Model With Reduced Transmissions in a Distributed Setting. *Chen, Y., +, TSP Oct. 15, 2019 5391-5401*
- Tests for the Weights of the Global Minimum Variance Portfolio in a High-Dimensional Setting. *Bodnar, T., +, TSP Sept. 1, 2019 4479-4493*
- Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models. Yu, H., +, TSP Dec. 15, 2019 6468-6482

Cramer-Rao bounds

- Co-Design for Overlaid MIMO Radar and Downlink MISO Communication Systems via Cramér–Rao Bound Minimization. *Cheng, Z., +, TSP Dec.* 15, 2019 6227-6240
- MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution. *Dytso, A.*, +, *TSP Dec. 15*, 2019 6352-6367

Crowdsourcing

An Incentive Scheme for Sensor Fusion With Strategic Sensors. *Chen, K.*, +, *TSP Dec. 15, 2019 6342-6351*

Cryptographic protocols

On the Algorithmic Computability of the Secret Key and Authentication Capacity Under Channel, Storage, and Privacy Leakage Constraints. *Boche, H.*, +, *TSP Sept. 1, 2019 4636-4648*

Curve fitting

iMUSIC: A Family of MUSIC-Like Algorithms for Integer Period Estimation. *Tenneti*, S.V., +, TSP Jan. 15, 2019 367-382

Curvelet transforms

Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. *Hwang, W.*, +, *TSP June 15, 2019 3330-3343*

CW rada

Automatic Recognition of General LPI Radar Waveform Using SSD and Supplementary Classifier. *Hoang, L.M.*, +, *TSP July 1*, 2019 3516-3530

D

Data acquisition

Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486

Data analysis

- Full Mean Square Performance Bounds on Quaternion Estimators for Improper Data. *Xia*, *Y*, +, *TSP Aug. 1*, 2019 4093-4106
- Gaussian Weighting Reversion Strategy for Accurate Online Portfolio Selection. Cai, X., +, TSP Nov. 1, 2019 5558-5570
- Graph Multiview Canonical Correlation Analysis. Chen, J., +, TSP June 1, 2019 2826-2838
- Graph-Variate Signal Analysis. *Smith, K.*, +, *TSP Jan. 15, 2019 293-305* Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J.*, +, *TSP Feb. 1, 2019 740-752*
- On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals. *Garfinkle, C.J.*, +, *TSP Dec. 1, 2019 5884-5892*
- Privacy Preserving Collaborative Computing: Heterogeneous Privacy Guarantee and Efficient Incentive Mechanism. *Wang, X.*, +, *TSP Jan. 1, 2019 221-233*
- Structured and Unstructured Outlier Identification for Robust PCA: A Fast Parameter Free Algorithm. *Menon*, V., +, *TSP May 1*, 2019 2439-2452
- Structured SUMCOR Multiview Canonical Correlation Analysis for Large-Scale Data. Kanatsoulis, C.I., +, TSP Jan. 15, 2019 306-319
- Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L., +, TSP April 1, 2019 1929-1940

Data compression

Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468

User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1*, 2019 2426-2438

Data handling

K-Medoids Clustering of Data Sequences With Composite Distributions. Wang, T., +, TSP April 15, 2019 2093-2106

Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour, M.*, +, *TSP Jan. 1*, 2019 17-28

Provable Subspace Tracking From Missing Data and Matrix Completion. Narayanamurthy, P., +, TSP Aug. 15, 2019 4245-4260

Data integrity

Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach. Guo, Z., +, TSP Jan. 1, 2019 194-207

Data mining

Sequential Outlier Detection Based on Incremental Decision Trees. Gokcesu, K., +, TSP Feb. 15, 2019 993-1005

Structured and Unstructured Outlier Identification for Robust PCA: A Fast Parameter Free Algorithm. *Menon*, V, +, *TSP May 1*, 2019 2439-2452

Data models

Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models. Yu, H., +, TSP Dec. 15, 2019 6468-6482

Data privacy

Online Graph-Adaptive Learning With Scalability and Privacy. Shen, Y., +, TSP May 1, 2019 2471-2483

Privacy Preserving Collaborative Computing: Heterogeneous Privacy Guarantee and Efficient Incentive Mechanism. Wang, X., +, TSP Jan. 1, 2019 221-233

Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982

Data reduction

Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J.*, +, *TSP Feb. 1*, 2019 740-752

Decision making

Beliefs in Decision-Making Cascades. Seo, D., +, TSP Oct. 1, 2019 5103-5117

Distributed Topology Manipulation to Control Epidemic Spreading Over Networks. *Xue*, *D.*, +, *TSP March 1*, 2019 1163-1174

Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search. Chen, J., +, TSP Oct. 15, 2019 5380-5390

Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari*, *J.*, +, *TSP Feb. 1*, 2019 638-651

Sequential Random Distortion Testing of Non-Stationary Processes. *Khanduri, P., +, TSP Nov. 1, 2019 5450-5462*

Decision theory

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379

Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari*, J., +, TSP Feb. 1, 2019 638-651

Decision trees

Sequential Outlier Detection Based on Incremental Decision Trees. Gokcesu, K., +, TSP Feb. 15, 2019 993-1005

Decoding

Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417

Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. Wasson, M., +, TSP Oct. 1, 2019 4976-4991

Hybrid Vector Perturbation Precoding: The Blessing of Approximate Message Passing. Lyu, S., +, TSP Jan. 1, 2019 178-193

Hypothesis Test for Bounds on the Size of Random Defective Set. *D'yach-kov*, A., +, TSP Nov. 15, 2019 5775-5784

Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914

Joint Decoder Design for SSDs. Li, Q., TSP May 1, 2019 2399-2409

Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. *Wang*, Z., +, *TSP* Aug. 15, 2019 4342-4356

On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam*, Y, +, TSP May 15, 2019 2608-2623

Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, *TSP March 15*, 2019 1662-1677

Rate-Flexible Fast Polar Decoders. Hashemi, S.A., +, TSP Nov. 15, 2019 5689-5701

SAFFRON: A Fast, Efficient, and Robust Framework for Group Testing Based on Sparse-Graph Codes. *Lee, K.*, +, *TSP Sept. 1, 2019 4649-4664* Stochastic Bit-Wise Iterative Decoding of Polar Codes. *Han, K.*, +, *TSP March 1, 2019 1138-1151*

Deconvolution

A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*

Bilinear Recovery Using Adaptive Vector-AMP. Sarkar, S., +, TSP July 1, 2019 3383-3396

Focused Blind Deconvolution. Bharadwaj, P., +, TSP June 15, 2019 3168-3180

Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658

Nonconvex Optimization Meets Low-Rank Matrix Factorization: An Overview. Chi, Y., +, TSP Oct. 15, 2019 5239-5269

Decorrelation

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk*, *J.*, +, *TSP April 15*, 2019 2221-2233

Delay estimation

On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation. *Chen, Y., +, TSP Jan. 15, 2019 431-443*

Delays

Computation Scheduling for Distributed Machine Learning With Straggling Workers. *Amiri*, *M.M.*, +, *TSP Dec. 15*, 2019 6270-6284

Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution. *Jia, T., +, TSP Nov. 15, 2019 5881-5895*

Online Change-Point Detection of Linear Regression Models. Geng, J., +, TSP June 15, 2019 3316-3329

Demodulation

Simultaneous Sparse Recovery and Blind Demodulation. *Xie, Y., +, TSP Oct.* 1, 2019 5184-5199

Detectors

Adaptive Detection of Coherent Radar Targets in the Presence of Noise Jamming. Addabbo, P., +, TSP Dec. 15, 2019 6498-6510

Corrections to "A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix" [Sep 19 4624-4635]. *Raghavan, R.S., TSP Nov. 1, 2019 5611*

Dictionaries

High Resolution Compressed Sensing Radar Using Difference Set Codes. *Taghavi, I.*, +, *TSP Jan. 1, 2019 136-148*

On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals. *Garfinkle, C.J.*, +, *TSP Dec. 1, 2019 5884-5892*

Differential equations

Online and Stable Learning of Analysis Operators. Sandbichler, M., +, TSP Jan. 1, 2019 41-53

Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381

Differentiation

Geometric-Algebra Adaptive Filters. Lopes, W.B., +, TSP July 15, 2019 3649-3662

Diffusion processes

Controllability of Bandlimited Graph Processes Over Random Time Varying Graphs. Gama, F., +, TSP Dec. 15, 2019 6440-6454

Digital computers

Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability. *Boche, H.*, +, *TSP Dec.* 15, 2019 6424-6439

Digital filters

Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers. *Liski*, *J.*, +, *TSP July 15*, 2019 3785-3795

Two-Timescale Hybrid Compression and Forward for Massive MIMO Aided C-RAN. *Liu*, A., +, *TSP May 1*, 2019 2484-2498

Digital signal processing chips

Hardware-Limited Task-Based Quantization. Shlezinger, N., +, TSP Oct. 15, 2019 5223-5238

Digital-analog conversion

A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. *Shao, M.*, +, *TSP Oct. 15*, 2019 5309-5324

Directed graphs

A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960

Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs. *Ioannidis, V.N.*, +, *TSP May 1, 2019 2263-2274*

Direction-of-arrival estimation

An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808

Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908

Design And Analysis of the Sparse Array for DoA Estimation of Noncircular Signals. *Gupta*, *P.*, +, *TSP Jan. 15*, 2019 460-473

Design of Large Effective Apertures for Millimeter Wave Systems Using a Sparse Array of Subarrays. *Gupta*, A., +, *TSP Dec. 15*, 2019 6483-6497

Detecting Gaussian Signals Using Coprime Sensor Arrays in Spatially Correlated Gaussian Noise. *Bautista*, R., +, TSP March 1, 2019 1296-1306

DOA Estimation Exploiting Sparse Array Motions. Qin, G., +, TSP June 1, 2019 3013-3027

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158

Gaussian Target Tracking With Direction-of-Arrival von Mises-Fisher Measurements. Garcia-Fernandez, A.F., +, TSP June 1, 2019 2960-2972

Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays. Qiao, H., +, TSP Nov. 15, 2019 5715-5729

Hole Identification and Filling ink-Times Extended Co-Prime Arrays for Highly Efficient DOA Estimation. Wang, X., +, TSP May 15, 2019 2693-2706

Improving Localization by Testing Mobility. Carlino, L., +, TSP July 1, 2019 3412-3423

Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator. Zuo, W., +, TSP Jan. 15, 2019 415-430

MISC Array: A New Sparse Array Design Achieving Increased Degrees of Freedom and Reduced Mutual Coupling Effect. *Zheng, Z.*, +, *TSP April 1*, 2019 1728-1741

New Designs on MVDR Robust Adaptive Beamforming Based on Optimal Steering Vector Estimation. *Huang*, Y., +, TSP July 15, 2019 3624-3638

Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. *Chen, P., +, TSP Jan. 1, 2019 208-220* Polarization Sensitivity of Antenna Arrays. *Friedlander, B., TSP Jan. 1, 2019 234-244*

Semiparametric CRB and Slepian-Bangs Formulas for Complex Elliptically Symmetric Distributions. Fortunati, S., +, TSP Oct. 15, 2019 5352-5364

Simplified and Enhanced Multiple Level Nested Arrays Exploiting High-Order Difference Co-Arrays. Shen, Q., +, TSP July 1, 2019 3502-3515

Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form. Sun, Y., +, TSP Jan. 15, 2019 320-335

Source Resolvability of Spatial-Smoothing-Based Subspace Methods: A Hadamard Product Perspective. *Yang, Z.*, +, *TSP May 15*, 2019 2543-2553 Thinned Coprime Array for Second-Order Difference Co-Array Generation

With Reduced Mutual Coupling. Raza, A., +, TSP April 15, 2019 2052-2065

Discrete Fourier transforms

Discrete Linear Canonical Transform Based on Hyperdifferential Operators. Koc, A., +, TSP May 1, 2019 2237-2248

Fractional Fourier Analysis Using the Möbius Inversion Formula. *Miao, H.*, +, *TSP June 15*, 2019 3181-3196

Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. *Hwang, W.*, +, *TSP June 15*, 2019 3330-3343

iMUSIC: A Family of MUSIC-Like Algorithms for Integer Period Estimation. *Tenneti*, S.V., +, TSP Jan. 15, 2019 367-382

Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. Wang, S., +, TSP Jan. 1, 2019 54-69

On Multisensor Detection of Improper Signals. *Tugnait, J.K., TSP Feb. 15*, 2019 870-884

Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, *J.*, +, *TSP May 1*, 2019 2410-2425

Discrete time filters

A Hybrid Lower Bound for Parameter Estimation of Signals With Multiple Change-Points. *Bacharach*, L., +, *TSP March 1*, 2019 1267-1279

Diseases

Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals. *Karisik, F., +, TSP Dec. 1, 2019 6067-6077*

Distortion

Truncated Sequential Non-Parametric Hypothesis Testing Based on Random Distortion Testing. *Khanduri*, *P*., +, *TSP Aug. 1*, 2019 4027-4042

Distributed algorithms

Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L., +, TSP April 1, 2019 1774-1784*

Distributed Gradient Descent Algorithm Robust to an Arbitrary Number of Byzantine Attackers. Cao, X., +, TSP Nov. 15, 2019 5850-5864

Distributed Solution of Large-Scale Linear Systems via Accelerated Projection-Based Consensus. Azizan-Ruhi, N., +, TSP July 15, 2019 3806-3817

FADE: Fast and Asymptotically Efficient Distributed Estimator for Dynamic Networks. *Simoes, A., +, TSP April 15, 2019 2080-2092*

Resilient Distributed Parameter Estimation With Heterogeneous Data. *Chen*, *Y*., +, *TSP Oct. 1*, 2019 4918-4933

Distributed control

Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. Siyari, P., +, TSP Feb. 1, 2019 594-608

Distributed processing

Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour*, M., +, TSP Jan. 1, 2019 17-28

Distributed programming

Distributed Non-Convex First-Order Optimization and Information Processing: Lower Complexity Bounds and Rate Optimal Algorithms. *Sun, H.*, +, *TSP Nov. 15*, 2019 5912-5928

Distributed sensors

Information Geometric Approach to Multisensor Estimation Fusion. *Tang*, M., +, *TSP Jan. 15*, 2019 279-292

Location-Free Spectrum Cartography. Teganya, Y., +, TSP Aug. 1, 2019 4013-4026

Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967

Testing the Structure of a Gaussian Graphical Model With Reduced Transmissions in a Distributed Setting. *Chen, Y.*, +, *TSP Oct. 15*, 2019 5391-5401

DNA

Exploiting Prior Information in Block-Sparse Signals. *Daei*, S., +, TSP Oct. 1, 2019 5093-5102

Matrix Completion and Performance Guarantees for Single Individual Haplotyping. *Barik, S.*, +, *TSP Sept. 15*, 2019 4782-4794

Document handling

Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J.*, +, *TSP Feb. 1*, 2019 740-752

Doppler radar

Joint Waveform and Guidance Control Optimization for Target Rendezvous. Benavoli, A., +, TSP Aug. 15, 2019 4357-4369

Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain. *Zhou, G., +, TSP Nov. 1, 2019 5596-5610*

Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection. Zhao, W., +, TSP Nov. 15, 2019 5746-5760

STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models. Li, X., +, TSP April 1, 2019 1902-1917

Doppler shift

Direct Position Determination Sensitivity to NLOS Propagation Effects on Doppler-Shift. *Picard, J.S.*, +, *TSP July 15*, 2019 3870-3881

Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution. *Jia, T., +, TSP Nov. 15, 2019 5881-5895*

On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation. *Chen, Y., +, TSP Jan. 15, 2019 431-443*

Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*

Duality (mathematics)

Simultaneous Safe Feature and Sample Elimination for Sparse Support Vector Regression. Wang, H., +, TSP Aug. 1, 2019 4043-4054

Dynamic programming

Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson, M.*, +, *TSP Jan. 1, 2019 149-163*

 \mathbf{E}

Edge detection

Edge Exclusion Tests for Improper Complex Gaussian Graphical Model Selection. *Tugnait, J.K., TSP July 1, 2019 3547-3560*

Eigenvalues and eigenfunctions

A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix. Raghavan, R.S., TSP Sept. 1, 2019 4624-4635

A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960

A Hilbert Space Theory of Generalized Graph Signal Processing. *Ji*, *F*, +, *TSP Dec. 15*, 2019 6188-6203

Corrections to "A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix" [Sep 19 4624-4635]. *Raghavan, R.S., TSP Nov. 1, 2019 5611*

Direct Position Determination Sensitivity to NLOS Propagation Effects on Doppler-Shift. *Picard, J.S.*, +, *TSP July 15*, 2019 3870-3881

Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis. *Ruan, H.*, +, *TSP Dec. 15, 2019 6411-6423*

Eigendecomposition-Free Sampling Set Selection for Graph Signals. Sakiyama, A., +, TSP May 15, 2019 2679-2692

Graph Multiview Canonical Correlation Analysis. Chen, J., +, TSP June 1, 2019 2826-2838

Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727

Hardware-Limited Task-Based Quantization. Shlezinger, N., +, TSP Oct. 15, 2019 5223-5238

Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299

Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J.*, +, *TSP Feb. 1*, 2019 740-752

On the Asymptotics of Maronna's Robust PCA. *Draskovic*, G., +, TSP Oct. 1, 2019 4964-4975

Optimization Algorithms for Graph Laplacian Estimation via ADMM and MM. Zhao, L., +, TSP Aug. 15, 2019 4231-4244

Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809

Scalable *M*-Channel Critically Sampled Filter Banks for Graph Signals. *Li*, *S.*, +, *TSP Aug. 1*, 2019 3954-3969

Subspace Averaging and Order Determination for Source Enumeration. *Garg, V., +, TSP June 1, 2019 3028-3041*

Elasticity

Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16

Electrocardiography

Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727

Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals. *Karisik, F., +, TSP Dec. 1, 2019 6067-6077*

New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications. *Miao*, *H.*, +, *TSP Nov. 1*, 2019 5543-5557

On Quasi-Isometry of Threshold-Based Sampling. *Moser, B.A.*, +, *TSP July* 15, 2019 3832-3841

Electrodes

Modeling the Active Neuron Separation in the Compressed Sensing and Finite Rate of Innovation Framework. *Schnier, T.*, +, *TSP Sept. 1, 2019 4521-4534*

Electroencephalography

Multivariate Variational Mode Decomposition. *Rehman, N.u.*, +, *TSP Dec.* 1, 2019 6039-6052

MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567

Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks. *Shen, Y., +, TSP Oct. 15, 2019 5325-5339*

Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty. Tang, S., +, TSP Oct. 1, 2019 4992-5003

Electromagnetic fields

Localization of Signals in the Near-Field of an Antenna Array. *Friedlander, B., TSP Aug. 1, 2019 3885-3893*

Electromagnetic wave attenuation

Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16

Nonlinear Distortion Noise and Linear Attenuation in MIMO Systems— Theory and Application to Multiband Transmitters. *Ronnow, D.*, +, *TSP Oct. 15*, 2019 5203-5212

Electromagnetic wave polarization

Polarization Sensitivity of Antenna Arrays. Friedlander, B., TSP Jan. 1, 2019 234-244

Electromagnetic wave reflection

Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271

Electromagnetic wave scattering

Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. *Ge, Y., +, TSP April 15, 2019 2143-2158*

Electronic countermeasures

Adaptive Detection of Coherent Radar Targets in the Presence of Noise Jamming. Addabbo, P., +, TSP Dec. 15, 2019 6498-6510

Encoding

Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters. *Goken, C.*, +, *TSP Aug. 15*, 2019 4302-4316

Estimation Theoretic Secure Communication via Encoder Randomization. Goken, C., +, TSP Dec. 1, 2019 6105-6120

Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X.*, +, *TSP Sept. 1*, 2019

On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals. *Garfinkle, C.J.*, +, TSP Dec. 1, 2019 5884-5892

Energy conservation

On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. *Xie*, *T*., +, *TSP Sept. 15*, 2019 4730-4744

Energy harvesting

Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15*, 2019 3197-3212

Entropy

A Framework of Adaptive Multiscale Wavelet Decomposition for Signals on Undirected Graphs. *Zheng, X.*, +, *TSP April 1, 2019 1696-1711*

Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810

MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution. *Dytso, A., +, TSP Dec. 15, 2019 6352-6367*

One-Bit Compressive Sensing via Schur-Concave Function Minimization. Xiao, P., +, TSP Aug. 15, 2019 4139-4151

- Probing High-Order Dependencies With Information Theory. Granero-Belinchon, C., +, TSP July 15, 2019 3796-3805
- Sparse Signal Recovery via Generalized Entropy Functions Minimization. Huang, S., +, TSP March 1, 2019 1322-1337

Equalizers

- Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers. *Liski, J.*, +, *TSP July 15*, 2019 3785-3795
- Decentralized Equalization With Feedforward Architectures for Massive MU-MIMO. *Jeon, C.*, +, *TSP Sept. 1, 2019 4418-4432*
- Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595
- Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914
- Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels. *Han, J., +, TSP Feb. 15, 2019 915-929*
- The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers. *Yeste Ojeda, O.A.*, +, *TSP Aug. 15, 2019 4333-4341*

Error analysis

- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L., +, TSP April 1, 2019 1774-1784*
- Direct Position Determination Sensitivity to NLOS Propagation Effects on Doppler-Shift. *Picard, J.S.*, +, *TSP July 15*, 2019 3870-3881

Error correction

Error Preserving Correction: A Method for CP Decomposition at a Target Error Bound. *Phan, A., +, TSP March 1, 2019 1175-1190*

Error correction codes

- Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. Liu, L., +, TSP April 1, 2019 1758-1773
- Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. *Wasson, M.*, +, *TSP Oct. 1, 2019 4976-4991* Joint Decoder Design for SSDs. *Li, Q., TSP May 1, 2019 2399-2409*

Error statistics

- A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. *Shao*, M., +, *TSP Oct. 15*, 2019 5309-5324
- A Simple ML Detection for Coded Generalized Frequency Division Multiplexing in MIMO Channels. *Towliat, M.*, +, *TSP Feb. 1*, 2019 798-807
- An Exact Quantized Decentralized Gradient Descent Algorithm. *Reisizadeh*, A., +, TSP Oct. 1, 2019 4934-4947
- Frequency Synchronization for OFDM-Based Massive MIMO Systems. Sabeti, P., +, TSP June 1, 2019 2973-2986
- Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. Wasson, M., +, TSP Oct. 1, 2019 4976-4991
- Hybrid Vector Perturbation Precoding: The Blessing of Approximate Message Passing. Lyu, S., +, TSP Jan. 1, 2019 178-193
- Hypothesis Test for Bounds on the Size of Random Defective Set. *D'yach-kov*, A., +, TSP Nov. 15, 2019 5775-5784
- Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search. Chen, J., +, TSP Oct. 15, 2019 5380-5390
- Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647
- K-Medoids Clustering of Data Sequences With Composite Distributions. Wang, T., +, TSP April 15, 2019 2093-2106
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Space-Time Media-Based Modulation. Yigit, Z., +, TSP May 1, 2019 2389-2398
- Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci*, E., +, TSP March 15, 2019 1550-1565
- Truncated Sequential Non-Parametric Hypothesis Testing Based on Random Distortion Testing. *Khanduri*, *P*., +, *TSP Aug. 1*, 2019 4027-4042

Estimation

- An Incentive Scheme for Sensor Fusion With Strategic Sensors. *Chen, K.*, +, *TSP Dec. 15*, 2019 6342-6351
- MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution. *Dytso, A.*, +, *TSP Dec. 15*, 2019 6352-6367

Estimation theory

- A Hybrid Lower Bound for Parameter Estimation of Signals With Multiple Change-Points. *Bacharach, L.*, +, *TSP March 1*, 2019 1267-1279
- An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808
- Cramér–Rao Bounds for Filtering Based on Gaussian Process State-Space Models. Zhao, Y., +, TSP Dec. 1, 2019 5936-5951
- Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters. *Goken, C.*, +, *TSP Aug. 15*, 2019 4302-4316
- FADE: Fast and Asymptotically Efficient Distributed Estimator for Dynamic Networks. *Simoes, A., +, TSP April 15, 2019 2080-2092*
- Full Mean Square Performance Bounds on Quaternion Estimators for Improper Data. Xia, Y., +, TSP Aug. 1, 2019 4093-4106
- Further Results on the Cramér–Rao Bound for Sparse Linear Arrays. Wang, M., +, TSP March 15, 2019 1493-1507
- Information Geometric Approach to Multisensor Estimation Fusion. *Tang*, M., +, *TSP Jan. 15*, 2019 279-292
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1*, 2019 245-259
- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567
- Noise Statistics Oblivious GARD For Robust Regression With Sparse Outliers. *Kallummil, S., +, TSP Jan. 15, 2019 383-398*
- On Noncausal Identification of Nonstationary Multivariate Autoregressive Processes. *Niedzwiecki, M.*, +, *TSP Feb. 1, 2019 769-782*
- Optimal Estimates of Two Common Remainders for a Robust Generalized Chinese Remainder Theorem. Li, X., +, TSP April 1, 2019 1824-1837
- Optimization Algorithms for Graph Laplacian Estimation via ADMM and MM. Zhao, L., +, TSP Aug. 15, 2019 4231-4244
- Particle-Based Adaptive-Lag Online Marginal Smoothing in General State-Space Models. *Alenlov, J.*, +, *TSP Nov. 1*, 2019 5571-5582
- Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution. *Liu, Y., +, TSP Aug. 15, 2019 4370-4382*
- Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. *Fortunati, S.*, +, *TSP Jan. 1, 2019 164-177*
- Sequential Outlier Detection Based on Incremental Decision Trees. Gokcesu, K., +, TSP Feb. 15, 2019 993-1005

Expectation-maximization algorithms

- Adaptive Detection of Structured Signals in Low-Rank Interference. Schniter, P., +, TSP July 1, 2019 3439-3454
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May* 1, 2019 2291-2303
- Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson, M.*, +, *TSP Jan. 1, 2019 149-163*
- Estimation of Sparse Directional Connectivity With Expectation Maximization. Khayambashi, M., +, TSP Feb. 15, 2019 854-869
- Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking. *Lian, L., +, TSP April 15, 2019 2007-2021*
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu*, *J.*, +, *TSP Nov. 15*, 2019 5837-5849
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*

Extrapolation

Matrix Completion and Extrapolation via Kernel Regression. Gimenez-Febrer, P., +, TSP Oct. 1, 2019 5004-5017 F

Fading channels

Event-Driven Sensor Scheduling for Mission-Critical Control Applications. Yu, M., +, TSP March 15, 2019 1537-1549

Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking. *Lian*, *L.*, +, *TSP April 15*, 2019 2007-2021

Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581

Failure analysis

Quickest Change Detection in the Presence of a Nuisance Change. *Lau, T.S.*, +, *TSP Oct. 15*, 2019 5281-5296

Fast Fourier transforms

Designing Sets of Binary Sequences for MIMO Radar Systems. *Alaee-Ker-ahroodi, M.*, +, *TSP July 1, 2019 3347-3360*

Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595

Fast Graph Fourier Transforms Based on Graph Symmetry and Bipartition. Lu, K., +, TSP Sept. 15, 2019 4855-4869

Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914

Optimized Signal Distortion for PAPR Reduction of OFDM Signals With IFFT/FFT Complexity Via ADMM Approaches. *Wang, Y.*, +, *TSP Jan. 15*, 2019 399-414

Sinusoidal Parameter Estimation From Signed Measurements Via Majorization–Minimization Based RELAX. *Ren, J.*, +, *TSP April 15, 2019 2173-2186*

Feature extraction

Graph Multiview Canonical Correlation Analysis. Chen, J., +, TSP June 1, 2019 2826-2838

Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16

Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J.*, +, *TSP Feb. 1*, 2019 740-752

Quaternion-Based Multiscale Analysis for Feature Extraction of Hyperspectral Images. *Li*, *H*., +, *TSP March 15*, 2019 1418-1430

Simultaneous Safe Feature and Sample Elimination for Sparse Support Vector Regression. Wang, H., +, TSP Aug. 1, 2019 4043-4054

Supervised Learning Under Distributed Features. Ying, B., +, TSP Feb. 15, 2019 977-992

Feedback

Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351

Online Primal-Dual Methods With Measurement Feedback for Time-Varying Convex Optimization. Bernstein, A., +, TSP April 15, 2019 1978-1991

Feed forward

Decentralized Equalization With Feedforward Architectures for Massive MU-MIMO. *Jeon, C., +, TSP Sept. 1, 2019 4418-4432*

Field programmable gate arrays

Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. *Wasson*, M., +, TSP Oct. 1, 2019 4976-4991

Filtering theory

A Hilbert Space Theory of Generalized Graph Signal Processing. *Ji*, F, +, *TSP Dec. 15*, 2019 6188-6203

A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi*, A.K., TSP Sept. 1, 2019 4535-4544

A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746

Convolutional Neural Network Architectures for Signals Supported on Graphs. Gama, F., +, TSP Feb. 15, 2019 1034-1049

Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh, M.*, +, *TSP Sept. 1, 2019 4545-4555*

Cramér–Rao Bounds for Filtering Based on Gaussian Process State-Space Models. Zhao, Y., +, TSP Dec. 1, 2019 5936-5951

Distributed Non-Convex First-Order Optimization and Information Processing: Lower Complexity Bounds and Rate Optimal Algorithms. *Sun, H.*, +, *TSP Nov. 15*, 2019 5912-5928

Double Bayesian Smoothing as Message Passing. Di Viesti, P., +, TSP Nov. 1, 2019 5495-5510

Ergodicity in Stationary Graph Processes: A Weak Law of Large Numbers. Gama, F., +, TSP May 15, 2019 2761-2774

False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96

Fractional Fourier Analysis Using the Möbius Inversion Formula. *Miao, H.*, +, *TSP June 15*, 2019 3181-3196

Gaussian Target Tracking With Direction-of-Arrival von Mises–Fisher Measurements. Garcia-Fernandez, A.F., +, TSP June 1, 2019 2960-2972

Graph-Variate Signal Analysis. *Smith*, *K.*, +, *TSP Jan. 15*, 2019 293-305

High-Dimensional Filtering Using Nested Sequential Monte Carlo. *Naesseth, C.A.*, +, *TSP Aug. 15*, 2019 4177-4188

Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. Li, Y., +, TSP May 1, 2019 2499-2512

Joint Waveform and Guidance Control Optimization for Target Rendezvous. Benavoli, A., +, TSP Aug. 15, 2019 4357-4369

Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526

Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351

New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications. *Miao*, H., +, TSP Nov. 1, 2019 5543-5557

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379

Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain. Zhou, G., +, TSP Nov. 1, 2019 5596-5610

Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. *Sebastian, J.*, +, *TSP June 1*, 2019 2923-2936

Theoretical Analysis of the Peak-to-Average Power Ratio and Optimal Pulse Shaping Filter Design for GFDM Systems. *Liu, K.*, +, *TSP July 1, 2019 3455-3470*

Time-Frequency Analysis of the Impulse Response. Galleani, L., TSP March 1, 2019 1280-1295

Filters

Convolution and Multichannel Sampling for the Offset Linear Canonical Transform and Their Applications. *Wei*, D., +, *TSP Dec. 1*, 2019 6009-6024

Financial data processing

Gaussian Weighting Reversion Strategy for Accurate Online Portfolio Selection. Cai, X., +, TSP Nov. 1, 2019 5558-5570

Flash memories

Joint Decoder Design for SSDs. Li, Q., TSP May 1, 2019 2399-2409

Fluorescence

Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. *Sebastian, J.*, +, *TSP June 1*, 2019 2923-2936

FM rada

Joint Waveform and Guidance Control Optimization for Target Rendezvous. Benavoli, A., +, TSP Aug. 15, 2019 4357-4369

Forecasting

A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature. Ramakrishna, R., +, TSP Dec. 15, 2019 6368-6383

Forecasting theory

Forecasting Time Series With VARMA Recursions on Graphs. *Isufi, E.*, +, *TSP Sept. 15, 2019 4870-4885*

Foreign exchange trading

Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series. *Tugnait, J.K., TSP Oct. 1, 2019 5062-5077*

Fourier analysis

Fractional Fourier Analysis Using the Möbius Inversion Formula. *Miao*, *H*., +, *TSP June 15*, 2019 3181-3196

Two-Dimensional Super-Resolution via Convex Relaxation. Valiulahi, I., +, TSP July 1, 2019 3372-3382

Fourier series

Fractional Fourier Analysis Using the Möbius Inversion Formula. *Miao, H.*, +, *TSP June 15*, 2019 3181-3196

Fourier transforms

- A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960
- A Hilbert Space Theory of Generalized Graph Signal Processing. *Ji*, *F*, +, *TSP Dec. 15*, 2019 6188-6203
- A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter. You, P., +, TSP Oct. 15, 2019 5433-5446
- Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June* 15, 2019 3100-3112
- Characterization of Analytic Wavelet Transforms and a New Phaseless Reconstruction Algorithm. *Holighaus*, N., +, TSP Aug. 1, 2019 3894-3908
- Convolution and Multichannel Sampling for the Offset Linear Canonical Transform and Their Applications. Wei, D., +, TSP Dec. 1, 2019 6009-6024
- Estimation of the Evolutionary Spectra With Application to Stationarity Test. *Xiang, Y., +, TSP March 1, 2019 1353-1365*
- Fractional Fourier Analysis Using the Möbius Inversion Formula. *Miao, H.*, +, *TSP June 15*, 2019 3181-3196
- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- Sampling and Super Resolution of Sparse Signals Beyond the Fourier Domain. *Bhandari*, A., +, *TSP March 15*, 2019 1508-1521
- Scalable M-Channel Critically Sampled Filter Banks for Graph Signals. Li, S., +, TSP Aug. 1, 2019 3954-3969
- Simultaneous Sparse Recovery and Blind Demodulation. *Xie, Y., +, TSP Oct.* 1, 2019 5184-5199
- STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models. Li, X., +, TSP April 1, 2019 1902-1917
- Super Resolution Phase Retrieval for Sparse Signals. *Baechler, G.*, +, *TSP Sept. 15*, 2019 4839-4854

Fractals

A Generalized Multifractal Formalism for the Estimation of Nonconcave Multifractal Spectra. *Leonarduzzi*, R., +, TSP Jan. 1, 2019 110-119

Frequency division multiplexing

A Simple ML Detection for Coded Generalized Frequency Division Multiplexing in MIMO Channels. *Towliat*, M., +, TSP Feb. 1, 2019 798-807

Theoretical Analysis of the Peak-to-Average Power Ratio and Optimal Pulse Shaping Filter Design for GFDM Systems. *Liu, K.*, +, *TSP July 1, 2019 3455-3470*

Frequency estimation

Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June* 15, 2019 3100-3112

Low Complexity and High-Resolution Line Spectral Estimation Using Cyclic Minimization. *Castanheira*, D., +, TSP Dec. 15, 2019 6285-6300

Frequency modulation

Fractional Fourier Analysis Using the Möbius Inversion Formula. *Miao*, *H.*, +, *TSP June 15*, 2019 3181-3196

Frequency-domain analysis

- A Unified Approach to the Statistical Convergence Analysis of Frequency-Domain Adaptive Filters. *Yang*, F., +, TSP April 1, 2019 1785-1796
- Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels. *Han, J., +, TSP Feb. 15, 2019 915-929*
- Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. Wang, S., +, TSP Jan. 1, 2019 54-69
- Representation and Reconstruction of Finite-Energy Band-Limited Signals via Pulse-Width Modulation. Sevuktekin, N.C., +, TSP Oct. 1, 2019 5153-5168

\mathbf{G}

Gain

Hybrid Sparse Array Beamforming Design for General Rank Signal Models. Hamza, S.A., +, TSP Dec. 15, 2019 6215-6226

Game theory

- A Reputation-Based Contract for Repeated Crowdsensing With Costly Verification. *Dobakhshari*, D.G., +, TSP Dec. 1, 2019 6092-6104
- An Incentive Scheme for Sensor Fusion With Strategic Sensors. *Chen, K.*, +, *TSP Dec. 15*, 2019 6342-6351
- Beliefs in Decision-Making Cascades. Seo, D., +, TSP Oct. 1, 2019 5103-5117
- Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari*, *P.*, +, *TSP Feb.* 1, 2019 594-608
- Hypothesis Testing Under Subjective Priors and Costs as a Signaling Game. Saritas, S., +, TSP Oct. 1, 2019 5169-5183
- Minimax Optimal Algorithms for Adversarial Bandit Problem With Multiple Plays. *Vural*, *N.M.*, +, *TSP Aug. 15*, 2019 4383-4398

Gaussian channels

Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82

Gaussian distribution

- A Novel Robust Gaussian–Student's t Mixture Distribution Based Kalman Filter. Huang, Y., +, TSP July 1, 2019 3606-3620
- Convergence Analysis of Gaussian Belief Propagation Under High-Order Factorization and Asynchronous Scheduling. *Li*, *B*., +, *TSP June 1*, 2019 2884-2897
- Distributed Detection of Sparse Stochastic Signals With Quantized Measurements: The Generalized Gaussian Case. Wang, X., +, TSP Sept. 15, 2019 4886-4898
- Edge Exclusion Tests for Improper Complex Gaussian Graphical Model Selection. *Tugnait, J.K., TSP July 1, 2019 3547-3560*
- Estimation From Quantized Gaussian Measurements: When and How to Use Dither. Rapp, J., +, TSP July 1, 2019 3424-3438
- Gaussian Target Tracking With Direction-of-Arrival von Mises-Fisher Measurements. Garcia-Fernandez, A.F., +, TSP June 1, 2019 2960-2972
- Information Geometric Approach to Multisensor Estimation Fusion. *Tang*, M., +, TSP Jan. 15, 2019 279-292
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1*, 2019 245-259
- Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. *Wang*, Z., +, *TSP Aug*. 15, 2019 4342-4356
- Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour*, M., +, TSP Jan. 1, 2019 17-28
- MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution. *Dytso, A., +, TSP Dec. 15, 2019 6352-6367*
- On the Asymptotics of Maronna's Robust PCA. *Draskovic, G.*, +, *TSP Oct.* 1, 2019 4964-4975
- Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR. Lu, Y., +, TSP June 1, 2019 2947-2959
- Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*
- Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*
- Tracking the Orientation and Axes Lengths of an Elliptical Extended Object. Yang, S., +, TSP Sept. 15, 2019 4720-4729

Gaussian noise

- A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter. You, P., +, TSP Oct. 15, 2019 5433-5446
- A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746
- Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810
- Detecting Gaussian Signals Using Coprime Sensor Arrays in Spatially Correlated Gaussian Noise. *Bautista*, R., +, TSP March 1, 2019 1296-1306

- Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution. *Jia, T., +, TSP Nov. 15, 2019 5881-5895*
- FADE: Fast and Asymptotically Efficient Distributed Estimator for Dynamic Networks. Simoes, A., +, TSP April 15, 2019 2080-2092
- False Alarm Rate of the GLRT for Subspace Signals in Subspace Interference Plus Gaussian Noise. *Liu*, *J.*, +, *TSP June 1*, 2019 3058-3069
- Mismatched Signal Rejection Performance of the Persymmetric GLRT Detector. Liu, J., +, TSP March 15, 2019 1610-1619
- Multistatic Localization in the Absence of Transmitter Position. *Zhang, Y., +, TSP Sept. 15, 2019 4745-4760*
- Noise Statistics Oblivious GARD For Robust Regression With Sparse Outliers. *Kallummil*, S., +, TSP Jan. 15, 2019 383-398
- Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization. *Xu*, *S.*, +, *TSP Oct. 1*, 2019 5018-5031
- Robust Detection in MIMO Radar With Steering Vector Mismatches. *Liu*, *J.*, +, *TSP Oct. 15*, 2019 5270-5280
- Robust Hemodynamic Response Function Estimation From fNIRS Signals. Seghouane, A., +, TSP April 1, 2019 1838-1848
- Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form. Sun, Y., +, TSP Jan. 15, 2019 320-335
- Stable Principal Component Pursuit via Convex Analysis. Yin, L., +, TSP May 15, 2019 2595-2607
- Trainable ISTA for Sparse Signal Recovery. Ito, D., +, TSP June 15, 2019 3113-3125

Gaussian processes

- A Large Dimensional Analysis of Least Squares Support Vector Machines. Liao, Z., +, TSP Feb. 15, 2019 1065-1074
- A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures. *Weiss, A., +, TSP Oct. 1, 2019 5032-5045*
- A Scalable Hierarchical Gaussian Process Classifier. Nguyen, T.N.A., +, TSP June 1, 2019 3042-3057
- A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746
- Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June* 15, 2019 3100-3112
- Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823
- Constrained Sampling: Optimum Reconstruction in Subspace With Minimax Regret Constraint. Sadeghi, B., +, TSP Aug. 15, 2019 4218-4230
- Convergence Analysis of Gaussian Belief Propagation Under High-Order Factorization and Asynchronous Scheduling. *Li*, *B*., +, *TSP June 1*, 2019 2884-2897
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh, M.*, +, *TSP Sept. 1, 2019 4545-4555*
- Corrections to "On the Restricted Isometry of the Columnwise Khatri–Rao Product" [Mar 18 1170-1183]. *Khanna*, S., +, TSP May 1, 2019 2387-2388
- Covariance Matrix Estimation From Linearly-Correlated Gaussian Samples. Cui, W., +, TSP April 15, 2019 2187-2195
- Cramér–Rao Bounds for Filtering Based on Gaussian Process State-Space Models. Zhao, Y., +, TSP Dec. 1, 2019 5936-5951
- Decentralized Gaussian Filters for Cooperative Self-Localization and Multi-Target Tracking. Sharma, P., +, TSP Nov. 15, 2019 5896-5911
- Design of Rao-Blackwellized Point-Mass Smoother for Conditionally Linear and Gaussian Models. *Dunik*, *J.*, +, *TSP Dec. 1*, 2019 6053-6066
- Detecting Gaussian Signals Using Coprime Sensor Arrays in Spatially Correlated Gaussian Noise. Bautista, R., +, TSP March 1, 2019 1296-1306
- Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter. Liu, J., +, TSP Feb. 15, 2019 1022-1033
- Double Bayesian Smoothing as Message Passing. Di Viesti, P., +, TSP Nov. 1, 2019 5495-5510
- Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series. *Tugnait, J.K., TSP Oct. 1, 2019 5062-5077*
- Estimation From Quantized Gaussian Measurements: When and How to Use Dither. Rapp, J., +, TSP July 1, 2019 3424-3438

- Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823
- Fixed Points of Gaussian Belief Propagation and Relation to Convergence. *Li*, *B.*, +, *TSP Dec. 1*, 2019 6025-6038
- Gaussian Weighting Reversion Strategy for Accurate Online Portfolio Selection. Cai, X., +, TSP Nov. 1, 2019 5558-5570
- Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. *Li*, *Y*, +, *TSP May 1*, 2019 2499-2512
- Joint Independent Subspace Analysis: Uniqueness and Identifiability. *Lahat*, D., +, TSP Feb. 1, 2019 684-699
- Marginalized Particle Filtering and Related Filtering Techniques as Message Passing. Vitetta, G.M., +, TSP March 15, 2019 1522-1536
- New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images. *Mian, A., +, TSP Jan. 15, 2019 520-534*
- One-Step Persymmetric GLRT for Subspace Signals. Liu, J., +, TSP July 15, 2019 3639-3648
- Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR. Lu, Y., +, TSP June 1, 2019 2947-2959
- Parameter Estimation Based on Scale-Dependent Algebraic Expressions and Scale-Space Fitting. *Kukuk*, *M.*, +, *TSP March 15*, 2019 1431-1446
- Probing High-Order Dependencies With Information Theory. Granero-Belinchon, C., +, TSP July 15, 2019 3796-3805
- Recursive Estimation of Dynamic RSS Fields Based on Crowdsourcing and Gaussian Processes. Santos, I., +, TSP March 1, 2019 1152-1162
- Seamless Tracking of Apparent Point and Extended Targets Using Gaussian Process PMHT. *Tang, X.*, +, *TSP Sept. 15, 2019 4825-4838*
- Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach. Guo, Z., +, TSP Jan. 1, 2019 194-207
- Simultaneous Sparse Recovery and Blind Demodulation. *Xie, Y., +, TSP Oct.* 1, 2019 5184-5199
- Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty. *Tang, S.*, +, *TSP Oct. 1*, 2019 4992-5003
- Testing the Structure of a Gaussian Graphical Model With Reduced Transmissions in a Distributed Setting. *Chen, Y.*, +, *TSP Oct. 15*, 2019 5391-5401
- The Generalized Complex Kernel Least-Mean-Square Algorithm. Boloix-Tortosa, R., +, TSP Oct. 15, 2019 5213-5222
- The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunni*, T., +, TSP Dec. 1, 2019 5909-5921
- Trajectory PHD and CPHD Filters. Garcia-Fernandez, A.F., +, TSP Nov. 15, 2019 5702-5714

Genetics

- Joint Network Topology and Dynamics Recovery From Perturbed Stationary Points. Wai, H., +, TSP Sept. 1, 2019 4582-4596
- Matrix Completion and Performance Guarantees for Single Individual Haplotyping. Barik, S., +, TSP Sept. 15, 2019 4782-4794

Genomics

Matrix Completion and Performance Guarantees for Single Individual Haplotyping. *Barik, S., +, TSP Sept. 15, 2019 4782-4794*

Geometry

- Detecting Approximate Reflection Symmetry in a Point Set Using Optimization on Manifold. Nagar, R., +, TSP March 15, 2019 1582-1595
- Hole Identification and Filling ink-Times Extended Co-Prime Arrays for Highly Efficient DOA Estimation. Wang, X., +, TSP May 15, 2019 2693-2706
- Hypercomplex Widely Linear Estimation Through the Lens of Underpinning Geometry. *Nitta*, T., +, TSP Aug. 1, 2019 3985-3994
- Information Geometric Approach to Multisensor Estimation Fusion. *Tang*, M., +, *TSP Jan. 15*, 2019 279-292
- Manifold Optimization Over the Set of Doubly Stochastic Matrices: A Second-Order Geometry. *Douik*, A., +, *TSP Nov. 15*, 2019 5761-5774

Geophysical signal processing

- Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823
- Comments on "The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". Wang, G., +, TSP April 1, 2019 1957-1958
- Focused Blind Deconvolution. Bharadwaj, P., +, TSP June 15, 2019 3168-

Reply to "Comments on 'The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". *Mandic, D.*, +, *TSP April 1, 2019 1959*

Geophysical techniques

Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823

Gesture recognition

Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142

Global Positioning System

Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810

Gradient methods

- A Decentralized Proximal-Gradient Method With Network Independent Step-Sizes and Separated Convergence Rates. Li, Z., +, TSP Sept. 1, 2019 4494-4506
- A Low-Complexity Nonlinear Least Mean Squares Filter Based on a Decomposable Volterra Model. *Pinheiro*, F.C., +, TSP Nov. 1, 2019 5463-5478
- An Accelerated Composite Gradient Method for Large-Scale Composite Objective Problems. Florea, M.I., +, TSP Jan. 15, 2019 444-459
- An Exact Quantized Decentralized Gradient Descent Algorithm. *Reisizadeh*, A., +, TSP Oct. 1, 2019 4934-4947
- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi*, L., +, *TSP April 1*, 2019 1774-1784
- Characterization of Analytic Wavelet Transforms and a New Phaseless Reconstruction Algorithm. *Holighaus*, N., +, TSP Aug. 1, 2019 3894-3908 Distributed Gradient Descent Algorithm Robust to an Arbitrary Number of
- Distributed Gradient Descent Algorithm Robust to an Arbitrary Number of Byzantine Attackers. Cao, X., +, TSP Nov. 15, 2019 5850-5864
- Distributed Solution of Large-Scale Linear Systems via Accelerated Projection-Based Consensus. Azizan-Ruhi, N., +, TSP July 15, 2019 3806-3817
- Exact Diffusion for Distributed Optimization and Learning—Part I: Algorithm Development. *Yuan, K.*, +, *TSP Feb. 1, 2019 708-723*
- Frequency-Resolved Optical Gating Recovery via Smoothing Gradient. *Pinilla*, S., +, TSP Dec. 1, 2019 6121-6132
- Gradient Algorithms for Complex Non-Gaussian Independent Component/ Vector Extraction, Question of Convergence. *Koldovsky, Z.*, +, *TSP Feb.* 15, 2019 1050-1064
- Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581
- Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370
- Learning to Detect. Samuel, N., +, TSP May 15, 2019 2554-2564
- Matrix Completion and Extrapolation via Kernel Regression. *Gimenez-Febrer*, P., +, TSP Oct. 1, 2019 5004-5017
- Nonconvex Optimization Meets Low-Rank Matrix Factorization: An Overview. Chi, Y., +, TSP Oct. 15, 2019 5239-5269
- Nonconvex Regularized Robust PCA Using the Proximal Block Coordinate Descent Algorithm. Wen, F., +, TSP Oct. 15, 2019 5402-5416
- On Global Linear Convergence in Stochastic Nonconvex Optimization for Semidefinite Programming. Zeng, J., +, TSP Aug. 15, 2019 4261-4275
- Online and Stable Learning of Analysis Operators. Sandbichler, M., +, TSP Jan. 1, 2019 41-53
- Online Learning With Inexact Proximal Online Gradient Descent Algorithms. Dixit, R., +, TSP March 1, 2019 1338-1352
- Online Primal-Dual Methods With Measurement Feedback for Time-Varying Convex Optimization. Bernstein, A., +, TSP April 15, 2019 1978-1991
- Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels. Koppel, A., +, TSP May 15, 2019 2528-2542
- Projection-Based Regularized Dual Averaging for Stochastic Optimization. Ushio, A., +, TSP May 15, 2019 2720-2733
- Stability Bound of the Initial Mean-Square Deviation of High-Order Stochastic Gradient Adaptive Filtering Algorithms. *Eweda, E., TSP Aug. 15*, 2019 4168-4176
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. *Ying, B.*, +, *TSP Jan. 15*, 2019 474-489

- The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunmi*, *T.*, +, *TSP Dec. 1*, 2019 5909-5921
- The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. *Slavakis, K., TSP June 1, 2019 2868-2883*
- Variance-Reduced Stochastic Learning by Networked Agents Under Random Reshuffling. Yuan, K., +, TSP Jan. 15, 2019 351-366
- Weakly Convex Regularized Robust Sparse Recovery Methods With Theoretical Guarantees. *Yang, C.*, +, *TSP Oct. 1, 2019 5046-5061*

Graph theory

- Adaptive Diffusions for Scalable Learning Over Graphs. *Berberidis, D.*, +, *TSP March 1, 2019 1307-1321*
- Advances in Distributed Graph Filtering. Coutino, M., +, TSP May 1, 2019 2320-2333
- CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. Levie, R., +, TSP Jan. 1, 2019 97-109
- Change-Point Methods on a Sequence of Graphs. Zambon, D., +, TSP Dec. 15, 2019 6327-6341
- Controllability of Bandlimited Graph Processes Over Random Time Varying Graphs. *Gama*, F., +, TSP Dec. 15, 2019 6440-6454
- Convergence Analysis of Gaussian Belief Propagation Under High-Order Factorization and Asynchronous Scheduling. *Li*, *B*., +, *TSP June 1*, 2019 2884-2897
- Convolutional Neural Network Architectures for Signals Supported on Graphs. Gama, F., +, TSP Feb. 15, 2019 1034-1049
- Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series. *Tugnait, J.K., TSP Oct. 1, 2019 5062-5077*
- Edge Exclusion Tests for Improper Complex Gaussian Graphical Model Selection. *Tugnait, J.K., TSP July 1, 2019 3547-3560*
- Eigendecomposition-Free Sampling Set Selection for Graph Signals. Sakiyama, A., +, TSP May 15, 2019 2679-2692
- Ergodicity in Stationary Graph Processes: A Weak Law of Large Numbers. *Gama, F.*, +, *TSP May 15, 2019 2761-2774*
- Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417
- Fast Graph Fourier Transforms Based on Graph Symmetry and Bipartition. Lu, K., +, TSP Sept. 15, 2019 4855-4869
- Finding GEMS: Multi-Scale Dictionaries For High-Dimensional Graph Signals. *Yankelevsky*, Y., +, TSP April 1, 2019 1889-1901
- Fixed Points of Gaussian Belief Propagation and Relation to Convergence. *Li*, *B*., +, *TSP Dec. 1*, 2019 6025-6038
- Forecasting Time Series With VARMA Recursions on Graphs. *Isufi, E.*, +, *TSP Sept. 15, 2019 4870-4885*
- Graph Multiview Canonical Correlation Analysis. Chen, J., +, TSP June 1, 2019 2826-2838
- Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727
- Graph-Variate Signal Analysis. Smith, K., +, TSP Jan. 15, 2019 293-305
- Joint Beamforming and Association Design for MIMO Radar. *Niesen, U.*, +, TSP July 15, 2019 3663-3675
- Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour, M.*, +, *TSP Jan. 1, 2019* 17-28
- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- Marginalized Particle Filtering and Related Filtering Techniques as Message Passing. Vitetta, G.M., +, TSP March 15, 2019 1522-1536
- Non-Iterative MDS Method for Collaborative Network Localization With Sparse Range and Pointing Measurements. *Hamaoui*, M., TSP Feb. 1, 2019 568-578
- On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO. *Maatouk*, A., +, TSP Feb. 15, 2019 1006-1021
- Online Graph-Adaptive Learning With Scalability and Privacy. Shen, Y., +, TSP May 1, 2019 2471-2483
- Optimization Algorithms for Graph Laplacian Estimation via ADMM and MM. Zhao, L., +, TSP Aug. 15, 2019 4231-4244

Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*

Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809

SAFFRON: A Fast, Efficient, and Robust Framework for Group Testing Based on Sparse-Graph Codes. Lee, K., +, TSP Sept. 1, 2019 4649-4664

Scalable M-Channel Critically Sampled Filter Banks for Graph Signals. Li, S., +, TSP Aug. 1, 2019 3954-3969

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

Sparse Sampling for Inverse Problems With Tensors. Ortiz-Jimenez, G., +, TSP June 15, 2019 3272-3286

Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*

Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L, +, TSP April 1, 2019 1929-1940

Two-Channel Critically Sampled Graph Filter Banks With Spectral Domain Sampling. Sakiyama, A., +, TSP March 15, 2019 1447-1460

Variance-Reduced Stochastic Learning by Networked Agents Under Random Reshuffling. Yuan, K., +, TSP Jan. 15, 2019 351-366

Graphical models

Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models. Yu, H., +, TSP Dec. 15, 2019 6468-6482

Greedy algorithms

A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960

Algorithms and Fundamental Limits for Unlabeled Detection Using Types. Marano, S., +, TSP April 15, 2019 2022-2035

Compressive Sensing Using Symmetric Alpha-Stable Distributions for Robust Sparse Signal Reconstruction. *Tzagkarakis*, G., +, TSP Feb. 1, 2019 808-820

Greedy Kernel Change-Point Detection. Truong, C., +, TSP Dec. 15, 2019 6204-6214

Group Greedy Method for Sensor Placement. *Jiang, C.*, +, *TSP May 1, 2019* 2249-2262

Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526

Noise Statistics Oblivious GARD For Robust Regression With Sparse Outliers. *Kallummil*, S., +, TSP Jan. 15, 2019 383-398

Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658

Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. *Wang, F.*, +, *TSP July 15, 2019 3818-3831*

Sparse Sampling for Inverse Problems With Tensors. *Ortiz-Jimenez, G.*, +, *TSP June 15*, 2019 3272-3286

Super Resolution Phase Retrieval for Sparse Signals. *Baechler, G.*, +, *TSP Sept. 15*, 2019 4839-4854

Group codes

SAFFRON: A Fast, Efficient, and Robust Framework for Group Testing Based on Sparse-Graph Codes. Lee, K., +, TSP Sept. 1, 2019 4649-4664

Groupware

Secure Mobile Edge Computing in IoT via Collaborative Online Learning. Li, B., +, TSP Dec. 1, 2019 5922-5935

H

Hadamard matrices

Source Resolvability of Spatial-Smoothing-Based Subspace Methods: A Hadamard Product Perspective. *Yang*, Z., +, *TSP May 15*, 2019 2543-2553

Hankel matrices

Correction of Corrupted Columns Through Fast Robust Hankel Matrix Completion. Zhang, S., +, TSP May 15, 2019 2580-2594

Hardware description languages

Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. Wasson, M., +, TSP Oct. 1, 2019 4976-4991

Harmonic oscillators

Time-Frequency Analysis of the Impulse Response. Galleani, L., TSP March 1, 2019 1280-1295

Hemodynamics

Robust Hemodynamic Response Function Estimation From fNIRS Signals. Seghouane, A., +, TSP April 1, 2019 1838-1848

Hidden Markov models

A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature. *Ramakrishna*, *R.*, +, *TSP Dec. 15*, 2019 6368-6383 Adaptive Bayesian Radio Tomography. *Lee*, *D.*, +, *TSP April 15*, 2019 1964-1977

Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C.*, +, *TSP March 15*, 2019 1477-1492

Higher order statistics

Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*

Probing High-Order Dependencies With Information Theory. Granero-Belinchon, C., +, TSP July 15, 2019 3796-3805

Hilbert spaces

A Hilbert Space Theory of Generalized Graph Signal Processing. *Ji*, *F*, +, *TSP Dec. 15*, 2019 6188-6203

Matrix Completion and Extrapolation via Kernel Regression. Gimenez-Febrer, P., +, TSP Oct. 1, 2019 5004-5017

Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels. *Koppel, A.*, +, *TSP May 15*, 2019 2528-2542

The Generalized Complex Kernel Least-Mean-Square Algorithm. Boloix-Tortosa, R., +, TSP Oct. 15, 2019 5213-5222

The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunni*, *T.*, +, *TSP Dec. 1*, 2019 5909-5921

Hyperspectral imaging

Hyperspectral Anomaly Detection via Global and Local Joint Modeling of Background. Wu, Z., +, TSP July 15, 2019 3858-3869

Quaternion-Based Multiscale Analysis for Feature Extraction of Hyperspectral Images. Li, H., +, TSP March 15, 2019 1418-1430

T

IEEE publishing

List of Reviewers. TSP Dec. 15, 2019 6526-6536

IIR filters

Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers. *Liski, J.*, +, *TSP July 15*, 2019 3785-3795

Image classification

CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. Levie, R., +, TSP Jan. 1, 2019 97-109

Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370

Quaternion-Based Multiscale Analysis for Feature Extraction of Hyperspectral Images. *Li*, *H*., +, *TSP March 15*, 2019 1418-1430

Image coding

Sparse Recovery and Dictionary Learning From Nonlinear Compressive Measurements. *Rencker, L., +, TSP Nov. 1, 2019 5659-5670*

Image color analysis

Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression. *Balda, E.R.*, +, *TSP Dec. 1,* 2019 6078-6091

Image filtering

A Novel Kullback–Leibler Divergence Minimization-Based Adaptive Student's t-Filter. *Huang, Y., +, TSP Oct. 15, 2019 5417-5432*

CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. *Levie, R.*, +, *TSP Jan. 1*, 2019 97-109

Convolution and Multichannel Sampling for the Offset Linear Canonical Transform and Their Applications. Wei, D., +, TSP Dec. 1, 2019 6009-6024

Image fusion

Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823

Quaternion-Based Multiscale Analysis for Feature Extraction of Hyperspectral Images. Li, H., +, TSP March 15, 2019 1418-1430

Image matching

A Novel Kullback–Leibler Divergence Minimization-Based Adaptive Student's t-Filter. *Huang, Y., +, TSP Oct. 15, 2019 5417-5432*

Detecting Approximate Reflection Symmetry in a Point Set Using Optimization on Manifold. *Nagar*, R., +, TSP March 15, 2019 1582-1595

Image reconstruction

Hyperspectral Anomaly Detection via Global and Local Joint Modeling of Background. Wu, Z., +, TSP July 15, 2019 3858-3869

Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method. Chen, W., +, TSP Nov. 15, 2019 5785-5797

Image representation

Detecting Approximate Reflection Symmetry in a Point Set Using Optimization on Manifold. *Nagar*, R., +, *TSP March 15*, 2019 1582-1595

Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems. Debarre, T., +, TSP Nov. 15, 2019 5824-5836

Sparse Recovery and Dictionary Learning From Nonlinear Compressive Measurements. Rencker, L., +, TSP Nov. 1, 2019 5659-5670

Image resolution

Two-Dimensional Super-Resolution via Convex Relaxation. *Valiulahi*, *I.*, +, *TSP July 1*, 2019 3372-3382

Image restoration

Stable Principal Component Pursuit via Convex Analysis. Yin, L., +, TSP May 15, 2019 2595-2607

Image sampling

Convolution and Multichannel Sampling for the Offset Linear Canonical Transform and Their Applications. *Wei*, *D.*, +, *TSP Dec. 1*, 2019 6009-6024 Low-Rank Data Completion With Very Low Sampling Rate Using Newton's Method. *Ashraphijuo*, *M.*, +, *TSP April 1*, 2019 1849-1859

Image segmentation

Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688

Sampling of Planar Curves: Theory and Fast Algorithms. Zou, Q., +, TSP Dec. 15, 2019 6455-6467

Image sensors

Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part II: Generalizations and Applications. *Li*, *C.*, +, *TSP June 1*, 2019 2911-2922

Image sequences

Detecting Approximate Reflection Symmetry in a Point Set Using Optimization on Manifold. Nagar, R., +, TSP March 15, 2019 1582-1595

Impulse noise

An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808

Compressive Sensing Using Symmetric Alpha-Stable Distributions for Robust Sparse Signal Reconstruction. *Tzagkarakis, G.*, +, *TSP Feb. 1, 2019 808-820*

Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks. Yu, Y., +, TSP March 15, 2019 1566-1581

Weakly Convex Regularized Robust Sparse Recovery Methods With Theoretical Guarantees. *Yang*, C., +, TSP Oct. 1, 2019 5046-5061

Independent component analysis

A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures. *Weiss, A.*, +, *TSP Oct. 1*, 2019 5032-5045

Gradient Algorithms for Complex Non-Gaussian Independent Component/ Vector Extraction, Question of Convergence. *Koldovsky, Z.*, +, *TSP Feb.* 15, 2019 1050-1064

Inertial navigation

Multivariate Signal Modeling With Applications to Inertial Sensor Calibration. *Xu*, *H*., +, *TSP Oct. 1*, 2019 5143-5152

Inference algorithms

Scalable Mean-Field Sparse Bayesian Learning. Worley, B., TSP Dec. 15, 2019 6314-6326

Inference mechanisms

Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727

Joint Network Topology and Dynamics Recovery From Perturbed Stationary Points. Wai, H., +, TSP Sept. 1, 2019 4582-4596

On the Properties of Gromov Matrices and Their Applications in Network Inference. *Ji*, *F*., +, *TSP May 15*, 2019 2624-2638

Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari*, *J.*, +, *TSP Feb. 1*, 2019 638-651

Semiparametric CRB and Slepian-Bangs Formulas for Complex Elliptically Symmetric Distributions. Fortunati, S., +, TSP Oct. 15, 2019 5352-5364

Information theory

Residual Ratio Thresholding for Linear Model Order Selection. *Kallummil*, S., +, TSP Feb. 15, 2019 838-853

Sparse Signal Recovery via Generalized Entropy Functions Minimization. Huang, S., +, TSP March 1, 2019 1322-1337

Infrared spectra

Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658

Robust Hemodynamic Response Function Estimation From fNIRS Signals. Seghouane, A., +, TSP April 1, 2019 1838-1848

Integer programming

Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. *Wang, F.*, +, *TSP July 15, 2019 3818-3831*

Integrated circuit design

Hardware-Limited Task-Based Quantization. Shlezinger, N., +, TSP Oct. 15, 2019 5223-5238

Joint Decoder Design for SSDs. Li, Q., TSP May 1, 2019 2399-2409

Integration

Approximating Sample State Vectors Using the ESPT for Computationally Efficient Particle Filtering. *Biswas, S.K.*, +, *TSP April 1, 2019 1918-1928*New Saddle-Point Technique for Non-Coherent Radar Detection With

Application to Correlated Targets in Uncorrelated Clutter Speckle. Zuk, J., +, TSP April 15, 2019 2221-2233

Intercarrier interference

Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels. *Han, J.*, +, *TSP Feb. 15, 2019 915-929*

Interference

Co-Design for Overlaid MIMO Radar and Downlink MISO Communication Systems via Cramér–Rao Bound Minimization. *Cheng, Z., +, TSP Dec.* 15, 2019 6227-6240

Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis. *Ruan, H.*, +, *TSP Dec. 15*, 2019 6411-6423

Hybrid Sparse Array Beamforming Design for General Rank Signal Models. Hamza, S.A., +, TSP Dec. 15, 2019 6215-6226

Maximally Improper Signaling in Underlay MIMO Cognitive Radio Networks. *Lameiro*, C., +, TSP Dec. 15, 2019 6241-6255

Interference (signal)

Adaptive Detection of Structured Signals in Low-Rank Interference. Schniter, P., +, TSP July 1, 2019 3439-3454

Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June* 15, 2019 3100-3112

False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96

False Alarm Rate of the GLRT for Subspace Signals in Subspace Interference Plus Gaussian Noise. *Liu*, *J.*, +, *TSP June 1*, 2019 3058-3069

Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution. *Liu*, Y., +, *TSP Aug. 15*, 2019 4370-4382

Interference suppression

A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix. *Raghavan, R.S., TSP Sept. 1, 2019 4624-4635*

Corrections to "A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix" [Sep 19 4624-4635]. *Raghavan, R.S., TSP Nov. 1, 2019 5611*

Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari, P.*, +, *TSP Feb.* 1, 2019 594-608

- Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158
- Hybrid Vector Perturbation Precoding: The Blessing of Approximate Message Passing. Lyu, S., +, TSP Jan. 1, 2019 178-193
- Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647
- Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. Wang, F., +, TSP July 15, 2019 3818-3831
- Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X., +, TSP Aug. 15, 2019 4152-4167*
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250
- State-Space Adaptive Nonlinear Self-Interference Cancellation for Full-Duplex Communication. *Vogt, H.*, +, *TSP June 1*, 2019 2810-2825
- Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays. Gao, X., +, TSP Sept. 15, 2019 4809-4824

Internet of Things

- Online Power Optimization in Feedback-Limited, Dynamic and Unpredictable IoT Networks. *Marcastel*, A., +, TSP June 1, 2019 2987-3000
- Resilient Distributed Parameter Estimation With Heterogeneous Data. *Chen*, Y, +, TSP Oct. 1, 2019 4918-4933
- Secure Mobile Edge Computing in IoT via Collaborative Online Learning. *Li*, *B*., +, *TSP Dec. 1*, 2019 5922-5935

Interpolation

- Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823
- Convolution and Multichannel Sampling for the Offset Linear Canonical Transform and Their Applications. *Wei*, D., +, TSP Dec. 1, 2019 6009-6024 Domain-Informed Spline Interpolation. *Behjat*, H., +, TSP Aug. 1, 2019 3909-3921
- Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability. *Boche, H.*, +, *TSP Dec.* 15, 2019 6424-6439

Inverse problems

- Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486
- Group Greedy Method for Sensor Placement. *Jiang, C.*, +, *TSP May 1*, 2019 2249-2262
- Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems. Debarre, T., +, TSP Nov. 15, 2019 5824-5836
- Sparse Recovery and Dictionary Learning From Nonlinear Compressive Measurements. Rencker, L., +, TSP Nov. 1, 2019 5659-5670
- Sparse Sampling for Inverse Problems With Tensors. *Ortiz-Jimenez, G.*, +, *TSP June 15*, 2019 3272-3286

Inverse transforms

Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595

Investment

- Gaussian Weighting Reversion Strategy for Accurate Online Portfolio Selection. Cai, X., +, TSP Nov. 1, 2019 5558-5570
- Optimal Mean-Reverting Portfolio With Leverage Constraint for Statistical Arbitrage in Finance. Zhao, Z., +, TSP April 1, 2019 1681-1695
- Tests for the Weights of the Global Minimum Variance Portfolio in a High-Dimensional Setting. *Bodnar, T.*, +, *TSP Sept. 1*, 2019 4479-4493

Iterative decoding

- Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. *Liu*, *L.*, +, *TSP April 1*, 2019 1758-1773
- Stochastic Bit-Wise Iterative Decoding of Polar Codes. *Han*, K., +, *TSP March 1*, 2019 1138-1151

Iterative methods

- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua, S.S.*, +, *TSP June 15*, 2019 3243-3257
- A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures. *Weiss, A., +, TSP Oct. 1, 2019 5032-5045*

- Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142
- Alternating Iteratively Reweighted Least Squares Minimization for Low-Rank Matrix Factorization. *Giampouras, P.V.*, +, *TSP Jan. 15, 2019 490-503*
- An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808
- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L., +, TSP April 1, 2019 1774-1784*
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO. Shen, W., +, TSP Aug. 15, 2019 4204-4217
- Communication-Censored ADMM for Decentralized Consensus Optimization. *Liu*, *Y*, +, *TSP May 15*, 2019 2565-2579
- Compressive Sensing Using Symmetric Alpha-Stable Distributions for Robust Sparse Signal Reconstruction. *Tzagkarakis*, G., +, TSP Feb. 1, 2019 808-820
- Delta-Ramp Encoder for Amplitude Sampling and Its Interpretation as Time Encoding. *Martinez-Nuevo*, P., +, TSP May 15, 2019 2516-2527
- Efficient Global Optimal Resource Allocation in Non-Orthogonal Interference Networks. *Matthiesen, B., +, TSP Nov. 1, 2019 5612-5627*
- Energy Efficiency Optimization in MIMO Interference Channels: A Successive Pseudoconvex Approximation Approach. Yang, Y., +, TSP Aug. 1, 2019 4107-4121
- Estimation From Quantized Gaussian Measurements: When and How to Use Dither. Rapp, J., +, TSP July 1, 2019 3424-3438
- Focused Blind Deconvolution. Bharadwaj, P., +, TSP June 15, 2019 3168-3180
- Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727
- Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation. *Gao*, R., +, TSP *Oct.* 1, 2019 5078-5092
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C., +, TSP Jan. 1, 2019 245-259*
- Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647
- Joint Optimization of a UAV's Trajectory and Transmit Power for Covert Communications. Zhou, X., +, TSP Aug. 15, 2019 4276-4290
- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370
- Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator. Zuo, W., +, TSP Jan. 15, 2019 415-430
- Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels. *Han, J., +, TSP Feb. 15, 2019 915-929*
- Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153
- Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach. *Naghsh*, *M.M.*, +, *TSP Sept. 15*, 2019 4707-
- Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351
- Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299
- Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658
- Nonconvex Optimization Meets Low-Rank Matrix Factorization: An Overview. Chi, Y., +, TSP Oct. 15, 2019 5239-5269
- Nonsubsampled Graph Filter Banks: Theory and Distributed Algorithms. *Jiang, J.*, +, *TSP Aug. 1*, 2019 3938-3953
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- One-Bit Compressive Sensing via Schur-Concave Function Minimization. *Xiao*, P., +, *TSP Aug. 15*, 2019 4139-4151

- Optimal Spectral Initialization for Signal Recovery With Applications to Phase Retrieval. *Luo*, W., +, *TSP May 1*, 2019 2347-2356
- Optimized Signal Distortion for PAPR Reduction of OFDM Signals With IFFT/FFT Complexity Via ADMM Approaches. *Wang, Y., +, TSP Jan. 15, 2019 399-414*
- Parameter Estimation Based on Scale-Dependent Algebraic Expressions and Scale-Space Fitting. *Kukuk*, M., +, TSP March 15, 2019 1431-1446
- Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava, S., +, TSP March 1, 2019 1251-1266*
- Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809
- Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. Zhang, L., +, TSP Aug. 1, 2019 4069-4077
- Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks. *Yu, Y., +, TSP March 15, 2019 1566-1581*
- Robust PCA via ℓ_0 - ℓ_1 Regularization. *Liu, J.*, +, *TSP Jan. 15, 2019 535-549* Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs. *Ioannidis, V.N.*, +, *TSP May 1, 2019 2263-2274*
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Sinusoidal Parameter Estimation From Signed Measurements Via Majorization–Minimization Based RELAX. *Ren, J.*, +, *TSP April 15, 2019 2173-2186*
- Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form. Sun, Y., +, TSP Jan. 15, 2019 320-335
- Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu*, *J.*, +, *TSP Nov. 15*, 2019 5837-5849
- Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci*, E., +, TSP March 15, 2019 1550-1565
- Stable Safe Screening and Structured Dictionaries for Faster ℓ_1 Regularization. Dantas, C.F., +, TSP July 15, 2019 3756-3769
- Stochastic Bit-Wise Iterative Decoding of Polar Codes. *Han, K.*, +, *TSP March 1*, 2019 1138-1151
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. Ying, B., +, TSP Jan. 15, 2019 474-489
- TARM: A Turbo-Type Algorithm for Affine Rank Minimization. *Xue*, Z., +, *TSP Nov. 15*, 2019 5730-5745
- Trainable ISTA for Sparse Signal Recovery. Ito, D., +, TSP June 15, 2019 3113-3125
- Wideband MIMO Radar Waveform Design. Yu, X., +, TSP July 1, 2019 3487-3501

J

Jamming

- Adaptive Detection of Coherent Radar Targets in the Presence of Noise Jamming. Addabbo, P., +, TSP Dec. 15, 2019 6498-6510
- Adaptive Detection of Structured Signals in Low-Rank Interference. Schniter, P., +, TSP July 1, 2019 3439-3454
- Advanced Properties of Full-Duplex Radio for Securing Wireless Network. Hua, Y., TSP Jan. 1, 2019 120-135
- Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari, P.*, +, *TSP Feb.* 1, 2019 594-608
- Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982

K

Kalman filters

A Novel Robust Gaussian–Student's t Mixture Distribution Based Kalman Filter. Huang, Y., +, TSP July 1, 2019 3606-3620

- A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555 Extended Object Tracking via Positive and Negative Information Fusion. *Lee*, S., +, TSP April 1, 2019 1812-1823
- Forecasting Time Series With VARMA Recursions on Graphs. *Isufi, E., +, TSP Sept. 15, 2019 4870-4885*
- How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems. *Krishnamurthy, V.*, +, *TSP Dec. 15, 2019 6511-6525*
- Iterated Extended Kalman Smoother-Based Variable Splitting for L₁-Regularized State Estimation. *Gao*, R., +, TSP Oct. 1, 2019 5078-5092
- Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava, S.*, +, *TSP March 1*, 2019 1251-1266
- Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs. *Ioannidis*, V.N., +, TSP May 1, 2019 2263-2274
- State-Space Adaptive Nonlinear Self-Interference Cancellation for Full-Duplex Communication. *Vogt, H.*, +, *TSP June 1*, 2019 2810-2825
- Tracking the Orientation and Axes Lengths of an Elliptical Extended Object. Yang, S., +, TSP Sept. 15, 2019 4720-4729

Kernel

Greedy Kernel Change-Point Detection. Truong, C., +, TSP Dec. 15, 2019 6204-6214

Sampling of Planar Curves: Theory and Fast Algorithms. Zou, Q., +, TSP Dec. 15, 2019 6455-6467

 \mathbf{L}

Laplace transforms

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk, J.,* +, *TSP April 15, 2019 2221-2233*

Large-scale systems

Online Graph-Adaptive Learning With Scalability and Privacy. Shen, Y., +, TSP May 1, 2019 2471-2483

Lattice filters

Fully Orthogonal 2-D Lattice Structures for Quarter-Plane and Asymmetric Half-Plane Autoregressive Modeling of Random Fields. *Kayran*, *A.H.*, +, *TSP Sept. 1*, 2019 4507-4520

Leaky wave antennas

On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290

Learning (artificial intelligence)

- A Learning-Based Two-Stage Spectrum Sharing Strategy With Multiple Primary Transmit Power Levels. *Zhang, R.*, +, *TSP Sept. 15, 2019 4899-4914*A Scalable Hierarchical Gaussian Process Classifier. *Nguyen, T.N.A.*, +, *TSP June 1, 2019 3042-3057*
- Adaptive Diffusions for Scalable Learning Over Graphs. *Berberidis, D.*, +, *TSP March 1*, 2019 1307-1321
- Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks. *Bedi, A.S.*, +, *TSP April 1, 2019 1742-1757*
- Beliefs in Decision-Making Cascades. Seo, D., +, TSP Oct. 1, 2019 5103-5117
- CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. *Levie, R.*, +, *TSP Jan. 1, 2019 97-109*
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555
- Corrections to "Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions" [Mar 19 1207-1222]. Basu, S., +, TSP April 1, 2019 1960
- Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization. Yang, K., +, TSP June 15, 2019 3087-3099
- DeepLOB: Deep Convolutional Neural Networks for Limit Order Books. Zhang, Z., +, TSP June 1, 2019 3001-3012

- Distributed Solution of Large-Scale Linear Systems via Accelerated Projection-Based Consensus. Azizan-Ruhi, N., +, TSP July 15, 2019 3806-3817
- Eigendecomposition-Free Sampling Set Selection for Graph Signals. Sakiyama, A., +, TSP May 15, 2019 2679-2692
- Exact Diffusion for Distributed Optimization and Learning—Part II: Convergence Analysis. *Yuan, K.*, +, *TSP Feb. 1, 2019 724-739*
- Fast and Provable Algorithms for Learning Two-Layer Polynomial Neural Networks. *Soltani, M.*, +, *TSP July 1, 2019 3361-3371*
- Finding GEMS: Multi-Scale Dictionaries For High-Dimensional Graph Signals. Yankelevsky, Y., +, TSP April 1, 2019 1889-1901
- Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. *Hwang, W.*, +, *TSP June 15, 2019 3330-3343*
- Gaussian Weighting Reversion Strategy for Accurate Online Portfolio Selection. Cai, X., +, TSP Nov. 1, 2019 5558-5570
- Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727
- Hyperdimensional Bayesian Time Mapping (HyperBaT): A Probabilistic Approach to Time Series Mapping of Non-Identical Sequences. *Ruble, M.*, +, *TSP July 15*, 2019 3719-3731
- Hyperspectral Anomaly Detection via Global and Local Joint Modeling of Background. Wu, Z., +, TSP July 15, 2019 3858-3869
- Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search. Chen, J., +, TSP Oct. 15, 2019 5380-5390
- Joint Channel Estimation and User Grouping for Massive MIMO Systems. Dai, J., +, TSP Feb. 1, 2019 622-637
- Joint Network Topology and Dynamics Recovery From Perturbed Stationary Points. Wai, H., +, TSP Sept. 1, 2019 4582-4596
- Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581
- Joint Time-Frequency Scattering. Anden, J., +, TSP July 15, 2019 3704-3718
- Learning Filter Bank Sparsifying Transforms. *Pfister, L., +, TSP Jan. 15, 2019 504-519*
- Learning in Wireless Control Systems Over Nonstationary Channels. *Eisen*, M., +, TSP March 1, 2019 1123-1137
- Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour, M.*, +, *TSP Jan. 1, 2019 17-28*
- Learning Optimal Resource Allocations in Wireless Systems. Eisen, M., +, TSP May 15, 2019 2775-2790
- Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370
- Location-Free Spectrum Cartography. Teganya, Y., +, TSP Aug. 1, 2019 4013-4026
- Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. *Basu, S.*, +, *TSP March 1*, 2019 1207-1222
- Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153
- Non-Uniform Burst-Sparsity Learning for Massive MIMO Channel Estimation. *Dai*, *J.*, +, *TSP Feb. 15*, 2019 1075-1087
- Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method. Chen, W., +, TSP Nov. 15, 2019 5785-5797
- Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J., +, TSP Feb. 1, 2019 740-752*
- Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks. *Shen, Y., +, TSP Oct. 15, 2019 5325-5339*
- Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. *Chen, P., +, TSP Jan. 1, 2019 208-220*
- On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals. *Garfinkle, C.J.*, +, *TSP Dec. 1, 2019 5884-5892*
- Online and Stable Learning of Analysis Operators. Sandbichler, M., +, TSP Jan. 1, 2019 41-53
- Online Graph-Adaptive Learning With Scalability and Privacy. Shen, Y., +, TSP May 1, 2019 2471-2483
- Online Learning With Inexact Proximal Online Gradient Descent Algorithms. Dixit, R., +, TSP March 1, 2019 1338-1352

- Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression. *Balda, E.R.*, +, *TSP Dec. 1,* 2019 6078-6091
- Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels. *Koppel, A., +, TSP May 15, 2019 2528-2542*
- Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava, S., +, TSP March 1, 2019 1251-1266*
- Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. Zhang, L., +, TSP Aug. 1, 2019 4069-4077
- Sequential Outlier Detection Based on Incremental Decision Trees. Gokcesu, K., +, TSP Feb. 15, 2019 993-1005
- Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu*, *J.*, +, *TSP Nov. 15*, 2019 5837-5849
- Sparse Recovery and Dictionary Learning From Nonlinear Compressive Measurements. Rencker, L., +, TSP Nov. 1, 2019 5659-5670
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. *Ying, B., +, TSP Jan. 15, 2019 474-489*
- Supervised Learning Under Distributed Features. Ying, B., +, TSP Feb. 15, 2019 977-992
- The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunni*, T., +, TSP Dec. 1, 2019 5909-5921
- Trainable ISTA for Sparse Signal Recovery. Ito, D., +, TSP June 15, 2019 3113-3125
- Universal Best Arm Identification. Shen, C., TSP Sept. 1, 2019 4464-4478
 Variance-Reduced Stochastic Learning by Networked Agents Under Random Reshuffling. Yuan, K., +, TSP Jan. 15, 2019 351-366

Least mean squares methods

- A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures. *Weiss, A., +, TSP Oct. 1, 2019 5032-5045*
- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi*, L., +, TSP April 1, 2019 1774-1784
- Analysis of the Unconstrained Frequency-Domain Block LMS for Second-Order Noncircular Inputs. Zhang, X., +, TSP Aug. 1, 2019 3970-3984
- Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908
- Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. *Liu*, *L.*, +, *TSP April 1*, 2019 1758-1773
- Comments on "The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". Wang, G., +, TSP April 1, 2019 1957-1958
- Decentralized Equalization With Feedforward Architectures for Massive MU-MIMO. *Jeon, C., +, TSP Sept. 1, 2019 4418-4432*
- Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595
- Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters. *Goken, C.*, +, *TSP Aug. 15*, 2019 4302-4316
- Estimation Theoretic Secure Communication via Encoder Randomization. Goken, C., +, TSP Dec. 1, 2019 6105-6120
- Extended-Object or Group-Target Tracking Using Random Matrix With Nonlinear Measurements. Lan, J., +, TSP Oct. 1, 2019 5130-5142
- Geometric-Algebra Adaptive Filters. Lopes, W.B., +, TSP July 15, 2019 3649-3662
- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- MMSE Approximation For Sparse Coding Algorithms Using Stochastic Resonance. Simon, D., +, TSP Sept. 1, 2019 4597-4610
- MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, *T.*, +, *TSP Feb. 1*, 2019 553-567
- Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, TSP March 15, 2019 1662-1677
- Projection-Based Regularized Dual Averaging for Stochastic Optimization. *Ushio, A., +, TSP May 15, 2019 2720-2733*
- Reply to "Comments on 'The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". *Mandic, D.*, +, *TSP April 1, 2019*

- Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks. *Yu, Y., +, TSP March 15, 2019 1566-1581*
- Stability Bound of the Initial Mean-Square Deviation of High-Order Stochastic Gradient Adaptive Filtering Algorithms. *Eweda, E., TSP Aug. 15*, 2019 4168-4176
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. *Ying, B.*, +, *TSP Jan. 15*, 2019 474-489
- The Generalized Complex Kernel Least-Mean-Square Algorithm. Boloix-Tortosa, R., +, TSP Oct. 15, 2019 5213-5222
- User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1*, 2019 2426-2438
- Widely Linear Complex-Valued Estimated-Input LMS Algorithm for Bias-Compensated Adaptive Filtering With Noisy Measurements. *Zhang*, S., +, TSP July 1, 2019 3592-3605

Least squares approximations

- A Large Dimensional Analysis of Least Squares Support Vector Machines. Liao, Z., +, TSP Feb. 15, 2019 1065-1074
- A Low-Complexity Nonlinear Least Mean Squares Filter Based on a Decomposable Volterra Model. *Pinheiro, F.C.*, +, *TSP Nov. 1, 2019 5463-5478*
- A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*
- Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810
- Alternating Iteratively Reweighted Least Squares Minimization for Low-Rank Matrix Factorization. *Giampouras, P.V.*, +, *TSP Jan. 15, 2019 490-503*
- An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Frequency-Resolved Optical Gating Recovery via Smoothing Gradient. *Pinilla*, S., +, TSP Dec. 1, 2019 6121-6132
- Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals. *Karisik, F., +, TSP Dec. 1, 2019 6067-6077*
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1*, 2019 245-259
- Matrix Completion and Extrapolation via Kernel Regression. *Gimenez-Febrer*, P., +, TSP Oct. 1, 2019 5004-5017
- Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658
- One-Bit Radar Processing With Time-Varying Sampling Thresholds. *Ameri*, A., +, TSP Oct. 15, 2019 5297-5308
- Parameter Estimation Based on Scale-Dependent Algebraic Expressions and Scale-Space Fitting. *Kukuk*, M., +, *TSP March 15*, 2019 1431-1446
- Rational Optimization for Nonlinear Reconstruction With Approximate ℓ_0 Penalization. Castella, M., +, TSP March 15, 2019 1407-1417
- Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks. *Yu*, *Y*, +, *TSP March 15*, 2019 1566-1581
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty. Tang, S., +, TSP Oct. 1, 2019 4992-5003
- Stable Safe Screening and Structured Dictionaries for Faster ℓ_1 Regularization. Dantas, C.F., +, TSP July 15, 2019 3756-3769
- State-Space Adaptive Nonlinear Self-Interference Cancellation for Full-Duplex Communication. Vogt, H., +, TSP June 1, 2019 2810-2825
- Tests For the Parameters of Chirp Signal Model. *Dhar, S.S.*, +, *TSP Aug. 15*, 2019 4291-4301
- The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. Slavakis, K., TSP June 1, 2019 2868-2883

Lens antennas

On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. *Xie*, *T*., +, *TSP Sept. 15*, 2019 4730-4744

Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays. *Gao, X.*, +, *TSP Sept. 15*, 2019 4809-4824

Lenses

Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays. *Shen, W.*, +, *TSP Dec. 15, 2019 6301-6313*

Level set

Sampling of Planar Curves: Theory and Fast Algorithms. Zou, Q., +, TSP Dec. 15, 2019 6455-6467

Linear antenna arrays

On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290

Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*

Linear codes

Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. *Wasson, M.*, +, *TSP Oct. 1*, 2019 4976-4991

Online Design of Optimal Precoders for High Dimensional Signal Detection. *Khanduri*, P., +, TSP Aug. 1, 2019 4122-4135

Linear programming

Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. Wasson, M., +, TSP Oct. 1, 2019 4976-4991

- Iterated Extended Kalman Smoother-Based Variable Splitting for L₁-Regularized State Estimation. *Gao*, R., +, TSP Oct. 1, 2019 5078-5092
- On Global Linear Convergence in Stochastic Nonconvex Optimization for Semidefinite Programming. Zeng, J., +, TSP Aug. 15, 2019 4261-4275
- Sequence Design for Spectral Shaping via Minimization of Regularized Spectral Level Ratio. Wu, L., +, TSP Sept. 15, 2019 4683-4695

Linear quadratic Gaussian control

Joint Waveform and Guidance Control Optimization for Target Rendezvous. Benavoli, A., +, TSP Aug. 15, 2019 4357-4369

Linear systems

Measurement Bounds for Observability of Linear Dynamical Systems Under Sparsity Constraints. *Joseph, G.*, +, *TSP April 15*, 2019 1992-2006

Non-Existence of Convolution Sum System Representations. *Boche, H.*, +, TSP May 15, 2019 2649-2664

On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290

Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR. Lu, Y., +, TSP June 1, 2019 2947-2959

Load flow

Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. *Zhang, L., +, TSP Aug. 1, 2019 4069-4077*

Load forecasting

Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. Zhang, L., +, TSP Aug. 1, 2019 4069-4077

Load modeling

A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature. Ramakrishna, R., +, TSP Dec. 15, 2019 6368-6383

Long Term Evolution

Advanced Low-Complexity Multicarrier Schemes Using Fast-Convolution Processing and Circular Convolution Decomposition. *Loulou, A.*, +, *TSP May 1*, 2019 2304-2319

Low-pass filters

A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960

Representation and Reconstruction of Finite-Energy Band-Limited Signals via Pulse-Width Modulation. Sevuktekin, N.C., +, TSP Oct. 1, 2019 5153-5169

\mathbf{M}

Machine bearings

Quickest Change Detection in the Presence of a Nuisance Change. *Lau*, *T.S.*, +, *TSP Oct. 15*, 2019 5281-5296

Machine learning

A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature. *Ramakrishna*, *R.*, +, *TSP Dec. 15*, *2019 6368-6383* Computation Scheduling for Distributed Machine Learning With Straggling

Workers. Amiri, M.M., +, TSP Dec. 15, 2019 6270-6284

Semi-Supervised Learning in Network-Structured Data via Total Variation Minimization. Jung, A., +, TSP Dec. 15, 2019 6256-6269

Magnetoencephalography

MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567

Marine radar

Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk, J.*, +, *TSP April 15*, 2019 2221-2233

Markov processes

Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson, M.*, +, *TSP Jan. 1, 2019 149-163*

Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July I, 2019 3471-3486

Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking. *Lian, L., +, TSP April 15, 2019 2007-2021*

Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. Li, Y., +, TSP May 1, 2019 2499-2512

Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. Wang, Z., +, TSP Aug. 15, 2019 4342-4356

Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour, M.*, +, *TSP Jan. 1, 2019 17-28*

Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16

Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379

Parameter Estimation of Heavy-Tailed AR Model With Missing Data Via Stochastic EM. Liu, J., +, TSP April 15, 2019 2159-2172

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

Split-and-Augmented Gibbs Sampler—Application to Large-Scale Inference Problems. *Vono*, *M*., +, *TSP March 15*, 2019 1648-1661

User Location Tracking in Massive MIMO Systems via Dynamic Variational Bayesian Inference. *Lian, L., +, TSP Nov. 1, 2019 5628-5642*

Matched filters

A CFAR Detector for Mismatched Eigenvalues of Training Sample Covariance Matrix. Raghavan, R.S., TSP Sept. 1, 2019 4624-4635

False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158

High Resolution Compressed Sensing Radar Using Difference Set Codes. *Taghavi, I.*, +, *TSP Jan. 1, 2019 136-148*

Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271

New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications. *Miao*, *H.*, +, *TSP Nov. 1*, 2019 5543-5557

Mathematical analysis

Advanced Low-Complexity Multicarrier Schemes Using Fast-Convolution Processing and Circular Convolution Decomposition. *Loulou, A.*, +, *TSP May 1*, 2019 2304-2319

Linear Canonical Wigner Distribution Based Noisy LFM Signals Detection Through the Output SNR Improvement Analysis. *Zhang, Z., TSP Nov. 1,* 2019 5527-5542

Residual Ratio Thresholding for Linear Model Order Selection. *Kallummil*, S., +, TSP Feb. 15, 2019 838-853

Mathematical operators

Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems. Debarre, T., +, TSP Nov. 15, 2019 5824-5836

Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809

Mathematical programming

Matrix Completion With Deterministic Pattern: A Geometric Perspective. Shapiro, A., +, TSP Feb. 15, 2019 1088-1103

Reconstruction of Signals From Their Autocorrelation and Cross-Correlation Vectors, With Applications to Phase Retrieval and Blind Channel Estimation. *Jaganathan, K.*, +, *TSP June 1, 2019 2937-2946*

Mathematics computing

Structured and Unstructured Outlier Identification for Robust PCA: A Fast Parameter Free Algorithm. *Menon, V.*, +, *TSP May 1, 2019 2439-2452*

Matrix algebra

A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960

A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua, S.S., +, TSP June 15, 2019 3243-3257*

A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization. *Xing, C.*, +, *TSP July 1, 2019 3531-3546*

A Large Dimensional Analysis of Least Squares Support Vector Machines. Liao, Z., +, TSP Feb. 15, 2019 1065-1074

A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures. *Weiss, A.*, +, *TSP Oct. 1*, 2019 5032-5045

A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*

A New Construction Framework for Polyphase Complete Complementary Codes With Various Lengths. Das, S., +, TSP May 15, 2019 2639-2648

Advances in Distributed Graph Filtering. Coutino, M., +, TSP May 1, 2019 2320-2333

An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808

Bayesian Smoothing for the Extended Object Random Matrix Model. Granstrom, K., +, TSP July 15, 2019 3732-3742

Bilinear Recovery Using Adaptive Vector-AMP. Sarkar, S., +, TSP July 1, 2019 3383-3396

Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part II: Generalizations and Applications. *Li*, *C.*, +, *TSP June 1*, 2019 2911-2922

Cramér-Rao Bound for Constrained Parameter Estimation Using Lehmann-Unbiasedness. Nitzan, E., +, TSP Feb. 1, 2019 753-768

Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. Chawla, A., +, TSP Aug. 1, 2019 4055-4068

Exact Diffusion for Distributed Optimization and Learning—Part I: Algorithm Development. *Yuan, K.*, +, *TSP Feb. 1, 2019 708-723*

Fast and Provable Algorithms for Learning Two-Layer Polynomial Neural Networks. *Soltani, M., +, TSP July 1, 2019 3361-3371*

Finding GEMS: Multi-Scale Dictionaries For High-Dimensional Graph Signals. *Yankelevsky*, Y., +, *TSP April 1*, 2019 1889-1901

Flexible Array Response Control via Oblique Projection. Zhang, X., +, TSP June 15, 2019 3126-3139

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI

Suppression in Angle Domain. *Ge, Y., +, TSP April 15, 2019 2143-2158* Graph Topology Inference Based on Sparsifying Transform Learning. *Sardellitti, S., +, TSP April 1, 2019 1712-1727*

Hypercomplex Widely Linear Estimation Through the Lens of Underpinning Geometry. Nitta, T., +, TSP Aug. 1, 2019 3985-3994

- iMUSIC: A Family of MUSIC-Like Algorithms for Integer Period Estimation. *Tenneti*, S.V., +, TSP Jan. 15, 2019 367-382
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1, 2019 245-259*
- Joint Spatiotemporal Multipath Mitigation in Large-Scale Array Localization. Wang, Y., +, TSP Feb. 1, 2019 783-797
- Learning Tensors From Partial Binary Measurements. Ghadermarzy, N., +, TSP Jan. 1, 2019 29-40
- Manifold Optimization Over the Set of Doubly Stochastic Matrices: A Second-Order Geometry. *Douik, A.*, +, *TSP Nov. 15*, 2019 5761-5774
- Matrix Completion and Extrapolation via Kernel Regression. Gimenez-Febrer, P., +, TSP Oct. 1, 2019 5004-5017
- Matrix Completion With Deterministic Pattern: A Geometric Perspective. Shapiro, A., +, TSP Feb. 15, 2019 1088-1103
- Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153
- Measurement Bounds for Observability of Linear Dynamical Systems Under Sparsity Constraints. *Joseph, G.*, +, *TSP April 15*, 2019 1992-2006
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351
- Nearly Optimal Restricted Isometry Condition for Rank Aware Order Recursive Matching Pursuit. Kim, J., +, TSP Sept. 1, 2019 4449-4463
- Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299
- Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method. Chen, W., +, TSP Nov. 15, 2019 5785-5797
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes. Su, D., +, TSP Sept. 15, 2019 4772-4781
- On the Properties of Gromov Matrices and Their Applications in Network Inference. *Ji*, *F*, +, *TSP May 15*, 2019 2624-2638
- Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization. Xu, S., +, TSP Oct. 1, 2019 5018-5031
- Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*
- Provable Subspace Tracking From Missing Data and Matrix Completion. Narayanamurthy, P., +, TSP Aug. 15, 2019 4245-4260
- Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809
- Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982
- Semiparametric CRB and Slepian-Bangs Formulas for Complex Elliptically Symmetric Distributions. Fortunati, S., +, TSP Oct. 15, 2019 5352-5364
- Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. Fortunati, S., +, TSP Jan. 1, 2019 164-177
- Space-Time Media-Based Modulation. *Yigit, Z.*, +, *TSP May 1*, 2019 2389-2398
- Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu*, *J.*, +, *TSP Nov. 15*, 2019 5837-5849
- Sparse Sampling for Inverse Problems With Tensors. *Ortiz-Jimenez, G.*, +, *TSP June 15, 2019 3272-3286*
- Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection. Zhao, W., +, TSP Nov. 15, 2019 5746-5760
- Stable Safe Screening and Structured Dictionaries for Faster ℓ_1 Regularization. Dantas, C.F., +, TSP July 15, 2019 3756-3769
- TARM: A Turbo-Type Algorithm for Affine Rank Minimization. *Xue*, Z., +, TSP Nov. 15, 2019 5730-5745
- Tight Performance Bounds for Compressed Sensing With Conventional and Group Sparsity. Ranjan, S., +, TSP June 1, 2019 2854-2867
- Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945
- Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, *J.*, +, *TSP May 1*, 2019 2410-2425

Uncovering Source Ranges From Range Differences Observed by Sensors at Unknown Positions: Fundamental Theory. *Le, T.*, +, *TSP May 15*, 2019 2665-2678

Matrix decomposition

- Alternating Iteratively Reweighted Least Squares Minimization for Low-Rank Matrix Factorization. *Giampouras, P.V.*, +, *TSP Jan. 15*, 2019 490-503
- Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823
- Error Preserving Correction: A Method for CP Decomposition at a Target Error Bound. *Phan, A., +, TSP March 1, 2019 1175-1190*
- Estimation of Sparse Directional Connectivity With Expectation Maximization. Khayambashi, M., +, TSP Feb. 15, 2019 854-869
- Matrix Completion and Performance Guarantees for Single Individual Haplotyping. Barik, S., +, TSP Sept. 15, 2019 4782-4794
- Nonconvex Optimization Meets Low-Rank Matrix Factorization: An Overview. Chi, Y., +, TSP Oct. 15, 2019 5239-5269
- On the Asymptotics of Maronna's Robust PCA. *Draskovic*, G., +, TSP Oct. 1, 2019 4964-4975
- Online Forecasting Matrix Factorization. Gultekin, S., +, TSP March 1, 2019
- Robust PCA via ℓ_0 - ℓ_1 Regularization. *Liu, J.*, +, *TSP Jan. 15, 2019 535-549* Scalable *M*-Channel Critically Sampled Filter Banks for Graph Signals. *Li, S.*, +, *TSP Aug. 1, 2019 3954-3969*
- Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu*, *J.*, +, *TSP Nov. 15*, 2019 5837-5849
- Unimodality-Constrained Matrix Factorization for Non-Parametric Source Localization. Chen, J., +, TSP May 1, 2019 2371-2386

Matrix inversion

- Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels. *Han, J., +, TSP Feb. 15, 2019 915-929*
- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- SINR Distribution for the Persymmetric SMI Beamformer With Steering Vector Mismatches. *Liu*, *J.*, +, *TSP March 1*, 2019 1382-1392

Maximum likelihood detection

Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688

Maximum likelihood estimation

- A Maximum Likelihood-Based Minimum Mean Square Error Separation and Estimation of Stationary Gaussian Sources From Noisy Mixtures. *Weiss, A.*, +, *TSP Oct. 1, 2019 5032-5045*
- A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter. You, P., +, TSP Oct. 15, 2019 5433-5446
- A Robust Spectral Estimator With Application to a Noise-Corrupted Process. Zhou, X., +, TSP April 15, 2019 2107-2114
- A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746
- Adaptive Radar Detection in Gaussian Disturbance With Structured Covariance Matrix via Invariance Theory. *Tang, M.*, +, *TSP Nov. 1, 2019 5671-5685*
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May 1*, 2019 2291-2303
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson, M.*, +, *TSP Jan. 1, 2019 149-163*
- Cramér-Rao Bound for Constrained Parameter Estimation Using Lehmann-Unbiasedness. Nitzan, E., +, TSP Feb. 1, 2019 753-768
- Estimation From Quantized Gaussian Measurements: When and How to Use Dither. Rapp, J., +, TSP July 1, 2019 3424-3438
- Gradient Algorithms for Complex Non-Gaussian Independent Component/ Vector Extraction, Question of Convergence. *Koldovsky, Z.*, +, *TSP Feb.* 15, 2019 1050-1064

- How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems. *Krishnamurthy, V.*, +, *TSP Dec. 15*, 2019 6511-6525
- Improving Localization by Testing Mobility. Carlino, L., +, TSP July 1, 2019 3412-3423
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1, 2019 245-259*
- Joint Spatiotemporal Multipath Mitigation in Large-Scale Array Localization. Wang, Y., +, TSP Feb. 1, 2019 783-797
- Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour, M.*, +, *TSP Jan. 1, 2019 17-28*
- Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation. *Aubry*, A., +, *TSP March 15*, 2019 1396-1406
- New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images. *Mian, A., +, TSP Jan. 15, 2019 520-534*
- On Multisensor Detection of Improper Signals. *Tugnait*, *J.K.*, *TSP Feb. 15*, 2019 870-884
- On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation. *Chen, Y., +, TSP Jan. 15, 2019 431-443*
- Parameter Estimation of Heavy-Tailed AR Model With Missing Data Via Stochastic EM. Liu, J., +, TSP April 15, 2019 2159-2172
- Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*
- Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381
- Residual Ratio Thresholding for Linear Model Order Selection. *Kallummil*, S., +, TSP Feb. 15, 2019 838-853
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Sinusoidal Parameter Estimation From Signed Measurements Via Majorization–Minimization Based RELAX. Ren, J., +, TSP April 15, 2019 2173-2186
- Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form. Sun, Y., +, TSP Jan. 15, 2019 320-335
- Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*

Mean square error methods

- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua, S.S.*, +, *TSP June 15*, 2019 3243-3257
- A Hybrid Lower Bound for Parameter Estimation of Signals With Multiple Change-Points. *Bacharach, L.*, +, *TSP March 1*, 2019 1267-1279
- A Unified Approach to the Statistical Convergence Analysis of Frequency-Domain Adaptive Filters. *Yang*, F., +, TSP April 1, 2019 1785-1796
- Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June 15*, 2019 3100-3112
- Cramér-Rao Bound for Constrained Parameter Estimation Using Lehmann-Unbiasedness. Nitzan, E., +, TSP Feb. 1, 2019 753-768
- Ergodicity in Stationary Graph Processes: A Weak Law of Large Numbers. Gama, F., +, TSP May 15, 2019 2761-2774
- Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158
- Full Mean Square Performance Bounds on Quaternion Estimators for Improper Data. Xia, Y., +, TSP Aug. 1, 2019 4093-4106
- Further Results on the Cramér–Rao Bound for Sparse Linear Arrays. Wang, M., +, TSP March 15, 2019 1493-1507
- Group Greedy Method for Sensor Placement. *Jiang, C.*, +, *TSP May 1, 2019* 2249-2262
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1, 2019 245-259*
- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator. Zuo, W., +, TSP Jan. 15, 2019 415-430

- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- Multistatic Localization in the Absence of Transmitter Position. *Zhang*, *Y*., +, *TSP Sept. 15*, 2019 4745-4760
- MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567
- Noise Benefits in Combined Nonlinear Bayesian Estimators. *Duan, F.*, +, *TSP Sept. 1*, 2019 4611-4623
- On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation. *Chen, Y., +, TSP Jan. 15, 2019 431-443*
- Online Forecasting Matrix Factorization. Gultekin, S., +, TSP March 1, 2019 1223-1236
- Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. Fortunati, S., +, TSP Jan. 1, 2019 164-177
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. Ying, B., +, TSP Jan. 15, 2019 474-489
- Trainable ISTA for Sparse Signal Recovery. Ito, D., +, TSP June 15, 2019 3113-3125
- Unimodality-Constrained Matrix Factorization for Non-Parametric Source Localization. *Chen, J.*, +, *TSP May 1*, 2019 2371-2386
- Widely Linear Complex-Valued Estimated-Input LMS Algorithm for Bias-Compensated Adaptive Filtering With Noisy Measurements. *Zhang*, S., +, TSP July 1, 2019 3592-3605

Measurement errors

- A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*
- Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi, R.*, +, *TSP Nov.* 15, 2019 5811-5823

Measurement uncertainty

A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*

Medical image processing

Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals. *Karisik, F., +, TSP Dec. 1, 2019 6067-6077*

Medical signal processing

- Domain-Informed Spline Interpolation. Behjat, H., +, TSP Aug. 1, 2019 3909-3921
- Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727
- Multivariate Variational Mode Decomposition. *Rehman, N.u.*, +, *TSP Dec.* 1, 2019 6039-6052
- MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567
- New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications. *Miao, H.*, +, *TSP Nov. 1, 2019 5543-5557*
- Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks. *Shen, Y., +, TSP Oct. 15, 2019 5325-5339*
- On Quasi-Isometry of Threshold-Based Sampling. *Moser, B.A.*, +, *TSP July 15, 2019 3832-3841*
- Robust Hemodynamic Response Function Estimation From fNIRS Signals. Seghouane, A., +, TSP April 1, 2019 1838-1848
- Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty. Tang, S., +, TSP Oct. 1, 2019 4992-5003
- Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. Sebastian, J., +, TSP June 1, 2019 2923-2936
- Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L., +, TSP April 1, 2019 1929-1940

Message passing

- An Approximate Message Passing Framework for Side Information. *Ma*, *A*., +, *TSP April 1*, 2019 1875-1888
- Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks. *Bedi, A.S.*, +, *TSP April 1, 2019 1742-1757*
- Bilinear Recovery Using Adaptive Vector-AMP. Sarkar, S., +, TSP July 1, 2019 3383-3396
- Decentralized Equalization With Feedforward Architectures for Massive MU-MIMO. *Jeon, C., +, TSP Sept. 1, 2019 4418-4432*

- Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking. *Lian*, *L.*, +, *TSP April 15*, 2019 2007-2021
- Hardware-Based Linear Program Decoding With the Alternating Direction Method of Multipliers. Wasson, M., +, TSP Oct. 1, 2019 4976-4991
- Hybrid Vector Perturbation Precoding: The Blessing of Approximate Message Passing. Lyu, S., +, TSP Jan. 1, 2019 178-193
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1*, 2019 245-259
- Marginalized Particle Filtering and Related Filtering Techniques as Message Passing. Vitetta, G.M., +, TSP March 15, 2019 1522-1536
- Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR. Lu, Y., +, TSP June 1, 2019 2947-2959
- Sketched Clustering via Hybrid Approximate Message Passing. *Byrne*, E., +, *TSP Sept. 1*, 2019 4556-4569
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*

Millimeter wave antenna arrays

- On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. Xie, T., +, TSP Sept. 15, 2019 4730-4744
- Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays. *Gao, X.*, +, *TSP Sept. 15*, 2019 4809-4824

Millimeter wave communication

- Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908
- Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417
- Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914
- On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. *Xie*, *T*., +, *TSP Sept. 15*, 2019 4730-4744
- Successive Localization and Beamforming in 5G mmWave MIMO Communication Systems. Zhou, B., +, TSP March 15, 2019 1620-1635
- Swift-Link: A Compressive Beam Alignment Algorithm for Practical mmWave Radios. Myers, N.J., +, TSP Feb. 15, 2019 1104-1119
- Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, *J.*, +, *TSP May 1*, 2019 2410-2425

Millimeter wave phase shifters

On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. *Xie*, *T.*, +, *TSP Sept. 15*, 2019 4730-4744

Millimeter wave radar

Design of Large Effective Apertures for Millimeter Wave Systems Using a Sparse Array of Subarrays. *Gupta*, A., +, *TSP Dec.* 15, 2019 6483-6497

Millimeter wave technology

Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information. *Lin*, *Z*., +, *TSP Dec.* 15, 2019 6384-6396

MIMO communication

- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua, S.S.*, +, *TSP June 15, 2019 3243-3257*
- A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. Shao, M., +, TSP Oct. 15, 2019 5309-5324
- A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization. Xing, C., +, TSP July 1, 2019 3531-3546
- A Simple ML Detection for Coded Generalized Frequency Division Multiplexing in MIMO Channels. *Towliat, M.*, +, *TSP Feb. 1*, 2019 798-807
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May 1, 2019 2291-2303*
- Asymptotic Task-Based Quantization With Application to Massive MIMO. Shlezinger, N., +, TSP Aug. 1, 2019 3995-4012
- Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908
- Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays. Shen, W., +, TSP Dec. 15, 2019 6301-6313

- Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. *Liu*, *L.*, +, *TSP April 1*, 2019 1758-1773
- Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO. Shen, W., +, TSP Aug. 15, 2019 4204-4217
- Compressed Training Based Massive MIMO. Yilmaz, B.B., +, TSP March 1, 2019 1191-1206
- Decentralized Equalization With Feedforward Architectures for Massive MU-MIMO. *Jeon, C., +, TSP Sept. 1, 2019 4418-4432*
- Deinterleaving of Mixtures of Renewal Processes. *Young, J.*, +, *TSP Feb. 15*, 2019 885-898
- Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. Chawla, A., +, TSP Aug. 1, 2019 4055-4068
- Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari*, *P.*, +, *TSP Feb.* 1, 2019 594-608
- Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595
- Energy Efficiency Optimization in MIMO Interference Channels: A Successive Pseudoconvex Approximation Approach. *Yang, Y., +, TSP Aug. 1, 2019 4107-4121*
- Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao*, Y., +, TSP July 15, 2019 3770-3784
- Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking. *Lian, L.*, +, *TSP April 15, 2019 2007-2021*
- Frequency Synchronization for OFDM-Based Massive MIMO Systems. Sabeti, P., +, TSP June 1, 2019 2973-2986
- Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158
- Hybrid Vector Perturbation Precoding: The Blessing of Approximate Message Passing. Lyu, S., +, TSP Jan. 1, 2019 178-193
- Information-Theoretic Pilot Design for Downlink Channel Estimation in FDD Massive MIMO Systems. Gu, Y., +, TSP May 1, 2019 2334-2346
- Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search. Chen, J., +, TSP Oct. 15, 2019 5380-5390
- Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1*, 2019 245-259
- Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647
- Joint Channel Estimation and User Grouping for Massive MIMO Systems. Dai, J., +, TSP Feb. 1, 2019 622-637
- Joint Spatiotemporal Multipath Mitigation in Large-Scale Array Localization. Wang, Y., +, TSP Feb. 1, 2019 783-797
- Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. Wang, Z., +, TSP Aug. 15, 2019 4342-4356
- Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153
- Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach. *Naghsh, M.M.*, +, *TSP Sept. 15*, 2019 4707-4719
- Maximally Improper Signaling in Underlay MIMO Cognitive Radio Networks. *Lameiro, C.*, +, *TSP Dec. 15*, 2019 6241-6255
- Non-Uniform Burst-Sparsity Learning for Massive MIMO Channel Estimation. *Dai*, *J*., +, *TSP Feb. 15*, 2019 1075-1087
- Nonlinear Distortion Noise and Linear Attenuation in MIMO Systems— Theory and Application to Multiband Transmitters. *Ronnow, D.*, +, *TSP Oct. 15*, 2019 5203-5212
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part I: Complementary Codes-Based Schemes. Su, D., +, TSP Sept. 15, 2019 4761-4771
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes. Su, D., +, TSP Sept. 15, 2019 4772-4781
- On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO. *Maatouk*, A., +, TSP Feb. 15, 2019 1006-1021

- On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. *Xie*, *T*., +, *TSP Sept. 15*, 2019 4730-4744
- Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, D., +, TSP March 15, 2019 1662-1677
- Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B.*, +, *TSP Nov. 1*, 2019 5479-5494
- Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava*, S., +, TSP March 1, 2019 1251-1266
- Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X., +, TSP Aug. 15, 2019 4152-4167*
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250
- Sampling and Reconstruction of Multiple-Input Multiple-Output Channels. *Lee, D.G.*, +, *TSP Feb. 15, 2019 961-976*
- Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982
- Space-Time Media-Based Modulation. *Yigit, Z.*, +, *TSP May 1, 2019 2389-2398*
- Successive Localization and Beamforming in 5G mmWave MIMO Communication Systems. Zhou, B., +, TSP March 15, 2019 1620-1635
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*
- Time-Frequency Analysis of the Impulse Response. Galleani, L., TSP March 1, 2019 1280-1295
- Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945
- Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, *J.*, +, *TSP May 1*, 2019 2410-2425
- Two-Timescale Hybrid Compression and Forward for Massive MIMO Aided C-RAN. *Liu*, A., +, *TSP May 1*, 2019 2484-2498
- User Location Tracking in Massive MIMO Systems via Dynamic Variational Bayesian Inference. *Lian, L.*, +, *TSP Nov. 1*, 2019 5628-5642
- Wideband Beamspace Channel Estimation for Millimeter-Wave MIMO Systems Relying on Lens Antenna Arrays. *Gao, X.*, +, *TSP Sept. 15, 2019 4809-4824*

MIMO radar

- Co-Design for Overlaid MIMO Radar and Downlink MISO Communication Systems via Cramér–Rao Bound Minimization. *Cheng, Z.*, +, *TSP Dec.* 15, 2019 6227-6240
- Designing Sets of Binary Sequences for MIMO Radar Systems. Alaee-Kerahroodi, M., +, TSP July 1, 2019 3347-3360
- Joint Beamforming and Association Design for MIMO Radar. Niesen, U., +, TSP July 15, 2019 3663-3675
- Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. Chen, P., +, TSP Jan. 1, 2019 208-220
- On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. *Wang, J.*, +, *TSP Aug. 15, 2019 4317-4332*
- Robust Detection in MIMO Radar With Steering Vector Mismatches. *Liu*, *J*., +, *TSP Oct.* 15, 2019 5270-5280
- Sparse Antenna and Pulse Placement for Colocated MIMO Radar. *Tohidi, E.*, +, *TSP Feb. 1, 2019 579-593*
- Spectrally Constrained MIMO Radar Waveform Design Based on Mutual Information. *Tang. B.*, +, *TSP Feb. 1*, 2019 821-834
- Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1, 2019 3561-3575*
- Wideband MIMO Radar Waveform Design. Yu, X., +, TSP July 1, 2019 3487-3501

Minimax techniques

- Connections Between Spectral Properties of Asymptotic Mappings and Solutions to Wireless Network Problems. *Cavalcante, R.L.G.*, +, *TSP May* 15, 2019 2747-2760
- Constrained Sampling: Optimum Reconstruction in Subspace With Minimax Regret Constraint. Sadeghi, B., +, TSP Aug. 15, 2019 4218-4230
- Localization From Incomplete Euclidean Distance Matrix: Performance Analysis for the SVD–MDS Approach. *Zhang, H., +, TSP April 15, 2019 2196-2209*
- Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach. *Naghsh*, *M.M.*, +, *TSP Sept. 15*, 2019 4707-4719
- Minimax Optimal Algorithms for Adversarial Bandit Problem With Multiple Plays. *Vural*, *N.M.*, +, *TSP Aug. 15*, 2019 4383-4398
- MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution. *Dytso, A.*, +, *TSP Dec. 15*, 2019 6352-6367
- Stable Principal Component Pursuit via Convex Analysis. Yin, L., +, TSP May 15, 2019 2595-2607

Minimization

- A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960
- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua*, S.S., +, TSP June 15, 2019 3243-3257
- A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. *Shao, M.*, +, *TSP Oct. 15*, 2019 5309-5324
- A Novel Kullback–Leibler Divergence Minimization-Based Adaptive Student's t-Filter. *Huang*, Y., +, TSP Oct. 15, 2019 5417-5432
- Alternating Iteratively Reweighted Least Squares Minimization for Low-Rank Matrix Factorization. *Giampouras, P.V.*, +, *TSP Jan. 15*, 2019 490-503
- An Iteratively Reweighted Instrumental-Variable Estimator for Robust 3-D AOA Localization in Impulsive Noise. *Nguyen, N.H.*, +, *TSP Sept. 15*, 2019 4795-4808
- Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks. *Bedi, A.S.*, +, *TSP April 1, 2019 1742-1757*
- Distributed Gradient Descent Algorithm Robust to an Arbitrary Number of Byzantine Attackers. Cao, X., +, TSP Nov. 15, 2019 5850-5864
- Distributed Topology Manipulation to Control Epidemic Spreading Over Networks. Xue, D., +, TSP March 1, 2019 1163-1174
- Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters. Goken, C., +, TSP Aug. 15, 2019 4302-4316
- Event-Driven Sensor Scheduling for Mission-Critical Control Applications. Yu, M., +, TSP March 15, 2019 1537-1549
- Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. *Hwang*, W., +, *TSP June 15*, 2019 3330-3343
- Geometric-Algebra Adaptive Filters. Lopes, W.B., +, TSP July 15, 2019 3649-3662
- Graph Multiview Canonical Correlation Analysis. Chen, J., +, TSP June 1, 2019 2826-2838
- Iterated Extended Kalman Smoother-Based Variable Splitting for L₁-Regularized State Estimation. *Gao*, R., +, TSP Oct. 1, 2019 5078-5092
- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- Learning in Wireless Control Systems Over Nonstationary Channels. *Eisen*, M., +, TSP March 1, 2019 1123-1137
- Low Complexity and High-Resolution Line Spectral Estimation Using Cyclic Minimization. Castanheira, D., +, TSP Dec. 15, 2019 6285-6300
- Low-Rank Data Completion With Very Low Sampling Rate Using Newton's Method. *Ashraphijuo*, M., +, TSP April 1, 2019 1849-1859
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- Nonconvex Regularized Robust PCA Using the Proximal Block Coordinate Descent Algorithm. Wen, F., +, TSP Oct. 15, 2019 5402-5416

- On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. *Wang, J.*, +, *TSP Aug. 15, 2019 4317-4332*
- One-Bit Compressive Sensing via Schur-Concave Function Minimization. Xiao, P., +, TSP Aug. 15, 2019 4139-4151
- Optimization Algorithms for Graph Laplacian Estimation via ADMM and MM. Zhao, L., +, TSP Aug. 15, 2019 4231-4244
- Robust PCA via ℓ_0 - ℓ_1 Regularization. *Liu*, *J.*, +, *TSP Jan*. *15*, 2019 535-549 Sequence Design for Spectral Shaping via Minimization of Regularized Spectral Level Ratio. *Wu*, *L.*, +, *TSP Sept. 15*, 2019 4683-4695
- Simultaneous Sparse Recovery and Blind Demodulation. *Xie*, Y, +, *TSP Oct.* 1, 2019 5184-5199
- Sinusoidal Parameter Estimation From Signed Measurements Via Majorization–Minimization Based RELAX. *Ren, J.*, +, *TSP April 15, 2019 2173-2186*
- Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form. Sun, Y., +, TSP Jan. 15, 2019 320-335
- Sparse Signal Recovery via Generalized Entropy Functions Minimization. Huang, S., +, TSP March 1, 2019 1322-1337
- Spectrally Constrained MIMO Radar Waveform Design Based on Mutual Information. *Tang, B., +, TSP Feb. 1, 2019 821-834*
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. Ying, B., +, TSP Jan. 15, 2019 474-489
- Stochastic Successive Convex Approximation for Non-Convex Constrained Stochastic Optimization. Liu, A., +, TSP Aug. 15, 2019 4189-4203
- Subspace Averaging and Order Determination for Source Enumeration. Garg, V., +, TSP June 1, 2019 3028-3041
- Supervised Learning Under Distributed Features. Ying, B., +, TSP Feb. 15, 2019 977-992
- TARM: A Turbo-Type Algorithm for Affine Rank Minimization. *Xue*, Z., +, *TSP Nov. 15*, 2019 5730-5745
- The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. *Slavakis, K., TSP June 1, 2019 2868-2883*
- Tight Performance Bounds for Compressed Sensing With Conventional and Group Sparsity. Ranjan, S., +, TSP June 1, 2019 2854-2867
- Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, *J.*, +, *TSP May 1*, 2019 2410-2425
- User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1, 2019 2426-2438*

Minimization methods

Co-Design for Overlaid MIMO Radar and Downlink MISO Communication Systems via Cramér–Rao Bound Minimization. *Cheng, Z.*, +, *TSP Dec.* 15, 2019 6227-6240

Minimum entropy methods

The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunni*, T., +, TSP Dec. 1, 2019 5909-5921

MISO communication

- A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. *Shao, M.*, +, *TSP Oct. 15, 2019 5309-5324*
- Co-Design for Overlaid MIMO Radar and Downlink MISO Communication Systems via Cramér–Rao Bound Minimization. *Cheng, Z.*, +, *TSP Dec.* 15, 2019 6227-6240
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam, Y.*, +, *TSP May 15*, 2019 2608-2623
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. Chen, C., +, TSP March 15, 2019 1477-1492

Mixture models

- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh, M.*, +, *TSP Sept. 1, 2019 4545-4555*
- Decentralized Gaussian Filters for Cooperative Self-Localization and Multi-Target Tracking. Sharma, P., +, TSP Nov. 15, 2019 5896-5911
- Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach. Guo, Z., +, TSP Jan. 1, 2019 194-207
- Trajectory PHD and CPHD Filters. Garcia-Fernandez, A.F., +, TSP Nov. 15, 2019 5702-5714

Mobile computing

- A Reputation-Based Contract for Repeated Crowdsensing With Costly Verification. *Dobakhshari*, D.G., +, TSP Dec. 1, 2019 6092-6104
- Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization. Yang, K., +, TSP June 15, 2019 3087-3099
- Secure Mobile Edge Computing in IoT via Collaborative Online Learning. Li, B., +, TSP Dec. 1, 2019 5922-5935

Mobile robots

Joint Optimization of a UAV's Trajectory and Transmit Power for Covert Communications. Zhou, X., +, TSP Aug. 15, 2019 4276-4290

Mobility management (mobile radio)

- Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO. Shen, W., +, TSP Aug. 15, 2019 4204-4217
- Decentralized Gaussian Filters for Cooperative Self-Localization and Multi-Target Tracking. Sharma, P., +, TSP Nov. 15, 2019 5896-5911

Modulation

Theoretical Analysis of the Peak-to-Average Power Ratio and Optimal Pulse Shaping Filter Design for GFDM Systems. *Liu*, *K*., +, *TSP July 1*, 2019 3455-3470

Molecular biophysics

Matrix Completion and Performance Guarantees for Single Individual Haplotyping. *Barik, S., +, TSP Sept. 15, 2019 4782-4794*

Molecular configurations

Matrix Completion and Performance Guarantees for Single Individual Haplotyping. *Barik*, S., +, *TSP Sept. 15*, 2019 4782-4794

Monte Carlo methods

- Adaptive Bayesian Radio Tomography. Lee, D., +, TSP April 15, 2019 1964-1977
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. Ho, D.K.W., +, TSP May 1, 2019 2291-2303
- Automatic Recognition of General LPI Radar Waveform Using SSD and Supplementary Classifier. *Hoang, L.M.*, +, *TSP July 1*, 2019 3516-3530
- Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson, M.*, +, *TSP Jan. 1, 2019 149-163*
- Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter. Liu, J., +, TSP Feb. 15, 2019 1022-1033
- Domain-Informed Spline Interpolation. Behjat, H., +, TSP Aug. 1, 2019 3909-3921
- False Alarm Rate of the GLRT for Subspace Signals in Subspace Interference Plus Gaussian Noise. *Liu*, *J.*, +, *TSP June 1*, 2019 3058-3069
- High-Dimensional Filtering Using Nested Sequential Monte Carlo. *Naesseth, C.A.*, +, *TSP Aug. 15*, 2019 4177-4188
- Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search. Chen, J., +, TSP Oct. 15, 2019 5380-5390
- Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. *Li*, *Y*, +, *TSP May 1*, 2019 2499-2512
- Joint Time-of-Arrival Estimation for Coherent UWB Ranging in Multipath Environment With Multi-User Interference. Wang, S., +, TSP July 15, 2019 3743-3755
- Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16
- Mismatched Signal Rejection Performance of the Persymmetric GLRT Detector. Liu, J., +, TSP March 15, 2019 1610-1619
- Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967
- New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk, J.,* +, *TSP April 15, 2019 2221-2233*
- One-Step Persymmetric GLRT for Subspace Signals. Liu, J., +, TSP July 15, 2019 3639-3648
- Parameter Estimation of Heavy-Tailed AR Model With Missing Data Via Stochastic EM. Liu, J., +, TSP April 15, 2019 2159-2172
- Probing High-Order Dependencies With Information Theory. *Granero-Belinchon, C.*, +, *TSP July 15*, 2019 3796-3805
- SINR Distribution for the Persymmetric SMI Beamformer With Steering Vector Mismatches. *Liu*, *J.*, +, *TSP March 1*, 2019 1382-1392

Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*

Split-and-Augmented Gibbs Sampler—Application to Large-Scale Inference Problems. Vono, M., +, TSP March 15, 2019 1648-1661

Tracking the Orientation and Axes Lengths of an Elliptical Extended Object. Yang, S., +, TSP Sept. 15, 2019 4720-4729

Motion estimation

A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter. You, P., +, TSP Oct. 15, 2019 5433-5446

Moving average processes

Quickest Change Detection in the Presence of a Nuisance Change. *Lau, T.S.*, +, *TSP Oct. 15*, 2019 5281-5296

Multi-access systems

Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. *Liu*, *L.*, +, *TSP April 1*, 2019 1758-1773

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158

Hybrid Vector Perturbation Precoding: The Blessing of Approximate Message Passing. Lyu, S., +, TSP Jan. 1, 2019 178-193

Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82

Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X., +, TSP Aug. 15, 2019 4152-4167*

Multi-agent systems

An Integrated Localization and Control Framework for Multi-Agent Formation. Cai, Y., +, TSP April 1, 2019 1941-1956

Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L.*, +, *TSP April 1, 2019 1774-1784*

Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks. *Bedi, A.S.*, +, *TSP April 1, 2019 1742-1757*

Beliefs in Decision-Making Cascades. Seo, D., +, TSP Oct. 1, 2019 5103-5117

Computationally Efficient Multi-Agent Multi-Object Tracking With Labeled Random Finite Sets. Li, S., +, TSP Jan. 1, 2019 260-275

FADE: Fast and Asymptotically Efficient Distributed Estimator for Dynamic Networks. Simoes, A., +, TSP April 15, 2019 2080-2092

Non-Iterative MDS Method for Collaborative Network Localization With Sparse Range and Pointing Measurements. *Hamaoui*, M., TSP Feb. 1, 2019 568-578

Resilient Distributed Parameter Estimation With Heterogeneous Data. *Chen*, *Y*, +, *TSP Oct. 1*, 2019 4918-4933

Variance-Reduced Stochastic Learning by Networked Agents Under Random Reshuffling. Yuan, K., +, TSP Jan. 15, 2019 351-366

Multipath channels

Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810

Direct Position Determination Sensitivity to NLOS Propagation Effects on Doppler-Shift. *Picard, J.S.*, +, *TSP July 15*, 2019 3870-3881

Joint Spatiotemporal Multipath Mitigation in Large-Scale Array Localization. Wang, Y., +, TSP Feb. 1, 2019 783-797

Joint Time-of-Arrival Estimation for Coherent UWB Ranging in Multipath Environment With Multi-User Interference. Wang, S., +, TSP July 15, 2019 3743-3755

Multiuser detection

Capacity-Achieving MIMO-NOMA: Iterative LMMSE Detection. Liu, L., +, TSP April 1, 2019 1758-1773

N

NAND circuits

Joint Decoder Design for SSDs. *Li*, *Q.*, *TSP May 1*, 2019 2399-2409 **Network theory (graphs)**

Joint Network Topology and Dynamics Recovery From Perturbed Stationary Points. Wai, H., +, TSP Sept. 1, 2019 4582-4596

Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. Basu, S., +, TSP March 1, 2019 1207-1222

Semi-Supervised Learning in Network-Structured Data via Total Variation Minimization. *Jung, A.*, +, *TSP Dec. 15*, 2019 6256-6269

Network topology

Controllability of Bandlimited Graph Processes Over Random Time Varying Graphs. Gama, F., +, TSP Dec. 15, 2019 6440-6454

Networked control systems

Hypothesis Testing Under Subjective Priors and Costs as a Signaling Game. Saritas, S., +, TSP Oct. 1, 2019 5169-5183

Neural network architecture

Convolutional Neural Network Architectures for Signals Supported on Graphs. *Gama*, F., +, TSP Feb. 15, 2019 1034-1049

Neural networks

A New Framework to Train Autoencoders Through Non-Smooth Regularization. *Amini*, S., +, TSP April 1, 2019 1860-1874

A Scalable Hierarchical Gaussian Process Classifier. Nguyen, T.N.A., +, TSP June 1, 2019 3042-3057

Adaptive Diffusions for Scalable Learning Over Graphs. *Berberidis, D.*, +, *TSP March 1*, 2019 1307-1321

CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. *Levie, R.*, +, *TSP Jan. 1, 2019 97-109*

Fast and Provable Algorithms for Learning Two-Layer Polynomial Neural Networks. *Soltani, M., +, TSP July 1, 2019 3361-3371*

Learning Optimal Resource Allocations in Wireless Systems. *Eisen, M.*, +, TSP May 15, 2019 2775-2790

Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370

Learning to Detect. Samuel, N., +, TSP May 15, 2019 2554-2564

Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression. *Balda, E.R.*, +, *TSP Dec. 1,* 2019 6078-6091

Neurophysiology

Domain-Informed Spline Interpolation. Behjat, H., +, TSP Aug. 1, 2019 3909-3921

Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks. *Shen, Y., +, TSP Oct. 15, 2019 5325-5339*

Spike Estimation From Fluorescence Signals Using High-Resolution Property of Group Delay. *Sebastian, J., +, TSP June 1, 2019 2923-2936*

Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L, +, TSP April 1, 2019 1929-1940

Newton method

A Primal-Dual Quasi-Newton Method for Exact Consensus Optimization. Eisen, M., +, TSP Dec. 1, 2019 5983-5997

Low-Rank Data Completion With Very Low Sampling Rate Using Newton's Method. *Ashraphijuo*, M., +, TSP April 1, 2019 1849-1859

Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes. Su, D., +, TSP Sept. 15, 2019 4772-4781

Noise measurement

Sampling of Planar Curves: Theory and Fast Algorithms. Zou, Q., +, TSP Dec. 15, 2019 6455-6467

Noise reduction

Sampling of Planar Curves: Theory and Fast Algorithms. Zou, Q., +, TSP Dec. 15, 2019 6455-6467

Nonlinear distortion

Nonlinear Distortion Noise and Linear Attenuation in MIMO Systems— Theory and Application to Multiband Transmitters. *Ronnow, D.*, +, *TSP Oct. 15*, 2019 5203-5212

Nonlinear estimation

Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May* 1, 2019 2291-2303

Cramér-Rao Bound for Constrained Parameter Estimation Using Lehmann-Unbiasedness. Nitzan, E., +, TSP Feb. 1, 2019 753-768

Nonlinear filters

A Low-Complexity Nonlinear Least Mean Squares Filter Based on a Decomposable Volterra Model. *Pinheiro, F.C.*, +, *TSP Nov. 1*, 2019 5463-5478

- A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746
- Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823
- Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation. *Gao*, R., +, TSP Oct. 1, 2019 5078-5092
- The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunmi*, T., +, TSP Dec. 1, 2019 5909-5921

Nonlinear programming

- Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation. *Gao*, R., +, TSP *Oct.* 1, 2019 5078-5092
- Noise Benefits in Combined Nonlinear Bayesian Estimators. *Duan, F.*, +, *TSP Sept. 1, 2019 4611-4623*
- Sequence Design for Spectral Shaping via Minimization of Regularized Spectral Level Ratio. Wu, L., +, TSP Sept. 15, 2019 4683-4695
- Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Nonlinear systems

Design of Rao-Blackwellized Point-Mass Smoother for Conditionally Linear and Gaussian Models. *Dunik, J.*, +, *TSP Dec. 1, 2019 6053-6066*

Nonparametric statistics

- A Binning Approach to Quickest Change Detection With Unknown Post-Change Distribution. Lau, T.S., +, TSP Feb. 1, 2019 609-621
- Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series. *Tugnait, J.K., TSP Oct. 1, 2019 5062-5077*

Normal distribution

- A Robust Spectral Estimator With Application to a Noise-Corrupted Process. *Zhou, X., +, TSP April 15, 2019 2107-2114*
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. Ho, D.K.W., +, TSP May 1, 2019 2291-2303

Number theory

- Hypercomplex Tensor Completion via Convex Optimization. *Mizoguchi, T.*, +, *TSP Aug. 1, 2019 4078-4092*
- Hypothesis Test for Bounds on the Size of Random Defective Set. *D'yachkov*, A., +, TSP Nov. 15, 2019 5775-5784
- Optimal Estimates of Two Common Remainders for a Robust Generalized Chinese Remainder Theorem. Li, X., +, TSP April 1, 2019 1824-1837

Numerical analysis

- Modeling the Active Neuron Separation in the Compressed Sensing and Finite Rate of Innovation Framework. *Schnier, T.*, +, *TSP Sept. 1, 2019 4521-4534*
- Online Power Optimization in Feedback-Limited, Dynamic and Unpredictable IoT Networks. *Marcastel*, A., +, TSP June 1, 2019 2987-3000

O

Object detection

- Adaptive Radar Detection in Gaussian Disturbance With Structured Covariance Matrix via Invariance Theory. *Tang, M.*, +, *TSP Nov. 1, 2019 5671-5685*
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. Emambakhsh, M., +, TSP Sept. 1, 2019 4545-4555
- Design of Robust Radar Detectors Through Random Perturbation of the Target Signature. *Coluccia*, A., +, TSP Oct. 1, 2019 5118-5129
- Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823
- Hyperspectral Anomaly Detection via Global and Local Joint Modeling of Background. Wu, Z., +, TSP July 15, 2019 3858-3869
- One-Step Persymmetric GLRT for Subspace Signals. Liu, J., +, TSP July 15, 2019 3639-3648
- Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379
- Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization. *Xu*, *S.*, +, *TSP Oct. 1*, 2019 5018-5031

- Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression. *Balda, E.R.*, +, *TSP Dec. 1,* 2019 6078-6091
- Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain. *Zhou, G.*, +, *TSP Nov. 1, 2019 5596-5610*
- Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937
- Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection. Zhao, W., +, TSP Nov. 15, 2019 5746-5760
- STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models. Li, X., +, TSP April 1, 2019 1902-1917

Object tracking

- A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter. You, P., +, TSP Oct. 15, 2019 5433-5446
- Bayesian Smoothing for the Extended Object Random Matrix Model. Granstrom, K., +, TSP July 15, 2019 3732-3742
- Computationally Efficient Multi-Agent Multi-Object Tracking With Labeled Random Finite Sets. Li, S., +, TSP Jan. 1, 2019 260-275
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555
- Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823
- Extended-Object or Group-Target Tracking Using Random Matrix With Nonlinear Measurements. Lan, J., +, TSP Oct. 1, 2019 5130-5142
- Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals. *Karisik*, F., +, TSP Dec. 1, 2019 6067-6077
- Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967
- Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688
- Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. *Nguyen, H.V.*, +, *TSP Oct. 15*, 2019 5365-5379
- Tracking the Orientation and Axes Lengths of an Elliptical Extended Object. Yang, S., +, TSP Sept. 15, 2019 4720-4729

Observability

Measurement Bounds for Observability of Linear Dynamical Systems Under Sparsity Constraints. *Joseph, G.*, +, *TSP April 15*, 2019 1992-2006

OFDM modulation

- A Simple ML Detection for Coded Generalized Frequency Division Multiplexing in MIMO Channels. *Towliat, M.*, +, *TSP Feb. 1, 2019 798-807*
- Advanced Low-Complexity Multicarrier Schemes Using Fast-Convolution Processing and Circular Convolution Decomposition. *Loulou, A.*, +, *TSP May 1, 2019 2304-2319*
- Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908
- Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO. Shen, W., +, TSP Aug. 15, 2019 4204-4217
- Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595
- Frequency Synchronization for OFDM-Based Massive MIMO Systems. Sabeti, P., +, TSP June 1, 2019 2973-2986
- Low-Complexity Equalization of Orthogonal Signal-Division Multiplexing in Doubly-Selective Channels. *Han, J., +, TSP Feb. 15, 2019 915-929*
- Optimized Signal Distortion for PAPR Reduction of OFDM Signals With IFFT/FFT Complexity Via ADMM Approaches. *Wang, Y.*, +, *TSP Jan. 15*, 2019 399-414
- Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B., +, TSP Nov. 1, 2019 5479-5494*
- Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*

Office environment

Cramér–Rao Bounds for Filtering Based on Gaussian Process State-Space Models. Zhao, Y., +, TSP Dec. 1, 2019 5936-5951

Omnidirectional antennas

- Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes. Su, D., +, TSP Sept. 15, 2019 4772-4781

Optical communication

Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao*, Y., +, TSP July 15, 2019 3770-3784

Optical radar

- Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486
- Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823

Optimal control

Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581

Optimization

- A Decentralized Proximal-Gradient Method With Network Independent Step-Sizes and Separated Convergence Rates. *Li*, *Z*., +, *TSP Sept. 1*, 2019 4494-4506
- A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960
- A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization. *Xing*, C., +, TSP July 1, 2019 3531-3546
- A Primal-Dual Quasi-Newton Method for Exact Consensus Optimization. Eisen, M., +, TSP Dec. 1, 2019 5983-5997
- An Exact Quantized Decentralized Gradient Descent Algorithm. *Reisizadeh*, A., +, TSP Oct. 1, 2019 4934-4947
- Analysis of Distributed ADMM Algorithm for Consensus Optimization in Presence of Node Error. *Majzoobi, L., +, TSP April 1, 2019 1774-1784*
- Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks. *Bedi, A.S.*, +, *TSP April 1, 2019 1742-1757*
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Clustering of Data With Missing Entries Using Non-Convex Fusion Penalties. *Poddar, S., +, TSP Nov. 15, 2019 5865-5880*
- Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson*, M., +, TSP Jan. 1, 2019 149-163
- Connections Between Spectral Properties of Asymptotic Mappings and Solutions to Wireless Network Problems. *Cavalcante, R.L.G.*, +, *TSP May* 15, 2019 2747-2760
- Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486
- Design of Large Effective Apertures for Millimeter Wave Systems Using a Sparse Array of Subarrays. *Gupta*, A., +, *TSP Dec. 15*, 2019 6483-6497
- Detecting Approximate Reflection Symmetry in a Point Set Using Optimization on Manifold. *Nagar, R.*, +, *TSP March 15*, 2019 1582-1595
- Distributed Solution of Large-Scale Linear Systems via Accelerated Projection-Based Consensus. Azizan-Ruhi, N., +, TSP July 15, 2019 3806-3817
- Efficient Design of Binary Sequences With Low Autocorrelation Sidelobes. Lin, R., +, TSP Dec. 15, 2019 6397-6410
- Energy Efficiency Optimization in MIMO Interference Channels: A Successive Pseudoconvex Approximation Approach. *Yang, Y.*, +, *TSP Aug. 1*, 2019 4107-4121
- Estimation of Sparse Directional Connectivity With Expectation Maximization. Khayambashi, M., +, TSP Feb. 15, 2019 854-869
- Estimation Theoretic Secure Communication via Encoder Randomization. Goken, C., +, TSP Dec. 1, 2019 6105-6120
- Exact Diffusion for Distributed Optimization and Learning—Part I: Algorithm Development. *Yuan, K.*, +, *TSP Feb. 1, 2019 708-723*
- Exact Diffusion for Distributed Optimization and Learning—Part II: Convergence Analysis. *Yuan, K.*, +, *TSP Feb. 1*, 2019 724-739
- Exploiting Prior Information in Block-Sparse Signals. *Daei*, S., +, TSP Oct. 1, 2019 5093-5102

- Flexible Array Response Control via Oblique Projection. Zhang, X., +, TSP June 15, 2019 3126-3139
- Focused Blind Deconvolution. Bharadwaj, P., +, TSP June 15, 2019 3168-3180
- Group Greedy Method for Sensor Placement. *Jiang, C.*, +, *TSP May 1*, 2019 2249-2262
- Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays. *Qiao, H.*, +, *TSP Nov. 15*, 2019 5715-5729
- Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems. Debarre, T., +, TSP Nov. 15, 2019 5824-5836
- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581
- Joint Waveform and Guidance Control Optimization for Target Rendezvous. Benavoli, A., +, TSP Aug. 15, 2019 4357-4369
- Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. *Wang*, Z., +, *TSP Aug.* 15, 2019 4342-4356
- Learning Optimal Resource Allocations in Wireless Systems. *Eisen, M.*, +, *TSP May 15, 2019 2775-2790*
- Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370
- Low Complexity and High-Resolution Line Spectral Estimation Using Cyclic Minimization. Castanheira, D., +, TSP Dec. 15, 2019 6285-6300
- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- Matrix Exponential Learning Schemes With Low Informational Exchange. *Li*, *W*., +, *TSP June 15*, 2019 3140-3153
- Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967
- Multi-User Regularized Zero-Forcing Beamforming. Nguyen, L.D., +, TSP June 1, 2019 2839-2853
- Multivariate Variational Mode Decomposition. *Rehman, N.u.*, +, *TSP Dec.* 1, 2019 6039-6052
- Nearly Optimal Restricted Isometry Condition for Rank Aware Order Recursive Matching Pursuit. *Kim, J., +, TSP Sept. 1, 2019 4449-4463*
- Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658
- Non-Uniform Burst-Sparsity Learning for Massive MIMO Channel Estimation. *Dai*, *J.*, +, *TSP Feb. 15*, 2019 1075-1087
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part I: Complementary Codes-Based Schemes. Su, D., +, TSP Sept. 15, 2019 4761-4771
- Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes. Su, D., +, TSP Sept. 15, 2019 4772-4781
- One-Bit Radar Processing With Time-Varying Sampling Thresholds. *Ameri*, A., +, TSP Oct. 15, 2019 5297-5308
- Online and Stable Learning of Analysis Operators. Sandbichler, M., +, TSP Jan. 1, 2019 41-53
- Online Design of Optimal Precoders for High Dimensional Signal Detection. *Khanduri*, P., +, *TSP Aug. 1*, 2019 4122-4135
- Online Learning With Inexact Proximal Online Gradient Descent Algorithms. *Dixit, R.*, +, *TSP March 1*, 2019 1338-1352
- Online Power Optimization in Feedback-Limited, Dynamic and Unpredictable IoT Networks. *Marcastel*, A., +, TSP June 1, 2019 2987-3000
- OPARC: Optimal and Precise Array Response Control Algorithm—Part I: Fundamentals. *Zhang*, *X.*, +, *TSP Feb. 1*, 2019 652-667
- Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15*, 2019 3197-3212
- Optimal Channel Estimation for Reciprocity-Based Backscattering With a Full-Duplex MIMO Reader. *Mishra*, *D.*, +, *TSP March 15*, 2019 1662-1677

- Optimal Estimates of Two Common Remainders for a Robust Generalized Chinese Remainder Theorem. Li, X., +, TSP April 1, 2019 1824-1837
- Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization. Xu, S., +, TSP Oct. 1, 2019 5018-5031
- Optimized Signal Distortion for PAPR Reduction of OFDM Signals With IFFT/FFT Complexity Via ADMM Approaches. *Wang, Y., +, TSP Jan. 15, 2019 399-414*
- Privacy Preserving Collaborative Computing: Heterogeneous Privacy Guarantee and Efficient Incentive Mechanism. *Wang, X.*, +, *TSP Jan. 1, 2019 221-233*
- Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels. *Koppel, A., +, TSP May 15, 2019 2528-2542*
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250
- Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information. *Lin, Z.,* +, *TSP Dec. 15, 2019 6384-6396*
- Semi-Supervised Learning in Network-Structured Data via Total Variation Minimization. *Jung, A.*, +, *TSP Dec. 15, 2019 6256-6269*
- Sparse Antenna and Pulse Placement for Colocated MIMO Radar. *Tohidi, E.*, +, *TSP Feb. 1, 2019 579-593*
- Sparse Sampling for Inverse Problems With Tensors. *Ortiz-Jimenez, G.*, +, *TSP June 15*, 2019 3272-3286
- Sparse Signal Recovery via Generalized Entropy Functions Minimization. Huang, S., +, TSP March 1, 2019 1322-1337
- Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty. Tang, S., +, TSP Oct. 1, 2019 4992-5003
- Stable Safe Screening and Structured Dictionaries for Faster ℓ₁ Regularization. *Dantas, C.F., +, TSP July 15, 2019 3756-3769*
- Successive Localization and Beamforming in 5G mmWave MIMO Communication Systems. Zhou, B., +, TSP March 15, 2019 1620-1635
- Two-Dimensional Super-Resolution via Convex Relaxation. *Valiulahi, I.*, +, TSP July 1, 2019 3372-3382
- Two-Timescale Hybrid Compression and Forward for Massive MIMO Aided C-RAN. *Liu*, A., +, *TSP May 1*, 2019 2484-2498

Oscillators

Pulse-Coupled Synchronization With Guaranteed Clock Continuity. *Anglea*, *T.*, +, *TSP March 15*, 2019 1596-1609

P

Packet radio networks

Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982

Parallel algorithms

Distributed Topology Manipulation to Control Epidemic Spreading Over Networks. *Xue*, *D.*, +, *TSP March 1*, 2019 1163-1174

Parameter estimation

- A Hybrid Lower Bound for Parameter Estimation of Signals With Multiple Change-Points. *Bacharach, L.*, +, *TSP March 1*, 2019 1267-1279
- Adaptive Filter Approach for GPS Multipath Estimation Under Correntropy Criterion in Dynamic Multipath Environment. *Cheng, L.*, +, *TSP Nov. 15*, 2019 5798-5810
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May 1, 2019 2291-2303*
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters. Goken, C., +, TSP Aug. 15, 2019 4302-4316
- Improving Localization by Testing Mobility. Carlino, L., +, TSP July 1, 2019 3412-3423
- Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16
- One-Bit Radar Processing With Time-Varying Sampling Thresholds. *Ameri*, A., +, TSP Oct. 15, 2019 5297-5308
- Parameter Estimation Based on Scale-Dependent Algebraic Expressions and Scale-Space Fitting. Kukuk, M., +, TSP March 15, 2019 1431-1446

- Parameter Estimation of Heavy-Tailed AR Model With Missing Data Via Stochastic EM. Liu, J., +, TSP April 15, 2019 2159-2172
- Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain. Zhou, G., +, TSP Nov. 1, 2019 5596-5610
- Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381
- Resilient Distributed Parameter Estimation With Heterogeneous Data. *Chen, Y., +, TSP Oct. 1, 2019 4918-4933*
- Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. Fortunati, S., +, TSP Jan. 1, 2019 164-177
- Sinusoidal Parameter Estimation From Signed Measurements Via Majorization–Minimization Based RELAX. *Ren, J.*, +, *TSP April 15, 2019 2173-*
- Tests For the Parameters of Chirp Signal Model. *Dhar, S.S.*, +, *TSP Aug. 15*, 2019 4291-4301
- The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers. *Yeste Ojeda, O.A.*, +, *TSP Aug. 15, 2019 4333-4341*
- Widely Linear Complex-Valued Estimated-Input LMS Algorithm for Bias-Compensated Adaptive Filtering With Noisy Measurements. *Zhang*, S., +, TSP July 1, 2019 3592-3605

Pareto analysis

Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. Fortunati, S., +, TSP Jan. 1, 2019 164-177

Parity check codes

- Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647
- Stochastic Bit-Wise Iterative Decoding of Polar Codes. *Han*, *K*., +, *TSP March 1*, 2019 1138-1151

Particle filtering (numerical methods)

- Approximating Sample State Vectors Using the ESPT for Computationally Efficient Particle Filtering. *Biswas, S.K.*, +, *TSP April 1, 2019 1918-1928*
- Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. *Li*, *Y*, +, *TSP May 1*, 2019 2499-2512
- Marginalized Particle Filtering and Related Filtering Techniques as Message Passing. *Vitetta*, G.M., +, TSP March 15, 2019 1522-1536
- Particle-Based Adaptive-Lag Online Marginal Smoothing in General State-Space Models. *Alenlov, J.*, +, *TSP Nov. 1, 2019 5571-5582*

Particle swarm optimization

Distributed Detection of Sparse Stochastic Signals With Quantized Measurements: The Generalized Gaussian Case. Wang, X., +, TSP Sept. 15, 2019 4886-4898

Path planning

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. *Nguyen, H.V.*, +, *TSP Oct. 15*, 2019 5365-5379

Patient diagnosis

Inhomogeneous Template Adaptation of Temporal Quasi-Periodic Three-Dimensional Signals. *Karisik, F., +, TSP Dec. 1, 2019 6067-6077*

Pattern classification

- A Scalable Hierarchical Gaussian Process Classifier. Nguyen, T.N.A., +, TSP June 1, 2019 3042-3057
- Adaptive Diffusions for Scalable Learning Over Graphs. *Berberidis, D.*, +, *TSP March 1*, 2019 1307-1321
- Optimal Bayesian Classification With Vector Autoregressive Data Dependency. *Zollanvari*, A., +, *TSP June 15*, 2019 3073-3086
- Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression. *Balda, E.R.*, +, *TSP Dec. 1,* 2019 6078-6091

Pattern clustering

- Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142
- Clustering of Data With Missing Entries Using Non-Convex Fusion Penalties. *Poddar, S., +, TSP Nov. 15, 2019 5865-5880*
- K-Medoids Clustering of Data Sequences With Composite Distributions. Wang, T., +, TSP April 15, 2019 2093-2106
- Linear-Complexity Exponentially-Consistent Tests for Universal Outlying Sequence Detection. Bu, Y., +, TSP April 15, 2019 2115-2128
- Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach. Guo, Z., +, TSP Jan. 1, 2019 194-207

Sketched Clustering via Hybrid Approximate Message Passing. Byrne, E., +, TSP Sept. 1, 2019 4556-4569

Pattern recognition

Clustering of Data With Missing Entries Using Non-Convex Fusion Penalties. *Poddar*, S., +, TSP Nov. 15, 2019 5865-5880

Pedestrians

Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. Emambakhsh, M., +, TSP Sept. 1, 2019 4545-4555

Peer-to-peer computing

Resilient Distributed Parameter Estimation With Heterogeneous Data. *Chen*, Y, +, TSP Oct. 1, 2019 4918-4933

Perturbation techniques

Design of Robust Radar Detectors Through Random Perturbation of the Target Signature. Coluccia, A., +, TSP Oct. 1, 2019 5118-5129

Phase shift keying

The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers. *Yeste Ojeda, O.A.*, +, *TSP Aug. 15*, 2019 4333-4341

Phase shifters

Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays. Shen, W., +, TSP Dec. 15, 2019 6301-6313

Photon counting

Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486

Polar codes

Rate-Flexible Fast Polar Decoders. Hashemi, S.A., +, TSP Nov. 15, 2019 5689-5701

Poles and zeros

On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. *Verdu-Monedero, R.*, +, *TSP May 1, 2019 2275-2290*

Polynomial approximation

Scalable M-Channel Critically Sampled Filter Banks for Graph Signals. Li, S., +, TSP Aug. 1, 2019 3954-3969

Polynomial matrices

Distributed Non-Convex First-Order Optimization and Information Processing: Lower Complexity Bounds and Rate Optimal Algorithms. Sun, H., +, TSP Nov. 15, 2019 5912-5928

Polynomials

Bounding Multivariate Trigonometric Polynomials. *Pfister, L.*, +, *TSP Feb.* 1, 2019 700-707

CayleyNets: Graph Convolutional Neural Networks With Complex Rational Spectral Filters. Levie, R., +, TSP Jan. 1, 2019 97-109

Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers. *Liski, J.*, +, *TSP July 15*, 2019 3785-3795

Fast and Provable Algorithms for Learning Two-Layer Polynomial Neural Networks. *Soltani, M., +, TSP July 1, 2019 3361-3371*

Low-Rank Data Completion With Very Low Sampling Rate Using Newton's Method. Ashraphijuo, M., +, TSP April 1, 2019 1849-1859

MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411

Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351

On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals. *Garfinkle, C.J.*, +, TSP Dec. 1, 2019 5884-5892

Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809

Power consumption

Energy Efficiency Optimization in MIMO Interference Channels: A Successive Pseudoconvex Approximation Approach. *Yang, Y., +, TSP Aug. 1, 2019 4107-4121*

Power control

Connections Between Spectral Properties of Asymptotic Mappings and Solutions to Wireless Network Problems. *Cavalcante, R.L.G.*, +, *TSP May* 15, 2019 2747-2760

Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari, P.*, +, *TSP Feb.* 1, 2019 594-608

Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, *S.*, +, *TSP Sept. 1*, 2019 4570-4581

Online Power Optimization in Feedback-Limited, Dynamic and Unpredictable IoT Networks. *Marcastel*, A., +, TSP June 1, 2019 2987-3000

Power engineering computing

A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746

Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. *Zhang, L.*, +, *TSP Aug. 1, 2019 4069-4077*

Power grids

Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. Zhang, L., +, TSP Aug. 1, 2019 4069-4077

Power system control

A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J*., +, *TSP May 15*, 2019 2734-2746

Power system measurement

Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. *Zhang, L.*, +, *TSP Aug. 1*, 2019 4069-4077

Power system state estimation

A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746

Power Systems Topology and State Estimation by Graph Blind Source Separation. *Grotas, S., +, TSP April 15, 2019 2036-2051*

Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. *Zhang, L., +, TSP Aug. 1, 2019 4069-4077*

Precoding

A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua, S.S.*, +, *TSP June 15, 2019 3243-3257*

A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. *Shao*, M., +, *TSP Oct. 15*, 2019 5309-5324

Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908

Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays. *Shen, W.*, +, *TSP Dec. 15, 2019 6301-6313*

Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao, Y., +, TSP July 15, 2019 3770-3784* Hybrid Vector Perturbation Precoding: The Blessing of Approximate Mes-

sage Passing. Lyu, S., +, TSP Jan. 1, 2019 178-193

Max–Min Fairness Design for MIMO Interference Channels: A Minorization–Maximization Approach. *Naghsh, M.M.*, +, *TSP Sept. 15*, 2019 4707-4719

Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part I: Complementary Codes-Based Schemes. Su, D., +, TSP Sept. 15, 2019 4761-4771

Omnidirectional Precoding for Massive MIMO With Uniform Rectangular Array—Part II: Numerical Optimization Based Schemes. Su, D., +, TSP Sept. 15, 2019 4772-4781

On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. *Xie*, *T.*, +, *TSP Sept. 15*, 2019 4730-4744

Online Design of Optimal Precoders for High Dimensional Signal Detection. *Khanduri*, P., +, TSP Aug. 1, 2019 4122-4135

Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B., +, TSP Nov. 1, 2019 5479-5494*

Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava, S., +, TSP March 1, 2019 1251-1266*

Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. Chen, X., +, TSP Aug. 15, 2019 4152-4167

Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Predictive models

A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature. *Ramakrishna, R.*, +, *TSP Dec. 15*, 2019 6368-6383

Pricing

DeepLOB: Deep Convolutional Neural Networks for Limit Order Books. Zhang, Z., +, TSP June 1, 2019 3001-3012

Principal component analysis

Bilinear Recovery Using Adaptive Vector-AMP. Sarkar, S., +, TSP July 1, 2019 3383-3396

Nonconvex Optimization Meets Low-Rank Matrix Factorization: An Overview. Chi, Y., +, TSP Oct. 15, 2019 5239-5269

Nonconvex Regularized Robust PCA Using the Proximal Block Coordinate Descent Algorithm. Wen, F., +, TSP Oct. 15, 2019 5402-5416

Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J.*, +, *TSP Feb. 1, 2019 740-752*

On the Asymptotics of Maronna's Robust PCA. *Draskovic, G.*, +, *TSP Oct.* 1, 2019 4964-4975

Quaternion-Based Multiscale Analysis for Feature Extraction of Hyperspectral Images. Li, H., +, TSP March 15, 2019 1418-1430

Robust PCA via ℓ_0 - ℓ_1 Regularization. *Liu, J., +, TSP Jan. 15, 2019 535-549* Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu, J., +, TSP Nov. 15, 2019 5837-5849*

Stable Principal Component Pursuit via Convex Analysis. Yin, L., +, TSP May 15, 2019 2595-2607

Structured and Unstructured Outlier Identification for Robust PCA: A Fast Parameter Free Algorithm. *Menon, V., +, TSP May 1, 2019 2439-2452*

Private key cryptography

On the Algorithmic Computability of the Secret Key and Authentication Capacity Under Channel, Storage, and Privacy Leakage Constraints. *Boche, H.*, +, *TSP Sept. 1, 2019 4636-4648*

Probabilistic logic

A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature. *Ramakrishna*, *R.*, +, *TSP Dec. 15*, *2019 6368-6383* Corrections to "On the Restricted Isometry of the Columnwise Khatri–Rao

Product" [Mar 18 1170-1183]. *Khanna*, S., +, *TSP May 1*, 2019 2387-2388 **Probability**

Adaptive Diffusions for Scalable Learning Over Graphs. *Berberidis, D.*, +, *TSP March 1, 2019 1307-1321*

Advanced Properties of Full-Duplex Radio for Securing Wireless Network. Hua, Y., TSP Jan. 1, 2019 120-135

Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555

Design of Rao-Blackwellized Point-Mass Smoother for Conditionally Linear and Gaussian Models. *Dunik, J.*, +, *TSP Dec. 1, 2019 6053-6066*

Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. Chawla, A., +, TSP Aug. 1, 2019 4055-4068

Ergodicity in Stationary Graph Processes: A Weak Law of Large Numbers. Gama, F., +, TSP May 15, 2019 2761-2774

False Alarm Rate of the GLRT for Subspace Signals in Subspace Interference Plus Gaussian Noise. *Liu*, *J.*, +, *TSP June 1*, 2019 3058-3069

Hyperdimensional Bayesian Time Mapping (HyperBaT): A Probabilistic Approach to Time Series Mapping of Non-Identical Sequences. *Ruble, M.*, +, *TSP July 15*, 2019 3719-3731

Information Geometric Approach to Multisensor Estimation Fusion. *Tang*, M., +, *TSP Jan. 15*, 2019 279-292

K-Medoids Clustering of Data Sequences With Composite Distributions. Wang, T., +, TSP April 15, 2019 2093-2106

Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153

Measurement Bounds for Observability of Linear Dynamical Systems Under Sparsity Constraints. *Joseph, G.*, +, *TSP April 15*, 2019 1992-2006

Minimax Optimal Algorithms for Adversarial Bandit Problem With Multiple Plays. *Vural*, *N.M.*, +, *TSP Aug. 15*, 2019 4383-4398

Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. Wang, S., +, TSP Jan. 1, 2019 54-69

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk, J.*, +, *TSP April 15*, 2019 2221-2233

Noise Benefits in Combined Nonlinear Bayesian Estimators. *Duan, F.*, +, *TSP Sept. 1*, 2019 4611-4623

Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82

On Quasi-Isometry of Threshold-Based Sampling. *Moser, B.A.*, +, *TSP July* 15, 2019 3832-3841

Online Change-Point Detection of Linear Regression Models. Geng, J., +, TSP June 15, 2019 3316-3329

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. *Nguyen, H.V.*, +, *TSP Oct. 15*, 2019 5365-5379

Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

Sequential Outlier Detection Based on Incremental Decision Trees. *Gokcesu, K.*, +, *TSP Feb. 15*, 2019 993-1005

Sequential Random Distortion Testing of Non-Stationary Processes. Khanduri, P., +, TSP Nov. 1, 2019 5450-5462

SINR Distribution for the Persymmetric SMI Beamformer With Steering Vector Mismatches. *Liu, J.*, +, *TSP March 1*, 2019 1382-1392

Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*

Stability Bound of the Initial Mean-Square Deviation of High-Order Stochastic Gradient Adaptive Filtering Algorithms. *Eweda, E., TSP Aug. 15,* 2019 4168-4176

The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. Slavakis, K., TSP June 1, 2019 2868-2883

Trajectory PHD and CPHD Filters. Garcia-Fernandez, A.F., +, TSP Nov. 15, 2019 5702-5714

Truncated Sequential Non-Parametric Hypothesis Testing Based on Random Distortion Testing. *Khanduri*, P., +, TSP Aug. 1, 2019 4027-4042

Probability distribution

Greedy Kernel Change-Point Detection. Truong, C., +, TSP Dec. 15, 2019 6204-6214

Probes

How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems. *Krishnamurthy, V.*, +, *TSP Dec. 15, 2019 6511-6525*

Processor scheduling

Computation Scheduling for Distributed Machine Learning With Straggling Workers. *Amiri*, *M.M.*, +, *TSP Dec. 15*, 2019 6270-6284

Protocol

Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809

Stochastic Bit-Wise Iterative Decoding of Polar Codes. Han, K., +, TSP March 1, 2019 1138-1151

Protoypes

Change-Point Methods on a Sequence of Graphs. Zambon, D., +, TSP Dec. 15, 2019 6327-6341

Pulse shaping

The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers. *Yeste Ojeda, O.A.*, +, *TSP Aug. 15, 2019 4333-4341*

Theoretical Analysis of the Peak-to-Average Power Ratio and Optimal Pulse Shaping Filter Design for GFDM Systems. *Liu*, *K*., +, *TSP July 1*, 2019 3455-3470

Pulse width modulation

Representation and Reconstruction of Finite-Energy Band-Limited Signals via Pulse-Width Modulation. *Sevuktekin, N.C.*, +, *TSP Oct. 1, 2019 5153-5168*

Q

Quadratic programming

Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part I: Array Designs. *Li*, *C.*, +, *TSP June 1*, 2019 2898-2910

Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation. *Gao*, R., +, TSP Oct. 1, 2019 5078-5092

- Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468
- New Designs on MVDR Robust Adaptive Beamforming Based on Optimal Steering Vector Estimation. *Huang, Y.*, +, *TSP July 15, 2019 3624-3638*

Quadrature amplitude modulation

- A Framework for One-Bit and Constant-Envelope Precoding Over Multiuser Massive MISO Channels. *Shao, M.*, +, *TSP Oct. 15, 2019 5309-5324*
- Iterative Inter-Cell Interference Cancellation Receiver for LDPC-Coded MIMO Systems. Sun, W., +, TSP March 15, 2019 1636-1647
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers. *Yeste Ojeda, O.A.*, +, *TSP Aug. 15, 2019 4333-4341*

Quality of service

- Multi-User Regularized Zero-Forcing Beamforming. Nguyen, L.D., +, TSP June 1, 2019 2839-2853
- Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information. *Lin*, *Z*., +, *TSP Dec.* 15, 2019 6384-6396
- Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945
- User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1*, 2019 2426-2438

Quantization (signal)

- A Family of Hybrid Analog–Digital Beamforming Methods for Massive MIMO Systems. *Ioushua, S.S., +, TSP June 15, 2019 3243-3257*
- An Exact Quantized Decentralized Gradient Descent Algorithm. *Reisizadeh*, A., +, TSP Oct. 1, 2019 4934-4947
- Asymptotic Task-Based Quantization With Application to Massive MIMO. Shlezinger, N., +, TSP Aug. 1, 2019 3995-4012
- Detection of Sparse Stochastic Signals With Quantized Measurements in Sensor Networks. Wang, X., +, TSP April 15, 2019 2210-2220
- Distributed Detection of Sparse Stochastic Signals With Quantized Measurements: The Generalized Gaussian Case. Wang, X., +, TSP Sept. 15, 2019 4886-4898
- Estimation From Quantized Gaussian Measurements: When and How to Use Dither. *Rapp, J.*, +, *TSP July 1, 2019 3424-3438*
- Fusion of Correlated Decisions Using Regular Vine Copulas. Zhang, S., +, TSP April 15, 2019 2066-2079
- Hardware-Limited Task-Based Quantization. Shlezinger, N., +, TSP Oct. 15, 2019 5223-5238
- On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam, Y.*, +, *TSP May 15, 2019 2608-2623*
- Sinusoidal Parameter Estimation From Signed Measurements Via Majorization–Minimization Based RELAX. *Ren, J.*, +, *TSP April 15, 2019 2173-2186*
- Two-Stage Analog Combining in Hybrid Beamforming Systems With Low-Resolution ADCs. *Choi*, J., +, TSP May 1, 2019 2410-2425

Quaternions

- Comments on "The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". Wang, G., +, TSP April 1, 2019 1957-1958
- Reply to "Comments on 'The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". *Mandic, D.*, +, *TSP April 1, 2019 1959*

Queueing theory

Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581

R

Radar

- Adaptive Detection of Coherent Radar Targets in the Presence of Noise Jamming. Addabbo, P., +, TSP Dec. 15, 2019 6498-6510
- Efficient Design of Binary Sequences With Low Autocorrelation Sidelobes. Lin, R., +, TSP Dec. 15, 2019 6397-6410

How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems. *Krishnamurthy, V.*, +, *TSP Dec. 15, 2019 6511-6525*

Radar antennas

- Adaptive Detection of Coherent Radar Targets in the Presence of Noise Jamming. *Addabbo*, P., +, TSP Dec. 15, 2019 6498-6510
- Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- Off-Grid DOA Estimation Using Sparse Bayesian Learning in MIMO Radar With Unknown Mutual Coupling. Chen, P., +, TSP Jan. 1, 2019 208-220
- Sparse Antenna and Pulse Placement for Colocated MIMO Radar. *Tohidi, E.*, +, *TSP Feb. 1, 2019 579-593*
- Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1, 2019 3561-3575*

Radar clutter

- A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter. You, P., +, TSP Oct. 15, 2019 5433-5446
- Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter. Liu, J., +, TSP Feb. 15, 2019 1022-1033
- False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96
- Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271
- MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411
- Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688
- New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. Zuk, J., +, TSP April 15, 2019 2221-2233
- Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection. Zhao, W., +, TSP Nov. 15, 2019 5746-5760

Radar cross-sections

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk*, *J.*, +, *TSP April 15*, 2019 2221-2233

Radar detection

- Adaptive Radar Detection in Gaussian Disturbance With Structured Covariance Matrix via Invariance Theory. *Tang, M.*, +, *TSP Nov. 1, 2019 5671-5685*
- Design of Robust Radar Detectors Through Random Perturbation of the Target Signature. *Coluccia*, A., +, TSP Oct. 1, 2019 5118-5129
- Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter. Liu, J., +, TSP Feb. 15, 2019 1022-1033
- False Alarm Analysis of the AMF Algorithm for Mismatched Training. Raghavan, R.S., TSP Jan. 1, 2019 83-96
- Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271
- New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images. *Mian, A., +, TSP Jan. 15, 2019 520-534*
- New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. Zuk, J., +, TSP April 15, 2019 2221-2233
- Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain. Zhou, G., +, TSP Nov. 1, 2019 5596-5610
- Robust Detection in MIMO Radar With Steering Vector Mismatches. *Liu*, *J.*, +, *TSP Oct. 15*, 2019 5270-5280
- Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937
- Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection. Zhao, W., +, TSP Nov. 15, 2019 5746-5760
- STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models. Li, X., +, TSP April 1, 2019 1902-1917

Radar imaging

Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688

New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images. *Mian*, A., +, *TSP Jan. 15*, 2019 520-534

Radar interference

Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. Wang, F., +, TSP July 15, 2019 3818-3831

Radar receivers

Joint Beamforming and Association Design for MIMO Radar. *Niesen, U.*, +, TSP July 15, 2019 3663-3675

Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271

Multistatic Localization in the Absence of Transmitter Position. *Zhang*, *Y.*, +, *TSP Sept. 15*, 2019 4745-4760

Radar resolution

High Resolution Compressed Sensing Radar Using Difference Set Codes. Taghavi, I., +, TSP Jan. 1, 2019 136-148

Radar signal processing

Distributed Target Detection Exploiting Persymmetry in Gaussian Clutter. Liu, J., +, TSP Feb. 15, 2019 1022-1033

High Resolution Compressed Sensing Radar Using Difference Set Codes. Taghavi, I., +, TSP Jan. 1, 2019 136-148

Joint Beamforming and Association Design for MIMO Radar. Niesen, U., +, TSP July 15, 2019 3663-3675

Joint Waveform and Guidance Control Optimization for Target Rendezvous. Benavoli, A., +, TSP Aug. 15, 2019 4357-4369

Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271

MIMO Radar Waveform Design for Quasi-Equiripple Transmit Beampattern Synthesis via Weighted l_p -Minimization. Fan, W., +, TSP July 1, 2019 3397-3411

Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation. *Aubry*, A., +, *TSP March 15*, 2019 1396-1406

Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. Wang, S., +, TSP Jan. 1, 2019 54-69

Multistatic Localization in the Absence of Transmitter Position. *Zhang, Y., +, TSP Sept. 15, 2019 4745-4760*

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. Zuk, J., +, TSP April 15, 2019 2221-2233

One-Bit Radar Processing With Time-Varying Sampling Thresholds. *Ameri*, A., +, TSP Oct. 15, 2019 5297-5308

Sparse Antenna and Pulse Placement for Colocated MIMO Radar. *Tohidi, E.*, +, TSP Feb. 1, 2019 579-593

Spectral Norm Based Mean Matrix Estimation and Its Application to Radar Target CFAR Detection. Zhao, W., +, TSP Nov. 15, 2019 5746-5760

Spectrally Constrained MIMO Radar Waveform Design Based on Mutual Information. *Tang, B., +, TSP Feb. 1, 2019 821-834*

Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1, 2019 3561-3575*

Radar theory

On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. *Wang, J., +, TSP Aug. 15, 2019 4317-4332*

Radar tracking

A Motion Parameter Estimation Method for Radar Maneuvering Target in Gaussian Clutter. You, P., +, TSP Oct. 15, 2019 5433-5446

Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688

Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain. Zhou, G., +, TSP Nov. 1, 2019 5596-5610

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models. Li, X., +, TSP April 1, 2019 1902-1917

Radio access networks

Two-Timescale Hybrid Compression and Forward for Massive MIMO Aided C-RAN. *Liu*, A., +, *TSP May 1*, 2019 2484-2498

User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1*, 2019 2426-2438

Radio direction-finding

Non-Iterative MDS Method for Collaborative Network Localization With Sparse Range and Pointing Measurements. *Hamaoui*, M., TSP Feb. 1, 2019 568-578

Radio frequency

Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays. *Shen, W.*, +, *TSP Dec. 15*, 2019 6301-6313

Radio links

Information-Theoretic Pilot Design for Downlink Channel Estimation in FDD Massive MIMO Systems. *Gu, Y., +, TSP May 1, 2019 2334-2346*

Radio networks

Connections Between Spectral Properties of Asymptotic Mappings and Solutions to Wireless Network Problems. *Cavalcante, R.L.G.*, +, *TSP May* 15, 2019 2747-2760

Learning Optimal Resource Allocations in Wireless Systems. *Eisen, M.*, +, *TSP May 15*, 2019 2775-2790

Radio receivers

Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari, P.*, +, *TSP Feb.* 1, 2019 594-608

Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595

Radio spectrum management

A Learning-Based Two-Stage Spectrum Sharing Strategy With Multiple Primary Transmit Power Levels. *Zhang, R.*, +, *TSP Sept. 15*, 2019 4899-4914

Location-Free Spectrum Cartography. Teganya, Y., +, TSP Aug. 1, 2019 4013-4026

Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. Wang, F., +, TSP July 15, 2019 3818-3831

Radio transceivers

A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization. *Xing, C.*, +, *TSP July 1, 2019 3531-3546*

Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization. Yang, K., +, TSP June 15, 2019 3087-3099

Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B.*, +, *TSP Nov. 1*, 2019 5479-5494

State-Space Adaptive Nonlinear Self-Interference Cancellation for Full-Duplex Communication. *Vogt, H.*, +, *TSP June 1*, 2019 2810-2825

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Radio transmitters

Advanced Properties of Full-Duplex Radio for Securing Wireless Network. Hua, Y., TSP Jan. 1, 2019 120-135

Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari, P.*, +, *TSP Feb.* 1, 2019 594-608

Estimation Theoretic Secure Communication via Encoder Randomization. Goken, C., +, TSP Dec. 1, 2019 6105-6120

Nonlinear Distortion Noise and Linear Attenuation in MIMO Systems— Theory and Application to Multiband Transmitters. *Ronnow, D.*, +, *TSP Oct. 15*, 2019 5203-5212

On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam*, *Y*., +, *TSP May 15*, 2019 2608-2623

Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250

Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. Chen, C., +, TSP March 15, 2019 1477-1492

Radiofrequency imaging

Adaptive Bayesian Radio Tomography. Lee, D., +, TSP April 15, 2019 1964-1977

Radiofrequency interference

Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization. Yang, K., +, TSP June 15, 2019 3087-3099

Energy-Efficient Beamforming Design for MU-MISO Mixed RF/VLC Heterogeneous Wireless Networks. *Hsiao*, Y., +, TSP July 15, 2019 3770-3784

Exploiting Dynamic Sparsity for Downlink FDD-Massive MIMO Channel Tracking. Lian, L., +, TSP April 15, 2019 2007-2021

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158

Max-Min Fairness Design for MIMO Interference Channels: A Minorization-Maximization Approach. *Naghsh, M.M.*, +, *TSP Sept. 15, 2019 4707-4719*

Multi-User Regularized Zero-Forcing Beamforming. Nguyen, L.D., +, TSP June 1, 2019 2839-2853

On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam, Y.*, +, *TSP May 15, 2019 2608-2623*

Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B.*, +, *TSP Nov. 1, 2019 5479-5494*

Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X.*, +, *TSP Aug. 15, 2019 4152-4167*

Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250

Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. Chen, C., +, TSP March 15, 2019 1477-1492

Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682

User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1*, 2019 2426-2438

Radiofrequency power transmission

Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15*, 2019 3197-3212

Radiowave propagation

Direct Position Determination Sensitivity to NLOS Propagation Effects on Doppler-Shift. *Picard, J.S.*, +, *TSP July 15*, 2019 3870-3881

Recursive Estimation of Dynamic RSS Fields Based on Crowdsourcing and Gaussian Processes. Santos, I., +, TSP March 1, 2019 1152-1162

Radon transforms

STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models. Li, X., +, TSP April 1, 2019 1902-1917

RAID

Joint Decoder Design for SSDs. Li, Q., TSP May 1, 2019 2399-2409

Random functions

Sketched Clustering via Hybrid Approximate Message Passing. Byrne, E., +, TSP Sept. 1, 2019 4556-4569

Random noise

Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370

Random processes

A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization. *Xing*, C., +, *TSP July 1*, 2019 3531-3546

A Novel Robust Gaussian–Student's t Mixture Distribution Based Kalman Filter. Huang, Y., +, TSP July 1, 2019 3606-3620

Bayesian Smoothing for the Extended Object Random Matrix Model. Granstrom, K., +, TSP July 15, 2019 3732-3742

Fully Orthogonal 2-D Lattice Structures for Quarter-Plane and Asymmetric Half-Plane Autoregressive Modeling of Random Fields. *Kayran, A.H.*, +, *TSP Sept. 1, 2019 4507-4520*

Hypothesis Test for Bounds on the Size of Random Defective Set. *D'yachkov, A.*, +, *TSP Nov. 15*, 2019 5775-5784

Joint Independent Subspace Analysis: Uniqueness and Identifiability. *Lahat*, D., +, TSP Feb. 1, 2019 684-699

On Quasi-Isometry of Threshold-Based Sampling. Moser, B.A., +, TSP July 15, 2019 3832-3841

Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari*, J., +, *TSP Feb. 1*, 2019 638-651

Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. Fortunati, S., +, TSP Jan. 1, 2019 164-177

Sequential Random Distortion Testing of Non-Stationary Processes. Khanduri, P., +, TSP Nov. 1, 2019 5450-5462

Random variables

An Incentive Scheme for Sensor Fusion With Strategic Sensors. *Chen, K.*, +, *TSP Dec. 15*, 2019 6342-6351

Rational functions

Rational Optimization for Nonlinear Reconstruction With Approximate ℓ_0 Penalization. Castella, M., +, TSP March 15, 2019 1407-1417

Rayleigh channels

On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam*, *Y*., +, *TSP May 15*, 2019 2608-2623

Receiving antennas

Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417

Joint Spatiotemporal Multipath Mitigation in Large-Scale Array Localization. Wang, Y., +, TSP Feb. 1, 2019 783-797

Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271

Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation. *Aubry*, A., +, *TSP March 15*, 2019 1396-1406

Recurrent neural networks

Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh, M.*, +, *TSP Sept. 1, 2019 4545-4555* Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. *Zhang, L.*, +, *TSP Aug. 1, 2019 4069-4077*

Recursive estimation

A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation. Vo, B., +, TSP Oct. 1, 2019 4948-4963

Recursive Estimation of Dynamic RSS Fields Based on Crowdsourcing and Gaussian Processes. Santos, I., +, TSP March 1, 2019 1152-1162

Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381

Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks. *Yu, Y., +, TSP March 15, 2019 1566-1581*

State-Space Adaptive Nonlinear Self-Interference Cancellation for Full-Duplex Communication. *Vogt, H.*, +, *TSP June 1*, 2019 2810-2825

Recursive filters

Marginalized Particle Filtering and Related Filtering Techniques as Message Passing. *Vitetta*, G.M., +, TSP March 15, 2019 1522-1536

Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351

Recursive functions

Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution. *Jia, T., +, TSP Nov. 15, 2019 5881-5895*

Regression analysis

A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746

Adaptive Bayesian Radio Tomography. Lee, D., +, TSP April 15, 2019 1964-

Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555

Extended Object Tracking via Positive and Negative Information Fusion. *Lee, S., +, TSP April 1, 2019 1812-1823*

Gather and Conquer: Region-Based Strategies to Accelerate Safe Screening Tests. Herzet, C., +, TSP June 15, 2019 3300-3315

Intelligent Massive MIMO Antenna Selection Using Monte Carlo Tree Search. Chen, J., +, TSP Oct. 15, 2019 5380-5390

Joint Network Topology and Dynamics Recovery From Perturbed Stationary Points. Wai, H., +, TSP Sept. 1, 2019 4582-4596

Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. Basu, S., +, TSP March 1, 2019 1207-1222

Matrix Completion and Extrapolation via Kernel Regression. *Gimenez-Febrer*, P., +, TSP Oct. 1, 2019 5004-5017

MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567

Noise Statistics Oblivious GARD For Robust Regression With Sparse Outliers. *Kallummil*, S., +, TSP Jan. 15, 2019 383-398

Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks. *Shen, Y., +, TSP Oct. 15, 2019 5325-5339*

Online Change-Point Detection of Linear Regression Models. *Geng, J.*, +, *TSP June 15*, 2019 3316-3329

Perturbation Analysis of Learning Algorithms: Generation of Adversarial Examples From Classification to Regression. *Balda, E.R.*, +, *TSP Dec. 1,* 2019 6078-6091

Residual Ratio Thresholding for Linear Model Order Selection. *Kallummil*, S., +, TSP Feb. 15, 2019 838-853

Simultaneous Safe Feature and Sample Elimination for Sparse Support Vector Regression. Wang, H., +, TSP Aug. 1, 2019 4043-4054

Symmetric Bilinear Regression for Signal Subgraph Estimation. Wang, L., +, TSP April 1, 2019 1929-1940

The Generalized Complex Kernel Least-Mean-Square Algorithm. Boloix-Tortosa, R., +, TSP Oct. 15, 2019 5213-5222

Unimodality-Constrained Matrix Factorization for Non-Parametric Source Localization. Chen, J., +, TSP May 1, 2019 2371-2386

Relay networks (telecommunication)

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Relays

Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis. *Ruan, H.*, +, *TSP Dec. 15*, 2019 6411-6423

Reliability

Sequential Anomaly Detection Under a Nonlinear System Cost. *Gurevich*, A., +, TSP July 15, 2019 3689-3703

Remote sensing

Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part II: Generalizations and Applications. *Li*, *C.*, +, *TSP June 1*, 2019 2911-2922

Resource allocation

Efficient Global Optimal Resource Allocation in Non-Orthogonal Interference Networks. *Matthiesen, B., +, TSP Nov. 1, 2019 5612-5627*

Learning Optimal Resource Allocations in Wireless Systems. Eisen, M., +, TSP May 15, 2019 2775-2790

Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153

Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong*, S., +, TSP June 15, 2019 3197-3212

Reverberation

Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351

Road vehicle radar

Multidimensional Sparse Fourier Transform Based on the Fourier Projection-Slice Theorem. Wang, S., +, TSP Jan. 1, 2019 54-69

Robust control

A Theoretical Framework of Robust *H*-Infinity Unscented Kalman Filter and Its Application to Power System Dynamic State Estimation. *Zhao*, *J.*, +, *TSP May 15*, 2019 2734-2746

RSSI

Improving Localization by Testing Mobility. Carlino, L., +, TSP July 1, 2019 3412-3423

Recursive Estimation of Dynamic RSS Fields Based on Crowdsourcing and Gaussian Processes. Santos, I., +, TSP March 1, 2019 1152-1162

S

S-matrix theory

Extended-Object or Group-Target Tracking Using Random Matrix With Nonlinear Measurements. Lan, J., +, TSP Oct. 1, 2019 5130-5142

Sampling methods

Adaptive Bayesian Radio Tomography. Lee, D., +, TSP April 15, 2019 1964-1977

Convolutional Neural Network Architectures for Signals Supported on Graphs. Gama, F., +, TSP Feb. 15, 2019 1034-1049

Eigendecomposition-Free Sampling Set Selection for Graph Signals. Sakiyama, A., +, TSP May 15, 2019 2679-2692

Lattice-Reduction-Aided Gibbs Algorithm for Lattice Gaussian Sampling: Convergence Enhancement and Decoding Optimization. Wang, Z., +, TSP Aug. 15, 2019 4342-4356

Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16

Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR. Lu, Y., +, TSP June 1, 2019 2947-2959

Satellite navigation

Non-Iterative MDS Method for Collaborative Network Localization With Sparse Range and Pointing Measurements. *Hamaoui*, M., TSP Feb. 1, 2019 568-578

Satellites

Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information. *Lin*, *Z*., +, *TSP Dec.* 15, 2019 6384-6396

Schedules

Computation Scheduling for Distributed Machine Learning With Straggling Workers. Amiri, M.M., +, TSP Dec. 15, 2019 6270-6284

Scheduling

Convergence Analysis of Gaussian Belief Propagation Under High-Order Factorization and Asynchronous Scheduling. *Li*, *B*., +, *TSP June 1*, 2019 2884-2897

Search problems

An Accelerated Composite Gradient Method for Large-Scale Composite Objective Problems. Florea, M.I., +, TSP Jan. 15, 2019 444-459

Power Allocation and Co-Design of Multicarrier Communication and Radar Systems for Spectral Coexistence. *Wang, F.*, +, *TSP July 15, 2019 3818-*

Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari, J., +, TSP Feb. 1, 2019 638-651*

Sequential Anomaly Detection Under a Nonlinear System Cost. *Gurevich*, A., +, TSP July 15, 2019 3689-3703

Simultaneous Safe Feature and Sample Elimination for Sparse Support Vector Regression. Wang, H., +, TSP Aug. 1, 2019 4043-4054

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Search radar

New Saddle-Point Technique for Non-Coherent Radar Detection With Application to Correlated Targets in Uncorrelated Clutter Speckle. *Zuk*, *J.*, +, *TSP April 15*, 2019 2221-2233

Security of data

Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982

Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach. Guo, Z., +, TSP Jan. 1, 2019 194-207

Seismolog

Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823

Focused Blind Deconvolution. Bharadwaj, P., +, TSP June 15, 2019 3168-3180

Self-adjusting systems

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

Semisupervised learning

Semi-Supervised Learning in Network-Structured Data via Total Variation Minimization. *Jung, A.*, +, *TSP Dec. 15, 2019 6256-6269*

Sensor arrays

Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part II: Generalizations and Applications. *Li*, *C.*, +, *TSP June 1*, 2019 2911-2922

Detecting Gaussian Signals Using Coprime Sensor Arrays in Spatially Correlated Gaussian Noise. *Bautista*, R., +, TSP March 1, 2019 1296-1306

Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays. *Qiao, H.*, +, *TSP Nov. 15*, 2019 5715-5729

Hybrid Sparse Array Beamforming Design for General Rank Signal Models. *Hamza, S.A.*, +, *TSP Dec. 15, 2019 6215-6226*

Sensor fusion

An Incentive Scheme for Sensor Fusion With Strategic Sensors. *Chen, K.*, +, *TSP Dec. 15*, 2019 6342-6351

Clustering of Data With Missing Entries Using Non-Convex Fusion Penalties. *Poddar, S., +, TSP Nov. 15, 2019 5865-5880*

Comments on "The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". Wang, G., +, TSP April 1, 2019 1957-1958

Computationally Efficient Multi-Agent Multi-Object Tracking With Labeled Random Finite Sets. Li, S., +, TSP Jan. 1, 2019 260-275

Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. Chawla, A., +, TSP Aug. 1, 2019 4055-4068

Distributed Detection of Sparse Stochastic Signals With Quantized Measurements: The Generalized Gaussian Case. *Wang, X.*, +, *TSP Sept. 15*, 2019 4886-4898

Fusion of Correlated Decisions Using Regular Vine Copulas. Zhang, S., +, TSP April 15, 2019 2066-2079

Information Geometric Approach to Multisensor Estimation Fusion. *Tang*, M., +, *TSP Jan. 15*, 2019 279-292

Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468

Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967

Reply to "Comments on 'The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes'". *Mandic, D.*, +, *TSP April 1, 2019* 1959

Secure Distributed Detection of Sparse Signals via Falsification of Local Compressive Measurements. Li, C., +, TSP Sept. 15, 2019 4696-4706

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

Subspace Averaging and Order Determination for Source Enumeration. *Garg, V., +, TSP June 1, 2019 3028-3041*

Testing the Structure of a Gaussian Graphical Model With Reduced Transmissions in a Distributed Setting. *Chen, Y., +, TSP Oct. 15, 2019 5391-5401*

Trajectory PHD and CPHD Filters. Garcia-Fernandez, A.F., +, TSP Nov. 15, $2019\ 5702$ -5714

Sensor placement

Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution. *Jia, T., +, TSP Nov. 15, 2019 5881-5895*

Group Greedy Method for Sensor Placement. *Jiang, C.*, +, *TSP May 1*, 2019 2249-2262

Localization From Incomplete Euclidean Distance Matrix: Performance Analysis for the SVD–MDS Approach. *Zhang, H.*, +, *TSP April 15*, 2019 2196-2209

Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization. *Xu*, *S.*, +, *TSP Oct. 1*, 2019 5018-5031

Sensors

Efficient Design of Binary Sequences With Low Autocorrelation Sidelobes. Lin, R., +, TSP Dec. 15, 2019 6397-6410

How to Calibrate Your Adversary's Capabilities? Inverse Filtering for Counter-Autonomous Systems. *Krishnamurthy, V.*, +, *TSP Dec. 15*, 2019 6511-6525

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379

Uncovering Source Ranges From Range Differences Observed by Sensors at Unknown Positions: Fundamental Theory. *Le*, *T.*, +, *TSP May 15*, 2019 2665-2678

Sequences

Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142

Sequential estimation

Sequential Random Distortion Testing of Non-Stationary Processes. Khanduri, P., +, TSP Nov. 1, 2019 5450-5462

Set theory

A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation. Vo. B., +, TSP Oct. 1, 2019 4948-4963

Computationally Efficient Multi-Agent Multi-Object Tracking With Labeled Random Finite Sets. *Li, S.*, +, *TSP Jan. 1, 2019 260-275*

Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555

Hypothesis Test for Bounds on the Size of Random Defective Set. *D'yachkov, A.*, +, *TSP Nov. 15, 2019 5775-5784*

Optimal Estimates of Two Common Remainders for a Robust Generalized Chinese Remainder Theorem. *Li*, *X.*, +, *TSP April 1*, 2019 1824-1837

The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. Slavakis, K., TSP June 1, 2019 2868-2883

Ships

Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688

Shot noise

Nonsubsampled Graph Filter Banks: Theory and Distributed Algorithms. Jiang, J., +, TSP Aug. 1, 2019 3938-3953

Signal classification

Convolutional Neural Network Architectures for Signals Supported on Graphs. *Gama*, F., +, *TSP Feb. 15*, 2019 1034-1049

Further Results on the Cramér–Rao Bound for Sparse Linear Arrays. Wang, M., +, TSP March 15, 2019 1493-1507

Hyperdimensional Bayesian Time Mapping (HyperBaT): A Probabilistic Approach to Time Series Mapping of Non-Identical Sequences. *Ruble, M.,* +, *TSP July 15, 2019 3719-3731*

iMUSIC: A Family of MUSIC-Like Algorithms for Integer Period Estimation. *Tenneti*, S.V., +, TSP Jan. 15, 2019 367-382

Joint Time-Frequency Scattering. Anden, J., +, TSP July 15, 2019 3704-3718

Robustness of Difference Coarrays of Sparse Arrays to Sensor Failures—Part I: A Theory Motivated by Coarray MUSIC. *Liu*, *C.*, +, *TSP June 15*, 2019 3213-3226

Signal denoising

A Directed Graph Fourier Transform With Spread Frequency Components. Shafipour, R., +, TSP Feb. 15, 2019 946-960

A Novel Robust Gaussian–Student's t Mixture Distribution Based Kalman Filter. Huang, Y., +, TSP July 1, 2019 3606-3620

Basis Pursuit Denoise With Nonsmooth Constraints. *Baraldi*, R., +, *TSP Nov.* 15, 2019 5811-5823

Classical Multidimensional Scaling: A Subspace Perspective, Over-Denoising, and Outlier Detection. Kong, L., +, TSP July 15, 2019 3842-3857

Estimation From Quantized Gaussian Measurements: When and How to Use Dither. *Rapp, J.*, +, *TSP July 1*, 2019 3424-3438

Extraction of Useful Information Content From Noisy Signals Based on Structural Affinity of Clustered TFDs' Coefficients. Saulig, N., +, TSP June 15, 2019 3154-3167

Noise Statistics Oblivious GARD For Robust Regression With Sparse Outliers. *Kallummil*, S., +, TSP Jan. 15, 2019 383-398

Nonsubsampled Graph Filter Banks: Theory and Distributed Algorithms. Jiang, J., +, TSP Aug. 1, 2019 3938-3953

Signal detection

A Binning Approach to Quickest Change Detection With Unknown Post-Change Distribution. Lau, T.S., +, TSP Feb. 1, 2019 609-621

A Learning-Based Two-Stage Spectrum Sharing Strategy With Multiple Primary Transmit Power Levels. *Zhang, R.*, +, *TSP Sept. 15*, 2019 4899-4914

Adaptive Detection of Structured Signals in Low-Rank Interference. Schniter, P., +, TSP July 1, 2019 3439-3454

Anomaly Detection in Partially Observed Traffic Networks. *Hou, E., +, TSP March 15, 2019 1461-1476*

- Classical Multidimensional Scaling: A Subspace Perspective, Over-Denoising, and Outlier Detection. Kong, L., +, TSP July 15, 2019 3842-3857
- Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486
- Detection of Sparse Stochastic Signals With Quantized Measurements in Sensor Networks. Wang, X., +, TSP April 15, 2019 2210-2220
- Distributed Detection of Sparse Stochastic Signals With Quantized Measurements: The Generalized Gaussian Case. Wang, X., +, TSP Sept. 15, 2019 4886-4898
- False Alarm Rate of the GLRT for Subspace Signals in Subspace Interference Plus Gaussian Noise. *Liu*, *J.*, +, *TSP June 1*, 2019 3058-3069
- Linear Canonical Wigner Distribution Based Noisy LFM Signals Detection Through the Output SNR Improvement Analysis. *Zhang, Z., TSP Nov. 1,* 2019 5527-5542
- Mismatched Signal Rejection Performance of the Persymmetric GLRT Detector. Liu, J., +, TSP March 15, 2019 1610-1619
- Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation. *Aubry*, A., +, *TSP March 15*, 2019 1396-1406
- On Multisensor Detection of Improper Signals. *Tugnait, J.K., TSP Feb. 15*, 2019 870-884
- Online Design of Optimal Precoders for High Dimensional Signal Detection. *Khanduri*, P., +, TSP Aug. 1, 2019 4122-4135
- Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari*, *J.*, +, *TSP Feb. 1*, 2019 638-651
- Secure Distributed Detection of Sparse Signals via Falsification of Local Compressive Measurements. *Li*, *C.*, +, *TSP Sept. 15*, 2019 4696-4706
- Sequential Anomaly Detection Under a Nonlinear System Cost. *Gurevich*, A., +, TSP July 15, 2019 3689-3703

Signal processing

- A Generalized Multifractal Formalism for the Estimation of Nonconcave Multifractal Spectra. *Leonarduzzi*, R., +, TSP Jan. 1, 2019 110-119
- A Hybrid Lower Bound for Parameter Estimation of Signals With Multiple Change-Points. *Bacharach, L., +, TSP March 1, 2019 1267-1279*
- A Low-Complexity Nonlinear Least Mean Squares Filter Based on a Decomposable Volterra Model. Pinheiro, F.C., +, TSP Nov. 1, 2019 5463-5478
- A Primal-Dual Quasi-Newton Method for Exact Consensus Optimization. Eisen, M., +, TSP Dec. 1, 2019 5983-5997
- Advances in Distributed Graph Filtering. Coutino, M., +, TSP May 1, 2019 2320-2333
- An Accelerated Composite Gradient Method for Large-Scale Composite Objective Problems. Florea, M.I., +, TSP Jan. 15, 2019 444-459
- Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May* 1, 2019 2291-2303
- Bayesian WIV Estimators for 3-D Bearings-Only TMA With Speed Constraints. Badriasl, L., +, TSP July 1, 2019 3576-3591
- Distributed Non-Convex First-Order Optimization and Information Processing: Lower Complexity Bounds and Rate Optimal Algorithms. *Sun, H.*, +, *TSP Nov. 15*, 2019 5912-5928
- Eigendecomposition-Free Sampling Set Selection for Graph Signals. Sakiyama, A., +, TSP May 15, 2019 2679-2692
- Fast Graph Fourier Transforms Based on Graph Symmetry and Bipartition. Lu, K., +, TSP Sept. 15, 2019 4855-4869
- Finding GEMS: Multi-Scale Dictionaries For High-Dimensional Graph Signals. Yankelevsky, Y., +, TSP April 1, 2019 1889-1901
- Fixed Points of Gaussian Belief Propagation and Relation to Convergence. *Li*, *B.*, +, *TSP Dec. 1*, 2019 6025-6038
- Forecasting Time Series With VARMA Recursions on Graphs. *Isufi, E.*, +, *TSP Sept. 15, 2019 4870-4885*
- Fractional Fourier Analysis Using the Möbius Inversion Formula. *Miao*, *H.*, +, *TSP June 15*, 2019 3181-3196
- Hypercomplex Tensor Completion via Convex Optimization. *Mizoguchi, T.*, +, *TSP Aug. 1, 2019 4078-4092*
- Hypercomplex Widely Linear Estimation Through the Lens of Underpinning Geometry. *Nitta*, T., +, TSP Aug. 1, 2019 3985-3994
- Localization of Signals in the Near-Field of an Antenna Array. *Friedlander, B., TSP Aug. 1, 2019 3885-3893*

- Lorentzian-Model-Based Bayesian Analysis for Automated Estimation of Attenuated Resonance Spectrum. Xu, K., +, TSP Jan. 1, 2019 4-16
- Noise Benefits in Combined Nonlinear Bayesian Estimators. *Duan, F.*, +, *TSP Sept. 1*, 2019 4611-4623
- On the Asymptotics of Maronna's Robust PCA. *Draskovic, G.*, +, *TSP Oct.* 1, 2019 4964-4975
- On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation. *Chen, Y., +, TSP Jan. 15, 2019 431-443*
- On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290
- Optimal Number of Measurements in a Linear System With Quadratically Decreasing SNR. Lu, Y., +, TSP June 1, 2019 2947-2959
- Optimization Algorithms for Graph Laplacian Estimation via ADMM and MM. Zhao, L., +, TSP Aug. 15, 2019 4231-4244
- Parameter Estimation Based on Scale-Dependent Algebraic Expressions and Scale-Space Fitting. *Kukuk*, *M.*, +, *TSP March 15*, 2019 1431-1446
- Probing High-Order Dependencies With Information Theory. *Granero-Belinchon, C.*, +, *TSP July 15*, 2019 3796-3805
- Random Node-Asynchronous Updates on Graphs. *Teke, O.*, +, *TSP June 1*, 2019 2794-2809
- Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381
- Robustness of Two-Dimensional Line Spectral Estimation Against Spiky Noise. Valiulahi, I., +, TSP Dec. 1, 2019 5998-6008
- Sparse Sampling for Inverse Problems With Tensors. *Ortiz-Jimenez, G.*, +, *TSP June 15*, 2019 3272-3286
- Tests For the Parameters of Chirp Signal Model. *Dhar, S.S.*, +, *TSP Aug. 15*, 2019 4291-4301
- The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers. *Yeste Ojeda, O.A.*, +, *TSP Aug. 15, 2019 4333-4341*
- Truncated Sequential Non-Parametric Hypothesis Testing Based on Random Distortion Testing. *Khanduri*, *P.*, +, *TSP Aug. 1*, 2019 4027-4042

Signal processing algorithms

- Downsampling of Bounded Bandlimited Signals and the Bandlimited Interpolation: Analytic Properties and Computability. *Boche, H.*, +, *TSP Dec.* 15, 2019 6424-6439
- Efficient Design of Binary Sequences With Low Autocorrelation Sidelobes. Lin, R., +, TSP Dec. 15, 2019 6397-6410
- Greedy Kernel Change-Point Detection. Truong, C., +, TSP Dec. 15, 2019 6204-6214
- Sampling of Planar Curves: Theory and Fast Algorithms. Zou, Q., +, TSP Dec. 15, 2019 6455-6467
- Scalable Mean-Field Sparse Bayesian Learning. Worley, B., TSP Dec. 15, 2019 6314-6326
- Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models. Yu, H., +, TSP Dec. 15, 2019 6468-6482

Signal reconstruction

- An Approximate Message Passing Framework for Side Information. *Ma*, *A*., +, *TSP April 1*, 2019 1875-1888
- Characterization of Analytic Wavelet Transforms and a New Phaseless Reconstruction Algorithm. *Holighaus*, N., +, TSP Aug. 1, 2019 3894-3908
- Compressive Sensing Using Symmetric Alpha-Stable Distributions for Robust Sparse Signal Reconstruction. *Tzagkarakis*, G., +, *TSP Feb. 1*, 2019 808-820
- Constrained Sampling: Optimum Reconstruction in Subspace With Minimax Regret Constraint. Sadeghi, B., +, TSP Aug. 15, 2019 4218-4230
- Delta-Ramp Encoder for Amplitude Sampling and Its Interpretation as Time Encoding. *Martinez-Nuevo*, P., +, TSP May 15, 2019 2516-2527
- Frequency-Resolved Optical Gating Recovery via Smoothing Gradient. *Pinilla*, S., +, TSP Dec. 1, 2019 6121-6132
- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- Multi-Snapshot Spectrum Sensing for Cognitive Radar via Block-Sparsity Exploitation. *Aubry*, A., +, *TSP March 15*, 2019 1396-1406

- MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567
- Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658
- Nonsubsampled Graph Filter Banks: Theory and Distributed Algorithms. Jiang, J., +, TSP Aug. 1, 2019 3938-3953
- On Quasi-Isometry of Threshold-Based Sampling. *Moser, B.A.*, +, *TSP July* 15, 2019 3832-3841
- Rational Optimization for Nonlinear Reconstruction With Approximate ℓ_0 Penalization. Castella, M., +, TSP March 15, 2019 1407-1417
- Reconstruction of Signals From Their Autocorrelation and Cross-Correlation Vectors, With Applications to Phase Retrieval and Blind Channel Estimation. *Jaganathan, K.*, +, *TSP June 1, 2019 2937-2946*
- Representation and Reconstruction of Finite-Energy Band-Limited Signals via Pulse-Width Modulation. *Sevuktekin, N.C.*, +, *TSP Oct. 1, 2019 5153-5168*
- Scalable *M*-Channel Critically Sampled Filter Banks for Graph Signals. *Li*, *S.*, +, *TSP Aug. 1*, 2019 3954-3969
- Super Resolution Phase Retrieval for Sparse Signals. *Baechler, G.*, +, *TSP Sept. 15*, 2019 4839-4854
- Trainable ISTA for Sparse Signal Recovery. Ito, D., +, TSP June 15, 2019 3113-3125
- Two-Channel Critically Sampled Graph Filter Banks With Spectral Domain Sampling. Sakiyama, A., +, TSP March 15, 2019 1447-1460
- Weakly Convex Regularized Robust Sparse Recovery Methods With Theoretical Guarantees. *Yang, C., +, TSP Oct. 1, 2019 5046-5061*

Signal representation

- A Robust Spectral Estimator With Application to a Noise-Corrupted Process. Zhou, X., +, TSP April 15, 2019 2107-2114
- Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June* 15, 2019 3100-3112
- Asymptotic Task-Based Quantization With Application to Massive MIMO. Shlezinger, N., +, TSP Aug. 1, 2019 3995-4012
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555
- Delta-Ramp Encoder for Amplitude Sampling and Its Interpretation as Time Encoding. *Martinez-Nuevo*, P., +, TSP May 15, 2019 2516-2527
- Finding GEMS: Multi-Scale Dictionaries For High-Dimensional Graph Signals. Yankelevsky, Y., +, TSP April 1, 2019 1889-1901
- Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. Hwang, W., +, TSP June 15, 2019 3330-3343
- Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727
- iMUSIC: A Family of MUSIC-Like Algorithms for Integer Period Estimation. *Tenneti*, S.V., +, TSP Jan. 15, 2019 367-382
- MMSE Approximation For Sparse Coding Algorithms Using Stochastic Resonance. Simon, D., +, TSP Sept. 1, 2019 4597-4610
- Non-Negative Orthogonal Greedy Algorithms. Nguyen, T.T., +, TSP Nov. 1, 2019 5643-5658
- On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals. *Garfinkle, C.J.*, +, *TSP Dec. 1, 2019 5884-5892*
- Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form. Sun, Y., +, TSP Jan. 15, 2019 320-335
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*

Signal resolution

- A Robust Spectral Estimator With Application to a Noise-Corrupted Process. *Zhou*, *X*., +, *TSP April 15*, 2019 2107-2114
- Asymptotic Task-Based Quantization With Application to Massive MIMO. Shlezinger, N., +, TSP Aug. 1, 2019 3995-4012
- Fully Orthogonal 2-D Lattice Structures for Quarter-Plane and Asymmetric Half-Plane Autoregressive Modeling of Random Fields. *Kayran, A.H.*, +, *TSP Sept. 1, 2019 4507-4520*
- Graph-Variate Signal Analysis. Smith, K., +, TSP Jan. 15, 2019 293-305

- Sampling and Super Resolution of Sparse Signals Beyond the Fourier Domain. *Bhandari*, A., +, *TSP March* 15, 2019 1508-1521
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*

Signal restoration

- Frequency-Resolved Optical Gating Recovery via Smoothing Gradient. *Pin-illa*, S., +, TSP Dec. 1, 2019 6121-6132
- Learning Filter Bank Sparsifying Transforms. Pfister, L., +, TSP Jan. 15, 2019 504-519

Signal sampling

- A Framework of Adaptive Multiscale Wavelet Decomposition for Signals on Undirected Graphs. *Zheng, X.*, +, *TSP April 1, 2019 1696-1711*
- Compressive Sensing Using Symmetric Alpha-Stable Distributions for Robust Sparse Signal Reconstruction. *Tzagkarakis*, G., +, TSP Feb. 1, 2019 808-820
- Constrained Sampling: Optimum Reconstruction in Subspace With Minimax Regret Constraint. Sadeghi, B., +, TSP Aug. 15, 2019 4218-4230
- Covariance Matrix Estimation From Linearly-Correlated Gaussian Samples. Cui, W., +, TSP April 15, 2019 2187-2195
- Delta-Ramp Encoder for Amplitude Sampling and Its Interpretation as Time Encoding. *Martinez-Nuevo*, P., +, TSP May 15, 2019 2516-2527
- Discrete Linear Canonical Transform Based on Hyperdifferential Operators. Koc, A., +, TSP May 1, 2019 2237-2248
- Exploiting Prior Information in Block-Sparse Signals. *Daei*, S., +, TSP Oct. 1, 2019 5093-5102
- Graph-Variate Signal Analysis. Smith, K., +, TSP Jan. 15, 2019 293-305
- High Resolution Compressed Sensing Radar Using Difference Set Codes. *Taghavi, I.*, +, *TSP Jan. 1, 2019 136-148*
- Low-complexity Graph Sampling With Noise and Signal Reconstruction via Neumann Series. Wang, F., +, TSP Nov. 1, 2019 5511-5526
- Nearly Optimal Restricted Isometry Condition for Rank Aware Order Recursive Matching Pursuit. *Kim. J.*, +, *TSP Sept. 1*, 2019 4449-4463
- On Quasi-Isometry of Threshold-Based Sampling. Moser, B.A., +, TSP July 15, 2019 3832-3841
- One-Bit Radar Processing With Time-Varying Sampling Thresholds. *Ameri*, A., +, TSP Oct. 15, 2019 5297-5308
- Representation and Reconstruction of Finite-Energy Band-Limited Signals via Pulse-Width Modulation. Sevuktekin, N.C., +, TSP Oct. 1, 2019 5153-5168
- Sampling and Reconstruction of Multiple-Input Multiple-Output Channels. *Lee, D.G.*, +, *TSP Feb. 15*, 2019 961-976
- Sampling and Super Resolution of Sparse Signals Beyond the Fourier Domain. *Bhandari*, A., +, *TSP March* 15, 2019 1508-1521
- Scalable M-Channel Critically Sampled Filter Banks for Graph Signals. Li, S., +, TSP Aug. 1, 2019 3954-3969
- Sequential Random Distortion Testing of Non-Stationary Processes. Khanduri, P., +, TSP Nov. 1, 2019 5450-5462
- Sparse Sampling for Inverse Problems With Tensors. *Ortiz-Jimenez, G.*, +, *TSP June 15, 2019 3272-3286*
- Split-and-Augmented Gibbs Sampler—Application to Large-Scale Inference Problems. Vono, M., +, TSP March 15, 2019 1648-1661
- Super Resolution Phase Retrieval for Sparse Signals. *Baechler, G.*, +, *TSP Sept. 15*, 2019 4839-4854
- Super-Resolution Blind Channel-and-Signal Estimation for Massive MIMO With One-Dimensional Antenna Array. *Liu, H., +, TSP Sept. 1, 2019 4433-4448*
- Theoretical Analysis of the Peak-to-Average Power Ratio and Optimal Pulse Shaping Filter Design for GFDM Systems. *Liu*, *K*., +, *TSP July 1*, 2019 3455-3470
- Two-Channel Critically Sampled Graph Filter Banks With Spectral Domain Sampling. Sakiyama, A., +, TSP March 15, 2019 1447-1460

Signal sources

Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945

Signal to noise ratio

Co-Design for Overlaid MIMO Radar and Downlink MISO Communication Systems via Cramér–Rao Bound Minimization. *Cheng, Z.*, +, *TSP Dec.* 15, 2019 6227-6240

Design of Large Effective Apertures for Millimeter Wave Systems Using a Sparse Array of Subarrays. *Gupta*, A., +, *TSP Dec. 15*, 2019 6483-6497

Distributed Robust Beamforming Based on Low-Rank and Cross-Correlation Techniques: Design and Analysis. *Ruan, H.*, +, *TSP Dec. 15*, 2019 6411-6423

Hybrid Sparse Array Beamforming Design for General Rank Signal Models. Hamza, S.A., +, TSP Dec. 15, 2019 6215-6226

Low Complexity and High-Resolution Line Spectral Estimation Using Cyclic Minimization. Castanheira, D., +, TSP Dec. 15, 2019 6285-6300

Singular value decomposition

Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. *Hwang, W.*, +, *TSP June 15, 2019 3330-3343*

Hypercomplex Tensor Completion via Convex Optimization. *Mizoguchi, T.*, +, *TSP Aug. 1, 2019 4078-4092*

Localization From Incomplete Euclidean Distance Matrix: Performance Analysis for the SVD–MDS Approach. *Zhang, H., +, TSP April 15, 2019 2196-2209*

Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator. Zuo, W., +, TSP Jan. 15, 2019 415-430

Online and Stable Learning of Analysis Operators. Sandbichler, M., +, TSP Jan. 1, 2019 41-53

Singularly perturbed systems

Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581

SLAM (robots)

Unimodality-Constrained Matrix Factorization for Non-Parametric Source Localization. Chen, J., +, TSP May 1, 2019 2371-2386

Smart power grids

Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. Zhang, L., +, TSP Aug. 1, 2019 4069-4077

Smoothing methods

A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation. Vo. B., +, TSP Oct. 1, 2019 4948-4963

A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi*, A.K., TSP Sept. 1, 2019 4535-4544

An Accelerated Composite Gradient Method for Large-Scale Composite Objective Problems. Florea, M.I., +, TSP Jan. 15, 2019 444-459

Design of Rao-Blackwellized Point-Mass Smoother for Conditionally Linear and Gaussian Models. *Dunik, J.*, +, *TSP Dec. 1, 2019 6053-6066*

Double Bayesian Smoothing as Message Passing. Di Viesti, P., +, TSP Nov. 1, 2019 5495-5510

Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation. *Gao*, R., +, TSP Oct. 1, 2019 5078-5092

Particle-Based Adaptive-Lag Online Marginal Smoothing in General State-Space Models. *Alenlov, J.*, +, *TSP Nov. 1*, 2019 5571-5582

Source Resolvability of Spatial-Smoothing-Based Subspace Methods: A Hadamard Product Perspective. *Yang*, Z., +, *TSP May 15*, 2019 2543-2553

Social networking (online)

Online Graph-Adaptive Learning With Scalability and Privacy. Shen, Y., +, TSP May 1, 2019 2471-2483

Solar panels

A Model for Joint Probabilistic Forecast of Solar Photovoltaic Power and Outdoor Temperature. Ramakrishna, R., +, TSP Dec. 15, 2019 6368-6383

Source separation

Convolutional Neural Network Architectures for Signals Supported on Graphs. Gama, F., +, TSP Feb. 15, 2019 1034-1049

Deinterleaving of Mixtures of Renewal Processes. Young, J., +, TSP Feb. 15, 2019 885-898

Modeling the Active Neuron Separation in the Compressed Sensing and Finite Rate of Innovation Framework. *Schnier, T.*, +, *TSP Sept. 1, 2019* 4521-4534

Multivariate Variational Mode Decomposition. Rehman, N.u., +, TSP Dec. 1, 2019 6039-6052

Subspace Averaging and Order Determination for Source Enumeration. Garg, V., +, TSP June 1, 2019 3028-3041

Space division multiple access

Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15*, 2019 3197-3212

Space division multiplexing

On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO. *Maatouk*, A., +, TSP Feb. 15, 2019 1006-1021

Two-Timescale Hybrid Compression and Forward for Massive MIMO Aided C-RAN. *Liu*, A., +, *TSP May 1*, 2019 2484-2498

Space-time codes

A Simple ML Detection for Coded Generalized Frequency Division Multiplexing in MIMO Channels. *Towliat, M.*, +, *TSP Feb. 1, 2019 798-807* Space-Time Media-Based Modulation. *Yigit, Z.*, +, *TSP May 1, 2019 2389-2308*

Sparse matrices

Classical Multidimensional Scaling: A Subspace Perspective, Over-Denoising, and Outlier Detection. Kong, L., +, TSP July 15, 2019 3842-3857

Coprime Sensing via Chinese Remaindering Over Quadratic Fields—Part I: Array Designs. *Li*, *C*., +, *TSP June 1*, 2019 2898-2910

Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417

On the Uniqueness and Stability of Dictionaries for Sparse Representation of Noisy Signals. *Garfinkle, C.J.*, +, TSP Dec. 1, 2019 5884-5892

Robust PCA via ℓ_0 - ℓ_1 Regularization. *Liu, J., +, TSP Jan. 15, 2019 535-549* Scalable Mean-Field Sparse Bayesian Learning. *Worley, B., TSP Dec. 15, 2019 6314-6326*

Simultaneous Sparse Recovery and Blind Demodulation. *Xie, Y., +, TSP Oct.* 1, 2019 5184-5199

Sparse Bayesian Learning for Robust PCA: Algorithms and Analyses. *Liu*, *J.*, +, *TSP Nov. 15*, 2019 5837-5849

Stable Principal Component Pursuit via Convex Analysis. Yin, L., +, TSP May 15, 2019 2595-2607

Variational Wishart Approximation for Graphical Model Selection: Monoscale and Multiscale Models. Yu, H., +, TSP Dec. 15, 2019 6468-6482

Spatial filters

MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567

Two-Timescale Hybrid Compression and Forward for Massive MIMO Aided C-RAN. *Liu*, A., +, *TSP May 1*, 2019 2484-2498

Speckle

Super Resolution Phase Retrieval for Sparse Signals. *Baechler, G.*, +, *TSP Sept. 15*, 2019 4839-4854

Spectral analysis

A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*

A Robust Spectral Estimator With Application to a Noise-Corrupted Process. *Zhou, X.*, +, *TSP April 15, 2019 2107-2114*

Estimation of the Evolutionary Spectra With Application to Stationarity Test. *Xiang*, Y., +, *TSP March 1*, 2019 1353-1365

Frequency-Resolved Optical Gating Recovery via Smoothing Gradient. *Pinilla*, S., +, TSP Dec. 1, 2019 6121-6132

Fully Orthogonal 2-D Lattice Structures for Quarter-Plane and Asymmetric Half-Plane Autoregressive Modeling of Random Fields. *Kayran, A.H.*, +, *TSP Sept. 1, 2019 4507-4520*

Optimal Spectral Initialization for Signal Recovery With Applications to Phase Retrieval. *Luo*, W., +, *TSP May 1*, 2019 2347-2356

Robustness of Two-Dimensional Line Spectral Estimation Against Spiky Noise. Valiulahi, I., +, TSP Dec. 1, 2019 5998-6008

Scalable *M*-Channel Critically Sampled Filter Banks for Graph Signals. *Li*, *S.*, +, *TSP Aug. 1*, 2019 3954-3969

Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty. Tang, S., +, TSP Oct. 1, 2019 4992-5003

Splines (mathematics)

Domain-Informed Spline Interpolation. Behjat, H., +, TSP Aug. 1, 2019 3909-3921

Hybrid-Spline Dictionaries for Continuous-Domain Inverse Problems. Debarre, T., +, TSP Nov. 15, 2019 5824-5836

Stability

Event-Driven Sensor Scheduling for Mission-Critical Control Applications. Yu, M., +, TSP March 15, 2019 1537-1549

Non-Existence of Convolution Sum System Representations. *Boche, H.*, +, *TSP May 15, 2019 2649-2664*

On the Asymptotics of Maronna's Robust PCA. *Draskovic*, G., +, TSP Oct. 1, 2019 4964-4975

State estimation

A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation. Vo, B., +, TSP Oct. 1, 2019 4948-4963

Approximating Sample State Vectors Using the ESPT for Computationally Efficient Particle Filtering. *Biswas, S.K.*, +, *TSP April 1, 2019 1918-1928*

Design of Rao-Blackwellized Point-Mass Smoother for Conditionally Linear and Gaussian Models. *Dunik, J.*, +, *TSP Dec. 1, 2019 6053-6066*

Extended Object Tracking via Positive and Negative Information Fusion. Lee, S., +, TSP April 1, 2019 1812-1823

Invertible Particle-Flow-Based Sequential MCMC With Extension to Gaussian Mixture Noise Models. Li, Y., +, TSP May 1, 2019 2499-2512

Iterated Extended Kalman Smoother-Based Variable Splitting for L_1 -Regularized State Estimation. *Gao*, R., +, TSP *Oct.* 1, 2019 5078-5092

Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967

Secure State Estimation Against Integrity Attacks: A Gaussian Mixture Model Approach. Guo, Z., +, TSP Jan. 1, 2019 194-207

State-space methods

A Multi-Scan Labeled Random Finite Set Model for Multi-Object State Estimation. Vo. B., +, TSP Oct. 1, 2019 4948-4963

A Novel Robust Gaussian–Student's t Mixture Distribution Based Kalman Filter. Huang, Y., +, TSP July 1, 2019 3606-3620

Cramér–Rao Bounds for Filtering Based on Gaussian Process State-Space Models. Zhao, Y., +, TSP Dec. 1, 2019 5936-5951

High-Dimensional Filtering Using Nested Sequential Monte Carlo. *Naesseth, C.A.*, +, *TSP Aug. 15, 2019 4177-4188*

Marginalized Particle Filtering and Related Filtering Techniques as Message Passing. Vitetta, G.M., +, TSP March 15, 2019 1522-1536

Particle-Based Adaptive-Lag Online Marginal Smoothing in General State-Space Models. Alenlov, J., +, TSP Nov. 1, 2019 5571-5582

Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381

Statistical analysis

A Generalized Multifractal Formalism for the Estimation of Nonconcave Multifractal Spectra. *Leonarduzzi*, R., +, TSP Jan. 1, 2019 110-119

Algorithms and Fundamental Limits for Unlabeled Detection Using Types. Marano, S., +, TSP April 15, 2019 2022-2035

Anomaly Detection in Partially Observed Traffic Networks. *Hou, E., +, TSP March 15, 2019 1461-1476*

Dead Time Compensation for High-Flux Ranging. Rapp, J., +, TSP July 1, 2019 3471-3486

Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series. *Tugnait, J.K., TSP Oct. 1, 2019 5062-5077*

Localization of Near-Field Sources Based on Linear Prediction and Oblique Projection Operator. Zuo, W., +, TSP Jan. 15, 2019 415-430

New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications. *Miao*, *H.*, +, *TSP Nov. 1*, 2019 5543-5557

Noise Statistics Oblivious GARD For Robust Regression With Sparse Outliers. *Kallummil*, S., +, TSP Jan. 15, 2019 383-398

Noisy Accelerated Power Method for Eigenproblems With Applications. Mai, V.V., +, TSP June 15, 2019 3287-3299

On the Asymptotics of Maronna's Robust PCA. *Draskovic*, G., +, TSP Oct. 1, 2019 4964-4975

Online Change-Point Detection of Linear Regression Models. Geng, J., +, TSP June~15, 2019~3316-3329

Optimal Mean-Reverting Portfolio With Leverage Constraint for Statistical Arbitrage in Finance. Zhao, Z., +, TSP April 1, 2019 1681-1695

Privacy Preserving Collaborative Computing: Heterogeneous Privacy Guarantee and Efficient Incentive Mechanism. Wang, X., +, TSP Jan. 1, 2019 221-233

Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X., +, TSP Aug. 15, 2019 4152-4167*

Recursive Maximum Likelihood Algorithm for Dependent Observations. Schwartz, B., +, TSP March 1, 2019 1366-1381

Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs. *Ioannidis, V.N.*, +, *TSP May 1, 2019 2263-2274*

Structured SUMCOR Multiview Canonical Correlation Analysis for Large-Scale Data. Kanatsoulis, C.I., +, TSP Jan. 15, 2019 306-319

Subspace Averaging and Order Determination for Source Enumeration. Garg, V., +, TSP June 1, 2019 3028-3041

Statistical distributions

A Binning Approach to Quickest Change Detection With Unknown Post-Change Distribution. *Lau*, *T.S.*, +, *TSP Feb. 1*, 2019 609-621

A CPHD Approximation Based on a Discrete-Gamma Cardinality Model. De Melo, F.E., +, TSP Jan. 15, 2019 336-350

Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson, M.*, +, TSP Jan. 1, 2019 149-163

Fusion of Correlated Decisions Using Regular Vine Copulas. Zhang, S., +, TSP April 15, 2019 2066-2079

Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351

On Multisensor Detection of Improper Signals. Tugnait, J.K., TSP Feb. 15, 2019 870-884

Optimal Shrinkage Covariance Matrix Estimation Under Random Sampling From Elliptical Distributions. Ollila, E., +, TSP May 15, 2019 2707-2719

Probing High-Order Dependencies With Information Theory. *Granero-Belinchon, C.*, +, *TSP July 15*, 2019 3796-3805

Quickest Change Detection in the Presence of a Nuisance Change. *Lau*, *T.S.*, +, *TSP Oct.* 15, 2019 5281-5296

Quickest Search and Learning Over Correlated Sequences: Theory and Application. *Heydari*, J., +, *TSP Feb. 1*, 2019 638-651

Semiparametric CRB and Slepian-Bangs Formulas for Complex Elliptically Symmetric Distributions. Fortunati, S., +, TSP Oct. 15, 2019 5352-5364

Truncated Sequential Non-Parametric Hypothesis Testing Based on Random Distortion Testing. *Khanduri*, P., +, TSP Aug. 1, 2019 4027-4042

Statistical testing

A Binning Approach to Quickest Change Detection With Unknown Post-Change Distribution. *Lau*, *T.S.*, +, *TSP Feb. 1*, 2019 609-621

Edge Exclusion Tests for Improper Complex Gaussian Graphical Model Selection. *Tugnait, J.K., TSP July 1, 2019 3547-3560*

Gather and Conquer: Region-Based Strategies to Accelerate Safe Screening Tests. *Herzet, C.*, +, *TSP June 15*, 2019 3300-3315

Hypothesis Test for Bounds on the Size of Random Defective Set. *D'yach-kov*, A., +, TSP Nov. 15, 2019 5775-5784

Linear-Complexity Exponentially-Consistent Tests for Universal Outlying Sequence Detection. Bu, Y., +, TSP April 15, 2019 2115-2128

Matrix Completion With Deterministic Pattern: A Geometric Perspective. Shapiro, A., +, TSP Feb. 15, 2019 1088-1103

New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images. *Mian, A., +, TSP Jan. 15, 2019 520-534*

Quickest Change Detection in the Presence of a Nuisance Change. *Lau, T.S.*, +, *TSP Oct. 15*, 2019 5281-5296

Tests for the Weights of the Global Minimum Variance Portfolio in a High-Dimensional Setting. *Bodnar, T.*, +, *TSP Sept. 1, 2019 4479-4493*

Stochastic processes

A Robust Spectral Estimator With Application to a Noise-Corrupted Process. *Zhou, X., +, TSP April 15, 2019 2107-2114*

Antithetic Dithered 1-Bit Massive MIMO Architecture: Efficient Channel Estimation via Parameter Expansion and PML. *Ho, D.K.W.*, +, *TSP May* 1, 2019 2291-2303

Asynchronous Saddle Point Algorithm for Stochastic Optimization in Heterogeneous Networks. *Bedi, A.S.*, +, *TSP April 1*, 2019 1742-1757

- Beliefs in Decision-Making Cascades. Seo, D., +, TSP Oct. 1, 2019 5103-5117
- Detection of Sparse Stochastic Signals With Quantized Measurements in Sensor Networks. Wang, X., +, TSP April 15, 2019 2210-2220
- Distributed Detection of Sparse Stochastic Signals With Quantized Measurements: The Generalized Gaussian Case. Wang, X., +, TSP Sept. 15, 2019 4886-4898
- Estimation Theoretic Secure Communication via Encoder Randomization. Goken, C., +, TSP Dec. 1, 2019 6105-6120
- Exact Diffusion for Distributed Optimization and Learning—Part I: Algorithm Development. *Yuan, K.*, +, *TSP Feb. 1*, 2019 708-723
- Exact Diffusion for Distributed Optimization and Learning—Part II: Convergence Analysis. Yuan, K., +, TSP Feb. 1, 2019 724-739
- Frequency-Resolved Optical Gating Recovery via Smoothing Gradient. *Pinilla*, S., +, TSP Dec. 1, 2019 6121-6132
- Learning Optimal Resource Allocations in Wireless Systems. *Eisen, M.*, +, *TSP May 15, 2019 2775-2790*
- Learning ReLU Networks on Linearly Separable Data: Algorithm, Optimality, and Generalization. Wang, G., +, TSP May 1, 2019 2357-2370
- Manifold Optimization Over the Set of Doubly Stochastic Matrices: A Second-Order Geometry. *Douik, A.*, +, *TSP Nov. 15, 2019 5761-5774*
- Matrix Completion and Extrapolation via Kernel Regression. *Gimenez-Febrer*, P., +, TSP Oct. 1, 2019 5004-5017
- MMSE Approximation For Sparse Coding Algorithms Using Stochastic Resonance. Simon, D., +, TSP Sept. 1, 2019 4597-4610
- MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567
- New Statistics of the Second-Order Chirp Cyclostationary Signals: Definitions, Properties and Applications. *Miao, H.*, +, *TSP Nov. 1, 2019 5543-5557*
- Online Change-Point Detection of Linear Regression Models. Geng, J., +, TSP June 15, 2019 3316-3329
- Projected Stochastic Primal-Dual Method for Constrained Online Learning With Kernels. Koppel, A., +, TSP May 15, 2019 2528-2542
- Projection-Based Regularized Dual Averaging for Stochastic Optimization. Ushio, A., +, TSP May 15, 2019 2720-2733
- Randomized Two-Timescale Hybrid Precoding for Downlink Multicell Massive MIMO Systems. *Chen, X., +, TSP Aug. 15, 2019 4152-4167*
- Seamless Tracking of Apparent Point and Extended Targets Using Gaussian Process PMHT. *Tang*, X., +, *TSP Sept. 15*, 2019 4825-4838
- Stability Bound of the Initial Mean-Square Deviation of High-Order Stochastic Gradient Adaptive Filtering Algorithms. *Eweda, E., TSP Aug. 15*, 2019 4168-4176
- Stochastic Bit-Wise Iterative Decoding of Polar Codes. Han, K., +, TSP March 1, 2019 1138-1151
- Stochastic Learning Under Random Reshuffling With Constant Step-Sizes. *Ying, B., +, TSP Jan. 15, 2019 474-489*
- The Quaternion Stochastic Information Gradient Algorithm for Nonlinear Adaptive Systems. *Ogunfunmi*, *T.*, +, *TSP Dec. 1*, 2019 5909-5921
- The Stochastic Fejér-Monotone Hybrid Steepest Descent Method and the Hierarchical RLS. Slavakis, K., TSP June 1, 2019 2868-2883
- Universal Best Arm Identification. Shen, C., TSP Sept. 1, 2019 4464-4478
 Variance-Reduced Stochastic Learning by Networked Agents Under Random Reshuffling. Yuan, K., +, TSP Jan. 15, 2019 351-366

Stochastic programming

- On Global Linear Convergence in Stochastic Nonconvex Optimization for Semidefinite Programming. Zeng, J., +, TSP Aug. 15, 2019 4261-4275
- On the Design of Constant Modulus Probing Waveforms With Good Correlation Properties for MIMO Radar via Consensus-ADMM Approach. Wang, J., +, TSP Aug. 15, 2019 4317-4332
- Stochastic Successive Convex Approximation for Non-Convex Constrained Stochastic Optimization. *Liu*, A., +, *TSP Aug. 15*, 2019 4189-4203

Stochastic systems

Design of Rao-Blackwellized Point-Mass Smoother for Conditionally Linear and Gaussian Models. *Dunik, J.*, +, *TSP Dec. 1, 2019 6053-6066*

Stock markets

- DeepLOB: Deep Convolutional Neural Networks for Limit Order Books. Zhang, Z., +, TSP June 1, 2019 3001-3012
- Gaussian Weighting Reversion Strategy for Accurate Online Portfolio Selection. Cai, X., +, TSP Nov. 1, 2019 5558-5570
- Optimal Mean-Reverting Portfolio With Leverage Constraint for Statistical Arbitrage in Finance. *Zhao*, *Z*., +, *TSP April 1*, *2019* 1681-1695

Support vector machines

- A Large Dimensional Analysis of Least Squares Support Vector Machines. Liao, Z., +, TSP Feb. 15, 2019 1065-1074
- Simultaneous Safe Feature and Sample Elimination for Sparse Support Vector Regression. *Wang, H.*, +, *TSP Aug. 1, 2019 4043-4054*

Synchronization

- Frequency Synchronization for OFDM-Based Massive MIMO Systems. Sabeti, P., +, TSP June 1, 2019 2973-2986
- Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158
- Pulse-Coupled Synchronization With Guaranteed Clock Continuity. *Anglea*, *T.*, +, *TSP March 15*, 2019 1596-1609
- Swift-Link: A Compressive Beam Alignment Algorithm for Practical mmWave Radios. *Myers*, N.J., +, TSP Feb. 15, 2019 1104-1119

Synthetic aperture radar

New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images. *Mian, A., +, TSP Jan. 15, 2019 520-534*

T

Target tracking

- A CPHD Approximation Based on a Discrete-Gamma Cardinality Model. De Melo, F.E., +, TSP Jan. 15, 2019 336-350
- A Novel Kullback–Leibler Divergence Minimization-Based Adaptive Student's t-Filter. *Huang, Y., +, TSP Oct. 15, 2019 5417-5432*
- Convolutional Recurrent Predictor: Implicit Representation for Multi-Target Filtering and Tracking. *Emambakhsh*, M., +, TSP Sept. 1, 2019 4545-4555
- Cramér–Rao Bounds for Filtering Based on Gaussian Process State-Space Models. Zhao, Y., +, TSP Dec. 1, 2019 5936-5951
- Decentralized Gaussian Filters for Cooperative Self-Localization and Multi-Target Tracking. Sharma, P., +, TSP Nov. 15, 2019 5896-5911
- Extended-Object or Group-Target Tracking Using Random Matrix With Nonlinear Measurements. Lan, J., +, TSP Oct. 1, 2019 5130-5142
- Gaussian Target Tracking With Direction-of-Arrival von Mises-Fisher Measurements. Garcia-Fernandez, A.F., +, TSP June 1, 2019 2960-2972
- Joint Beamforming and Association Design for MIMO Radar. *Niesen, U.*, +, TSP July 15, 2019 3663-3675
- Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676 3688
- Pseudo-Spectrum Based Speed Square Filter for Track-Before-Detect in Range-Doppler Domain. *Zhou, G., +, TSP Nov. 1, 2019 5596-5610*
- Seamless Tracking of Apparent Point and Extended Targets Using Gaussian Process PMHT. *Tang, X.*, +, *TSP Sept. 15, 2019 4825-4838*
- Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937
- STGRFT for Detection of Maneuvering Weak Target With Multiple Motion Models. Li, X., +, TSP April 1, 2019 1902-1917
- Tracking the Orientation and Axes Lengths of an Elliptical Extended Object. Yang, S., +, TSP Sept. 15, 2019 4720-4729
- Trajectory PHD and CPHD Filters. Garcia-Fernandez, A.F., +, TSP Nov. 15, 2019 5702-5714
- User Location Tracking in Massive MIMO Systems via Dynamic Variational Bayesian Inference. *Lian, L.*, +, *TSP Nov. 1*, 2019 5628-5642

Task analysis

Computation Scheduling for Distributed Machine Learning With Straggling Workers. *Amiri*, *M.M.*, +, *TSP Dec. 15*, 2019 6270-6284

Telecommunication computing

A Learning-Based Two-Stage Spectrum Sharing Strategy With Multiple Primary Transmit Power Levels. Zhang, R., +, TSP Sept. 15, 2019 4899-4914

- Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581
- Learning in Wireless Control Systems Over Nonstationary Channels. *Eisen*, M., +, TSP March 1, 2019 1123-1137
- Learning Optimal Resource Allocations in Wireless Systems. Eisen, M., +, TSP May 15, 2019 2775-2790
- Matrix Exponential Learning Schemes With Low Informational Exchange. Li, W., +, TSP June 15, 2019 3140-3153
- User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W., +, TSP May 1, 2019 2426-2438*

Telecommunication control

- Connections Between Spectral Properties of Asymptotic Mappings and Solutions to Wireless Network Problems. *Cavalcante, R.L.G.*, +, *TSP May* 15, 2019 2747-2760
- Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. *Siyari, P.*, +, *TSP Feb.* 1, 2019 594-608
- Event-Driven Sensor Scheduling for Mission-Critical Control Applications. Yu, M., +, TSP March 15, 2019 1537-1549
- Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581
- Learning in Wireless Control Systems Over Nonstationary Channels. *Eisen*, *M.*, +, *TSP March 1*, 2019 1123-1137

Telecommunication network planning

Communication-Censored ADMM for Decentralized Consensus Optimization. *Liu*, *Y*, +, *TSP May 15*, 2019 2565-2579

Telecommunication network reliability

- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15, 2019 3197-3212*

Telecommunication network topology

Semi-Blind Inference of Topologies and Dynamical Processes Over Dynamic Graphs. *Ioannidis, V.N.*, +, *TSP May 1, 2019 2263-2274*

Telecommunication power management

- Energy Efficiency Optimization in MIMO Interference Channels: A Successive Pseudoconvex Approximation Approach. *Yang, Y.*, +, *TSP Aug. 1*, 2019 4107-4121
- Event-Driven Sensor Scheduling for Mission-Critical Control Applications. *Yu, M.*, +, *TSP March 15*, 2019 1537-1549
- Learning in Wireless Control Systems Over Nonstationary Channels. *Eisen*, M., +, TSP March 1, 2019 1123-1137
- User Selection and Power Minimization in Full-Duplex Cloud Radio Access Networks. *Tang, W.*, +, *TSP May 1, 2019 2426-2438*

Telecommunication scheduling

- Event-Driven Sensor Scheduling for Mission-Critical Control Applications. Yu, M., +, TSP March 15, 2019 1537-1549
- On Optimal Scheduling for Joint Spatial Division and Multiplexing Approach in FDD Massive MIMO. *Maatouk*, A., +, TSP Feb. 15, 2019 1006-1021

Telecommunication security

- Advanced Properties of Full-Duplex Radio for Securing Wireless Network. Hua. Y., TSP Jan. 1, 2019 120-135
- Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. Siyari, P., +, TSP Feb. 1, 2019 594-608
- Estimation Theoretic Optimal Encoding Design for Secure Transmission of Multiple Parameters. Goken, C., +, TSP Aug. 15, 2019 4302-4316
- Estimation Theoretic Secure Communication via Encoder Randomization. Goken, C., +, TSP Dec. 1, 2019 6105-6120
- Secrecy Analyses of a Full-Duplex MIMOME Network. Sohrabi, R., +, TSP Dec. 1, 2019 5968-5982
- Secure Distributed Detection of Sparse Signals via Falsification of Local Compressive Measurements. Li, C., +, TSP Sept. 15, 2019 4696-4706

Telecommunication signaling

Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. *Chawla, A.*, +, *TSP Aug. 1, 2019 4055-4068*

Telecommunication traffic

- An Exact Quantized Decentralized Gradient Descent Algorithm. *Reisizadeh*, A., +, TSP Oct. 1, 2019 4934-4947
- Anomaly Detection in Partially Observed Traffic Networks. *Hou, E., +, TSP March 15, 2019 1461-1476*
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C., +, TSP March 15, 2019 1477-1492*

Tensors

- Error Preserving Correction: A Method for CP Decomposition at a Target Error Bound. *Phan, A.*, +, *TSP March 1, 2019 1175-1190*
- Hypercomplex Tensor Completion via Convex Optimization. *Mizoguchi, T.*, +, *TSP Aug. 1, 2019 4078-4092*
- Joint Independent Subspace Analysis: Uniqueness and Identifiability. *Lahat*, D., +, TSP Feb. 1, 2019 684-699
- Learning Tensors From Partial Binary Measurements. *Ghadermarzy, N.*, +, TSP Jan. 1, 2019 29-40
- Low-Rank Data Completion With Very Low Sampling Rate Using Newton's Method. *Ashraphijuo, M.*, +, *TSP April 1, 2019 1849-1859*
- Nonconvex Robust Low-Rank Tensor Reconstruction via an Empirical Bayes Method. *Chen, W.*, +, *TSP Nov. 15*, 2019 5785-5797
- Sparse Sampling for Inverse Problems With Tensors. *Ortiz-Jimenez, G.*, +, *TSP June 15*, 2019 3272-3286

Testing

Tests For the Parameters of Chirp Signal Model. *Dhar, S.S.*, +, *TSP Aug. 15*, 2019 4291-4301

Time division multiple access

Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15*, 2019 3197-3212

Time series

- Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142
- Computationally Efficient Off-Line Joint Change Point Detection in Multiple Time Series. *Eriksson*, M., +, TSP Jan. 1, 2019 149-163
- Edge Exclusion Tests for Graphical Model Selection: Complex Gaussian Vectors and Time Series. *Tugnait, J.K., TSP Oct. 1, 2019 5062-5077*
- Estimation of Sparse Directional Connectivity With Expectation Maximization. Khayambashi, M., +, TSP Feb. 15, 2019 854-869
- Forecasting Time Series With VARMA Recursions on Graphs. *Isufi, E.*, +, *TSP Sept. 15, 2019 4870-4885*
- Hyperdimensional Bayesian Time Mapping (HyperBaT): A Probabilistic Approach to Time Series Mapping of Non-Identical Sequences. *Ruble, M.*, +, *TSP July 15*, 2019 3719-3731
- Joint Time-Frequency Scattering. Anden, J., +, TSP July 15, 2019 3704-3718
- Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. Basu, S., +, TSP March 1, 2019 1207-1222
- Multivariate Signal Modeling With Applications to Inertial Sensor Calibration. Xu, H., +, TSP Oct. 1, 2019 5143-5152
- New Robust Statistics for Change Detection in Time Series of Multivariate SAR Images. *Mian, A., +, TSP Jan. 15, 2019 520-534*
- Nonlinear Structural Vector Autoregressive Models With Application to Directed Brain Networks. Shen, Y., +, TSP Oct. 15, 2019 5325-5339
- Online Forecasting Matrix Factorization. Gultekin, S., +, TSP March 1, 2019 1223-1236
- Parameter Estimation of Heavy-Tailed AR Model With Missing Data Via Stochastic EM. Liu, J., +, TSP April 15, 2019 2159-2172
- Real-Time Power System State Estimation and Forecasting via Deep Unrolled Neural Networks. Zhang, L., +, TSP Aug. 1, 2019 4069-4077
- Spectral Estimation Using Multitaper Whittle Methods With a Lasso Penalty. Tang, S., +, TSP Oct. 1, 2019 4992-5003

Time series analysis

Corrections to "Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions" [Mar 19 1207-1222]. Basu, S., +, TSP April 1, 2019 1960

Time warp simulation

Adaptive Global Time Sequence Averaging Method Using Dynamic Time Warping. Liu, Y., +, TSP April 15, 2019 2129-2142

Time-domain analysis

Robustness of Two-Dimensional Line Spectral Estimation Against Spiky Noise. Valiulahi, I., +, TSP Dec. 1, 2019 5998-6008

Time-frequency analysis

Adaptive Instantaneous Frequency Estimation of Multicomponent Signals Based on Linear Time–Frequency Transforms. *Abdoush, Y.*, +, *TSP June* 15, 2019 3100-3112

Channel Estimation for Orthogonal Time Frequency Space (OTFS) Massive MIMO. Shen, W., +, TSP Aug. 15, 2019 4204-4217

Estimation of the Evolutionary Spectra With Application to Stationarity Test. *Xiang, Y.*, +, *TSP March 1, 2019 1353-1365*

Extraction of Useful Information Content From Noisy Signals Based on Structural Affinity of Clustered TFDs' Coefficients. Saulig, N., +, TSP June 15, 2019 3154-3167

Joint Time-Frequency Scattering. Anden, J., +, TSP July 15, 2019 3704-3718

Online UAV Path Planning for Joint Detection and Tracking of Multiple Radio-Tagged Objects. Nguyen, H.V., +, TSP Oct. 15, 2019 5365-5379

Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava*, S., +, TSP March 1, 2019 1251-1266

Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution. *Liu*, Y., +, *TSP Aug. 15*, 2019 4370-4382

Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci, E., +, TSP March 15, 2019 1550-1565*

Time-Frequency Analysis of the Impulse Response. Galleani, L., TSP March 1, 2019 1280-1295

Time-of-arrival estimation

Effect of Sensor Motion on Time Delay and Doppler Shift Localization: Analysis and Solution. *Jia, T., +, TSP Nov. 15, 2019 5881-5895*

Improving Localization by Testing Mobility. Carlino, L., +, TSP July 1, 2019 3412-3423

Iterative Channel Estimation Using LSE and Sparse Message Passing for MmWave MIMO Systems. *Huang, C.*, +, *TSP Jan. 1, 2019 245-259*

Joint Time-of-Arrival Estimation for Coherent UWB Ranging in Multipath Environment With Multi-User Interference. Wang, S., +, TSP July 15, 2019 3743-3755

Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization. Xu, S., +, TSP Oct. 1, 2019 5018-5031

Solution and Analysis of TDOA Localization of a Near or Distant Source in Closed Form. Sun, Y., +, TSP Jan. 15, 2019 320-335

Time-varying channels

Efficient Equalization of Time-Varying Channels in MIMO OFDM Systems. Rottenberg, F., +, TSP Nov. 1, 2019 5583-5595

Sampling and Reconstruction of Multiple-Input Multiple-Output Channels. *Lee, D.G.*, +, *TSP Feb. 15, 2019 961-976*

Time-varying systems

Self-Tuning Algorithms for Multisensor-Multitarget Tracking Using Belief Propagation. Soldi, G., +, TSP Aug. 1, 2019 3922-3937

Toeplitz matrices

Covariance Matrix Estimation From Linearly-Correlated Gaussian Samples. Cui, W., +, TSP April 15, 2019 2187-2195

Tomography

Adaptive Bayesian Radio Tomography. Lee, D., +, TSP April 15, 2019 1964-1977

Topology

Change-Point Methods on a Sequence of Graphs. Zambon, D., +, TSP Dec. 15, 2019 6327-6341

Distributed Topology Manipulation to Control Epidemic Spreading Over Networks. *Xue*, *D.*, +, *TSP March 1*, 2019 1163-1174

Tracking filters

A CPHD Approximation Based on a Discrete-Gamma Cardinality Model. De Melo, F.E., +, TSP Jan. 15, 2019 336-350 Decentralized Gaussian Filters for Cooperative Self-Localization and Multi-Target Tracking. Sharma, P., +, TSP Nov. 15, 2019 5896-5911

Multi-Sensor Multi-Object Tracking With the Generalized Labeled Multi-Bernoulli Filter. Vo. B., +, TSP Dec. 1, 2019 5952-5967

Multiple Kernelized Correlation Filters (MKCF) for Extended Object Tracking Using X-Band Marine Radar Data. Zhou, Y., +, TSP July 15, 2019 3676-3688

Trajectory PHD and CPHD Filters. Garcia-Fernandez, A.F., +, TSP Nov. 15, 2019 5702-5714

Traffic engineering computing

Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization. *Yang, K.*, +, *TSP June 15, 2019 3087-3099*

Trajectory optimization (aerospace)

Joint Optimization of a UAV's Trajectory and Transmit Power for Covert Communications. Zhou, X., +, TSP Aug. 15, 2019 4276-4290

Transceivers

Maximally Improper Signaling in Underlay MIMO Cognitive Radio Networks. *Lameiro*, C., +, TSP Dec. 15, 2019 6241-6255

Transfer functions

Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers. *Liski, J.*, +, *TSP July 15*, 2019 3785-3795

Modal Decomposition of Feedback Delay Networks. Schlecht, S.J., +, TSP Oct. 15, 2019 5340-5351

Transforms

Detecting Approximate Reflection Symmetry in a Point Set Using Optimization on Manifold. *Nagar, R.*, +, *TSP March 15*, 2019 1582-1595

Graph Topology Inference Based on Sparsifying Transform Learning. Sardellitti, S., +, TSP April 1, 2019 1712-1727

Joint Optimization of Dimension Assignment and Compression in Distributed Estimation Fusion. Zhang, L., +, TSP May 1, 2019 2453-2468

Learning Filter Bank Sparsifying Transforms. *Pfister, L.*, +, *TSP Jan. 15*, 2019 504-519

On the Use of the Z Transform of LTI Systems for the Synthesis of Steered Beams and Nulls in the Radiation Pattern of Leaky-Wave Antenna Arrays. Verdu-Monedero, R., +, TSP May 1, 2019 2275-2290

Transient response

A New Approach to ARMAX Signals Smoothing: Application to Variable-Q ARMA Filter Design. *Roonizi, A.K., TSP Sept. 1, 2019 4535-4544*

Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914

Time-Frequency Analysis of the Impulse Response. Galleani, L., TSP March 1, 2019 1280-1295

Transmitting antennas

Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417

Limited-Complexity Receiver Design for Passive/Active MIMO Radar Detection. Li, Y., +, TSP June 15, 2019 3258-3271

Localization of Signals in the Near-Field of an Antenna Array. *Friedlander, B., TSP Aug. 1, 2019 3885-3893*

Transmit MIMO Radar Beampattern Design via Optimization on the Complex Circle Manifold. *Alhujaili, K.*, +, *TSP July 1, 2019 3561-3575*

Trees (mathematics)

A Framework of Adaptive Multiscale Wavelet Decomposition for Signals on Undirected Graphs. Zheng, X., +, TSP April 1, 2019 1696-1711

Learning of Tree-Structured Gaussian Graphical Models on Distributed Data Under Communication Constraints. *Tavassolipour, M.*, +, *TSP Jan. 1, 2019 17-28*

On the Properties of Gromov Matrices and Their Applications in Network Inference. *Ji*, *F*., +, *TSP May 15*, 2019 2624-2638

 \mathbf{U}

Ultra wideband communication

Joint Time-of-Arrival Estimation for Coherent UWB Ranging in Multipath Environment With Multi-User Interference. Wang, S., +, TSP July 15, 2019 3743-3755

Uncertainty

Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information. *Lin*, *Z*., +, *TSP Dec.* 15, 2019 6384-6396

Underwater acoustic communication

Sparse Channel Estimation for OFDM-Based Underwater Acoustic Systems in Rician Fading With a New OMP-MAP Algorithm. *Panayirci*, E., +, TSP March 15, 2019 1550-1565

Unsupervised learning

A New Framework to Train Autoencoders Through Non-Smooth Regularization. Amini, S., +, TSP April 1, 2019 1860-1874

Structured and Unstructured Outlier Identification for Robust PCA: A Fast Parameter Free Algorithm. *Menon, V.*, +, *TSP May 1*, 2019 2439-2452

Upper bound

MMSE Bounds for Additive Noise Channels Under Kullback–Leibler Divergence Constraints on the Input Distribution. Dytso, A., +, TSP Dec. 15, 2019 6352-6367

V

Variational techniques

Multivariate Variational Mode Decomposition. *Rehman, N.u.*, +, *TSP Dec.* 1, 2019 6039-6052

Vector quantization

Asymptotic Task-Based Quantization With Application to Massive MIMO. Shlezinger, N., +, TSP Aug. 1, 2019 3995-4012

Vectors

A Large Dimensional Analysis of Least Squares Support Vector Machines. Liao, Z., +, TSP Feb. 15, 2019 1065-1074

Approximating Sample State Vectors Using the ESPT for Computationally Efficient Particle Filtering. *Biswas, S.K.*, +, *TSP April 1, 2019 1918-1928* Bilinear Recovery Using Adaptive Vector-AMP. *Sarkar, S.*, +, *TSP July 1, 2019 3383-3396*

Edge Exclusion Tests for Improper Complex Gaussian Graphical Model Selection. *Tugnait, J.K., TSP July 1, 2019 3547-3560*

Frame-Based Sparse Analysis and Synthesis Signal Representations and Parseval K-SVD. *Hwang, W.*, +, *TSP June 15, 2019 3330-3343*

Frequency Synchronization for Uplink Massive MIMO With Adaptive MUI Suppression in Angle Domain. Ge, Y., +, TSP April 15, 2019 2143-2158

Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays. *Qiao*, H., +, TSP Nov. 15, 2019 5715-5729

Hypercomplex Widely Linear Estimation Through the Lens of Underpinning Geometry. Nitta, T., +, TSP Aug. 1, 2019 3985-3994

Joint Independent Subspace Analysis: Uniqueness and Identifiability. *Lahat*, D., +, TSP Feb. 1, 2019 684-699

Low Rank and Structured Modeling of High-Dimensional Vector Autoregressions. Basu, S., +, TSP March 1, 2019 1207-1222

Measurement Bounds for Observability of Linear Dynamical Systems Under Sparsity Constraints. *Joseph, G.*, +, *TSP April 15*, 2019 1992-2006

Nearly Optimal Restricted Isometry Condition for Rank Aware Order Recursive Matching Pursuit. Kim, J., +, TSP Sept. 1, 2019 4449-4463

Nonlinear Dimensionality Reduction for Discriminative Analytics of Multiple Datasets. *Chen, J.*, +, *TSP Feb. 1*, 2019 740-752

Optimal Bayesian Classification With Vector Autoregressive Data Dependency. Zollanvari, A., +, TSP June 15, 2019 3073-3086

Robust Adaptive Wideband Beamforming Based on Time Frequency Distribution. Liu, Y., +, TSP Aug. 15, 2019 4370-4382

Semiparametric CRB and Slepian-Bangs Formulas for Complex Elliptically Symmetric Distributions. Fortunati, S., +, TSP Oct. 15, 2019 5352-5364

Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. Fortunati, S., +, TSP Jan. 1, 2019 164-177

Tight Performance Bounds for Compressed Sensing With Conventional and Group Sparsity. *Ranjan*, S., +, *TSP June 1*, 2019 2854-2867

Video signal processing

Provable Subspace Tracking From Missing Data and Matrix Completion. Narayanamurthy, P., +, TSP Aug. 15, 2019 4245-4260

Video streaming

Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581

W

Wavelet transforms

A Framework of Adaptive Multiscale Wavelet Decomposition for Signals on Undirected Graphs. *Zheng*, *X.*, +, *TSP April 1*, 2019 1696-1711

Characterization of Analytic Wavelet Transforms and a New Phaseless Reconstruction Algorithm. *Holighaus*, N., +, TSP Aug. 1, 2019 3894-3908

Finding GEMS: Multi-Scale Dictionaries For High-Dimensional Graph Signals. *Yankelevsky, Y.*, +, *TSP April 1, 2019 1889-1901*

Joint Time-Frequency Scattering. Anden, J., +, TSP July 15, 2019 3704-3718

Multivariate Signal Modeling With Applications to Inertial Sensor Calibration. Xu, H., +, TSP Oct. 1, 2019 5143-5152

Weibull distribution

Semiparametric Inference and Lower Bounds for Real Elliptically Symmetric Distributions. Fortunati, S., +, TSP Jan. 1, 2019 164-177

White noise

A Robust Spectral Estimator With Application to a Noise-Corrupted Process. *Zhou, X., +, TSP April 15, 2019 2107-2114*

Flexible Array Response Control via Oblique Projection. Zhang, X., +, TSP June 15, 2019 3126-3139

On the Impact of Unknown Signals on Delay, Doppler, Amplitude, and Phase Parameter Estimation. *Chen, Y., +, TSP Jan. 15, 2019 431-443*

Wideband

Beamspace Precoding and Beam Selection for Wideband Millimeter-Wave MIMO Relying on Lens Antenna Arrays. *Shen, W.*, +, *TSP Dec. 15*, 2019 6301-6313

Wiener filters

MV-PURE Spatial Filters With Application to EEG/MEG Source Reconstruction. *Piotrowski*, T., +, TSP Feb. 1, 2019 553-567

The Relationship Between the Cyclic Wiener Filter and Fractionally Spaced Equalizers. *Yeste Ojeda, O.A.*, +, *TSP Aug. 15, 2019 4333-4341*

Wigner distribution

Linear Canonical Wigner Distribution Based Noisy LFM Signals Detection Through the Output SNR Improvement Analysis. *Zhang, Z., TSP Nov. 1,* 2019 5527-5542

Time-Frequency Analysis of the Impulse Response. Galleani, L., TSP March 1, 2019 1280-1295

Wind

Comments on "The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". Wang, G., +, TSP April 1, 2019 1957-1958

Reply to "Comments on 'The Quaternion LMS Algorithm for Adaptive Filtering of Hypercomplex Processes". *Mandic, D.*, +, *TSP April 1, 2019 1959*

Wireless channels

A Framework on Hybrid MIMO Transceiver Design Based on Matrix-Monotonic Optimization. *Xing, C.*, +, *TSP July 1*, 2019 3531-3546

Advanced Properties of Full-Duplex Radio for Securing Wireless Network. Hua, Y., TSP Jan. 1, 2019 120-135

Beam Squint and Channel Estimation for Wideband mmWave Massive MIMO-OFDM Systems. Wang, B., +, TSP Dec. 1, 2019 5893-5908

Compressed Training Based Massive MIMO. Yilmaz, B.B., +, TSP March 1, 2019 1191-1206

Data Shuffling in Wireless Distributed Computing via Low-Rank Optimization. *Yang, K.*, +, *TSP June 15*, 2019 3087-3099

Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. Chawla, A., +, TSP Aug. 1, 2019 4055-4068

Distributed Power Control in Single-Stream MIMO Wiretap Interference Networks With Full-Duplex Jamming Receivers. Siyari, P., +, TSP Feb. 1, 2019 594-608

Estimation Theoretic Secure Communication via Encoder Randomization. Goken, C., +, TSP Dec. 1, 2019 6105-6120

- Fast Beam Alignment for Millimeter Wave Communications: A Sparse Encoding and Phaseless Decoding Approach. *Li*, *X*., +, *TSP Sept. 1*, 2019 4402-4417
- Information-Theoretic Pilot Design for Downlink Channel Estimation in FDD Massive MIMO Systems. *Gu, Y., +, TSP May 1, 2019 2334-2346*
- Learning in Wireless Control Systems Over Nonstationary Channels. *Eisen*, M., +, TSP March 1, 2019 1123-1137
- Max-Min Fairness Design for MIMO Interference Channels: A Minorization-Maximization Approach. *Naghsh, M.M.*, +, *TSP Sept. 15, 2019 4707-4719*
- Offset-Based Beamforming: A New Approach to Robust Downlink Transmission. *Medra*, M., +, TSP Jan. 1, 2019 70-82
- On the Power Leakage Problem in Millimeter-Wave Massive MIMO With Lens Antenna Arrays. Xie, T., +, TSP Sept. 15, 2019 4730-4744
- On the Two-User MISO Interference Channel With Single-User Decoding: Impact of Imperfect CSIT and Channel Dimension Reduction. *Noam*, *Y*, +, *TSP May 15*, 2019 2608-2623
- Power Leakage Elimination for Wideband mmWave Massive MIMO-OFDM Systems: An Energy-Focusing Window Approach. *Wang, B.*, +, *TSP Nov. 1*, 2019 5479-5494
- Quasi-Static and Time-Selective Channel Estimation for Block-Sparse Millimeter Wave Hybrid MIMO Systems: Sparse Bayesian Learning (SBL) Based Approaches. *Srivastava, S., +, TSP March 1, 2019 1251-1266*
- Receive Spatial Modulation in Correlated Massive MIMO With Partial CSI. Maleki, M., +, TSP March 1, 2019 1237-1250
- Robust Beamforming Design for MISO Bursty Interference Channels Under Traffic Uncertainties. *Chen, C.*, +, *TSP March 15*, 2019 1477-1492
- Semi-Blind, Training, and Data-Aided Channel Estimation Schemes for MIMO-FBMC-OQAM Systems. Singh, P., +, TSP Sept. 15, 2019 4668-4682
- Successive Localization and Beamforming in 5G mmWave MIMO Communication Systems. Zhou, B., +, TSP March 15, 2019 1620-1635
- Two-Hop AF MIMO Relay System Optimization With Own Information From the Relay Node. Su, Q., +, TSP Feb. 15, 2019 930-945
- User Location Tracking in Massive MIMO Systems via Dynamic Variational Bayesian Inference. *Lian, L.*, +, *TSP Nov. 1*, 2019 5628-5642

Wireless communication

Robust Multi-Objective Beamforming for Integrated Satellite and High Altitude Platform Network With Imperfect Channel State Information. *Lin*, *Z*., +, *TSP Dec.* 15, 2019 6384-6396

Wireless LAN

Joint Channel-Estimation/Decoding With Frequency-Selective Channels and Few-Bit ADCs. Sun, P., +, TSP Feb. 15, 2019 899-914

Wireless sensor networks

- Adaptive Bayesian Radio Tomography. Lee, D., +, TSP April 15, 2019 1964-1977
- Algorithms and Fundamental Limits for Unlabeled Detection Using Types. Marano, S., +, TSP April 15, 2019 2022-2035
- Distributed Detection in Massive MIMO Wireless Sensor Networks Under Perfect and Imperfect CSI. Chawla, A., +, TSP Aug. 1, 2019 4055-4068
- Event-Driven Sensor Scheduling for Mission-Critical Control Applications. Yu, M., +, TSP March 15, 2019 1537-1549
- Joint Rate and Power Optimization for Multimedia Streaming in Wireless Fading Channels via Parametric Policy Gradient. *Chai*, S., +, TSP Sept. 1, 2019 4570-4581
- Multistatic Localization in the Absence of Transmitter Position. *Zhang*, *Y.*, +, *TSP Sept. 15*, 2019 4745-4760
- On Multisensor Detection of Improper Signals. *Tugnait, J.K., TSP Feb. 15*, 2019 870-884
- Online Design of Optimal Precoders for High Dimensional Signal Detection. *Khanduri*, P., +, TSP Aug. 1, 2019 4122-4135
- Optimal Beamforming and Time Allocation for Partially Wireless Powered Sensor Networks With Downlink SWIPT. *Gong, S.*, +, *TSP June 15*, 2019 3197-3212
- Optimal Sensor Placement for 3-D Time-of-Arrival Target Localization. *Xu*, *S.*, +, *TSP Oct. 1*, 2019 5018-5031
- Robust Distributed Diffusion Recursive Least Squares Algorithms With Side Information for Adaptive Networks. *Yu*, *Y*., +, *TSP March 15*, 2019 1566-1581