2021 Index IEEE Transactions on Cybernetics Vol. 51

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

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

Author Index

A

Abadia, I., Naveros, F., Garrido, J.A., Ros, E., and Luque, N.R., On Robot Compliance: A Cerebellar Control Approach; *TCYB May 2021 2476-2489*

Abbas, A., see Ghafoor, M., TCYB Sept. 2021 4515-4527

Abbass, H.A., see Debie, E., TCYB March 2021 1542-1555

Abdel-Aty, M., see Lv, X., TCYB Nov. 2021 5269-5278

Abdel-Basset, M., see Ding, W., TCYB Oct. 2021 4944-4958

Abdel-Fatah, L., see Ding, W., TCYB Oct. 2021 4944-4958

Abidi, K., see Teo, T.T., TCYB Nov. 2021 5375-5386

Abraham, A., see Mishro, P.K., TCYB Aug. 2021 3901-3912

Abusorrah, A., see Wang, X., TCYB July 2021 3483-3495

Adeli, E., see Xue, J., TCYB April 2021 2153-2165

Adeli, E., see Arzani, M.M., TCYB Dec. 2021 5859-5870

Agrawal, S., see Mishro, P.K., TCYB Aug. 2021 3901-3912

Ahn, C., see Sim, J.Y., TCYB May 2021 2761-2772

Ahn, C.K., see Wang, Y., TCYB Jan. 2021 297-308

Ahn, C.K., see Li, S., TCYB Aug. 2021 4011-4020

Ahn, C.K., see Wu, Y., TCYB Nov. 2021 5214-5224

Ajina, M., Tabatabai, D., and Nowzari, C., Asynchronous Distributed Event-Triggered Coordination for Multiagent Coverage Control; TCYB Dec. 2021 5941-5953

Al-Juboori, U.A., see Lv, X., TCYB Nov. 2021 5269-5278

Alahakoon, D., see Nguyen, S., TCYB March 2021 1403-1416

Aldape-Perez, M., see Rodriguez-Molina, A., TCYB March 2021 1272-1285

Alippi, C., see Zhao, B., TCYB June 2021 2858-2869

An, Q., see Meng, F., TCYB Dec. 2021 5871-5882

Anaissi, A., see Zandavi, S.M., TCYB May 2021 2725-2734

Anavatti, S., see Debie, E., TCYB March 2021 1542-1555

Andreae, P., see Nguyen, B.H., TCYB Feb. 2021 589-603

Andreae, P., see Nguyen, B.H., TCYB Dec. 2021 6319-6332

Angelov, P.P., see Gu, X., TCYB Nov. 2021 5352-5363

Arzani, M.M., Fathy, M., Azirani, A.A., and Adeli, E., Switching Structured Prediction for Simple and Complex Human Activity Recognition; TCYB Dec. 2021 5859-5870

Azirani, A.A., see Arzani, M.M., TCYB Dec. 2021 5859-5870

В

Bai, X., see Wang, C., TCYB Oct. 2021 4770-4783

Bai, X., Cao, M., Yan, W., Ge, S.S., and Zhang, X., Efficient Heuristic Algorithms for Single-Vehicle Task Planning With Precedence Constraints; TCYB Dec. 2021 6274-6283

Bai, Y., see Luo, M., TCYB Sept. 2021 4707-4715

Bakolas, E., see Selvakumar, J., TCYB Feb. 2021 696-707

Bali, K.K., Gupta, A., Ong, Y., and Tan, P.S., Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II; TCYB April 2021 1784-1796

Baranitha, R., Mohajerpoor, R., and Rakkiyappan, R., Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels; TCYB Jan. 2021 247-257

Barlow, M., see Debie, E., TCYB March 2021 1542-1555

Bartoli, A., De Lorenzo, A., Medvet, E., and Tarlao, F., Automatic Search-and-Replace From Examples With Coevolutionary Genetic Programming; TCYB May 2021 2612-2624

Benediktsson, J.A., see Wu, Z., TCYB July 2021 3588-3601

Benhabib, B., see Hong, A., TCYB Dec. 2021 5954-5968

Bezdek, J.C., see Rathore, P., TCYB Dec. 2021 5979-5992

Bi, Y., Xue, B., and Zhang, M., Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification; TCYB April 2021 1769-1783

Bi, Y., see Peng, B., TCYB Oct. 2021 4909-4923

Bian, W., see Ma, L., TCYB March 2021 1322-1333

Blanchini, F., see Drioli, C., TCYB May 2021 2587-2600

Bouraffa, T., Yan, L., Feng, Z., Xiao, B., Wu, Q.M.J., and Xia, Y., Context-Aware Correlation Filter Learning Toward Peak Strength for Visual Tracking; TCYB Oct. 2021 5105-5115

Bremner, P., see Ondras, J., TCYB Nov. 2021 5445-5454

(

Cai, X., see Li, F., TCYB March 2021 1390-1402

Cai, X., Xia, C., Zhang, Q., Mei, Z., Hu, H., Wang, L., and Hu, J., The Collaborative Local Search Based on Dynamic-Constrained Decomposition With Grids for Combinatorial Multiobjective Optimization; TCYB May 2021 2639-2650

Cai, X., Sun, W., Misir, M., Tan, K.C., Li, X., Xu, T., and Fan, Z., A Bi-Objective Constrained Robust Gate Assignment Problem: Formulation, Instances and Algorithm; *TCYB Sept. 2021 4488-4500*

Cao, J., Stamov, G., Stamova, I., and Simeonov, S., Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays; TCYB Jan. 2021 151-161

Cao, J., see Liu, J., TCYB Jan. 2021 162-173

Cao, J., see Tan, X., TCYB Feb. 2021 624-634

Cao, J., see Liu, J., TCYB Aug. 2021 4000-4010

Cao, J., see Ge, Y., TCYB Oct. 2021 4808-4821

Cao, J., see Hu, H., TCYB Nov. 2021 5328-5341

Cao, J., see Xia, Z., TCYB Nov. 2021 5631-5636

Cao, J., see Lv, X., TCYB Nov. 2021 5269-5278

Cao, L., Ren, H., Li, H., and Lu, R., Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis; TCYB Nov. 2021 5236-5247

Cao, M., see Bai, X., TCYB Dec. 2021 6274-6283

Cao, S., see Ji, Z., TCYB Jan. 2021 64-76

Cao, T., see Zhou, Y., TCYB Nov. 2021 5423-5432

Cao, W., see Zhu, W., TCYB April 2021 2178-2187

Cao, W., see Dai, D., TCYB April 2021 2019-2031

Cao, X., see Peng, L., TCYB Feb. 2021 779-788

Cao, X., see Feng, J., TCYB Sept. 2021 4414-4428

Cao, Y., see Wang, S., TCYB Jan. 2021 427-437

Cao, Y., Wen, C., and Song, Y., A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints; TCYB March 2021 1262-1271

Cao, Y., see Wu, E.Q., TCYB Nov. 2021 5483-5496

Cao, Z., see Zhou, M., TCYB June 2021 3017-3026

Celiktutan, O., see Ondras, J., TCYB Nov. 2021 5445-5454

Chae, S., see Sim, J.Y., TCYB May 2021 2761-2772

Chai, R., Tsourdos, A., Savvaris, A., Chai, S., Xia, Y., and Philip Chen, C.L., Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles; TCYB Aug. 2021 4035-4049

Chai, S., see Chai, R., TCYB Aug. 2021 4035-4049

Chai, X., see Wang, X., TCYB Jan. 2021 174-187

Chakraborty, B., Ghosh, L., and Konar, A., Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game; TCYB Dec. 2021 6200-6212

Chan, K.W., see Zhang, X., TCYB June 2021 3157-3170

Chang, L., see Li, L., TCYB April 2021 2055-2067

Chang, L., Han, Q., Ge, X., Zhang, C., and Zhang, X., On Designing Distributed Prescribed Finite-Time Observers for Strict-Feedback Nonlinear Systems; TCYB Sept. 2021 4695-4706

Chang, M., Ke, L., Qi, H., Wen, L., and Lyu, S., Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions; TCYB Jan.

Chang, X., see Guan, W., TCYB Sept. 2021 4501-4514

Chang, Y., Jung, C., and Sun, J., Joint Reflection Removal and Depth Estimation From a Single Image; TCYB Dec. 2021 5836-5849

Chanussot, J., see Hong, D., TCYB July 2021 3602-3615

Chao, H., see Gan, W., TCYB Feb. 2021 487-500

Chaudhuri, B.B., see Santhosh, K.K., TCYB Aug. 2021 4148-4161

Che, W., see Liang, Y., TCYB Feb. 2021 853-861

Che, W., see Deng, C., TCYB April 2021 1812-1821

Chen, B., see Yang, Y., TCYB March 2021 1678-1689

Chen, B., see Xing, L., TCYB June 2021 3298-3311

Chen, B., Wang, C., and Lee, M., Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations; TCYB Dec. 2021 5786-5799

Chen, B., see Chen, J., TCYB Dec. 2021 5993-6003

Chen, B.M., see Lyu, Y., TCYB May 2021 2651-2662

Chen, C., see Li, X., TCYB Jan. 2021 199-209

Chen, C., see Zhou, L., TCYB May 2021 2563-2576

Chen, C.L.P., see Lu, K., TCYB Jan. 2021 405-415

Chen, C.L.P., see Zhang, C., TCYB Jan. 2021 210-221

Chen, C.L.P., see Zhang, Y., TCYB Feb. 2021 736-749

Chen, C.L.P., see Chen, G., TCYB Feb. 2021 614-623

Chen, C.L.P., see Du, J., TCYB March 2021 1586-1597

Chen, C.L.P., see Liu, Y., TCYB March 2021 1380-1389

Chen, C.L.P., see Sheng, B., TCYB March 2021 1463-1477

Chen, C.L.P., see Dai, D., TCYB April 2021 2019-2031

Chen, C.L.P., see Guo, H., TCYB May 2021 2735-2747

Chen, C.L.P., see Huang, H., TCYB July 2021 3824-3835

Chen, C.L.P., see Yang, L., TCYB Aug. 2021 4100-4111

Chen, C.L.P., see Ye, H., TCYB Sept. 2021 4450-4463

Chen, C.L.P., see Wen, G., TCYB Sept. 2021 4567-4580

Chen, C.L.P., see Wang, B., TCYB Oct. 2021 5008-5020

Chen, C.L.P., see Tang, M., TCYB Oct. 2021 4784-4795

Chen, E., see Ma, Q., TCYB March 2021 1613-1625

Chen, G., see Duan, P., TCYB Feb. 2021 512-520

Chen, G., Gan, M., Chen, C.L.P., and Li, H., Basis Function Matrix-Based Flexible Coefficient Autoregressive Models: A Framework for Time Series and Nonlinear System Modeling; TCYB Feb. 2021 614-623

Chen, G., see Wang, Z., TCYB March 2021 1454-1462

Chen, G., see Zhu, S., TCYB April 2021 2224-2231

Chen, G., see Wang, Q., TCYB June 2021 2905-2915

Chen, G., see Zhang, Y., TCYB Nov. 2021 5364-5374

Chen, G., see Li, H., TCYB Dec. 2021 6188-6199

Chen, H., see Miao, Z., TCYB May 2021 2801-2812

Chen, H., see Huang, Y., TCYB Nov. 2021 5397-5408

Chen, J., and Ling, Q., Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering; TCYB Feb. 2021 984-993

Chen, J., see Zhang, Z., TCYB Feb. 2021 604-613

Chen, J., see Zhu, Q., TCYB Feb. 2021 765-778

Chen, J., see Yang, Q., TCYB April 2021 1993-2005

Chen, J., see Mao, S., TCYB May 2021 2835-2846

Chen, J., see Wu, X., TCYB May 2021 2676-2687

Chen, J., Gong, Y., Chen, W., Li, M., and Zhang, J., Elastic Differential Evolution for Automatic Data Clustering; TCYB Aug. 2021 4134-4147

Chen, J., see Feng, J., TCYB Sept. 2021 4414-4428

Chen, J., see Luo, M., TCYB Sept. 2021 4707-4715

Chen, J., see Weng, H., TCYB Oct. 2021 5198-5211

Chen, J., see Zeng, Y., TCYB Oct. 2021 5116-5129

Chen, J., see Su, H., TCYB Nov. 2021 5259-5268

Chen, J., Chen, B., Zeng, Z., and Jiang, P., Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology; TCYB Dec. 2021 5993-6003

Chen, J., see Sun, Q., TCYB Dec. 2021 5921-5929

Chen, J., see Li, J., TCYB Dec. 2021 6029-6040

Chen, L., Wang, L., Zhao, J., and Wang, W., Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches; TCYB Aug. 2021 4298-4311

Chen, M., see Li, H., TCYB March 2021 1163-1174

Chen, M., see Zhang, K., TCYB March 2021 1230-1240

Chen, M., see Wu, Y., TCYB June 2021 2870-2881

Chen, M., see Zhang, Y., TCYB Dec. 2021 5728-5739

Chen, Q., Xie, S., and He, X., Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts; TCYB Oct. 2021 5032-5045

Chen, S., see Yang, P., TCYB Jan. 2021 233-246

Chen, S., see Zhou, G., TCYB March 2021 1666-1677

Chen, S., see Liu, P., TCYB April 2021 1860-1874

Chen, S., Yang, J., Wei, Y., Luo, L., Lu, G., and Gong, C., δ-Norm-Based Robust Regression With Applications to Image Analysis; TCYB June 2021 3371-3383

Chen, S., see Ye, P., TCYB Dec. 2021 5897-5906

Chen, T., see Lu, W., TCYB June 2021 3384-3388

Chen, T., Wang, C., and Hill, D.J., Fault Detection for a Class of Uncertain Sampled-Data Systems Using Deterministic Learning; TCYB Dec. 2021 5930-5940

Chen, W., see He, X., TCYB March 2021 1651-1665

Chen, W., see Li, L., TCYB April 2021 2142-2152

Chen, W., Ding, D., Dong, H., Wei, G., and Ge, X., Finite-Horizon H∞ Bipartite Consensus Control of Cooperation-Competition Multiagent Systems With Round-Robin Protocols; TCYB July 2021 3699-3709

Chen, W., see Zhao, T., TCYB July 2021 3752-3766

Chen, W., see Xu, B., TCYB Aug. 2021 3975-3987

Chen, W., see Chen, J., TCYB Aug. 2021 4134-4147

Chen, W., see Huang, Z., TCYB Nov. 2021 5559-5572

Chen, W., see Zhang, Z., TCYB Dec. 2021 6105-6118

Chen, W., see Zhang, Y., TCYB Dec. 2021 5728-5739

Chen, X., see Zhang, X., TCYB March 2021 1121-1133

Chen, X., see Song, K., TCYB May 2021 2699-2711 Chen, X., see Wu, H., TCYB Sept. 2021 4464-4475

Chen, X., see Hu, S., TCYB Sept. 2021 4591-4601

Chen, X., see Su, H., TCYB Nov. 2021 5259-5268

Chen, Y., Wen, G., Peng, Z., Huang, T., and Yu, Y., Necessary and Sufficient Conditions for Group Consensus of Fractional Multiagent Systems Under Fixed and Switching Topologies via Pinning Control; TCYB Jan. 2021 28-39

Chen, Y., Lam, J., Cui, Y., Shen, J., and Kwok, K., Reachable Set Estimation and Synthesis for Periodic Positive Systems; TCYB Feb. 2021 501-511

Chen, Y., Wang, Z., Wang, L., and Sheng, W., Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol; TCYB March 2021 1204-1215

Chen, Y., Tanaka, K., Tanaka, M., Tsai, S., and Wang, H.O., A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design; TCYB June 2021 2993-3003

Chen, Y., see Yang, L., TCYB Aug. 2021 4100-4111

Chen, Y., and Lu, X., Deep Category-Level and Regularized Hashing With Global Semantic Similarity Learning; TCYB Dec. 2021 6240-6252

Chen, Y., see Wang, T., TCYB Dec. 2021 6017-6028

Chen, Z., Lin, J., Zhou, T., and Wu, F., Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration; TCYB Jan. 2021 451-461

Chen, Z., see Zhang, C., TCYB Jan. 2021 210-221

Chen, Z., see Ding, J., TCYB Jan. 2021 52-63

Chen, Z., see Zhang, Z., TCYB Feb. 2021 604-613

Chen, Z., see He, X., TCYB March 2021 1651-1665

Chen, Z., see Wang, Z., TCYB March 2021 1454-1462

Chen, Z., see Huang, Z., TCYB Oct. 2021 5130-5141

Chen, Z., Lin, Y., Gong, Y., Zhan, Z., and Zhang, J., Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm; TCYB Nov. 2021 5433-5444

Chen, Z., see Li, J., TCYB Dec. 2021 6029-6040

Cheng, B., Wu, Z., and Li, Z., Distributed Edge-Based Event-Triggered Formation Control; TCYB March 2021 1241-1252

Cheng, M., see Liu, Y., TCYB Sept. 2021 4439-4449

Cheng, R., see Pan, L., TCYB June 2021 3325-3337

Cheng, R., see He, C., TCYB June 2021 3129-3142

Cheng, X., see Zhou, D., TCYB Dec. 2021 5681-5691

Cheng, Y., see Zhu, H., TCYB Feb. 2021 829-838

Cheng, Y., see Wang, C., TCYB March 2021 1531-1541

Cheng, Y., see Shao, J., TCYB Nov. 2021 5225-5235

Cheng, Z., see Zhang, X., TCYB July 2021 3616-3629

Cheng, Z., see Hu, S., TCYB Sept. 2021 4591-4601

Cheung, R.C.C., see Zhu, H., TCYB Aug. 2021 4062-4074

Cheung, Y., see Lu, Y., TCYB March 2021 1598-1612

Cheung, Y., see Zhou, Y., TCYB July 2021 3496-3509

Chiu, C., Tien, Y., Feng, K., and Tseng, P., Intelligent Visual Acuity Estimation System With Hand Motion Recognition; *TCYB Dec. 2021 6226-6239*

Choong, P., see Garcia-Rosas, R., TCYB Feb. 2021 1070-1084

Chow, T.W.S., see Ma, J., TCYB Feb. 2021 1028-1042

Chu, H., Yue, D., Dou, C., and Chu, L., Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints; TCYB April 2021 2296-2302

Chu, L., see Zhang, Y., TCYB Jan. 2021 40-51

Chu, L., see Chu, H., TCYB April 2021 2296-2302

Chu, S., see Zhang, G., TCYB May 2021 2327-2338

Chuang, C., see Lin, C., TCYB Oct. 2021 4959-4967

Chung, V.Y.Y., see Zandavi, S.M., TCYB May 2021 2725-2734

Coello Coello, C.A., see Zhu, Q., TCYB Feb. 2021 765-778

Cong, R., see Li, C., TCYB Jan. 2021 88-100

Constantinescu, D., see Yang, Y., TCYB July 2021 3469-3482

Coutinho, P., see Nguyen, A., TCYB Sept. 2021 4673-4684

Cui, C., see Zhu, H., TCYB Aug. 2021 4062-4074

Cui, M., see Zhang, Y., TCYB April 2021 1875-1887

Cui, Y., see Chen, Y., TCYB Feb. 2021 501-511

D

Dai, D., see Hu, Y., TCYB Feb. 2021 708-721

Dai, D., see Yu, Y., TCYB Feb. 2021 521-533

Dai, D., see Ren, C., TCYB April 2021 2166-2177

Dai, D., see Ren, C., TCYB April 2021 2006-2018

Dai, D., Tang, J., Yu, Z., Wong, H., You, J., Cao, W., Hu, Y., and Chen, C.L.P., An Inception Convolutional Autoencoder Model for Chinese Healthcare Question Clustering; TCYB April 2021 2019-2031

Das, S., see Gupta, A., TCYB May 2021 2601-2611

Datta, S., see Gupta, A., TCYB May 2021 2601-2611

de Albuquerque, V.H.C., see Ding, W., TCYB Oct. 2021 4944-4958

De Lorenzo, A., see Bartoli, A., TCYB May 2021 2612-2624

de Queiroz, M., see Liu, T., TCYB Dec. 2021 5969-5978

de Silva, C.W., see Zhang, K., TCYB June 2021 3285-3297

Deb, K., see Dhebar, Y., TCYB Nov. 2021 5573-5584

Debie, E., Fernandez Rojas, R., Fidock, J., Barlow, M., Kasmarik, K., Anavatti, S., Garratt, M., and Abbass, H.A., Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review; TCYB March 2021 1542-1555

Deng, C., Che, W., and Wu, Z., A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays; TCYB April 2021 1812-1821

Deng, C., and Wen, C., MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks; TCYB May 2021 2347-2358

Deng, F., see Hu, Z., TCYB July 2021 3779-3788

Deng, L., see Song, K., TCYB May 2021 2699-2711

Deng, L., see Zhu, H., TCYB Aug. 2021 4062-4074

Deng, P., see Wu, E.Q., TCYB Nov. 2021 5483-5496

Deng, R., see Wan, Y., TCYB Nov. 2021 5314-5327

Deng, S., see Gao, L., TCYB Aug. 2021 4075-4088

Deng, Z., see Ding, L., TCYB Jan. 2021 382-392

Deng, Z., see Yin, L., TCYB April 2021 2188-2200

Dhar, N.K., see Mishra, P.K., TCYB April 2021 2042-2054

Dhebar, Y., and Deb, K., Interpretable Rule Discovery Through Bilevel Optimization of Split-Rules of Nonlinear Decision Trees for Classification Problems; TCYB Nov. 2021 5573-5584

Ding, D., see Chen, W., TCYB July 2021 3699-3709

Ding, J., Wen, C., Li, G., and Chen, Z., Key Nodes Selection in Controlling Complex Networks via Convex Optimization; *TCYB Jan.* 2021 52-63

Ding, L., Li, S., Gao, H., Liu, Y., Huang, L., and Deng, Z., Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone; TCYB Jan. 2021 382-392

Ding, L., see Ning, B., TCYB Aug. 2021 3988-3999

Ding, S., Wang, Z., and Rong, N., Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks; TCYB Feb. 2021 862-873

Ding, S.X., see Han, H., TCYB Feb. 2021 801-814

Ding, S.X., see Gao, Q., TCYB Feb. 2021 889-899

Ding, W., Abdel-Basset, M., Eldrandaly, K.A., Abdel-Fatah, L., and de Albuquerque, V.H.C., Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model; TCYB Oct. 2021 4944-4958

Ding, X., see Yang, Y., TCYB June 2021 2916-2928

Ding, Z., see Zhang, D., TCYB May 2021 2490-2503

Ding, Z., see Liu, B., TCYB July 2021 3836-3844

Ding, Z., see Li, Z., TCYB Dec. 2021 5800-5810

Dogra, D.P., see Santhosh, K.K., TCYB Aug. 2021 4148-4161

Domeniconi, C., see Tan, Q., TCYB March 2021 1716-1727

Domeniconi, C., see Wang, J., TCYB July 2021 3576-3587

Dong, D., see Gao, Q., TCYB Feb. 2021 889-899

Dong, G., and Liu, H., Global Receptive-Based Neural Network for Target Recognition in SAR Images; TCYB April 2021 1954-1967

Dong, H., see Song, J., TCYB July 2021 3664-3675

Dong, H., see Chen, W., TCYB July 2021 3699-3709

Dong, H., see Shen, Y., TCYB Oct. 2021 4897-4908

Dong, L., see Yuan, X., TCYB Nov. 2021 5619-5630

Dong, S., Ren, W., and Wu, Z., Observer-Based Distributed Mean-Square Consensus Design for Leader-Following Multiagent Markov Jump Systems; TCYB June 2021 3054-3061

Dong, X., see Yu, J., TCYB April 2021 2265-2277

Dong, Y., see Wu, Y., TCYB Feb. 2021 649-659

Dong, Y., Liang, T., Zhang, Y., and Du, B., Spectral–Spatial Weighted Kernel Manifold Embedded Distribution Alignment for Remote Sensing Image Classification; TCYB June 2021 3185-3197

Dong, Y., and Xu, S., Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control; TCYB Aug. 2021 4201-4211

Dou, C., see Zhang, B., TCYB Jan. 2021 267-282

Dou, C., see Zhang, H., TCYB April 2021 2068-2079

Dou, C., see Chu, H., TCYB April 2021 2296-2302

Dou, Q., see Huang, Y., TCYB Nov. 2021 5397-5408

Drioli, C., Giordano, G., Salvati, D., Blanchini, F., and Foresti, G.L., Acoustic Target Tracking Through a Cluster of Mobile Agents; TCYB May 2021 2587-2600

Du, B., see Zhang, L., TCYB Feb. 2021 673-685

Du, B., see Dong, Y., TCYB June 2021 3185-3197

Du, J., Vong, C., and Chen, C.L.P., Novel Efficient RNN and LSTM-Like Architectures: Recurrent and Gated Broad Learning Systems and Their Applications for Text Classification; TCYB March 2021 1586-1597

Du, J., see Xiao, J., TCYB Aug. 2021 4173-4186

Du, M., Ma, B., and Meng, D., Further Results for Edge Convergence of Directed Signed Networks; TCYB Dec. 2021 5659-5670

Du, N., see Zhou, S., TCYB March 2021 1430-1442

Du, Q., see Xie, W., TCYB Aug. 2021 3889-3900

Du, Q., see Li, L., TCYB Sept. 2021 4363-4372

Du, S., see Yang, Y., TCYB March 2021 1678-1689

Du, S., see Xing, L., TCYB June 2021 3298-3311

Du, W., see Zhou, P., TCYB Dec. 2021 6262-6273

Duan, H., see Wang, B., TCYB Oct. 2021 5170-5183

Duan, J., see Zhang, H., TCYB Feb. 2021 548-557

Duan, J., see Xie, W., TCYB May 2021 2787-2800

Duan, P., Duan, Z., Lv, Y., and Chen, G., Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems; TCYB Feb. 2021 512-520

Duan, Q., see Zhang, L., TCYB Dec. 2021 5883-5896

Duan, Y., Huang, H., Li, Z., and Tang, Y., Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image; TCYB Aug. 2021 4021-4034

Duan, Z., see Duan, P., TCYB Feb. 2021 512-520

Duan, Z., see Wang, Q., TCYB June 2021 2905-2915

Duran-Rosal, A.M., see Guijo-Rubio, D., TCYB Nov. 2021 5409-5422

E

Eldrandaly, K.A., see Ding, W., TCYB Oct. 2021 4944-4958

Er, M.J., see Sun, W., TCYB March 2021 1099-1109

Eyo, E.N., Pilario, K.E.S., Lao, L., and Falcone, G., Development of a Real-Time Objective Gas-Liquid Flow Regime Identifier Using Kernel Methods; TCYB May 2021 2688-2698

F

Falcone, G., see Eyo, E.N., TCYB May 2021 2688-2698

Fan, D., see Yang, Y., TCYB March 2021 1678-1689

Fan, Q., Yan, X., Zhang, Y., and Zhu, C., A Variable Search Space Strategy Based on Sequential Trust Region Determination Technique; TCYB May 2021 2712-2724

Fan, S., see Liu, B., TCYB March 2021 1571-1585

Fan, Y., see Song, C., TCYB June 2021 3071-3078

Fan, Z., see Cai, X., TCYB Sept. 2021 4488-4500

Fang, C., see Lin, C., TCYB Oct. 2021 4959-4967

Fang, H., see Luo, M., TCYB Sept. 2021 4707-4715

Fang, J., see Wang, B., TCYB Oct. 2021 5170-5183

Fang, Y., Zhou, D., Li, K., Ju, Z., and Liu, H., Attribute-Driven Granular Model for EMG-Based Pinch and Fingertip Force Grand Recognition; TCYB Feb. 2021 789-800

Fang, Z., see Zhu, H., TCYB Feb. 2021 829-838

Fathy, M., see Arzani, M.M., TCYB Dec. 2021 5859-5870

Fei, L., see Wen, J., TCYB Jan. 2021 101-114

Feng, D., see Yan, K., TCYB Dec. 2021 5907-5920

Feng, G., Lu, W., Pedrycz, W., Yang, J., and Liu, X., The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy; TCYB April 2021 2080-2092

Feng, G., see Li, H., TCYB May 2021 2319-2326

Feng, G., see Li, Y., TCYB June 2021 2969-2978

Feng, H., Wang, S., Xu, H., and Ge, S.S., Object Activity Scene Description, Construction, and Recognition; TCYB Oct. 2021 5082-5092

Feng, J., see Ren, C., TCYB April 2021 2166-2177

Feng, J., Chen, J., Sun, Q., Shang, R., Cao, X., Zhang, X., and Jiao, L., Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection; TCYB Sept. 2021 4414-4428

Feng, K., see Chiu, C., TCYB Dec. 2021 6226-6239

Feng, L., see Zhou, L., TCYB May 2021 2563-2576

Feng, L., Zhou, L., Gupta, A., Zhong, J., Zhu, Z., Tan, K., and Qin, K., Solving Generalized Vehicle Routing Problem With Occasional Drivers via Evolutionary Multitasking; TCYB June 2021 3171-3184

Feng, L., Yu, J., Hu, C., Yang, C., and Jiang, H., Nonseparation Method-Based Finite/Fixed-Time Synchronization of Fully Complex-Valued Discontinuous Neural Networks; TCYB June 2021 3212-3223

Feng, L., Huang, Y., Zhou, L., Zhong, J., Gupta, A., Tang, K., and Tan, K.C., Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem; TCYB June 2021 3143-3156

Feng, Y., Yuan, Y., and Lu, X., Person Reidentification via Unsupervised Cross-View Metric Learning; TCYB April 2021 1849-1859

Feng, Z., Yang, S., Wang, M., and Jiao, L., Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification; TCYB Jan. 2021 346-358

Feng, Z., see Bouraffa, T., TCYB Oct. 2021 5105-5115

Fernandez Rojas, R., see Debie, E., TCYB March 2021 1542-1555

Fidock, J., see Debie, E., TCYB March 2021 1542-1555

Fierro, R., see Miao, Z., TCYB May 2021 2801-2812

Fietkiewicz, C., see Liu, C., TCYB Oct. 2021 5046-5056

Figueiras-Vidal, A.R., see Lazaro, M., TCYB July 2021 3524-3534

Flemisch, F., see Martinez-Garcia, M., TCYB Aug. 2021 3913-3924

Foresti, G.L., see Drioli, C., TCYB May 2021 2587-2600

Fournier-Viger, P., see Gan, W., TCYB Feb. 2021 487-500

Franco dos Reis Alves, S., see Hong, A., TCYB Dec. 2021 5954-5968

Fu, C., see Zhang, K., TCYB June 2021 3285-3297

Fu, H., see Li, C., TCYB Jan. 2021 88-100

Fu, J., see Tian, F., TCYB April 2021 2232-2241

Fu, J., see Lv, Y., TCYB May 2021 2359-2371

 \mathbf{G}

Gaeini, N., Moradi Amani, A., Jalili, M., and Yu, X., Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate; TCYB Aug. 2021 4277-4285

Gan, M., see Chen, G., TCYB Feb. 2021 614-623

Gan, R., Xiao, Y., Shao, J., and Qin, J., An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems; TCYB Feb. 2021 994-1003

Gan, T., see Guan, W., TCYB Sept. 2021 4501-4514

Gan, W., Lin, J.C., Zhang, J., Fournier-Viger, P., Chao, H., and Yu, P.S., Fast Utility Mining on Sequence Data; TCYB Feb. 2021 487-500

Gao, D.Y., see Latorre, V., TCYB Oct. 2021 5069-5081

Gao, F., see Yu, J., TCYB Sept. 2021 4350-4362

Gao, H., see Ding, L., TCYB Jan. 2021 382-392

Gao, H., see Yu, X., TCYB Feb. 2021 938-946

Gao, H., see Qiu, J., TCYB Aug. 2021 3964-3974

Gao, J., see Zhang, X., TCYB Sept. 2021 4386-4399

Gao, J., Yuan, Y., and Wang, Q., Feature-Aware Adaptation and Density Alignment for Crowd Counting in Video Surveillance; TCYB Oct. 2021 4822-4833

Gao, L., see Li, F., TCYB March 2021 1390-1402

Gao, L., Deng, S., Ren, W., and Hu, C., Differentially Private Consensus With Quantized Communication; TCYB Aug. 2021 4075-4088

Gao, L., see Liu, Q., TCYB Sept. 2021 4429-4438

Gao, Q., Dong, D., Petersen, I.R., and Ding, S.X., Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector; TCYB Feb. 2021 889-899

Gao, T., Liu, Y., Li, D., Tong, S., and Li, T., Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints; TCYB April 2021 1943-1953

Gao, W., see Zhang, X., TCYB Aug. 2021 4237-4250

Gao, X., see Jiang, M., TCYB July 2021 3417-3428

Gao, X., see Jiang, M., TCYB Oct. 2021 4968-4981

Gao, X., see Yang, X., TCYB Dec. 2021 5773-5785

Gao, Y., see Yang, Y., TCYB March 2021 1678-1689 **Gao, Y.,** see Zhang, J., TCYB Aug. 2021 4112-4124

Gao, Z., see Zhang, H., TCYB Feb. 2021 548-557

Garai, P., see Maji, P., TCYB July 2021 3641-3652

Garcia-Rosas, R., Tan, Y., Oetomo, D., Manzie, C., and Choong, P., Personalized Online Adaptation of Kinematic Synergies for Human-Prosthesis Interfaces: TCYB Feb. 2021 1070-1084

Garratt, M., see Debie, E., TCYB March 2021 1542-1555

Garrido, J.A., see Abadia, I., TCYB May 2021 2476-2489

Ge, C., Park, J.H., Hua, C., and Guan, X., Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control; *TCYB Feb. 2021 961-969*

Ge, M., see Wang, L., TCYB May 2021 2813-2823

Ge, M., see Liang, C., TCYB June 2021 2893-2904

Ge, P., see Ren, C., TCYB April 2021 2006-2018

Ge, S.S., see Zhang, X., TCYB July 2021 3616-3629

Ge, S.S., see Wen, G., TCYB Sept. 2021 4567-4580

Ge, S.S., see Feng, H., TCYB Oct. 2021 5082-5092

Ge, S.S., see Li, D., TCYB Dec. 2021 6119-6130

Ge, S.S., see Bai, X., TCYB Dec. 2021 6274-6283

Ge, X., see Mousavinejad, E., TCYB April 2021 2107-2119

Ge, X., see Xiao, S., TCYB July 2021 3676-3686

Ge, X., see Chen, W., TCYB July 2021 3699-3709

Ge, X., see Chang, L., TCYB Sept. 2021 4695-4706

Ge, Y., Yu, W., Cao, J., Wang, H., Zhan, Z., Zhang, Y., and Zhang, J., Distributed Memetic Algorithm for Outsourced Database Fragmentation; TCYB Oct. 2021 4808-4821

Ge, Z., see Shao, W., TCYB July 2021 3455-3468

George, S.N., see Tom, A.J., TCYB Feb. 2021 1004-1014

Ghafoor, M., Tariq, S.A., Zia, T., Taj, I.A., Abbas, A., Hassan, A., and Zomaya, A.Y., Fingerprint Identification With Shallow Multifeature View Classifier; TCYB Sept. 2021 4515-4527

Ghosh, L., see Chakraborty, B., TCYB Dec. 2021 6200-6212

Giordano, G., see Drioli, C., TCYB May 2021 2587-2600

Gong, C., see Chen, S., TCYB June 2021 3371-3383

Gong, D., see Hu, Y., TCYB Feb. 2021 874-888

Gong, M., see Liu, Y., TCYB March 2021 1380-1389

Gong, M., see Tian, D., TCYB July 2021 3802-3812

Gong, M., see Li, H., TCYB Aug. 2021 4187-4200

Gong, S., Guo, Z., Wen, S., and Huang, T., Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay; TCYB June 2021 2944-2955

Gong, Y., see Chen, J., TCYB Aug. 2021 4134-4147

Gong, Y., see Chen, Z., TCYB Nov. 2021 5433-5444

Goo, W., see Sim, J.Y., TCYB May 2021 2761-2772

Goodman, E.D., see Peng, C., TCYB Nov. 2021 5546-5558

Gordon, T., see Martinez-Garcia, M., TCYB Aug. 2021 3913-3924

Gou, S., see Mao, S., TCYB May 2021 2835-2846

Gou, X., Xu, Z., Liao, H., and Herrera, F., Consensus Model Handling Minority Opinions and Noncooperative Behaviors in Large-Scale Group Decision-Making Under Double Hierarchy Linguistic Preference Relations; TCYB Jan. 2021 283-296

Greenwood, D.M., see Teo, T.T., TCYB Nov. 2021 5375-5386

Gu, B., Shan, Y., Quan, X., and Zheng, G., Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent; TCYB April 2021 2215-2223

Gu, F., see Lin, J., TCYB June 2021 3238-3248

Gu, H., Liu, P., Lu, J., and Lin, Z., PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies; TCYB March 2021 1334-1346

Gu, J., see Tian, F., TCYB April 2021 2232-2241

Gu, T., see Li, L., TCYB April 2021 2055-2067

Gu, T., see Zhao, T., TCYB July 2021 3752-3766

Gu, W., see Tian, F., TCYB April 2021 2232-2241

Gu, X., Shen, Q., and Angelov, P.P., Particle Swarm Optimized Autonomous Learning Fuzzy System; TCYB Nov. 2021 5352-5363

Gu, Y., see Xing, L., TCYB June 2021 3298-3311

Gu, Y., see Liu, Y., TCYB Sept. 2021 4439-4449

Gu, Z., see Qi, F., TCYB Feb. 2021 558-567

Guan, W., Song, X., Gan, T., Lin, J., Chang, X., and Nie, L., Cooperation Learning From Multiple Social Networks: Consistent and Complementary Perspectives; TCYB Sept. 2021 4501-4514

Guan, X., see Ge, C., TCYB Feb. 2021 961-969

Guan, X., see Li, K., TCYB June 2021 3361-3370

Guan, X., see Zhao, G., TCYB Nov. 2021 5387-5396

Guan, X., see Li, K., TCYB Dec. 2021 5850-5858

Guan, Z., see Zhou, D., TCYB Dec. 2021 5681-5691

Guerra, T., see Nguyen, A., TCYB Sept. 2021 4673-4684

Gui, W., see Liu, J., TCYB Feb. 2021 839-852

Gui, W., see Xiong, Q., TCYB Sept. 2021 4716-4721

Guijo-Rubio, D., Duran-Rosal, A.M., Gutierrez, P.A., Troncoso, A., and Hervas-Martinez, C., Time-Series Clustering Based on the Characterization of Segment Typologies; TCYB Nov. 2021 5409-5422

Gunes, H., see Ondras, J., TCYB Nov. 2021 5445-5454

Guo, C., see Zhang, Y., TCYB Jan. 2021 40-51

Guo, H., Sheng, B., Li, P., and Chen, C.L.P., Multiview High Dynamic Range Image Synthesis Using Fuzzy Broad Learning System; TCYB May 2021 2735-2747

Guo, H., Wang, L., Liu, X., and Pedrycz, W., Information Granulation-Based Fuzzy Clustering of Time Series; *TCYB Dec.* 2021 6253-6261

Guo, J., see Li, S., TCYB Aug. 2021 4011-4020

Guo, L., see Zhang, P., TCYB June 2021 2956-2968

Guo, L., see Yuan, Y., TCYB Dec. 2021 6004-6016

Guo, S., see Jiang, M., TCYB July 2021 3417-3428

Guo, S., see Jiang, M., TCYB Oct. 2021 4968-4981

Guo, Z., Zhang, Y., Zhao, X., and Song, X., CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems; TCYB Jan. 2021 188-198

Guo, Z., see Wang, S., TCYB Jan. 2021 427-437

Guo, Z., see Gong, S., TCYB June 2021 2944-2955

Gupta, A., see Bali, K.K., TCYB April 2021 1784-1796

Gupta, A., Datta, S., and Das, S., Fuzzy Clustering to Identify Clusters at Different Levels of Fuzziness: An Evolutionary Multiobjective Optimization Approach; TCYB May 2021 2601-2611

Gupta, A., see Feng, L., TCYB June 2021 3171-3184

Gupta, A., see Feng, L., TCYB June 2021 3143-3156

Gutierrez, P.A., see Guijo-Rubio, D., TCYB Nov. 2021 5409-5422

 \mathbf{H}

Haddad, W.M., see Zhou, Y., TCYB Sept. 2021 4648-4660

Hammer, H.L., see Yazidi, A., TCYB Dec. 2021 5706-5716

Han, B., see Yang, X., TCYB Dec. 2021 5773-5785

Han, H., Yang, Y., Li, L., and Ding, S.X., Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T-S Fuzzy Implementation; TCYB Feb. 2021 801-814

Han, H., Liu, Z., Lu, W., Hou, Y., and Qiao, J., Dynamic MOPSO-Based Optimal Control for Wastewater Treatment Process; TCYB May 2021 2518-2528

Han, H., Zhang, L., Zhang, L., He, Z., and Qiao, J., Cooperative Optimal Controller and Its Application to Activated Sludge Process; TCYB Aug. 2021 3938-3951

Han, M., see Yang, B., TCYB May 2021 2824-2834

Han, Q., see Mousavinejad, E., TCYB April 2021 2107-2119

Han, Q., see Qu, H., TCYB July 2021 3767-3778

Han, Q., see Xiao, S., TCYB July 2021 3676-3686

Han, Q., see Ning, B., TCYB Aug. 2021 3988-3999

Han, Q., see Yang, Y., TCYB Aug. 2021 4337-4347

Han, Q., see Chang, L., TCYB Sept. 2021 4695-4706

Han, Q., see Zhao, M., TCYB Nov. 2021 5609-5618 **Han, Q.,** see Ma, L., TCYB Dec. 2021 5761-5772

Hao, J., see Zhou, G., TCYB March 2021 1666-1677

Hao, M., see Yang, B., TCYB May 2021 2824-2834

Hao, Y., Wang, T., Li, G., and Wen, C., Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix; TCYB Sept. 2021 4743-4754 Hashimoto, K., Yoshimura, Y., and Ushio, T., Learning Self-Triggered Controllers With Gaussian Processes; TCYB Dec. 2021 6294-6304

Hassan, A., see Ghafoor, M., TCYB Sept. 2021 4515-4527

Hayat, T., see Yang, W., TCYB June 2021 3039-3053

He, C., see Pan, L., TCYB June 2021 3325-3337

He, C., Huang, S., Cheng, R., Tan, K.C., and Jin, Y., Evolutionary Multiobjective Optimization Driven by Generative Adversarial Networks (GANs); TCYB June 2021 3129-3142

He, H., see Yang, X., TCYB Feb. 2021 635-648

He, H., see Zhang, J., TCYB Feb. 2021 750-764

He, H., see Wang, L., TCYB May 2021 2813-2823

He, H., see Wei, Q., TCYB May 2021 2372-2383

He, H., see Yang, X., TCYB May 2021 2419-2432

He, H., see Liu, J., TCYB June 2021 3263-3272

He, H., see Hu, C., TCYB June 2021 2882-2892

He, H., see Li, L., TCYB July 2021 3404-3416

He, H., see Luo, G., TCYB Oct. 2021 4994-5007

He, H., see Yang, X., TCYB Oct. 2021 4860-4872

He, H., see Su, H., TCYB Nov. 2021 5259-5268

He, J., see Liu, J., TCYB Feb. 2021 839-852

He, J., see Liu, J., TCYB Feb. 2021 839-852

He, K., see Xue, J., TCYB April 2021 2153-2165

He, L., see Song, Y., TCYB Sept. 2021 4755-4765

He, Q., see Weng, H., TCYB Oct. 2021 5198-5211

He, S., see Ren, C., TCYB Jan. 2021 77-87

He, W., see Yu, X., TCYB April 2021 1822-1834

He, W., see Yang, Y., TCYB Aug. 2021 4337-4347

He, W., see Kong, L., TCYB Oct. 2021 4873-4884

He, W., see Li, D., TCYB Dec. 2021 6119-6130

He, X., Zhou, Y., Chen, Z., Zhang, J., and Chen, W., Large-Scale Evolution Strategy Based on Search Direction Adaptation; TCYB March 2021 1651-1665

He, X., see Yang, S., TCYB April 2021 1981-1992

He, X., see Ren, C., TCYB July 2021 3535-3548

He, X., see Chen, Q., TCYB Oct. 2021 5032-5045

He, X., see Huang, Z., TCYB Oct. 2021 5130-5141

He, X., see Zhao, F., TCYB Nov. 2021 5291-5303

He, Y., see Lin, W., TCYB March 2021 1311-1321

He, Z., see Zhang, K., TCYB Feb. 2021 722-735

He, Z., see Han, H., TCYB Aug. 2021 3938-3951

He, Z., see Li, H., TCYB Nov. 2021 5248-5258

Heng, P.A., see Zheng, Q., TCYB April 2021 2242-2252

Herrera, F., see Gou, X., TCYB Jan. 2021 283-296

Herrera-Viedma, E., see Tang, M., TCYB Oct. 2021 4784-4795

Herrera-Viedma, E.E., see Yazidi, A., TCYB Dec. 2021 5706-5716

Hervas-Martinez, C., see Guijo-Rubio, D., TCYB Nov. 2021 5409-5422

Hill, D.J., see Wang, Y., TCYB March 2021 1300-1310

Hill, D.J., see Chen, T., TCYB Dec. 2021 5930-5940

Hirasawa, K., see Song, T., TCYB Aug. 2021 4251-4264

Hone, K., see Liu, W., TCYB Feb. 2021 1085-1093

Hong, A., Lunscher, N., Hu, T., Tsuboi, Y., Zhang, X., Franco dos Reis Alves, S., Nejat, G., and Benhabib, B., A Multimodal Emotional Human–Robot Interaction Architecture for Social Robots Engaged in Bidirectional Communication; TCYB Dec. 2021 5954-5968

Hong, D., Yokoya, N., Chanussot, J., Xu, J., and Zhu, X.X., Joint and Progressive Subspace Analysis (JPSA) With Spatial—Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction; TCYB July 2021 3602-3615

Hong, K., see Ren, Y., TCYB Oct. 2021 4796-4807

Hong, W., Qian, C., and Tang, K., Efficient Minimum Cost Seed Selection With Theoretical Guarantees for Competitive Influence Maximization; TCYB Dec. 2021 6091-6104

Hou, C., see Tao, H., TCYB March 2021 1690-1703

Hou, C., see Wu, J., TCYB Oct. 2021 5156-5169

Hou, J., see Li, C., TCYB Jan. 2021 88-100

Hou, J., see Jia, Y., TCYB May 2021 2550-2562

Hou, K., see Zhang, X., TCYB Sept. 2021 4386-4399

Hou, Y., see Han, H., TCYB May 2021 2518-2528

Hou, Z., see Liang, Y., TCYB Feb. 2021 853-861

Hu, B., see Zhang, X., TCYB Sept. 2021 4386-4399

Hu, B., see Zhang, X., TCYB Sept. 2021 4386-4399

Hu, B., Zheng, Z., Liu, P., Yang, W., and Ren, M., Unsupervised Eyeglasses Removal in the Wild; *TCYB Sept. 2021 4373-4385*

Hu, B., see Zhou, D., TCYB Dec. 2021 5681-5691

Hu, C., see Feng, L., TCYB June 2021 3212-3223

Hu, C., He, H., and Jiang, H., Fixed/Preassigned-Time Synchronization of Complex Networks via Improving Fixed-Time Stability; TCYB June 2021 2882-2892

Hu, C., see Gao, L., TCYB Aug. 2021 4075-4088

Hu, D., see Tao, H., TCYB March 2021 1690-1703

Hu, D., see Wu, E.Q., TCYB Nov. 2021 5483-5496

Hu, G., see Sun, C., TCYB Nov. 2021 5532-5545

Hu, H., see Cai, X., TCYB May 2021 2639-2650

Hu, H., Wen, G., Yu, W., Huang, T., and Cao, J., Distributed Stabilization of Multiple Heterogeneous Agents in the Strong–Weak Competition Network: A Switched System Approach; TCYB Nov. 2021 5328-5341

Hu, J., see Lyu, Y., TCYB May 2021 2651-2662

Hu, J., see Cai, X., TCYB May 2021 2639-2650

Hu, J., see Wu, B., TCYB July 2021 3738-3751

Hu, J., see Wang, D., TCYB Oct. 2021 5057-5068

Hu, K., see Liang, Z., TCYB March 2021 1417-1429

Hu, K., see Liang, Z., TCYB Sept. 2021 4553-4566

Hu, P., Peng, X., Zhu, H., Lin, J., Zhen, L., and Peng, D., Joint Versus Independent Multiview Hashing for Cross-View Retrieval; TCYB Oct. 2021 4982-4993

Hu, S., Yue, D., Cheng, Z., Tian, E., Xie, X., and Chen, X., Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks; TCYB Sept. 2021 4591-4601

Hu, T., see Hong, A., TCYB Dec. 2021 5954-5968

Hu, W., see Wu, B., TCYB July 2021 3738-3751

Hu, X.T., see Zhang, X., TCYB Feb. 2021 1043-1055

Hu, Y., Wen, G., Liao, H., Wang, C., Dai, D., and Yu, Z., Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics; TCYB Feb. 2021 708-721

Hu, Y., Zhang, Y., and Gong, D., Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost; TCYB Feb. 2021 874-888

Hu, Y., see Dai, D., TCYB April 2021 2019-2031

Hu, Z., Deng, F., and Wu, Z., Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts; TCYB July 2021 3779-3788

Hua, C., see Ge, C., TCYB Feb. 2021 961-969

Hua, C., see Li, Y., TCYB June 2021 2969-2978

Hua, C., see Li, K., TCYB June 2021 3361-3370

Hua, C., see Zhao, G., TCYB Nov. 2021 5387-5396

Hua, C., see Li, K., TCYB Dec. 2021 5850-5858

Huang, F., Zhang, X., Xu, J., Zhao, Z., and Li, Z., Multimodal Learning of Social Image Representation by Exploiting Social Relations; TCYB March 2021 1506-1518

Huang, G., see Zeng, Y., TCYB Oct. 2021 5116-5129

Huang, H., Yang, C., and Chen, C.L.P., Optimal Robot–Environment Interaction Under Broad Fuzzy Neural Adaptive Control; TCYB July 2021 3824-3835

Huang, H., see Duan, Y., TCYB Aug. 2021 4021-4034

Huang, J., see Long, J., TCYB Aug. 2021 4050-4061

Huang, J., see Huang, T., TCYB Nov. 2021 5595-5608

Huang, L., see Ding, L., TCYB Jan. 2021 382-392

Huang, L., see Liu, B., TCYB March 2021 1571-1585

Huang, Q., see Li, C., TCYB Jan. 2021 88-100

Huang, Q., see Yu, J., TCYB Sept. 2021 4350-4362 **Huang, S.,** see He, C., TCYB June 2021 3129-3142

Huang, S., see Zhang, X., TCYB July 2021 3616-3629

Huang, T., see Chen, Y., TCYB Jan. 2021 28-39

Huang, T., see Li, J., TCYB Jan. 2021 462-472

Huang, T., see Wang, S., TCYB Jan. 2021 427-437

Huang, T., see Sheng, Y., TCYB Feb. 2021 579-588

Huang, T., see Wang, J., TCYB Feb. 2021 927-937

Huang, T., see Luo, B., TCYB March 2021 1253-1261

Huang, T., see Li, Z., TCYB April 2021 2253-2264

Huang, T., see Xiao, Q., TCYB April 2021 2290-2295

Huang, T., see Lv, Y., TCYB May 2021 2359-2371

Huang, T., see Gong, S., TCYB June 2021 2944-2955

Huang, T., see Lu, Q., TCYB June 2021 3224-3237

Huang, T., see Wang, J., TCYB July 2021 3845-3857

Huang, T., see Hu, H., TCYB Nov. 2021 5328-5341

Huang, T., see Wan, Y., TCYB Nov. 2021 5314-5327

Huang, T., Lin, W., Xiong, C., Pan, R., and Huang, J., An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing; TCYB Nov. 2021 5595-5608

Huang, T., see Wang, J., TCYB Dec. 2021 6041-6053

Huang, X., Peng, Y., and Wen, Z., Visual–Textual Hybrid Sequence Matching for Joint Reasoning; TCYB Dec. 2021 5692-5705

Huang, Y., see Feng, L., TCYB June 2021 3143-3156

Huang, Y., Dou, Q., Wang, Z., Liu, L., Jin, Y., Li, C., Wang, L., Chen, H., and Xu, R., 3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation; TCYB Nov. 2021 5397-5408

Huang, Y., see Wang, L., TCYB Nov. 2021 5522-5531

Huang, Y., see Zhao, Z., TCYB Dec. 2021 6179-6187

Huang, Z., Zhou, Y., Chen, Z., He, X., Lai, X., and Xia, X., Running Time Analysis of MOEA/D on Pseudo-Boolean Functions; TCYB Oct. 2021 5130-5141

Huang, Z., Chen, W., Li, Q., Luo, X., Yuan, H., and Zhang, J., Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation; TCYB Nov. 2021 5559-5572

Hung, Y., see Lin, C., TCYB Oct. 2021 4959-4967

I

Iu, H.H.C., see Xiong, K., TCYB Nov. 2021 5497-5510

J

Jalili, M., see Gaeini, N., TCYB Aug. 2021 4277-4285

Ji, S., see Weng, H., TCYB Oct. 2021 5198-5211

Ji, W., see Qiu, J., TCYB Aug. 2021 3964-3974

Ji, Z., Lin, H., Cao, S., Qi, Q., and Ma, H., The Complexity in Complete Graphic Characterizations of Multiagent Controllability; TCYB Jan. 2021 64-76

Ji, Z., see Qu, J., TCYB Sept. 2021 4661-4672

Jia, W., see Zhang, L., TCYB Dec. 2021 5883-5896

Jia, Y., Liu, H., Hou, J., and Kwong, S., Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization; TCYB May 2021 2550-2562

Jiang, B., see Wang, C., TCYB March 2021 1531-1541

Jiang, B., see Zhang, K., TCYB March 2021 1230-1240

Jiang, H., see Feng, L., TCYB June 2021 3212-3223 **Jiang, H.,** see Hu, C., TCYB June 2021 2882-2892

Jiang, M., see Song, B., TCYB Jan. 2021 438-450

Jiang, M., see Yu, Y., TCYB Feb. 2021 521-533

Jiang, M., Wang, Z., Qiu, L., Guo, S., Gao, X., and Tan, K.C., A Fast Dynamic Evolutionary Multiobjective Algorithm via Manifold Transfer Learning; TCYB July 2021 3417-3428

Jiang, M., Wang, Z., Guo, S., Gao, X., and Tan, K.C., Individual-Based Transfer Learning for Dynamic Multiobjective Optimization; TCYB Oct. 2021 4968-4981

Jiang, P., see Chen, J., TCYB Dec. 2021 5993-6003

Jiang, W., Narayanan, V., and Li, J., Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment; TCYB Dec. 2021 5717-5727

Jiang, Z., see Zhu, W., TCYB April 2021 2178-2187

Jiang, Z., see Zhou, Y., TCYB Sept. 2021 4648-4660

Jiang, Z., see Wang, Z., TCYB Dec. 2021 6141-6153

Jiao, L., see Feng, Z., TCYB Jan. 2021 346-358

Jiao, L., see Mao, S., TCYB May 2021 2835-2846

Jiao, L., see Wang, S., TCYB Aug. 2021 4212-4226

Jiao, L., see Feng, J., TCYB Sept. 2021 4414-4428

Jiao, R., Zeng, S., Li, C., Yang, S., and Ong, Y., Handling Constrained Many-Objective Optimization Problems via Problem Transformation; TCYB Oct. 2021 4834-4847

Jin, B., see Wang, X., TCYB Sept. 2021 4540-4552

Jin, H., see Wang, Z., TCYB March 2021 1175-1188

Jin, H., see Zhang, Z., TCYB Dec. 2021 6105-6118

Jin, X., see Zhang, G., TCYB May 2021 2327-2338

Jin, X., Iterative Learning Control for MIMO Nonlinear Systems With Iteration-Varying Trial Lengths Using Modified Composite Energy Function Analysis; TCYB Dec. 2021 6080-6090

Jin, Y., see Wang, S., TCYB Feb. 2021 900-912

Jin, Y., see Tian, Y., TCYB June 2021 3115-3128

Jin, Y., see He, C., TCYB June 2021 3129-3142

Jin, Y., see Huang, Y., TCYB Nov. 2021 5397-5408

Jing, M., Zhao, J., Li, J., Zhu, L., Yang, Y., and Shen, H.T., Adaptive Component Embedding for Domain Adaptation; TCYB July 2021 3390-3403

Jing, X., see Zhang, M., TCYB April 2021 1743-1755

Jing, Y., and Yang, G., Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints; TCYB Feb. 2021 568 578

John, T., see Teo, T.T., TCYB Nov. 2021 5375-5386

Joo, Y.H., see Kuppusamy, S., TCYB May 2021 2457-2465

Ju, X., see Zhang, L., TCYB Dec. 2021 5671-5680

Ju, Z., see Fang, Y., TCYB Feb. 2021 789-800

Ju, Z., see Ogenyi, U.E., TCYB April 2021 1888-1901

Jung, C., see Chang, Y., TCYB Dec. 2021 5836-5849

K

Kalawsky, R.S., see Martinez-Garcia, M., TCYB Aug. 2021 3913-3924

Kang, Q., see Wang, X., TCYB July 2021 3483-3495

Kang, Z., see Zhu, H., TCYB Feb. 2021 829-838

Kang, Z., see Wang, B., TCYB Oct. 2021 5008-5020

Karimi, H.R., see Zong, G., TCYB Jan. 2021 309-317

Karimi, H.R., see Ren, C., TCYB Jan. 2021 77-87

Karimi, H.R., see Liu, J., TCYB Jan. 2021 162-173

Karimi, H.R., see Liang, C., TCYB June 2021 2893-2904

Kasmarik, K., see Debie, E., TCYB March 2021 1542-1555

Kaynak, O., see Kong, L., TCYB Oct. 2021 4873-4884

Ke, C., Li, C., and You, L., Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols; TCYB Aug. 2021 4162-4172

Ke, L., see Wang, X., TCYB Jan. 2021 174-187

Ke, L., see Chang, M., TCYB Jan. 2021 2-15

Kim, J., see Yoo, Y., TCYB March 2021 1704-1715

Kim, J., see Kim, U., TCYB Sept. 2021 4528-4539

Kim, J., see Yan, K., TCYB Dec. 2021 5907-5920

Kim, N., see Sim, J.Y., TCYB May 2021 2761-2772

Kim, U., see Yoo, Y., TCYB March 2021 1704-1715

Kim, U., Yoo, S., and Kim, J., I-Keyboard: Fully Imaginary Keyboard on Touch Devices Empowered by Deep Neural Decoder; TCYB Sept. 2021 4528-4539
Konar, A., see Chakraborty, B., TCYB Dec. 2021 6200-6212

Kong, L., He, W., Yang, W., Li, Q., and Kaynak, O., Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space; TCYB Oct. 2021 4873-4884

Kothari, M., see Sen, A., TCYB Jan. 2021 222-232

Kou, L., see Wang, X., TCYB Sept. 2021 4400-4413

Kristan, M., see Lukezic, A., TCYB Dec. 2021 6305-6318

Kumar, D., see Rathore, P., TCYB Dec. 2021 5979-5992

Kung, S., see Zhou, Y., TCYB Nov. 2021 5423-5432

Kuppusamy, S., and Joo, Y.H., Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer; TCYB May 2021 2457-2465 Kwok, K., see Chen, Y., TCYB Feb. 2021 501-511

Kwong, S., see Li, C., TCYB Jan. 2021 88-100

Kwong, S., see Wang, Z., TCYB March 2021 1175-1188

Kwong, S., see Wang, T., TCYB May 2021 2748-2760

Kwong, S., see Jia, Y., TCYB May 2021 2550-2562

Kwong, S., see Zhao, T., TCYB July 2021 3752-3766

Kwong, S., see Li, J., TCYB Oct. 2021 4848-4859

L

Lai, G., see Lu, K., TCYB Jan. 2021 405-415

Lai, X., see Huang, Z., TCYB Oct. 2021 5130-5141

Lam, H., see Zhang, R., TCYB May 2021 2384-2397

Lam, H., see Tsai, S., TCYB July 2021 3789-3801

Lam, H., see Zeng, Y., TCYB Oct. 2021 4934-4943

Lam, H., see Wang, L., TCYB Nov. 2021 5637-5643

Lam, J., see Chen, Y., TCYB Feb. 2021 501-511

Lan, R., Sun, L., Liu, Z., Lu, H., Su, Z., Pang, C., and Luo, X., Cascading and Enhanced Residual Networks for Accurate Single-Image Super-Resolution; TCYB Jan. 2021 115-125

Lan, R., Sun, L., Liu, Z., Lu, H., Pang, C., and Luo, X., MADNet: A Fast and Lightweight Network for Single-Image Super Resolution; TCYB March 2021 1443-1453

Lan, R., Zhu, Y., Lu, H., Liu, Z., and Luo, X., A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization; TCYB Dec. 2021 6284-6293

Lao, L., see Eyo, E.N., TCYB May 2021 2688-2698

Latorre, V., and Gao, D.Y., Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory; TCYB Oct. 2021 5069-5081

Lazaro, M., and Figueiras-Vidal, A.R., A Bayes Risk Minimization Machine for Example-Dependent Cost Classification; TCYB July 2021 3524-3534

Le, J., Lei, X., Mu, N., Zhang, H., Zeng, K., and Liao, X., Federated Continuous Learning With Broad Network Architecture; TCYB Aug. 2021 3874-3888

Le, X., see Liu, Q., TCYB May 2021 2466-2475

Lee, M., see Chen, B., TCYB Dec. 2021 5786-5799

Lee, S., see Xue, J., TCYB April 2021 2153-2165

Lee, T.H., see Zhang, X., TCYB July 2021 3616-3629

Lei, B., see Yang, P., TCYB Jan. 2021 233-246

Lei, J., see Xie, W., TCYB Aug. 2021 3889-3900

Lei, X., see Le, J., TCYB Aug. 2021 3874-3888

Lensen, A., Xue, B., and Zhang, M., Genetic Programming for Evolving a Front of Interpretable Models for Data Visualization; TCYB Nov. 2021 5468-5482

Lewis, F.L., see Song, R., TCYB June 2021 2929-2943

Lewis, F.L., see Liu, H., TCYB Dec. 2021 5752-5760

Li, A., see Zhou, P., TCYB Dec. 2021 6262-6273

Li, C., Cong, R., Kwong, S., Hou, J., Fu, H., Zhu, G., Zhang, D., and Huang, Q., ASIF-Net: Attention Steered Interweave Fusion Network for RGB-D Salient Object Detection; TCYB Jan. 2021 88-100

Li, C., see Wang, S., TCYB Aug. 2021 4089-4099

Li, C., see Ke, C., TCYB Aug. 2021 4162-4172

Li, C., see Jiao, R., TCYB Oct. 2021 4834-4847

Li, C., see Huang, Y., TCYB Nov. 2021 5397-5408

Li, C., see Li, H., TCYB Nov. 2021 5248-5258

Li, C., see Xu, Z., TCYB Dec. 2021 6165-6178

Li, D., see Xue, J., TCYB April 2021 2153-2165

Li, D., see Gao, T., TCYB April 2021 1943-1953

Li, D., see Song, T., TCYB Aug. 2021 4251-4264

Li, D., Ma, G., Xu, Y., He, W., and Ge, S.S., Layered Affine Formation Control of Networked Uncertain Systems: A Fully Distributed Approach Over Directed Graphs; TCYB Dec. 2021 6119-6130

Li, F., Cai, X., Gao, L., and Shen, W., A Surrogate-Assisted Multiswarm Optimization Algorithm for High-Dimensional Computationally Expensive Problems; TCYB March 2021 1390-1402

Li, F., see Yang, J., TCYB May 2021 2773-2786

Li, F., and Tang, Y., Pinning Controllability for a Boolean Network With Arbitrary Disturbance Inputs; *TCYB June 2021 3338-3347*

Li, F., and Liu, Y., Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems; TCYB Oct. 2021 5142-5155

Li, G., see Ding, J., TCYB Jan. 2021 52-63

Li, G., see Song, K., TCYB May 2021 2699-2711

Li, G., see Hao, Y., TCYB Sept. 2021 4743-4754

Li, G., see Li, H., TCYB Dec. 2021 6188-6199 **Li, H.,** see Chen, G., TCYB Feb. 2021 614-623

Li, H., Wu, Y., and Chen, M., Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm; TCYB March 2021 1163-1174

Li, H., see Wang, Z., TCYB March 2021 1359-1369

Li, H., see Wei, Q., TCYB May 2021 2372-2383

Li, H., Zhang, X., and Feng, G., Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation; TCYB May 2021 2319-2326

Li, H., see Wu, Y., TCYB June 2021 2870-2881

Li, H., see Lu, Q., TCYB June 2021 3224-3237

Li, H., see Zhang, X., TCYB June 2021 3157-3170

Li, H., see Zhang, H., TCYB July 2021 3724-3737

Li, H., Gong, M., Wang, C., and Miao, Q., Pareto Self-Paced Learning Based on Differential Evolution; TCYB Aug. 2021 4187-4200

Li, H., see Ye, H., TCYB Sept. 2021 4450-4463

Li, H., Yang, X., and Wang, S., Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks; TCYB Sept. 2021 4623-4633

Li, H., see Wang, C., TCYB Oct. 2021 4770-4783

Li, H., see Wang, B., TCYB Oct. 2021 5170-5183

Li, H., see Zhou, Y., TCYB Nov. 2021 5423-5432

Li, H., see Yang, H., TCYB Nov. 2021 5511-5521

Li, H., see Cao, L., TCYB Nov. 2021 5236-5247

Li, H., Li, C., Ouyang, D., Nguang, S.K., and He, Z., Observer-Based Dissipativity Control for T–S Fuzzy Neural Networks With Distributed Time-Varying Delays; TCYB Nov. 2021 5248-5258

Li, H., see Wang, Z., TCYB Dec. 2021 5740-5751

Li, H., Li, G., Yang, B., Chen, G., Lin, L., and Yu, Y., Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread; TCYB Dec. 2021 6188-6199

Li, J., Zhang, B., Lu, R., Xu, Y., and Huang, T., Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks; *TCYB Jan. 2021 462-472*

Li, J., and Ren, W., Finite-Horizon H_∞ Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays; TCYB Jan. 2021 416-426

Li, J., Lu, G., Zhang, B., You, J., and Zhang, D., Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification; TCYB Feb. 2021 534-547

Li, J., see Zhu, Q., TCYB Feb. 2021 765-778

Li, J., see Yu, X., TCYB April 2021 1822-1834

Li, J., see Jing, M., TCYB July 2021 3390-3403

Li, J., see Wu, Z., TCYB July 2021 3588-3601

Li, J., Zhan, Z., Wang, H., and Zhang, J., Data-Driven Evolutionary Algorithm With Perturbation-Based Ensemble Surrogates; TCYB Aug. 2021 3925-3937

Li, J., see Xie, W., TCYB Aug. 2021 3889-3900

Li, J., see Luo, G., TCYB Oct. 2021 4994-5007

Li, J., Zhan, Z., Liu, R., Wang, C., Kwong, S., and Zhang, J., Generation-Level Parallelism for Evolutionary Computation: A Pipeline-Based Parallel Particle Swarm Optimization; TCYB Oct. 2021 4848-4859

Li, J., see Wang, L., TCYB Nov. 2021 5522-5531

Li, J., see Zhou, P., TCYB Dec. 2021 6262-6273

Li, J., Chen, Z., Chen, J., and Lin, Q., Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention; TCYB Dec. 2021 6029-6040

Li, J., see Jiang, W., TCYB Dec. 2021 5717-5727

Li, K., see Fang, Y., TCYB Feb. 2021 789-800

Li, K., see Zhang, H., TCYB April 2021 2068-2079

Li, K., see Liu, Q., TCYB May 2021 2466-2475

- Li, K., Zhang, T., and Wang, R., Deep Reinforcement Learning for Multiobjective Optimization; TCYB June 2021 3103-3114
- Li, K., Hua, C., and Guan, X., Distributed Containment Control for Nonlinear Stochastic Multiagent Systems; TCYB June 2021 3361-3370
- Li, K., Hua, C., You, X., and Guan, X., Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays; TCYB Dec. 2021 5850-5858
- Li, L., see Zhu, H., TCYB Feb. 2021 829-838
- Li, L., see Han, H., TCYB Feb. 2021 801-814
- Li, L., Chen, W., and Wu, X., Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors; TCYB April 2021 2142-2152
- Li, L., Chang, L., Gu, T., Sheng, W., and Wang, W., On the Norm of Dominant Difference for Many-Objective Particle Swarm Optimization; TCYB April 2021 2055-2067
- Li, L., see Pan, L., TCYB June 2021 3325-3337
- Li, L., Wan, Z., and He, H., Dual Alignment for Partial Domain Adaptation; TCYB July 2021 3404-3416
- Li, L., Li, W., Du, Q., and Tao, R., Low-Rank and Sparse Decomposition With Mixture of Gaussian for Hyperspectral Anomaly Detection; TCYB Sept. 2021 4363-4372
- Li, L., see Yang, H., TCYB Nov. 2021 5511-5521
- Li, M., see Teng, X., TCYB Jan. 2021 138-150
- Li, M., and Wang, D., 2-D Stochastic Configuration Networks for Image Data Analytics; TCYB Jan. 2021 359-372
- Li, M., see Chen, J., TCYB Aug. 2021 4134-4147
- Li, M., see Ren, L., TCYB Sept. 2021 4685-4694
- Li, M., see Liu, Y., TCYB Nov. 2021 5585-5594
- Li, P., see Sheng, Y., TCYB Feb. 2021 579-588
- Li, P., see Sheng, B., TCYB March 2021 1463-1477
- Li, P., see Guo, H., TCYB May 2021 2735-2747
- Li, P., see Yang, H., TCYB Aug. 2021 4227-4236
- Li, P., see Wu, H., TCYB Sept. 2021 4464-4475
- Li, Q., see Pang, J., TCYB Feb. 2021 815-828
- Li, Q., see Yu, J., TCYB April 2021 2265-2277
- Li, Q., see Kong, L., TCYB Oct. 2021 4873-4884
- Li, Q., see Huang, Z., TCYB Nov. 2021 5559-5572
- Li, R., see Zhang, Y., TCYB Nov. 2021 5364-5374
- Li, S., see Ding, L., TCYB Jan. 2021 382-392
- Li, S., see Lian, J., TCYB April 2021 2032-2041
- Li, S., see Yang, L., TCYB Aug. 2021 4100-4111
- Li, S., Ahn, C.K., Guo, J., and Xiang, Z., Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems; TCYB Aug. 2021 4011-4020
- Li, S., see Zhang, X., TCYB Sept. 2021 4386-4399
- Li, S., see Wang, X., TCYB Sept. 2021 4634-4647
- Li, T., see Gao, T., TCYB April 2021 1943-1953
- Li, W., see Zhang, Z., TCYB Feb. 2021 604-613
- Li, W., see Zhang, L., TCYB April 2021 2284-2289
- Li, W., see Zuo, X., TCYB July 2021 3549-3561
- Li, W., see Wang, X., TCYB Sept. 2021 4540-4552
- Li, W., see Li, L., TCYB Sept. 2021 4363-4372
- Li, X., Wen, C., and Chen, C., Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements; TCYB Jan. 2021 199-209
- Li, X., Yuan, A., and Lu, X., Vision-to-Language Tasks Based on Attributes and Attention Mechanism; TCYB Feb. 2021 913-926
- Li, X., see Liu, Q., TCYB Sept. 2021 4429-4438
- Li, X., see Zhang, S., TCYB Sept. 2021 4476-4487
- Li, X., see Cai, X., TCYB Sept. 2021 4488-4500
- Li, X., see Zhang, Y., TCYB Oct. 2021 5093-5104
- Li, X., see Lv, X., TCYB Nov. 2021 5269-5278
- Li, X., see Zhang, L., TCYB Dec. 2021 5671-5680
- **Li, X.,** see Wu, J., TCYB Dec. 2021 5825-5835
- Li, X., Zhang, S., and Wong, K., Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data; *TCYB Dec.* 2021 5811-5824

- Li, Y., Qu, F., and Tong, S., Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay; TCYB Jan. 2021 126-137
- Li, Y., see Liang, Y., TCYB Feb. 2021 853-861
- Li, Y., see Qi, F., TCYB Feb. 2021 558-567
- Li, Y., see Lin, W., TCYB March 2021 1478-1492
- Li, Y., see Yu, X., TCYB April 2021 1822-1834
- Li, Y., see Wang, W., TCYB April 2021 2131-2141
- Li, Y., Zhang, Y., and Zhu, Z., Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification; TCYB April 2021 1756-1768
- Li, Y., see Yang, J., TCYB May 2021 2773-2786
- Li, Y., see Yang, Y., TCYB June 2021 2916-2928
- Li, Y., Liu, L., Hua, C., and Feng, G., Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method; TCYB June 2021 2969-2978
- Li, Y., see Xie, W., TCYB Aug. 2021 3889-3900
- Li, Y., see Liu, Q., TCYB Sept. 2021 4429-4438
- Li, Y., see Luo, M., TCYB Sept. 2021 4707-4715
- Li, Y., see Zhao, Z., TCYB Dec. 2021 6179-6187
- Li, Y., see Wang, T., TCYB Dec. 2021 6017-6028
- Li, Z., see Zhang, X., TCYB March 2021 1121-1133
- Li, Z., see Cheng, B., TCYB March 2021 1241-1252
- Li, Z., see Huang, F., TCYB March 2021 1506-1518
- Li, Z., see Zhu, X., TCYB March 2021 1639-1650
- Li, Z., Huang, T., Tang, Y., and Zhang, W., Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach; TCYB April 2021 2253-2264
- Li, Z., see Yang, Z., TCYB June 2021 3249-3262
- Li, Z., Yu, J., Wang, Y., Zhou, H., Yang, H., and Qiao, Z., DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution; TCYB July 2021 3441-3454
- Li, Z., see Duan, Y., TCYB Aug. 2021 4021-4034
- Li, Z., and Ding, Z., Distributed Multiobjective Optimization for Network Resource Allocation of Multiagent Systems; TCYB Dec. 2021 5800-5810
- Li, Z., Yan, J., Yu, W., and Qiu, J., Adaptive Event-Triggered Control for Unknown Second-Order Nonlinear Multiagent Systems; TCYB Dec. 2021 6131-6140
- Lian, J., and Li, S., Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint; TCYB April 2021 2032-2041
- Liang, C., Ge, M., Liu, Z., Wang, Y., and Karimi, H.R., Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control; TCYB June 2021 2893-2904
- Liang, H., see Wu, Y., TCYB Nov. 2021 5214-5224
- Liang, N., see Yang, Z., TCYB June 2021 3249-3262
- Liang, R., see Zhang, L., TCYB Aug. 2021 4265-4276
- Liang, S., Wang, L.Y., and Yin, G., Distributed Dual Subgradient Algorithms With Iterate-Averaging Feedback for Convex Optimization With Coupled Constraints; TCYB May 2021 2529-2539
- Liang, T., see Dong, Y., TCYB June 2021 3185-3197
- Liang, Y., Li, Y., Che, W., and Hou, Z., Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure; TCYB Feb. 2021 853-861
- Liang, Z., Hu, K., Ma, X., and Zhu, Z., A Many-Objective Evolutionary Algorithm Based on a Two-Round Selection Strategy; TCYB March 2021 1417-1429
- Liang, Z., Luo, T., Hu, K., Ma, X., and Zhu, Z., An Indicator-Based Many-Objective Evolutionary Algorithm With Boundary Protection; TCYB Sept. 2021 4553-4566
- Liao, H., see Gou, X., TCYB Jan. 2021 283-296
- Liao, H., see Hu, Y., TCYB Feb. 2021 708-721
- Liao, H., see Tang, M., TCYB Oct. 2021 4784-4795
- Liao, Q., and Sun, D., Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models; TCYB Feb. 2021 947-960
- Liao, S., see Liu, Y., TCYB Dec. 2021 5647-5658
- Liao, X., see Wang, K., TCYB March 2021 1556-1570
- Liao, X., see Lu, Q., TCYB June 2021 3224-3237
- Liao, X., see Le, J., TCYB Aug. 2021 3874-3888

Lim, J., see Zhu, H., TCYB Feb. 2021 829-838

Lin, C., Chuang, C., Hung, Y., Fang, C., Wu, D., and Wang, Y., A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks; TCYB Oct. 2021 4959-4967

Lin, H., see Ji, Z., TCYB Jan, 2021 64-76

Lin, J., see Chen, Z., TCYB Jan. 2021 451-461

Lin, J., see Sun, W., TCYB March 2021 1099-1109

Lin, J., Liu, H., Tan, K.C., and Gu, F., An Effective Knowledge Transfer Approach for Multiobjective Multitasking Optimization; TCYB June 2021

Lin, J., see Guan, W., TCYB Sept. 2021 4501-4514

Lin, J., see Hu, P., TCYB Oct. 2021 4982-4993

Lin, J.C., see Gan, W., TCYB Feb. 2021 487-500

Lin, L., see Li, H., TCYB Dec. 2021 6188-6199

Lin, P., see Xiong, Q., TCYB Sept. 2021 4716-4721

Lin, Q., see Zhu, Q., TCYB Feb. 2021 765-778

Lin, Q., see Zhang, S., TCYB Sept. 2021 4476-4487

Lin, Q., see Li, J., TCYB Dec. 2021 6029-6040

Lin, W., Li, Y., Xiao, H., See, J., Zou, J., Xiong, H., Wang, J., and Mei, T., Group Reidentification with Multigrained Matching and Integration; TCYB March 2021 1478-1492

Lin, W., He, Y., Zhang, C., Wang, Q., and Wu, M., Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities; TCYB March 2021 1311-1321

Lin, W., see Mao, S., TCYB May 2021 2835-2846

Lin, W., see Huang, T., TCYB Nov. 2021 5595-5608

Lin, X., Luo, W., and Xu, P., Differential Evolution for Multimodal Optimization With Species by Nearest-Better Clustering; TCYB Feb. 2021 970-983

Lin, Y., see Chen, Z., TCYB Nov. 2021 5433-5444

Lin, Z., see Gu, H., TCYB March 2021 1334-1346

Lin, Z., see Ma, Q., TCYB March 2021 1613-1625

Lin, Z., see Wang, T., TCYB Dec. 2021 6017-6028

Ling, Q., see Chen, J., TCYB Feb. 2021 984-993

Liu, A., Lu, J., and Zhang, G., Concept Drift Detection via Equal Intensity k-Means Space Partitioning; TCYB June 2021 3198-3211

Liu, B., Huang, L., Wang, C., Fan, S., and Yu, P.S., Adaptively Weighted Multiview Proximity Learning for Clustering; TCYB March 2021 1571-1585

Liu, B., and Ding, Z., Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs; TCYB July 2021 3836-3844

Liu, C., see Xu, X., TCYB March 2021 1519-1530

Liu, C., see Shen, D., TCYB March 2021 1286-1299

Liu, C., Wen, G., Zhao, Z., and Sedaghati, R., Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain; TCYB May 2021 2339-2346

Liu, C., see Weng, H., TCYB Oct. 2021 5198-5211

Liu, C., Zhou, C., Wang, J., Fietkiewicz, C., and Loparo, K.A., Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model: TCYB Oct. 2021 5046-5056

Liu, D., see Luo, B., TCYB March 2021 1253-1261

Liu, D., see Zhao, B., TCYB June 2021 2858-2869

Liu, D., see Luo, B., TCYB July 2021 3630-3640

Liu, F., see Ren, C., TCYB Jan. 2021 77-87

Liu, F., see Wang, B., TCYB Oct. 2021 5008-5020

Liu, H., see Fang, Y., TCYB Feb. 2021 789-800

Liu, H., see Ogenyi, U.E., TCYB April 2021 1888-1901

Liu, H., see Dong, G., TCYB April 2021 1954-1967

Liu, H., see Wu, A., TCYB May 2021 2398-2408

Liu, H., see Jia, Y., TCYB May 2021 2550-2562

Liu, H., see Zhang, K., TCYB June 2021 3285-3297

Liu, H., see Lin, J., TCYB June 2021 3238-3248

Liu, H., see Wang, X., TCYB Oct. 2021 4924-4933

Liu, H., see Peng, C., TCYB Nov. 2021 5546-5558

Liu, H., Tian, Y., and Lewis, F.L., Robust Trajectory Tracking in Satellite Time-Varying Formation Flying; TCYB Dec. 2021 5752-5760

Liu, H., see Yuan, Y., TCYB Dec. 2021 6004-6016

Liu, J., see Teng, X., TCYB Jan. 2021 138-150

Liu, J., Yin, T., Yue, D., Karimi, H.R., and Cao, J., Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks; TCYB Jan. 2021 162-173

Liu, J., see Wang, S., TCYB Feb. 2021 900-912

Liu, J., He, J., Xie, Y., Gui, W., Tang, Z., Ma, T., He, J., and Niyoyita, J.P., Illumination-Invariant Flotation Froth Color Measuring via Wasserstein Distance-Based CycleGAN With Structure-Preserving Constraint; TCYB Feb. 2021 839-852

Liu, J., see Ogenyi, U.E., TCYB April 2021 1888-1901

Liu, J., Yu, Y., He, H., and Sun, C., Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance; TCYB June 2021 3263-3272

Liu, J., see Yu, N., TCYB Aug. 2021 3952-3963

Liu, J., Wang, Y., Cao, J., Yue, D., and Xie, X., Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack; TCYB Aug. 2021 4000-4010

Liu, J., see Zhang, X., TCYB Sept. 2021 4386-4399

Liu, J., see Wang, L., TCYB Nov. 2021 5637-5643

Liu, K., see Zhou, L., TCYB May 2021 2563-2576

Liu, K., see Long, J., TCYB Aug. 2021 4050-4061

Liu, L., see Liu, Y., TCYB March 2021 1380-1389

Liu, L., see Li, Y., TCYB June 2021 2969-2978

Liu, L., see Peng, Z., TCYB Sept. 2021 4611-4622

Liu, L., see Wu, J., TCYB Oct. 2021 5156-5169

Liu, L., see Huang, Y., TCYB Nov. 2021 5397-5408

Liu, M., see Zhang, J., TCYB Aug. 2021 4112-4124

Liu, P., see Gu, H., TCYB March 2021 1334-1346

Liu, P., Chen, S., and Tang, G., Multicriteria Decision Making With Incomplete Weights Based on 2-D Uncertain Linguistic Choquet Integral Operators; TCYB April 2021 1860-1874

Liu, P., see Hu, B., TCYB Sept. 2021 4373-4385

Liu, P.X., see Meng, W., TCYB May 2021 2446-2456

Liu, Q., Le, X., and Li, K., A Distributed Optimization Algorithm Based on Multiagent Network for Economic Dispatch With Region Partitioning; TCYB May 2021 2466-2475

Liu, Q., Li, X., Gao, L., and Li, Y., A Modified Genetic Algorithm With New Encoding and Decoding Methods for Integrated Process Planning and Scheduling Problem; TCYB Sept. 2021 4429-4438

Liu, R., see Lu, J., TCYB Jan. 2021 373-381

Liu, R., see Li, J., TCYB Oct. 2021 4848-4859

Liu, T., and de Queiroz, M., Distance + Angle-Based Control of 2-D Rigid Formations; TCYB Dec. 2021 5969-5978

Liu, T., see Wang, Z., TCYB Dec. 2021 6141-6153

Liu, W., Wang, Z., Yuan, Y., Zeng, N., Hone, K., and Liu, X., A Novel Sigmoid-Function-Based Adaptive Weighted Particle Swarm Optimizer; TCYB Feb. 2021 1085-1093

Liu, X., see Liu, W., TCYB Feb. 2021 1085-1093

Liu, X., see Feng, G., TCYB April 2021 2080-2092

Liu, X., see Xue, J., TCYB April 2021 2153-2165

Liu, X., see Lu, W., TCYB May 2021 2625-2638

Liu, X., see Zuo, X., TCYB July 2021 3549-3561

Liu, X., see Zhang, Y., TCYB Aug. 2021 4286-4297

Liu, X., see Wu, J., TCYB Oct. 2021 5156-5169

Liu, X., see Wang, C., TCYB Oct. 2021 4770-4783

Liu, X., see Guo, H., TCYB Dec. 2021 6253-6261

Liu, Y., see Lu, J., TCYB Jan. 2021 373-381

Liu, Y., see Ding, L., TCYB Jan. 2021 382-392

Liu, Y., see Zhang, Y., TCYB Jan. 2021 40-51

Liu, Y., Gong, M., Liu, L., Tong, S., and Chen, C.L.P., Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints; TCYB March 2021 1380-1389

Liu, Y., see Zhang, H., TCYB March 2021 1110-1120

Liu, Y., see Gao, T., TCYB April 2021 1943-1953

Liu, Y., see Miao, Z., TCYB May 2021 2801-2812

Liu, Y., Gu, Y., Zhang, X., Wang, W., and Cheng, M., Lightweight Salient Object Detection via Hierarchical Visual Perception Learning; TCYB Sept. 2021 4439-4449

Liu, Y., see Liu, Z., TCYB Sept. 2021 4602-4610

Liu, Y., see Li, F., TCYB Oct. 2021 5142-5155

Liu, Y., see Xia, Z., TCYB Nov. 2021 5631-5636

Liu, Y., Zhu, N., and Li, M., Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism; TCYB Nov. 2021 5585-5594

Liu, Y., Liao, S., Zhang, H., Ren, W., and Wang, W., Kernel Stability for Model Selection in Kernel-Based Algorithms; TCYB Dec. 2021 5647-5658

Liu, Y., see Xu, Z., TCYB Dec. 2021 6165-6178

Liu, Z., see Lu, K., TCYB Jan. 2021 405-415

Liu, Z., see Lan, R., TCYB Jan. 2021 115-125

Liu, Z., see Zhang, C., TCYB Jan. 2021 210-221

Liu, Z., see Zhang, Y., TCYB Feb. 2021 736-749

Liu, Z., see Lan, R., TCYB March 2021 1443-1453

Liu, Z., see Han, H., TCYB May 2021 2518-2528

Liu, Z., see Liang, C., TCYB June 2021 2893-2904

Liu, Z., see Su, X., TCYB June 2021 2979-2992

Liu, Z., Liu, Y., Lyu, C., and Ye, J., Building Personalized Transportation Model for Online Taxi-Hailing Demand Prediction; TCYB Sept. 2021 4602-4610

Liu, Z., see Lan, R., TCYB Dec. 2021 6284-6293

Logenthiran, T., see Teo, T.T., TCYB Nov. 2021 5375-5386

Long, C., see Wan, Y., TCYB Nov. 2021 5314-5327

Long, J., Wang, W., Huang, J., Zhou, J., and Liu, K., Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology; TCYB Aug. 2021 4050-4061

Loparo, K.A., see Liu, C., TCYB Oct. 2021 5046-5056

Lou, J., see Lu, J., TCYB Jan. 2021 373-381

Lou, J., see Lu, J., TCYB April 2021 2278-2283

Lozano, J.A., see Moreno, J., TCYB Dec. 2021 6154-6164

Lu, A., and Yang, G., Stability Analysis for Cyber-Physical Systems Under Denial-of-Service Attacks; TCYB Nov. 2021 5304-5313

Lu, C., see Tian, Y., TCYB June 2021 3115-3128

Lu, G., see Tan, X., TCYB Feb. 2021 624-634

Lu, G., see Li, J., TCYB Feb. 2021 534-547

Lu, G., see Chen, S., TCYB June 2021 3371-3383

Lu, H., see Lan, R., TCYB Jan. 2021 115-125

Lu, H., see Lan, R., TCYB March 2021 1443-1453

Lu, H., see Zhou, Y., TCYB July 2021 3496-3509

Lu, H., see Lan, R., TCYB Dec. 2021 6284-6293

Lu, J., Liu, R., Lou, J., and Liu, Y., Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers; TCYB Jan. 2021 373-381

Lu, J., see Gu, H., TCYB March 2021 1334-1346

Lu, J., see Wang, H., TCYB March 2021 1347-1358

Lu, J., Yang, J., Lou, J., and Qiu, J., Event-Triggered Sampled Feedback Synchronization in an Array of Output-Coupled Boolean Control Networks; TCYB April 2021 2278-2283

Lu, J., see Yu, J., TCYB April 2021 2265-2277

Lu, J., see Zhu, S., TCYB April 2021 2224-2231

Lu, J., see Liu, A., TCYB June 2021 3198-3211

Lu, J., see Xia, Z., TCYB Nov. 2021 5631-5636

Lu, K., Liu, Z., Lai, G., Chen, C.L.P., and Zhang, Y., Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy; TCYB Jan. 2021 405-415

Lu, K., see Zhang, J., TCYB Aug. 2021 4112-4124

Lu, N., see Wang, C., TCYB March 2021 1531-1541

Lu, Q., Liao, X., Xiang, T., Li, H., and Huang, T., Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization; TCYB June 2021 3224-3237

Lu, R., see Li, J., TCYB Jan. 2021 462-472

Lu, R., see Cao, L., TCYB Nov. 2021 5236-5247

Lu, S., see Zhu, H., TCYB Feb. 2021 829-838

Lu, W., see Feng, G., TCYB April 2021 2080-2092

Lu, W., see Han, H., TCYB May 2021 2518-2528

Lu, W., Pedrycz, W., Yang, J., and Liu, X., Granular Fuzzy Modeling Guided Through the Synergy of Granulating Output Space and Clustering Input Subspaces; TCYB May 2021 2625-2638 Lu, W., and Chen, T., QUAD-Condition, Synchronization, Consensus of Multiagents, and Anti-Synchronization of Complex Networks; TCYB June 2021 3384-3388

Lu, X., see Li, X., TCYB Feb. 2021 913-926

Lu, X., see Feng, Y., TCYB April 2021 1849-1859

Lu, X., see Yuan, Y., TCYB July 2021 3562-3575

Lu, X., see Chen, Y., TCYB Dec. 2021 6240-6252

Lu, Y., Cheung, Y., and Tang, Y.Y., Self-Adaptive Multiprototype-Based Competitive Learning Approach: A k-Means-Type Algorithm for Imbalanced Data Clustering; TCYB March 2021 1598-1612

Lu, Z., see Zhang, K., TCYB June 2021 3285-3297

Luan, X., see Ren, C., TCYB Jan. 2021 77-87

Lukezic, A., Zajc, L.C., Vojir, T., Matas, J., and Kristan, M., Performance Evaluation Methodology for Long-Term Single-Object Tracking; TCYB Dec. 2021 6305-6318

Lunscher, N., see Hong, A., TCYB Dec. 2021 5954-5968

Luo, B., Huang, T., and Liu, D., Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis; TCYB March 2021 1253-1261

Luo, B., Yang, Y., and Liu, D., Policy Iteration Q-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems; TCYB July 2021 3630-3640

Luo, G., Zhang, H., He, H., Li, J., and Wang, F., Multiagent Adversarial Collaborative Learning via Mean-Field Theory; TCYB Oct. 2021 4994-5007

Luo, J., see Wu, X., TCYB May 2021 2676-2687

Luo, J., see Zhang, K., TCYB June 2021 3285-3297

Luo, L., see Chen, S., TCYB June 2021 3371-3383

Luo, M., see Zhang, Y., TCYB Aug. 2021 4286-4297

Luo, M., Fang, H., Li, Y., Bai, Y., Chen, J., and Wei, Y., Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems; TCYB Sept. 2021 4707-4715

Luo, T., see Liang, Z., TCYB Sept. 2021 4553-4566

Luo, W., see Lin, X., TCYB Feb. 2021 970-983

Luo, X., see Lan, R., TCYB Jan. 2021 115-125

Luo, X., see Lan, R., TCYB March 2021 1443-1453

Luo, X., see Wang, X., TCYB Sept. 2021 4400-4413

Luo, X., see Huang, Z., TCYB Nov. 2021 5559-5572

Luo, X., see Lan, R., TCYB Dec. 2021 6284-6293

Luque, N.R., see Abadia, I., TCYB May 2021 2476-2489

Lv, M., see Wang, W., TCYB Dec. 2021 6066-6079

Lv, X., Cao, J., Li, X., Abdel-Aty, M., and Al-Juboori, U.A., Synchronization Analysis for Complex Dynamical Networks With Coupling Delay via Event-Triggered Delayed Impulsive Control; TCYB Nov. 2021 5269-5278

Lv, Y., see Duan, P., TCYB Feb. 2021 512-520

Lv, Y., Fu, J., Wen, G., Huang, T., and Yu, X., Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology; TCYB May 2021 2359-2371

Lv, Y., see Yang, W., TCYB June 2021 3039-3053

Lv, Y., see Wang, Q., TCYB June 2021 2905-2915

Lyu, C., Shi, Y., and Sun, L., A Novel Local Community Detection Method Using Evolutionary Computation; TCYB June 2021 3348-3360

Lyu, C., see Liu, Z., TCYB Sept. 2021 4602-4610

Lyu, S., see Chang, M., TCYB Jan. 2021 2-15

Lyu, Y., Hu, J., Chen, B.M., Zhao, C., and Pan, Q., Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control; TCYB May 2021 2651-2662

М

Ma, B., see Du, M., TCYB Dec. 2021 5659-5670

Ma, G., see Li, D., TCYB Dec. 2021 6119-6130

Ma, H., see Ji, Z., TCYB Jan. 2021 64-76

Ma, H., Xu, L., and Yang, G., Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems; TCYB April 2021 1913-1928 Ma, J., Zhang, H., and Chow, T.W.S., Multilabel Classification With Label-Specific Features and Classifiers: A Coarse- and Fine-Tuned Framework; TCYB Feb. 2021 1028-1042

Ma, J., see Zhang, X., TCYB July 2021 3616-3629

Ma, L., and Bian, W., A Novel Multiagent Neurodynamic Approach to Constrained Distributed Convex Optimization; TCYB March 2021 1322-1333

Ma, L., Wang, Y., and Han, Q., H_{∞} Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling; *TCYB Dec. 2021 5761-5772*

Ma, Q., Chen, E., Lin, Z., Yan, J., Yu, Z., and Ng, W.W.Y., Convolutional Multitimescale Echo State Network; *TCYB March 2021 1613-1625*

Ma, R., Shi, P., and Wu, L., Dissipativity-Based Sliding-Mode Control of Cyber-Physical Systems Under Denial-of-Service Attacks; TCYB May 2021 2306-2318

Ma, S., see Zhang, X., TCYB Aug. 2021 4237-4250

Ma, T., see Liu, J., TCYB Feb. 2021 839-852

Ma, X., see Liang, Z., TCYB March 2021 1417-1429

Ma, X., see Liang, Z., TCYB Sept. 2021 4553-4566

Maji, P., and Garai, P., Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm; *TCYB July 2021 3641-3652*

Manzie, C., see Garcia-Rosas, R., TCYB Feb. 2021 1070-1084

Mao, L., see Sheng, B., TCYB March 2021 1463-1477

Mao, S., Lin, W., Jiao, L., Gou, S., and Chen, J., End-to-End Ensemble Learning by Exploiting the Correlation Between Individuals and Weights; TCYB May 2021 2835-2846

Mao, Z., see Xu, J., TCYB July 2021 3510-3523

Martinez-Garcia, M., Kalawsky, R.S., Gordon, T., Smith, T., Meng, Q., and Flemisch, F., Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering; *TCYB Aug. 2021 3913-3924*

Matas, J., see Lukezic, A., TCYB Dec. 2021 6305-6318

Medvet, E., see Bartoli, A., TCYB May 2021 2612-2624

Mei, T., see Lin, W., TCYB March 2021 1478-1492

Mei, Y., see Zhang, F., TCYB April 2021 1797-1811

Mei, Z., see Cai, X., TCYB May 2021 2639-2650

Meng, D., see Wang, K., TCYB March 2021 1556-1570

Meng, D., see Xu, J., TCYB March 2021 1493-1505

Meng, D., see Du, M., TCYB Dec. 2021 5659-5670

Meng, F., Tang, J., Pedrycz, W., and An, Q., Optimal Interaction Priority Calculation From Hesitant Fuzzy Preference Relations Based on the Monte Carlo Simulation Method for the Acceptable Consistency and Consensus; TCYB Dec. 2021 5871-5882

Meng, Q., see Martinez-Garcia, M., TCYB Aug. 2021 3913-3924

Meng, W., and Liu, P.X., Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults; TCYB May 2021 2446-2456

Mezura-Montes, E., see Rodriguez-Molina, A., TCYB March 2021 1272-1285

Miao, Q., see Li, H., TCYB Aug. 2021 4187-4200

Miao, Z., Liu, Y., Wang, Y., Chen, H., Zhong, H., and Fierro, R., Consensus With Persistently Exciting Couplings and Its Application to Vision-Based Estimation; TCYB May 2021 2801-2812

Ming, Z., see Zhu, Q., TCYB Feb. 2021 765-778

Mishra, P.K., Dhar, N.K., and Verma, N.K., Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints; TCYB April 2021 2042-2054

Mishro, P.K., Agrawal, S., Panda, R., and Abraham, A., A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation; TCYB Aug. 2021 3901-3912

Misir, M., see Cai, X., TCYB Sept. 2021 4488-4500

Mohajerpoor, R., see Baranitha, R., TCYB Jan. 2021 247-257

Mohammadi, M., A Compact Neural Network for Fused Lasso Signal Approximator; TCYB Aug. 2021 4327-4336

Moradi Amani, A., see Gaeini, N., TCYB Aug. 2021 4277-4285

Moreno, J., Rodriguez, D., Nebro, A.J., and Lozano, J.A., Merge Nondominated Sorting Algorithm for Many-Objective Optimization; TCYB Dec. 2021 6154-6164

Moreno Saenz, J., Tanaka, M., and Tanaka, K., Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems; TCYB April 2021 2093-2106

Mousavinejad, E., Ge, X., Han, Q., Yang, F., and Vlacic, L., Resilient Tracking Control of Networked Control Systems Under Cyber Attacks; TCYB April 2021 2107-2119

Mu, N., see Le, J., TCYB Aug. 2021 3874-3888

N

Napoles, G., Salmeron, J.L., and Vanhoof, K., Construction and Supervised Learning of Long-Term Grey Cognitive Networks; TCYB Feb. 2021 686-695

Narayanan, V., see Jiang, W., TCYB Dec. 2021 5717-5727

Naveros, F., see Abadia, I., TCYB May 2021 2476-2489

Nebro, A.J., see Moreno, J., TCYB Dec. 2021 6154-6164

Nejat, G., see Hong, A., TCYB Dec. 2021 5954-5968

Ng, W.W.Y., see Ma, Q., TCYB March 2021 1613-1625

Ng, W.W.Y., see Wang, T., TCYB May 2021 2748-2760

Ng, W.W.Y., see Tian, X., TCYB Oct. 2021 5184-5197

Nguang, S.K., see Li, H., TCYB Nov. 2021 5248-5258

Nguyen, A., Coutinho, P., Guerra, T., Palhares, R., and Pan, J., Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints; TCYB Sept. 2021 4673-4684

Nguyen, B.H., Xue, B., Andreae, P., and Zhang, M., A New Binary Particle Swarm Optimization Approach: Momentum and Dynamic Balance Between Exploration and Exploitation; *TCYB Feb.* 2021 589-603

Nguyen, B.H., Xue, B., Andreae, P., and Zhang, M., A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation; TCYB Dec. 2021 6319-6332

Nguyen, S., Zhang, M., Alahakoon, D., and Tan, K.C., People-Centric Evolutionary System for Dynamic Production Scheduling; TCYB March 2021 1403-1416

Nguyen, S., see Zhang, F., TCYB April 2021 1797-1811

Nguyen, T.Q., see Ren, C., TCYB July 2021 3535-3548

Ni, D., see Yang, P., TCYB Jan. 2021 233-246

Ni, J., and Shi, P., Adaptive Neural Network Fixed-Time Leader-Follower Consensus for Multiagent Systems With Constraints and Disturbances; TCYB April 2021 1835-1848

 $\mathbf{Ni},\,\mathbf{Q.},\,see\,\mathrm{Yin},\,\mathrm{L.},\,TCYB\,April\,2021\,2188-2200$

Nie, D., see Xue, J., TCYB April 2021 2153-2165

Nie, L., see Guan, W., TCYB Sept. 2021 4501-4514

Ning, B., Han, Q., and Ding, L., Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies; TCYB Aug. 2021 3988-3999

Ning, H., see Yuan, Y., TCYB July 2021 3562-3575

Niu, Y., see Song, J., TCYB July 2021 3664-3675

Niu, Y., see Song, J., TCYB Sept. 2021 4581-4590

Niu, Y., see Zhang, Z., TCYB Nov. 2021 5342-5351

Niyoyita, J.P., see Liu, J., TCYB Feb. 2021 839-852

Noh, H.W., see Sim, J.Y., TCYB May 2021 2761-2772

Nowzari, C., see Ajina, M., TCYB Dec. 2021 5941-5953

0

Oetomo, D., see Garcia-Rosas, R., TCYB Feb. 2021 1070-1084

Ogenyi, U.E., Liu, J., Yang, C., Ju, Z., and Liu, H., Physical Human–Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators; TCYB April 2021 1888-1901

Ondras, J., Celiktutan, O., Bremner, P., and Gunes, H., Audio-Driven Robot Upper-Body Motion Synthesis; TCYB Nov. 2021 5445-5454

Ong, Y., see Zhang, Z., TCYB Feb. 2021 1015-1027

Ong, Y., see Bali, K.K., TCYB April 2021 1784-1796

Ong, Y., see Jiao, R., TCYB Oct. 2021 4834-4847

Ou, Y., see Zhang, Y., TCYB Jan. 2021 40-51

Ou-Yang, L., see Zhang, X., TCYB Feb. 2021 1043-1055 **Ouyang, D.,** see Li, H., TCYB Nov. 2021 5248-5258 Ouyang, T., Pedrycz, W., Reyes-Galaviz, O.F., and Pizzi, N.J., Granular Description of Data Structures: A Two-Phase Design; TCYB April 2021 1902-1912

Ouyang, T., Pedrycz, W., and Pizzi, N.J., Rule-Based Modeling With DBSCAN-Based Information Granules; TCYB July 2021 3653-3663

Palaniswami, M., see Rathore, P., TCYB Dec. 2021 5979-5992

Palhares, R., see Nguyen, A., TCYB Sept. 2021 4673-4684

Pan, J., see Nguyen, A., TCYB Sept. 2021 4673-4684

Pan, L., Li, L., Cheng, R., He, C., and Tan, K.C., Manifold Learning-Inspired Mating Restriction for Evolutionary Multiobjective Optimization With Complicated Pareto Sets; TCYB June 2021 3325-3337

Pan, L., see Wang, X., TCYB July 2021 3483-3495

Pan, Q., see Lyu, Y., TCYB May 2021 2651-2662

Pan, O., see Wang, D., TCYB Oct. 2021 5057-5068

Pan, R., see Huang, T., TCYB Nov. 2021 5595-5608

Pan, S., see Wang, L., TCYB May 2021 2663-2675

Pan, Y., see Xu, Y., TCYB Jan. 2021 258-266

Pan, Y., see Xu, Y., TCYB March 2021 1370-1379

Pan, Y., see Wu, Y., TCYB June 2021 2870-2881

Panda, R., see Mishro, P.K., TCYB Aug. 2021 3901-3912

Pang, C., see Lan, R., TCYB Jan. 2021 115-125

Pang, C., see Lan, R., TCYB March 2021 1443-1453

Pang, J., Rao, Y., Xie, H., Wang, X., Wang, F.L., Wong, T., and Li, Q., Fast Supervised Topic Models for Short Text Emotion Detection; TCYB Feb. 2021 815-828

Park, J.H., see Ge, C., TCYB Feb. 2021 961-969

Park, J.H., see Zhang, R., TCYB May 2021 2384-2397

Park, J.H., see Wang, X., TCYB Oct. 2021 4924-4933

Park, J.H., see Wu, L., TCYB Dec. 2021 6054-6065

Patsios, C., see Teo, T.T., TCYB Nov. 2021 5375-5386

Pedrycz, W., see Wu, Y., TCYB Feb. 2021 649-659

Pedrycz, W., see Zhu, X., TCYB March 2021 1639-1650

Pedrycz, W., see Feng, G., TCYB April 2021 2080-2092

Pedrycz, W., see Ouyang, T., TCYB April 2021 1902-1912

Pedrycz, W., see Zhao, J., TCYB April 2021 2201-2214

Pedrycz, W., see Lu, W., TCYB May 2021 2625-2638

Pedrycz, W., see Ouyang, T., TCYB July 2021 3653-3663

Pedrycz, W., see Tang, M., TCYB Oct. 2021 4784-4795

Pedrycz, W., see Guo, H., TCYB Dec. 2021 6253-6261

Pedrycz, W., see Meng, F., TCYB Dec. 2021 5871-5882

Pei, J., see Song, K., TCYB May 2021 2699-2711

Pelillo, M., see Wang, T., TCYB May 2021 2748-2760

Peng, B., Wan, S., Bi, Y., Xue, B., and Zhang, M., Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis; TCYB Oct. 2021 4909-4923

Peng, C., see Yang, Y., TCYB Aug. 2021 4337-4347

Peng, C., Liu, H., and Goodman, E.D., A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints; TCYB Nov. 2021 5546-5558

Peng, C., see Zhao, M., TCYB Nov. 2021 5609-5618

Peng, D., see Hu, P., TCYB Oct. 2021 4982-4993

Peng, J.C., see Sahoo, S., TCYB July 2021 3687-3698

Peng, L., Cao, X., and Sun, C., Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems; TCYB Feb. 2021

Peng, X., see Zhu, H., TCYB Feb. 2021 829-838

Peng, X., see Hu, P., TCYB Oct. 2021 4982-4993

Peng, Y., see Huang, X., TCYB Dec. 2021 5692-5705

Peng, Z., see Chen, Y., TCYB Jan. 2021 28-39

Peng, Z., Liu, L., and Wang, J., Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers; TCYB Sept. 2021 4611-4622

Perez-Jimenez, M.J., see Song, B., TCYB Jan. 2021 438-450

Pescape, A., see Petrillo, A., TCYB March 2021 1134-1149

Petersen, I.R., see Gao, Q., TCYB Feb. 2021 889-899

Petrillo, A., Pescape, A., and Santini, S., A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks; TCYB March 2021

Philip Chen, C.L., see Su, X., TCYB June 2021 2979-2992

Philip Chen, C.L., see Chai, R., TCYB Aug. 2021 4035-4049

Pilario, K.E.S., see Eyo, E.N., TCYB May 2021 2688-2698

Pizzi, N.J., see Ouyang, T., TCYB April 2021 1902-1912

Pizzi, N.J., see Ouyang, T., TCYB July 2021 3653-3663

Plaza, A., see Wu, Z., TCYB July 2021 3588-3601

Pu, Y., see Ren, C., TCYB July 2021 3535-3548

Pu, Z., see Tao, X., TCYB May 2021 2504-2517

Qi, F., Wu, W., Yu, Z.L., Gu, Z., Wen, Z., Yu, T., and Li, Y., Spatiotemporal-Filtering-Based Channel Selection for Single-Trial EEG Classification; TCYB Feb. 2021 558-567

Qi, H., see Chang, M., TCYB Jan. 2021 2-15

Qi, Q., see Ji, Z., TCYB Jan. 2021 64-76

Qian, C., see Hong, W., TCYB Dec. 2021 6091-6104

Qian, F., see Zhang, D., TCYB May 2021 2490-2503

Qiao, J., see Han, H., TCYB May 2021 2518-2528

Qiao, J., see Han, H., TCYB Aug. 2021 3938-3951

Qiao, Z., see Wang, X., TCYB Jan. 2021 174-187

Qiao, Z., see Li, Z., TCYB July 2021 3441-3454

Qin, J., see Wu, Y., TCYB Feb. 2021 649-659

Qin, J., see Gan, R., TCYB Feb. 2021 994-1003

Qin, K., see Feng, L., TCYB June 2021 3171-3184

Qiu, J., see Yu, X., TCYB Feb. 2021 938-946

Qiu, J., see Lu, J., TCYB April 2021 2278-2283

Qiu, J., see Zhang, X., TCYB June 2021 3157-3170

Qiu, J., Ji, W., Rudas, I.J., and Gao, H., Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems; TCYB Aug. 2021 3964-3974

Qiu, J., see Li, Z., TCYB Dec. 2021 6131-6140

Qiu, L., see Jiang, M., TCYB July 2021 3417-3428

Qu, F., see Li, Y., TCYB Jan. 2021 126-137

Qu, H., Yang, F., Han, Q., and Zhang, Y., Distributed H∞-Consensus Filtering for Attitude Tracking Using Ground-Based Radars; TCYB July 2021 3767-

Qu, J., Ji, Z., and Shi, Y., The Graphical Conditions for Controllability of Multiagent Systems Under Equitable Partition; TCYB Sept. 2021 4661-4672

Qu, X., see Zhang, Z., TCYB Aug. 2021 4312-4326

Quan, X., see Gu, B., TCYB April 2021 2215-2223

Rajasegarar, S., see Rathore, P., TCYB Dec. 2021 5979-5992

Rakkiyappan, R., see Baranitha, R., TCYB Jan. 2021 247-257

Rao, Y., see Pang, J., TCYB Feb. 2021 815-828

Rathore, P., Kumar, D., Bezdek, J.C., Rajasegarar, S., and Palaniswami, M., Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams; TCYB Dec. 2021 5979-5992

Ren, C., He, S., Luan, X., Liu, F., and Karimi, H.R., Finite-Time L2-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T-S Fuzzy Model Approach; TCYB Jan. 2021 77-87

Ren, C., Feng, J., Dai, D., and Yan, S., Heterogeneous Domain Adaptation via Covariance Structured Feature Translators; TCYB April 2021 2166-2177

Ren, C., Ge, P., Dai, D., and Yan, H., Learning Kernel for Conditional Moment-Matching Discrepancy-Based Image Classification; TCYB April 2021 2006-2018

Ren, C., He, X., Pu, Y., and Nguyen, T.Q., Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution; TCYB July 2021 3535-3548

Ren, H., see Zong, G., TCYB Jan. 2021 309-317

Ren, H., see Wu, E.Q., TCYB Jan. 2021 332-345

Ren, H., see Wu, E.Q., TCYB Nov. 2021 5483-5496

Ren, H., see Cao, L., TCYB Nov. 2021 5236-5247

Ren, L., Li, M., and Sun, C., Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation; *TCYB Sept. 2021 4685-4694*

Ren, M., see Hu, B., TCYB Sept. 2021 4373-4385

Ren, W., see Li, J., TCYB Jan. 2021 416-426

Ren, W., see Wang, H., TCYB March 2021 1347-1358

Ren, W., see Dong, S., TCYB June 2021 3054-3061

Ren, W., see Gao, L., TCYB Aug. 2021 4075-4088

Ren, W., see Xiong, Q., TCYB Sept. 2021 4716-4721

Ren, W., see Liu, Y., TCYB Dec. 2021 5647-5658

Ren, Y., Zhao, Z., Zhang, C., Yang, Q., and Hong, K., Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties; *TCYB Oct.* 2021 4796-4807

Ren, Z., see Yu, J., TCYB April 2021 2265-2277

Ren, Z., Yang, S.X., Sun, Q., and Wang, T., Consensus Affinity Graph Learning for Multiple Kernel Clustering; *TCYB June 2021 3273-3284*

Reyes-Galaviz, O.F., see Ouyang, T., TCYB April 2021 1902-1912

Rodriguez, D., see Moreno, J., TCYB Dec. 2021 6154-6164

Rodriguez-Molina, A., Villarreal-Cervantes, M.G., Mezura-Montes, E., and Aldape-Perez, M., Adaptive Controller Tuning Method Based on Online Multiobjective Optimization: A Case Study of the Four-Bar Mechanism; TCYB March 2021 1272-1285

Rong, N., see Ding, S., TCYB Feb. 2021 862-873

Rong, Y., see Zhang, K., TCYB June 2021 3285-3297

Ros, E., see Abadia, I., TCYB May 2021 2476-2489

Roy, P.P., see Santhosh, K.K., TCYB Aug. 2021 4148-4161

Rudas, I.J., see Qiu, J., TCYB Aug. 2021 3964-3974

Rutkowski, L., see Tan, X., TCYB Feb. 2021 624-634

Rutkowski, L., see Xia, Z., TCYB Nov. 2021 5631-5636

S

Sahoo, S., and Peng, J.C., A Localized Event-Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks; TCYB July 2021 3687-3698

Sahoo, S.R., see Sen, A., TCYB Jan. 2021 222-232

Salmeron, J.L., see Napoles, G., TCYB Feb. 2021 686-695

Salvati, D., see Drioli, C., TCYB May 2021 2587-2600

Samouylov, K., see Yazidi, A., TCYB Dec. 2021 5706-5716

Sang, H., and Zhao, J., Sampled-Data-Based H_∞ Synchronization of Switched Coupled Neural Networks; *TCYB April 2021 1968-1980*

Santhosh, K.K., Dogra, D.P., Roy, P.P., and Chaudhuri, B.B., Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model; *TCYB Aug.* 2021 4148-4161

Santini, S., see Petrillo, A., TCYB March 2021 1134-1149

Savvaris, A., see Chai, R., TCYB Aug. 2021 4035-4049

Sedaghati, R., see Liu, C., TCYB May 2021 2339-2346

See, J., see Lin, W., TCYB March 2021 1478-1492

Seghouane, A., and Shokouhi, N., Adaptive Learning for Robust Radial Basis Function Networks; TCYB May 2021 2847-2856

Selvakumar, J., and Bakolas, E., Feedback Strategies for a Reach-Avoid Game With a Single Evader and Multiple Pursuers; TCYB Feb. 2021 696-707

Sen, A., Sahoo, S.R., and Kothari, M., Circumnavigation on Multiple Circles Around a Nonstationary Target With Desired Angular Spacing; TCYB Jan. 2021 222-232

Shan, Y., see Gu, B., TCYB April 2021 2215-2223

Shang, C., see Yang, J., TCYB May 2021 2773-2786

Shang, R., see Feng, J., TCYB Sept. 2021 4414-4428

Shang, Y., Resilient Consensus for Expressed and Private Opinions; *TCYB Jan.*

Shang, Y., see Zhang, L., TCYB Dec. 2021 5671-5680

Shao, J., see Gan, R., TCYB Feb. 2021 994-1003

Shao, J., Zheng, W.X., Shi, L., and Cheng, Y., Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation— Competition Networks; TCYB Nov. 2021 5225-5235

Shao, L., see Xu, J., TCYB March 2021 1493-1505

Shao, L., see Zhang, L., TCYB Aug. 2021 4265-4276

Shao, W., Ge, Z., and Song, Z., Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor; *TCYB July 2021 3455-3468*

Shen, B., see Shen, Y., TCYB Oct. 2021 4897-4908

Shen, D., Liu, C., Wang, L., and Yu, X., Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach; TCYB March 2021 1286-1299

Shen, D., see Xue, J., TCYB April 2021 2153-2165

Shen, H., see Wang, S., TCYB Aug. 2021 4089-4099

Shen, H.T., see Jing, M., TCYB July 2021 3390-3403

Shen, J., see Chen, Y., TCYB Feb. 2021 501-511

Shen, J., see Zhang, X., TCYB Sept. 2021 4386-4399

Shen, L., see Zhang, Y., TCYB April 2021 1875-1887

Shen, L., see Xie, W., TCYB May 2021 2787-2800

Shen, Q., see Yang, J., TCYB May 2021 2773-2786

Shen, Q., see Gu, X., TCYB Nov. 2021 5352-5363

Shen, S., see Zhang, H., TCYB July 2021 3724-3737

Shen, W., see Li, F., TCYB March 2021 1390-1402

Shen, Y., Wang, Z., Shen, B., and Dong, H., Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol; TCYB Oct. 2021 4897-4908

Sheng, B., Li, P., Zhang, Y., Mao, L., and Chen, C.L.P., GreenSea: Visual Soccer Analysis Using Broad Learning System; TCYB March 2021 1463-1477

Sheng, B., see Guo, H., TCYB May 2021 2735-2747

Sheng, R.S.F., see Wu, E.Q., TCYB Jan. 2021 332-345

Sheng, W., see Chen, Y., TCYB March 2021 1204-1215

Sheng, W., see Li, L., TCYB April 2021 2055-2067

Sheng, Y., Huang, T., Zeng, Z., and Li, P., Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays; TCYB Feb. 2021 579-588

Shi, J., and Zeng, Z., Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks; TCYB May 2021 2540-2549

Shi, L., see Shao, J., TCYB Nov. 2021 5225-5235

Shi, P., see Ni, J., TCYB April 2021 1835-1848

Shi, P., see Ma, R., TCYB May 2021 2306-2318

Shi, P., see Xu, B., TCYB Aug. 2021 3975-3987

Shi, S., see Yu, J., TCYB Sept. 2021 4350-4362

Shi, Y., see Lyu, C., TCYB June 2021 3348-3360

Shi, Y., see Su, Y., TCYB July 2021 3813-3823

Shi, Y., see Yang, Y., TCYB July 2021 3469-3482

Shi, Y., see Qu, J., TCYB Sept. 2021 4661-4672

Shi, Y., see Wang, D., TCYB Oct. 2021 5057-5068

Cl. X. C. O. TECAND D. 2021 5021 5020

Shi, Y., see Sun, Q., TCYB Dec. 2021 5921-5929 **Shi, Z.,** see Xue, J., TCYB April 2021 2153-2165

Shokouhi, N., see Seghouane, A., TCYB May 2021 2847-2856

Shui, C., see Wang, B., TCYB Oct. 2021 5008-5020

Sim, J.Y., Noh, H.W., Goo, W., Kim, N., Chae, S., and Ahn, C., Identity Recognition Based on Bioacoustics of Human Body; TCYB May 2021 2761-2772

Simeonov, S., see Cao, J., TCYB Jan. 2021 151-161

Smith, T., see Martinez-Garcia, M., TCYB Aug. 2021 3913-3924

Snoussi, H., see Wang, T., TCYB Dec. 2021 6017-6028

Song, A., see Zhang, H., TCYB July 2021 3724-3737

Song, B., Zeng, X., Jiang, M., and Perez-Jimenez, M.J., Monodirectional Tissue P Systems With Promoters; TCYB Jan. 2021 438-450

Song, B., see Yang, X., TCYB Dec. 2021 5773-5785

Song, C., Fan, Y., and Xu, S., Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve; TCYB June 2021 3071-3078

Song, E., see Tsai, S., TCYB July 2021 3789-3801

Song, J., Wang, Z., Niu, Y., and Dong, H., Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels; TCYB July 2021 3664-3675 Song, J., and Niu, Y., Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm; TCYB Sept. 2021 4581-4590

Song, K., Li, G., Chen, X., Deng, L., Xiao, G., Zeng, F., and Pei, J., Target Controllability of Two-Layer Multiplex Networks Based on Network Flow Theory; TCYB May 2021 2699-2711

Song, L., see Zhang, L., TCYB Feb. 2021 673-685

Song, R., Wei, Q., Zhang, H., and Lewis, F.L., Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics; TCYB June 2021 2929-2943

Song, S., see Yang, L., TCYB Aug. 2021 4100-4111

Song, T., Li, D., Yang, W., and Hirasawa, K., Recursive Least-Squares Temporal Difference With Gradient Correction; TCYB Aug. 2021 4251-4264

Song, X., see Guo, Z., TCYB Jan. 2021 188-198

Song, X., see Guan, W., TCYB Sept. 2021 4501-4514

Song, Y., see Wang, Y., TCYB March 2021 1300-1310

Song, Y., see Cao, Y., TCYB March 2021 1262-1271

Song, Y., He, L., and Wang, Y., Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems; TCYB Sept. 2021 4755-4765

Song, Z., see Shao, W., TCYB July 2021 3455-3468

Stamov, G., see Cao, J., TCYB Jan. 2021 151-161

Stamova, I., see Cao, J., TCYB Jan. 2021 151-161

Stegagno, P., see Zhang, J., TCYB Feb. 2021 750-764

Su, C., see Zhang, X., TCYB March 2021 1121-1133

Su, C., see Wu, J., TCYB Sept. 2021 4733-4742

Su, H., Chen, J., Chen, X., and He, H., Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints; TCYB Nov. 2021 5259-5268

Su, J., see Xiang, G., TCYB Feb. 2021 1056-1069

Su, S., see Zhuang, G., TCYB March 2021 1189-1203

Su, S., see Sun, W., TCYB March 2021 1099-1109

Su, S., see Zhang, Z., TCYB Nov. 2021 5342-5351

Su, X., see Zhang, Y., TCYB Feb. 2021 736-749

Su, X., Liu, Z., Zhang, Y., and Philip Chen, C.L., Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis; TCYB June 2021 2979-2992

Su, Y., Shi, Y., and Sun, C., Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays; TCYB July 2021 3813-3823

Su, Z., see Lan, R., TCYB Jan. 2021 115-125

Sugumaran, V., see Wang, X., TCYB Sept. 2021 4400-4413

Sun, C., see Peng, L., TCYB Feb. 2021 779-788

Sun, C., see Liu, J., TCYB June 2021 3263-3272

Sun, C., see Su, Y., TCYB July 2021 3813-3823

Sun, C., see Ren, L., TCYB Sept. 2021 4685-4694

Sun, C., and Hu, G., Distributed Generalized Nash Equilibrium Seeking for Monotone Generalized Noncooperative Games by a Regularized Penalized Dynamical System; TCYB Nov. 2021 5532-5545

Sun, C., see Yuan, X., TCYB Nov. 2021 5619-5630

Sun, D., see Liao, O., TCYB Feb. 2021 947-960

Sun, H., see Zhang, X., TCYB Aug. 2021 4237-4250

Sun, J., see Yang, Q., TCYB April 2021 1993-2005

Sun, J., see Wu, Z., TCYB July 2021 3588-3601

Sun, J., see Wang, Y., TCYB July 2021 3858-3870

Sun, J., see Chang, Y., TCYB Dec. 2021 5836-5849

Sun, L., see Lan, R., TCYB Jan. 2021 115-125

Sun, L., see Lan, R., TCYB March 2021 1443-1453

Sun, L., see Lyu, C., TCYB June 2021 3348-3360

Sun, Q., see Ren, Z., TCYB June 2021 3273-3284

Sun, Q., see Feng, J., TCYB Sept. 2021 4414-4428

Sun, Q., Chen, J., and Shi, Y., Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance; TCYB Dec. 2021 5921-5929

Sun, S., Zhang, H., Zhang, J., and Zhang, K., Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults; TCYB Dec. 2021 6213-6225

Sun, W., see Zhuang, G., TCYB March 2021 1189-1203

Sun, W., Lin, J., Su, S., Wang, N., and Er, M.J., Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton; TCYB March 2021 1099-1109

Sun, W., see Cai, X., TCYB Sept. 2021 4488-4500

Τ

Tabatabai, D., see Ajina, M., TCYB Dec. 2021 5941-5953

Taj, I.A., see Ghafoor, M., TCYB Sept. 2021 4515-4527

Tan, C.P., see Wang, X., TCYB March 2021 1216-1229

Tan, K., see Feng, L., TCYB June 2021 3171-3184

Tan, K.C., see Nguyen, S., TCYB March 2021 1403-1416

Tan, K.C., see Zhou, L., TCYB May 2021 2563-2576

Tan, K.C., see Tian, Y., TCYB June 2021 3115-3128

Tan, K.C., see Lin, J., TCYB June 2021 3238-3248

Tan, K.C., see Feng, L., TCYB June 2021 3143-3156

Tan, K.C., see Pan, L., TCYB June 2021 3325-3337 Tan, K.C., see He, C., TCYB June 2021 3129-3142

Tan, K.C., see Jiang, M., TCYB July 2021 3417-3428

Tall, K.C., see Jiang, M., 1C1b July 2021 541/-5420

Tan, K.C., see Cai, X., TCYB Sept. 2021 4488-4500

Tan, K.C., see Jiang, M., TCYB Oct. 2021 4968-4981

Tan, P.S., see Bali, K.K., TCYB April 2021 1784-1796

Tan, Q., Yu, G., Wang, J., Domeniconi, C., and Zhang, X., Individuality- and Commonality-Based Multiview Multilabel Learning; TCYB March 2021 1716-1727

Tan, X., Cao, J., Rutkowski, L., and Lu, G., Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution; TCYB Feb. 2021 624-634

Tan, Y., see Garcia-Rosas, R., TCYB Feb. 2021 1070-1084

Tanaka, K., see Moreno Saenz, J., TCYB April 2021 2093-2106

Tanaka, K., see Chen, Y., TCYB June 2021 2993-3003

Tanaka, M., see Moreno Saenz, J., TCYB April 2021 2093-2106

Tanaka, M., see Chen, Y., TCYB June 2021 2993-3003

Tang, G., see Liu, P., TCYB April 2021 1860-1874

Tang, J., see Dai, D., TCYB April 2021 2019-2031

Tang, J., see Meng, F., TCYB Dec. 2021 5871-5882

Tang, K., see Feng, L., TCYB June 2021 3143-3156 Tang, K., see Hong, W., TCYB Dec. 2021 6091-6104

Tang, M., Liao, H., Herrera-Viedma, E., Chen, C.L.P., and Pedrycz, W., A Dynamic Adaptive Subgroup-to-Subgroup Compatibility-Based Conflict Detection and Resolution Model for Multicriteria Large-Scale Group Decision Making; TCYB Oct. 2021 4784-4795

Tang, X., see Zhang, Y., TCYB Jan. 2021 40-51

Tang, Y., see Li, Z., TCYB April 2021 2253-2264

Tang, Y., see Zhang, D., TCYB May 2021 2490-2503

Tang, Y., see Li, F., TCYB June 2021 3338-3347

Tang, Y., see Duan, Y., TCYB Aug. 2021 4021-4034

Tang, Y.Y., see Lu, Y., TCYB March 2021 1598-1612

Tang, Z., see Liu, J., TCYB Feb. 2021 839-852

Tang, Z., see Wu, E.Q., TCYB Nov. 2021 5483-5496

Tao, D., see Yu, J., TCYB April 2021 1731-1742 **Tao, D.,** see Yu, J., TCYB Sept. 2021 4350-4362

Tao, D., see Wang, C., TCYB Oct. 2021 4770-4783

T-- C -- 71-- V TCVD D-- 2021 5720 572

Tao, G., see Zhang, Y., TCYB Dec. 2021 5728-5739

Tao, H., Hou, C., Yi, D., Zhu, J., and Hu, D., Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning; TCYB March 2021 1690-1703

Tao, R., see Li, L., TCYB Sept. 2021 4363-4372

Tao, X., Yi, J., Pu, Z., and Xiong, T., Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach; TCYB May 2021 2504-2517

Tariq, S.A., see Ghafoor, M., TCYB Sept. 2021 4515-4527

Tarlao, F., see Bartoli, A., TCYB May 2021 2612-2624

Taylor, P.C., see Teo, T.T., TCYB Nov. 2021 5375-5386

Teng, X., Liu, J., and Li, M., Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm; TCYB Jan. 2021 138-150 Teo, T.T., Logenthiran, T., Woo, W.L., Abidi, K., John, T., Wade, N.S., Greenwood, D.M., Patsios, C., and Taylor, P.C., Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II; TCYB Nov. 2021 5375-5386

Tian, D., Zhou, D., Gong, M., and Wei, Y., Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing; TCYB July 2021 3802-3812

Tian, E., see Hu, S., TCYB Sept. 2021 4591-4601

Tian, F., Yu, W., Fu, J., Gu, W., and Gu, J., Distributed Optimization of Multiagent Systems Subject to Inequality Constraints; TCYB April 2021 2232-2241

Tian, X., Ng, W.W.Y., and Wang, H., Concept Preserving Hashing for Semantic Image Retrieval With Concept Drift; TCYB Oct. 2021 5184-5197

Tian, Y., see Wang, B., TCYB Jan. 2021 16-27

Tian, Y., see Yang, Y., TCYB June 2021 2916-2928

Tian, Y., Lu, C., Zhang, X., Tan, K.C., and Jin, Y., Solving Large-Scale Multiobjective Optimization Problems With Sparse Optimal Solutions via Unsupervised Neural Networks; TCYB June 2021 3115-3128

Tian, Y., see Liu, H., TCYB Dec. 2021 5752-5760

Tien, Y., see Chiu, C., TCYB Dec. 2021 6226-6239

Tom, A.J., and George, S.N., A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations; *TCYB Feb. 2021 1004-1014*

Tong, S., see Li, Y., TCYB Jan. 2021 126-137

Tong, S., see Liu, Y., TCYB March 2021 1380-1389

Tong, S., see Gao, T., TCYB April 2021 1943-1953

Toyoda, M., and Wu, Y., Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities; TCYB June 2021 3079-3092

Troncoso, A., see Guijo-Rubio, D., TCYB Nov. 2021 5409-5422

Tsai, S., see Chen, Y., TCYB June 2021 2993-3003

Tsai, S., Wang, J., Song, E., and Lam, H., Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model; *TCYB July 2021 3789-3801*

Tsang, I.W., see Xu, X., TCYB March 2021 1519-1530

Tseng, P., see Chiu, C., TCYB Dec. 2021 6226-6239

Tsourdos, A., see Chai, R., TCYB Aug. 2021 4035-4049

Tsuboi, Y., see Hong, A., TCYB Dec. 2021 5954-5968

U

Ushio, T., see Hashimoto, K., TCYB Dec. 2021 6294-6304

V

Vamvoudakis, K.G., see Zhou, Y., TCYB Sept. 2021 4648-4660

Vanhoof, K., see Napoles, G., TCYB Feb. 2021 686-695

Verma, N.K., see Mishra, P.K., TCYB April 2021 2042-2054

Villarreal-Cervantes, M.G., see Rodriguez-Molina, A., TCYB March 2021 1272-1285

Vlacic, L., see Mousavinejad, E., TCYB April 2021 2107-2119

Vojir, T., see Lukezic, A., TCYB Dec. 2021 6305-6318

Vong, C., see Du, J., TCYB March 2021 1586-1597

Vu, V., and Wang, W., Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems; TCYB April 2021 1929-1942

Vu, V., and Wang, W., Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T-S Fuzzy System With Nonlinear Interconnection Terms; TCYB June 2021 3312-3324

w

Wade, N.S., see Teo, T.T., TCYB Nov. 2021 5375-5386

Wan, F., see Wang, B., TCYB Oct. 2021 5008-5020

Wan, S., see Peng, B., TCYB Oct. 2021 4909-4923

Wan, X., see Zuo, X., TCYB July 2021 3549-3561

Wan, Y., Long, C., Deng, R., Wen, G., Yu, X., and Huang, T., Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks; TCYB Nov. 2021 5314-5327

Wan, Z., see Li, L., TCYB July 2021 3404-3416

Wang, B., and Tian, Y., Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information; TCYB Jan. 2021 16-27

Wang, B., Wong, C.M., Kang, Z., Liu, F., Shui, C., Wan, F., and Chen, C.L.P., Common Spatial Pattern Reformulated for Regularizations in Brain–Computer Interfaces; TCYB Oct. 2021 5008-5020

Wang, B., Fang, J., Duan, H., and Li, H., Graph Simplification-Aided ADMM for Decentralized Composite Optimization; TCYB Oct. 2021 5170-5183

Wang, C., see Hu, Y., TCYB Feb. 2021 708-721

Wang, C., see Zhang, J., TCYB Feb. 2021 750-764

Wang, C., see Zhang, X., TCYB March 2021 1121-1133

Wang, C., Lu, N., Cheng, Y., and Jiang, B., A Data-Driven Aero-Engine Degradation Prognostic Strategy; TCYB March 2021 1531-1541

Wang, C., see Liu, B., TCYB March 2021 1571-1585

Wang, C., see Li, H., TCYB Aug. 2021 4187-4200

Wang, C., Bai, X., Wang, X., Liu, X., Zhou, J., Wu, X., Li, H., and Tao, D., Self-Supervised Multiscale Adversarial Regression Network for Stereo Disparity Estimation; TCYB Oct. 2021 4770-4783

Wang, C., see Li, J., TCYB Oct. 2021 4848-4859

Wang, C., see Chen, B., TCYB Dec. 2021 5786-5799

Wang, C., see Chen, T., TCYB Dec. 2021 5930-5940

Wang, D., Yin, J., and Wang, W., Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs; TCYB Jan. 2021 473-482

Wang, D., see Li, M., TCYB Jan. 2021 359-372

Wang, D., see Wang, J., TCYB Feb. 2021 927-937

Wang, D., see Zhang, Z., TCYB Feb. 2021 1015-1027

Wang, D., see Wang, J., TCYB July 2021 3845-3857

Wang, D., Wang, Z., Wang, Z., and Wang, W., Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems; TCYB Oct. 2021 4885-4896

Wang, D., Pan, Q., Shi, Y., Hu, J., and Zhao, C., Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment; TCYB Oct. 2021 5057-5068

Wang, F., see Zheng, W., TCYB Jan. 2021 393-404

Wang, F., see Luo, G., TCYB Oct. 2021 4994-5007

Wang, F., see Ye, P., TCYB Dec. 2021 5897-5906

Wang, F.L., see Pang, J., TCYB Feb. 2021 815-828

Wang, G., see Zhang, X., TCYB June 2021 3157-3170

Wang, G., see Wang, X., TCYB Sept. 2021 4634-4647

Wang, H., Yu, W., Ren, W., and Lu, J., Distributed Adaptive Finite-Time Consensus for Second-Order Multiagent Systems With Mismatched Disturbances Under Directed Networks; TCYB March 2021 1347-1358

Wang, H., see Zhang, X., TCYB June 2021 3157-3170

Wang, H., see Li, J., TCYB Aug. 2021 3925-3937

Wang, H., see Ge, Y., TCYB Oct. 2021 4808-4821

Wang, H., see Tian, X., TCYB Oct. 2021 5184-5197

Wang, H., see Wang, T., TCYB Dec. 2021 6017-6028

Wang, H.O., see Chen, Y., TCYB June 2021 2993-3003

Wang, J., see Zhang, C., TCYB Jan. 2021 210-221

Wang, J., Wang, D., Wu, H., and Huang, T., Output Synchronization of Complex Dynamical Networks With Multiple Output or Output Derivative Couplings; TCYB Feb. 2021 927-937

Wang, J., see Lin, W., TCYB March 2021 1478-1492

Wang, J., see Tan, Q., TCYB March 2021 1716-1727

Wang, J., see Wang, X., TCYB March 2021 1216-1229

Wang, J., and Wu, H., Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems; TCYB May 2021 2433-2445

Wang, J., see Zhou, M., TCYB June 2021 3017-3026

Wang, J., see Tsai, S., TCYB July 2021 3789-3801

Wang, J., Wang, D., Wu, H., and Huang, T., Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling; TCYB July 2021 3845-3857

Wang, J., Wang, X., Yu, G., Domeniconi, C., Yu, Z., and Zhang, Z., Discovering Multiple Co-Clusterings With Matrix Factorization; TCYB July 2021 3576-3587

Wang, J., see Peng, Z., TCYB Sept. 2021 4611-4622

Wang, J., see Liu, C., TCYB Oct. 2021 5046-5056

Wang, J., see Wang, Z., TCYB Dec. 2021 5740-5751

Wang, J., see Wang, W., TCYB Dec. 2021 6066-6079

Wang, J., Wang, Q., Wu, H., and Huang, T., Finite-Time Output Synchronization and H_∞ Output Synchronization of Coupled Neural Networks With Multiple Output Couplings; TCYB Dec. 2021 6041-6053

Wang, K., see Zheng, W., TCYB Jan. 2021 393-404

Wang, K., Wang, Y., Zhao, Q., Meng, D., Liao, X., and Xu, Z., SPLBoost: An Improved Robust Boosting Algorithm Based on Self-Paced Learning; TCYB March 2021 1556-1570

Wang, L., see Chen, Y., TCYB March 2021 1204-1215

Wang, L., see Zhou, S., TCYB March 2021 1430-1442

Wang, L., see Shen, D., TCYB March 2021 1286-1299

Wang, L., He, H., Zeng, Z., and Ge, M., Model-Independent Formation Tracking of Multiple Euler–Lagrange Systems via Bounded Inputs; TCYB May 2021 2813-2823

Wang, L., see Cai, X., TCYB May 2021 2639-2650

Wang, L., Yu, Z., Xiong, F., Yang, D., Pan, S., and Yan, Z., Influence Spread in Geo-Social Networks: A Multiobjective Optimization Perspective; TCYB May 2021 2663-2675

Wang, L., see Xiao, J., TCYB June 2021 3004-3016

Wang, L., see Chen, L., TCYB Aug. 2021 4298-4311

Wang, L., see Huang, Y., TCYB Nov. 2021 5397-5408

Wang, L., Liu, J., and Lam, H., Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay; TCYB Nov. 2021 5637-5643

Wang, L., You, Z., Li, J., and Huang, Y., IMS-CDA: Prediction of CircRNA-Disease Associations From the Integration of Multisource Similarity Information With Deep Stacked Autoencoder Model; TCYB Nov. 2021 5522-5531

Wang, L., see Zhao, F., TCYB Nov. 2021 5291-5303

Wang, L., see Guo, H., TCYB Dec. 2021 6253-6261

Wang, L.Y., see Liang, S., TCYB May 2021 2529-2539

Wang, M., see Wen, J., TCYB Jan. 2021 101-114

Wang, M., see Feng, Z., TCYB Jan. 2021 346-358

Wang, M., see Yang, Y., TCYB March 2021 1678-1689

Wang, M., see Wang, S., TCYB Aug. 2021 4212-4226

Wang, M., see Yu, J., TCYB Sept. 2021 4350-4362

Wang, N., see Sun, W., TCYB March 2021 1099-1109

Wang, Q., see Lin, W., TCYB March 2021 1311-1321

Wang, Q., Duan, Z., Lv, Y., and Chen, G., Distributed Model Predictive Control for Linear—Quadratic Performance and Consensus State Optimization of Multiagent Systems; TCYB June 2021 2905-2915

Wang, Q., see Wang, Q., TCYB June 2021 2905-2915

Wang, Q., see Gao, J., TCYB Oct. 2021 4822-4833

Wang, Q., see Wang, J., TCYB Dec. 2021 6041-6053

Wang, R., see Li, K., TCYB June 2021 3103-3114

Wang, S., Cao, Y., Guo, Z., Yan, Z., Wen, S., and Huang, T., Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch; TCYB Jan. 2021 427-437

Wang, S., Liu, J., and Jin, Y., Finding Influential Nodes in Multiplex Networks Using a Memetic Algorithm; *TCYB Feb. 2021 900-912*

Wang, S., Yang, S., Wang, M., and Jiao, L., New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection; TCYB Aug. 2021 4212-4226

Wang, S., see Zhang, X., TCYB Aug. 2021 4237-4250

Wang, S., Li, C., and Shen, H., Equivalent Continuous Formulation of General Hashing Problem; *TCYB Aug. 2021 4089-4099*

Wang, S., see Li, H., TCYB Sept. 2021 4623-4633

Wang, S., see Feng, H., TCYB Oct. 2021 5082-5092

Wang, S., see Xiong, K., TCYB Nov. 2021 5497-5510

Wang, T., see Yang, P., TCYB Jan. 2021 233-246

Wang, T., see Yu, X., TCYB Feb. 2021 938-946

Wang, T., see Zhao, J., TCYB April 2021 2201-2214

Wang, T., Ng, W.W.Y., Pelillo, M., and Kwong, S., LiSSA: Localized Stochastic Sensitive Autoencoders; TCYB May 2021 2748-2760

Wang, T., see Ren, Z., TCYB June 2021 3273-3284

Wang, T., see Hao, Y., TCYB Sept. 2021 4743-4754

Wang, T., see Weng, H., TCYB Oct. 2021 5198-5211

Wang, T., Chen, Y., Lin, Z., Zhu, A., Li, Y., Snoussi, H., and Wang, H., Recap-Net: Action Proposal Generation Mimicking Human Cognitive Process; TCYB Dec. 2021 6017-6028

Wang, W., see Wang, D., TCYB Jan. 2021 473-482

Wang, W., see Vu, V., TCYB April 2021 1929-1942

Wang, W., and Li, Y., Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems; TCYB April 2021 2131-2141

Wang, W., see Li, L., TCYB April 2021 2055-2067

Wang, W., see Zhao, J., TCYB April 2021 2201-2214

Wang, W., see Vu, V., TCYB June 2021 3312-3324

Wang, W., see Long, J., TCYB Aug. 2021 4050-4061

Wang, W., see Chen, L., TCYB Aug. 2021 4298-4311

Wang, W., see Liu, Y., TCYB Sept. 2021 4439-4449

Wang, W., see Wang, D., TCYB Oct. 2021 4885-4896

Wang, W., see Liu, Y., TCYB Dec. 2021 5647-5658

Wang, W., Zhang, K., Lv, M., and Wang, J., Hierarchical Spatiotemporal Context-Aware Correlation Filters for Visual Tracking; TCYB Dec. 2021 6066-

Wang, X., Ke, L., Qiao, Z., and Chai, X., Large-Scale Traffic Signal Control Using a Novel Multiagent Reinforcement Learning; *TCYB Jan. 2021 174-*

Wang, X., see Pang, J., TCYB Feb. 2021 815-828

Wang, X., Tan, C.P., Wu, F., and Wang, J., Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements; TCYB March 2021 1216-1229

Wang, X., and Yang, G., Event-Triggered H_∞ Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach; *TCYB June 2021* 3062-3070

Wang, X., Kang, Q., Zhou, M., Pan, L., and Abusorrah, A., Multiscale Drift Detection Test to Enable Fast Learning in Nonstationary Environments; TCYB July 2021 3483-3495

Wang, X., see Wang, J., TCYB July 2021 3576-3587

Wang, X., see Xu, B., TCYB Aug. 2021 3975-3987

Wang, X., and Yang, G., Event-Triggered Controller Design With Varying Gains for T–S Fuzzy Systems; TCYB Aug. 2021 4125-4133

Wang, X., Kou, L., Sugumaran, V., Luo, X., and Zhang, H., Emotion Correlation Mining Through Deep Learning Models on Natural Language Text; TCYB Sept. 2021 4400-4413

Wang, X., Yan, J., Jin, B., and Li, W., Distributed and Parallel ADMM for Structured Nonconvex Optimization Problem; TCYB Sept. 2021 4540-4552

Wang, X., Wang, G., and Li, S., Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems; TCYB Sept. 2021 4634-4647

Wang, X., Park, J.H., Liu, H., and Zhang, X., Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks; TCYB Oct. 2021 4924-4933

Wang, X., see Wang, C., TCYB Oct. 2021 4770-4783

Wang, X., see Yan, K., TCYB Dec. 2021 5907-5920

Wang, X., see Ye, P., TCYB Dec. 2021 5897-5906

Wang, X., see Zhang, L., TCYB Dec. 2021 5883-5896

Wang, Y., Ahn, C.K., Yan, H., and Xie, S., Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems; TCYB Jan. 2021 207 308

Wang, Y., see Zhang, H., TCYB Feb. 2021 548-557

Wang, Y., see Wang, K., TCYB March 2021 1556-1570

Wang, Y., see Zhang, X., TCYB March 2021 1121-1133

Wang, Y., Song, Y., and Hill, D.J., Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems; TCYB March 2021 1300-1310

Wang, Y., see Zhang, H., TCYB March 2021 1110-1120

Wang, Y., see Zheng, Q., TCYB April 2021 2242-2252

Wang, Y., see Zhou, T., TCYB May 2021 2409-2418

Wang, Y., see Miao, Z., TCYB May 2021 2801-2812 Wang, Y., see Liang, C., TCYB June 2021 2893-2904

Wang, Y., see Li, Z., TCYB July 2021 3441-3454

Wang, Y., Zhang, J., Zhang, H., and Sun, J., A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay; TCYB July 2021 3858-3870

Wang, Y., see Liu, J., TCYB Aug. 2021 4000-4010

Wang, Y., see Song, Y., TCYB Sept. 2021 4755-4765

Wang, Y., see Wu, J., TCYB Sept. 2021 4733-4742

Wang, Y., see Lin, C., TCYB Oct. 2021 4959-4967

Wang, Y., Zhang, J., Zhang, H., and Xie, X., Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients; TCYB Nov. 2021 5279-5290

Wang, Y., see Ma, L., TCYB Dec. 2021 5761-5772

Wang, Z., see Ding, S., TCYB Feb. 2021 862-873

Wang, Z., see Liu, W., TCYB Feb. 2021 1085-1093

Wang, Z., Xia, C., Chen, Z., and Chen, G., Epidemic Propagation With Positive and Negative Preventive Information in Multiplex Networks; TCYB March 2021 1454-1462

Wang, Z., see Chen, Y., TCYB March 2021 1204-1215

Wang, Z., Zhan, Z., Kwong, S., Jin, H., and Zhang, J., Adaptive Granularity Learning Distributed Particle Swarm Optimization for Large-Scale Optimization; TCYB March 2021 1175-1188

Wang, Z., Wu, H., and Li, H., Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay; TCYB March 2021 1359-1369

Wang, Z., see Wu, Y., TCYB March 2021 1150-1162

Wang, Z., see Song, J., TCYB July 2021 3664-3675

Wang, Z., see Jiang, M., TCYB July 2021 3417-3428

Wang, Z., see Shen, Y., TCYB Oct. 2021 4897-4908

Wang, Z., see Jiang, M., TCYB Oct. 2021 4968-4981

Wang, Z., see Wang, D., TCYB Oct. 2021 4885-4896

Wang, Z., see Wang, D., TCYB Oct. 2021 4885-4896

Wang, Z., see Huang, Y., TCYB Nov. 2021 5397-5408

Wang, Z., Wu, H., Wang, J., and Li, H., Quantized Sampled-Data Synchronization of Delayed Reaction-Diffusion Neural Networks Under Spatially Point Measurements; TCYB Dec. 2021 5740-5751

Wang, Z., Liu, T., and Jiang, Z., Cooperative Formation Control Under Switching Topology: An Experimental Case Study in Multirotors; TCYB Dec. 2021 6141-6153

Wei, C., see Wu, E.Q., TCYB Jan. 2021 332-345

Wei, G., see Chen, W., TCYB July 2021 3699-3709

Wei, Q., Li, H., Yang, X., and He, H., Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems; TCYB May 2021 2372-2383

Wei, Q., see Song, R., TCYB June 2021 2929-2943

Wei, Y., see Chen, S., TCYB June 2021 3371-3383

Wei, Y., see Tian, D., TCYB July 2021 3802-3812

Wei, Y., see Luo, M., TCYB Sept. 2021 4707-4715

Wei, Z., see Wu, Z., TCYB July 2021 3588-3601

Wen, C., see Ding, J., TCYB Jan. 2021 52-63

Wen, C., see Li, X., TCYB Jan. 2021 199-209

Wen, C., see Cao, Y., TCYB March 2021 1262-1271

Wen, C., see Deng, C., TCYB May 2021 2347-2358

Wen, C., see Hao, Y., TCYB Sept. 2021 4743-4754

Wen, G., see Chen, Y., TCYB Jan. 2021 28-39

Wen, G., see Hu, Y., TCYB Feb. 2021 708-721

Wen, G., see Lv, Y., TCYB May 2021 2359-2371

Wen, G., see Liu, C., TCYB May 2021 2339-2346

Wen, G., Chen, C.L.P., and Ge, S.S., Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions; TCYB Sept. 2021 4567-4580

Wen, G., see Ye, M., TCYB Oct. 2021 5021-5031

Wen, G., see Hu, H., TCYB Nov. 2021 5328-5341

Wen, G., see Wan, Y., TCYB Nov. 2021 5314-5327

Wen, J., Zhang, Z., Zhang, Z., Fei, L., and Wang, M., Generalized Incomplete Multiview Clustering With Flexible Locality Structure Diffusion; TCYB Jan. 2021 101-114

Wen, L., see Chang, M., TCYB Jan. 2021 2-15

Wen, S., see Wang, S., TCYB Jan. 2021 427-437

Wen, S., see Xiao, J., TCYB June 2021 3004-3016

Wen, S., see Gong, S., TCYB June 2021 2944-2955

Wen, S., see Zhou, P., TCYB Dec. 2021 6262-6273

Wen, Z., see Qi, F., TCYB Feb. 2021 558-567

Wen, Z., see Wu, H., TCYB Sept. 2021 4464-4475

Wen, Z., see Huang, X., TCYB Dec. 2021 5692-5705

Weng, H., Ji, S., Liu, C., Wang, T., He, Q., and Chen, J., Fast-RCM: Fast Tree-Based Unsupervised Rare-Class Mining; TCYB Oct. 2021 5198-5211

Wong, C.M., see Wang, B., TCYB Oct. 2021 5008-5020

Wong, H., see Dai, D., TCYB April 2021 2019-2031

Wong, K., see Zhang, S., TCYB Sept. 2021 4476-4487

Wong, K., see Li, X., TCYB Dec. 2021 5811-5824

Wong, T., see Pang, J., TCYB Feb. 2021 815-828

Woo, W.L., see Teo, T.T., TCYB Nov. 2021 5375-5386

Wu, A., Liu, H., and Zeng, Z., Observer Design and H_∞ Performance for Discrete-Time Uncertain Fuzzy-Logic Systems; TCYB May 2021 2398-2408

Wu, A., see Xiao, J., TCYB June 2021 3004-3016

Wu, B., Hu, W., Hu, J., and Yen, G.G., Adaptive Multiobjective Particle Swarm Optimization Based on Evolutionary State Estimation; TCYB July 2021 3738-3751

Wu, D., see Lin, C., TCYB Oct. 2021 4959-4967

Wu, E.Q., Zhou, G., Zhu, L., Wei, C., Ren, H., and Sheng, R.S.F., Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection; TCYB Jan. 2021

Wu, E.Q., Hu, D., Deng, P., Tang, Z., Cao, Y., Zhang, W., Zhu, L., and Ren, H., Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status; TCYB Nov. 2021 5483-5496

Wu, F., see Chen, Z., TCYB Jan. 2021 451-461

Wu, F., see Wang, X., TCYB March 2021 1216-1229

Wu, H., see Wang, J., TCYB Feb. 2021 927-937

Wu, H., see Wang, Z., TCYB March 2021 1359-1369

Wu, H., see Wang, J., TCYB May 2021 2433-2445

Wu, H., see Wang, J., TCYB July 2021 3845-3857

Wu, H., Chen, X., Li, P., and Wen, Z., Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network; TCYB Sept. 2021 4464-4475

Wu, H., see Wang, Z., TCYB Dec. 2021 5740-5751

Wu, H., see Wang, J., TCYB Dec. 2021 6041-6053

Wu, J., Ye, W., Wang, Y., and Su, C., A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints; TCYB Sept. 2021 4733-4742

Wu, J., Zhuge, W., Liu, X., Liu, L., and Hou, C., Fragmentary Multi-Instance Classification; TCYB Oct. 2021 5156-5169

Wu, J., and Li, X., Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control; TCYB Dec. 2021 5825-5835

Wu, L., see Ma, R., TCYB May 2021 2306-2318

Wu, L., see Zeng, Y., TCYB Oct. 2021 4934-4943

Wu, L., Park, J.H., Xie, X., and Zhao, N., Adaptive Fuzzy Tracking Control for a Class of Uncertain Switched Nonlinear Systems With Full-State Constraints and Input Saturations; TCYB Dec. 2021 6054-6065

Wu, M., see Lin, W., TCYB March 2021 1311-1321

Wu, M., see Yu, N., TCYB Aug. 2021 3952-3963

Wu, Q.M.J., see Bouraffa, T., TCYB Oct. 2021 5105-5115

Wu, W., see Qi, F., TCYB Feb. 2021 558-567

Wu, X., see Li, L., TCYB April 2021 2142-2152

Wu, X., Chen, J., Yu, F., Yao, M., and Luo, J., Joint Learning of Multiple Latent Domains and Deep Representations for Domain Adaptation; TCYB May 2021 2676-2687

Wu, X., see Wang, C., TCYB Oct. 2021 4770-4783

Wu, Y., Dong, Y., Qin, J., and Pedrycz, W., Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making; TCYB Feb. 2021 649-659

Wu, Y., see Li, H., TCYB March 2021 1163-1174

Wu, Y., and Wang, Z., Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults; TCYB March 2021 1150-1162

Wu, Y., Pan, Y., Chen, M., and Li, H., Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems; TCYB June 2021 2870-2881

Wu, Y., see Toyoda, M., TCYB June 2021 3079-3092

Wu, Y., Liang, H., Zhang, Y., and Ahn, C.K., Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems; TCYB Nov. 2021 5214-5224

Wu, Z., see Xu, Y., TCYB Jan. 2021 258-266

Wu, Z., see Xu, Y., TCYB March 2021 1370-1379

Wu, Z., see Cheng, B., TCYB March 2021 1241-1252

Wu, Z., see Deng, C., TCYB April 2021 1812-1821

Wu, Z., see Dong, S., TCYB June 2021 3054-3061

Wu, Z., Sun, J., Zhang, Y., Zhu, Y., Li, J., Plaza, A., Benediktsson, J.A., and Wei, Z., Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures; TCYB July 2021 3588-3601

Wu, Z., see Hu, Z., TCYB July 2021 3779-3788

\mathbf{X}

Xia, C., see Wang, Z., TCYB March 2021 1454-1462

Xia, C., see Cai, X., TCYB May 2021 2639-2650

Xia, J., see Zhuang, G., TCYB March 2021 1189-1203

Xia, X., see Huang, Z., TCYB Oct. 2021 5130-5141

Xia, Y., see Zhang, J., TCYB April 2021 2120-2130

Xia, Y., see Yang, H., TCYB June 2021 3093-3102

Xia, Y., see Yang, H., TCYB Aug. 2021 4227-4236

Xia, Y., see Chai, R., TCYB Aug. 2021 4035-4049

Xia, Y., see Bouraffa, T., TCYB Oct. 2021 5105-5115

Xia, Y., see Yang, H., TCYB Nov. 2021 5511-5521

Xia, Z., Liu, Y., Lu, J., Cao, J., and Rutkowski, L., Penalty Method for Constrained Distributed Quaternion-Variable Optimization; TCYB Nov. 2021 5631-5636

Xiang, G., and Su, J., Task-Oriented Deep Reinforcement Learning for Robotic Skill Acquisition and Control; *TCYB Feb. 2021 1056-1069*

Xiang, T., see Lu, Q., TCYB June 2021 3224-3237

Xiang, Z., see Li, S., TCYB Aug. 2021 4011-4020

Xiao, B., and Yin, S., Large-Angle Velocity-Free Attitude Tracking Control of Satellites: An Observer-Free Framework; TCYB Sept. 2021 4722-4732

Xiao, B., see Bouraffa, T., TCYB Oct. 2021 5105-5115

Xiao, G., see Song, K., TCYB May 2021 2699-2711

Xiao, H., see Lin, W., TCYB March 2021 1478-1492

Xiao, J., Zeng, Z., Wen, S., Wu, A., and Wang, L., A Unified Framework Design for Finite-Time and Fixed-Time Synchronization of Discontinuous Neural Networks; TCYB June 2021 3004-3016

Xiao, J., Zhang, T., Du, J., and Zhang, X., An Evolutionary Multiobjective Route Grouping-Based Heuristic Algorithm for Large-Scale Capacitated Vehicle Routing Problems; TCYB Aug. 2021 4173-4186

Xiao, Q., and Huang, T., Quasisynchronization of Discrete-Time Inertial Neural Networks With Parameter Mismatches and Delays; TCYB April 2021 2290-2295

Xiao, S., Ge, X., Han, Q., and Zhang, Y., Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks; TCYB July 2021 3676-3686

Xiao, W., see Zhang, K., TCYB June 2021 3285-3297

Xiao, Y., see Gan, R., TCYB Feb. 2021 994-1003

Xie, H., see Pang, J., TCYB Feb. 2021 815-828

Xie, S., see Wang, Y., TCYB Jan. 2021 297-308

Xie, S., see Yang, Z., TCYB June 2021 3249-3262

Xie, S., see Chen, Q., TCYB Oct. 2021 5032-5045

Xie, S., see Zhang, K., TCYB Nov. 2021 5455-5467

Xie, W., Shen, L., and Duan, J., Adaptive Weighting of Handcrafted Feature Losses for Facial Expression Recognition; TCYB May 2021 2787-2800

Xie, W., Zhang, X., Li, Y., Lei, J., Li, J., and Du, Q., Weakly Supervised Low-Rank Representation for Hyperspectral Anomaly Detection; TCYB Aug. 2021 3889-3900

Xie, X., see Zhang, H., TCYB April 2021 2068-2079

Xie, X., see Zhang, R., TCYB May 2021 2384-2397

Xie, X., see Liu, J., TCYB Aug. 2021 4000-4010

Xie, X., see Hu, S., TCYB Sept. 2021 4591-4601

Xie, X., see Wang, Y., TCYB Nov. 2021 5279-5290

Xie, X., see Wu, L., TCYB Dec. 2021 6054-6065

Xie, Y., see Liu, J., TCYB Feb. 2021 839-852

Xing, L., see Zhou, S., TCYB March 2021 1430-1442

Xing, L., Chen, B., Du, S., Gu, Y., and Zheng, N., Correntropy-Based Multiview Subspace Clustering; TCYB June 2021 3298-3311

Xiong, C., see Huang, T., TCYB Nov. 2021 5595-5608

Xiong, F., see Wang, L., TCYB May 2021 2663-2675

Xiong, G., see Ye, P., TCYB Dec. 2021 5897-5906

Xiong, H., see Lin, W., TCYB March 2021 1478-1492

Xiong, K., Iu, H.H.C., and Wang, S., Kernel Correntropy Conjugate Gradient Algorithms Based on Half-Quadratic Optimization; TCYB Nov. 2021 5497-5510

Xiong, Q., Zhang, Q., Lin, P., Ren, W., and Gui, W., Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints; TCYB Sept. 2021 4716-4721

Xiong, T., see Tao, X., TCYB May 2021 2504-2517

Xu, B., Wang, X., Chen, W., and Shi, P., Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism; TCYB Aug. 2021 3975-2087

Xu, G., see Yu, Y., TCYB Feb. 2021 521-533

Xu, G., see Zhou, G., TCYB March 2021 1666-1677

Xu, H., see Zhang, J., TCYB April 2021 2120-2130

Xu, H., Zeng, W., Zeng, X., and Yen, G.G., A Polar-Metric-Based Evolutionary Algorithm; TCYB July 2021 3429-3440

Xu, H., see Feng, H., TCYB Oct. 2021 5082-5092

Xu, J., see Zhou, G., TCYB March 2021 1666-1677

Xu, J., Yu, M., Shao, L., Zuo, W., Meng, D., Zhang, L., and Zhang, D., Scaled Simplex Representation for Subspace Clustering; TCYB March 2021 1493-1505

Xu, J., see Huang, F., TCYB March 2021 1506-1518

Xu, J., see Hong, D., TCYB July 2021 3602-3615

Xu, J., and Mao, Z., Multilabel Feature Extraction Algorithm via Maximizing Approximated and Symmetrized Normalized Cross-Covariance Operator; TCYB July 2021 3510-3523

Xu, L., see Ma, H., TCYB April 2021 1913-1928

Xu, P., see Lin, X., TCYB Feb. 2021 970-983

Xu, R., see Huang, Y., TCYB Nov. 2021 5397-5408

Xu, S., see Song, C., TCYB June 2021 3071-3078

Xu, S., see Dong, Y., TCYB Aug. 2021 4201-4211

Xu, T., see Cai, X., TCYB Sept. 2021 4488-4500

Xu, X., Tsang, I.W., and Liu, C., Complementary Attributes: A New Clue to Zero-Shot Learning; TCYB March 2021 1519-1530

Xu, X., and Yoneda, M., Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model; TCYB May 2021 2577-2586

Xu, X., see Yu, J., TCYB Sept. 2021 4350-4362

Xu, Y., see Yang, P., TCYB Jan. 2021 233-246

Xu, Y., see Li, J., TCYB Jan. 2021 462-472

Xu, Y., Wu, Z., and Pan, Y., Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication; TCYB Jan. 2021 258-266

Xu, Y., Wu, Z., and Pan, Y., Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks; TCYB March 2021 1370-1379

Xu, Y., see Yu, N., TCYB Aug. 2021 3952-3963

Xu, Y., see Li, D., TCYB Dec. 2021 6119-6130

Xu, Z., see Gou, X., TCYB Jan. 2021 283-296

Xu, Z., see Wang, K., TCYB March 2021 1556-1570

Xu, Z., see Zhang, K., TCYB Nov. 2021 5455-5467

Xu, Z., Liu, Y., and Li, C., Distributed Semi-Supervised Learning With Missing Data; TCYB Dec. 2021 6165-6178

Xue, B., see Zhang, Z., TCYB Feb. 2021 1015-1027

Xue, B., see Nguyen, B.H., TCYB Feb. 2021 589-603

Xue, B., see Bi, Y., TCYB April 2021 1769-1783

Xue, B., see Peng, B., TCYB Oct. 2021 4909-4923

Xue, B., see Lensen, A., TCYB Nov. 2021 5468-5482

Xue, B., see Nguyen, B.H., TCYB Dec. 2021 6319-6332

Xue, C., see Yu, X., TCYB April 2021 1822-1834

Xue, J., He, K., Nie, D., Adeli, E., Shi, Z., Lee, S., Zheng, Y., Liu, X., Li, D., and Shen, D., Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation; TCYB April 2021 2153-2165

Y

Yan, C., see Yang, H., TCYB Aug. 2021 4227-4236

Yan, H., see Wang, Y., TCYB Jan. 2021 297-308

Yan, H., see Yu, Y., TCYB Feb. 2021 521-533

Yan, H., see Zhang, X., TCYB Feb. 2021 1043-1055

Yan, H., see Ren, C., TCYB April 2021 2006-2018

Yan, H., see Zhu, H., TCYB Aug. 2021 4062-4074

Yan, J., see Ma, Q., TCYB March 2021 1613-1625

Yan, J., see Wang, X., TCYB Sept. 2021 4540-4552

Yan, J., see Li, Z., TCYB Dec. 2021 6131-6140

Yan, K., Wang, X., Kim, J., and Feng, D., A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection; *TCYB Dec.* 2021 5907-5920

Yan, L., see Bouraffa, T., TCYB Oct. 2021 5105-5115

Yan, S., see Ren, C., TCYB April 2021 2166-2177

Yan, T., see Zhang, X., TCYB Feb. 2021 1043-1055

Yan, W., see Yang, Z., TCYB June 2021 3249-3262

Yan, W., see Bai, X., TCYB Dec. 2021 6274-6283

Yan, X., see Zhang, K., TCYB March 2021 1230-1240

Yan, X., see Fan, Q., TCYB May 2021 2712-2724

Yan, Z., see Wang, S., TCYB Jan. 2021 427-437

Yan, Z., see Wang, L., TCYB May 2021 2663-2675

Yang, B., Hao, M., Han, M., Zhao, X., and Zong, G., Exponential Stability of Discrete-Time Neural Networks With Large Delay; TCYB May 2021 2824-2834

Yang, B., see Li, H., TCYB Dec. 2021 6188-6199

Yang, C., see Ogenyi, U.E., TCYB April 2021 1888-1901

Yang, C., see Yu, X., TCYB April 2021 1822-1834

Yang, C., see Feng, L., TCYB June 2021 3212-3223

Yang, C., see Huang, H., TCYB July 2021 3824-3835

Yang, C., see Zhang, Y., TCYB Aug. 2021 4286-4297

Yang, D., see Wang, L., TCYB May 2021 2663-2675

Yang, F., see Mousavinejad, E., TCYB April 2021 2107-2119

Yang, F., see Qu, H., TCYB July 2021 3767-3778

Yang, G., see Jing, Y., TCYB Feb. 2021 568-578

Yang, G., see Ma, H., TCYB April 2021 1913-1928

Yang, G., see Wang, X., TCYB June 2021 3062-3070

Yang, G., see Wang, X., TCYB Aug. 2021 4125-4133

Yang, G., see Lu, A., TCYB Nov. 2021 5304-5313

Yang, H., Zhao, H., Xia, Y., and Zhang, J., Event-Triggered Active MPC for Nonlinear Multiagent Systems With Packet Losses; TCYB June 2021 3093-3102

Yang, H., see Li, Z., TCYB July 2021 3441-3454

Yang, H., Li, P., Xia, Y., and Yan, C., H_{∞} Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme; TCYB Aug. 2021 4227-4236

Yang, H., see Zhang, Z., TCYB Aug. 2021 4312-4326

Yang, H., Li, H., Xia, Y., and Li, L., Distributed Kalman Filtering Over Sensor Networks With Transmission Delays; TCYB Nov. 2021 5511-5521

Yang, J., see Lu, J., TCYB April 2021 2278-2283

Yang, J., see Feng, G., TCYB April 2021 2080-2092

Yang, J., see Lu, W., TCYB May 2021 2625-2638

Yang, J., Shang, C., Li, Y., Li, F., and Shen, Q., ANFIS Construction With Sparse Data via Group Rule Interpolation; TCYB May 2021 2773-2786

Yang, J., see Chen, S., TCYB June 2021 3371-3383

Yang, J., see Zhou, Y., TCYB Nov. 2021 5423-5432

Yang, L., Song, S., Li, S., Chen, Y., and Chen, C.L.P., Discriminative Dimension Reduction via Maximin Separation Probability Analysis; TCYB Aug. 2021 4100-4111

Yang, P., Zhou, F., Ni, D., Xu, Y., Chen, S., Wang, T., and Lei, B., Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment; *TCYB Jan. 2021 233-246*

Yang, Q., Sun, J., and Chen, J., Output Consensus for Heterogeneous Linear Multiagent Systems With a Predictive Event-Triggered Mechanism; TCYB April 2021 1993-2005

Yang, Q., see Ren, Y., TCYB Oct. 2021 4796-4807

Yang, S., see Feng, Z., TCYB Jan. 2021 346-358

Yang, S., Zhang, L., He, X., and Yi, Z., Learning Manifold Structures With Subspace Segmentations; TCYB April 2021 1981-1992

Yang, S., see Wang, S., TCYB Aug. 2021 4212-4226

Yang, S., see Jiao, R., TCYB Oct. 2021 4834-4847

Yang, S.X., see Ren, Z., TCYB June 2021 3273-3284

Yang, W., Yu, W., Lv, Y., Zhu, L., and Hayat, T., Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems; TCYB June 2021 3039-3053

Yang, W., see Song, T., TCYB Aug. 2021 4251-4264

Yang, W., see Hu, B., TCYB Sept. 2021 4373-4385

Yang, W., see Kong, L., TCYB Oct. 2021 4873-4884

Yang, X., and He, H., Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning; TCYB Feb. 2021 635-648

Yang, X., see Wei, Q., TCYB May 2021 2372-2383

Yang, X., He, H., and Zhong, X., Approximate Dynamic Programming for Nonlinear-Constrained Optimizations; TCYB May 2021 2419-2432

Yang, X., see Li, H., TCYB Sept. 2021 4623-4633

Yang, X., and He, H., Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning; *TCYB Oct. 2021 4860-4872*

Yang, X., Gao, X., Song, B., and Han, B., Hierarchical Deep Embedding for Aurora Image Retrieval; TCYB Dec. 2021 5773-5785

Yang, Y., see Han, H., TCYB Feb. 2021 801-814

Yang, Y., Fan, D., Du, S., Wang, M., Chen, B., and Gao, Y., Point Set Registration With Similarity and Affine Transformations Based on Bidirectional KMPE Loss; TCYB March 2021 1678-1689

Yang, Y., Li, Y., Yue, D., Tian, Y., and Ding, X., Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks; TCYB June 2021 2916-2928

Yang, Y., see Luo, B., TCYB July 2021 3630-3640

Yang, Y., see Jing, M., TCYB July 2021 3390-3403

Yang, Y., Shi, Y., and Constantinescu, D., Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation; TCYB July 2021 3469-3482

Yang, Y., Zhang, X., He, W., Han, Q., and Peng, C., Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays; TCYB Aug. 2021 4337-4347

Yang, Z., Liang, N., Yan, W., Li, Z., and Xie, S., Uniform Distribution Non-Negative Matrix Factorization for Multiview Clustering; TCYB June 2021 3249-3262

Yao, J., see Yu, J., TCYB April 2021 1731-1742

Yao, M., see Wu, X., TCYB May 2021 2676-2687

Yazidi, A., Hammer, H.L., Samouylov, K., and Herrera-Viedma, E.E., Game-Theoretic Learning for Sensor Reliability Evaluation Without Knowledge of the Ground Truth; TCYB Dec. 2021 5706-5716

Ye, H., Li, H., and Chen, C.L.P., Adaptive Deep Cascade Broad Learning System and Its Application in Image Denoising; TCYB Sept. 2021 4450-4463

Ye, J., see Liu, Z., TCYB Sept. 2021 4602-4610

Ye, M., Yin, L., Wen, G., and Zheng, Y., On Distributed Nash Equilibrium Computation: Hybrid Games and a Novel Consensus-Tracking Perspective; TCYB Oct. 2021 5021-5031

Ye, P., Wang, X., Xiong, G., Chen, S., and Wang, F., TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution; TCYB Dec. 2021 5897-5906

Ye, W., see Wu, J., TCYB Sept. 2021 4733-4742

Yen, G.G., see Zhang, K., TCYB Feb. 2021 722-735

Yen, G.G., see Zhou, Y., TCYB March 2021 1626-1638

Yen, G.G., see Wu, B., TCYB July 2021 3738-3751

Yen, G.G., see Xu, H., TCYB July 2021 3429-3440

Yen, G.G., see Zhang, K., TCYB Nov. 2021 5455-5467

Yi, D., see Tao, H., TCYB March 2021 1690-1703

Yi, J., see Tao, X., TCYB May 2021 2504-2517

Yi, Z., see Zhou, Y., TCYB March 2021 1626-1638

Yi, Z., see Yang, S., TCYB April 2021 1981-1992

Yin, G., see Liang, S., TCYB May 2021 2529-2539

Yin, J., see Wang, D., TCYB Jan. 2021 473-482

Yin, J., see Zhang, L., TCYB Aug. 2021 4265-4276

Yin, L., Ni, Q., and Deng, Z., Intelligent Multisensor Cooperative Localization

Under Cooperative Redundancy Validation; TCYB April 2021 2188-2200

Yin, L., see Ye, M., TCYB Oct. 2021 5021-5031

Yin, S., see Xiao, B., TCYB Sept. 2021 4722-4732

Yin, T., see Liu, J., TCYB Jan. 2021 162-173

Yokoya, N., see Hong, D., TCYB July 2021 3602-3615

Yoneda, M., see Xu, X., TCYB May 2021 2577-2586

Yoo, S., see Kim, U., TCYB Sept. 2021 4528-4539

Yoo, Y., Kim, U., and Kim, J., Recurrent Reconstructive Network for Sequential Anomaly Detection; TCYB March 2021 1704-1715

Yoshimura, Y., see Hashimoto, K., TCYB Dec. 2021 6294-6304

You, J., see Li, J., TCYB Feb. 2021 534-547

You, J., see Dai, D., TCYB April 2021 2019-2031

You, L., see Ke, C., TCYB Aug. 2021 4162-4172

You, X., see Li, K., TCYB Dec. 2021 5850-5858

You, Z., see Wang, L., TCYB Nov. 2021 5522-5531

Yu, F., see Wu, X., TCYB May 2021 2676-2687

Yu, G., see Tan, Q., TCYB March 2021 1716-1727

Yu, G., see Wang, J., TCYB July 2021 3576-3587

Yu, J., Yao, J., Zhang, J., Yu, Z., and Tao, D., SPRNet: Single-Pixel Reconstruction for One-Stage Instance Segmentation; TCYB April 2021 1731-1742

Yu, J., Dong, X., Li, Q., Lu, J., and Ren, Z., Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders; TCYB April 2021 2265-2277

Yu, J., see Feng, L., TCYB June 2021 3212-3223

Yu, J., see Li, Z., TCYB July 2021 3441-3454

Yu, J., Xu, X., Gao, F., Shi, S., Wang, M., Tao, D., and Huang, Q., Toward Realistic Face Photo–Sketch Synthesis via Composition-Aided GANs; TCYB Sept. 2021 4350-4362

Yu, M., see Xu, J., TCYB March 2021 1493-1505

Yu, N., Wu, M., Liu, J., Zheng, C., and Xu, Y., Correntropy-Based Hypergraph Regularized NMF for Clustering and Feature Selection on Multi-Cancer Integrated Data; TCYB Aug. 2021 3952-3963

Yu, P.S., see Gan, W., TCYB Feb. 2021 487-500

Yu, P.S., see Liu, B., TCYB March 2021 1571-1585

Yu, T., see Qi, F., TCYB Feb. 2021 558-567

Yu, W., see Wang, H., TCYB March 2021 1347-1358

Yu, W., see Tian, F., TCYB April 2021 2232-2241

Yu, W., see Yang, W., TCYB June 2021 3039-3053

Yu, W., see Ge, Y., TCYB Oct. 2021 4808-4821

Yu, W., see Hu, H., TCYB Nov. 2021 5328-5341

Yu, W., see Li, Z., TCYB Dec. 2021 6131-6140

Yu, X., Wang, T., Qiu, J., and Gao, H., Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems; TCYB Feb. 2021 938-946

Yu, X., see Shen, D., TCYB March 2021 1286-1299

Yu, X., He, W., Li, Y., Xue, C., Li, J., Zou, J., and Yang, C., Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration ; TCYB April 2021 1822-1834

Yu, X., see Lv, Y., TCYB May 2021 2359-2371

Yu, X., see Gaeini, N., TCYB Aug. 2021 4277-4285

Yu, X., see Wan, Y., TCYB Nov. 2021 5314-5327

Yu, Y., see Chen, Y., TCYB Jan. 2021 28-39

Yu, Y., Xu, G., Jiang, M., Zhu, H., Dai, D., and Yan, H., Joint Transformation Learning via the L_{2,1}-Norm Metric for Robust Graph Matching; *TCYB Feb.* 2021 521-533

Yu, Y., see Liu, J., TCYB June 2021 3263-3272

Yu, Y., see Li, H., TCYB Dec. 2021 6188-6199

Yu, Z., see Hu, Y., TCYB Feb. 2021 708-721

Yu, Z., see Ma, Q., TCYB March 2021 1613-1625

Yu, Z., see Yu, J., TCYB April 2021 1731-1742

Yu, Z., see Dai, D., TCYB April 2021 2019-2031

Yu, Z., see Wang, L., TCYB May 2021 2663-2675

Yu, Z., see Wang, J., TCYB July 2021 3576-3587

Yu, Z.L., see Qi, F., TCYB Feb. 2021 558-567

Yuan, A., see Li, X., TCYB Feb. 2021 913-926

Yuan, C., see Zhang, J., TCYB Feb. 2021 750-764

Yuan, H., see Zhao, T., TCYB July 2021 3752-3766

Yuan, H., see Huang, Z., TCYB Nov. 2021 5559-5572

Yuan, X., Dong, L., and Sun, C., Solver-Critic: A Reinforcement Learning Method for Discrete-Time-Constrained-Input Systems; TCYB Nov. 2021 5619-5630

Yuan, Y., see Liu, W., TCYB Feb. 2021 1085-1093

Yuan, Y., see Feng, Y., TCYB April 2021 1849-1859

Yuan, Y., see Zhang, P., TCYB June 2021 2956-2968

Yuan, Y., Ning, H., and Lu, X., Bio-Inspired Representation Learning for Visual Attention Prediction; TCYB July 2021 3562-3575

Yuan, Y., see Gao, J., TCYB Oct. 2021 4822-4833

Yuan, Y., Guo, L., and Liu, H., Model Predictive Cooperative Control With ISM for Multiagent Systems Under Stochastic Communication Protocol; TCYB Dec. 2021 6004-6016

Yue, D., see Zhang, B., TCYB Jan. 2021 267-282

Yue, D., see Liu, J., TCYB Jan. 2021 162-173

Yue, D., see Zhang, H., TCYB April 2021 2068-2079

Yue, D., see Chu, H., TCYB April 2021 2296-2302

Yue, D., see Yang, Y., TCYB June 2021 2916-2928

Yue, D., see Liu, J., TCYB Aug. 2021 4000-4010

Yue, D., see Hu, S., TCYB Sept. 2021 4591-4601

\mathbf{Z}

Zajc, L.C., see Lukezic, A., TCYB Dec. 2021 6305-6318

Zandavi, S.M., Chung, V.Y.Y., and Anaissi, A., Stochastic Dual Simplex Algorithm: A Novel Heuristic Optimization Algorithm; TCYB May 2021 2725-2734

Zeng, D., see Zhang, R., TCYB May 2021 2384-2397

Zeng, F., see Song, K., TCYB May 2021 2699-2711

Zeng, K., see Le, J., TCYB Aug. 2021 3874-3888

Zeng, N., see Liu, W., TCYB Feb. 2021 1085-1093

Zeng, S., see Jiao, R., TCYB Oct. 2021 4834-4847

Zeng, W., see Xu, H., TCYB July 2021 3429-3440

Zeng, X., see Song, B., TCYB Jan. 2021 438-450

Zeng, X., see Xu, H., TCYB July 2021 3429-3440

Zeng, Y., Lam, H., and Wu, L., Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework; TCYB Oct. 2021 4934-4943

Zeng, Y., Chen, J., and Huang, G., Slice-Based Online Convolutional Dictionary Learning; TCYB Oct. 2021 5116-5129

Zeng, Z., see Sheng, Y., TCYB Feb. 2021 579-588

Zeng, Z., see Zhang, H., TCYB Feb. 2021 660-672

Zeng, Z., see Zhang, Y., TCYB April 2021 1875-1887

Zeng, Z., see Wang, L., TCYB May 2021 2813-2823

Zeng, Z., see Wu, A., TCYB May 2021 2398-2408

Zeng, Z., see Shi, J., TCYB May 2021 2540-2549

Zeng, Z., see Xiao, J., TCYB June 2021 3004-3016

Zeng, Z., see Zhang, F., TCYB June 2021 3027-3038

Zeng, Z., see Zhang, F., TCYB Dec. 2021 6333-6344

Zeng, Z., see Chen, J., TCYB Dec. 2021 0555-0542 **Zeng, Z.,** see Chen, J., TCYB Dec. 2021 5993-6003

Zhan, Z., see Wang, Z., TCYB March 2021 1175-1188

Zhan, Z., see Wang, Z., TCTB March 2021 1173-**Zhan, Z.,** see Li, J., TCYB Aug. 2021 3925-3937

Zhan, Z., see Ge, Y., TCYB Oct. 2021 4808-4821

Zhan, Z., see Li, J., TCYB Oct. 2021 4848-4859

Zhan, Z., see Chen, Z., TCYB Nov. 2021 5433-5444

Zhang, B., Dou, C., Yue, D., Zhang, Z., and Zhang, T., A Packet Loss-Dependent Event-Triggered Cyber-Physical Cooperative Control Strategy for Islanded Microgrid; TCYB Jan. 2021 267-282

Zhang, B., see Li, J., TCYB Jan. 2021 462-472

Zhang, B., see Li, J., TCYB Feb. 2021 534-547

Zhang, C., Chen, Z., Wang, J., Liu, Z., and Chen, C.L.P., Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint; TCYB Jan. 2021 210-221

Zhang, C., see Lin, W., TCYB March 2021 1311-1321

Zhang, C., see Chang, L., TCYB Sept. 2021 4695-4706

Zhang, C., see Ren, Y., TCYB Oct. 2021 4796-4807

Zhang, D., see Li, C., TCYB Jan. 2021 88-100

Zhang, D., see Li, J., TCYB Feb. 2021 534-547

Zhang, D., see Xu, J., TCYB March 2021 1493-1505

Zhang, D., Tang, Y., Ding, Z., and Qian, F., Event-Based Resilient Formation Control of Multiagent Systems; *TCYB May 2021 2490-2503*

Zhang, D., see Zhang, L., TCYB Aug. 2021 4265-4276

Zhang, D., see Zhou, D., TCYB Dec. 2021 5681-5691

Zhang, D., see Zhang, L., TCYB Dec. 2021 5883-5896

Zhang, F., Mei, Y., Nguyen, S., and Zhang, M., Evolving Scheduling Heuristics via Genetic Programming With Feature Selection in Dynamic Flexible Job-Shop Scheduling; TCYB April 2021 1797-1811

Zhang, F., and Zeng, Z., Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation; TCYB June 2021 3027-3038

Zhang, F., and Zeng, Z., Multiple Mittag-Leffler Stability of Delayed Fractional-Order Cohen–Grossberg Neural Networks via Mixed Monotone Operator Pair; TCYB Dec. 2021 6333-6344

Zhang, G., Chu, S., Jin, X., and Zhang, W., Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input; TCYB May 2021 2327-2338

Zhang, G., see Liu, A., TCYB June 2021 3198-3211

Zhang, H., Duan, J., Wang, Y., and Gao, Z., Bipartite Fixed-Time Output Consensus of Heterogeneous Linear Multiagent Systems; TCYB Feb. 2021 548-557

Zhang, H., see Ma, J., TCYB Feb. 2021 1028-1042

Zhang, H., and Zeng, Z., Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques; TCYB Feb. 2021 660-672

Zhang, H., Liu, Y., and Wang, Y., Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints; TCYB March 2021 1110-1120

Zhang, H., Yue, D., Dou, C., Li, K., and Xie, X., Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response; TCYB April 2021 2068-2079

Zhang, H., see Song, R., TCYB June 2021 2929-2943

Zhang, H., see Wang, Y., TCYB July 2021 3858-3870

Zhang, H., Song, A., Li, H., and Shen, S., Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation; TCYB July 2021 3724-3737

Zhang, H., see Le, J., TCYB Aug. 2021 3874-3888

Zhang, H., see Wang, X., TCYB Sept. 2021 4400-4413

Zhang, H., see Luo, G., TCYB Oct. 2021 4994-5007

Zhang, H., see Wang, Y., TCYB Nov. 2021 5279-5290

Zhang, H., see Liu, Y., TCYB Dec. 2021 5647-5658

Zhang, H., see Sun, S., TCYB Dec. 2021 6213-6225

Zhang, J., see Gan, W., TCYB Feb. 2021 487-500

Zhang, J., Yuan, C., Stegagno, P., He, H., and Wang, C., Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems; TCYB Feb. 2021 750-764

Zhang, J., see Zhu, Q., TCYB Feb. 2021 765-778

Zhang, J., see He, X., TCYB March 2021 1651-1665

Zhang, J., see Wang, Z., TCYB March 2021 1175-1188

Zhang, J., see Yu, J., TCYB April 2021 1731-1742

Zhang, J., Zheng, W.X., Xu, H., and Xia, Y., Observer-Based Event-Driven Control for Discrete-Time Systems With Disturbance Rejection; TCYB April 2021 2120-2130

Zhang, J., see Yang, H., TCYB June 2021 3093-3102

Zhang, J., see Wang, Y., TCYB July 2021 3858-3870

Zhang, J., see Zhao, T., TCYB July 2021 3752-3766

Zhang, J., see Zhao, T., TCYB July 2021 3752-3766

Zhang, J., Liu, M., Lu, K., and Gao, Y., Group-Wise Learning for Aurora Image Classification With Multiple Representations; *TCYB Aug. 2021 4112-4124*

Zhang, J., see Li, J., TCYB Aug. 2021 3925-3937

Zhang, J., see Zhang, X., TCYB Aug. 2021 4237-4250

Zhang, J., see Chen, J., TCYB Aug. 2021 4134-4147

Zhang, J., see Ge, Y., TCYB Oct. 2021 4808-4821

Zhang, J., see Li, J., TCYB Oct. 2021 4848-4859

Zhang, J., see Chen, Z., TCYB Nov. 2021 5433-5444

Zhang, J., see Huang, Z., TCYB Nov. 2021 5559-5572

Zhang, J., see Wang, Y., TCYB Nov. 2021 5279-5290

Zhang, J., see Zhang, Z., TCYB Dec. 2021 6105-6118

Zhang, J., see Sun, S., TCYB Dec. 2021 6213-6225

Zhang, K., Yen, G.G., and He, Z., Evolutionary Algorithm for Knee-Based Multiple Criteria Decision Making; TCYB Feb. 2021 722-735

Zhang, K., Jiang, B., Chen, M., and Yan, X., Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems; TCYB March 2021 1230-1240

Zhang, K., Luo, J., Xiao, W., Zhang, W., Liu, H., Zhu, J., Lu, Z., Rong, Y., de Silva, C.W., and Fu, C., A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis; TCYB June 2021 3285-3297

Zhang, K., Xu, Z., Xie, S., and Yen, G.G., Evolution Strategy-Based Many-Objective Evolutionary Algorithm Through Vector Equilibrium; TCYB Nov. 2021 5455-5467

Zhang, K., see Wang, W., TCYB Dec. 2021 6066-6079

Zhang, K., see Sun, S., TCYB Dec. 2021 6213-6225

Zhang, L., Song, L., Du, B., and Zhang, Y., Nonlocal Low-Rank Tensor Completion for Visual Data; TCYB Feb. 2021 673-685

Zhang, L., see Xu, J., TCYB March 2021 1493-1505

Zhang, L., Zhao, J., and Li, W., Online and Unsupervised Anomaly Detection for Streaming Data Using an Array of Sliding Windows and PDDs; TCYB April 2021 2284-2289

Zhang, L., see Yang, S., TCYB April 2021 1981-1992

Zhang, L., see Han, H., TCYB Aug. 2021 3938-3951

Zhang, L., see Han, H., TCYB Aug. 2021 3938-3951

Zhang, L., Liang, R., Yin, J., Zhang, D., and Shao, L., Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context; TCYB Aug. 2021 4265-4276

Zhang, L., Ju, X., Shang, Y., and Li, X., Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition; TCYB Dec. 2021 5671-5680

Zhang, L., Duan, Q., Zhang, D., Jia, W., and Wang, X., AdvKin: Adversarial Convolutional Network for Kinship Verification; TCYB Dec. 2021 5883-

Zhang, M., see Nguyen, B.H., TCYB Feb. 2021 589-603

Zhang, M., see Nguyen, S., TCYB March 2021 1403-1416

Zhang, M., and Jing, X., A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations; TCYB April 2021 1743-1755

Zhang, M., see Zhang, F., TCYB April 2021 1797-1811

Zhang, M., see Bi, Y., TCYB April 2021 1769-1783

Zhang, M., see Peng, B., TCYB Oct. 2021 4909-4923

Zhang, M., see Lensen, A., TCYB Nov. 2021 5468-5482

Zhang, M., see Nguyen, B.H., TCYB Dec. 2021 6319-6332

Zhang, P., Yuan, Y., and Guo, L., Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach; *TCYB June 2021 2956-2968*

Zhang, Q., see Zhou, S., TCYB March 2021 1430-1442

Zhang, Q., see Cai, X., TCYB May 2021 2639-2650

Zhang, Q., see Zuo, X., TCYB July 2021 3549-3561

Zhang, Q., see Xiong, Q., TCYB Sept. 2021 4716-4721

Zhang, R., Zeng, D., Park, J.H., Lam, H., and Xie, X., Fuzzy Sampled-Data Control for Synchronization of T-S Fuzzy Reaction-Diffusion Neural Networks With Additive Time-Varying Delays; TCYB May 2021 2384-2397

Zhang, S., Li, X., Lin, Q., and Wong, K., Nature-Inspired Compressed Sensing for Transcriptomic Profiling From Random Composite Measurements; TCYB Sept. 2021 4476-4487 Zhang, S., see Li, X., TCYB Dec. 2021 5811-5824

Zhang, T., see Zhang, B., TCYB Jan. 2021 267-282

Zhang, T., see Li, K., TCYB June 2021 3103-3114

Zhang, T., see Xiao, J., TCYB Aug. 2021 4173-4186

Zhang, T., see Zhang, X., TCYB Sept. 2021 4386-4399

Zhang, W., see Li, Z., TCYB April 2021 2253-2264

Zhang, W., see Zhang, G., TCYB May 2021 2327-2338

Zhang, W., see Zhang, K., TCYB June 2021 3285-3297

Zhang, W., see Wu, E.Q., TCYB Nov. 2021 5483-5496

Zhang, X., Ou-Yang, L., Yan, T., Hu, X.T., and Yan, H., A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types; TCYB Feb. 2021 1043-1055

Zhang, X., Wang, Y., Zhu, G., Chen, X., Li, Z., Wang, C., and Su, C., Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification; TCYB March 2021 1121-1133

Zhang, X., see Tan, Q., TCYB March 2021 1716-1727

Zhang, X., see Huang, F., TCYB March 2021 1506-1518

Zhang, X., see Li, H., TCYB May 2021 2319-2326

Zhang, X., see Tian, Y., TCYB June 2021 3115-3128

Zhang, X., Chan, K.W., Li, H., Wang, H., Qiu, J., and Wang, G., Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model; TCYB June 2021 3157-3170

Zhang, X., Ma, J., Cheng, Z., Huang, S., Ge, S.S., and Lee, T.H., Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction; TCYB July 2021 3616-3629

Zhang, X., see Xiao, J., TCYB Aug. 2021 4173-4186

Zhang, X., see Xie, W., TCYB Aug. 2021 3889-3900

Zhang, X., Ma, S., Wang, S., Zhang, J., Sun, H., and Gao, W., Divisively Normalized Sparse Coding: Toward Perceptual Visual Signal Representation; TCYB Aug. 2021 4237-4250

Zhang, X., see Yang, Y., TCYB Aug. 2021 4337-4347

Zhang, X., see Liu, Y., TCYB Sept. 2021 4439-4449

Zhang, X., see Feng, J., TCYB Sept. 2021 4414-4428

Zhang, X., Liu, J., Shen, J., Li, S., Hou, K., Hu, B., Gao, J., Zhang, T., and Hu, B., Emotion Recognition From Multimodal Physiological Signals Using a Regularized Deep Fusion of Kernel Machine; TCYB Sept. 2021 4386-4399

Zhang, X., see Chang, L., TCYB Sept. 2021 4695-4706

Zhang, X., see Wang, X., TCYB Oct. 2021 4924-4933

Zhang, X., see Zhao, M., TCYB Nov. 2021 5609-5618

Zhang, X., see Bai, X., TCYB Dec. 2021 6274-6283

Zhang, X., see Hong, A., TCYB Dec. 2021 5954-5968

Zhang, Y., see Lu, K., TCYB Jan. 2021 405-415

Zhang, Y., see Guo, Z., TCYB Jan. 2021 188-198

Zhang, Y., Chu, L., Ou, Y., Guo, C., Liu, Y., and Tang, X., A Cyber-Physical System-Based Velocity-Profile Prediction Method and Case Study of Application in Plug-In Hybrid Electric Vehicle; TCYB Jan. 2021 40-51

Zhang, Y., Su, X., Liu, Z., and Chen, C.L.P., Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems; TCYB Feb. 2021 736-749

Zhang, Y., see Zhang, L., TCYB Feb. 2021 673-685

Zhang, Y., see Hu, Y., TCYB Feb. 2021 874-888

Zhang, Y., see Sheng, B., TCYB March 2021 1463-1477

Zhang, Y., Cui, M., Shen, L., and Zeng, Z., Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip; TCYB April 2021 1875-1887

Zhang, Y., see Li, Y., TCYB April 2021 1756-1768

Zhang, Y., see Fan, Q., TCYB May 2021 2712-2724

Zhang, Y., see Dong, Y., TCYB June 2021 3185-3197

Zhang, Y., see Su, X., TCYB June 2021 2979-2992

Zhang, Y., see Wu, Z., TCYB July 2021 3588-3601

Zhang, Y., see Qu, H., TCYB July 2021 3767-3778

Zhang, Y., see Xiao, S., TCYB July 2021 3676-3686

Zhang, Y., Liu, X., Luo, M., and Yang, C., Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control; TCYB Aug. 2021 4286-4297

Zhang, Y., Li, X., and Zhang, Z., Efficient Person Search via Expert-Guided Knowledge Distillation; TCYB Oct. 2021 5093-5104

Zhang, Y., see Ge, Y., TCYB Oct. 2021 4808-4821

Zhang, Y., see Wu, Y., TCYB Nov. 2021 5214-5224

Zhang, Y., Li, R., and Chen, G., Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements; TCYB Nov. 2021 5364-5374

Zhang, Y., Tao, G., Chen, M., Chen, W., and Zhang, Z., An Implicit Function-Based Adaptive Control Scheme for Noncanonical-Form Discrete-Time Neural-Network Systems; TCYB Dec. 2021 5728-5739

Zhang, Z., see Wen, J., TCYB Jan. 2021 101-114

Zhang, Z., see Wen, J., TCYB Jan. 2021 101-114

Zhang, Z., see Zhang, B., TCYB Jan. 2021 267-282

Zhang, Z., Chen, J., Chen, Z., and Li, W., Asynchronous Episodic Deep Deterministic Policy Gradient: Toward Continuous Control in Computationally Complex Environments; TCYB Feb. 2021 604-613

Zhang, Z., Ong, Y., Wang, D., and Xue, B., A Collaborative Multiagent Reinforcement Learning Method Based on Policy Gradient Potential; TCYB Feb. 2021 1015-1027

Zhang, Z., see Zheng, L., TCYB July 2021 3710-3723

Zhang, Z., see Wang, J., TCYB July 2021 3576-3587

Zhang, Z., Zheng, L., Yang, H., and Qu, X., Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation; TCYB Aug. 2021 4312-4326

Zhang, Z., see Zhang, Y., TCYB Oct. 2021 5093-5104

Zhang, Z., Su, S., and Niu, Y., Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel; TCYB Nov. 2021 5342-5351

Zhang, Z., Chen, W., Jin, H., and Zhang, J., A Preference Biobjective Evolutionary Algorithm for the Payment Scheduling Negotiation Problem; TCYB Dec. 2021 6105-6118

Zhang, Z., see Zhang, Y., TCYB Dec. 2021 5728-5739

Zhao, B., Liu, D., and Alippi, C., Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure; TCYB June 2021 2858-2869

Zhao, C., see Lyu, Y., TCYB May 2021 2651-2662

Zhao, C., see Wang, D., TCYB Oct. 2021 5057-5068

Zhao, F., He, X., and Wang, L., A Two-Stage Cooperative Evolutionary Algorithm With Problem-Specific Knowledge for Energy-Efficient Scheduling of No-Wait Flow-Shop Problem; TCYB Nov. 2021 5291-5303

Zhao, G., Hua, C., and Guan, X., Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication; TCYB Nov. 2021 5387-5396

Zhao, H., see Yang, H., TCYB June 2021 3093-3102

Zhao, J., see Zhang, L., TCYB April 2021 2284-2289

Zhao, J., see Sang, H., TCYB April 2021 1968-1980

Zhao, J., Wang, T., Pedrycz, W., and Wang, W., Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System; *TCYB April 2021 2201-2214*

Zhao, J., see Jing, M., TCYB July 2021 3390-3403

Zhao, J., see Chen, L., TCYB Aug. 2021 4298-4311

Zhao, M., Peng, C., Han, Q., and Zhang, X., Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions; TCYB Nov. 2021 5609-5618

Zhao, N., see Wu, L., TCYB Dec. 2021 6054-6065

Zhao, Q., see Wang, K., TCYB March 2021 1556-1570

Zhao, T., Chen, W., Kwong, S., Gu, T., Yuan, H., Zhang, J., and Zhang, J., Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks; TCYB July 2021 3752-3766

Zhao, W., see Zhou, P., TCYB Dec. 2021 6262-6273

Zhao, X., see Guo, Z., TCYB Jan. 2021 188-198

Zhao, X., see Yang, B., TCYB May 2021 2824-2834

Zhao, X., see Zuo, X., TCYB July 2021 3549-3561

Zhao, Z., see Huang, F., TCYB March 2021 1506-1518

Zhao, Z., see Liu, C., TCYB May 2021 2339-2346 **Zhao, Z.,** see Ren, Y., TCYB Oct. 2021 4796-4807

Zhao, Z., Huang, Y., Zhen, Z., and Li, Y., Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems; TCYB Dec. 2021 6179-6187

Zhen, L., see Hu, P., TCYB Oct. 2021 4982-4993

Zhen, Z., see Zhao, Z., TCYB Dec. 2021 6179-6187

Zheng, C., see Yu, N., TCYB Aug. 2021 3952-3963

Zheng, G., see Gu, B., TCYB April 2021 2215-2223

Zheng, L., and Zhang, Z., Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs; TCYB July 2021 3710-3723

Zheng, L., see Zhang, Z., TCYB Aug. 2021 4312-4326

Zheng, N., see Xing, L., TCYB June 2021 3298-3311

Zheng, Q., Wang, Y., and Heng, P.A., Multitask Feature Learning Meets Robust Tensor Decomposition for EEG Classification; TCYB April 2021 2242-2252

Zheng, W., Wang, K., and Wang, F., GAN-Based Key Secret-Sharing Scheme in Blockchain; TCYB Jan. 2021 393-404

Zheng, W.X., see Zhang, J., TCYB April 2021 2120-2130

Zheng, W.X., see Shao, J., TCYB Nov. 2021 5225-5235

Zheng, X., see Zhou, G., TCYB March 2021 1666-1677

Zheng, X., see Zhou, S., TCYB March 2021 1430-1442

Zheng, Y., see Xue, J., TCYB April 2021 2153-2165

Zheng, Y., see Ye, M., TCYB Oct. 2021 5021-5031

Zheng, Z., see Hu, B., TCYB Sept. 2021 4373-4385

Zhong, H., see Miao, Z., TCYB May 2021 2801-2812

Zhong, J., see Zhou, L., TCYB May 2021 2563-2576

Zhong, J., see Feng, L., TCYB June 2021 3171-3184

Zhong, J., see Feng, L., TCYB June 2021 3143-3156

Zhong, X., see Yang, X., TCYB May 2021 2419-2432

Zhou, C., see Liu, C., TCYB Oct. 2021 5046-5056

Zhou, D., see Fang, Y., TCYB Feb. 2021 789-800

Zhou, D., see Tian, D., TCYB July 2021 3802-3812

Zhou, D., Hu, B., Guan, Z., Zhang, D., and Cheng, X., Consensus Tracking Control of Uncertain Multiagent Systems With Sampled Data and Time-Varying Delay; TCYB Dec. 2021 5681-5691

Zhou, F., see Yang, P., TCYB Jan. 2021 233-246

Zhou, G., see Wu, E.Q., TCYB Jan. 2021 332-345

Zhou, G., Xu, G., Hao, J., Chen, S., Xu, J., and Zheng, X., Generalized Centered 2-D Principal Component Analysis; TCYB March 2021 1666-1677

Zhou, H., see Li, Z., TCYB July 2021 3441-3454

Zhou, J., see Zhu, S., TCYB April 2021 2224-2231

Zhou, J., see Long, J., TCYB Aug. 2021 4050-4061

Zhou, J., see Wang, C., TCYB Oct. 2021 4770-4783

Zhou, J.T., see Zhu, H., TCYB Feb. 2021 829-838

Zhou, L., Feng, L., Tan, K.C., Zhong, J., Zhu, Z., Liu, K., and Chen, C., Toward Adaptive Knowledge Transfer in Multifactorial Evolutionary Computation; TCYB May 2021 2563-2576

Zhou, L., see Feng, L., TCYB June 2021 3171-3184

Zhou, L., see Feng, L., TCYB June 2021 3143-3156

Zhou, M., Cao, Z., and Wang, J., Finite-Frequency H-/H^{\infty} Fault Detection for Discrete-Time T-S Fuzzy Systems With Unmeasurable Premise Variables; TCYB June 2021 3017-3026

Zhou, M., see Zhou, M., TCYB June 2021 3017-3026

Zhou, M., see Wang, X., TCYB July 2021 3483-3495

Zhou, P., Zhao, W., Li, J., Li, A., Du, W., and Wen, S., Massive Maritime Path Planning: A Contextual Online Learning Approach; TCYB Dec. 2021 6262-

Zhou, S., Xing, L., Zheng, X., Du, N., Wang, L., and Zhang, Q., A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times; TCYB March 2021 1430-1442

Zhou, T., see Chen, Z., TCYB Jan. 2021 451-461

Zhou, T., Zuo, Z., and Wang, Y., Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints; TCYB May 2021 2409-2418

Zhou, Y., see He, X., TCYB March 2021 1651-1665

Zhou, Y., Yen, G.G., and Yi, Z., A Knee-Guided Evolutionary Algorithm for Compressing Deep Neural Networks; TCYB March 2021 1626-1638

Zhou, Y., Lu, H., and Cheung, Y., Probabilistic Rank-One Tensor Analysis With Concurrent Regularizations; TCYB July 2021 3496-3509

Zhou, Y., Vamvoudakis, K.G., Haddad, W.M., and Jiang, Z., A Secure Control Learning Framework for Cyber-Physical Systems Under Sensor and Actuator Attacks; TCYB Sept. 2021 4648-4660

Zhou, Y., see Huang, Z., TCYB Oct. 2021 5130-5141

Zhou, Y., Yang, J., Li, H., Cao, T., and Kung, S., Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes; TCYB Nov. 2021 5423-

Zhu, A., see Wang, T., TCYB Dec. 2021 6017-6028

Zhu, C., see Fan, Q., TCYB May 2021 2712-2724

Zhu, G., see Li, C., TCYB Jan. 2021 88-100

Zhu, G., see Zhang, X., TCYB March 2021 1121-1133

Zhu, H., Cheng, Y., Peng, X., Zhou, J.T., Kang, Z., Lu, S., Fang, Z., Li, L., and Lim, J., Single-Image Dehazing via Compositional Adversarial Network; TCYB Feb. 2021 829-838

Zhu, H., see Yu, Y., TCYB Feb. 2021 521-533

Zhu, H., Cui, C., Deng, L., Cheung, R.C.C., and Yan, H., Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching; TCYB Aug. 2021 4062-4074

Zhu, H., see Hu, P., TCYB Oct. 2021 4982-4993

Zhu, J., see Tao, H., TCYB March 2021 1690-1703

Zhu, J., see Zhang, K., TCYB June 2021 3285-3297

Zhu, L., see Wu, E.Q., TCYB Jan. 2021 332-345

Zhu, L., see Yang, W., TCYB June 2021 3039-3053

Zhu, L., see Jing, M., TCYB July 2021 3390-3403

Zhu, L., see Wu, E.Q., TCYB Nov. 2021 5483-5496

Zhu, N., see Liu, Y., TCYB Nov. 2021 5585-5594

Zhu, Q., Lin, Q., Li, J., Coello Coello, C.A., Ming, Z., Chen, J., and Zhang, J., An Elite Gene Guided Reproduction Operator for Many-Objective Optimization; TCYB Feb. 2021 765-778

Zhu, S., Zhou, J., Chen, G., and Lu, J., A New Method for Topology Identification of Complex Dynamical Networks; TCYB April 2021 2224-2231

Zhu, W., Cao, W., and Jiang, Z., Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian; TCYB April 2021 2178-2187

Zhu, X., Pedrycz, W., and Li, Z., A Development of Granular Input Space in System Modeling; TCYB March 2021 1639-1650

Zhu, X.X., see Hong, D., TCYB July 2021 3602-3615

Zhu, Y., see Wu, Z., TCYB July 2021 3588-3601

Zhu, Y., see Lan, R., TCYB Dec. 2021 6284-6293

Zhu, Z., see Liang, Z., TCYB March 2021 1417-1429

Zhu, Z., see Li, Y., TCYB April 2021 1756-1768

Zhu, Z., see Zhou, L., TCYB May 2021 2563-2576

Zhu, Z., see Feng, L., TCYB June 2021 3171-3184

Zhu, Z., see Liang, Z., TCYB Sept. 2021 4553-4566 **Zhuang, G.,** Su, S., Xia, J., and Sun, W., HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays; TCYB March 2021 1189-1203

Zhuge, W., see Wu, J., TCYB Oct. 2021 5156-5169

Zia, T., see Ghafoor, M., TCYB Sept. 2021 4515-4527

Zomaya, A.Y., see Ghafoor, M., TCYB Sept. 2021 4515-4527

Zong, G., Ren, H., and Karimi, H.R., Event-Triggered Communication and Annular Finite-Time H∞ Filtering for Networked Switched Systems; TCYB Jan. 2021 309-317

Zong, G., see Yang, B., TCYB May 2021 2824-2834

Zou, J., see Lin, W., TCYB March 2021 1478-1492

Zou, J., see Yu, X., TCYB April 2021 1822-1834

Zuo, W., see Xu, J., TCYB March 2021 1493-1505

Zuo, X., Liu, X., Zhang, Q., Li, W., Wan, X., and Zhao, X., MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands; TCYB July 2021 3549-3561

Zuo, Z., see Zhou, T., TCYB May 2021 2409-2418

Subject Index

Α

Acceleration

Cooperative Formation Control Under Switching Topology: An Experimental Case Study in Multirotors. Wang, Z., +, TCYB Dec. 2021 6141-6153

Acoustic signal processing

Acoustic Target Tracking Through a Cluster of Mobile Agents. Drioli, C., +, TCYB May 2021 2587-2600

Activity recognition

Switching Structured Prediction for Simple and Complex Human Activity Recognition. Arzani, M.M., +, TCYB Dec. 2021 5859-5870

Actuators

- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing, Y., +, TCYB Feb. 2021 568-578*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y.*, +, *TCYB July 2021 3469-3482*
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long. J., +, TCYB Aug. 2021 4050-4061
- Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. Sun, S., +, TCYB Dec. 2021 6213-6225
- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. Zhang, P., +, TCYB June 2021 2956-2968
- Finite-Frequency H'/H[∞] Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021* 3017-3026
- Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. *Li*, *J*., +, *TCYB Jan. 2021 416-426*
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162
- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May 2021 2446-2456*
- Model-Independent Formation Tracking of Multiple Euler-Lagrange Systems via Bounded Inputs. Wang, L., +, TCYB May 2021 2813-2823
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021* 1913-1928
- On Robot Compliance: A Cerebellar Control Approach. *Abadia*, *I.*, +, *TCYB May 2021 2476-2489*
- Physical Human–Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators. *Ogenyi*, *U.E.*, +, *TCYB April 2021 1888-1901*

Ad hoc networks

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

Adaptation models

- An Implicit Function-Based Adaptive Control Scheme for Noncanonical-Form Discrete-Time Neural-Network Systems. *Zhang, Y.*, +, *TCYB Dec. 2021 5728-5739*
- Finite-Time Output Synchronization and H_{∞} Output Synchronization of Coupled Neural Networks With Multiple Output Couplings. Wang, J., +, $TCYB\ Dec.\ 2021\ 6041-6053$
- Hierarchical Spatiotemporal Context-Aware Correlation Filters for Visual Tracking. Wang, W., +, TCYB Dec. 2021 6066-6079

Adaptive control

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149
- A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao*, Y, +, TCYB March 2021 1262-1271
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Controller Tuning Method Based on Online Multiobjective Optimization: A Case Study of the Four-Bar Mechanism. *Rodriguez-Molina*, A., +, TCYB March 2021 1272-1285
- Adaptive Event-Triggered Control for Unknown Second-Order Nonlinear Multiagent Systems. Li, Z., +, TCYB Dec. 2021 6131-6140
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. *Li*, *X*, +, *TCYB Jan. 2021 199-209*
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, TCYB June 2021 3039-3053
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*
- Adaptive Neural Network Fixed-Time Leader–Follower Consensus for Multiagent Systems With Constraints and Disturbances. Ni, J., +, TCYB April 2021 1835-1848
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- An Implicit Function-Based Adaptive Control Scheme for Noncanonical-Form Discrete-Time Neural-Network Systems. *Zhang, Y.*, +, *TCYB Dec. 2021 5728-5739*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*

- Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July* 2021 3710-3723
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Cooperative Optimal Controller and Its Application to Activated Sludge Process. *Han*, H., +, *TCYB Aug*. 2021 3938-3951
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. Wang, X., +, TCYB Oct. 2021 4924-4933
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. *Vu, V.*, +, *TCYB June 2021 3312-3324*
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long. J., +, TCYB Aug. 2021 4050-4061
- Distributed Adaptive Finite-Time Consensus for Second-Order Multiagent Systems With Mismatched Disturbances Under Directed Networks. *Wang, H.*, +, *TCYB March 2021 1347-1358*
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Distributed Edge-Based Event-Triggered Formation Control. Cheng, B., +, TCYB March 2021 1241-1252
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu, B., +, TCYB July 2021 3836-3844*
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Event-Triggered Sampled Feedback Synchronization in an Array of Output-Coupled Boolean Control Networks. *Lu, J.*, +, *TCYB April 2021 2278-*2283
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*, +, *TCYB June 2021 2969-2978*
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang*, *P*, +, *TCYB June 2021 2956-2968*
- Finite-Time Output Synchronization and H_{∞} Output Synchronization of Coupled Neural Networks With Multiple Output Couplings. Wang, J., +, $TCYB\ Dec.\ 2021\ 6041-6053$
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang. J., +, TCYB July 2021 3845-3857

- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162
- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu*, Y, +, TCYB March 2021 1380-1389
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y., +, TCYB Sept. 2021 4755-4765
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May 2021 2446-2456*
- Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach. Shen, D., +, TCYB March 2021 1286-1299
- Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021 1913-1928*
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug.* 2021 4011-4020
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, O., +, TCYB Oct. 2021 5032-5045
- Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain. *Liu, C.*, +, *TCYB May* 2021 2339-2346
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. *Wang, W.*, +, *TCYB April 2021 2131-2141*
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li, Y.*, +, *TCYB Jan. 2021* 126-137
- On Robot Compliance: A Cerebellar Control Approach. *Abadia, I.*, +, *TCYB May 2021 2476-2489*
- Optimal Robot–Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Output Synchronization of Complex Dynamical Networks With Multiple Output or Output Derivative Couplings. *Wang, J.*, +, *TCYB Feb. 2021 927-937*
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*

Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987

Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. Wen, G., +, TCYB Sept. 2021 4567-4580

Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. Zhao, B., +, TCYB June 2021 2858-2869

Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques. Zhang, H., +, TCYB Feb. 2021 660-672

Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. Wang, Y., +, TCYB March 2021 1300-1310

Adaptive filters

Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. Liu, J., +, TCYB Aug. 2021 4000-4010

Adaptive systems

Adaptive Fuzzy Tracking Control for a Class of Uncertain Switched Nonlinear Systems With Full-State Constraints and Input Saturations. Wu, L., +, TCYB Dec. 2021 6054-6065

ANFIS Construction With Sparse Data via Group Rule Interpolation. Yang, J., +, TCYB May 2021 2773-2786

Additives

Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance. Sun, Q., +, TCYB Dec. 2021 5921-5929

Optimal Interaction Priority Calculation From Hesitant Fuzzy Preference Relations Based on the Monte Carlo Simulation Method for the Acceptable Consistency and Consensus. Meng, F., +, TCYB Dec. 2021 5871-5882

Advertising

Influence Spread in Geo-Social Networks: A Multiobjective Optimization Perspective. Wang, L., +, TCYB May 2021 2663-2675

Aerodynamics

Data-Driven Evolutionary Algorithm With Perturbation-Based Ensemble Surrogates. Li, J., +, TCYB Aug. 2021 3925-3937

Aerospace computing

Distributed H_∞-Consensus Filtering for Attitude Tracking Using Ground-Based Radars. Qu, H., +, TCYB July 2021 3767-3778

Aerospace engines

A Data-Driven Aero-Engine Degradation Prognostic Strategy. Wang, C., +, TCYB March 2021 1531-1541

CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems. Guo, Z., +, TCYB Jan. 2021 188-198

Affine transforms

Point Set Registration With Similarity and Affine Transformations Based on Bidirectional KMPE Loss. Yang, Y., +, TCYB March 2021 1678-1689

Agent-based modeling

TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution. Ye, P., +, TCYB Dec. 2021 5897-5906

Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip. Zhang, Y., +, TCYB April 2021 1875-1887

Air pollution

Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. Xu, X., +, TCYB May 2021 2577-2586

Air quality

Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. Xu, X., +, TCYB May 2021 2577-2586

Aircraft control

Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. Zheng, L., +, TCYB July 2021 3710-3723

Distributed Robust Fault Estimation Using Relative Measurements for Leader-Follower Multiagent Systems. Luo, M., +, TCYB Sept. 2021 4707-

Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. Meng, W., +, TCYB May 2021 2446-2456

Airports

A Bi-Objective Constrained Robust Gate Assignment Problem: Formulation, Instances and Algorithm. Cai, X., +, TCYB Sept. 2021 4488-4500

Analytical models

Optimal Interaction Priority Calculation From Hesitant Fuzzy Preference Relations Based on the Monte Carlo Simulation Method for the Acceptable Consistency and Consensus. Meng, F., +, TCYB Dec. 2021 5871-5882

Angular velocity control

Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229

Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, Q., +, TCYB Oct. 2021 5032-5045 Annotations

Performance Evaluation Methodology for Long-Term Single-Object Tracking. Lukezic, A., +, TCYB Dec. 2021 6305-6318

Ant colony optimization

An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing. Huang, T., +, TCYB Nov. 2021 5595-5608

Approximation algorithms

Efficient Minimum Cost Seed Selection With Theoretical Guarantees for Competitive Influence Maximization. Hong, W., +, TCYB Dec. 2021 6091-6104

Evolution Strategy-Based Many-Objective Evolutionary Algorithm Through Vector Equilibrium. Zhang, K., +, TCYB Nov. 2021 5455-5467

Learning Self-Triggered Controllers With Gaussian Processes. Hashimoto, K., +, TCYB Dec. 2021 6294-6304

Approximation theory

A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. Chen, Y., +, TCYB June 2021 2993-3003

A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, l_{1/2}, and TTV Regularizations. Tom, A.J., +, TCYB Feb. 2021 1004-1014

Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. Wang, Y, +, TCYB Nov. 2021 5279-5290

Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. Mishra, P.K., +, TCYB April 2021 2042-2054

Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. Yang, X., +, TCYB May 2021 2419-2432

Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943

Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. Wang, B., +, TCYB Jan. 2021 16-27

Equivalent Continuous Formulation of General Hashing Problem. Wang, S., +, TCYB Aug. 2021 4089-4099

Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. Zhang, C., +, TCYB Jan. 2021 210-221

Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning. Tao, H., +, TCYB March 2021 1690-1703

Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109

Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. Zhao, B., +, TCYB June 2021 2858-2869

Solving Large-Scale Multiobjective Optimization Problems With Sparse Optimal Solutions via Unsupervised Neural Networks. Tian, Y., +, TCYB June 2021 3115-3128

Array signal processing

Acoustic Target Tracking Through a Cluster of Mobile Agents. Drioli, C., +, TCYB May 2021 2587-2600

Artificial limbs

Personalized Online Adaptation of Kinematic Synergies for Human-Prosthesis Interfaces. Garcia-Rosas, R., +, TCYB Feb. 2021 1070-1084

Artificial neural networks

- Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology. *Chen, J.*, +, *TCYB Dec.* 2021 5993-6003
- Fault Detection for a Class of Uncertain Sampled-Data Systems Using Deterministic Learning. Chen, T., +, TCYB Dec. 2021 5930-5940
- Quantized Sampled-Data Synchronization of Delayed Reaction–Diffusion Neural Networks Under Spatially Point Measurements. *Wang, Z.*, +, *TCYB Dec. 2021 5740-5751*

Artificial satellites

- Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu. H.*, +, *TCYB July 2021 3767-3778*
- Large-Angle Velocity-Free Attitude Tracking Control of Satellites: An Observer-Free Framework. Xiao, B., +, TCYB Sept. 2021 4722-4732

Asymptotic stability

- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. *Cao, J.*, +, *TCYB Jan. 2021 151-161*
- An Implicit Function-Based Adaptive Control Scheme for Noncanonical-Form Discrete-Time Neural-Network Systems. *Zhang, Y.*, +, *TCYB Dec. 2021 5728-5739*
- Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks. Shi, J., +, TCYB May 2021 2540-2549
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. *Wang, J.*, +, *TCYB May 2021 2433-2445*
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. Ge, C., +, TCYB Feb. 2021 961-969
- Distance + Angle-Based Control of 2-D Rigid Formations. *Liu*, *T.*, +, *TCYB Dec.* 2021 5969-5978
- Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. Wang, B., +, TCYB Jan. 2021 16-27
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. Liu, J., +, TCYB Jan. 2021 162-173
- Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong, G.*, +, *TCYB Jan. 2021 309-317*
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays. Sheng, Y., +, TCYB Feb. 2021 579-588
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang*, *R*., +, *TCYB May 2021 2384-2397*

- Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors. *Li*, *L.*, +, *TCYB April 2021 2142-2152*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y., +, TCYB Sept. 2021 4755-4765
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*
- Multiple Mittag-Leffler Stability of Delayed Fractional-Order Cohen-Grossberg Neural Networks via Mixed Monotone Operator Pair. *Zhang, F., +, TCYB Dec. 2021 6333-6344*
- Necessary and Sufficient Conditions for Group Consensus of Fractional Multiagent Systems Under Fixed and Switching Topologies via Pinning Control. *Chen, Y.*, +, *TCYB Jan. 2021 28-39*
- Observer-Based Dissipativity Control for T–S Fuzzy Neural Networks With Distributed Time-Varying Delays. *Li*, *H*., +, *TCYB Nov. 2021 5248-5258*
- Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. *Li, F., +, TCYB Oct. 2021 5142-5155*
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug.* 2021 4337-4347
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. Zhang, F., +, TCYB June 2021 3027-3038
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Stability Analysis for Cyber-Physical Systems Under Denial-of-Service Attacks. Lu, A., +, TCYB Nov. 2021 5304-5313
- Synchronization Analysis for Complex Dynamical Networks With Coupling Delay via Event-Triggered Delayed Impulsive Control. Lv, X., +, TCYB Nov. 2021 5269-5278
- Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques. *Zhang, H.*, +, *TCYB Feb. 2021 660-672*
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. *Hu*, *Z*., +, *TCYB July 2021 3779-3788*

Atmospheric composition

Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. *Xu*, *X*., +, *TCYB May 2021 2577-2586*

Attenuation

 ${\rm H}_{\infty}$ Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling. *Ma, L.*, +, *TCYB Dec. 2021 5761-5772*

Attitude control

- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133
- Cooperative Formation Control Under Switching Topology: An Experimental Case Study in Multirotors. Wang, Z., +, TCYB Dec. 2021 6141-6153
- Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. Qu, H., +, TCYB July 2021 3767-3778
- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229
- Large-Angle Velocity-Free Attitude Tracking Control of Satellites: An Observer-Free Framework. *Xiao, B., +, TCYB Sept. 2021 4722-4732*
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, Q., +, TCYB Oct. 2021 5032-5045

Robust Trajectory Tracking in Satellite Time-Varying Formation Flying. *Liu*, *H.*, +, *TCYB Dec. 2021 5752-5760*

Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations. *Chen, B., +, TCYB Dec.* 2021 5786-5799

Aurora

Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124

Automation

Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions. Zhao, M., +, TCYB Nov. 2021 5609-5618

Automobiles

A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*

Autonomous aerial vehicles

Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July 2021 3710-3723*

Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068

Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*

Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021 1913-1928*

Autonomous agents

Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation–Competition Networks. *Shao, J.*, +, *TCYB Nov. 2021 5225-5235*

Autoregressive processes

Basis Function Matrix-Based Flexible Coefficient Autoregressive Models: A Framework for Time Series and Nonlinear System Modeling. *Chen, G.*, +, *TCYB Feb. 2021 614-623*

Time-Series Clustering Based on the Characterization of Segment Typologies. Guijo-Rubio, D., +, TCYB Nov. 2021 5409-5422

В

Backpropagation

Construction and Supervised Learning of Long-Term Grey Cognitive Networks. *Napoles, G.*, +, *TCYB Feb. 2021 686-695*

Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. Zhang, Z., +, TCYB Aug. 2021 4312-4326

Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu, B., +, TCYB July 2021 3836-3844*

Banach spaces

Policy Iteration *Q*-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. *Luo*, *B.*, +, *TCYB July 2021 3630-3640*

Band-pass filters

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

Batch processing (industrial)

A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times. *Zhou, S., +, TCYB March 2021 1430-1442*

Batteries

Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm. *Chen, Z.*, +, *TCYB Nov. 2021 5433-5444*

Battery powered vehicles

Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model. *Zhang, X.*, +, *TCYB June 2021 3157-3170*

Battery storage plants

Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H.,* +, TCYB April 2021 2068-2079

Bayes methods

A Bayes Risk Minimization Machine for Example-Dependent Cost Classification. *Lazaro*, M., +, TCYB July 2021 3524-3534

A Multimodal Emotional Human–Robot Interaction Architecture for Social Robots Engaged in Bidirectional Communication. *Hong, A.*, +, *TCYB Dec.* 2021 5954-5968

Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834

Low-Rank and Sparse Decomposition With Mixture of Gaussian for Hyperspectral Anomaly Detection. *Li*, *L*., +, *TCYB Sept. 2021 4363-4372*

Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.O., +, TCYB Nov. 2021 5483-5496

Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *Zhang, X.*, +, *TCYB July 2021 3616-3629*

Belief networks

A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. Zhang, X., +, TCYB Feb. 2021 1043-1055

Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions. *Chang, M.*, +, *TCYB Jan. 2021 2-15*

Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496

Benchmark testing

A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *Peng. C.*, +, *TCYB Nov. 2021 5546-5558*

Deep Category-Level and Regularized Hashing With Global Semantic Similarity Learning. Chen, Y., +, TCYB Dec. 2021 6240-6252

Performance Evaluation Methodology for Long-Term Single-Object Tracking. Lukezic, A., +, TCYB Dec. 2021 6305-6318

Big Data

Massive Maritime Path Planning: A Contextual Online Learning Approach. Zhou, P., +, TCYB Dec. 2021 6262-6273

Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601

Binary codes

Deep Category-Level and Regularized Hashing With Global Semantic Similarity Learning. *Chen, Y., +, TCYB Dec. 2021 6240-6252*

Equivalent Continuous Formulation of General Hashing Problem. *Wang, S.*, +, *TCYB Aug. 2021 4089-4099*

Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*

Binary trees

Massive Maritime Path Planning: A Contextual Online Learning Approach. *Zhou, P., +, TCYB Dec. 2021 6262-6273*

Bioacoustics

Identity Recognition Based on Bioacoustics of Human Body. Sim, J.Y., +, TCYB May 2021 2761-2772

Biocomputing

Monodirectional Tissue P Systems With Promoters. Song, B., +, TCYB Jan. 2021 438-450

Biocontrol

On Robot Compliance: A Cerebellar Control Approach. *Abadia, I.*, +, *TCYB May 2021 2476-2489*

Bioelectric potentials

Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. *Liu, C.*, +, *TCYB Oct. 2021 5046-5056*

Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Bioinformatics

A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. Zhang, X., +, TCYB Feb. 2021 1043-1055

Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data. Li, X., +, TCYB Dec. 2021 5811-5824

Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652

Biological neural networks

Finite-Time Output Synchronization and H_{∞} Output Synchronization of Coupled Neural Networks With Multiple Output Couplings. Wang, J., +, $TCYB\ Dec.\ 2021\ 6041-6053$

Biological organs

Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb.* 2021 708-721

Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation. Xue, J., +, TCYB April 2021 2153-2165

Biological system modeling

TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution. Ye, P., +, TCYB Dec. 2021 5897-5906

Biological tissues

A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation. Mishro, P.K., +, TCYB Aug. 2021 3901-3912

Monodirectional Tissue *P* Systems With Promoters. *Song*, *B*., +, *TCYB Jan*. 2021 438-450

Biology computing

A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. Zhang, X., +, TCYB Feb. 2021 1043-1055

Nature-Inspired Compressed Sensing for Transcriptomic Profiling From Random Composite Measurements. Zhang, S., +, TCYB Sept. 2021 4476-4487

Biomechanics

Attribute-Driven Granular Model for EMG-Based Pinch and Fingertip Force Grand Recognition. Fang, Y., +, TCYB Feb. 2021 789-800

Personalized Online Adaptation of Kinematic Synergies for Human-Prosthesis Interfaces. *Garcia-Rosas*, R., +, TCYB Feb. 2021 1070-1084

Biomedical MRI

A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation. Mishro, P.K., +, TCYB Aug. 2021 3901-3912

Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network. Wu, H., +, TCYB Sept. 2021 4464-4475

DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. Li, Z., +, TCYB July 2021 3441-3454

Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P., +, TCYB Jan. 2021 233-246*

Biomedical optical imaging

Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb. 2021 708-721*

Biometrics (access control)

Identity Recognition Based on Bioacoustics of Human Body. Sim, J.Y., +, TCYB May 2021 2761-2772

Blast furnaces

Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. *Zhao, J., +, TCYB April* 2021 2201-2214

Body sensor networks

Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Boolean algebra

Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092

Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li, H.,* +, *TCYB Sept. 2021 4623-4633*

Pinning Controllability for a Boolean Network With Arbitrary Disturbance Inputs. Li, F., +, TCYB June 2021 3338-3347

Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. *Lu*, *J*., +, *TCYB Jan. 2021 373-381*

Boolean functions

Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*

Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381

Running Time Analysis of MOEA/D on Pseudo-Boolean Functions. *Huang*, Z., +, *TCYB Oct. 2021 5130-5141*

Brain modeling

A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin, C.*, +, *TCYB Oct.* 2021 4959-4967

A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation. Mishro, P.K., +, TCYB Aug. 2021 3901-3912

Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network. Wu, H., +, TCYB Sept. 2021 4464-4475

DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. Li, Z., +, TCYB July 2021 3441-3454

Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. Liu, C., +, TCYB Oct. 2021 5046-5056

Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P., +, TCYB Jan. 2021 233-246*

Multitask Feature Learning Meets Robust Tensor Decomposition for EEG Classification. Zheng, O., +, TCYB April 2021 2242-2252

Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496

Brain-computer interfaces

Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020

Spatiotemporal-Filtering-Based Channel Selection for Single-Trial EEG Classification. *Qi, F., +, TCYB Feb. 2021 558-567*

Broadcasting

Asynchronous Distributed Event-Triggered Coordination for Multiagent Coverage Control. *Ajina*, M., +, *TCYB Dec.* 2021 5941-5953

Buffer storage

Distributed Kalman Filtering Over Sensor Networks With Transmission Delays. Yang, H., +, TCYB Nov. 2021 5511-5521

Buildings

Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks. Wan, Y., +, TCYB Nov. 2021 5314-5327

C

Cameras

Joint Reflection Removal and Depth Estimation From a Single Image. Chang, Y, +, TCYB Dec. 2021 5836-5849

Person Reidentification via Unsupervised Cross-View Metric Learning. Feng. Y., +, TCYB April 2021 1849-1859

Cancer

3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation. *Huang, Y.*, +, *TCYB Nov. 2021 5397-5408*

A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. Zhang, X., +, TCYB Feb. 2021 1043-1055

Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation. Xue, J., +, TCYB April 2021 2153-2165

Correntropy-Based Hypergraph Regularized NMF for Clustering and Feature Selection on Multi-Cancer Integrated Data. Yu, N., +, TCYB Aug. 2021 3952-3963

Cellular biophysics

Nature-Inspired Compressed Sensing for Transcriptomic Profiling From Random Composite Measurements. Zhang, S., +, TCYB Sept. 2021 4476-4487

Cellular neural networks

Cascading and Enhanced Residual Networks for Accurate Single-Image Super-Resolution. Lan, R., +, TCYB Jan. 2021 115-125

Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Networks. Sang, H_{∞} , +, TCYB April 2021 1968-1980

Centralized control

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli*, C., +, TCYB May 2021 2587-2600

Channel bank filters

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

Channel flow

Development of a Real-Time Objective Gas-Liquid Flow Regime Identifier Using Kernel Methods. *Eyo, E.N.*, +, *TCYB May 2021 2688-2698*

Chemical reactors

Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*

Classification

A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation. Nguyen, B.H., +, TCYB Dec. 2021 6319-6332

Client-server systems

Federated Continuous Learning With Broad Network Architecture. Le, J., +, TCYB Aug. 2021 3874-3888

Closed loop systems

- A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo, A.*, +, *TCYB March 2021 1134-1149*
- A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao*, Y., +, TCYB March 2021 1262-1271
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-302
- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. Ren, Y., +, TCYB Oct. 2021 4796-4807
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song*, *J.*, +, *TCYB Sept. 2021 4581-4590*
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224

- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. *Wang, X.*, +, *TCYB Oct. 2021 4924-4933*
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. *Liu, C.*, +, *TCYB Oct. 2021 5046-5056*
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. Wang, J., +, TCYB May 2021 2433-2445
- Dissipativity-Based Sliding-Mode Control of Cyber-Physical Systems Under Denial-of-Service Attacks. *Ma, R., +, TCYB May 2021 2306-2318*
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. *Long, J.*, +, *TCYB Aug. 2021 4050-4061*
- Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. *Su, X.*, +, *TCYB June 2021 2979-2992*
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Event-Triggered Controller Design With Varying Gains for T–S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Event-Triggered H_∞ Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach. *Wang, X.*, +, *TCYB June 2021 3062-3070*
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*., +, *TCYB June 2021 2969-2978*
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*
- Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. *Li*, *J*., +, *TCYB Jan. 2021 416-426*
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*

- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian*, J., +, TCYB April 2021 2032-2041
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y., +, TCYB Sept. 2021 4755-4765
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance. Sun, Q., +, TCYB Dec. 2021 5921-5929
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021* 1913-1928
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S*., +, *TCYB Aug.* 2021 4011-4020
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, Q., +, TCYB Oct. 2021 5032-5045
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. Wang, W., +, TCYB April 2021 2131-2141
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li, Y.,* +, *TCYB Jan. 2021* 126-137
- Optimal Robot-Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control. *Liang, C.*, +, *TCYB June 2021* 2893-2904
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T–S Fuzzy Implementation. *Han, H.*, +, *TCYB Feb. 2021 801-814*
- Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. Li, F., +, TCYB Oct. 2021 5142-5155
- Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. Luo, B., +, TCYB March 2021 1253-1261
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. *Chen, Y., +, TCYB Feb. 2021 501-511*
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987

- Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. *Liao, Q.*, +, *TCYB Feb. 2021 947-960*
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266
- Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. Wang, Y., +, TCYB March 2021 1300-1310

Cloud computing

- An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing. *Huang, T.*, +, *TCYB Nov. 2021 5595-5608*
- Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601
- Solving Generalized Vehicle Routing Problem With Occasional Drivers via Evolutionary Multitasking. Feng, L., +, TCYB June 2021 3171-3184

Clustering algorithms

- Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment. *Jiang, W.*, +, *TCYB Dec. 2021 5717-5727*
- Time-Series Clustering Based on the Characterization of Segment Typologies. *Guijo-Rubio*, D., +, TCYB Nov. 2021 5409-5422
- Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams. *Rathore, P., +, TCYB Dec. 2021 5979-5992*

Cognition

- A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin, C.*, +, *TCYB Oct.* 2021 4959-4967
- Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P., +, TCYB Jan. 2021 233-246*
- Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. Debie, E., +, TCYB March 2021 1542-1555
- Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496
- The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092
- TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution. Ye, P., +, TCYB Dec. 2021 5897-5906
- Visual—Textual Hybrid Sequence Matching for Joint Reasoning. *Huang, X.*, +, *TCYB Dec. 2021 5692-5705*

Cognitive processes

- Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game. *Chakraborty, B.*, +, *TCYB Dec.* 2021 6200-6212
- RecapNet: Action Proposal Generation Mimicking Human Cognitive Process. Wang, T., +, TCYB Dec. 2021 6017-6028

Cognitive systems

- Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II. Bali, K.K., +, TCYB April 2021 1784-1796
- The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092

Collaboration

Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention. *Li*, *J*., +, *TCYB Dec. 2021 6029-6040* Joint Reflection Removal and Depth Estimation From a Single Image. *Chang*, *Y*, +, *TCYB Dec. 2021 5836-5849*

Collaborative filtering

New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226

Collision avoidance

- A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285-3297*
- Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control. Lyu, Y., +, TCYB May 2021 2651-2662
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*

Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *Zhang, X.*, +, *TCYB July 2021 3616-3629*

Combinatorial mathematics

Evolving Scheduling Heuristics via Genetic Programming With Feature Selection in Dynamic Flexible Job-Shop Scheduling. *Zhang, F.*, +, *TCYB April 2021 1797-1811*

Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem. Feng, L., +, TCYB June 2021 3143-3156

The Collaborative Local Search Based on Dynamic-Constrained Decomposition With Grids for Combinatorial Multiobjective Optimization. *Cai, X.*, +, *TCYB May 2021 2639-2650*

Communication networks

Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks. Wan, Y., +, TCYB Nov. 2021 5314-5327

Compensation

Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834

Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, TCYB Aug. 2021 3988-3999

Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*

HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*

Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881

Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. Liao, Q., +, TCYB Feb. 2021 947-960

Complex networks

A New Method for Topology Identification of Complex Dynamical Networks. Zhu, S., +, TCYB April 2021 2224-2231

A Novel Local Community Detection Method Using Evolutionary Computation. Lyu, C., +, TCYB June 2021 3348-3360

Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks. *Zhao*, *T*., +, *TCYB July 2021 3752-3766*

Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*

Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang. J., +, TCYB July 2021 3845-3857

Fixed/Preassigned-Time Synchronization of Complex Networks via Improving Fixed-Time Stability. *Hu, C.*, +, *TCYB June 2021 2882-2892*

Key Nodes Selection in Controlling Complex Networks via Convex Optimization. *Ding, J.*, +, *TCYB Jan. 2021 52-63*

Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm. *Teng, X.*, +, *TCYB Jan. 2021 138-150*

PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu, H.*, +, *TCYB March 2021 1334-1346*

Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381

QUAD-Condition, Synchronization, Consensus of Multiagents, and Anti-Synchronization of Complex Networks. *Lu, W.*, +, *TCYB June 2021 3384-3388*

Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. Hu, Z., +, TCYB July 2021 3779-3788

Computability

Monodirectional Tissue P Systems With Promoters. Song, B., +, TCYB Jan. 2021 438-450

Computational complexity

2-D Stochastic Configuration Networks for Image Data Analytics. Li, M., +, TCYB Jan. 2021 359-372

A Modified Genetic Algorithm With New Encoding and Decoding Methods for Integrated Process Planning and Scheduling Problem. *Liu*, *Q*., +, *TCYB Sept.* 2021 4429-4438

Distributed Dual Subgradient Algorithms With Iterate-Averaging Feedback for Convex Optimization With Coupled Constraints. *Liang, S.*, +, *TCYB May 2021 2529-2539*

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068

Equivalent Continuous Formulation of General Hashing Problem. Wang, S., +, TCYB Aug. 2021 4089-4099

Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks. *Zhao, T.,* +, *TCYB July 2021 3752-3766*

Fast-RCM: Fast Tree-Based Unsupervised Rare-Class Mining. Weng, H., +, TCYB Oct. 2021 5198-5211

Large-Scale Evolution Strategy Based on Search Direction Adaptation. *He*, X., +, *TCYB March 2021 1651-1665*

Merge Nondominated Sorting Algorithm for Many-Objective Optimization. Moreno, J., +, TCYB Dec. 2021 6154-6164

Monodirectional Tissue P Systems With Promoters. Song, B., +, TCYB Jan. 2021 438-450

Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285

Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381

Recursive Least-Squares Temporal Difference With Gradient Correction. Song, T., +, TCYB Aug. 2021 4251-4264

Slice-Based Online Convolutional Dictionary Learning. Zeng, Y., +, TCYB Oct. 2021 5116-5129

Target Controllability of Two-Layer Multiplex Networks Based on Network Flow Theory. Song, K., +, TCYB May 2021 2699-2711

The Complexity in Complete Graphic Characterizations of Multiagent Controllability. *Ji*, *Z.*, +, *TCYB Jan. 2021 64-76*

Computational fluid dynamics

Development of a Real-Time Objective Gas—Liquid Flow Regime Identifier Using Kernel Methods. *Eyo, E.N.*, +, *TCYB May 2021 2688-2698*

Computational linguistics

Consensus Model Handling Minority Opinions and Noncooperative Behaviors in Large-Scale Group Decision-Making Under Double Hierarchy Linguistic Preference Relations. *Gou, X.*, +, *TCYB Jan. 2021 283-296*

Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making. Wu, Y, +, TCYB Feb. 2021 649-659

Computational modeling

Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation. *Huang, Z.*, +, *TCYB Nov. 2021 5559-5572*

Efficient Minimum Cost Seed Selection With Theoretical Guarantees for Competitive Influence Maximization. *Hong, W.*, +, *TCYB Dec. 2021 6091-6104*

Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment. *Jiang, W.*, +, *TCYB Dec. 2021 5717-5727* TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution.

Ye, P., +, TCYB Dec. 2021 5897-5906

Computer architecture

An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing. *Huang, T.*, +, *TCYB Nov. 2021 5595-5608*

TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution. Ye, P., +, TCYB Dec. 2021 5897-5906

Computer games

GreenSea: Visual Soccer Analysis Using Broad Learning System. Sheng, B., +, TCYB March 2021 1463-1477

Computer network security

Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks. *Yang*, Y., +, TCYB June 2021 2916-2928

MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*

Computer networks

A Knee-Guided Evolutionary Algorithm for Compressing Deep Neural Networks. *Zhou, Y.*, +, *TCYB March 2021 1626-1638*

Computer simulation

Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. Zhang, Z., +, TCYB Aug. 2021 4312-4326

Computer viruses

Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks. *Zhao, T.*, +, *TCYB July 2021 3752-3766*

Computer vision

A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan, K.*, +, *TCYB Dec. 2021 5907-5920*

ASIF-Net: Attention Steered Interweave Fusion Network for RGB-D Salient Object Detection. *Li, C.*, +, *TCYB Jan. 2021 88-100*

Bio-Inspired Representation Learning for Visual Attention Prediction. *Yuan*, *Y*, +, *TCYB July 2021 3562-3575*

Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching. Zhu, H., +, TCYB Aug. 2021 4062-4074

Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification. *Bi*, *Y*, +, *TCYB April 2021 1769-1783*

Joint Transformation Learning via the L_{2,1}-Norm Metric for Robust Graph Matching. Yu, Y, +, TCYB Feb. 2021 521-533

Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. Ren, C., +, TCYB July 2021 3535-3548

Lightweight Salient Object Detection via Hierarchical Visual Perception Learning. Liu, Y., +, TCYB Sept. 2021 4439-4449

Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276

SPRNet: Single-Pixel Reconstruction for One-Stage Instance Segmentation. *Yu, J.*, +, *TCYB April 2021 1731-1742*

Vision-to-Language Tasks Based on Attributes and Attention Mechanism. Li, X., +, TCYB Feb. 2021 913-926

Concave programming

Discriminative Dimension Reduction via Maximin Separation Probability Analysis. *Yang, L., +, TCYB Aug. 2021 4100-4111*

Distributed and Parallel ADMM for Structured Nonconvex Optimization Problem. Wang, X., +, TCYB Sept. 2021 4540-4552

Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285

Condition monitoring

A Data-Driven Aero-Engine Degradation Prognostic Strategy. Wang, C., +, TCYB March 2021 1531-1541

Consensus algorithm

Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays. *Li, K.*, +, *TCYB Dec. 2021 5850-5858*

Constraint handling

Handling Constrained Many-Objective Optimization Problems via Problem Transformation. *Jiao*, R., +, *TCYB Oct. 2021 4834-4847*

Content-based retrieval

Concept Preserving Hashing for Semantic Image Retrieval With Concept Drift. *Tran, X.*, +, *TCYB Oct. 2021 5184-5197*

Continuous systems

Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*

Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396

Continuous time systems

A Novel Multiagent Neurodynamic Approach to Constrained Distributed Convex Optimization. Ma, L., +, TCYB March 2021 1322-1333

Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. *Yang*, X., +, *TCYB May 2021 2419-2432*

Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684

Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. *Xiong*, Q., +, *TCYB Sept. 2021 4716-4721*

Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383

Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648

Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. Wang, D., +, TCYB Oct. 2021 4885-4896

Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943

Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187

Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240

Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351

Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872

Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078

Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*

Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643

Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*

Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. *Li, F., +, TCYB Oct. 2021 5142-5155*

Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. *Luo, B., +, TCYB March 2021 1253-1261*

Quasisynchronization of Discrete-Time Inertial Neural Networks With Parameter Mismatches and Delays. *Xiao, Q.*, +, *TCYB April 2021 2290-2295*

Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Networks. Sang, H., +, TCYB April 2021 1968-1980

Control design

Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations. *Chen, B., +, TCYB Dec.* 2021 5786-5799

Control engineering computing

A Cyber-Physical System-Based Velocity-Profile Prediction Method and Case Study of Application in Plug-In Hybrid Electric Vehicle. *Zhang, Y.*, +, *TCYB Jan. 2021 40-51*

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285*-3297

Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. Zhou, T., +, TCYB May 2021 2409-2418

CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems. *Guo*, Z., +, *TCYB Jan. 2021 188-198*

Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu, H.*, +, *TCYB July 2021 3767-3778*

Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks. *Yang, Y.*, +, *TCYB June 2021 2916-2928*

- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- On Robot Compliance: A Cerebellar Control Approach. *Abadia*, *I.*, +, *TCYB May 2021 2476-2489*
- Physical Human–Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators. *Ogenyi*, *U.E.*, +, *TCYB April 2021 1888-1901*

Control nonlinearities

- A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao*, Y., +, TCYB March 2021 1262-1271
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H., +, TCYB March* 2021 1163-1174
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing, Y., +, TCYB Feb. 2021 568-578*
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021* 3724-3737
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*, +, *TCYB Jan. 2021* 126-137
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881

Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. Wen, G., +, TCYB Sept. 2021 4567-4580

Control system analysis

- H_∞ Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme. Yang, H., +, TCYB Aug. 2021 4227-4236
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266

Control system analysis computing

Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*

Control system security

- Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks. *Yang, Y.*, +, *TCYB June 2021 2916-2928*
- Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. *Liu*, *J*., +, *TCYB Aug*. 2021 4000-4010

Control system synthesis

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742
- A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. *Wang, Y., +, TCYB July 2021 3858-3870*
- A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. *Chen, Y., +, TCYB June 2021 2993-3003*
- A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao, Y.*, +, *TCYB March 2021 1262-1271*
- A Unified Framework Design for Finite-Time and Fixed-Time Synchronization of Discontinuous Neural Networks. *Xiao, J.*, +, *TCYB June 2021* 3004-3016
- Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. Zhou, T., +, TCYB May 2021 2409-2418
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. *Li*, *X*, +, *TCYB Jan. 2021 199-209*
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*
- Adaptive Neural Network Fixed-Time Leader–Follower Consensus for Multiagent Systems With Constraints and Disturbances. Ni, J., +, TCYB April 2021 1835-1848
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807

- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems. *Qiu, J.*, +, *TCYB Aug. 2021 3964-3974*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. *Chen, J.*, +, *TCYB Feb. 2021 984-993*
- Circumnavigation on Multiple Circles Around a Nonstationary Target With Desired Angular Spacing. Sen, A., +, TCYB Jan. 2021 222-232
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song*, *J*., +, *TCYB Sept. 2021 4581-4590*
- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133
- Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y.*, +, *TCYB July 2021 3469-3482*
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July 2021 3710-3723*
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. Wang, X., +, TCYB Oct. 2021 4924-4933
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. Vu, V., +, TCYB June 2021 3312-3324
- Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. Wang, D., +, TCYB Oct. 2021 4885-4896
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. Wang, J., +, $TCYB\ May\ 2021\ 2433-2445$
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. Ge, C., +, TCYB Feb. 2021 961-969
- Dissipativity-Based Sliding-Mode Control of Cyber-Physical Systems Under Denial-of-Service Attacks. Ma, R., +, TCYB May 2021 2306-2318
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and

- Directed Communication Topology. Long, J., +, TCYB Aug. 2021 4050-4061
- Distributed Adaptive Finite-Time Consensus for Second-Order Multiagent Systems With Mismatched Disturbances Under Directed Networks. *Wang*, H., +, TCYB March 2021 1347-1358
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. *Li*, *K*., +, *TCYB June 2021 3361-3370*
- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*
- Distributed Edge-Based Event-Triggered Formation Control. Cheng, B., +, TCYB March 2021 1241-1252
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, *TCYB Aug*. 2021 3988-3999
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks. *Xiao*, S., +, *TCYB July 2021 3676-3686*
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo*, M., +, TCYB Sept. 2021 4707-4715
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +. *TCYB May 2021 2490-2503*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. Liu, J., +, TCYB Jan. 2021 162-173
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. *Su, X.*, +, *TCYB June 2021 2979-2992*
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong, G.*, +, *TCYB Jan. 2021 309-317*
- Event-Triggered Controller Design With Varying Gains for T–S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Event-Triggered H_∞ Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach. *Wang, X.*, +, *TCYB June 2021 3062-3070*
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*, +, *TCYB June 2021 2969-2978*
- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*
- Feedback Strategies for a Reach-Avoid Game With a Single Evader and Multiple Pursuers. Selvakumar, J., +, TCYB Feb. 2021 696-707
- Finite-Frequency H'/H $^{\infty}$ Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021 3017-3026*

- Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*
- Finite-Horizon H∞ Bipartite Consensus Control of Cooperation—Competition Multiagent Systems With Round-Robin Protocols. *Chen, W.*, +, *TCYB July 2021 3699-3709*
- Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. Li, J., +, TCYB Jan. 2021 416-426
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fixed/Preassigned-Time Synchronization of Complex Networks via Improving Fixed-Time Stability. Hu, C., +, TCYB June 2021 2882-2892
- Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. *Li*, *Z*., +, *TCYB April 2021 2253-2264*
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162
- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. Lian, J., +, TCYB April 2021 2032-2041
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang*, *R.*, +, *TCYB May 2021 2384-2397*
- Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y, +, TCYB Sept. 2021 4755-4765
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- ${
 m H}_{\infty}$ Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme. *Yang, H.*, +, *TCYB Aug.* 2021 4227-4236
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach. Shen, D., +, TCYB March 2021 1286-1299
- Large-Angle Velocity-Free Attitude Tracking Control of Satellites: An Observer-Free Framework. *Xiao*, B., +, TCYB Sept. 2021 4722-4732

- Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix. *Hao*, Y, +, TCYB Sept. 2021 4743-4754
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*
- Model-Independent Formation Tracking of Multiple Euler-Lagrange Systems via Bounded Inputs. Wang, L., +, TCYB May 2021 2813-2823
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021* 1913-1928
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug. 2021 4011-4020*
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, Q., +, TCYB Oct. 2021 5032-5045
- Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain. *Liu, C.*, +, *TCYB May* 2021 2339-2346
- Nonseparation Method-Based Finite/Fixed-Time Synchronization of Fully Complex-Valued Discontinuous Neural Networks. *Feng, L.*, +, *TCYB June 2021 3212-3223*
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Observer-Based Distributed Mean-Square Consensus Design for Leader-Following Multiagent Markov Jump Systems. *Dong, S.*, +, *TCYB June 2021 3054-3061*
- Observer-Based Event-Driven Control for Discrete-Time Systems With Disturbance Rejection. Zhang, J., +, TCYB April 2021 2120-2130
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. Wang, W., +, TCYB April 2021 2131-2141
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li, Y.*, +, *TCYB Jan. 2021* 126-137
- On Designing Distributed Prescribed Finite-Time Observers for Strict-Feedback Nonlinear Systems. *Chang, L.*, +, *TCYB Sept. 2021 4695-4706*
- Optimal Robot–Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control. *Liang, C.*, +, *TCYB June 2021 2893-2904*
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T–S Fuzzy Implementation. *Han, H.,* +, *TCYB Feb. 2021 801-814*
- Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. Li, F., +, TCYB Oct. 2021 5142-5155
- Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. *Luo, B., +, TCYB March 2021 1253-1261*
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu, H.*, +, *TCYB March 2021 1334-1346*
- Pinning Controllability for a Boolean Network With Arbitrary Disturbance Inputs. Li, F., +, TCYB June 2021 3338-3347

- Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y., +, TCYB June 2021 2870-2881
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. Chen, Y., +, TCYB Feb. 2021 501-511
- Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109
- Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation. Ren, L., +, TCYB Sept. 2021 4685-4694
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. *Liao*, Q., +, TCYB Feb. 2021 947-960
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y, +, TCYB Jan. 2021 258-266
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. Hu, Z., +, TCYB July 2021 3779-3788
- Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. Wang, Y., +, TCYB March 2021 1300-1310

Control systems

Stability Analysis for Cyber-Physical Systems Under Denial-of-Service Attacks. Lu, A., +, TCYB Nov. 2021 5304-5313

Control theory

Quantized Sampled-Data Synchronization of Delayed Reaction–Diffusion Neural Networks Under Spatially Point Measurements. *Wang, Z.*, +, *TCYB Dec.* 2021 5740-5751

Controllability

- Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Pinning Controllability for a Boolean Network With Arbitrary Disturbance Inputs. Li, F., +, TCYB June 2021 3338-3347
- Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381
- The Graphical Conditions for Controllability of Multiagent Systems Under Equitable Partition. *Qu, J.*, +, *TCYB Sept. 2021 4661-4672*

Convergence

- A Distributed Optimization Algorithm Based on Multiagent Network for Economic Dispatch With Region Partitioning. *Liu*, *Q*., +, *TCYB May 2021* 2466-2475
- A Many-Objective Evolutionary Algorithm Based on a Two-Round Selection Strategy. *Liang, Z.*, +, *TCYB March 2021 1417-1429*
- A Polar-Metric-Based Evolutionary Algorithm. Xu, H., +, TCYB July 2021 3429-3440

- A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization. Lan, R., +, TCYB Dec. 2021 6284-6293
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- An Indicator-Based Many-Objective Evolutionary Algorithm With Boundary Protection. *Liang*, Z., +, TCYB Sept. 2021 4553-4566
- Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation–Competition Networks. *Shao, J.*, +, *TCYB Nov. 2021 5225-5235*
- Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383
- Distributed Generalized Nash Equilibrium Seeking for Monotone Generalized Noncooperative Games by a Regularized Penalized Dynamical System. Sun, C., +, TCYB Nov. 2021 5532-5545
- Distributed Multiobjective Optimization for Network Resource Allocation of Multiagent Systems. *Li*, *Z*., +, *TCYB Dec. 2021 5800-5810*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078
- Further Results for Edge Convergence of Directed Signed Networks. *Du*, *M*., +, *TCYB Dec.* 2021 5659-5670
- Graph Simplification-Aided ADMM for Decentralized Composite Optimization. Wang, B., +, TCYB Oct. 2021 5170-5183
- Recursive Least-Squares Temporal Difference With Gradient Correction. Song, T., +, TCYB Aug. 2021 4251-4264
- Solver-Critic: A Reinforcement Learning Method for Discrete-Time-Constrained-Input Systems. *Yuan*, X., +, TCYB Nov. 2021 5619-5630
- Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism. *Liu, Y.*, +, *TCYB Nov. 2021 5585-5594*
- Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance. *Liu, J., +, TCYB June 2021 3263-3272*

Convergence of numerical methods

- Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. *Zhang, Z.*, +, *TCYB Aug. 2021* 4312-4326
- Distributed Dual Subgradient Algorithms With Iterate-Averaging Feedback for Convex Optimization With Coupled Constraints. *Liang, S.*, +, *TCYB May 2021 2529-2539*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482

Convex functions

Penalty Method for Constrained Distributed Quaternion-Variable Optimization. Xia, Z., +, TCYB Nov. 2021 5631-5636

Convex programming

- A Novel Multiagent Neurodynamic Approach to Constrained Distributed Convex Optimization. Ma, L., +, TCYB March 2021 1322-1333
- Adaptive Deep Cascade Broad Learning System and Its Application in Image Denoising. Ye, H., +, TCYB Sept. 2021 4450-4463
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. *Xiong*, Q., +, *TCYB Sept. 2021 4716-4721*
- Distributed Dual Subgradient Algorithms With Iterate-Averaging Feedback for Convex Optimization With Coupled Constraints. *Liang, S.*, +, *TCYB May 2021 2529-2539*
- Distributed Optimization of Multiagent Systems Subject to Inequality Constraints. *Tian, F.*, +, *TCYB April 2021 2232-2241*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching. Zhu, H., +, TCYB Aug. 2021 4062-4074

- Equivalent Continuous Formulation of General Hashing Problem. *Wang, S.*, +, *TCYB Aug. 2021 4089-4099*
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Key Nodes Selection in Controlling Complex Networks via Convex Optimization. Ding, J., +, TCYB Jan. 2021 52-63
- Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control. Lyu, Y., +, TCYB May 2021 2651-2662
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. Lu, Q., +, TCYB June 2021 3224-3237
- Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119
- The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092

Convolutional neural networks

- AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896
- Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb.* 2021 708-721
- Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network. Wu, H., +, TCYB Sept. 2021 4464-4475
- Bio-Inspired Representation Learning for Visual Attention Prediction. *Yuan*, Y., +, TCYB July 2021 3562-3575
- Convolutional Multitimescale Echo State Network. Ma, Q., +, TCYB March 2021 1613-1625
- Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng. J.*, +, *TCYB Sept. 2021 4414-4428*
- DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. Li, Z., +, TCYB July 2021 3441-3454
- Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread. *Li*, *H*., +, *TCYB Dec. 2021 6188-6199*
- Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y., +, TCYB April 2021 1756-1768
- Fingerprint Identification With Shallow Multifeature View Classifier. Ghafoor, M., +, TCYB Sept. 2021 4515-4527
- Illumination-Invariant Flotation Froth Color Measuring via Wasserstein Distance-Based CycleGAN With Structure-Preserving Constraint. Liu, J, +, $TCYB\ Feb$, $2021\ 839-852$
- Joint Reflection Removal and Depth Estimation From a Single Image. Chang, Y., +, TCYB Dec. 2021 5836-5849
- Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. Ren, C., +, TCYB July 2021 3535-3548
- Lightweight Salient Object Detection via Hierarchical Visual Perception Learning. Liu, Y., +, TCYB Sept. 2021 4439-4449
- MADNet: A Fast and Lightweight Network for Single-Image Super Resolution. Lan, R., +, TCYB March 2021 1443-1453
- RecapNet: Action Proposal Generation Mimicking Human Cognitive Process. Wang, T., +, TCYB Dec. 2021 6017-6028
- Slice-Based Online Convolutional Dictionary Learning. Zeng, Y., +, TCYB Oct. 2021 5116-5129
- SPRNet: Single-Pixel Reconstruction for One-Stage Instance Segmentation. Yu, J., +, TCYB April 2021 1731-1742

Correlation

Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread. *Li*, *H*., +, *TCYB Dec. 2021 6188-6199*

Cost function

- Penalty Method for Constrained Distributed Quaternion-Variable Optimization. Xia, Z., +, TCYB Nov. 2021 5631-5636
- Solver–Critic: A Reinforcement Learning Method for Discrete-Time-Constrained-Input Systems. *Yuan*, X., +, TCYB Nov. 2021 5619-5630

Cost reduction

Solving Generalized Vehicle Routing Problem With Occasional Drivers via Evolutionary Multitasking. Feng, L., +, TCYB June 2021 3171-3184

Counlings

- Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions. Zhao, M., +, TCYB Nov. 2021 5609-5618
- Finite-Time Output Synchronization and H_{∞} Output Synchronization of Coupled Neural Networks With Multiple Output Couplings. Wang, J., +, $TCYB\ Dec.\ 2021\ 6041-6053$
- Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control. Wu, J., +, TCYB Dec. 2021 5825-5835

Covariance matrices

- Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020
- Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177
- Large-Scale Evolution Strategy Based on Search Direction Adaptation. *He*, X, +, *TCYB March 2021 1651-1665*
- Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. *Shen, Y.*, +, *TCYB Oct. 2021 4897-4908*
- Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J*., +, *TCYB Feb. 2021 534-547*

Cryptography

- Concept Preserving Hashing for Semantic Image Retrieval With Concept Drift. *Tian, X.*, +, *TCYB Oct. 2021 5184-5197*
- Distributed Memetic Algorithm for Outsourced Database Fragmentation. Ge, Y., +, TCYB Oct. 2021 4808-4821
- Equivalent Continuous Formulation of General Hashing Problem. *Wang, S.*, +, *TCYB Aug. 2021 4089-4099*
- Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*, +, *TCYB Oct. 2021 4982-4993*

Cultural differences

A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization. Lan, R., +, TCYB Dec. 2021 6284-6293

Current measurement

Performance Evaluation Methodology for Long-Term Single-Object Tracking. *Lukezic*, A., +, TCYB Dec. 2021 6305-6318

Cyber-physical systems

- A Secure Control Learning Framework for Cyber-Physical Systems Under Sensor and Actuator Attacks. *Zhou, Y.*, +, *TCYB Sept. 2021 4648-4660*
- Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems. Zhao, Z., +, TCYB Dec. 2021 6179-6187
- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. *Peng, L.*, +, *TCYB Feb. 2021 779-788*

Cyberattack

Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks. Wan, Y., +, TCYB Nov. 2021 5314-5327

Cybernetics

- A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *Peng, C.*, +, *TCYB Nov. 2021 5546-5558*
- A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation. *Nguyen, B.H.*, +, *TCYB Dec. 2021 6319-6332*
- A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization. Lan, R., +, TCYB Dec. 2021 6284-6293

AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896

Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation–Competition Networks. *Shao, J.*, +, *TCYB Nov. 2021 5225-5235*

Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems. Zhao, Z., +, TCYB Dec. 2021 6179-6187

D

Damping

A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*

Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y.*, +, *TCYB July 2021 3469-3482*

Data analysis

2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M*., +, *TCYB Jan.* 2021 359-372

Data handling

Asynchronous Episodic Deep Deterministic Policy Gradient: Toward Continuous Control in Computationally Complex Environments. *Zhang*, *Z.*, +, *TCYB Feb. 2021 604-613*

End-to-End Ensemble Learning by Exploiting the Correlation Between Individuals and Weights. *Mao*, S., +, *TCYB May 2021 2835-2846*

Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches. *Chen, L.*, +, *TCYB Aug.* 2021 4298-4311

Data integrity

A Localized Event-Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks. Sahoo, S., +, TCYB July 2021 3687-3698

Data mining

Concept Drift Detection via Equal Intensity k-Means Space Partitioning. Liu, A., +, TCYB June 2021 3198-3211

Correntropy-Based Multiview Subspace Clustering. Xing, L., +, TCYB June 2021 3298-3311

Emotion Correlation Mining Through Deep Learning Models on Natural Language Text. Wang, X., +, TCYB Sept. 2021 4400-4413

Fast Utility Mining on Sequence Data. Gan, W., +, TCYB Feb. 2021 487-500 Fast-RCM: Fast Tree-Based Unsupervised Rare-Class Mining. Weng, H., +, TCYB Oct. 2021 5198-5211

Genetic Programming for Evolving a Front of Interpretable Models for Data Visualization. *Lensen, A., +, TCYB Nov. 2021 5468-5482*

Interpretable Rule Discovery Through Bilevel Optimization of Split-Rules of Nonlinear Decision Trees for Classification Problems. *Dhebar, Y.*, +, *TCYB Nov. 2021 5573-5584*

Multiscale Drift Detection Test to Enable Fast Learning in Nonstationary Environments. Wang, X., +, TCYB July 2021 3483-3495

Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652

Rule-Based Modeling With DBSCAN-Based Information Granules. Ouyang, T., +, TCYB July 2021 3653-3663

Time-Series Clustering Based on the Characterization of Segment Typologies. *Guijo-Rubio*, D., +, TCYB Nov. 2021 5409-5422

Data models

AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896

Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems. Zhao, Z., +, TCYB Dec. 2021 6179-6187

Distributed Semi-Supervised Learning With Missing Data. Xu, Z., +, TCYB Dec. 2021 6165-6178

Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention. Li, J., +, TCYB Dec. 2021 6029-6040

Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams. *Rathore, P., +, TCYB Dec. 2021 5979-5992*

Data privacy

Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, TCYB Aug. 2021 4075-4088

Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu*, *B*., +, *TCYB July 2021 3836-3844*

Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. *Lu*, *Q*., +, *TCYB June 2021 3224-3237*

Data protection

Distributed Memetic Algorithm for Outsourced Database Fragmentation. Ge. Y., +, TCYB Oct. 2021 4808-4821

Data structures

Granular Description of Data Structures: A Two-Phase Design. *Ouyang, T.*, +, TCYB April 2021 1902-1912

Merge Nondominated Sorting Algorithm for Many-Objective Optimization. Moreno, J., +, TCYB Dec. 2021 6154-6164

Rule-Based Modeling With DBSCAN-Based Information Granules. Ouyang, T., +, TCYB July 2021 3653-3663

Data visualization

Emotion Recognition From Multimodal Physiological Signals Using a Regularized Deep Fusion of Kernel Machine. *Zhang, X.*, +, *TCYB Sept. 2021* 4386-4399

Genetic Programming for Evolving a Front of Interpretable Models for Data Visualization. Lensen, A., +, TCYB Nov. 2021 5468-5482

Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams. *Rathore, P., +, TCYB Dec. 2021 5979-5992*

Database management systems

Distributed Memetic Algorithm for Outsourced Database Fragmentation. *Ge, Y.*, +, *TCYB Oct. 2021 4808-4821*

Fast Utility Mining on Sequence Data. Gan, W., +, TCYB Feb. 2021 487-500 Databases

IMS-CDA: Prediction of CircRNA-Disease Associations From the Integration of Multisource Similarity Information With Deep Stacked Autoencoder Model. Wang, L., +, TCYB Nov. 2021 5522-5531

Information Granulation-Based Fuzzy Clustering of Time Series. *Guo*, *H*., +, *TCYB Dec.* 2021 6253-6261

Decentralized control

Adaptive Event-Triggered Control for Unknown Second-Order Nonlinear Multiagent Systems. *Li*, *Z.*, +, *TCYB Dec. 2021 6131-6140*

Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. Yang, X., +, TCYB May 2021 2419-2432

Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648

Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. *Vu, V.*, +, *TCYB June 2021 3312-3324*

Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks. Wan, Y., +, TCYB Nov. 2021 5314-5327

Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. *Zhu, W., +, TCYB April 2021 2178-2187*

Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240

Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo, M.*, +, *TCYB Sept. 2021 4707-4715*

Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks. *Yang*, Y., +, TCYB June 2021 2916-2928

Further Results for Edge Convergence of Directed Signed Networks. *Du*, *M*., +, *TCYB Dec.* 2021 5659-5670

Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control. Wu, J., +, TCYB Dec. 2021 5825-5835

Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456

 ${
m H}_{\infty}$ Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme. Yang, H., +, TCYB Aug. 2021 4227-4236

Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. Liao, Q., +, TCYB Feb. 2021 947-960

Decision making

- A Dynamic Adaptive Subgroup-to-Subgroup Compatibility-Based Conflict Detection and Resolution Model for Multicriteria Large-Scale Group Decision Making. *Tang, M.*, +, *TCYB Oct. 2021 4784-4795*
- A Preference Biobjective Evolutionary Algorithm for the Payment Scheduling Negotiation Problem. Zhang, Z., +, TCYB Dec. 2021 6105-6118
- Consensus Model Handling Minority Opinions and Noncooperative Behaviors in Large-Scale Group Decision-Making Under Double Hierarchy Linguistic Preference Relations. *Gou, X., +, TCYB Jan. 2021 283-296*
- CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems. Guo, Z., +, TCYB Jan. 2021 188-198
- Evolutionary Algorithm for Knee-Based Multiple Criteria Decision Making. Zhang, K., +, TCYB Feb. 2021 722-735
- Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making. Wu, Y, +, TCYB Feb. 2021 649-659
- Multicriteria Decision Making With Incomplete Weights Based on 2-D Uncertain Linguistic Choquet Integral Operators. *Liu, P., +, TCYB April* 2021 1860-1874
- Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost. *Hu*, *Y*, +, *TCYB Feb. 2021 874-888*
- Optimal Interaction Priority Calculation From Hesitant Fuzzy Preference Relations Based on the Monte Carlo Simulation Method for the Acceptable Consistency and Consensus. *Meng*, F., +, TCYB Dec. 2021 5871-5882
- TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution. Ye, P., +, TCYB Dec. 2021 5897-5906
- Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161

Decision theory

Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. Peng, L., +, TCYB Feb. 2021 779-788

Decision trees

Interpretable Rule Discovery Through Bilevel Optimization of Split-Rules of Nonlinear Decision Trees for Classification Problems. *Dhebar, Y.*, +, *TCYB Nov. 2021 5573-5584*

Decoding

Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, *TCYB Aug. 2021 4075-4088*

Deep learning

- A Bayes Risk Minimization Machine for Example-Dependent Cost Classification. *Lazaro*, M., +, TCYB July 2021 3524-3534
- A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan, K.*, +, *TCYB Dec. 2021 5907-5920*
- A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285-3297*
- AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896
- Adaptive Deep Cascade Broad Learning System and Its Application in Image Denoising. Ye, H., +, TCYB Sept. 2021 4450-4463
- Adaptive Weighting of Handcrafted Feature Losses for Facial Expression Recognition. Xie, W., +, TCYB May 2021 2787-2800
- An Inception Convolutional Autoencoder Model for Chinese Healthcare Question Clustering. Dai, D., +, TCYB April 2021 2019-2031
- Bio-Inspired Representation Learning for Visual Attention Prediction. *Yuan*, Y, +, TCYB July 2021 3562-3575
- Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng, J.*, +, *TCYB Sept. 2021 4414-4428*
- Deep Reinforcement Learning for Multiobjective Optimization. Li, K., +, TCYB June 2021 3103-3114
- Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model. *Zhang, X.*, +, *TCYB June 2021 3157-3170*
- Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition. Zhang, L., +, TCYB Dec. 2021 5671-5680

- DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. *Li*, *Z*., +, *TCYB July 2021 3441-3454*
- Efficient Person Search via Expert-Guided Knowledge Distillation. Zhang, Y., +, TCYB Oct. 2021 5093-5104
- Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y., +, TCYB April 2021 1756-1768
- Feature-Aware Adaptation and Density Alignment for Crowd Counting in Video Surveillance. *Gao*, J., +, *TCYB Oct.* 2021 4822-4833
- Group Reidentification with Multigrained Matching and Integration. *Lin, W.*, +, *TCYB March 2021 1478-1492*
- Joint Reflection Removal and Depth Estimation From a Single Image. Chang, Y., +, TCYB Dec. 2021 5836-5849
- Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. *Ren, C., +, TCYB July 2021 3535-3548*
- Learning Kernel for Conditional Moment-Matching Discrepancy-Based Image Classification. Ren, C., +, TCYB April 2021 2006-2018
- Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip. *Zhang, Y.*, +, *TCYB April 2021 1875-1887*
- Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276
- Self-Supervised Multiscale Adversarial Regression Network for Stereo Disparity Estimation. Wang, C., +, TCYB Oct. 2021 4770-4783
- Weakly Supervised Low-Rank Representation for Hyperspectral Anomaly Detection. Xie, W., +, TCYB Aug. 2021 3889-3900

Delay estimation

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli, C.*, +, TCYB May 2021 2587-2600

Delay systems

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*

Delays

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870
- A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149
- Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. Zhou, T., +, TCYB May 2021 2409-2418
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. *Cao, J.*, +, *TCYB Jan. 2021 151-161*
- Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks. Shi, J., +, TCYB May 2021 2540-2549
- Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems. *Qiu, J.*, +, *TCYB Aug. 2021 3964-3974*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. *Chen, J.*, +, *TCYB Feb. 2021 984-993*

- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. Yang, Y., +, TCYB July 2021 3469-3482
- Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements. Zhang, Y., +, TCYB Nov. 2021 5364-5374
- Consensus Tracking Control of Uncertain Multiagent Systems With Sampled Data and Time-Varying Delay. Zhou, D., +, TCYB Dec. 2021 5681-5691
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. Xiong, Q., +, TCYB Sept. 2021 4716-4721
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, TCYB Aug. 2021 3988-3999
- Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J.*, +, *TCYB Jan. 2021 462-472*
- Distributed Kalman Filtering Over Sensor Networks With Transmission Delays. Yang, H., +, TCYB Nov. 2021 5511-5521
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. *Liu*, *J*., +, *TCYB Jan. 2021 162-173*
- Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology. *Chen, J.*, +, *TCYB Dec.* 2021 5993-6003
- Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong, G.*, +, *TCYB Jan. 2021 309-317*
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays. Sheng, Y., +, TCYB Feb. 2021 579-588
- Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. Sun, S., +, TCYB Dec. 2021 6213-6225
- Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. *Li*, *J*., +, *TCYB Jan. 2021 416-426*
- Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay. *Gong, S.*, +, *TCYB June 2021 2944-2955*
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays. *Li, K.*, +, *TCYB Dec. 2021 5850-5858*
- Finite-Time Output Synchronization and H_{∞} Output Synchronization of Coupled Neural Networks With Multiple Output Couplings. Wang, J., +, TCYB Dec. 2021 6041-6053
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang, R.*, +, *TCYB May 2021 2384-2397*
- Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors. *Li*, *L.*, +, *TCYB April 2021 2142-2152*

- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May 2021 2446-2456*
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*
- Multiple Mittag-Leffler Stability of Delayed Fractional-Order Cohen-Grossberg Neural Networks via Mixed Monotone Operator Pair. *Zhang, F., +, TCYB Dec. 2021 6333-6344*
- Nonseparation Method-Based Finite/Fixed-Time Synchronization of Fully Complex-Valued Discontinuous Neural Networks. Feng, L., +, TCYB June 2021 3212-3223
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021* 3724-3737
- Observer-Based Dissipativity Control for T-S Fuzzy Neural Networks With Distributed Time-Varying Delays. *Li, H., +, TCYB Nov. 2021 5248-5258*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li, Y.*, +, *TCYB Jan. 2021* 126-137
- Output Synchronization of Complex Dynamical Networks With Multiple Output or Output Derivative Couplings. *Wang, J.*, +, *TCYB Feb. 2021 927-937*
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Quantized Sampled-Data Synchronization of Delayed Reaction—Diffusion Neural Networks Under Spatially Point Measurements. *Wang, Z.*, +, *TCYB Dec. 2021 5740-5751*
- Quasisynchronization of Discrete-Time Inertial Neural Networks With Parameter Mismatches and Delays. *Xiao*, *Q*., +, *TCYB April 2021 2290-2295*
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. Zhang, F., +, TCYB June 2021 3027-3038
- Synchronization Analysis for Complex Dynamical Networks With Coupling Delay via Event-Triggered Delayed Impulsive Control. Lv, X., +, TCYB Nov. 2021 5269-5278
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. *Hu*, *Z*., +, *TCYB July 2021 3779-3788*

Demand side management

Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H.*, +, *TCYB April 2021 2068-2079*

Denial-of-service attack

- Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks. Wan, Y., +, TCYB Nov. 2021 5314-5327
- Stability Analysis for Cyber-Physical Systems Under Denial-of-Service Attacks. Lu, A., +, TCYB Nov. 2021 5304-5313

Design of experiments

Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177

Detectors

Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems. Zhao, Z., +, TCYB Dec. 2021 6179-6187

Deterministic algorithms

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Difference equations

Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. Gao, Q., +, TCYB Feb. 2021 889-899

- Finite-Horizon H∞ Bipartite Consensus Control of Cooperation—Competition Multiagent Systems With Round-Robin Protocols. *Chen, W.*, +, *TCYB July 2021 3699-3709*
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. *Shen, Y.*, +, *TCYB Oct.* 2021 4897-4908

Differential equations

- Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays. *Sheng, Y.*, +, *TCYB Feb. 2021 579-588*
- Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix. *Hao*, Y, +, TCYB Sept. 2021 4743-4754

Differential games

A Secure Control Learning Framework for Cyber-Physical Systems Under Sensor and Actuator Attacks. Zhou, Y., +, TCYB Sept. 2021 4648-4660

Digital communication

Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. *Chen, J.*, +, *TCYB Feb. 2021 984-993*

Dimensionality reduction

Information Granulation-Based Fuzzy Clustering of Time Series. *Guo*, *H*., +, *TCYB Dec. 2021 6253-6261*

Directed graphs

- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Bipartite Fixed-Time Output Consensus of Heterogeneous Linear Multiagent Systems. Zhang, H., +, TCYB Feb. 2021 548-557
- Circumnavigation on Multiple Circles Around a Nonstationary Target With Desired Angular Spacing. Sen, A., +, TCYB Jan. 2021 222-232
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. Xiong, Q., +, TCYB Sept. 2021 4716-4721
- Distance + Angle-Based Control of 2-D Rigid Formations. *Liu*, *T.*, +, *TCYB Dec. 2021 5969-5978*
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Distributed Optimization of Multiagent Systems Subject to Inequality Constraints. *Tian, F., +, TCYB April 2021 2232-2241*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y, +, TCYB May 2021 2359-2371
- Layered Affine Formation Control of Networked Uncertain Systems: A Fully Distributed Approach Over Directed Graphs. Li, D., +, TCYB Dec. 2021 6119-6130
- Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control. *Liang, C.*, +, *TCYB June 2021 2893-2904*
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. Gu, H., +, TCYB March 2021 1334-1346
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266

Discrete systems

- Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. *Gao*, *Q*., +, *TCYB Feb. 2021 889-899*
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. *Zhao, G.*, +, *TCYB Nov. 2021 5387-5396*

Discrete time systems

Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174

- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. *Nguyen, A., +, TCYB Sept. 2021 4673-4684*
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. *Xiong, Q.*, +, *TCYB Sept. 2021 4716-4721*
- Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383
- Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. Gao, Q., +, TCYB Feb. 2021 889-899
- Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943
- Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Distributed Optimization of Multiagent Systems Subject to Inequality Constraints. *Tian*, F., +, *TCYB April 2021 2232-2241*
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872
- Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong, G.*, +, *TCYB Jan. 2021 309-317*
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*
- Finite-Horizon H∞ Bipartite Consensus Control of Cooperation—Competition Multiagent Systems With Round-Robin Protocols. *Chen, W.*, +, *TCYB July 2021 3699-3709*
- Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Observer-Based Event-Driven Control for Discrete-Time Systems With Disturbance Rejection. Zhang, J., +, TCYB April 2021 2120-2130
- Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. *Shen, Y.*, +, *TCYB Oct. 2021 4897-4908*
- Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. *Luo, B., +, TCYB March 2021 1253-1261*
- Policy Iteration *Q*-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. *Luo*, *B*., +, *TCYB July 2021 3630-3640*
- Quasisynchronization of Discrete-Time Inertial Neural Networks With Parameter Mismatches and Delays. *Xiao, Q.*, +, *TCYB April 2021 2290-2295*
- Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*

- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119
- Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764

Discrete-time systems

An Implicit Function-Based Adaptive Control Scheme for Noncanonical-Form Discrete-Time Neural-Network Systems. *Zhang, Y.*, +, *TCYB Dec.* 2021 5728-5739

Diseases

- Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb* 2021 708-721
- Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network. Wu, H., +, TCYB Sept. 2021 4464-4475
- Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. *Liu, C.*, +, *TCYB Oct. 2021 5046-5056*
- Epidemic Propagation With Positive and Negative Preventive Information in Multiplex Networks. Wang, Z., +, TCYB March 2021 1454-1462
- Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P., +, TCYB Jan. 2021 233-246*
- IMS-CDA: Prediction of CircRNA-Disease Associations From the Integration of Multisource Similarity Information With Deep Stacked Autoencoder Model. Wang, L., +, TCYB Nov. 2021 5522-5531
- Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Distributed algorithms

- A Distributed Optimization Algorithm Based on Multiagent Network for Economic Dispatch With Region Partitioning. *Liu*, *Q*., +, *TCYB May 2021* 2466-2475
- Distributed Generalized Nash Equilibrium Seeking for Monotone Generalized Noncooperative Games by a Regularized Penalized Dynamical System. Sun, C., +, TCYB Nov. 2021 5532-5545
- Distributed Multiobjective Optimization for Network Resource Allocation of Multiagent Systems. Li, Z., +, TCYB Dec. 2021 5800-5810
- Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. *Lu*, *Q*., +, *TCYB June 2021 3224-3237*

Distributed control

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- A Packet Loss-Dependent Event-Triggered Cyber-Physical Cooperative Control Strategy for Islanded Microgrid. *Zhang, B.*, +, *TCYB Jan. 2021* 267-282
- A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149
- Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. Zhou, T., +, TCYB May 2021 2409-2418
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. Li, X., +, TCYB Jan. 2021 199-209
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Bipartite Fixed-Time Output Consensus of Heterogeneous Linear Multiagent Systems. Zhang, H., +, TCYB Feb. 2021 548-557
- Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. Chen, J., +, TCYB Feb. 2021 984-993
- Circumnavigation on Multiple Circles Around a Nonstationary Target With Desired Angular Spacing. Sen, A., +, TCYB Jan. 2021 222-232
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. Xiong, Q., +, TCYB Sept. 2021 4716-4721

- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. *Wang, X.*, +, *TCYB Oct. 2021 4924-4933*
- Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. Wang, D., +, TCYB Oct. 2021 4885-4896
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long. J., +, TCYB Aug. 2021 4050-4061
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. *Li*, *K*., +, *TCYB June 2021 3361-3370*
- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*
- Distributed Edge-Based Event-Triggered Formation Control. *Cheng, B.*, +, *TCYB March 2021 1241-1252*
- Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, *TCYB Aug*. 2021 3988-3999
- Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. Wang, B., +, TCYB Jan. 2021 16-27
- Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J.*, +, *TCYB Jan.* 2021 462-472
- Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. $Qu, H_{-}, +, TCYB July 2021 3767-3778$
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu*, *B*., +, *TCYB July 2021 3836-3844*
- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks. *Xiao*, S., +, *TCYB July 2021 3676-3686*
- Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks. *Yang*, Y., +, *TCYB June 2021 2916-2928*
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*
- Event-Triggered Active MPC for Nonlinear Multiagent Systems With Packet Losses. Yang, H., +, TCYB June 2021 3093-3102
- Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162
- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- Model-Independent Formation Tracking of Multiple Euler-Lagrange Systems via Bounded Inputs. Wang, L., +, TCYB May 2021 2813-2823
- Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control. *Lyu, Y., +, TCYB May 2021 2651-2662*
- Necessary and Sufficient Conditions for Group Consensus of Fractional Multiagent Systems Under Fixed and Switching Topologies via Pinning Control. *Chen, Y., +, TCYB Jan. 2021 28-39*

- Observer-Based Distributed Mean-Square Consensus Design for Leader-Following Multiagent Markov Jump Systems. *Dong, S.*, +, *TCYB June* 2021 3054-3061
- On Designing Distributed Prescribed Finite-Time Observers for Strict-Feedback Nonlinear Systems. Chang, L., +, TCYB Sept. 2021 4695-4706
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance. *Liu, J., +, TCYB June 2021 3263-3272*
- Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. Wang, Y., +, TCYB March 2021 1300-1310

Distributed databases

Distributed Semi-Supervised Learning With Missing Data. Xu, Z., +, TCYB Dec. 2021 6165-6178

Distributed parameter systems

- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*

Distributed power generation

- A Localized Event-Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks. Sahoo, S., +, TCYB July 2021 3687-3698
- A Packet Loss-Dependent Event-Triggered Cyber-Physical Cooperative Control Strategy for Islanded Microgrid. *Zhang, B.*, +, *TCYB Jan. 2021* 267-282
- Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, *TCYB Aug*. 2021 3988-3999
- Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. Teo, T.T., +, TCYB Nov. 2021 5375-5386

Divide and conquer methods

- An Evolutionary Multiobjective Route Grouping-Based Heuristic Algorithm for Large-Scale Capacitated Vehicle Routing Problems. *Xiao*, *J.*, +, *TCYB Aug.* 2021 4173-4186
- Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks. *Zhao, T., +, TCYB July 2021 3752-3766*

Doppler effect

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli, C.*, +, *TCYB May 2021 2587-2600*

DSL

A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan, K.*, +, *TCYB Dec. 2021 5907-5920*

Duality (mathematics)

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Dynamic programming

- Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. *Yang*, X., +, *TCYB May 2021 2419-2432*
- Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383
- Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. Zhang, P., +, TCYB June 2021 2956-2968
- Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. Zhao, J., +, TCYB April 2021 2201-2214

Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021 3079-3092*

Dynamic scheduling

- Evolving Scheduling Heuristics via Genetic Programming With Feature Selection in Dynamic Flexible Job-Shop Scheduling. *Zhang, F.*, +, *TCYB April 2021 1797-1811*
- Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. Zhao, J., +, TCYB April 2021 2201-2214

 \mathbf{E}

Edge computing

An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing. Huang, T., +, TCYB Nov. 2021 5595-5608

Eigenvalues and eigenfunctions

- Adaptive Event-Triggered Control for Unknown Second-Order Nonlinear Multiagent Systems. Li, Z., +, TCYB Dec. 2021 6131-6140
- Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. *Chen, J.*, +, *TCYB Feb. 2021 984-993*
- Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo*, M., +, TCYB Sept. 2021 4707-4715
- H_∞ Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling. Ma, L., +, TCYB Dec. 2021 5761-5772
- Kernel Stability for Model Selection in Kernel-Based Algorithms. *Liu*, Y, +, *TCYB Dec.* 2021 5647-5658
- Layered Affine Formation Control of Networked Uncertain Systems: A Fully Distributed Approach Over Directed Graphs. *Li*, *D*., +, *TCYB Dec*. 2021 6119-6130
- Multilabel Feature Extraction Algorithm via Maximizing Approximated and Symmetrized Normalized Cross-Covariance Operator. Xu, J., +, TCYB July 2021 3510-3523
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Output Consensus for Heterogeneous Linear Multiagent Systems With a Predictive Event-Triggered Mechanism. *Yang*, *Q*., +, *TCYB April 2021* 1993-2005
- The Graphical Conditions for Controllability of Multiagent Systems Under Equitable Partition. Qu, J., +, TCYB Sept. 2021 4661-4672

Electrocardiography

- Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. *Debie, E., +, TCYB March 2021 1542-1555*
- Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Electrodes

Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game. *Chakraborty, B.*, +, *TCYB Dec.* 2021 6200-6212

Electroencephalography

- A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin, C.*, +, *TCYB Oct. 2021 4959-4967*
- Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020
- Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. Debie, E., +, TCYB March 2021 1542-1555
- Multitask Feature Learning Meets Robust Tensor Decomposition for EEG Classification. Zheng, Q., +, TCYB April 2021 2242-2252
- Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496

Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game. *Chakraborty, B.*, +, *TCYB Dec.* 2021 6200-6212

Spatiotemporal-Filtering-Based Channel Selection for Single-Trial EEG Classification. Qi, F., +, TCYB Feb. 2021 558-567

Electromyography

Attribute-Driven Granular Model for EMG-Based Pinch and Fingertip Force Grand Recognition. Fang, Y., +, TCYB Feb. 2021 789-800

Electronic commerce

Fast Utility Mining on Sequence Data. Gan, W., +, TCYB Feb. 2021 487-500

Electronic engineering computing

Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip. *Zhang, Y.*, +, *TCYB April 2021 1875-1887*

Embedded systems

A Cyber-Physical System-Based Velocity-Profile Prediction Method and Case Study of Application in Plug-In Hybrid Electric Vehicle. *Zhang, Y.*, +, *TCYB Jan. 2021 40-51*

Emotion recognition

A Multimodal Emotional Human–Robot Interaction Architecture for Social Robots Engaged in Bidirectional Communication. *Hong, A.*, +, *TCYB Dec.* 2021 5954-5968

Adaptive Weighting of Handcrafted Feature Losses for Facial Expression Recognition. Xie, W., +, TCYB May 2021 2787-2800

Emotion Correlation Mining Through Deep Learning Models on Natural Language Text. Wang, X., +, TCYB Sept. 2021 4400-4413

Emotion Recognition From Multimodal Physiological Signals Using a Regularized Deep Fusion of Kernel Machine. *Zhang, X.*, +, *TCYB Sept. 2021* 4386-4399

Fast Supervised Topic Models for Short Text Emotion Detection. *Pang, J.*, +, *TCYB Feb. 2021 815-828*

Encoding

Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation. *Huang, Z.*, +, *TCYB Nov. 2021 5559-5572*

Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, *TCYB Aug. 2021 4075-4088*

End effectors

A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742

Energy conservation

Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. Zhao, J., +, TCYB April 2021 2201-2214

Energy consumption

Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm. *Chen, Z.*, +, *TCYB Nov. 2021 5433-5444*

Energy harvesting

Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. Peng, L., +, TCYB Feb. 2021 779-788

Energy management systems

Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. Teo, T.T., +, TCYB Nov. 2021 5375-5386

Energy storage

Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. *Teo, T.T.*, +, *TCYB Nov. 2021 5375-5386*

Entropy

The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092

Environmental factors

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285-3297*

Environmental science computing

Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. *Xu*, *X*., +, *TCYB May 2021 2577-2586*

Epidemics

Epidemic Propagation With Positive and Negative Preventive Information in Multiplex Networks. *Wang, Z., +, TCYB March 2021 1454-1462*

Error correction

Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y., +, TCYB April 2021 1756-1768

Estimation

Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes. Zhou, Y., +, TCYB Nov. 2021 5423-5432

Efficient Minimum Cost Seed Selection With Theoretical Guarantees for Competitive Influence Maximization. *Hong, W.*, +, *TCYB Dec. 2021 6091-6104*

Fault Detection for a Class of Uncertain Sampled-Data Systems Using Deterministic Learning. Chen, T., +, TCYB Dec. 2021 5930-5940

Joint Reflection Removal and Depth Estimation From a Single Image. Chang, Y., +, TCYB Dec. 2021 5836-5849

Kernel Stability for Model Selection in Kernel-Based Algorithms. *Liu*, Y, +, TCYB Dec. 2021 5647-5658

Solver-Critic: A Reinforcement Learning Method for Discrete-Time-Constrained-Input Systems. Yuan, X., +, TCYB Nov. 2021 5619-5630

Estimation error

Consensus Tracking Control of Uncertain Multiagent Systems With Sampled Data and Time-Varying Delay. Zhou, D., +, TCYB Dec. 2021 5681-5691

Estimation theory

Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174

Feature-Aware Adaptation and Density Alignment for Crowd Counting in Video Surveillance. *Gao. J.*, +, *TCYB Oct. 2021 4822-4833*

Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*

Event detection

Asynchronous Distributed Event-Triggered Coordination for Multiagent Coverage Control. *Ajina*, *M.*, +, *TCYB Dec. 2021 5941-5953*

Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology. *Chen, J.*, +, *TCYB Dec.* 2021 5993-6003

Learning Self-Triggered Controllers With Gaussian Processes. *Hashimoto*, K., +, TCYB Dec. 2021 6294-6304

RecapNet: Action Proposal Generation Mimicking Human Cognitive Process. Wang, T., +, TCYB Dec. 2021 6017-6028

Evolutionary algorithms

Merge Nondominated Sorting Algorithm for Many-Objective Optimization. Moreno, J., +, TCYB Dec. 2021 6154-6164

Evolutionary computation

A Fast Dynamic Evolutionary Multiobjective Algorithm via Manifold Transfer Learning. *Jiang, M.*, +, *TCYB July 2021 3417-3428*

A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation. Nguyen, B.H., +, TCYB Dec. 2021 6319-6332

A Knee-Guided Evolutionary Algorithm for Compressing Deep Neural Networks. *Zhou*, *Y*, +, *TCYB March 2021 1626-1638*

A Many-Objective Evolutionary Algorithm Based on a Two-Round Selection Strategy. *Liang*, Z., +, *TCYB March* 2021 1417-1429

A Novel Local Community Detection Method Using Evolutionary Computation. Lvu, C., +, TCYB June 2021 3348-3360

A Polar-Metric-Based Evolutionary Algorithm. Xu, H., +, TCYB July 2021 3429-3440

A Preference Biobjective Evolutionary Algorithm for the Payment Scheduling Negotiation Problem. Zhang, Z., +, TCYB Dec. 2021 6105-6118

A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times. *Zhou, S., +, TCYB March 2021 1430-1442*

A Surrogate-Assisted Multiswarm Optimization Algorithm for High-Dimensional Computationally Expensive Problems. *Li*, F., +, TCYB March 2021 1390-1402

- A Two-Stage Cooperative Evolutionary Algorithm With Problem-Specific Knowledge for Energy-Efficient Scheduling of No-Wait Flow-Shop Problem. *Zhao*, F., +, TCYB Nov. 2021 5291-5303
- Adaptive Granularity Learning Distributed Particle Swarm Optimization for Large-Scale Optimization. Wang, Z., +, TCYB March 2021 1175-1188
- Adaptive Multiobjective Particle Swarm Optimization Based on Evolutionary State Estimation. Wu. B., +, TCYB July 2021 3738-3751
- An Effective Knowledge Transfer Approach for Multiobjective Multitasking Optimization. *Lin, J., +, TCYB June 2021 3238-3248*
- An Elite Gene Guided Reproduction Operator for Many-Objective Optimization. Zhu, Q., +, TCYB Feb. 2021 765-778
- An Evolutionary Multiobjective Route Grouping-Based Heuristic Algorithm for Large-Scale Capacitated Vehicle Routing Problems. *Xiao*, *J.*, +, *TCYB Aug.* 2021 4173-4186
- An Indicator-Based Many-Objective Evolutionary Algorithm With Boundary Protection. *Liang*, Z., +, TCYB Sept. 2021 4553-4566
- Automatic Search-and-Replace From Examples With Coevolutionary Genetic Programming. *Bartoli, A., +, TCYB May 2021 2612-2624*
- Data-Driven Evolutionary Algorithm With Perturbation-Based Ensemble Surrogates. Li, J., +, TCYB Aug. 2021 3925-3937
- Deep Reinforcement Learning for Multiobjective Optimization. Li, K., +, TCYB June 2021 3103-3114
- Differential Evolution for Multimodal Optimization With Species by Nearest-Better Clustering. Lin, X., +, TCYB Feb. 2021 970-983
- Distributed Memetic Algorithm for Outsourced Database Fragmentation. Ge, Y., +, TCYB Oct. 2021 4808-4821
- Evolution Strategy-Based Many-Objective Evolutionary Algorithm Through Vector Equilibrium. Zhang, K., +, TCYB Nov. 2021 5455-5467
- Evolutionary Algorithm for Knee-Based Multiple Criteria Decision Making. Zhang, K., +, TCYB Feb. 2021 722-735
- Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks. *Zhao, T.*, +, *TCYB July 2021 3752-3766*
- Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem. Feng, L., +, TCYB June 2021 3143-3156
- Finding Influential Nodes in Multiplex Networks Using a Memetic Algorithm. Wang, S., +, TCYB Feb. 2021 900-912
- Generation-Level Parallelism for Evolutionary Computation: A Pipeline-Based Parallel Particle Swarm Optimization. *Li*, *J*., +, *TCYB Oct.* 2021 4848-4859
- Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification. *Bi*, *Y*, +, *TCYB April 2021 1769-1783*
- Individual-Based Transfer Learning for Dynamic Multiobjective Optimization. Jiang, M., +, TCYB Oct. 2021 4968-4981
- Large-Scale Evolution Strategy Based on Search Direction Adaptation. *He*, X., +, *TCYB March 2021 1651-1665*
- MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. *Zuo*, X., +, *TCYB July 2021 3549-3561*
- Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049
- On the Norm of Dominant Difference for Many-Objective Particle Swarm Optimization. Li, L., +, TCYB April 2021 2055-2067
- Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. Teo, T.T., +, TCYB Nov. 2021 5375-5386
- Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm. *Teng, X.*, +, *TCYB Jan. 2021 138-150*
- Pareto Self-Paced Learning Based on Differential Evolution. Li, H., +, TCYB Aug. 2021 4187-4200
- People-Centric Evolutionary System for Dynamic Production Scheduling. Nguyen, S., +, TCYB March 2021 1403-1416
- Running Time Analysis of MOEA/D on Pseudo-Boolean Functions. *Huang*, Z., +, *TCYB Oct.* 2021 5130-5141
- Solving Generalized Vehicle Routing Problem With Occasional Drivers via Evolutionary Multitasking. Feng, L., +, TCYB June 2021 3171-3184

- Solving Large-Scale Multiobjective Optimization Problems With Sparse Optimal Solutions via Unsupervised Neural Networks. *Tian, Y.*, +, *TCYB June 2021 3115-3128*
- Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism. *Liu, Y.*, +, *TCYB Nov. 2021 5585-5594*
- Stochastic Dual Simplex Algorithm: A Novel Heuristic Optimization Algorithm. Zandavi, S.M., +, TCYB May 2021 2725-2734
- The Collaborative Local Search Based on Dynamic-Constrained Decomposition With Grids for Combinatorial Multiobjective Optimization. *Cai*, *X*., +, *TCYB May 2021 2639-2650*
- Toward Adaptive Knowledge Transfer in Multifactorial Evolutionary Computation. Zhou, L., +, TCYB May 2021 2563-2576

Expectation-maximization algorithms

- Fragmentary Multi-Instance Classification. Wu, J., +, TCYB Oct. 2021 5156-5169
- Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches. *Chen, L.*, +, *TCYB Aug.* 2021 4298-4311

F

Face recognition

- 2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M*., +, *TCYB Jan. 2021 359-372*
- Adaptive Weighting of Handcrafted Feature Losses for Facial Expression Recognition. Xie, W., +, TCYB May 2021 2787-2800
- AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896
- Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. *Chen, Z.*, +, *TCYB Jan. 2021 451-461*
- Toward Realistic Face Photo–Sketch Synthesis via Composition-Aided GANs. Yu, J., +, TCYB Sept. 2021 4350-4362
- Unsupervised Eyeglasses Removal in the Wild. Hu, B., +, TCYB Sept. 2021 4373-4385

Facilities layout

MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. *Zuo*, X., +, *TCYB July 2021 3549-3561*

Fading channels

Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*

Fault detection

Fault Detection for a Class of Uncertain Sampled-Data Systems Using Deterministic Learning. Chen, T., +, TCYB Dec. 2021 5930-5940

Fault diagnosis

- Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4909-4923
- Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. Gao, Q., +, TCYB Feb. 2021 889-899
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo*, M., +, TCYB Sept. 2021 4707-
- Finite-Frequency H⁻/H^{\infty} Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou*, *M*., +, *TCYB June 2021 3017-3026*
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021 1913-1928*
- Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T–S Fuzzy Implementation. *Han, H.,* +, *TCYB Feb. 2021 801-814*
- Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764

Fault tolerance

- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. *Gao*, *Q*., +, *TCYB Feb. 2021 889-899*
- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229
- Finite-Horizon H_∞ Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. Li, J., +, TCYB Jan. 2021 416-426 Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. Ma, H., +, TCYB April 2021 1913-1928
- Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T–S Fuzzy Implementation. *Han, H.*, +, *TCYB Feb. 2021 801-814*

Fault tolerant control

- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y, +, TCYB March 2021 1150-1162
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021 1913-1928*

Fault tolerant systems

Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. Sun, S., +, TCYB Dec. 2021 6213-6225

Feature extraction

- 3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation. *Huang, Y.*, +, *TCYB Nov. 2021 5397-5408*
- A Multimodal Emotional Human–Robot Interaction Architecture for Social Robots Engaged in Bidirectional Communication. *Hong, A.*, +, *TCYB Dec.* 2021 5954-5968
- A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan, K.*, +, *TCYB Dec. 2021 5907-5920*
- Adaptive Component Embedding for Domain Adaptation. *Jing, M.*, +, *TCYB July 2021 3390-3403*
- Adaptive Deep Cascade Broad Learning System and Its Application in Image Denoising. Ye, H., +, TCYB Sept. 2021 4450-4463
- Adaptive Weighting of Handcrafted Feature Losses for Facial Expression Recognition. Xie, W., +, TCYB May 2021 2787-2800
- Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes. Zhou, Y., +, TCYB Nov. 2021 5423-5432
- An Inception Convolutional Autoencoder Model for Chinese Healthcare Question Clustering. Dai, D., +, TCYB April 2021 2019-2031
- ASIF-Net: Attention Steered Interweave Fusion Network for RGB-D Salient Object Detection. Li, C., +, TCYB Jan. 2021 88-100
- Audio-Driven Robot Upper-Body Motion Synthesis. Ondras, J., +, TCYB Nov. 2021 5445-5454
- Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4909-4923
- Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network. Wu, H., +, TCYB Sept. 2021 4464-4475
- Bio-Inspired Representation Learning for Visual Attention Prediction. *Yuan*, *Y*, +, *TCYB July 2021 3562-3575*
- Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation. Xue, J., +, TCYB April 2021 2153-2165
- Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020

- Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng, J.*, +, *TCYB Sept. 2021 4414-4428*
- Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition. Zhang, L., +, TCYB Dec. 2021 5671-5680
- Discriminative Dimension Reduction via Maximin Separation Probability Analysis. *Yang, L.*, +, *TCYB Aug. 2021 4100-4111*
- Dual Alignment for Partial Domain Adaptation. Li, L., +, TCYB July 2021 3404-3416
- Emotion Recognition From Multimodal Physiological Signals Using a Regularized Deep Fusion of Kernel Machine. *Zhang, X.*, +, *TCYB Sept. 2021* 4386-4399
- Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y, +, TCYB April 2021 1756-1768
- Fault Detection for a Class of Uncertain Sampled-Data Systems Using Deterministic Learning. Chen, T., +, TCYB Dec. 2021 5930-5940
- Feature-Aware Adaptation and Density Alignment for Crowd Counting in Video Surveillance. *Gao, J., +, TCYB Oct. 2021 4822-4833*
- Fingerprint Identification With Shallow Multifeature View Classifier. Ghafoor, M., +, TCYB Sept. 2021 4515-4527
- Fragmentary Multi-Instance Classification. Wu, J., +, TCYB Oct. 2021 5156-5169
- Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification. *Bi*, *Y*., +, *TCYB April 2021 1769-1783*
- Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967
- GreenSea: Visual Soccer Analysis Using Broad Learning System. Sheng, B., +, TCYB March 2021 1463-1477
- Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124
- Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177
- Hierarchical Deep Embedding for Aurora Image Retrieval. Yang, X., +, TCYB Dec. 2021 5773-5785
- IMS-CDA: Prediction of CircRNA-Disease Associations From the Integration of Multisource Similarity Information With Deep Stacked Autoencoder Model. Wang, L., +, TCYB Nov. 2021 5522-5531
- Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239
- Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*
- Joint and Progressive Subspace Analysis (JPSA) With Spatial-Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction. *Hong, D.*, +, *TCYB July 2021 3602-3615*
- Joint Reflection Removal and Depth Estimation From a Single Image. Chang, Y, +, TCYB Dec. 2021 5836-5849
- Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*., +, *TCYB Oct. 2021 4982-4993*
- Learning Manifold Structures With Subspace Segmentations. *Yang, S.*, +, *TCYB April 2021 1981-1992*
- Lightweight Salient Object Detection via Hierarchical Visual Perception Learning. Liu, Y, +, TCYB Sept. 2021 4439-4449
- Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. *Duan, Y., +, TCYB Aug. 2021 4021-4034*
- MADNet: A Fast and Lightweight Network for Single-Image Super Resolution. Lan, R., +, TCYB March 2021 1443-1453
- Multilabel Classification With Label-Specific Features and Classifiers: A Coarse- and Fine-Tuned Framework. *Ma, J.*, +, *TCYB Feb. 2021 1028-1042*
- Multilabel Feature Extraction Algorithm via Maximizing Approximated and Symmetrized Normalized Cross-Covariance Operator. Xu, J., +, TCYB July 2021 3510-3523
- Multitask Feature Learning Meets Robust Tensor Decomposition for EEG Classification. Zheng, Q., +, TCYB April 2021 2242-2252
- Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496

- Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092
- Online and Unsupervised Anomaly Detection for Streaming Data Using an Array of Sliding Windows and PDDs. *Zhang, L.*, +, *TCYB April 2021 2284-2289*
- Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game. *Chakraborty, B.*, +, *TCYB Dec.* 2021 6200-6212
- Person Reidentification via Unsupervised Cross-View Metric Learning. Feng, Y., +, TCYB April 2021 1849-1859
- Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection. Wu, E.Q., +, TCYB Jan. 2021 332-345
- Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276
- Self-Supervised Multiscale Adversarial Regression Network for Stereo Disparity Estimation. *Wang*, C., +, TCYB Oct. 2021 4770-4783
- Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J*., +, *TCYB Feb. 2021 534-547*
- Vision-to-Language Tasks Based on Attributes and Attention Mechanism. Li, X., +, TCYB Feb. 2021 913-926
- Visual–Textual Hybrid Sequence Matching for Joint Reasoning. *Huang, X.*, +, *TCYB Dec. 2021 5692-5705*

Feature selection

- Evolving Scheduling Heuristics via Genetic Programming With Feature Selection in Dynamic Flexible Job-Shop Scheduling. *Zhang, F.*, +, *TCYB April 2021 1797-1811*
- Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost. *Hu*, *Y*., +, *TCYB Feb. 2021 874-888*

Feedback

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- A Secure Control Learning Framework for Cyber-Physical Systems Under Sensor and Actuator Attacks. *Zhou, Y., +, TCYB Sept. 2021 4648-4660*
- A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao, Y.*, +, *TCYB March 2021 1262-1271*
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224

- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. *Wang, X.*, +, *TCYB Oct. 2021 4924-4933*
- Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. *Liu, C.*, +, *TCYB Oct. 2021 5046-5056*
- Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. *Wang, D.*, +, *TCYB Oct.* 2021 4885-4896
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. Wang, J., +, $TCYB\ May\ 2021\ 2433-2445$
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. *Li*, *K*., +, *TCYB June 2021 3361-3370*
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*, +, *TCYB June 2021 2969-2978*
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*
- Feedback Strategies for a Reach-Avoid Game With a Single Evader and Multiple Pursuers. Selvakumar, J., +, TCYB Feb. 2021 696-707
- Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fixed/Preassigned-Time Synchronization of Complex Networks via Improving Fixed-Time Stability. *Hu*, *C*., +, *TCYB June 2021 2882-2892*
- Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. Li, Z., +, TCYB April 2021 2253-2264
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y, +, TCYB May 2021 2359-2371
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang, R.*, +, *TCYB May 2021 2384-2397*
- Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors. *Li*, *L.*, +, *TCYB April 2021 2142-2152*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y., +, TCYB Sept. 2021 4755-4765
- ${
 m H}_{\infty}$ Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme. Yang, H., +, TCYB Aug. 2021 4227-4236

- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug. 2021 4011-4020*
- Observer-Based Event-Driven Control for Discrete-Time Systems With Disturbance Rejection. Zhang, J., +, TCYB April 2021 2120-2130
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. *Wang, W.*, +, *TCYB April 2021 2131-2141*
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li, Y.*, +, *TCYB Jan. 2021* 126-137
- On Designing Distributed Prescribed Finite-Time Observers for Strict-Feedback Nonlinear Systems. Chang, L., +, TCYB Sept. 2021 4695-4706
- On Robot Compliance: A Cerebellar Control Approach. *Abadia, I.*, +, *TCYB May 2021 2476-2489*
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. Li, F., +, TCYB Oct. 2021 5142-5155
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li, H.,* +, *TCYB Sept. 2021 4623-4633*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. *Chen, Y., +, TCYB Feb. 2021 501-511*
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation. Ren, L., +, TCYB Sept. 2021 4685-4694
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266

Feedback control

- Event-Triggered Sampled Feedback Synchronization in an Array of Output-Coupled Boolean Control Networks. *Lu, J.*, +, *TCYB April 2021 2278-*2283
- Iterative Learning Control for MIMO Nonlinear Systems With Iteration-Varying Trial Lengths Using Modified Composite Energy Function Analysis. *Jin, X., TCYB Dec. 2021 6080-6090*

Feedforward

Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647

Feedforward neural networks

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

File organization

- Concept Preserving Hashing for Semantic Image Retrieval With Concept Drift. Tian, X., +, TCYB Oct. 2021 5184-5197
- Equivalent Continuous Formulation of General Hashing Problem. *Wang, S.*, +, *TCYB Aug. 2021 4089-4099*
- Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*, +, *TCYB Oct. 2021 4982-4993*

Filtering theory

Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020

- Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. *Gao*, *Q*., +, *TCYB Feb. 2021 889-899*
- Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu, H.*, +, *TCYB July 2021 3767-3778*
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*
- Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. *Shen, Y.*, +, *TCYB Oct. 2021 4897-4908*
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119

Fingerprint identification

Fingerprint Identification With Shallow Multifeature View Classifier. Ghafoor, M., +, TCYB Sept. 2021 4515-4527

Flexible manipulators

- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*

Flotation (process)

Illumination-Invariant Flotation Froth Color Measuring via Wasserstein Distance-Based CycleGAN With Structure-Preserving Constraint. Liu, J, +, $TCYB\ Feb$. $2021\ 839-852$

Flow measurement

Development of a Real-Time Objective Gas—Liquid Flow Regime Identifier Using Kernel Methods. *Eyo, E.N.*, +, *TCYB May 2021 2688-2698*

Flow shop scheduling

A Two-Stage Cooperative Evolutionary Algorithm With Problem-Specific Knowledge for Energy-Efficient Scheduling of No-Wait Flow-Shop Problem. *Zhao, F., +, TCYB Nov. 2021 5291-5303*

Force control

Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia, M.*, +, *TCYB Aug. 2021 3913-3924*

Formal logic

Pinning Controllability for a Boolean Network With Arbitrary Disturbance Inputs. Li, F, +, TCYB June 2021 3338-3347

Frequency control

Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, *TCYB Aug*. 2021 3988-3999

Frequency synchronization

Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control. Wu, J., +, TCYB Dec. 2021 5825-5835

Fuel economy

A Cyber-Physical System-Based Velocity-Profile Prediction Method and Case Study of Application in Plug-In Hybrid Electric Vehicle. *Zhang, Y.*, +, *TCYB Jan. 2021 40-51*

Function approximation

- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu*, Y, +, TCYB March 2021 1380-1389
- Recursive Least-Squares Temporal Difference With Gradient Correction. Song, T., +, TCYB Aug. 2021 4251-4264

Fuzzy control

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. *Chen, Y.*, +, *TCYB June 2021 2993-3003*
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*

- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems. *Qiu, J.*, +, *TCYB Aug. 2021 3964-3974*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. Wang, J., +, $TCYB\ May\ 2021\ 2433-2445$
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Event-Triggered Controller Design With Varying Gains for T-S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Event-Triggered H_∞ Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach. *Wang, X.*, +, *TCYB June 2021 3062-3070*
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162
- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*

- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang, R., +, TCYB May 2021 2384-2397*
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021* 2457-2465
- Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049
- Multiview High Dynamic Range Image Synthesis Using Fuzzy Broad Learning System. *Guo*, *H*., +, *TCYB May 2021 2735-2747*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. Wang, W., +, TCYB April 2021 2131-2141
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*, +, *TCYB Jan. 2021* 126-137
- Optimal Robot-Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. *Teo, T.T.*, +, *TCYB Nov. 2021 5375-5386*
- Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T–S Fuzzy Implementation. *Han, H.*, +, *TCYB Feb. 2021 801-814*
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942
- Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109
- Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*
- Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. *Liao*, *Q*., +, *TCYB Feb. 2021 947-960*

Fuzzy logic

- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan.* 2021 210-221
- Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. *Teo, T.T.*, +, *TCYB Nov. 2021 5375-5386*
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Fuzzy neural networks

- ANFIS Construction With Sparse Data via Group Rule Interpolation. *Yang*, *J.*, +, *TCYB May 2021 2773-2786*
- Observer-Based Dissipativity Control for T–S Fuzzy Neural Networks With Distributed Time-Varying Delays. *Li, H.,* +, *TCYB Nov. 2021 5248-5258*
- Optimal Robot–Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*

Fuzzy reasoning

ANFIS Construction With Sparse Data via Group Rule Interpolation. *Yang*, *J.*, +, *TCYB May 2021 2773-2786*

Fuzzy set theory

- A Development of Granular Input Space in System Modeling. Zhu, X., +, TCYB March 2021 1639-1650
- A Dynamic Adaptive Subgroup-to-Subgroup Compatibility-Based Conflict Detection and Resolution Model for Multicriteria Large-Scale Group Decision Making. *Tang, M.*, +, *TCYB Oct. 2021 4784-4795*
- A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation. Mishro, P.K., +, TCYB Aug. 2021 3901-3912
- ANFIS Construction With Sparse Data via Group Rule Interpolation. *Yang*, *J.*, +, *TCYB May 2021 2773-2786*
- Consensus Model Handling Minority Opinions and Noncooperative Behaviors in Large-Scale Group Decision-Making Under Double Hierarchy Linguistic Preference Relations. *Gou, X., +, TCYB Jan. 2021 283-296*
- Construction and Supervised Learning of Long-Term Grey Cognitive Networks. *Napoles, G.*, +, *TCYB Feb. 2021 686-695*
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Clustering to Identify Clusters at Different Levels of Fuzziness: An Evolutionary Multiobjective Optimization Approach. *Gupta, A.*, +, *TCYB May 2021 2601-2611*
- Granular Description of Data Structures: A Two-Phase Design. *Ouyang, T.*, +, TCYB April 2021 1902-1912
- Granular Fuzzy Modeling Guided Through the Synergy of Granulating Output Space and Clustering Input Subspaces. Lu, W., +, TCYB May 2021 2625-2638
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*
- Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making. Wu, Y, +, TCYB Feb. 2021 649-659
- Multicriteria Decision Making With Incomplete Weights Based on 2-D Uncertain Linguistic Choquet Integral Operators. *Liu, P.*, +, *TCYB April* 2021 1860-1874
- Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost. Hu, Y, +, TCYB Feb. 2021 874-888
- Multiview High Dynamic Range Image Synthesis Using Fuzzy Broad Learning System. *Guo*, *H*., +, *TCYB May 2021 2735-2747*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. *Teo, T.T.*, +, *TCYB Nov. 2021 5375-5386*
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652
- Rule-Based Modeling With DBSCAN-Based Information Granules. *Ouyang*, T., +, TCYB July 2021 3653-3663
- Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. Liao, Q., +, TCYB Feb. 2021 947-960

The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092

Fuzzy sets

Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game. *Chakraborty, B.*, +, *TCYB Dec.* 2021 6200-6212

Fuzzy systems

- A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. Vu, V., +, TCYB June 2021 3312-3324
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Event-Triggered Controller Design With Varying Gains for T–S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Event-Triggered H_{∞} Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach. Wang, X., +, TCYB June 2021 3062-3070
- Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. *Sun*, S., +, *TCYB Dec. 2021 6213-6225*
- Finite-Frequency H⁻/H^{\infty} Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021 3017-3026*
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Information Granulation-Based Fuzzy Clustering of Time Series. *Guo*, *H.*, +, *TCYB Dec.* 2021 6253-6261
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021* 2457-2465
- Multiview High Dynamic Range Image Synthesis Using Fuzzy Broad Learning System. *Guo*, H., +, TCYB May 2021 2735-2747
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Particle Swarm Optimized Autonomous Learning Fuzzy System. Gu, X., +, TCYB Nov. 2021 5352-5363
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942
- Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. Liao, Q., +, TCYB Feb. 2021 947-960

 \mathbf{G}

Gait analysis

Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109

Game theory

- A Collaborative Multiagent Reinforcement Learning Method Based on Policy Gradient Potential. Zhang, Z., +, TCYB Feb. 2021 1015-1027
- Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943
- Distributed Generalized Nash Equilibrium Seeking for Monotone Generalized Noncooperative Games by a Regularized Penalized Dynamical System. Sun, C., +, TCYB Nov. 2021 5532-5545
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X, +, TCYB Oct. 2021 4860-4872
- Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H.*, +, TCYB April 2021 2068-2079
- Feedback Strategies for a Reach-Avoid Game With a Single Evader and Multiple Pursuers. Selvakumar, J., +, TCYB Feb. 2021 696-707
- Game-Theoretic Learning for Sensor Reliability Evaluation Without Knowledge of the Ground Truth. Yazidi, A., +, TCYB Dec. 2021 5706-5716
- Multiagent Adversarial Collaborative Learning via Mean-Field Theory. *Luo*, G., +, TCYB Oct. 2021 4994-5007
- On Distributed Nash Equilibrium Computation: Hybrid Games and a Novel Consensus-Tracking Perspective. Ye, M., +, TCYB Oct. 2021 5021-5031
- Policy Iteration *Q*-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. *Luo*, *B*., +, *TCYB July 2021 3630-3640*

Gaussian distribution

- Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834
- Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches. *Chen, L.*, +, *TCYB Aug.* 2021 4298-4311

Gaussian noise

- Adaptive Learning for Robust Radial Basis Function Networks. Seghouane, A., +, TCYB May 2021 2847-2856
- Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip. Zhang, Y., +, TCYB April 2021 1875-1887
- Point Set Registration With Similarity and Affine Transformations Based on Bidirectional KMPE Loss. *Yang, Y.*, +, *TCYB March 2021 1678-1689*
- Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection. *Wu, E.Q.*, +, *TCYB Jan. 2021 332-345*

Gaussian processes

- Learning Self-Triggered Controllers With Gaussian Processes. *Hashimoto*, K., +, TCYB Dec. 2021 6294-6304
- Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468
- Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J*., +, *TCYB Feb. 2021 534-547*
- Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *Zhang, X.*, +, *TCYB July 2021 3616-3629*

Gaze tracking

Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276

Gears

Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4909-4923

Generalization (artificial intelligence)

Complementary Attributes: A New Clue to Zero-Shot Learning. Xu, X., +, TCYB March 2021 1519-1530

Generative adversarial networks

Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention. Li, J., +, TCYB Dec. 2021 6029-6040

Generators

Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes. Zhou, Y., +, TCYB Nov. 2021 5423-5432

Genetic algorithms

- A Modified Genetic Algorithm With New Encoding and Decoding Methods for Integrated Process Planning and Scheduling Problem. *Liu*, *Q*., +, *TCYB Sept.* 2021 4429-4438
- A Preference Biobjective Evolutionary Algorithm for the Payment Scheduling Negotiation Problem. *Zhang*, Z., +, *TCYB Dec. 2021 6105-6118*
- A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times. *Zhou, S., +, TCYB March 2021 1430-1442*
- A Variable Search Space Strategy Based on Sequential Trust Region Determination Technique. Fan, Q., +, TCYB May 2021 2712-2724
- Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli, C.*, +, *TCYB May 2021 2587-2600*
- Adaptive Controller Tuning Method Based on Online Multiobjective Optimization: A Case Study of the Four-Bar Mechanism. *Rodriguez-Molina*, A., +, TCYB March 2021 1272-1285
- An Elite Gene Guided Reproduction Operator for Many-Objective Optimization. Zhu, Q., +, TCYB Feb. 2021 765-778
- Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4909-4923
- Automatic Search-and-Replace From Examples With Coevolutionary Genetic Programming. *Bartoli, A., +, TCYB May 2021 2612-2624*
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*
- Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II. Bali, K.K., +, TCYB April 2021 1784-1796
- Data-Driven Evolutionary Algorithm With Perturbation-Based Ensemble Surrogates. Li, J., +, TCYB Aug. 2021 3925-3937
- Efficient Heuristic Algorithms for Single-Vehicle Task Planning With Precedence Constraints. *Bai*, X., +, *TCYB Dec.* 2021 6274-6283
- Elastic Differential Evolution for Automatic Data Clustering. Chen, J., +, TCYB Aug. 2021 4134-4147
- Evolutionary Multiobjective Optimization Driven by Generative Adversarial Networks (GANs). *He, C.*, +, *TCYB June 2021 3129-3142*
- Evolving Scheduling Heuristics via Genetic Programming With Feature Selection in Dynamic Flexible Job-Shop Scheduling. *Zhang, F.*, +, *TCYB April 2021 1797-1811*
- Fuzzy Clustering to Identify Clusters at Different Levels of Fuzziness: An Evolutionary Multiobjective Optimization Approach. *Gupta, A.*, +, *TCYB May 2021 2601-2611*
- Genetic Programming for Evolving a Front of Interpretable Models for Data Visualization. Lensen, A., +, TCYB Nov. 2021 5468-5482
- Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification. *Bi*, *Y*, +, *TCYB April 2021 1769-1783*
- Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*
- Handling Constrained Many-Objective Optimization Problems via Problem Transformation. *Jiao*, R., +, *TCYB Oct. 2021 4834-4847*
- Manifold Learning-Inspired Mating Restriction for Evolutionary Multiobjective Optimization With Complicated Pareto Sets. *Pan, L.*, +, *TCYB June* 2021 3325-3337
- Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost. *Hu, Y.*, +, *TCYB Feb. 2021 874-888*
- Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. *Teo, T.T.*, +, *TCYB Nov. 2021 5375-5386*
- Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm. *Teng, X.*, +, *TCYB Jan. 2021 138-150*
- People-Centric Evolutionary System for Dynamic Production Scheduling. Nguyen, S., +, TCYB March 2021 1403-1416

Genetics

- A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation. Nguyen, B.H., +, TCYB Dec. 2021 6319-6332
- A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. *Zhang, X.*, +, *TCYB Feb. 2021 1043-1055*
- Nature-Inspired Compressed Sensing for Transcriptomic Profiling From Random Composite Measurements. Zhang, S., +, TCYB Sept. 2021 4476-4487
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652

Genomics

- A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. *Zhang, X.*, +, *TCYB Feb. 2021 1043-1055*
- Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data. *Li*, *X*., +, *TCYB Dec. 2021 5811-5824*
- Nature-Inspired Compressed Sensing for Transcriptomic Profiling From Random Composite Measurements. *Zhang, S.*, +, *TCYB Sept. 2021 4476-4487*

Geographic information systems

Influence Spread in Geo-Social Networks: A Multiobjective Optimization Perspective. Wang, L., +, TCYB May 2021 2663-2675

Geomagnetism

Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control. Zhang, Y., +, TCYB Aug. 2021 4286-4297

Geometr

Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng, Z., +, TCYB Jan. 2021 346-358

Geophysical image processing

- Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng, J.*, +, *TCYB Sept. 2021 4414-4428*
- Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124
- Joint and Progressive Subspace Analysis (JPSA) With Spatial-Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction. *Hong, D.*, +, *TCYB July 2021 3602-3615*
- Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng. Z., +, TCYB Jan. 2021 346-358
- Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. Duan, Y., +, TCYB Aug. 2021 4021-4034
- Low-Rank and Sparse Decomposition With Mixture of Gaussian for Hyperspectral Anomaly Detection. Li, L., +, TCYB Sept. 2021 4363-4372
- Spectral–Spatial Weighted Kernel Manifold Embedded Distribution Alignment for Remote Sensing Image Classification. Dong. Y., +, TCYB June 2021 3185-3197

Geophysical signal processing

Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng, Z., +, TCYB Jan. 2021 346-358

Geophysical techniques

Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng, J.*, +, *TCYB Sept. 2021 4414-4428*

Gradient methods

- A Bayes Risk Minimization Machine for Example-Dependent Cost Classification. *Lazaro, M.*, +, *TCYB July 2021 3524-3534*
- Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent. Gu, B., +, TCYB April 2021 2215-2223
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. Zhang, Z., +, TCYB Aug. 2021 4312-4326
- Distributed Dual Subgradient Algorithms With Iterate-Averaging Feedback for Convex Optimization With Coupled Constraints. *Liang, S.*, +, *TCYB May 2021 2529-2539*

- Distributed Generalized Nash Equilibrium Seeking for Monotone Generalized Noncooperative Games by a Regularized Penalized Dynamical System. Sun, C., +, TCYB Nov. 2021 5532-5545
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu*, B., +, *TCYB July 2021 3836-3844*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching. Zhu, H., +, TCYB Aug. 2021 4062-4074
- New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226
- Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. Lu, Q., +, TCYB June 2021 3224-3237
- Recursive Least-Squares Temporal Difference With Gradient Correction. Song, T., +, TCYB Aug. 2021 4251-4264
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*
- Uniform Distribution Non-Negative Matrix Factorization for Multiview Clustering. Yang, Z., +, TCYB June 2021 3249-3262

Granular computing

- A Development of Granular Input Space in System Modeling. Zhu, X., +, TCYB March 2021 1639-1650
- Granular Description of Data Structures: A Two-Phase Design. *Ouyang, T.*, +, *TCYB April 2021 1902-1912*
- Granular Fuzzy Modeling Guided Through the Synergy of Granulating Output Space and Clustering Input Subspaces. *Lu, W.*, +, *TCYB May 2021 2625-2638*

Graph theory

- A Distributed Optimization Algorithm Based on Multiagent Network for Economic Dispatch With Region Partitioning. *Liu*, *Q*., +, *TCYB May 2021 2466-2475*
- Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. Li, X., +, TCYB Jan. 2021 199-209
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- Consensus Affinity Graph Learning for Multiple Kernel Clustering. Ren, Z., +, TCYB June 2021 3273-3284
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Correntropy-Based Hypergraph Regularized NMF for Clustering and Feature Selection on Multi-Cancer Integrated Data. Yu, N., +, TCYB Aug. 2021 3952-3963
- Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu*, B., +, *TCYB July 2021 3836-3844*
- Distributed Optimization of Multiagent Systems Subject to Inequality Constraints. *Tian, F.*, +, *TCYB April 2021 2232-2241*
- Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching. Zhu, H., +, TCYB Aug. 2021 4062-4074
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. Liu, J., +, TCYB Jan. 2021 162-173
- Finite-Horizon H∞ Bipartite Consensus Control of Cooperation—Competition Multiagent Systems With Round-Robin Protocols. *Chen, W.*, +, *TCYB July 2021 3699-3709*
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Generalized Incomplete Multiview Clustering With Flexible Locality Structure Diffusion. Wen, J., +, TCYB Jan. 2021 101-114
- Graph Simplification-Aided ADMM for Decentralized Composite Optimization. Wang, B., +, TCYB Oct. 2021 5170-5183

Joint Transformation Learning via the L_{2,1}-Norm Metric for Robust Graph Matching. Yu, Y, +, TCYB Feb. 2021 521-533

Key Nodes Selection in Controlling Complex Networks via Convex Optimization. *Ding, J.*, +, *TCYB Jan. 2021 52-63*

Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng, Z., +, TCYB Jan. 2021 346-358

Learning Manifold Structures With Subspace Segmentations. Yang, S., +, TCYB April 2021 1981-1992

Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. Duan, Y., +, TCYB Aug. 2021 4021-4034

Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm. *Teng, X.*, +, *TCYB Jan. 2021 138-150*

Resilient Consensus for Expressed and Private Opinions. Shang, Y., TCYB Jan. 2021 318-331

Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization. Jia, Y, +, TCYB May 2021 2550-2562

Target Controllability of Two-Layer Multiplex Networks Based on Network Flow Theory. Song, K., +, TCYB May 2021 2699-2711

Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance. *Liu, J., +, TCYB June 2021 3263-3272*

The Complexity in Complete Graphic Characterizations of Multiagent Controllability. *Ji*, *Z*., +, *TCYB Jan. 2021 64-76*

The Graphical Conditions for Controllability of Multiagent Systems Under Equitable Partition. Qu, J., +, TCYB Sept. 2021 4661-4672

Graphical models

Switching Structured Prediction for Simple and Complex Human Activity Recognition. *Arzani, M.M.*, +, *TCYB Dec. 2021 5859-5870*

Graphical user interfaces

Evolutionary Algorithm for Knee-Based Multiple Criteria Decision Making. Zhang, K., +, TCYB Feb. 2021 722-735

Graphics processing units

3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation. *Huang, Y.*, +, *TCYB Nov. 2021 5397-5408*

Greedy algorithms

Efficient Minimum Cost Seed Selection With Theoretical Guarantees for Competitive Influence Maximization. *Hong, W.*, +, *TCYB Dec. 2021 6091-6104*

Influence Spread in Geo-Social Networks: A Multiobjective Optimization Perspective. Wang, L., +, TCYB May 2021 2663-2675

Grey systems

Construction and Supervised Learning of Long-Term Grey Cognitive Networks. *Napoles, G.*, +, *TCYB Feb. 2021 686-695*

Н

$H^{\infty} \ control$

Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J.*, +, *TCYB Jan. 2021 462-472*

Robust H_∞ Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*

Sampled-Data-Based H_∞ Synchronization of Switched Coupled Neural Networks. Sang, H., +, TCYB April 2021 1968-1980

Handwritten character recognition

2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M*., +, *TCYB Jan.* 2021 359-372

Haptic interfaces

Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y.*, +, *TCYB July 2021 3469-3482*

Harmonic oscillators

Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266

Health care

Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb. 2021 708-721*

Heating systems

Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams. *Rathore, P., +, TCYB Dec. 2021 5979-5992*

Hebbian learning

The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092

Helicopters

Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133

Hessian matrices

Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647

Heuristic algorithms

Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation. *Huang, Z.*, +, *TCYB Nov. 2021 5559-5572*

Efficient Heuristic Algorithms for Single-Vehicle Task Planning With Precedence Constraints. *Bai*, X., +, *TCYB Dec. 2021 6274-6283*

Learning Self-Triggered Controllers With Gaussian Processes. *Hashimoto*, K., +, TCYB Dec. 2021 6294-6304

Hidden Markov models

A Multimodal Emotional Human–Robot Interaction Architecture for Social Robots Engaged in Bidirectional Communication. *Hong, A.*, +, *TCYB Dec.* 2021 5954-5968

Audio-Driven Robot Upper-Body Motion Synthesis. Ondras, J., +, TCYB Nov. 2021 5445-5454

Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*

Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*

HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*

Time-Series Clustering Based on the Characterization of Segment Typologies. *Guijo-Rubio*, D., +, TCYB Nov. 2021 5409-5422

Hilbert spaces

Adaptive Component Embedding for Domain Adaptation. *Jing, M.*, +, *TCYB July 2021 3390-3403*

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

Hopfield neural networks

Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Networks. Sang, H., +, TCYB April 2021 1968-1980

Hospitals

MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. *Zuo*, *X*., +, *TCYB July 2021 3549-3561*

Human computer interaction

Identity Recognition Based on Bioacoustics of Human Body. Sim, J.Y., +, TCYB May 2021 2761-2772

Human factors

Switching Structured Prediction for Simple and Complex Human Activity Recognition. Arzani, M.M., +, TCYB Dec. 2021 5859-5870

Human-robot interaction

A Multimodal Emotional Human–Robot Interaction Architecture for Social Robots Engaged in Bidirectional Communication. *Hong, A.*, +, *TCYB Dec.* 2021 5954-5968

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285*-3297

Adaptive Weighting of Handcrafted Feature Losses for Facial Expression Recognition. Xie, W., +, TCYB May 2021 2787-2800

Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834

Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia, M.*, +, *TCYB Aug. 2021 3913-3924*

Physical Human–Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators. Ogenyi, U.E., +, TCYB April 2021 1888-1901

Humanoid robots

Audio-Driven Robot Upper-Body Motion Synthesis. Ondras, J., +, TCYB Nov. 2021 5445-5454

Hybrid electric vehicles

A Cyber-Physical System-Based Velocity-Profile Prediction Method and Case Study of Application in Plug-In Hybrid Electric Vehicle. *Zhang, Y.*, +, *TCYB Jan. 2021 40-51*

Hybrid power systems

Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks. Wan, Y., +, TCYB Nov. 2021 5314-5327

Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H.*, +, *TCYB April 2021 2068-2079*

Hyperbolic equations

Robust H_∞ Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*

Hyperspectral imaging

Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng, J.*, +, *TCYB Sept. 2021 4414-4428*

Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng, Z., +, TCYB Jan. 2021 346-358

Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. *Duan, Y., +, TCYB Aug. 2021 4021-4034*

Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601

Weakly Supervised Low-Rank Representation for Hyperspectral Anomaly Detection. Xie, W., +, TCYB Aug. 2021 3889-3900

Hysteresis

Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992

Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881

I

Identification

Game-Theoretic Learning for Sensor Reliability Evaluation Without Knowledge of the Ground Truth. *Yazidi*, A., +, TCYB Dec. 2021 5706-5716

Image annotation

Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y, +, TCYB April 2021 1756-1768

Image classification

δ-Norm-Based Robust Regression With Applications to Image Analysis. Chen, S., +, TCYB June 2021 3371-3383

2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M*., +, *TCYB Jan. 2021 359-372*

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285*-3207

Adaptive Component Embedding for Domain Adaptation. *Jing, M.*, +, *TCYB July 2021 3390-3403*

Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation. Xue, J., +, TCYB April 2021 2153-2165

Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng, J.*, +, *TCYB Sept. 2021 4414-4428*

Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y., +, TCYB April 2021 1756-1768

Fingerprint Identification With Shallow Multifeature View Classifier. *Ghafoor, M.*, +, TCYB Sept. 2021 4515-4527

Fragmentary Multi-Instance Classification. Wu, J., +, TCYB Oct. 2021 5156-5169

Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. Yang, P., +, TCYB Jan. 2021 233-246

Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification. *Bi*, *Y*, +, *TCYB April 2021 1769-1783*

Group Reidentification with Multigrained Matching and Integration. *Lin, W.*, +, *TCYB March 2021 1478-1492*

Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124

Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177

Individuality- and Commonality-Based Multiview Multilabel Learning. *Tan,* Q., +, *TCYB March 2021 1716-1727*

Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*

Joint and Progressive Subspace Analysis (JPSA) With Spatial–Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction. *Hong, D.*, +, *TCYB July 2021 3602-3615*

Joint Learning of Multiple Latent Domains and Deep Representations for Domain Adaptation. Wu, X., +, TCYB May 2021 2676-2687

Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng. Z., +, TCYB Jan. 2021 346-358

Learning Kernel for Conditional Moment-Matching Discrepancy-Based Image Classification. Ren, C., +, TCYB April 2021 2006-2018

Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. *Duan, Y., +, TCYB Aug. 2021 4021-4034*

Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip. *Zhang, Y.*, +, *TCYB April 2021 1875-1887*

Multilabel Classification With Label-Specific Features and Classifiers: A Coarse- and Fine-Tuned Framework. *Ma, J.*, +, *TCYB Feb. 2021 1028-1042*

Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092

Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276

Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601

Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J.*, +, *TCYB Feb. 2021 534-547*

Spectral–Spatial Weighted Kernel Manifold Embedded Distribution Alignment for Remote Sensing Image Classification. *Dong, Y.*, +, *TCYB June* 2021 3185-3197

Image coding

Divisively Normalized Sparse Coding: Toward Perceptual Visual Signal Representation. Zhang, X., +, TCYB Aug. 2021 4237-4250

GAN-Based Key Secret-Sharing Scheme in Blockchain. Zheng, W., +, TCYB Jan. 2021 393-404

Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. *Chen, Z.*, +, *TCYB Jan. 2021 451-461*

Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J*., +, *TCYB Feb. 2021 534-547*

Slice-Based Online Convolutional Dictionary Learning. Zeng, Y., +, TCYB Oct. 2021 5116-5129

Image color analysis

ASIF-Net: Attention Steered Interweave Fusion Network for RGB-D Salient Object Detection. Li, C., +, TCYB Jan. 2021 88-100

Illumination-Invariant Flotation Froth Color Measuring via Wasserstein Distance-Based CycleGAN With Structure-Preserving Constraint. Liu, J, +, $TCYB\ Feb$. $2021\ 839-852$

Penalty Method for Constrained Distributed Quaternion-Variable Optimization. Xia, Z., +, TCYB Nov. 2021 5631-5636

Image denoising

- δ-Norm-Based Robust Regression With Applications to Image Analysis. *Chen, S., +, TCYB June 2021 3371-3383*
- A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*
- Adaptive Deep Cascade Broad Learning System and Its Application in Image Denoising. Ye, H., +, TCYB Sept. 2021 4450-4463
- Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. Ren, C., +, TCYB July 2021 3535-3548
- Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection. Wu, E.Q., +, TCYB Jan. 2021 332-345
- Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. *Chen, Z., +, TCYB Jan. 2021 451-461*
- Single-Image Dehazing via Compositional Adversarial Network. Zhu, H., +, TCYB Feb. 2021 829-838

Image edge detection

Joint Reflection Removal and Depth Estimation From a Single Image. Chang, Y., +, TCYB Dec. 2021 5836-5849

Image enhancement

- Cascading and Enhanced Residual Networks for Accurate Single-Image Super-Resolution. Lan. R., +, TCYB Jan. 2021 115-125
- Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. Ren, C., +, TCYB July 2021 3535-3548
- Multiview High Dynamic Range Image Synthesis Using Fuzzy Broad Learning System. *Guo*, *H*., +, *TCYB May 2021 2735-2747*
- Single-Image Dehazing via Compositional Adversarial Network. Zhu, H., +, TCYB Feb. 2021 829-838

Image filtering

- Context-Aware Correlation Filter Learning Toward Peak Strength for Visual Tracking. *Bouraffa*, T., +, TCYB Oct. 2021 5105-5115
- Spectral–Spatial Weighted Kernel Manifold Embedded Distribution Alignment for Remote Sensing Image Classification. Dong, Y., +, TCYB June 2021 3185-3197

Image fusion

- Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124
- New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226

Image matching

- Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching. Zhu, H., +, TCYB Aug. 2021 4062-4074
- Fingerprint Identification With Shallow Multifeature View Classifier. Ghafoor, M., +, TCYB Sept. 2021 4515-4527
- Group Reidentification with Multigrained Matching and Integration. *Lin, W.*, +, *TCYB March 2021 1478-1492*
- Joint Transformation Learning via the L_{2,1}-Norm Metric for Robust Graph Matching. Yu, Y, +, TCYB Feb. 2021 521-533
- Learning Kernel for Conditional Moment-Matching Discrepancy-Based Image Classification. Ren, C., +, TCYB April 2021 2006-2018
- Self-Supervised Multiscale Adversarial Regression Network for Stereo Disparity Estimation. Wang, C., +, TCYB Oct. 2021 4770-4783

Image motion analysis

- A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, I_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*
- Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions. *Chang, M.*, +, *TCYB Jan. 2021 2-15*
- Object Activity Scene Description, Construction, and Recognition. *Feng, H.*, +, *TCYB Oct. 2021 5082-5092*

Image processing

- Generalized Centered 2-D Principal Component Analysis. Zhou, G., +, TCYB March 2021 1666-1677
- LiSSA: Localized Stochastic Sensitive Autoencoders. Wang, T., +, TCYB May 2021 2748-2760

Image recognition

- Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition. Zhang, L., +, TCYB Dec. 2021 5671-5680
- Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip. *Zhang, Y.*, +, *TCYB April 2021 1875-1887*
- Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092
- Visual-Textual Hybrid Sequence Matching for Joint Reasoning. *Huang, X.*, +, *TCYB Dec. 2021 5692-5705*

Image reconstruction

- A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfermoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285-3297*
- DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. *Li*, *Z*., +, *TCYB July 2021 3441-3454*
- Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. Ren, C., +, TCYB July 2021 3535-3548
- Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. *Duan, Y., +, TCYB Aug. 2021 4021-4034*
- Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection. Wu, E.Q., +, TCYB Jan. 2021 332-345
- Slice-Based Online Convolutional Dictionary Learning. Zeng, Y., +, TCYB Oct. 2021 5116-5129
- Toward Realistic Face Photo–Sketch Synthesis via Composition-Aided GANs. Yu, J., +, TCYB Sept. 2021 4350-4362

Image registration

Point Set Registration With Similarity and Affine Transformations Based on Bidirectional KMPE Loss. *Yang*, Y., +, TCYB March 2021 1678-1689

Image representation

- A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*
- Adaptive Component Embedding for Domain Adaptation. *Jing, M.*, +, *TCYB July 2021 3390-3403*
- Bio-Inspired Representation Learning for Visual Attention Prediction. *Yuan*, Y, +, TCYB July 2021 3562-3575
- Correntropy-Based Multiview Subspace Clustering. Xing, L., +, TCYB June 2021 3298-3311
- Divisively Normalized Sparse Coding: Toward Perceptual Visual Signal Representation. Zhang, X., +, TCYB Aug. 2021 4237-4250
- Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y., +, TCYB April 2021 1756-1768
- Group Reidentification with Multigrained Matching and Integration. *Lin, W.*, +, *TCYB March 2021 1478-1492*
- Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124
- Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177
- Individuality- and Commonality-Based Multiview Multilabel Learning. *Tan, O., +, TCYB March 2021 1716-1727*
- Joint and Progressive Subspace Analysis (JPSA) With Spatial–Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction. *Hong, D.*, +, *TCYB July 2021 3602-3615*
- Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*, +, *TCYB Oct. 2021 4982-4993*
- Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng. Z., +, TCYB Jan. 2021 346-358
- Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. *Duan, Y., +, TCYB Aug. 2021 4021-4034*
- Low-Rank and Sparse Decomposition With Mixture of Gaussian for Hyperspectral Anomaly Detection. Li, L., +, TCYB Sept. 2021 4363-4372
- MADNet: A Fast and Lightweight Network for Single-Image Super Resolution. Lan, R., +, TCYB March 2021 1443-1453
- Multimodal Learning of Social Image Representation by Exploiting Social Relations. *Huang, F., +, TCYB March 2021 1506-1518*

Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092

Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. *Chen, Z., +, TCYB Jan. 2021 451-461*

Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J*., +, *TCYB Feb. 2021 534-547*

Slice-Based Online Convolutional Dictionary Learning. Zeng, Y., +, TCYB Oct. 2021 5116-5129

Weakly Supervised Low-Rank Representation for Hyperspectral Anomaly Detection. *Xie*, W., +, *TCYB Aug. 2021 3889-3900*

Image resolution

Cascading and Enhanced Residual Networks for Accurate Single-Image Super-Resolution. Lan, R., +, TCYB Jan. 2021 115-125

DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. Li, Z., +, TCYB July 2021 3441-3454

Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177

Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. Ren, C., +, TCYB July 2021 3535-3548

MADNet: A Fast and Lightweight Network for Single-Image Super Resolution. Lan, R., +, TCYB March 2021 1443-1453

Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. *Chen, Z., +, TCYB Jan. 2021 451-461*

Image restoration

Nonlocal Low-Rank Tensor Completion for Visual Data. Zhang, L., +, TCYB Feb. 2021 673-685

Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. Chen, Z., +, TCYB Jan. 2021 451-461

Single-Image Dehazing via Compositional Adversarial Network. Zhu, H., +, TCYB Feb. 2021 829-838

Image retrieval

Concept Preserving Hashing for Semantic Image Retrieval With Concept Drift. *Tran, X.*, +, *TCYB Oct. 2021 5184-5197*

Deep Category-Level and Regularized Hashing With Global Semantic Similarity Learning. *Chen, Y.*, +, *TCYB Dec. 2021 6240-6252*

Hierarchical Deep Embedding for Aurora Image Retrieval. Yang, X., +, TCYB Dec. 2021 5773-5785

Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*, +, *TCYB Oct. 2021 4982-4993*

Image segmentation

3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation. Huang, Y., +, TCYB Nov. 2021 5397-5408

A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation. Mishro, P.K., +, TCYB Aug. 2021 3901-3912

A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*

ASIF-Net: Attention Steered Interweave Fusion Network for RGB-D Salient Object Detection. Li, C., +, TCYB Jan. 2021 88-100

Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation. Xue, J., +, TCYB April 2021 2153-2165

Convolutional Neural Network Based on Bandwise-Independent Convolution and Hard Thresholding for Hyperspectral Band Selection. *Feng, J.*, +, *TCYB Sept. 2021 4414-4428*

DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. Li, Z., +, TCYB July 2021 3441-3454

Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread. *Li*, *H.*, +, *TCYB Dec. 2021 6188-6199*

GAN-Based Key Secret-Sharing Scheme in Blockchain. Zheng, W., +, TCYB Jan. 2021 393-404

Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124

SPRNet: Single-Pixel Reconstruction for One-Stage Instance Segmentation. Yu, J., +, TCYB April 2021 1731-1742

Image sensors

Multiview High Dynamic Range Image Synthesis Using Fuzzy Broad Learning System. *Guo*, *H*., +, *TCYB May 2021 2735-2747*

Image sequences

A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*

Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions. *Chang, M.*, +, *TCYB Jan. 2021 2-15*

Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. *Chen, Z., +, TCYB Jan. 2021 451-461*

Inference algorithms

Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread. *Li*, *H*., +, *TCYB Dec. 2021 6188-6199*

Inference mechanisms

ANFIS Construction With Sparse Data via Group Rule Interpolation. *Yang*, J., +, TCYB May 2021 2773-2786

Cooperation Learning From Multiple Social Networks: Consistent and Complementary Perspectives. Guan, W., +, TCYB Sept. 2021 4501-4514

Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Infinite horizon

Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383

Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915

Information exchange

Distributed Stabilization of Multiple Heterogeneous Agents in the Strong-Weak Competition Network: A Switched System Approach. *Hu, H.*, +, *TCYB Nov. 2021 5328-5341*

Information retrieval

Multimodal Learning of Social Image Representation by Exploiting Social Relations. *Huang, F., +, TCYB March 2021 1506-1518*

Vision-to-Language Tasks Based on Attributes and Attention Mechanism. Li, X., +, TCYB Feb. 2021 913-926

Information theory

Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems. Zhao, Z., +, TCYB Dec. 2021 6179-6187

Instruction sets

Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread. *Li*, *H*., +, *TCYB Dec. 2021 6188-6199*

Integer programming

An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. Gan, R., +, TCYB Feb. 2021 994-1003 Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. Li, J., +, TCYB Jan. 2021 462-472

MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. Zuo, X., +, TCYB July 2021 3549-3561

Intelligent control

Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987

Intelligent manufacturing systems

A Modified Genetic Algorithm With New Encoding and Decoding Methods for Integrated Process Planning and Scheduling Problem. *Liu*, *Q*., +, *TCYB Sept.* 2021 4429-4438

Intelligent robots

Physical Human–Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators. Ogenyi, U.E., +, TCYB April 2021 1888-1901

Intelligent systems

Particle Swarm Optimized Autonomous Learning Fuzzy System. Gu, X., +, TCYB Nov. 2021 5352-5363

Intelligent transportation systems

Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia, M.*, +, *TCYB Aug. 2021 3913-3924*

Interconnected systems

Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. Yang, X., +, TCYB May 2021 2419-2432

Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648

Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. *Vu, V.*, +, *TCYB June 2021 3312-3324*

Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240

Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. *Liu*, *J*., +, *TCYB Aug*. 2021 4000-4010

Internet

Cooperation Learning From Multiple Social Networks: Consistent and Complementary Perspectives. Guan, W., +, TCYB Sept. 2021 4501-4514

Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119

Internet of Things

An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing. Huang, T., +, TCYB Nov. 2021 5595-5608

Interpolation

ANFIS Construction With Sparse Data via Group Rule Interpolation. *Yang*, *J.*, +, *TCYB May 2021 2773-2786*

Nonlocal Low-Rank Tensor Completion for Visual Data. Zhang, L., +, TCYB Feb. 2021 673-685

Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations. *Chen, B., +, TCYB Dec.* 2021 5786-5799

Ion radiation effects

Hierarchical Deep Embedding for Aurora Image Retrieval. Yang, X., +, TCYB Dec. 2021 5773-5785

Iterative learning control

Iterative Learning Control for MIMO Nonlinear Systems With Iteration-Varying Trial Lengths Using Modified Composite Energy Function Analysis. *Jin, X., TCYB Dec. 2021 6080-6090*

Iterative methods

A Two-Stage Cooperative Evolutionary Algorithm With Problem-Specific Knowledge for Energy-Efficient Scheduling of No-Wait Flow-Shop Problem. *Zhao, F., +, TCYB Nov. 2021 5291-5303*

Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302

Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. Yang, X., +, TCYB May 2021 2419-2432

Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383

Correntropy-Based Multiview Subspace Clustering. Xing, L., +, TCYB June 2021 3298-3311

Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943

Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu*, B., +, *TCYB July 2021 3836-3844*

Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y., +, TCYB April 2021 1756-1768

Generalized Centered 2-D Principal Component Analysis. Zhou, G., +, TCYB March 2021 1666-1677

Generation-Level Parallelism for Evolutionary Computation: A Pipeline-Based Parallel Particle Swarm Optimization. *Li*, *J*., +, *TCYB Oct.* 2021 4848-4859

Group Reidentification with Multigrained Matching and Integration. *Lin, W.*, +, *TCYB March 2021 1478-1492*

Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach. Shen, D., +, TCYB March 2021 1286-1299

Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning. *Tao, H.*, +, *TCYB March 2021 1690-1703*

Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. *Ren, C.*, +, *TCYB July 2021 3535-3548*

Learning Kernel for Conditional Moment-Matching Discrepancy-Based Image Classification. Ren, C., +, TCYB April 2021 2006-2018

New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226

Policy Iteration Q-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. Luo, B., +, TCYB July 2021 3630-3640

Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106

Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization. *Jia, Y.*, +, *TCYB May 2021 2550-2562*

J

Jamming

An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. *Gan, R., +, TCYB Feb. 2021 994-1003* Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S., +, TCYB Sept. 2021 4591-4601*

Job shop scheduling

A Modified Genetic Algorithm With New Encoding and Decoding Methods for Integrated Process Planning and Scheduling Problem. *Liu*, *Q*., +, *TCYB Sept.* 2021 4429-4438

A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times. *Zhou, S., +, TCYB March 2021 1430-1442*

Evolving Scheduling Heuristics via Genetic Programming With Feature Selection in Dynamic Flexible Job-Shop Scheduling. *Zhang, F.*, +, *TCYB April 2021 1797-1811*

People-Centric Evolutionary System for Dynamic Production Scheduling. Nguyen, S., +, TCYB March 2021 1403-1416

K

Kalman filters

Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems. *Duan, P., +, TCYB Feb. 2021 512-520*

Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu, H.*, +, *TCYB July 2021 3767-3778*

Distributed Kalman Filtering Over Sensor Networks With Transmission Delays. *Yang, H.*, +, *TCYB Nov. 2021 5511-5521*

Intelligent Multisensor Cooperative Localization Under Cooperative Redundancy Validation. Yin, L., +, TCYB April 2021 2188-2200

Kernel

An Inception Convolutional Autoencoder Model for Chinese Healthcare Question Clustering. Dai, D., +, TCYB April 2021 2019-2031

IMS-CDA: Prediction of CircRNA-Disease Associations From the Integration of Multisource Similarity Information With Deep Stacked Autoencoder Model. Wang, L., +, TCYB Nov. 2021 5522-5531

Kernel Correntropy Conjugate Gradient Algorithms Based on Half-Quadratic Optimization. Xiong, K., +, TCYB Nov. 2021 5497-5510

Kernel Stability for Model Selection in Kernel-Based Algorithms. *Liu*, Y, +, TCYB Dec. 2021 5647-5658

Observer-Based Dissipativity Control for T-S Fuzzy Neural Networks With Distributed Time-Varying Delays. *Li, H., +, TCYB Nov. 2021 5248-5258*

Keyboards

I-Keyboard: Fully Imaginary Keyboard on Touch Devices Empowered by Deep Neural Decoder. *Kim, U.*, +, *TCYB Sept. 2021 4528-4539*

Kinematics

Personalized Online Adaptation of Kinematic Synergies for Human-Prosthesis Interfaces. *Garcia-Rosas, R.*, +, *TCYB Feb. 2021 1070-1084*

Knowledge discovery

An Inception Convolutional Autoencoder Model for Chinese Healthcare Question Clustering. Dai, D., +, TCYB April 2021 2019-2031

Knowledge representation

Construction and Supervised Learning of Long-Term Grey Cognitive Networks. *Napoles, G.*, +, *TCYB Feb. 2021 686-695*

Knowledge transfer

Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment. *Jiang, W.*, +, *TCYB Dec. 2021 5717-5727*

Visual-Textual Hybrid Sequence Matching for Joint Reasoning. *Huang, X.*, +, *TCYB Dec. 2021 5692-5705*

L

Labeling

A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan*, K., +, *TCYB Dec.* 2021 5907-5920

Lagrangian functions

Layered Affine Formation Control of Networked Uncertain Systems: A Fully Distributed Approach Over Directed Graphs. *Li*, *D*., +, *TCYB Dec*. 2021 6119-6130

Laplace equations

- Adaptive Event-Triggered Control for Unknown Second-Order Nonlinear Multiagent Systems. Li, Z., +, TCYB Dec. 2021 6131-6140
- Further Results for Edge Convergence of Directed Signed Networks. *Du*, *M*., +, *TCYB Dec.* 2021 5659-5670
- H_∞ Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling. Ma, L., +, TCYB Dec. 2021 5761-5772
- Layered Affine Formation Control of Networked Uncertain Systems: A Fully Distributed Approach Over Directed Graphs. *Li*, *D*., +, *TCYB Dec*. 2021 6119-6130

Large-scale systems

- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942

Learning (artificial intelligence)

- 2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M*., +, *TCYB Jan. 2021 359-372*
- A Collaborative Multiagent Reinforcement Learning Method Based on Policy Gradient Potential. Zhang, Z., +, TCYB Feb. 2021 1015-1027
- A Development of Granular Input Space in System Modeling. Zhu, X., +, TCYB March 2021 1639-1650
- A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin*, *C.*, +, *TCYB* Oct. 2021 4959-4967
- A Fast Dynamic Evolutionary Multiobjective Algorithm via Manifold Transfer Learning. *Jiang, M.*, +, *TCYB July 2021 3417-3428*
- A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. Zhang, X., +, TCYB Feb. 2021 1043-1055
- A Secure Control Learning Framework for Cyber-Physical Systems Under Sensor and Actuator Attacks. *Zhou, Y.*, +, *TCYB Sept. 2021 4648-4660*
- Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent. Gu, B., +, TCYB April 2021 2215-2223
- Adaptive Component Embedding for Domain Adaptation. *Jing, M.*, +, *TCYB July 2021 3390-3403*
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Adaptive Learning for Robust Radial Basis Function Networks. Seghouane, A., +, TCYB May 2021 2847-2856
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- Adaptively Weighted Multiview Proximity Learning for Clustering. *Liu, B.*, +, *TCYB March 2021 1571-1585*
- ANFIS Construction With Sparse Data via Group Rule Interpolation. *Yang*, *J.*, +, *TCYB May 2021 2773-2786*
- Asynchronous Episodic Deep Deterministic Policy Gradient: Toward Continuous Control in Computationally Complex Environments. *Zhang, Z.*, +, *TCYB Feb. 2021 604-613*
- Attribute-Driven Granular Model for EMG-Based Pinch and Fingertip Force Grand Recognition. Fang, Y., +, TCYB Feb. 2021 789-800
- Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb. 2021 708-721*
- Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation. Xue, J., +, TCYB April 2021 2153-2165

- Cascading and Enhanced Residual Networks for Accurate Single-Image Super-Resolution. Lan, R., +, TCYB Jan. 2021 115-125
- Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II. Bali, K.K., +, TCYB April 2021 1784-1796
- Complementary Attributes: A New Clue to Zero-Shot Learning. Xu, X., +, TCYB March 2021 1519-1530
- Concept Drift Detection via Equal Intensity k-Means Space Partitioning. Liu, A., +, TCYB June 2021 3198-3211
- Concept Preserving Hashing for Semantic Image Retrieval With Concept Drift. *Tian, X.*, +, *TCYB Oct. 2021 5184-5197*
- Consensus Affinity Graph Learning for Multiple Kernel Clustering. *Ren, Z.*, +, *TCYB June 2021 3273-3284*
- Context-Aware Correlation Filter Learning Toward Peak Strength for Visual Tracking. *Bouraffa, T.*, +, *TCYB Oct. 2021 5105-5115*
- Convolutional Multitimescale Echo State Network. Ma, Q., +, TCYB March 2021 1613-1625
- Cooperation Learning From Multiple Social Networks: Consistent and Complementary Perspectives. *Guan, W.*, +, *TCYB Sept. 2021 4501-4514*
- Correntropy-Based Multiview Subspace Clustering. Xing, L., +, TCYB June 2021 3298-3311
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Deep Reinforcement Learning for Multiobjective Optimization. Li, K., +, TCYB June 2021 3103-3114
- Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943
- Discriminative Dimension Reduction via Maximin Separation Probability Analysis. Yang, L., +, TCYB Aug. 2021 4100-4111
- Distributed and Parallel ADMM for Structured Nonconvex Optimization Problem. Wang, X., +, TCYB Sept. 2021 4540-4552
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu, B., +, TCYB July 2021 3836-3844*
- Elastic Differential Evolution for Automatic Data Clustering. Chen, J., +, TCYB Aug. 2021 4134-4147
- Emotion Correlation Mining Through Deep Learning Models on Natural Language Text. Wang, X., +, TCYB Sept. 2021 4400-4413
- Emotion Recognition From Multimodal Physiological Signals Using a Regularized Deep Fusion of Kernel Machine. *Zhang, X.*, +, *TCYB Sept. 2021* 4386-4399
- End-to-End Ensemble Learning by Exploiting the Correlation Between Individuals and Weights. *Mao, S.*, +, *TCYB May 2021 2835-2846*
- Evolutionary Multiobjective Optimization Driven by Generative Adversarial Networks (GANs). *He, C.*, +, *TCYB June 2021 3129-3142*
- Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem. Feng, L., +, TCYB June 2021 3143-3156
- Fast-RCM: Fast Tree-Based Unsupervised Rare-Class Mining. Weng, H., +, TCYB Oct. 2021 5198-5211
- Federated Continuous Learning With Broad Network Architecture. Le, J., +, TCYB Aug. 2021 3874-3888
- Fingerprint Identification With Shallow Multifeature View Classifier. Ghafoor, M., +, TCYB Sept. 2021 4515-4527
- Fragmentary Multi-Instance Classification. Wu, J., +, TCYB Oct. 2021 5156-5169
- Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P.*, +, *TCYB Jan. 2021 233-246*
- Generalized Incomplete Multiview Clustering With Flexible Locality Structure Diffusion. Wen, J., +, TCYB Jan. 2021 101-114
- Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification. *Bi*, *Y*., +, *TCYB April 2021 1769-1783*
- Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967
- Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. *Zhao, J., +, TCYB April* 2021 2201-2214

- GreenSea: Visual Soccer Analysis Using Broad Learning System. Sheng, B., +, TCYB March 2021 1463-1477
- Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124
- Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177
- Individual-Based Transfer Learning for Dynamic Multiobjective Optimization. Jiang, M., +, TCYB Oct. 2021 4968-4981
- Individuality- and Commonality-Based Multiview Multilabel Learning. *Tan, Q., +, TCYB March 2021 1716-1727*
- Interpretable Rule Discovery Through Bilevel Optimization of Split-Rules of Nonlinear Decision Trees for Classification Problems. *Dhebar*, Y., +, TCYB Nov. 2021 5573-5584
- Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*
- Joint and Progressive Subspace Analysis (JPSA) With Spatial-Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction. *Hong, D.*, +, *TCYB July 2021 3602-3615*
- Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning. *Tao, H., +, TCYB March 2021 1690-1703*
- Joint Learning of Multiple Latent Domains and Deep Representations for Domain Adaptation. Wu, X., +, TCYB May 2021 2676-2687
- Joint Transformation Learning via the L_{2,1}-Norm Metric for Robust Graph Matching. Yu, Y, +, TCYB Feb. 2021 521-533
- Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*, +, *TCYB Oct. 2021 4982-4993*
- Large-Scale Traffic Signal Control Using a Novel Multiagent Reinforcement Learning. Wang, X., +, TCYB Jan. 2021 174-187
- Learning Dual Geometric Low-Rank Structure for Semisupervised Hyperspectral Image Classification. Feng, Z., +, TCYB Jan. 2021 346-358
- Learning Manifold Structures With Subspace Segmentations. Yang, S., +, TCYB April 2021 1981-1992
- Lightweight Salient Object Detection via Hierarchical Visual Perception Learning. Liu, Y., +, TCYB Sept. 2021 4439-4449
- Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. Duan, Y., +, TCYB Aug. 2021 4021-4034
- MADNet: A Fast and Lightweight Network for Single-Image Super Resolution. Lan, R., +, TCYB March 2021 1443-1453
- Manifold Learning-Inspired Mating Restriction for Evolutionary Multiobjective Optimization With Complicated Pareto Sets. *Pan, L.*, +, *TCYB June* 2021 3325-3337
- Multiagent Adversarial Collaborative Learning via Mean-Field Theory. *Luo*, G., +, TCYB Oct. 2021 4994-5007
- Multilabel Classification With Label-Specific Features and Classifiers: A Coarse- and Fine-Tuned Framework. *Ma, J.*, +, *TCYB Feb. 2021 1028-1042*
- Multimodal Learning of Social Image Representation by Exploiting Social Relations. *Huang, F., +, TCYB March 2021 1506-1518*
- Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost. *Hu, Y.*, +, *TCYB Feb. 2021 874-888*
- Multiscale Drift Detection Test to Enable Fast Learning in Nonstationary Environments. Wang, X., +, TCYB July 2021 3483-3495
- Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. *Xu*, *X*, +, *TCYB May 2021 2577-2586*
- Multiview High Dynamic Range Image Synthesis Using Fuzzy Broad Learning System. *Guo*, *H*., +, *TCYB May 2021 2735-2747*
- New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226
- Novel Efficient RNN and LSTM-Like Architectures: Recurrent and Gated Broad Learning Systems and Their Applications for Text Classification. *Du, J.*, +, *TCYB March 2021 1586-1597*
- Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092
- On Distributed Nash Equilibrium Computation: Hybrid Games and a Novel Consensus-Tracking Perspective. Ye, M., +, TCYB Oct. 2021 5021-5031
- Pareto Self-Paced Learning Based on Differential Evolution. *Li, H.*, +, *TCYB Aug. 2021 4187-4200*

- Physical Human–Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators. *Ogenyi*, *U.E.*, +, *TCYB April 2021 1888-1901*
- Policy Iteration *Q*-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. *Luo*, *B*., +, *TCYB July 2021 3630-3640*
- Probabilistic Rank-One Tensor Analysis With Concurrent Regularizations. *Zhou, Y., +, TCYB July 2021 3496-3509*
- Recurrent Reconstructive Network for Sequential Anomaly Detection. *Yoo*, Y, +, TCYB March 2021 1704-1715
- Recursive Least-Squares Temporal Difference With Gradient Correction. Song, T., +, TCYB Aug. 2021 4251-4264
- Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches. *Chen, L.*, +, *TCYB Aug.* 2021 4298-4311
- Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection. Wu, E.Q., +, TCYB Jan. 2021 332-345
- Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652
- Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization. *Jia*, Y., +, *TCYB May 2021 2550-2562*
- Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. *Chen, Z., +, TCYB Jan. 2021 451-461*
- Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J*., +, *TCYB Feb. 2021 534-547*
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*
- Single-Image Dehazing via Compositional Adversarial Network. Zhu, H., +, TCYB~Feb.~2021~829-838
- Slice-Based Online Convolutional Dictionary Learning. Zeng, Y., +, TCYB Oct. 2021 5116-5129
- Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764
- Spectral–Spatial Weighted Kernel Manifold Embedded Distribution Alignment for Remote Sensing Image Classification. Dong, Y., +, TCYB June 2021 3185-3197
- SPLBoost: An Improved Robust Boosting Algorithm Based on Self-Paced Learning. Wang, K., +, TCYB March 2021 1556-1570
- Task-Oriented Deep Reinforcement Learning for Robotic Skill Acquisition and Control. Xiang, G., +, TCYB Feb. 2021 1056-1069
- The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092
- Toward Realistic Face Photo–Sketch Synthesis via Composition-Aided GANs. Yu, J., +, TCYB Sept. 2021 4350-4362
- Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161
- Uniform Distribution Non-Negative Matrix Factorization for Multiview Clustering. Yang, Z., +, TCYB June 2021 3249-3262
- Unsupervised Eyeglasses Removal in the Wild. Hu, B., +, TCYB Sept. 2021 4373-4385

Learning automata

Game-Theoretic Learning for Sensor Reliability Evaluation Without Knowledge of the Ground Truth. *Yazidi*, A., +, TCYB Dec. 2021 5706-5716

Learning systems

- AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896
- Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach. Shen, D., +, TCYB March 2021 1286-1299
- Optimal Robot-Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987

Least mean squares methods

Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*

Least squares approximations

- A Compact Neural Network for Fused Lasso Signal Approximator. *Mohammadi, M., TCYB Aug. 2021 4327-4336*
- Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning. *Tao, H., +, TCYB March 2021 1690-1703* Recursive Least-Squares Temporal Difference With Gradient Correction. *Song, T., +, TCYB Aug. 2021 4251-4264*

Lense

Hierarchical Deep Embedding for Aurora Image Retrieval. Yang, X., +, TCYB Dec. 2021 5773-5785

Linear matrix inequalities

- Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. *Zhou, T., +, TCYB May 2021 2409-2418*Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-
- Based Stochastic Nonlinear Systems. Qiu, J., +, TCYB Aug. 2021 3964-3974
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*
- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. Wang, J., +, $TCYB\ May\ 2021\ 2433-2445$
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. Ge, C., +, TCYB Feb. 2021 961-969
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J*., +, *TCYB Jan. 2021 462-472*
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo, M.*, +, *TCYB Sept. 2021 4707-4715*
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. Liu, J., +, TCYB Jan. 2021 162-173
- Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong, G.*, +, *TCYB Jan. 2021 309-317*
- Event-Triggered Controller Design With Varying Gains for T-S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Finite-Frequency H-/H\sigma Fault Detection for Discrete-Time T-S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021 3017-3026*
- Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. Li, J., +, TCYB Jan. 2021 416-426

- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian*, *J.*, +, *TCYB April 2021 2032-2041*
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang, R.*, +, *TCYB May 2021 2384-2397*
- ${
 m H}_{\infty}$ Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme. *Yang, H.*, +, *TCYB Aug.* 2021 4227-4236
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T-S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- Necessary and Sufficient Conditions for Group Consensus of Fractional Multiagent Systems Under Fixed and Switching Topologies via Pinning Control. *Chen, Y., +, TCYB Jan. 2021 28-39*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Quantized Sampled-Data Synchronization of Delayed Reaction–Diffusion Neural Networks Under Spatially Point Measurements. *Wang, Z.*, +, *TCYB Dec. 2021 5740-5751*
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. Chen, Y., +, TCYB Feb. 2021 501-511
- Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*
- Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. *Mousavinejad, E.*, +, *TCYB April 2021 2107-2119*
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. Zhang, F., +, TCYB June 2021 3027-3038
- Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. *Liu, J.*, +, *TCYB Aug. 2021 4000-4010*
- Synchronization Analysis for Complex Dynamical Networks With Coupling Delay via Event-Triggered Delayed Impulsive Control. Lv, X., +, TCYB Nov. 2021 5269-5278
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y, +, TCYB Jan. 2021 258-266
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. *Hu*, *Z*., +, *TCYB July 2021 3779-3788*

Linear programming

- A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *Peng, C.*, +, *TCYB Nov. 2021 5546-5558*
- Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation. *Huang, Z.*, +, *TCYB Nov. 2021 5559-5572*
- Distributed Multiobjective Optimization for Network Resource Allocation of Multiagent Systems. Li, Z., +, TCYB Dec. 2021 5800-5810

- Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks. Xiao, S., +, TCYB July 2021 3676-3686
- MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. *Zuo*, X., +, *TCYB July 2021 3549-3561*

Linear quadratic control

- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix. *Hao*, Y, +, TCYB Sept. 2021 4743-4754

Linear systems

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- Adaptive Fuzzy Tracking Control for a Class of Uncertain Switched Nonlinear Systems With Full-State Constraints and Input Saturations. Wu, L., +, TCYB Dec. 2021 6054-6065
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- Bipartite Fixed-Time Output Consensus of Heterogeneous Linear Multiagent Systems. Zhang, H., +, TCYB Feb. 2021 548-557
- Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. *Chen, J.*, +, *TCYB Feb. 2021 984-993*
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. Wang, D., +, TCYB Oct. 2021 4885-4896
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo*, M., +, TCYB Sept. 2021 4707-4715
- Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays. *Li, K.*, +, *TCYB Dec. 2021 5850-5858*
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian*, J., +, TCYB April 2021 2032-2041
- ${
 m H}_{\infty}$ Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme. Yang, H., +, TCYB Aug. 2021 4227-4236
- Iterative Learning Control for MIMO Nonlinear Systems With Iteration-Varying Trial Lengths Using Modified Composite Energy Function Analysis. Jin, X., TCYB Dec. 2021 6080-6090
- Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix. *Hao, Y.*, +, *TCYB Sept. 2021 4743-4754*
- Necessary and Sufficient Conditions for Group Consensus of Fractional Multiagent Systems Under Fixed and Switching Topologies via Pinning Control. *Chen, Y., +, TCYB Jan. 2021 28-39*
- Observer-Based Distributed Mean-Square Consensus Design for Leader-Following Multiagent Markov Jump Systems. *Dong, S.*, +, *TCYB June 2021 3054-3061*
- Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. *Luo*, *B.*, +, *TCYB March 2021 1253-1261*
- Policy Iteration Q-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. Luo, B., +, TCYB July 2021 3630-3640

- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. Chen, Y., +, TCYB Feb. 2021 501-511
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. *Mousavinejad, E.*, +, *TCYB April 2021 2107-2119*
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. *Zhang, F., +, TCYB June 2021 3027-3038*
- Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation. Ren, L., +, TCYB Sept. 2021 4685-4694
- Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. *Liao*, *Q.*, +, *TCYB Feb. 2021 947-960*
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266

Linearization techniques

Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha, R.*, +, *TCYB Jan. 2021 247-257*

Load forecasting

Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model. *Zhang, X.*, +, *TCYB June 2021 3157-3170*

Logistics

CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems. Guo, Z., +, TCYB Jan. 2021 188-198

Loss measurement

Kernel Correntropy Conjugate Gradient Algorithms Based on Half-Quadratic Optimization. Xiong, K., +, TCYB Nov. 2021 5497-5510

Lyapunov matrix equations

Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding*, S., +, TCYB Feb. 2021 862-873

Lyapunov methods

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- A Compact Neural Network for Fused Lasso Signal Approximator. *Mohammadi, M., TCYB Aug.* 2021 4327-4336
- A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. *Chen, Y.*, +, *TCYB June 2021 2993-3003*
- A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo, A.*, +, *TCYB March 2021 1134-1149*
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Adaptive Fuzzy Tracking Control for a Class of Uncertain Switched Nonlinear Systems With Full-State Constraints and Input Saturations. Wu, L., +, TCYB Dec. 2021 6054-6065
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*

- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. *Cao, J.*, +, *TCYB Jan. 2021 151-161*
- Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks. Shi, J., +, TCYB May 2021 2540-2549
- Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems. *Qiu, J.*, +, *TCYB Aug. 2021 3964-3974*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y.*, +, *TCYB July 2021 3469-3482*
- Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements. Zhang, Y., +, TCYB Nov. 2021 5364-5374
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. Xiong, O., +, TCYB Sept. 2021 4716-4721
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. *Wang, X.*, +, *TCYB Oct. 2021 4924-4933*
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. Vu, V., +, TCYB June 2021 3312-3324
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. Wang, J., +, $TCYB\ May\ 2021\ 2433-2445$
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long, J., +, TCYB Aug. 2021 4050-4061
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370

- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J*., +, *TCYB Jan.* 2021 462-472
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y., +, TCYB July 2021 3813-3823
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks. Xiao, S., +, TCYB July 2021 3676-3686
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. *Liu, J.*, +, *TCYB Jan. 2021 162-173*
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X, +, TCYB Oct. 2021 4860-4872
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong*, *G*., +, *TCYB Jan. 2021 309-317*
- Event-Triggered Controller Design With Varying Gains for T-S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Event-Triggered H_∞ Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach. *Wang, X.*, +, *TCYB June 2021 3062*-3070
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays. Sheng, Y., +, TCYB Feb. 2021 579-588
- Finite-Horizon H_∞ Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. Li, J., +, TCYB Jan. 2021 416-426
- Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay. *Gong*, S., +, *TCYB June 2021 2944-2955*
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. Lian, J., +, TCYB April 2021 2032-2041
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369

- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y., +, TCYB March 2021 1380-1389*
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction–Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang*, *R*., +, *TCYB May 2021 2384-2397*
- Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*
- Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors. *Li*, *L.*, +, *TCYB April 2021 2142-2152*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y., +, TCYB Sept. 2021 4755-4765
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T-S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- Model-Independent Formation Tracking of Multiple Euler-Lagrange Systems via Bounded Inputs. Wang, L., +, TCYB May 2021 2813-2823
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. Li, S., +, TCYB Aug. 2021 4011-4020
- Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain. *Liu, C.*, +, *TCYB May* 2021 2339-2346
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. Wang, W., +, TCYB April 2021 2131-2141
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*, +, *TCYB Jan. 2021* 126-137
- Optimal Robot–Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control. *Liang, C.*, +, *TCYB June 2021 2893-2904*
- Output Synchronization of Complex Dynamical Networks With Multiple Output or Output Derivative Couplings. *Wang, J.*, +, *TCYB Feb. 2021 927-937*
- Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. Li, F., +, TCYB Oct. 2021 5142-5155
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y., +, TCYB June 2021 2870-2881
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. Chen, Y., +, TCYB Feb. 2021 501-511

- Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*
- Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust H_∞ Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. Zhang, F., +, TCYB June 2021 3027-3038
- Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. *Liu, J.*, +, *TCYB Aug. 2021 4000-4010*
- Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation. Ren, L., +, TCYB Sept. 2021 4685-4694
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Synchronization Analysis for Complex Dynamical Networks With Coupling Delay via Event-Triggered Delayed Impulsive Control. Lv, X., +, TCYB Nov. 2021 5269-5278
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266
- Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques. *Zhang, H.*, +, *TCYB Feb. 2021 660-672*
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. Hu, Z., +, TCYB July 2021 3779-3788

M

Machine control

Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*

Machine learning

- Deep Category-Level and Regularized Hashing With Global Semantic Similarity Learning. *Chen, Y.*, +, *TCYB Dec. 2021 6240-6252*
- Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition. Zhang, L., +, TCYB Dec. 2021 5671-5680
- Penalty Method for Constrained Distributed Quaternion-Variable Optimization. Xia, Z., +, TCYB Nov. 2021 5631-5636

Machinery

Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4909-4923

Magnetic heads

Audio-Driven Robot Upper-Body Motion Synthesis. Ondras, J., +, TCYB Nov. 2021 5445-5454

Magnetic particles

Evolution Strategy-Based Many-Objective Evolutionary Algorithm Through Vector Equilibrium. Zhang, K., +, TCYB Nov. 2021 5455-5467

Magnetosphere

Hierarchical Deep Embedding for Aurora Image Retrieval. *Yang, X.*, +, *TCYB Dec. 2021 5773-5785*

Maintenance engineering

- A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *Peng, C.*, +, *TCYB Nov. 2021 5546-5558*
- A Data-Driven Aero-Engine Degradation Prognostic Strategy. Wang, C., +, TCYB March 2021 1531-1541

Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism. *Liu, Y.*, +, *TCYB Nov. 2021 5585-5594*

Manifolds

A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation. *Nguyen, B.H.*, +, *TCYB Dec. 2021 6319-6332* Switching Structured Prediction for Simple and Complex Human Activity

Recognition. Arzani, M.M., +, TCYB Dec. 2021 5859-5870

Manipulators

- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. *Zhang*, *Z.*, +, *TCYB Aug. 2021* 4312-4326
- Finite-Frequency H⁻/H^{\infty} Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou*, *M*., +, *TCYB June 2021* 3017-3026
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- Optimal Robot-Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*

Manufacturing systems

CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems. *Guo*, Z., +, *TCYB Jan. 2021 188-198*

Marine navigation

Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control. Zhang, Y., +, TCYB Aug. 2021 4286-4297

Maritime communications

Massive Maritime Path Planning: A Contextual Online Learning Approach. Zhou, P., +, TCYB Dec. 2021 6262-6273

Markov processes

- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- Multiagent Adversarial Collaborative Learning via Mean-Field Theory. *Luo*, G., +, TCYB Oct. 2021 4994-5007
- Observer-Based Distributed Mean-Square Consensus Design for Leader-Following Multiagent Markov Jump Systems. *Dong, S.*, +, *TCYB June* 2021 3054-3061
- Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. Peng, L., +, TCYB Feb. 2021 779-788
- Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*

Mathematical model

- Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation. *Huang, Z.*, +, *TCYB Nov. 2021 5559-5572*
- Learning Self-Triggered Controllers With Gaussian Processes. *Hashimoto*, K., +, TCYB Dec. 2021 6294-6304

Mathematical operators

Multicriteria Decision Making With Incomplete Weights Based on 2-D Uncertain Linguistic Choquet Integral Operators. *Liu, P.*, +, *TCYB April* 2021 1860-1874

Matrix algebra

- δ-Norm-Based Robust Regression With Applications to Image Analysis. *Chen, S.,* +, *TCYB June 2021 3371-3383*
- 2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M.*, +, *TCYB Jan. 2021 359-372*
- A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- Adaptively Weighted Multiview Proximity Learning for Clustering. *Liu, B.*, +, *TCYB March 2021 1571-1585*
- Basis Function Matrix-Based Flexible Coefficient Autoregressive Models: A Framework for Time Series and Nonlinear System Modeling. *Chen, G.*, +, *TCYB Feb.* 2021 614-623
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*
- Correntropy-Based Multiview Subspace Clustering. Xing, L., +, TCYB June 2021 3298-3311
- Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. Zhang, Z., +, TCYB Aug. 2021 4312-4326
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. Wang, J., +, TCYB May 2021 2433-2445
- Discovering Multiple Co-Clusterings With Matrix Factorization. Wang, J., +, TCYB July 2021 3576-3587
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu, B., +, TCYB July 2021 3836-3844*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo*, M., +, TCYB Sept. 2021 4707-4715
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. Liu, J., +, TCYB Jan. 2021 162-173
- Finite-Frequency H-/H[∞] Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021 3017-3026*
- Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay. *Gong, S., +, TCYB June 2021 2944-2955*
- Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. *Li*, *Z*., +, *TCYB April 2021 2253-2264*
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Generalized Centered 2-D Principal Component Analysis. Zhou, G., +, TCYB March 2021 1666-1677
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning. Tao, H., +, TCYB March 2021 1690-1703
- Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix. *Hao*, Y, +, *TCYB Sept. 2021 4743-4754*
- Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092

- Multilabel Feature Extraction Algorithm via Maximizing Approximated and Symmetrized Normalized Cross-Covariance Operator. Xu, J., +, TCYB July 2021 3510-3523
- Nonlocal Low-Rank Tensor Completion for Visual Data. Zhang, L., +, TCYB Feb. 2021 673-685
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. *Shen, Y.*, +, *TCYB Oct.* 2021 4897-4908
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Pinning Controllability for a Boolean Network With Arbitrary Disturbance Inputs. Li, F., +, TCYB June 2021 3338-3347
- Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381
- QUAD-Condition, Synchronization, Consensus of Multiagents, and Anti-Synchronization of Complex Networks. *Lu, W.*, +, *TCYB June 2021* 3384-3388
- Quasisynchronization of Discrete-Time Inertial Neural Networks With Parameter Mismatches and Delays. *Xiao*, Q., +, TCYB April 2021 2290-2295
- Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches. *Chen, L.*, +, *TCYB Aug.* 2021 4298-4311
- Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652
- Scaled Simplex Representation for Subspace Clustering. Xu, J., +, TCYB March 2021 1493-1505
- Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation. Ren, L., +, TCYB Sept. 2021 4685-4694
- Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization. *Jia, Y.*, +, *TCYB May 2021 2550-2562*
- The Graphical Conditions for Controllability of Multiagent Systems Under Equitable Partition. *Qu, J.*, +, *TCYB Sept. 2021 4661-4672*

Matrix decomposition

- Correntropy-Based Hypergraph Regularized NMF for Clustering and Feature Selection on Multi-Cancer Integrated Data. *Yu, N.*, +, *TCYB Aug. 2021* 3952-3963
- Discovering Multiple Co-Clusterings With Matrix Factorization. Wang, J., +, TCYB July 2021 3576-3587
- Generalized Incomplete Multiview Clustering With Flexible Locality Structure Diffusion. Wen, J., +, TCYB Jan. 2021 101-114
- Learning Manifold Structures With Subspace Segmentations. *Yang, S.*, +, *TCYB April 2021 1981-1992*
- Pareto Self-Paced Learning Based on Differential Evolution. *Li*, *H*., +, *TCYB Aug.* 2021 4187-4200
- Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276
- Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization. Jia, Y., +, TCYB May 2021 2550-2562
- Uniform Distribution Non-Negative Matrix Factorization for Multiview Clustering. Yang, Z., +, TCYB June 2021 3249-3262

Maximum likelihood estimation

- Adaptive Learning for Robust Radial Basis Function Networks. Seghouane, A., +, TCYB May 2021 2847-2856
- Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239

Mean square error methods

- Adaptive Learning for Robust Radial Basis Function Networks. *Seghouane*, A., +, TCYB May 2021 2847-2856
- Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, *TCYB Aug. 2021 4075-4088*
- Point Set Registration With Similarity and Affine Transformations Based on Bidirectional KMPE Loss. *Yang, Y.*, +, *TCYB March 2021 1678-1689*

Measurement errors

Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks. *Yang*, Y., +, *TCYB June 2021 2916-2928*

Mechanical engineering computing

- A Data-Driven Aero-Engine Degradation Prognostic Strategy. Wang, C., +, TCYB March 2021 1531-1541
- Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4909-4923

Media

Visual-Textual Hybrid Sequence Matching for Joint Reasoning. *Huang, X.*, +, *TCYB Dec. 2021 5692-5705*

Medical computing

A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. *Zhang, X.*, +, *TCYB Feb. 2021 1043-1055*

Personalized Online Adaptation of Kinematic Synergies for Human-Prosthesis Interfaces. *Garcia-Rosas, R.*, +, *TCYB Feb. 2021 1070-1084*

Medical control systems

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285*-3297

Medical disorders

Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P., +, TCYB Jan. 2021 233-246*

Medical image processing

- A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation. Mishro, P.K., +, TCYB Aug. 2021 3901-3912
- Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb.* 2021 708-721
- Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network. Wu, H., +, TCYB Sept. 2021 4464-4475
- Cascaded MultiTask 3-D Fully Convolutional Networks for Pancreas Segmentation. Xue, J., +, TCYB April 2021 2153-2165
- DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. Li, Z., +, TCYB July 2021 3441-3454
- Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P.*, +, *TCYB Jan. 2021 233-246*

Medical services

An Inception Convolutional Autoencoder Model for Chinese Healthcare Question Clustering. Dai, D., +, TCYB April 2021 2019-2031

Medical signal detection

Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Medical signal processing

- A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin, C.*, +, *TCYB Oct. 2021 4959-4967*
- Attribute-Driven Granular Model for EMG-Based Pinch and Fingertip Force Grand Recognition. Fang, Y., +, TCYB Feb. 2021 789-800
- Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020
- Emotion Recognition From Multimodal Physiological Signals Using a Regularized Deep Fusion of Kernel Machine. *Zhang, X.*, +, *TCYB Sept. 2021*
- Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. Debie, E., +, TCYB March 2021 1542-1555
- Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496
- Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, TCYB Oct. 2021 4944-4958
- Spatiotemporal-Filtering-Based Channel Selection for Single-Trial EEG Classification. *Qi, F., +, TCYB Feb. 2021 558-567*

Memristors

Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay. *Gong, S., +, TCYB June 2021 2944-2955*

Memristive Quantized Neural Networks: A Novel Approach to Accelerate Deep Learning On-Chip. *Zhang, Y.*, +, *TCYB April 2021 1875-1887*

Message passing

Graph Simplification-Aided ADMM for Decentralized Composite Optimization. Wang, B., +, TCYB Oct. 2021 5170-5183

Metaheuristics

Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601

Meteorology

Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. *Xu*, *X*, +, *TCYB May 2021 2577-2586*

Microgrids

Distributed Event-Based Control for Thermostatically Controlled Loads Under Hybrid Cyber Attacks. Wan, Y., +, TCYB Nov. 2021 5314-5327

Microorganisms

Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li, H.,* +, *TCYB Sept. 2021 4623-4633*

Microsoft Windows

Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams. *Rathore, P., +, TCYB Dec. 2021 5979-5992*

MIMO communication

Iterative Learning Control for MIMO Nonlinear Systems With Iteration-Varying Trial Lengths Using Modified Composite Energy Function Analysis. *Jin, X., TCYB Dec. 2021 6080-6090*

Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. *Liao*, Q., +, TCYB Feb. 2021 947-960

MIMO systems

Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*

Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*

Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu*, Y, +, TCYB March 2021 1380-1389

Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109

Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. Liao, Q., +, TCYB Feb. 2021 947-960

Mineral processing industry

Illumination-Invariant Flotation Froth Color Measuring via Wasserstein Distance-Based CycleGAN With Structure-Preserving Constraint. *Liu, J.*, +, *TCYB Feb. 2021 839-852*

Minimization

A Bayes Risk Minimization Machine for Example-Dependent Cost Classification. Lazaro, M., +, TCYB July 2021 3524-3534

A Novel Multiagent Neurodynamic Approach to Constrained Distributed Convex Optimization. Ma, L., +, TCYB March 2021 1322-1333

A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times. *Zhou, S., +, TCYB March 2021 1430-1442*

A Two-Stage Cooperative Evolutionary Algorithm With Problem-Specific Knowledge for Energy-Efficient Scheduling of No-Wait Flow-Shop Problem. *Zhao*, F., +, TCYB Nov. 2021 5291-5303

Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020

Dual Alignment for Partial Domain Adaptation. Li, L., +, TCYB July 2021 3404-3416

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Key Nodes Selection in Controlling Complex Networks via Convex Optimization. *Ding, J.*, +, *TCYB Jan. 2021 52-63*

LiSSA: Localized Stochastic Sensitive Autoencoders. Wang, T., +, TCYB May 2021 2748-2760

MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. Zuo, X., +, TCYB July 2021 3549-3561

Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285

Mixture models

Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161

Mobile agents

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli, C.*, +, TCYB May 2021 2587-2600

Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078

Mobile computing

I-Keyboard: Fully Imaginary Keyboard on Touch Devices Empowered by Deep Neural Decoder. Kim, U., +, TCYB Sept. 2021 4528-4539

Mobile radio

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

Mobile robots

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285-3297*

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli, C.*, +, TCYB May 2021 2587-2600

Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. Li, X., +, TCYB Jan. 2021 199-209

Circumnavigation on Multiple Circles Around a Nonstationary Target With Desired Angular Spacing. Sen, A., +, TCYB Jan. 2021 222-232

Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia, M.*, +, *TCYB Aug. 2021 3913-3924*

Consensus With Persistently Exciting Couplings and Its Application to Vision-Based Estimation. *Miao*, Z., +, TCYB May 2021 2801-2812

Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July* 2021 3710-3723

Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. Wang, B., +, TCYB Jan. 2021 16-27

Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*

Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078

Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. *Li*, *Z*., +, *TCYB April 2021 2253-2264*

Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049

Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control. Lyu, Y., +, TCYB May 2021 2651-2662

On Robot Compliance: A Cerebellar Control Approach. *Abadia, I.,* +, *TCYB May 2021 2476-2489*

Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*

Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance. *Liu, J., +, TCYB June 2021 3263-3272*

Modeling

MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. *Zuo*, X., +, *TCYB July 2021 3549-3561*

Molecular biophysics

A Joint Graphical Model for Inferring Gene Networks Across Multiple Subpopulations and Data Types. *Zhang, X.*, +, *TCYB Feb. 2021 1043-1055*

Nature-Inspired Compressed Sensing for Transcriptomic Profiling From Random Composite Measurements. *Zhang, S.*, +, *TCYB Sept. 2021 4476-*

Monitoring

- Asynchronous Distributed Event-Triggered Coordination for Multiagent Coverage Control. *Ajina*, *M.*, +, *TCYB Dec.* 2021 5941-5953
- Stability Analysis for Cyber-Physical Systems Under Denial-of-Service Attacks. Lu, A., +, TCYB Nov. 2021 5304-5313

MONOS devices

Multiple Mittag-Leffler Stability of Delayed Fractional-Order Cohen—Grossberg Neural Networks via Mixed Monotone Operator Pair. *Zhang, F.,+, TCYB Dec. 2021 6333-6344*

Monte Carlo methods

- Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. *Yang, X.*, +, *TCYB May 2021 2419-2432*
- Efficient Minimum Cost Seed Selection With Theoretical Guarantees for Competitive Influence Maximization. *Hong, W.*, +, *TCYB Dec. 2021 6091-6104*
- Epidemic Propagation With Positive and Negative Preventive Information in Multiplex Networks. *Wang, Z.*, +, *TCYB March 2021 1454-1462*
- Optimal Interaction Priority Calculation From Hesitant Fuzzy Preference Relations Based on the Monte Carlo Simulation Method for the Acceptable Consistency and Consensus. *Meng, F.*, +, *TCYB Dec. 2021 5871-5882*

Motion control

- A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742
- A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285*-3297
- Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. *Li, X., +, TCYB Jan. 2021 199-209*
- Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834
- Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239
- On Robot Compliance: A Cerebellar Control Approach. *Abadia, I.*, +, *TCYB May 2021 2476-2489*

Multi-agent systems

- A Collaborative Multiagent Reinforcement Learning Method Based on Policy Gradient Potential. Zhang, Z., +, TCYB Feb. 2021 1015-1027
- A Distributed Optimization Algorithm Based on Multiagent Network for Economic Dispatch With Region Partitioning. *Liu*, *Q*., +, *TCYB May 2021*
- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- A Novel Multiagent Neurodynamic Approach to Constrained Distributed Convex Optimization. Ma, L., +, TCYB March 2021 1322-1333
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Event-Triggered Control for Unknown Second-Order Nonlinear Multiagent Systems. Li, Z., +, TCYB Dec. 2021 6131-6140
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li*, *H*., +, *TCYB March* 2021 1163-1174
- Adaptive Neural Network Fixed-Time Leader–Follower Consensus for Multiagent Systems With Constraints and Disturbances. Ni, J., +, TCYB April 2021 1835-1848
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- Bipartite Fixed-Time Output Consensus of Heterogeneous Linear Multiagent Systems. Zhang, H., +, TCYB Feb. 2021 548-557
- Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. *Chen, J.*, +, *TCYB Feb. 2021 984-993*
- Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions. Zhao, M., +, TCYB Nov. 2021 5609-5618

- Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements. Zhang, Y., +, TCYB Nov. 2021 5364-5374
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Consensus Tracking Control of Uncertain Multiagent Systems With Sampled Data and Time-Varying Delay. Zhou, D., +, TCYB Dec. 2021 5681-5691
- Consensus With Persistently Exciting Couplings and Its Application to Vision-Based Estimation. *Miao*, Z., +, *TCYB May 2021 2801-2812*
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. Xiong, O., +, TCYB Sept. 2021 4716-4721
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. Wang, D., +, TCYB Oct. 2021 4885-4896
- Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, *TCYB Aug. 2021 4075-4088*
- Distance + Angle-Based Control of 2-D Rigid Formations. *Liu*, *T.*, +, *TCYB Dec.* 2021 5969-5978
- Distributed Adaptive Finite-Time Consensus for Second-Order Multiagent Systems With Mismatched Disturbances Under Directed Networks. *Wang, H.*, +, *TCYB March 2021 1347-1358*
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*
- Distributed Edge-Based Event-Triggered Formation Control. *Cheng, B.*, +, *TCYB March 2021 1241-1252*
- Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, *TCYB Aug. 2021 3988-3999*
- Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. *Wang, B., +, TCYB Jan. 2021 16-27*
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu, B., +, TCYB July 2021 3836-3844*
- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Multiobjective Optimization for Network Resource Allocation of Multiagent Systems. *Li*, *Z*., +, *TCYB Dec. 2021 5800-5810*
- Distributed Optimization of Multiagent Systems Subject to Inequality Constraints. *Tian, F.*, +, *TCYB April 2021 2232-2241*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473.482
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo*, M., +, TCYB Sept. 2021 4707-4715
- Distributed Secure Consensus Control With Event-Triggering for Multiagent Systems Under DoS Attacks. *Yang*, Y, +, *TCYB June 2021 2916-2928*
- Distributed Stabilization of Multiple Heterogeneous Agents in the Strong-Weak Competition Network: A Switched System Approach. *Hu*, *H*., +, *TCYB Nov. 2021 5328-5341*
- Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention. Li, J., +, TCYB Dec. 2021 6029-6040
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*

- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. *Liu*, *J.*, +, *TCYB Jan. 2021 162-173* Event-Triggered Active MPC for Nonlinear Multiagent Systems With Packet Losses. *Yang*, *H.*, +, *TCYB June 2021 3093-3102*
- Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H., +, TCYB April 2021 2068-2079*
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*., +, *TCYB June 2021 2969-2978*
- Feedback Strategies for a Reach-Avoid Game With a Single Evader and Multiple Pursuers. Selvakumar, J., +, TCYB Feb. 2021 696-707
- Finite-Horizon H∞ Bipartite Consensus Control of Cooperation—Competition Multiagent Systems With Round-Robin Protocols. *Chen, W.*, +, *TCYB July 2021 3699-3709*
- Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. *Li*, *J*., +, *TCYB Jan. 2021 416-426*
- Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078
- Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays. *Li, K.*, +, *TCYB Dec. 2021 5850-5858*
- Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. Li, Z., +, TCYB April 2021 2253-2264
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162
- H_∞ Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling. Ma, L., +, TCYB Dec. 2021 5761-5772
- Large-Scale Traffic Signal Control Using a Novel Multiagent Reinforcement Learning. Wang, X., +, TCYB Jan. 2021 174-187
- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment. *Jiang, W.*, +, *TCYB Dec. 2021 5717-5727*
- Model Predictive Cooperative Control With ISM for Multiagent Systems Under Stochastic Communication Protocol. *Yuan, Y., +, TCYB Dec. 2021* 6004-6016
- Multiagent Adversarial Collaborative Learning via Mean-Field Theory. *Luo*, G., +, TCYB Oct. 2021 4994-5007
- Necessary and Sufficient Conditions for Group Consensus of Fractional Multiagent Systems Under Fixed and Switching Topologies via Pinning Control. *Chen, Y., +, TCYB Jan. 2021 28-39*
- Observer-Based Distributed Mean-Square Consensus Design for Leader-Following Multiagent Markov Jump Systems. *Dong, S.*, +, *TCYB June* 2021 3054-3061
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. Wang, W., +, TCYB April 2021 2131-2141
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*, +, *TCYB Jan. 2021* 126-137
- Output Consensus for Heterogeneous Linear Multiagent Systems With a Predictive Event-Triggered Mechanism. *Yang, Q.*, +, *TCYB April 2021* 1993-2005
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. Lu, Q., +, TCYB June 2021 3224-3237

- QUAD-Condition, Synchronization, Consensus of Multiagents, and Anti-Synchronization of Complex Networks. *Lu, W.*, +, *TCYB June 2021 3384-3388*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y., +, TCYB June 2021 2870-2881
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance. *Liu, J., +, TCYB June 2021 3263-3272*
- The Complexity in Complete Graphic Characterizations of Multiagent Controllability. *Ji*, *Z*., +, *TCYB Jan. 2021 64-76*
- The Graphical Conditions for Controllability of Multiagent Systems Under Equitable Partition. Qu, J., +, TCYB Sept. 2021 4661-4672
- Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. *Wang, Y.*, +, *TCYB March 2021 1300-1310*

Multi-robot systems

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli*, C., +, TCYB May 2021 2587-2600
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. *Li*, *X*., +, *TCYB Jan. 2021 199-209*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302
- Circumnavigation on Multiple Circles Around a Nonstationary Target With Desired Angular Spacing. Sen, A., +, TCYB Jan. 2021 222-232
- Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements. *Zhang*, Y., +, TCYB Nov. 2021 5364-5374
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Consensus With Persistently Exciting Couplings and Its Application to Vision-Based Estimation. *Miao*, Z., +, *TCYB May 2021 2801-2812*
- Containment Problem for Multiagent Systems With Nonconvex Velocity Constraints. *Xiong*, O., +, *TCYB Sept.* 2021 4716-4721
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. Wang, D., +, TCYB Oct. 2021 4885-4896
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*
- Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. *Wang, B., +, TCYB Jan. 2021 16-27*
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu, B., +, TCYB July 2021 3836-3844*
- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Distributed Optimization of Multiagent Systems Subject to Inequality Constraints. *Tian, F.*, +, *TCYB April 2021 2232-2241*

- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo, M.*, +, *TCYB Sept. 2021 4707-4715*
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. Liu, J., +, TCYB Jan. 2021 162-173
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*, +, *TCYB June 2021 2969-2978*
- Finite-Time Coverage Control for Multiagent Systems With Unidirectional Motion on a Closed Curve. Song, C., +, TCYB June 2021 3071-3078
- Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. Li, Z., +, TCYB April 2021 2253-2264
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control. Lyu, Y, +, TCYB May 2021 2651-2662
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. Lu, Q., +, TCYB June 2021 3224-3237
- Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance. *Liu, J., +, TCYB June 2021 3263-3272*

Multidimensional systems

Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*

Multiprogramming

Efficient Person Search via Expert-Guided Knowledge Distillation. Zhang, Y., +, TCYB Oct. 2021 5093-5104

Multivariable control systems

Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. *Liao*, *Q*., +, *TCYB Feb. 2021 947-960*

Muscles

On Robot Compliance: A Cerebellar Control Approach. *Abadia, I., +, TCYB May 2021 2476-2489*

N

Natural language processing

- Emotion Correlation Mining Through Deep Learning Models on Natural Language Text. Wang, X., +, TCYB Sept. 2021 4400-4413
- Vision-to-Language Tasks Based on Attributes and Attention Mechanism. Li, X., +, TCYB Feb. 2021 913-926

Natural languages

Vision-to-Language Tasks Based on Attributes and Attention Mechanism. Li, X., +, TCYB Feb. 2021 913-926

Nearest neighbor methods

- Equivalent Continuous Formulation of General Hashing Problem. Wang, S., +, TCYB Aug. 2021 4089-4099
- Fragmentary Multi-Instance Classification. Wu, J., +, TCYB Oct. 2021 5156-5169

Network architecture

AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896

Network theory (graphs)

- A Novel Local Community Detection Method Using Evolutionary Computation. Lyu, C., +, TCYB June 2021 3348-3360
- Bipartite Fixed-Time Output Consensus of Heterogeneous Linear Multiagent Systems. Zhang, H., +, TCYB Feb. 2021 548-557
- Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements. Zhang, Y., +, TCYB Nov. 2021 5364-5374
- Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, TCYB Aug. 2021 4075-4088
- Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks. *Zhao, T., +, TCYB July 2021 3752-3766*
- Finding Influential Nodes in Multiplex Networks Using a Memetic Algorithm. Wang, S., +, TCYB Feb. 2021 900-912
- Key Nodes Selection in Controlling Complex Networks via Convex Optimization. *Ding*, J., +, *TCYB Jan. 2021 52-63*
- Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm. *Teng, X.*, +, *TCYB Jan. 2021 138-150*
- PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu, H.*, +, *TCYB March 2021 1334-1346*
- Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. *Lu*, *Q*., +, *TCYB June 2021 3224-3237*
- QUAD-Condition, Synchronization, Consensus of Multiagents, and Anti-Synchronization of Complex Networks. *Lu, W.*, +, *TCYB June 2021* 3384-3388
- Target Controllability of Two-Layer Multiplex Networks Based on Network Flow Theory. Song, K., +, TCYB May 2021 2699-2711
- The Graphical Conditions for Controllability of Multiagent Systems Under Equitable Partition. Qu, J., +, TCYB Sept. 2021 4661-4672

Network topology

- Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation–Competition Networks. *Shao, J.*, +, *TCYB Nov. 2021 5225-5235*
- Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions, Zhao, M., +, TCYB Nov. 2021 5609-5618
- Distributed Edge-Based Event-Triggered Formation Control. *Cheng, B.*, +, *TCYB March 2021 1241-1252*
- Distributed Kalman Filtering Over Sensor Networks With Transmission Delays. Yang, H., +, TCYB Nov. 2021 5511-5521
- Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology. *Chen, J.*, +, *TCYB Dec.* 2021 5993-6003
- Further Results for Edge Convergence of Directed Signed Networks. *Du*, *M*., +, *TCYB Dec. 2021 5659-5670*
- Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control. Wu, J., +, TCYB Dec. 2021 5825-5835
- H_∞ Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling. Ma, L., +, TCYB Dec. 2021 5761-5772

Networked control systems

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. Zhou, T., +, TCYB May 2021 2409-2418
- An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. Gan, R., +, TCYB Feb. 2021 994-1003
- Bit-Rate Conditions for the Consensus of Quantized Multiagent Systems With Network-Induced Delays Based on Event Triggering. *Chen, J.*, +, *TCYB Feb. 2021 984-993*

- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*
- Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu, H.*, +, *TCYB July 2021 3767-3778*
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*
- Event-Triggered Active MPC for Nonlinear Multiagent Systems With Packet Losses. *Yang, H.*, +, *TCYB June 2021 3093-3102*
- Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*
- ${
 m H}_{\infty}$ Static Output Feedback for Low-Frequency Networked Control Systems With a Decentralized Event-Triggered Scheme. Yang, H., +, TCYB Aug. 2021 4227-4236
- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug, 2021 4337-4347*
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119
- Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. Liu, J., +, TCYB Aug. 2021 4000-4010
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. *Hu*, *Z*., +, *TCYB July 2021 3779-3788*

Neural network architecture

A Bayes Risk Minimization Machine for Example-Dependent Cost Classification. *Lazaro*, M., +, TCYB July 2021 3524-3534

Neural networks

- 2-D Stochastic Configuration Networks for Image Data Analytics. Li, M., +, TCYB Jan. 2021 359-372
- A Compact Neural Network for Fused Lasso Signal Approximator. Mohammadi, M., TCYB Aug. 2021 4327-4336
- A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin, C.*, +, *TCYB Oct. 2021 4959-4967*
- A Knee-Guided Evolutionary Algorithm for Compressing Deep Neural Networks. *Zhou, Y.*, +, *TCYB March 2021 1626-1638*
- A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan*, K., +, *TCYB Dec.* 2021 5907-5920
- A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan, K.*, +, *TCYB Dec. 2021 5907-5920*
- Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. *Cao, J.*, +, *TCYB Jan. 2021 151-161*
- Building Personalized Transportation Model for Online Taxi-Hailing Demand Prediction. *Liu, Z., +, TCYB Sept. 2021 4602-4610*
- Cascading and Enhanced Residual Networks for Accurate Single-Image Super-Resolution. Lan, R., +, TCYB Jan. 2021 115-125
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Construction and Supervised Learning of Long-Term Grey Cognitive Networks. *Napoles, G.*, +, *TCYB Feb. 2021 686-695*
- Deep Reinforcement Learning for Multiobjective Optimization. Li, K., +, TCYB June 2021 3103-3114

- Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model. *Zhang, X.*, +, *TCYB June 2021 3157-3170*
- Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread. Li, H., +, TCYB Dec. 2021 6188-6199
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu*, B., +, *TCYB July 2021 3836-3844*
- Emotion Correlation Mining Through Deep Learning Models on Natural Language Text. Wang, X., +, TCYB Sept. 2021 4400-4413
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology. *Chen, J.*, +, *TCYB Dec.* 2021 5993-6003
- Evolutionary Multiobjective Optimization Driven by Generative Adversarial Networks (GANs). *He, C.*, +, *TCYB June 2021 3129-3142*
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays. *Sheng, Y.*, +, *TCYB Feb. 2021 579-588*
- Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay. Gong, S., +, TCYB June 2021 2944-2955
- GAN-Based Key Secret-Sharing Scheme in Blockchain. Zheng, W., +, TCYB Jan. 2021 393-404
- Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors. *Li*, *L.*, +, *TCYB April 2021 2142-2152*
- I-Keyboard: Fully Imaginary Keyboard on Touch Devices Empowered by Deep Neural Decoder. *Kim, U.*, +, *TCYB Sept. 2021 4528-4539*
- Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- Joint Learning of Multiple Latent Domains and Deep Representations for Domain Adaptation. Wu, X., +, TCYB May 2021 2676-2687
- Layered Affine Formation Control of Networked Uncertain Systems: A Fully Distributed Approach Over Directed Graphs. *Li*, *D*., +, *TCYB Dec*. 2021 6119-6130
- LiSSA: Localized Stochastic Sensitive Autoencoders. Wang, T., +, TCYB May 2021 2748-2760
- Multiagent Adversarial Collaborative Learning via Mean-Field Theory. *Luo*, G., +, *TCYB Oct. 2021 4994-5007*
- Multilabel Classification With Label-Specific Features and Classifiers: A Coarse- and Fine-Tuned Framework. *Ma, J.*, +, *TCYB Feb. 2021 1028-1042*
- Multiple Mittag-Leffler Stability of Delayed Fractional-Order Cohen-Grossberg Neural Networks via Mixed Monotone Operator Pair. *Zhang, F., +, TCYB Dec. 2021 6333-6344*
- Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092
- Observer-Based Dissipativity Control for T-S Fuzzy Neural Networks With Distributed Time-Varying Delays. *Li, H., +, TCYB Nov. 2021 5248-5258*
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- Quantized Sampled-Data Synchronization of Delayed Reaction–Diffusion Neural Networks Under Spatially Point Measurements. *Wang, Z.*, +, *TCYB Dec. 2021 5740-5751*
- Quasisynchronization of Discrete-Time Inertial Neural Networks With Parameter Mismatches and Delays. *Xiao*, *Q.*, +, *TCYB April 2021 2290-2205*
- Sequential Gating Ensemble Network for Noise Robust Multiscale Face Restoration. Chen, Z., +, TCYB Jan. 2021 451-461
- Single-Image Dehazing via Compositional Adversarial Network. Zhu, H., +, $TCYB\ Feb.\ 2021\ 829-838$

- Solving Large-Scale Multiobjective Optimization Problems With Sparse Optimal Solutions via Unsupervised Neural Networks. *Tian, Y.*, +, *TCYB June 2021 3115-3128*
- Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques. Zhang, H., +, TCYB Feb. 2021 660-672
- Task-Oriented Deep Reinforcement Learning for Robotic Skill Acquisition and Control. *Xiang, G.*, +, *TCYB Feb. 2021 1056-1069*
- The Learning of Fuzzy Cognitive Maps With Noisy Data: A Rapid and Robust Learning Method With Maximum Entropy. Feng, G., +, TCYB April 2021 2080-2092
- Unsupervised Eyeglasses Removal in the Wild. Hu, B., +, TCYB Sept. 2021 4373-4385

Neurocontrollers

- A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao*, Y., +, TCYB March 2021 1262-1271
- A Unified Framework Design for Finite-Time and Fixed-Time Synchronization of Discontinuous Neural Networks. *Xiao, J.*, +, *TCYB June 2021* 3004-3016
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H., +, TCYB March* 2021 1163-1174
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*
- Adaptive Neural Network Fixed-Time Leader–Follower Consensus for Multiagent Systems With Constraints and Disturbances. *Ni, J.*, +, *TCYB April* 2021 1835-1848
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. *Cao, J.*, +, *TCYB Jan. 2021 151-161*
- Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks. Shi, J., +, TCYB May 2021 2540-2549
- Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July 2021 3710-3723*
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu*, *B*., +, *TCYB July 2021 3836-3844*

- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. *Wang, X.*, +, *TCYB March 2021 1216-1229*
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang, R.*, +, *TCYB May 2021 2384-2397*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y., +, TCYB Sept. 2021 4755-4765
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May 2021 2446-2456*
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021 1913-1928*
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug. 2021 4011-4020*
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, Q., +, TCYB Oct. 2021 5032-5045
- Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain. *Liu, C.*, +, *TCYB May* 2021 2339-2346
- Nonseparation Method-Based Finite/Fixed-Time Synchronization of Fully Complex-Valued Discontinuous Neural Networks. Feng, L., +, TCYB June 2021 3212-3223
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- On Robot Compliance: A Cerebellar Control Approach. *Abadia, I.*, +, *TCYB May 2021 2476-2489*
- Optimal Robot–Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. *Zhang, F., +, TCYB June 2021 3027-3038*
- Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Networks. Sang, H., +, TCYB April 2021 1968-1980
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764

Neurodynamics

Penalty Method for Constrained Distributed Quaternion-Variable Optimization. Xia, Z., +, TCYB Nov. 2021 5631-5636

Neurophysiology

A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin, C.*, +, *TCYB Oct. 2021 4959-4967*

- Automatic Symmetry Detection From Brain MRI Based on a 2-Channel Convolutional Neural Network. Wu, H., +, TCYB Sept. 2021 4464-4475
- DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. Li, Z., +, TCYB July 2021 3441-3454
- Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. Liu, C., +, TCYB Oct. 2021 5046-5056
- Fused Sparse Network Learning for Longitudinal Analysis of Mild Cognitive Impairment. *Yang, P., +, TCYB Jan. 2021 233-246*
- On Robot Compliance: A Cerebellar Control Approach. *Abadia, I., +, TCYB May 2021 2476-2489*

Newton method

Policy Iteration *Q*-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. *Luo*, *B.*, +, *TCYB July 2021 3630-3640*

Next generation networking

A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization. Lan, R., +, TCYB Dec. 2021 6284-6293

Noise measurement

- Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition. Zhang, L., +, TCYB Dec. 2021 5671-5680
- Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game. *Chakraborty, B.*, +, *TCYB Dec.* 2021 6200-6212

Nonlinear control systems

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao, Y.*, +, *TCYB March 2021* 1262-1271
- Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. Zhou, T., +, TCYB May 2021 2409-2418
- Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415
- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H., +, TCYB March* 2021 1163-1174
- Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. Li, X., +, TCYB Jan. 2021 199-209
- Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T*, +, *TCYB April 2021 1943-1953*
- Adaptive Neural Network Fixed-Time Leader–Follower Consensus for Multiagent Systems With Constraints and Disturbances. Ni, J., +, TCYB April 2021 1835-1848
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302

- Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. Yang, X., +, TCYB May 2021 2419-2432
- Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems. *Qiu, J.*, +, *TCYB Aug. 2021 3964-3974*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Bipartite Fixed-Time Output Consensus of Heterogeneous Linear Multiagent Systems. Zhang, H., +, TCYB Feb. 2021 548-557
- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. *Zhang, X.*, +, *TCYB March 2021 1121-1133*
- Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements. *Zhang*, Y., +, TCYB Nov. 2021 5364-5374
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Constrained Output-Feedback Control for Discrete-Time Fuzzy Systems With Local Nonlinear Models Subject to State and Input Constraints. Nguyen, A., +, TCYB Sept. 2021 4673-4684
- Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July 2021 3710-3723*
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. *Wang, X.*, +, *TCYB Oct. 2021 4924-4933*
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. Vu, V., +, TCYB June 2021 3312-3324
- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. *Wang, J.*, +, *TCYB May 2021 2433-2445*
- Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Dissipativity-Based Sliding-Mode Control of Cyber-Physical Systems Under Denial-of-Service Attacks. *Ma*, *R*., +, *TCYB May 2021 2306-2318*
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long. J., +, TCYB Aug. 2021 4050-4061
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. *Li*, K., +, *TCYB June 2021 3361-3370*
- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240

- Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems. *Duan, P., +, TCYB Feb. 2021 512-520*
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, *TCYB Aug*. 2021 3988-3999
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y., +, TCYB July 2021 3813-3823
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo, M.*, +, *TCYB Sept. 2021 4707-4715*
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872
- Event-Triggered Active MPC for Nonlinear Multiagent Systems With Packet Losses. *Yang, H.*, +, *TCYB June 2021 3093-3102*
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Event-Triggered H_∞ Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach. *Wang, X.*, +, *TCYB June 2021 3062-3070*
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*, +, *TCYB June 2021 2969-2978*
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. Zhang, P., +, TCYB June 2021 2956-2968
- Feedback Strategies for a Reach-Avoid Game With a Single Evader and Multiple Pursuers. Selvakumar, J., +, TCYB Feb. 2021 696-707
- Finite-Frequency H'/H[∞] Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021* 3017-3026
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fixed/Preassigned-Time Synchronization of Complex Networks via Improving Fixed-Time Stability. Hu, C., +, TCYB June 2021 2882-2892
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Adaptive Practical Fixed-Time Consensus for Second-Order Nonlinear Multiagent Systems Under Actuator Faults. Wu, Y., +, TCYB March 2021 1150-1162

- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian*, *J.*, +, *TCYB April 2021 2032-2041*
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. *Song, Y., +, TCYB Sept. 2021 4755-4765*
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May 2021 2446-2456*
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Model-Independent Formation Tracking of Multiple Euler-Lagrange Systems via Bounded Inputs. Wang, L., +, TCYB May 2021 2813-2823
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021* 1913-1928
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug.* 2021 4011-4020
- Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain. *Liu, C.*, +, *TCYB May* 2021 2339-2346
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, $TCYB\ May\ 2021\ 2398-2408$
- Observer-Based Event-Driven Control for Discrete-Time Systems With Disturbance Rejection. Zhang, J., +, TCYB April 2021 2120-2130
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. Wang, W., +, TCYB April 2021 2131-2141
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March* 2021 1110-1120
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*, +, *TCYB Jan. 2021* 126-137
- On Designing Distributed Prescribed Finite-Time Observers for Strict-Feedback Nonlinear Systems. *Chang, L.*, +, *TCYB Sept. 2021 4695-4706*
- Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control. *Liang, C.*, +, *TCYB June 2021 2893-2904*
- Output Synchronization of Complex Dynamical Networks With Multiple Output or Output Derivative Couplings. Wang, J., +, TCYB Feb. 2021 927-037
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T–S Fuzzy Implementation. *Han, H.*, +, *TCYB Feb. 2021 801-814*
- Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. *Li*, F, +, TCYB Oct. 2021 5142-5155

- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. Chen, Y., +, TCYB Feb. 2021 501-511
- Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109
- Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. Liu, J., +, TCYB Aug. 2021 4000-4010
- Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation. Ren, L., +, TCYB Sept. 2021 4685-4694
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. *Wen, G.*, +, *TCYB Sept. 2021 4567-4580*
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764
- Sparse and Decoupling Control Strategies Based on Takagi–Sugeno Fuzzy Models. *Liao*, Q., +, TCYB Feb. 2021 947-960
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y, +, TCYB Jan. 2021 258-266
- Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques. Zhang, H., +, TCYB Feb. 2021 660-672
- Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *Zhang, X.*, +, *TCYB July 2021 3616-3629*
- Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. Wang, Y., +, TCYB March 2021 1300-1310

Nonlinear differential equations

Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369

Nonlinear dynamical systems

- Adaptive Event-Triggered Control for Unknown Second-Order Nonlinear Multiagent Systems. Li, Z., +, TCYB Dec. 2021 6131-6140
- Distributed Dynamic Self-Triggered Impulsive Control for Consensus Networks: The Case of Impulse Gain With Normal Distribution. *Tan, X.*, +, *TCYB Feb. 2021 624-634*

Nonlinear filters

Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems. *Duan, P., +, TCYB Feb. 2021 512-520*

Nonlinear functions

- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. *Vu, V.*, +, *TCYB June 2021 3312-3324*
- Learning Kernel for Conditional Moment-Matching Discrepancy-Based Image Classification. Ren, C., +, TCYB April 2021 2006-2018

- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y., +, TCYB June 2021 2870-2881

Nonlinear systems

- Adaptive Fuzzy Tracking Control for a Class of Uncertain Switched Nonlinear Systems With Full-State Constraints and Input Saturations. Wu, L., +, TCYB Dec. 2021 6054-6065
- An Implicit Function-Based Adaptive Control Scheme for Noncanonical-Form Discrete-Time Neural-Network Systems. *Zhang, Y.*, +, *TCYB Dec. 2021 5728-5739*
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems. *Duan, P., +, TCYB Feb. 2021 512-520*
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance. Sun, Q., +, TCYB Dec. 2021 5921-5929
- Iterative Learning Control for MIMO Nonlinear Systems With Iteration-Varying Trial Lengths Using Modified Composite Energy Function Analysis. *Jin, X., TCYB Dec. 2021 6080-6090*
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764

Numerical models

- Massive Maritime Path Planning: A Contextual Online Learning Approach. *Zhou, P., +, TCYB Dec. 2021 6262-6273*
- Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment. *Jiang, W.*, +, *TCYB Dec. 2021 5717-5727*

Numerical stability

Multiple Mittag-Leffler Stability of Delayed Fractional-Order Cohen-Grossberg Neural Networks via Mixed Monotone Operator Pair. *Zhang, F., +, TCYB Dec. 2021 6333-6344*

0

Object detection

- A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations. *Tom*, A.J., +, TCYB Feb. 2021 1004-1014
- ASIF-Net: Attention Steered Interweave Fusion Network for RGB-D Salient Object Detection. *Li*, *C.*, +, *TCYB Jan. 2021 88-100*
- Context-Aware Correlation Filter Learning Toward Peak Strength for Visual Tracking. *Bouraffa*, T., +, TCYB Oct. 2021 5105-5115
- Depthwise Nonlocal Module for Fast Salient Object Detection Using a Single Thread. *Li*, *H*., +, *TCYB Dec. 2021 6188-6199*
- Efficient Person Search via Expert-Guided Knowledge Distillation. *Zhang*, Y, +, TCYB Oct. 2021 5093-5104
- Lightweight Salient Object Detection via Hierarchical Visual Perception Learning. Liu, Y., +, TCYB Sept. 2021 4439-4449
- Low-Rank and Sparse Decomposition With Mixture of Gaussian for Hyperspectral Anomaly Detection. *Li*, *L*., +, *TCYB Sept. 2021 4363-4372*
- New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226
- SPRNet: Single-Pixel Reconstruction for One-Stage Instance Segmentation. *Yu, J.*, +, *TCYB April 2021 1731-1742*
- Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161

Object recognition

Group Reidentification with Multigrained Matching and Integration. *Lin, W.*, +, *TCYB March 2021 1478-1492*

- Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092
- RecapNet: Action Proposal Generation Mimicking Human Cognitive Process. Wang, T., +, TCYB Dec. 2021 6017-6028

Object tracking

Context-Aware Correlation Filter Learning Toward Peak Strength for Visual Tracking. *Bouraffa*, T., +, TCYB Oct. 2021 5105-5115

Observer

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y., +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Consensus Tracking Control of Uncertain Multiagent Systems With Sampled Data and Time-Varying Delay. Zhou, D., +, TCYB Dec. 2021 5681-5691
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. *Vu, V.*, +, *TCYB June 2021 3312-3324*
- Design of Hybrid Event-Triggered Containment Controllers for Homogeneous and Heterogeneous Multiagent Systems. Wang, D., +, TCYB Oct. 2021 4885-4896
- Distributed Adaptive Finite-Time Consensus for Second-Order Multiagent Systems With Mismatched Disturbances Under Directed Networks. *Wang, H., +, TCYB March 2021 1347-1358*
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*, +, *TCYB June 2021 2969-2978*
- Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. Sun, S., +, TCYB Dec. 2021 6213-6225
- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*
- Finite-Frequency H-/H[∞] Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021 3017-3026*
- Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays. *Li, K.*, +, *TCYB Dec. 2021 5850-5858*
- Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. *Li*, *Z*., +, *TCYB April 2021 2253-2264*

- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y, +, TCYB May 2021 2359-2371
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*
- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021* 2457-2465
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug. 2021 4011-4020*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Observer-Based Distributed Mean-Square Consensus Design for Leader-Following Multiagent Markov Jump Systems. *Dong, S.*, +, *TCYB June* 2021 3054-3061
- Observer-Based Event-Driven Control for Discrete-Time Systems With Disturbance Rejection. Zhang, J., +, TCYB April 2021 2120-2130
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. *Wang, W.*, +, *TCYB April 2021 2131-2141*
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li, Y.*, +, *TCYB Jan. 2021* 126-137
- On Designing Distributed Prescribed Finite-Time Observers for Strict-Feedback Nonlinear Systems. Chang, L., +, TCYB Sept. 2021 4695-4706
- Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*

Online services

Massive Maritime Path Planning: A Contextual Online Learning Approach. *Zhou, P., +, TCYB Dec. 2021 6262-6273*

Open loop systems

Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. *Luo*, *B*., +, *TCYB March 2021 1253-1261*

Optimal control

- Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li, H.*, +, *TCYB March* 2021 1163-1174
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. Yang, X., +, TCYB May 2021 2419-2432
- Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control. Zhang, Y., +, TCYB Aug. 2021 4286-4297
- Continuous-Time Distributed Policy Iteration for Multicontroller Nonlinear Systems. Wei, Q., +, TCYB May 2021 2372-2383
- Cooperative Optimal Controller and Its Application to Activated Sludge Process. *Han, H.*, +, *TCYB Aug. 2021 3938-3951*
- Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648
- Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647

- Dynamic MOPSO-Based Optimal Control for Wastewater Treatment Process. *Han, H.*, +, *TCYB May 2021 2518-2528*
- Event-Driven H_{∞} -Constrained Control Using Adaptive Critic Learning. Yang, X., +, TCYB Oct. 2021 4860-4872
- Fault-Tolerant Optimal Control for Discrete-Time Nonlinear System Subjected to Input Saturation: A Dynamic Event-Triggered Approach. *Zhang, P., +, TCYB June 2021 2956-2968*
- Learning Self-Triggered Controllers With Gaussian Processes. *Hashimoto*, K., +, TCYB Dec. 2021 6294-6304
- Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix. *Hao*, Y, +, TCYB Sept. 2021 4743-4754
- Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092
- Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049
- Optimal Robot–Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Simplified Optimized Backstepping Control for a Class of Nonlinear Strict-Feedback Systems With Unknown Dynamic Functions. Wen, G., +, TCYB Sept. 2021 4567-4580
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Solver-Critic: A Reinforcement Learning Method for Discrete-Time-Constrained-Input Systems. *Yuan*, X., +, TCYB Nov. 2021 5619-5630
- Team-Triggered Practical Fixed-Time Consensus of Double-Integrator Agents With Uncertain Disturbance. *Liu, J., +, TCYB June 2021 3263-3272*

Optimization

- A Bi-Objective Constrained Robust Gate Assignment Problem: Formulation, Instances and Algorithm. Cai, X., +, TCYB Sept. 2021 4488-4500
- A Compact Neural Network for Fused Lasso Signal Approximator. Mohammadi, M., TCYB Aug. 2021 4327-4336
- A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *Peng, C.*, +, *TCYB Nov. 2021 5546-5558*
- A Development of Granular Input Space in System Modeling. Zhu, X., +, TCYB March 2021 1639-1650
- A Distributed Optimization Algorithm Based on Multiagent Network for Economic Dispatch With Region Partitioning. *Liu*, *Q*., +, *TCYB May 2021 2466-2475*
- A Knee-Guided Evolutionary Algorithm for Compressing Deep Neural Networks. *Zhou, Y.*, +, *TCYB March 2021 1626-1638*
- A Preference Biobjective Evolutionary Algorithm for the Payment Scheduling Negotiation Problem. Zhang, Z., +, TCYB Dec. 2021 6105-6118
- A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization. Lan, R., +, TCYB Dec. 2021 6284-6293
- Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent. Gu, B., +, TCYB April 2021 2215-2223
- Adaptive Deep Cascade Broad Learning System and Its Application in Image Denoising. Ye, H., +, TCYB Sept. 2021 4450-4463
- An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing. Huang, T., +, TCYB Nov. 2021 5595-5608
- An Effective Knowledge Transfer Approach for Multiobjective Multitasking Optimization. *Lin, J., +, TCYB June 2021 3238-3248*
- An Evolutionary Multiobjective Route Grouping-Based Heuristic Algorithm for Large-Scale Capacitated Vehicle Routing Problems. *Xiao*, *J.*, +, *TCYB Aug.* 2021 4173-4186
- Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation. *Huang, Z.*, +, *TCYB Nov. 2021 5559-5572*

- Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. Yang, X., +, TCYB May 2021 2419-2432
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*
- Cooperative Optimal Controller and Its Application to Activated Sludge Process. *Han*, H., +, *TCYB Aug. 2021 3938-3951*
- Correntropy-Based Multiview Subspace Clustering. Xing, L., +, TCYB June 2021 3298-3311
- CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems. Guo, Z., +, TCYB Jan. 2021 188-198
- Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems. Zhao, Z., +, TCYB Dec. 2021 6179-6187
- Distributed Finite-Time Optimization for Disturbed Second-Order Multiagent Systems. Wang, X., +, TCYB Sept. 2021 4634-4647
- Distributed Memetic Algorithm for Outsourced Database Fragmentation. *Ge, Y.*, +, *TCYB Oct. 2021 4808-4821*
- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Distributed Multiobjective Optimization for Network Resource Allocation of Multiagent Systems. Li, Z., +, TCYB Dec. 2021 5800-5810
- Distributed Optimization of Multiagent Systems Subject to Inequality Constraints. *Tian*, F., +, *TCYB April 2021 2232-2241*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Efficient Heuristic Algorithms for Single-Vehicle Task Planning With Precedence Constraints. *Bai*, X., +, *TCYB Dec. 2021 6274-6283*
- Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068
- Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching. Zhu, H., +, TCYB Aug. 2021 4062-4074
- Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H., TCYB April 2021 2068-2079*
- Evolution Strategy-Based Many-Objective Evolutionary Algorithm Through Vector Equilibrium. *Zhang, K.*, +, *TCYB Nov. 2021 5455-5467*
- Evolutionary Algorithm for Knee-Based Multiple Criteria Decision Making. Zhang, K., +, TCYB Feb. 2021 722-735
- Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem. Feng, L., +, TCYB June 2021 3143-3156
- Generalized Centered 2-D Principal Component Analysis. Zhou, G., +, TCYB March 2021 1666-1677
- Generalized Incomplete Multiview Clustering With Flexible Locality Structure Diffusion. Wen, J., +, TCYB Jan. 2021 101-114
- Graph Simplification-Aided ADMM for Decentralized Composite Optimization. Wang, B., +, TCYB Oct. 2021 5170-5183
- Group Reidentification with Multigrained Matching and Integration. *Lin, W.*, +, *TCYB March 2021 1478-1492*
- Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance. Sun, Q., +, TCYB Dec. 2021 5921-5929
- Interpretable Rule Discovery Through Bilevel Optimization of Split-Rules of Nonlinear Decision Trees for Classification Problems. *Dhebar, Y.*, +, *TCYB Nov. 2021 5573-5584*
- Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach. Shen, D., +, TCYB March 2021 1286-1299
- Joint and Progressive Subspace Analysis (JPSA) With Spatial–Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction. *Hong, D.*, +, *TCYB July 2021 3602-3615*
- Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning. Tao, H., +, TCYB March 2021 1690-1703
 Joint Transformation Learning via the L_{2,1}-Norm Metric for Robust Graph

Matching. Yu, Y., +, TCYB Feb. 2021 521-533

Large-Scale Evolution Strategy Based on Search Direction Adaptation. *He*, X., +, *TCYB March 2021 1651-1665*

Large-Scale Traffic Signal Control Using a Novel Multiagent Reinforcement Learning. Wang, X., +, TCYB Jan. 2021 174-187

Learning Image Profile Enhancement and Denoising Statistics Priors for Single-Image Super-Resolution. Ren, C., +, TCYB July 2021 3535-3548

Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making. Wu, Y., +, TCYB Feb. 2021 649-659

Local Manifold-Based Sparse Discriminant Learning for Feature Extraction of Hyperspectral Image. *Duan, Y., +, TCYB Aug. 2021 4021-4034*

Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092

Merge Nondominated Sorting Algorithm for Many-Objective Optimization. Moreno, J., +, TCYB Dec. 2021 6154-6164

Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data. *Li*, *X*., +, *TCYB Dec. 2021 5811-5824*

Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049

Multitask Feature Learning Meets Robust Tensor Decomposition for EEG Classification. Zheng, Q., +, TCYB April 2021 2242-2252

New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226

Optimal Interaction Priority Calculation From Hesitant Fuzzy Preference Relations Based on the Monte Carlo Simulation Method for the Acceptable Consistency and Consensus. *Meng*, F., +, TCYB Dec. 2021 5871-5882

Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285

Particle Swarm Optimized Autonomous Learning Fuzzy System. Gu, X., +, TCYB Nov. 2021 5352-5363

Penalty Method for Constrained Distributed Quaternion-Variable Optimization. Xia, Z., +, TCYB Nov. 2021 5631-5636

Point Set Registration With Similarity and Affine Transformations Based on Bidirectional KMPE Loss. *Yang, Y.*, +, *TCYB March 2021 1678-1689*

Privacy Masking Stochastic Subgradient-Push Algorithm for Distributed Online Optimization. Lu, Q., +, TCYB June 2021 3224-3237

Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119

Running Time Analysis of MOEA/D on Pseudo-Boolean Functions. *Huang*, Z., +, *TCYB Oct.* 2021 5130-5141

Scaled Simplex Representation for Subspace Clustering. Xu, J., +, TCYB March 2021 1493-1505

Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization. *Jia*, Y, +, *TCYB May 2021 2550-2562*

Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Solving Generalized Vehicle Routing Problem With Occasional Drivers via Evolutionary Multitasking. Feng, L., +, TCYB June 2021 3171-3184

Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism. *Liu, Y.*, +, *TCYB Nov. 2021 5585-5594*

SPLBoost: An Improved Robust Boosting Algorithm Based on Self-Paced Learning. Wang, K., +, TCYB March 2021 1556-1570

Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations. *Chen, B., +, TCYB Dec.* 2021 5786-5799

Target Controllability of Two-Layer Multiplex Networks Based on Network Flow Theory. Song, K., +, TCYB May 2021 2699-2711

Toward Adaptive Knowledge Transfer in Multifactorial Evolutionary Computation. Zhou, L., +, TCYB May 2021 2563-2576

Optimization methods

Kernel Correntropy Conjugate Gradient Algorithms Based on Half-Quadratic Optimization. Xiong, K., +, TCYB Nov. 2021 5497-5510

Orbits

Robust Trajectory Tracking in Satellite Time-Varying Formation Flying. *Liu*, *H.*, +, *TCYB Dec. 2021 5752-5760*

Oscillators

Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control. Wu, J., +, TCYB Dec. 2021 5825-5835

Output feedback

Adaptive Fuzzy Tracking Control for a Class of Uncertain Switched Nonlinear Systems With Full-State Constraints and Input Saturations. Wu, L., +, TCYB Dec. 2021 6054-6065

Outsourcing

Distributed Memetic Algorithm for Outsourced Database Fragmentation. Ge, Y., +, TCYB Oct. 2021 4808-4821

P

Parallel algorithms

Distributed and Parallel ADMM for Structured Nonconvex Optimization Problem. Wang, X., +, TCYB Sept. 2021 4540-4552

Parallel processing

Generation-Level Parallelism for Evolutionary Computation: A Pipeline-Based Parallel Particle Swarm Optimization. *Li*, *J*., +, *TCYB Oct.* 2021 4848-4859

Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601

Parameter estimation

Basis Function Matrix-Based Flexible Coefficient Autoregressive Models: A Framework for Time Series and Nonlinear System Modeling. *Chen, G.*, +, *TCYB Feb. 2021 614-623*

Consensus Tracking Control of Uncertain Multiagent Systems With Sampled Data and Time-Varying Delay. Zhou, D., +, TCYB Dec. 2021 5681-5691

Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long. J., +, TCYB Aug. 2021 4050-4061

Pareto optimization

A Fast Dynamic Evolutionary Multiobjective Algorithm via Manifold Transfer Learning. *Jiang, M.*, +, *TCYB July 2021 3417-3428*

A Many-Objective Evolutionary Algorithm Based on a Two-Round Selection Strategy. *Liang*, Z., +, *TCYB March* 2021 1417-1429

A Polar-Metric-Based Evolutionary Algorithm. Xu, H., +, TCYB July 2021 3429-3440

Adaptive Controller Tuning Method Based on Online Multiobjective Optimization: A Case Study of the Four-Bar Mechanism. *Rodriguez-Molina*, A., +, TCYB March 2021 1272-1285

Adaptive Multiobjective Particle Swarm Optimization Based on Evolutionary State Estimation. Wu, B., +, TCYB July 2021 3738-3751

An Elite Gene Guided Reproduction Operator for Many-Objective Optimization. Zhu, Q., +, TCYB Feb. 2021 765-778

Deep Reinforcement Learning for Multiobjective Optimization. Li, K., +, TCYB June 2021 3103-3114

Evolutionary Algorithm for Knee-Based Multiple Criteria Decision Making. *Zhang, K.*, +, *TCYB Feb. 2021 722-735*

Evolutionary Multiobjective Optimization Driven by Generative Adversarial Networks (GANs). *He, C.*, +, *TCYB June 2021 3129-3142*

Fuzzy Clustering to Identify Clusters at Different Levels of Fuzziness: An Evolutionary Multiobjective Optimization Approach. *Gupta, A.*, +, *TCYB May 2021 2601-2611*

Individual-Based Transfer Learning for Dynamic Multiobjective Optimization. *Jiang, M.*, +, *TCYB Oct. 2021 4968-4981*

Influence Spread in Geo-Social Networks: A Multiobjective Optimization Perspective. Wang, L., +, TCYB May 2021 2663-2675

Manifold Learning-Inspired Mating Restriction for Evolutionary Multiobjective Optimization With Complicated Pareto Sets. *Pan, L.*, +, *TCYB June* 2021 3325-3337

Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049

- Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost. *Hu, Y.*, +, *TCYB Feb. 2021 874-888*
- On the Norm of Dominant Difference for Many-Objective Particle Swarm Optimization. Li, L., +, TCYB April 2021 2055-2067
- Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. Teo, T.T., +, TCYB Nov. 2021 5375-5386
- Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm. *Teng, X.*, +, *TCYB Jan. 2021 138-150*
- Pareto Self-Paced Learning Based on Differential Evolution. Li, H., +, TCYB Aug. 2021 4187-4200
- Running Time Analysis of MOEA/D on Pseudo-Boolean Functions. *Huang*, Z, +, *TCYB Oct. 2021 5130-5141*
- Solving Large-Scale Multiobjective Optimization Problems With Sparse Optimal Solutions via Unsupervised Neural Networks. *Tian, Y.*, +, *TCYB June 2021 3115-3128*
- The Collaborative Local Search Based on Dynamic-Constrained Decomposition With Grids for Combinatorial Multiobjective Optimization. *Cai, X.*, +, *TCYB May 2021 2639-2650*

Partial differential equations

- Design of Suboptimal Local Piecewise Fuzzy Controller With Multiple Constraints for Quasi-Linear Spatiotemporal Dynamic Systems. *Wang, J.*, +, *TCYB May 2021 2433-2445*
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*

Particle swarm optimization

- A New Binary Particle Swarm Optimization Approach: Momentum and Dynamic Balance Between Exploration and Exploitation. *Nguyen, B.H.*, +, *TCYB Feb. 2021 589-603*
- A Novel Sigmoid-Function-Based Adaptive Weighted Particle Swarm Optimizer. Liu, W., +, TCYB Feb. 2021 1085-1093
- A Surrogate-Assisted Multiswarm Optimization Algorithm for High-Dimensional Computationally Expensive Problems. *Li*, F., +, TCYB March 2021 1390-1402
- A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization. Lan, R., +, TCYB Dec. 2021 6284-6293
- Adaptive Granularity Learning Distributed Particle Swarm Optimization for Large-Scale Optimization. Wang, Z., +, TCYB March 2021 1175-1188
- Adaptive Multiobjective Particle Swarm Optimization Based on Evolutionary State Estimation. Wu, B., +, TCYB July 2021 3738-3751
- Dynamic MOPSO-Based Optimal Control for Wastewater Treatment Process. Han, H., +, TCYB May 2021 2518-2528
- Generation-Level Parallelism for Evolutionary Computation: A Pipeline-Based Parallel Particle Swarm Optimization. *Li*, *J*., +, *TCYB Oct.* 2021 4848-4859
- Influence Spread in Geo-Social Networks: A Multiobjective Optimization Perspective. Wang, L., +, TCYB May 2021 2663-2675
- Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049
- Multiobjective Particle Swarm Optimization for Feature Selection With Fuzzy Cost. *Hu, Y.*, +, *TCYB Feb. 2021 874-888*
- On the Norm of Dominant Difference for Many-Objective Particle Swarm Optimization. Li, L., +, TCYB April 2021 2055-2067
- Particle Swarm Optimized Autonomous Learning Fuzzy System. Gu, X., +, TCYB Nov. 2021 5352-5363

Partitioning algorithms

Asynchronous Distributed Event-Triggered Coordination for Multiagent Coverage Control. *Ajina*, *M.*, +, *TCYB Dec. 2021 5941-5953*

Path planning

- A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742
- Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control. Zhang, Y., +, TCYB Aug. 2021 4286-4297

Massive Maritime Path Planning: A Contextual Online Learning Approach. Zhou, P., +, TCYB Dec. 2021 6262-6273

Patient monitoring

Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Patient rehabilitation

Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109

Patient treatment

- Automatic Construction of Chinese Herbal Prescriptions From Tongue Images Using CNNs and Auxiliary Latent Therapy Topics. *Hu*, *Y*, +, *TCYB Feb. 2021 708-721*
- Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. *Liu, C.*, +, *TCYB Oct. 2021 5046-5056*
- Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Pattern classification

- A Bayes Risk Minimization Machine for Example-Dependent Cost Classification. *Lazaro*, M., +, TCYB July 2021 3524-3534
- Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent. Gu, B., +, TCYB April 2021 2215-2223
- Concept Drift Detection via Equal Intensity k-Means Space Partitioning. Liu, A., +, TCYB June 2021 3198-3211
- Discriminative Dimension Reduction via Maximin Separation Probability Analysis. *Yang, L., +, TCYB Aug. 2021 4100-4111*
- Dual Alignment for Partial Domain Adaptation. Li, L., +, TCYB July 2021 3404-3416
- End-to-End Ensemble Learning by Exploiting the Correlation Between Individuals and Weights. *Mao*, S., +, *TCYB May 2021 2835-2846*
- Fast-RCM: Fast Tree-Based Unsupervised Rare-Class Mining. Weng, H., +, TCYB Oct. 2021 5198-5211
- Fragmentary Multi-Instance Classification. Wu, J., +, TCYB Oct. 2021 5156-5169
- Genetic Programming With a New Representation to Automatically Learn Features and Evolve Ensembles for Image Classification. *Bi*, *Y*, +, *TCYB April 2021 1769-1783*
- GreenSea: Visual Soccer Analysis Using Broad Learning System. Sheng, B., +, TCYB March 2021 1463-1477
- Interpretable Rule Discovery Through Bilevel Optimization of Split-Rules of Nonlinear Decision Trees for Classification Problems. *Dhebar, Y.*, +, *TCYB Nov. 2021 5573-5584*
- Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*
- LiSSA: Localized Stochastic Sensitive Autoencoders. Wang, T., +, TCYB May 2021 2748-2760
- Multilabel Feature Extraction Algorithm via Maximizing Approximated and Symmetrized Normalized Cross-Covariance Operator. Xu, J., +, TCYB July 2021 3510-3523
- Multimodal Learning of Social Image Representation by Exploiting Social Relations. *Huang, F., +, TCYB March 2021 1506-1518*
- Multiscale Drift Detection Test to Enable Fast Learning in Nonstationary Environments. Wang, X., +, TCYB July 2021 3483-3495
- Pareto Self-Paced Learning Based on Differential Evolution. Li, H., +, TCYB Aug. 2021 4187-4200
- Recurrent Reconstructive Network for Sequential Anomaly Detection. *Yoo*, Y, +, TCYB March 2021 1704-1715

Pattern clustering

- A Dynamic Adaptive Subgroup-to-Subgroup Compatibility-Based Conflict Detection and Resolution Model for Multicriteria Large-Scale Group Decision Making. *Tang, M.*, +, *TCYB Oct. 2021 4784-4795*
- A Novel Type-2 Fuzzy C-Means Clustering for Brain MR Image Segmentation. Mishro, P.K., +, TCYB Aug. 2021 3901-3912
- Adaptively Weighted Multiview Proximity Learning for Clustering. *Liu, B.*, +, *TCYB March 2021 1571-1585*
- Concept Drift Detection via Equal Intensity k-Means Space Partitioning. Liu, A., +, TCYB June 2021 3198-3211

Consensus Affinity Graph Learning for Multiple Kernel Clustering. Ren, Z., +, TCYB June 2021 3273-3284

Correntropy-Based Multiview Subspace Clustering. Xing, L., +, TCYB June 2021 3298-3311

Differential Evolution for Multimodal Optimization With Species by Nearest-Better Clustering. *Lin, X.*, +, *TCYB Feb. 2021 970-983*

Discovering Multiple Co-Clusterings With Matrix Factorization. Wang, J., +, TCYB July 2021 3576-3587

Elastic Differential Evolution for Automatic Data Clustering. Chen, J., +, TCYB Aug. 2021 4134-4147

Fuzzy Clustering to Identify Clusters at Different Levels of Fuzziness: An Evolutionary Multiobjective Optimization Approach. *Gupta, A.*, +, *TCYB May 2021 2601-2611*

Generalized Incomplete Multiview Clustering With Flexible Locality Structure Diffusion. Wen, J., +, TCYB Jan. 2021 101-114

Granular Description of Data Structures: A Two-Phase Design. *Ouyang, T.*, +, TCYB April 2021 1902-1912

Granular Fuzzy Modeling Guided Through the Synergy of Granulating Output Space and Clustering Input Subspaces. *Lu, W.*, +, *TCYB May 2021 2625-2638*

Group-Wise Learning for Aurora Image Classification With Multiple Representations. Zhang, J., +, TCYB Aug. 2021 4112-4124

Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*

Joint Embedding Learning and Low-Rank Approximation: A Framework for Incomplete Multiview Learning. *Tao, H., +, TCYB March 2021 1690-1703*

Joint Learning of Multiple Latent Domains and Deep Representations for Domain Adaptation. Wu, X., +, TCYB May 2021 2676-2687

Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652

Rule-Based Modeling With DBSCAN-Based Information Granules. Ouyang, T, +, TCYB July 2021 3653-3663

Scaled Simplex Representation for Subspace Clustering. Xu, J., +, TCYB March 2021 1493-1505

Self-Adaptive Multiprototype-Based Competitive Learning Approach: A k-Means-Type Algorithm for Imbalanced Data Clustering. Lu, Y., +, TCYB March 2021 1598-1612

Semisupervised Adaptive Symmetric Non-Negative Matrix Factorization. Jia, Y., +, TCYB May 2021 2550-2562

Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161

Uniform Distribution Non-Negative Matrix Factorization for Multiview Clustering. Yang, Z., +, TCYB June 2021 3249-3262

Pattern recognition

Adaptive Learning for Robust Radial Basis Function Networks. Seghouane, A., +, TCYB May 2021 2847-2856

Generalized Centered 2-D Principal Component Analysis. Zhou, G., +, TCYB March 2021 1666-1677

Online and Unsupervised Anomaly Detection for Streaming Data Using an Array of Sliding Windows and PDDs. *Zhang, L.*, +, *TCYB April 2021 2284-2289*

Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652

PD control

A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*

PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu, H.*, +, *TCYB March 2021 1334-1346*

Pediatrics

An Inception Convolutional Autoencoder Model for Chinese Healthcare Question Clustering. Dai, D., +, TCYB April 2021 2019-2031

Pendulums

Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648

Performance analysis

Distributed Semi-Supervised Learning With Missing Data. Xu, Z., +, TCYB Dec. 2021 6165-6178

Performance evaluation

Performance Evaluation Methodology for Long-Term Single-Object Tracking. *Lukezic*, A., +, TCYB Dec. 2021 6305-6318

Performance index

Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. *Li*, *J*., +, *TCYB Jan. 2021 416-426*

Periodic control

Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J.*, +, *TCYB Jan. 2021 462-472*

Permanent magnet motors

Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*

Perturbation methods

Kernel Stability for Model Selection in Kernel-Based Algorithms. *Liu*, Y, +, TCYB Dec. 2021 5647-5658

Perturbation techniques

Quasisynchronization of Discrete-Time Inertial Neural Networks With Parameter Mismatches and Delays. *Xiao, Q.*, +, *TCYB April 2021 2290-2295*

Physiological models

Delayed Feedback-Based Suppression of Pathological Oscillations in a Neural Mass Model. *Liu, C.*, +, *TCYB Oct. 2021 5046-5056*

PI control

Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302

PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. Gu, H., +, TCYB March 2021 1334-1346

Pipe flow

Development of a Real-Time Objective Gas—Liquid Flow Regime Identifier Using Kernel Methods. *Eyo, E.N.*, +, *TCYB May 2021 2688-2698*

Pipeline processing

Generation-Level Parallelism for Evolutionary Computation: A Pipeline-Based Parallel Particle Swarm Optimization. *Li*, *J*., +, *TCYB Oct.* 2021 4848-4859

Planning

Efficient Heuristic Algorithms for Single-Vehicle Task Planning With Precedence Constraints. *Bai*, X., +, *TCYB Dec.* 2021 6274-6283

Polynomials

A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. Chen, Y, +, TCYB June 2021 2993-3003

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. *Vu, V.*, +, *TCYB April 2021 1929-1942*

Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106

Robust H_{∞} Control for Nonlinear Hyperbolic PDE Systems Based on the Polynomial Fuzzy Model. *Tsai*, S., +, *TCYB July 2021 3789-3801*

Pose estimation

Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions. *Chang, M.*, +, *TCYB Jan. 2021 2-15*

Position control

A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli*, C., +, TCYB May 2021 2587-2600

Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415

Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. Li, X., +, TCYB Jan. 2021 199-209

Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807

Adaptive PI Control for Consensus of Multiagent Systems With Relative State Saturation Constraints. Chu, H., +, TCYB April 2021 2296-2302

Circumnavigation on Multiple Circles Around a Nonstationary Target With Desired Angular Spacing. Sen, A., +, TCYB Jan. 2021 222-232

Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133

Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July* 2021 3710-3723

Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. Wang, B., +, TCYB Jan. 2021 16-27

Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. *Li*, *Z*., +, *TCYB April 2021 2253-2264*

Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*

On Robot Compliance: A Cerebellar Control Approach. *Abadia*, *I.*, +, *TCYB May 2021 2476-2489*

Position measurement

Cooperative Formation Control Under Switching Topology: An Experimental Case Study in Multirotors. Wang, Z., +, TCYB Dec. 2021 6141-6153

Power distribution faults

Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning, B.*, +, *TCYB Aug. 2021 3988-3999*

Power engineering computing

A Localized Event-Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks. Sahoo, S., +, TCYB July 2021 3687-3698

Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model. *Zhang, X.*, +, *TCYB June 2021 3157-3170*

Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H., +, TCYB April 2021 2068-2079*

Power generation control

A Localized Event-Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks. Sahoo, S., +, TCYB July 2021 3687-3698

A Packet Loss-Dependent Event-Triggered Cyber-Physical Cooperative Control Strategy for Islanded Microgrid. *Zhang, B.*, +, *TCYB Jan. 2021* 267-282

Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, *TCYB Aug*. 2021 3988-3999

Power generation dispatch

A Localized Event-Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks. Sahoo, S., +, TCYB July 2021 3687-3698 Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. Zhang, H., +, TCYB April 2021 2068-2079

Power generation economics

A Localized Event-Driven Resilient Mechanism for Cooperative Microgrid Against Data Integrity Attacks. *Sahoo, S.*, +, *TCYB July 2021 3687-3698* Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H.*, +, *TCYB April 2021 2068-2079*

Power generation scheduling

Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H.*, +, *TCYB April 2021 2068-2079*

Power markets

Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. *Teo, T.T.*, +, *TCYB Nov. 2021 5375-5386*

Power system stability

Stability Analysis for Cyber-Physical Systems Under Denial-of-Service Attacks. Lu, A., +, TCYB Nov. 2021 5304-5313

Prediction algorithms

Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance. Sun, Q., +, TCYB Dec. 2021 5921-5929

Kernel Correntropy Conjugate Gradient Algorithms Based on Half-Quadratic Optimization. Xiong, K., +, TCYB Nov. 2021 5497-5510

Particle Swarm Optimized Autonomous Learning Fuzzy System. Gu, X., +, TCYB Nov. 2021 5352-5363

Predictive control

Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control. Zhang, Y., +, TCYB Aug. 2021 4286-4297

Cooperative Optimal Controller and Its Application to Activated Sludge Process. *Han, H.*, +, *TCYB Aug. 2021 3938-3951*

Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915

Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823

Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068

Event-Triggered Active MPC for Nonlinear Multiagent Systems With Packet Losses. *Yang, H.*, +, *TCYB June 2021 3093-3102*

Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance. Sun, Q., +, TCYB Dec. 2021 5921-5929

Model Predictive Cooperative Control With ISM for Multiagent Systems Under Stochastic Communication Protocol. *Yuan, Y., +, TCYB Dec. 2021* 6004-6016

Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control. Lyu, Y., +, TCYB May 2021 2651-2662

Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *Zhang, X.*, +, *TCYB July 2021 3616-3629*

Predictive models

Model Predictive Cooperative Control With ISM for Multiagent Systems Under Stochastic Communication Protocol. *Yuan, Y., +, TCYB Dec. 2021 6004-6016*

Output Consensus for Heterogeneous Linear Multiagent Systems With a Predictive Event-Triggered Mechanism. *Yang*, *Q*., +, *TCYB April 2021* 1993-2005

Switching Structured Prediction for Simple and Complex Human Activity Recognition. *Arzani, M.M.*, +, *TCYB Dec. 2021 5859-5870*

Pricing

Event-Triggered Multiagent Optimization for Two-Layered Model of Hybrid Energy System With Price Bidding-Based Demand Response. *Zhang, H., +, TCYB April 2021 2068-2079*

Principal component analysis

Development of a Real-Time Objective Gas—Liquid Flow Regime Identifier Using Kernel Methods. *Eyo, E.N.*, +, *TCYB May 2021 2688-2698*

Generalized Centered 2-D Principal Component Analysis. Zhou, G., +, TCYB March 2021 1666-1677

Large-Scale Evolution Strategy Based on Search Direction Adaptation. *He*, X., +, *TCYB March 2021 1651-1665*

Low-Rank and Sparse Decomposition With Mixture of Gaussian for Hyperspectral Anomaly Detection. Li, L., +, TCYB Sept. 2021 4363-4372

Probabilistic Rank-One Tensor Analysis With Concurrent Regularizations. Zhou, Y., +, TCYB July 2021 3496-3509

Private key cryptography

GAN-Based Key Secret-Sharing Scheme in Blockchain. Zheng, W., +, TCYB Jan. 2021 393-404

Probabilistic logic

Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition. Zhang, L., +, TCYB Dec. 2021 5671-5680

Probability

Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*

- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model. *Zhang, X.*, +, *TCYB June 2021 3157-3170*
- Development of a Real-Time Objective Gas-Liquid Flow Regime Identifier Using Kernel Methods. *Eyo*, *E.N.*, +, *TCYB May 2021 2688-2698*
- Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, TCYB Aug. 2021 4075-4088
- Discriminative Dimension Reduction via Maximin Separation Probability Analysis. Yang, L., +, TCYB Aug. 2021 4100-4111
- Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu*, *H*., +, *TCYB July 2021 3767-3778*
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092
- Online and Unsupervised Anomaly Detection for Streaming Data Using an Array of Sliding Windows and PDDs. *Zhang, L.*, +, *TCYB April 2021 2284-2289*
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Probabilistic Rank-One Tensor Analysis With Concurrent Regularizations. Zhou, Y, +, TCYB July 2021 3496-3509
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. *Hu*, *Z*., +, *TCYB July 2021 3779-3788*
- Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *Zhang, X.*, +, *TCYB July 2021 3616-3629*

Problem solving

Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II. Bali, K.K., +, TCYB April 2021 1784-1796

Process control

Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Process monitoring

Illumination-Invariant Flotation Froth Color Measuring via Wasserstein Distance-Based CycleGAN With Structure-Preserving Constraint. *Liu*, *J*., +, *TCYB Feb.* 2021 839-852

Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Process planning

A Modified Genetic Algorithm With New Encoding and Decoding Methods for Integrated Process Planning and Scheduling Problem. *Liu*, *Q*., +, *TCYB Sept. 2021 4429-4438*

Production engineering computing

- CPS-Based Self-Adaptive Collaborative Control for Smart Production-Logistics Systems. Guo, Z., +, TCYB Jan. 2021 188-198
- Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. *Zhao, J.,* +, *TCYB April* 2021 2201-2214
- Illumination-Invariant Flotation Froth Color Measuring via Wasserstein Distance-Based CycleGAN With Structure-Preserving Constraint. Liu, J, +, $TCYB\ Feb$. $2021\ 839-852$
- Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Programming

Optimal Interaction Priority Calculation From Hesitant Fuzzy Preference Relations Based on the Monte Carlo Simulation Method for the Acceptable Consistency and Consensus. *Meng, F.*, +, *TCYB Dec. 2021 5871-5882*

Programming profession

Solver-Critic: A Reinforcement Learning Method for Discrete-Time-Constrained-Input Systems. Yuan, X., +, TCYB Nov. 2021 5619-5630

Project management

A Preference Biobjective Evolutionary Algorithm for the Payment Scheduling Negotiation Problem. *Zhang*, Z., +, TCYB Dec. 2021 6105-6118

Proposals

Time-Series Clustering Based on the Characterization of Segment Typologies. *Guijo-Rubio*, D., +, TCYB Nov. 2021 5409-5422

Prosthetics

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285-3297*

Attribute-Driven Granular Model for EMG-Based Pinch and Fingertip Force Grand Recognition. Fang, Y., +, TCYB Feb. 2021 789-800

Proteins

Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092

Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data. *Li*, *X.*, +, *TCYB Dec. 2021 5811-5824*

Protoco

- A Packet Loss-Dependent Event-Triggered Cyber-Physical Cooperative Control Strategy for Islanded Microgrid. *Zhang, B.*, +, *TCYB Jan. 2021* 267-282
- Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions. Zhao, M., +, TCYB Nov. 2021 5609-5618
- Distributed Stabilization of Multiple Heterogeneous Agents in the Strong-Weak Competition Network: A Switched System Approach. *Hu, H.*, +, *TCYB Nov. 2021 5328-5341*
- Fully Distributed Anti-Windup Consensus Protocols for Linear MASs With Input Saturation: The Case With Directed Topology. Lv, Y., +, TCYB May 2021 2359-2371
- Model Predictive Cooperative Control With ISM for Multiagent Systems Under Stochastic Communication Protocol. *Yuan, Y., +, TCYB Dec. 2021* 6004-6016
- Output Consensus for Heterogeneous Linear Multiagent Systems With a Predictive Event-Triggered Mechanism. *Yang*, *Q*., +, *TCYB April 2021* 1993-2005

Q

Quality control

Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Quantization (signal)

Quantized Sampled-Data Synchronization of Delayed Reaction–Diffusion Neural Networks Under Spatially Point Measurements. *Wang, Z.*, +, *TCYB Dec. 2021 5740-5751*

Quantum computing

Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. Gao, Q., +, TCYB Feb. 2021 889-899

Quantum theory

Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. Gao, Q., +, TCYB Feb. 2021 889-899

Quaternions

Penalty Method for Constrained Distributed Quaternion-Variable Optimization. Xia, Z., +, TCYB Nov. 2021 5631-5636

Query processing

Distributed Memetic Algorithm for Outsourced Database Fragmentation. *Ge, Y.*, +, *TCYB Oct. 2021 4808-4821*

Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*, +, *TCYB Oct. 2021 4982-4993*

Question answering (information retrieval)

Fast Supervised Topic Models for Short Text Emotion Detection. *Pang, J.*, +, *TCYB Feb. 2021 815-828*

Queueing theory

Deep-Learning-Based Probabilistic Forecasting of Electric Vehicle Charging Load With a Novel Queuing Model. *Zhang, X.*, +, *TCYB June 2021 3157-3170*

R

Radar computing

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

Radar imaging

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

Radar target recognition

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

Radar tracking

Distributed H_{∞} -Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu, H.*, +, *TCYB July 2021 3767-3778*

Radial basis function networks

Adaptive Learning for Robust Radial Basis Function Networks. Seghouane, A., +, TCYB May 2021 2847-2856

Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T*., +, *TCYB April 2021 1943-1953*

Adaptive Neural Network Fixed-Time Leader–Follower Consensus for Multiagent Systems With Constraints and Disturbances. Ni, J., +, TCYB April 2021 1835-1848

Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807

Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224

Data-Driven Evolutionary Algorithm With Perturbation-Based Ensemble Surrogates. Li, J., +, TCYB Aug. 2021 3925-3937

Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247

Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May 2021 2446-2456*

Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*

Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881

Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764

Radio frequency

Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data. Li, X., +, TCYB Dec. 2021 5811-5824

Radio networks

A New Method for Topology Identification of Complex Dynamical Networks. *Zhu, S., +, TCYB April 2021 2224-2231*

Random number generation

Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays. Sheng, Y., +, TCYB Feb. 2021 579-588

Random processes

2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M*., +, *TCYB Jan.* 2021 359-372

Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351

Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach. Shen, D., +, TCYB March 2021 1286-1299

Random variables

A Two-Phase Learning-Based Swarm Optimizer for Large-Scale Optimization. Lan, R., +, TCYB Dec. 2021 6284-6293

Reachability analysis

Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092

Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*

Reachable Set Estimation for Discrete-Time Markovian Jump Neural Networks With Generally Incomplete Transition Probabilities. *Lin, W.*, +, *TCYB March 2021 1311-1321*

Reaction-diffusion systems

Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. *Cao, J.*, +, *TCYB Jan. 2021 151-161*

Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang*, *R*., +, *TCYB May 2021 2384-2397*

Real-time systems

An Ant Colony Optimization-Based Multiobjective Service Replicas Placement Strategy for Fog Computing. Huang, T., +, TCYB Nov. 2021 5595-5608

Audio-Driven Robot Upper-Body Motion Synthesis. Ondras, J., +, TCYB Nov. 2021 5445-5454

Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239

Recurrent neural networks

Convolutional Multitimescale Echo State Network. Ma, Q., +, TCYB March 2021 1613-1625

DeepVolume: Brain Structure and Spatial Connection-Aware Network for Brain MRI Super-Resolution. *Li*, *Z*., +, *TCYB July 2021 3441-3454*

Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. *Zhang, Z.*, +, *TCYB Aug. 2021* 4312-4326

Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. *Xu*, *X.*, +, *TCYB May 2021 2577-2586*

Novel Efficient RNN and LSTM-Like Architectures: Recurrent and Gated Broad Learning Systems and Their Applications for Text Classification. *Du*, *J.*, +, *TCYB March 2021 1586-1597*

Recurrent Reconstructive Network for Sequential Anomaly Detection. *Yoo*, Y, +, TCYB March 2021 1704-1715

Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. Zhang, F., +, TCYB June 2021 3027-3038

Recursive estimation

Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*

Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119

Recursive filters

Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. Shen, Y., +, TCYB Oct. 2021 4897-4908

Reduced order systems

Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning, B.*, +, *TCYB Aug. 2021 3988-3999*

Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*

Regression analysis

δ-Norm-Based Robust Regression With Applications to Image Analysis. Chen, S., +, TCYB June 2021 3371-3383

Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent. Gu, B., +, TCYB April 2021 2215-2223

ANFIS Construction With Sparse Data via Group Rule Interpolation. *Yang*, *J.*, +, *TCYB May 2021 2773-2786*

Building Personalized Transportation Model for Online Taxi-Hailing Demand Prediction. *Liu, Z., +, TCYB Sept. 2021 4602-4610*

Context-Aware Correlation Filter Learning Toward Peak Strength for Visual Tracking. *Bouraffa, T., +, TCYB Oct. 2021 5105-5115*

Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions. *Chang, M.*, +, *TCYB Jan. 2021 2-15*

Heterogeneous Domain Adaptation via Covariance Structured Feature Translators. Ren, C., +, TCYB April 2021 2166-2177

Self-Supervised Multiscale Adversarial Regression Network for Stereo Disparity Estimation. Wang, C., +, TCYB Oct. 2021 4770-4783

Reliability theory

Game-Theoretic Learning for Sensor Reliability Evaluation Without Knowledge of the Ground Truth. Yazidi, A., +, TCYB Dec. 2021 5706-5716

Remaining life assessment

A Data-Driven Aero-Engine Degradation Prognostic Strategy. Wang, C., +, TCYB March 2021 1531-1541

Remote sensing

Error-Tolerant Deep Learning for Remote Sensing Image Scene Classification. Li, Y., +, TCYB April 2021 1756-1768

Joint and Progressive Subspace Analysis (JPSA) With Spatial–Spectral Manifold Alignment for Semisupervised Hyperspectral Dimensionality Reduction. *Hong, D.*, +, *TCYB July 2021 3602-3615*

Spectral–Spatial Weighted Kernel Manifold Embedded Distribution Alignment for Remote Sensing Image Classification. Dong, Y, +, TCYB June 2021 3185-3197

Remotely operated vehicles

Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*

Output-Feedback Flocking Control of Multiple Autonomous Surface Vehicles Based on Data-Driven Adaptive Extended State Observers. *Peng, Z.*, +, *TCYB Sept. 2021 4611-4622*

Renewable energy sources

Optimization of Fuzzy Energy-Management System for Grid-Connected Microgrid Using NSGA-II. *Teo, T.T.*, +, *TCYB Nov. 2021 5375-5386*

Resistance

Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism. *Liu, Y.*, +, *TCYB Nov. 2021 5585-5594*

Resource allocation

Evolutionary Divide-and-Conquer Algorithm for Virus Spreading Control Over Networks. *Zhao, T., +, TCYB July 2021 3752-3766*

Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601

Resource management

Distributed Multiobjective Optimization for Network Resource Allocation of Multiagent Systems. Li, Z., +, TCYB Dec. 2021 5800-5810

Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm. *Chen, Z.*, +, *TCYB Nov. 2021 5433-5444*

Reviews

Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. Debie, E., +, TCYB March 2021 1542-1555

Riccati equations

Discrete-Time Non-Zero-Sum Games With Completely Unknown Dynamics. Song, R., +, TCYB June 2021 2929-2943

Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*

Finite-Horizon H∞ Bipartite Consensus Control of Cooperation—Competition Multiagent Systems With Round-Robin Protocols. *Chen, W.*, +, *TCYB July 2021 3699-3709*

Linear Quadratic Optimal Control of Time-Invariant Linear Networks With Selectable Input Matrix. *Hao*, Y, +, TCYB Sept. 2021 4743-4754

Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. Luo, B., +, TCYB March 2021 1253-1261

Policy Iteration *Q*-Learning for Data-Based Two-Player Zero-Sum Game of Linear Discrete-Time Systems. *Luo*, *B*., +, *TCYB July 2021 3630-3640*

Rigidity

Distance + Angle-Based Control of 2-D Rigid Formations. *Liu, T.*, +, *TCYB Dec. 2021 5969-5978*

RNA

IMS-CDA: Prediction of CircRNA-Disease Associations From the Integration of Multisource Similarity Information With Deep Stacked Autoencoder Model. Wang, L., +, TCYB Nov. 2021 5522-5531

Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data. *Li*, *X.*, +, *TCYB Dec. 2021 5811-5824*

Nature-Inspired Compressed Sensing for Transcriptomic Profiling From Random Composite Measurements. *Zhang, S.*, +, *TCYB Sept. 2021 4476-4487*

Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. *Maji*, P., +, *TCYB July 2021 3641-3652*

Road safety

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo, A.*, +, *TCYB March 2021 1134-1149*

Road traffic

Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161

Road traffic control

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

Large-Scale Traffic Signal Control Using a Novel Multiagent Reinforcement Learning. Wang, X., +, TCYB Jan. 2021 174-187

Road vehicles

A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin*, C., +, *TCYB* Oct. 2021 4959-4967

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

Ant Colony Evacuation Planner: An Ant Colony System With Incremental Flow Assignment for Multipath Crowd Evacuation. *Huang, Z.*, +, *TCYB Nov. 2021 5559-5572*

Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia, M.*, +, *TCYB Aug. 2021 3913-3924*

Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049

Robot dynamics

Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834

Robot vision

A Subvision System for Enhancing the Environmental Adaptability of the Powered Transfemoral Prosthesis. *Zhang, K.*, +, *TCYB June 2021 3285*-3297

Consensus With Persistently Exciting Couplings and Its Application to Vision-Based Estimation. *Miao, Z., +, TCYB May 2021 2801-2812*

Switching Structured Prediction for Simple and Complex Human Activity Recognition. *Arzani, M.M.*, +, *TCYB Dec. 2021 5859-5870*

Robots

A Multimodal Emotional Human–Robot Interaction Architecture for Social Robots Engaged in Bidirectional Communication. *Hong, A.*, +, *TCYB Dec.* 2021 5954-5968

Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention. *Li*, *J*., +, *TCYB Dec. 2021 6029-6040* Task-Oriented Deep Reinforcement Learning for Robotic Skill Acquisition and Control. *Xiang*, *G*., +, *TCYB Feb. 2021 1056-1069*

Robust control

A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*

A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870

- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing, Y., +, TCYB Feb. 2021 568-578*
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July 2021 3710-3723*
- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. Ge, C., +, TCYB Feb. 2021 961-969
- Distributed Fault Estimation and Fault-Tolerant Control of Interconnected Systems. Zhang, K., +, TCYB March 2021 1230-1240
- Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems. *Duan, P., +, TCYB Feb. 2021 512-520*
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo*, M., +, TCYB Sept. 2021 4707-4715
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. Zhang, F., +, TCYB June 2021 3027-3038
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y, +, TCYB Jan. 2021 258-266
- Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques. Zhang, H., +, TCYB Feb. 2021 660-672
- Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. Wang, Y., +, TCYB March 2021 1300-1310

Robustness

Integral-Type Event-Triggered Model Predictive Control of Nonlinear Systems With Additive Disturbance. Sun, Q., +, TCYB Dec. 2021 5921-5929
 Kernel Correntropy Conjugate Gradient Algorithms Based on Half-Quadratic Optimization. Xiong, K., +, TCYB Nov. 2021 5497-5510

Rolling bearings

Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4009-4023

Rough set theory

- A Development of Granular Input Space in System Modeling. Zhu, X., +, TCYB March 2021 1639-1650
- Rough Hypercuboid Based Generalized and Robust IT2 Fuzzy C-Means Algorithm. Maji, P., +, TCYB July 2021 3641-3652

Routing

Massive Maritime Path Planning: A Contextual Online Learning Approach. Zhou, P., +, TCYB Dec. 2021 6262-6273 S

Saliency detection

A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan*, K., +, *TCYB Dec.* 2021 5907-5920

Sampled data systems

- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang*, R., +, TCYB May 2021 2384-2397
- Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Networks. Sang, H_{∞} , +, TCYB April 2021 1968-1980

Sampling methods

- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Spectral–Spatial Weighted Kernel Manifold Embedded Distribution Alignment for Remote Sensing Image Classification. *Dong, Y.*, +, *TCYB June* 2021 3185-3197

Satellites

Robust Trajectory Tracking in Satellite Time-Varying Formation Flying. *Liu*, *H.*, +, *TCYB Dec. 2021 5752-5760*

Scheduling

- A Preference Biobjective Evolutionary Algorithm for the Payment Scheduling Negotiation Problem. *Zhang*, Z., +, *TCYB Dec. 2021 6105-6118*
- A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times. *Zhou, S., +, TCYB March 2021 1430-1442*
- A Two-Stage Cooperative Evolutionary Algorithm With Problem-Specific Knowledge for Energy-Efficient Scheduling of No-Wait Flow-Shop Problem. *Zhao, F.*, +, *TCYB Nov. 2021 5291-5303*
- People-Centric Evolutionary System for Dynamic Production Scheduling. Nguyen, S., +, TCYB March 2021 1403-1416
- Scheduling-Guided Automatic Processing of Massive Hyperspectral Image Classification on Cloud Computing Architectures. Wu, Z., +, TCYB July 2021 3588-3601

Search problems

- A Bi-Objective Constrained Robust Gate Assignment Problem: Formulation, Instances and Algorithm. Cai, X., +, TCYB Sept. 2021 4488-4500
- A Knee-Guided Evolutionary Algorithm for Compressing Deep Neural Networks. *Zhou, Y.*, +, *TCYB March 2021 1626-1638*
- A Surrogate-Assisted Multiswarm Optimization Algorithm for High-Dimensional Computationally Expensive Problems. *Li*, F, +, TCYB March 2021 1390-1402
- A Two-Stage Cooperative Evolutionary Algorithm With Problem-Specific Knowledge for Energy-Efficient Scheduling of No-Wait Flow-Shop Problem. *Zhao, F.*, +, *TCYB Nov. 2021 5291-5303*
- A Variable Search Space Strategy Based on Sequential Trust Region Determination Technique. Fan, Q., +, TCYB May 2021 2712-2724
- Adaptive Controller Tuning Method Based on Online Multiobjective Optimization: A Case Study of the Four-Bar Mechanism. *Rodriguez-Molina*, A., +, TCYB March 2021 1272-1285
- Adaptive Multiobjective Particle Swarm Optimization Based on Evolutionary State Estimation. Wu, B., +, TCYB July 2021 3738-3751
- An Evolutionary Multiobjective Route Grouping-Based Heuristic Algorithm for Large-Scale Capacitated Vehicle Routing Problems. *Xiao*, *J.*, +, *TCYB Aug.* 2021 4173-4186
- Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II. Bali, K.K., +, TCYB April 2021 1784-1796
- Deep Reinforcement Learning for Multiobjective Optimization. Li, K., +, TCYB June 2021 3103-3114
- Distributed Memetic Algorithm for Outsourced Database Fragmentation. *Ge, Y.*, +, *TCYB Oct. 2021 4808-4821*
- Efficient Person Search via Expert-Guided Knowledge Distillation. *Zhang*, *Y*, +, *TCYB Oct. 2021 5093-5104*
- Elastic Differential Evolution for Automatic Data Clustering. Chen, J., +, TCYB Aug. 2021 4134-4147

Equivalent Continuous Formulation of General Hashing Problem. Wang, S., +, TCYB Aug. 2021 4089-4099

Evolutionary Algorithm for Knee-Based Multiple Criteria Decision Making. Zhang, K., +, TCYB Feb. 2021 722-735

Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem. Feng, L., +, TCYB June 2021 3143-3156

Joint Versus Independent Multiview Hashing for Cross-View Retrieval. *Hu*, *P*, +, *TCYB Oct.* 2021 4982-4993

Large-Scale Evolution Strategy Based on Search Direction Adaptation. *He*, X., +, *TCYB March 2021 1651-1665*

MOEA/D With Linear Programming for Double Row Layout Problem With Center-Islands. *Zuo*, X., +, *TCYB July 2021 3549-3561*

Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049

Particle Swarm Optimized Autonomous Learning Fuzzy System. Gu, X., +, TCYB Nov. 2021 5352-5363

Solving Generalized Vehicle Routing Problem With Occasional Drivers via Evolutionary Multitasking. Feng, L., +, TCYB June 2021 3171-3184

Solving Large-Scale Multiobjective Optimization Problems With Sparse Optimal Solutions via Unsupervised Neural Networks. *Tian, Y.*, +, *TCYB June 2021 3115-3128*

Stochastic Dual Simplex Algorithm: A Novel Heuristic Optimization Algorithm. Zandavi, S.M., +, TCYB May 2021 2725-2734

The Collaborative Local Search Based on Dynamic-Constrained Decomposition With Grids for Combinatorial Multiobjective Optimization. *Cai*, *X*., +, *TCYB May 2021 2639-2650*

Toward Adaptive Knowledge Transfer in Multifactorial Evolutionary Computation. Zhou, L., +, TCYB May 2021 2563-2576

Security of data

A Secure Control Learning Framework for Cyber-Physical Systems Under Sensor and Actuator Attacks. *Zhou, Y.*, +, *TCYB Sept. 2021 4648-4660*

Online and Unsupervised Anomaly Detection for Streaming Data Using an Array of Sliding Windows and PDDs. *Zhang, L.*, +, *TCYB April 2021 2284-2289*

Recurrent Reconstructive Network for Sequential Anomaly Detection. *Yoo, Y*, +, *TCYB March 2021 1704-1715*

Semantics

Deep Category-Level and Regularized Hashing With Global Semantic Similarity Learning. Chen, Y., +, TCYB Dec. 2021 6240-6252

Deeply Encoding Stable Patterns From Contaminated Data for Scenery Image Recognition. Zhang, L., +, TCYB Dec. 2021 5671-5680

Hierarchical Deep Embedding for Aurora Image Retrieval. Yang, X., +, TCYB Dec. 2021 5773-5785

IMS-CDA: Prediction of CircRNA-Disease Associations From the Integration of Multisource Similarity Information With Deep Stacked Autoencoder Model. Wang, L., +, TCYB Nov. 2021 5522-5531

Information Granulation-Based Fuzzy Clustering of Time Series. $Guo, H., +, TCYB \ Dec. \ 2021 \ 6253-6261$

Semisupervised learning

Distributed Semi-Supervised Learning With Missing Data. Xu, Z., +, TCYB Dec. 2021 6165-6178

Sensor fusion

Game-Theoretic Learning for Sensor Reliability Evaluation Without Knowledge of the Ground Truth. *Yazidi*, A., +, TCYB Dec. 2021 5706-5716

Intelligent Multisensor Cooperative Localization Under Cooperative Redundancy Validation. Yin, L., +, TCYB April 2021 2188-2200

Iterative Learning Tracking for Multisensor Systems: A Weighted Optimization Approach. Shen, D., +, TCYB March 2021 1286-1299

Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. Debie, E., +, TCYB March 2021 1542-1555

Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. *Shen, Y.*, +, *TCYB Oct.* 2021 4897-4908

Sensor placement

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Sensors

Asynchronous Distributed Event-Triggered Coordination for Multiagent Coverage Control. *Ajina*, *M*., +, *TCYB Dec. 2021 5941-5953*

Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control. Zhang, Y., +, TCYB Aug. 2021 4286-4297

Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239

Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm. *Chen, Z.*, +, *TCYB Nov. 2021 5433-5444*

Physical Human–Robot Collaboration: Robotic Systems, Learning Methods, Collaborative Strategies, Sensors, and Actuators. *Ogenyi*, *U.E.*, +, *TCYB April 2021 1888-1901*

Sentiment analysis

Fast Supervised Topic Models for Short Text Emotion Detection. *Pang, J.*, +, *TCYB Feb. 2021 815-828*

Set theory

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli, C.*, +, *TCYB May 2021 2587-2600*

Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119

Signal classification

A Driving Performance Forecasting System Based on Brain Dynamic State Analysis Using 4-D Convolutional Neural Networks. *Lin, C.*, +, *TCYB Oct. 2021 4959-4967*

Attribute-Driven Granular Model for EMG-Based Pinch and Fingertip Force Grand Recognition. Fang, Y., +, TCYB Feb. 2021 789-800

Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020

Emotion Recognition From Multimodal Physiological Signals Using a Regularized Deep Fusion of Kernel Machine. *Zhang, X.*, +, *TCYB Sept. 2021* 4386-4399

Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. Debie, E., +, TCYB March 2021 1542-1555

Spatiotemporal-Filtering-Based Channel Selection for Single-Trial EEG Classification. *Qi, F., +, TCYB Feb. 2021 558-567*

Signal processing

A Compact Neural Network for Fused Lasso Signal Approximator. *Mohammadi, M., TCYB Aug. 2021 4327-4336*

Adaptive Learning for Robust Radial Basis Function Networks. Seghouane, A., +, TCYB May 2021 2847-2856

Signal processing algorithms

Kernel Correntropy Conjugate Gradient Algorithms Based on Half-Quadratic Optimization. Xiong, K., +, TCYB Nov. 2021 5497-5510

Silicon

Particle Swarm Optimized Autonomous Learning Fuzzy System. Gu, X., +, TCYB Nov. 2021 5352-5363

Single machine scheduling

A Self-Adaptive Differential Evolution Algorithm for Scheduling a Single Batch-Processing Machine With Arbitrary Job Sizes and Release Times. *Zhou, S.*, +, *TCYB March 2021 1430-1442*

Single-input single-output systems (control)

Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*

Singular value decomposition

A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*

Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020

Singularly perturbed systems

Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308

Skeleton

Switching Structured Prediction for Simple and Complex Human Activity Recognition. Arzani, M.M., +, TCYB Dec. 2021 5859-5870

Sliding mode control

Model Predictive Cooperative Control With ISM for Multiagent Systems Under Stochastic Communication Protocol. *Yuan, Y., +, TCYB Dec. 2021* 6004-6016

Sludge treatment

Cooperative Optimal Controller and Its Application to Activated Sludge Process. *Han*, H., +, *TCYB Aug. 2021 3938-3951*

Social network theory

Finding Influential Nodes in Multiplex Networks Using a Memetic Algorithm. Wang, S., +, TCYB Feb. 2021 900-912

Resilient Consensus for Expressed and Private Opinions. Shang, Y., TCYB Jan. 2021 318-331

Social networking (online)

Cooperation Learning From Multiple Social Networks: Consistent and Complementary Perspectives. Guan, W., +, TCYB Sept. 2021 4501-4514

Efficient Minimum Cost Seed Selection With Theoretical Guarantees for Competitive Influence Maximization. *Hong, W.*, +, *TCYB Dec. 2021 6091-6104*

Fast Supervised Topic Models for Short Text Emotion Detection. *Pang, J.*, +, *TCYB Feb. 2021 815-828*

Influence Spread in Geo-Social Networks: A Multiobjective Optimization Perspective. Wang, L., +, TCYB May 2021 2663-2675

Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*

Multimodal Learning of Social Image Representation by Exploiting Social Relations. *Huang, F., +, TCYB March 2021 1506-1518*

Sociology

Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes. Zhou, Y., +, TCYB Nov. 2021 5423-5432

Evolution Strategy-Based Many-Objective Evolutionary Algorithm Through Vector Equilibrium. *Zhang, K.*, +, *TCYB Nov. 2021 5455-5467*

Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm. *Chen, Z.*, +, *TCYB Nov. 2021 5433-5444*

Merge Nondominated Sorting Algorithm for Many-Objective Optimization. Moreno, J., +, TCYB Dec. 2021 6154-6164

Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism. *Liu, Y.*, +, *TCYB Nov. 2021 5585-5594*

TiDEC: A Two-Layered Integrated Decision Cycle for Population Evolution. *Ye, P., +, TCYB Dec. 2021 5897-5906*

Soft sensors

Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Software architecture

Federated Continuous Learning With Broad Network Architecture. *Le, J.*, +, *TCYB Aug. 2021 3874-3888*

Solid modeling

3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation. Huang, Y., +, TCYB Nov. 2021 5397-5408

Sorting

Efficient Heuristic Algorithms for Single-Vehicle Task Planning With Precedence Constraints. *Bai*, X., +, *TCYB Dec. 2021 6274-6283*

Overlapping Community Detection in Directed and Undirected Attributed Networks Using a Multiobjective Evolutionary Algorithm. *Teng, X.*, +, *TCYB Jan. 2021 138-150*

Space vehicles

Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229

Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. *Chen, Q.*, +, *TCYB Oct. 2021 5032-5045* Robust Trajectory Tracking in Satellite Time-Varying Formation Flying. *Liu, H.*, +, *TCYB Dec. 2021 5752-5760*

Sparse matrices

Slice-Based Online Convolutional Dictionary Learning. Zeng, Y., +, TCYB Oct. 2021 5116-5129

Spatial filters

Common Spatial Pattern Reformulated for Regularizations in Brain-Computer Interfaces. Wang, B., +, TCYB Oct. 2021 5008-5020

Optimal Selection of EEG Electrodes Using Interval Type-2 Fuzzy-Logic-Based Semiseparating Signaling Game. *Chakraborty, B.*, +, *TCYB Dec.* 2021 6200-6212

Spatiotemporal phenomena

Building Personalized Transportation Model for Online Taxi-Hailing Demand Prediction. Liu, Z., +, TCYB Sept. 2021 4602-4610

Hierarchical Spatiotemporal Context-Aware Correlation Filters for Visual Tracking. Wang, W., +, TCYB Dec. 2021 6066-6079

Spectral analysis

Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496

Spor

GreenSea: Visual Soccer Analysis Using Broad Learning System. Sheng, B., +, TCYB March 2021 1463-1477

Springs (mechanical)

Decentralized Event-Triggered Control for a Class of Nonlinear-Interconnected Systems Using Reinforcement Learning. *Yang, X.*, +, *TCYB Feb.* 2021 635-648

Stability

A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*

A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742

A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. *Chen, Y., +, TCYB June 2021 2993-3003*

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao, Y.*, +, *TCYB March 2021 1262-1271*

Active Event-Triggered Control for Nonlinear Networked Control Systems With Communication Constraints. Zhou, T., +, TCYB May 2021 2409-2418

Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415

Adaptive Fault-Tolerant Tracking Control for Discrete-Time Multiagent Systems via Reinforcement Learning Algorithm. *Li*, *H*., +, *TCYB March* 2021 1163-1174

Adaptive Formation Control of Networked Robotic Systems With Bearing-Only Measurements. *Li*, *X*., +, *TCYB Jan. 2021 199-209*

Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578

Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T*., +, *TCYB April 2021 1943-1953*

Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392

Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807

Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*

Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257

Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*

- Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*
- Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y.*, +, *TCYB July 2021 3469-3482*
- Consensus of Nonlinear Multiagent Systems With Grouping Via State-Constraint Impulsive Protocols. Ke, C., +, TCYB Aug. 2021 4162-4172
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July* 2021 3710-3723
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. Wang, X., +, TCYB Oct. 2021 4924-4933
- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. *Vu, V.*, +, *TCYB June 2021 3312-3324*
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. Ge, C., +, TCYB Feb. 2021 961-969
- Dissipativity-Based Sliding-Mode Control of Cyber-Physical Systems Under Denial-of-Service Attacks. *Ma*, *R*., +, *TCYB May 2021 2306-2318*
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J.*, +, *TCYB Jan. 2021 462-472*
- Distributed Model Predictive Control for Linear–Quadratic Performance and Consensus State Optimization of Multiagent Systems. Wang, Q., +, TCYB June 2021 2905-2915
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. Zhang, Z., +, TCYB Nov. 2021 5342-5351
- Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. Liu, J., +, TCYB Jan. 2021 162-173
- Event-Triggered Controller Design With Varying Gains for T–S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Event-Triggered H_∞ Control for T–S Fuzzy Systems via New Asynchronous Premise Reconstruction Approach. *Wang, X.*, +, *TCYB June 2021 3062-3070*
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fixed/Preassigned-Time Synchronization of Complex Networks via Improving Fixed-Time Stability. *Hu, C.*, +, *TCYB June 2021 2882-2892*
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*

- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y, +, TCYB Sept. 2021 4755-4765
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- Model-Independent Formation Tracking of Multiple Euler-Lagrange Systems via Bounded Inputs. Wang, L., +, TCYB May 2021 2813-2823
- Multiple Environment Integral Reinforcement Learning-Based Fault-Tolerant Control for Affine Nonlinear Systems. *Ma, H.*, +, *TCYB April 2021 1913-1928*
- Multivehicle Flocking With Collision Avoidance via Distributed Model Predictive Control. *Lyu, Y., +, TCYB May 2021 2651-2662*
- Necessary and Sufficient Conditions for Group Consensus of Fractional Multiagent Systems Under Fixed and Switching Topologies via Pinning Control. *Chen, Y., +, TCYB Jan. 2021 28-39*
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, Q., +, TCYB Oct. 2021 5032-5045
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*
- Observer-Based Event-Driven Control for Discrete-Time Systems With Disturbance Rejection. Zhang, J., +, TCYB April 2021 2120-2130
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*, +, *TCYB Jan. 2021* 126-137
- Optimal Robot-Environment Interaction Under Broad Fuzzy Neural Adaptive Control. *Huang, H.*, +, *TCYB July 2021 3824-3835*
- Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control. *Liang, C.*, +, *TCYB June 2021* 2893-2904
- Performance-Based Fault Detection and Fault-Tolerant Control for Nonlinear Systems With T–S Fuzzy Implementation. *Han, H.*, +, *TCYB Feb. 2021 801-814*
- Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. *Luo*, *B.*, +, *TCYB March 2021 1253-1261*
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. *Vu*, *V*., +, *TCYB April 2021 1929-1942*
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y., +, TCYB June 2021 2870-2881
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. Chen, Y., +, TCYB Feb. 2021 501-511
- Relaxed Stabilization and Disturbance Attenuation Control Synthesis Conditions for Polynomial Fuzzy Systems. *Moreno Saenz, J.*, +, *TCYB April* 2021 2093-2106
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Networks. Sang, H., +, TCYB April 2021 1968-1980
- Secure Adaptive-Event-Triggered Filter Design With Input Constraint and Hybrid Cyber Attack. Liu, J., +, TCYB Aug. 2021 4000-4010

- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y., +, TCYB Jan. 2021 258-266

Stability analysis

- An Implicit Function-Based Adaptive Control Scheme for Noncanonical-Form Discrete-Time Neural-Network Systems. *Zhang, Y.*, +, *TCYB Dec. 2021 5728-5739*
- Distance + Angle-Based Control of 2-D Rigid Formations. *Liu*, *T.*, +, *TCYB Dec.* 2021 5969-5978
- Observer-Based Dissipativity Control for T–S Fuzzy Neural Networks With Distributed Time-Varying Delays. *Li*, *H*., +, *TCYB Nov. 2021 5248-5258*

Stability criteria

- A Novel Path-Following-Method-Based Polynomial Fuzzy Control Design. *Chen, Y., +, TCYB June 2021 2993-3003*
- Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. *Cao, J.*, +, *TCYB Jan. 2021 151-161*
- Kernel Stability for Model Selection in Kernel-Based Algorithms. *Liu*, Y., +, TCYB Dec. 2021 5647-5658
- Multiple Mittag-Leffler Stability of Delayed Fractional-Order Cohen—Grossberg Neural Networks via Mixed Monotone Operator Pair. *Zhang*, F, +, TCYB Dec. 2021 6333-6344
- Stability Analysis for Cyber-Physical Systems Under Denial-of-Service Attacks. Lu, A., +, TCYB Nov. 2021 5304-5313

State estimation

- A Secure Control Learning Framework for Cyber-Physical Systems Under Sensor and Actuator Attacks. *Zhou, Y., +, TCYB Sept. 2021 4648-4660*
- An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. *Gan, R., +, TCYB Feb. 2021 994-1003*
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. Wang, X., +, TCYB Oct. 2021 4924-4933
- Data-Driven False Data-Injection Attack Design and Detection in Cyber-Physical Systems. Zhao, Z., +, TCYB Dec. 2021 6179-6187
- Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems. *Duan, P.*, +, *TCYB Feb. 2021 512-520*
- Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J*., +, *TCYB Jan. 2021 462-472*
- Distributed Kalman Filtering Over Sensor Networks With Transmission Delays. Yang, H., +, TCYB Nov. 2021 5511-5521
- Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks. *Xiao*, S., +, *TCYB July 2021 3676-3686*
- Distributed Robust Fault Estimation Using Relative Measurements for Leader–Follower Multiagent Systems. *Luo, M.*, +, *TCYB Sept. 2021 4707-4715*
- Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*
- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. Peng, L., +, TCYB Feb. 2021 779-788
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119

State feedback

- Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Distributed Edge-Based Event-Triggered Formation Control. Cheng, B., +, TCYB March 2021 1241-1252
- Dynamic Event-Triggered Control for Interval Type-2 Fuzzy Systems Under Fading Channel. *Zhang, Z.*, +, *TCYB Nov. 2021 5342-5351*
- Feedback Strategies for a Reach-Avoid Game With a Single Evader and Multiple Pursuers. Selvakumar, J., +, TCYB Feb. 2021 696-707

- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Output Synchronization and H_{∞} Output Synchronization of Coupled Neural Networks With Multiple Output Couplings. Wang, J., +, $TCYB\ Dec.\ 2021\ 6041-6053$
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*, +, *TCYB Jan. 2021* 126-137
- Optimization of Communication Network Topology in Distributed Control Systems Subject to Prescribed Decay Rate. *Gaeini*, N., +, TCYB Aug. 2021 4277-4285
- Perturbation Analysis for Finite-Time Stability and Stabilization of Probabilistic Boolean Networks. *Li*, *H*., +, *TCYB Sept. 2021 4623-4633*
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. *Chen, Y.*, +, *TCYB Feb. 2021 501-511*

Statistical analysis

- Adaptive Component Embedding for Domain Adaptation. *Jing, M.*, +, *TCYB July 2021 3390-3403*
- Concept Drift Detection via Equal Intensity k-Means Space Partitioning. Liu, A., +, TCYB June 2021 3198-3211
- Differentially Private Consensus With Quantized Communication. *Gao, L.*, +, *TCYB Aug. 2021 4075-4088*

Statistical distributions

Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II. Bali, K.K., +, TCYB April 2021 1784-1796

Statistics

- Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes. Zhou, Y., +, TCYB Nov. 2021 5423-5432
- Evolution Strategy-Based Many-Objective Evolutionary Algorithm Through Vector Equilibrium. Zhang, K., +, TCYB Nov. 2021 5455-5467
- Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm. *Chen, Z.*, +, *TCYB Nov. 2021 5433-5444*
- Merge Nondominated Sorting Algorithm for Many-Objective Optimization. Moreno, J., +, TCYB Dec. 2021 6154-6164
- Solving Many-Objective Optimization Problems by a Pareto-Based Evolutionary Algorithm With Preprocessing and a Penalty Mechanism. *Liu, Y.*, +, *TCYB Nov. 2021 5585-5594*

Steel industry

Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. Zhao, J., +, TCYB April 2021 2201-2214

Steering systems

Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia, M.*, +, *TCYB Aug. 2021 3913-3924*

Stereo image processing

Self-Supervised Multiscale Adversarial Regression Network for Stereo Disparity Estimation. Wang, C., +, TCYB Oct. 2021 4770-4783

Stochastic processes

- 2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M.*, +, *TCYB Jan. 2021 359-372*
- Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent. Gu, B., +, TCYB April 2021 2215-2223
- Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. Gao, Q., +, TCYB Feb. 2021 889-899
- Distributed Formation Control: Asymptotic Stabilization Results Under Local Noisy Information. Wang, B., +, TCYB Jan. 2021 16-27

- Distributed Heuristic Adaptive Neural Networks With Variance Reduction in Switching Graphs. *Liu, B., +, TCYB July 2021 3836-3844*
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*
- Formation Control of Multiagent Systems With Communication Noise: A Convex Analysis Approach. Li, Z., +, TCYB April 2021 2253-2264
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Game-Theoretic Learning for Sensor Reliability Evaluation Without Knowledge of the Ground Truth. Yazidi, A., +, TCYB Dec. 2021 5706-5716
- Genetic Programming for Evolving a Front of Interpretable Models for Data Visualization. *Lensen, A.*, +, *TCYB Nov. 2021 5468-5482*
- Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control. Wu, J., +, TCYB Dec. 2021 5825-5835
- LiSSA: Localized Stochastic Sensitive Autoencoders. Wang, T., +, TCYB May 2021 2748-2760
- Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment. *Jiang, W.*, +, *TCYB Dec. 2021 5717-5727*
- Model Predictive Cooperative Control With ISM for Multiagent Systems Under Stochastic Communication Protocol. *Yuan*, *Y*., +, *TCYB Dec. 2021* 6004-6016
- Outlier-Resistant Recursive Filtering for Multisensor Multirate Networked Systems Under Weighted Try-Once-Discard Protocol. *Shen, Y.*, +, *TCYB Oct. 2021 4897-4908*
- Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations. *Chen, B., +, TCYB Dec.* 2021 5786-5799
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. *Hu*, *Z*., +, *TCYB July 2021 3779-3788*

Stochastic programming

Stochastic Dual Simplex Algorithm: A Novel Heuristic Optimization Algorithm. Zandavi, S.M., +, TCYB May 2021 2725-2734

Stochastic systems

- A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. Wang, Y., +, TCYB Nov. 2021 5279-5290
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*
- Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems. *Qiu, J.*, +, *TCYB Aug. 2021 3964-*
- Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224
- Design of a Discrete-Time Fault-Tolerant Quantum Filter and Fault Detector. *Gao*, *Q*., +, *TCYB Feb*. 2021 889-899
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Event-Based Dissipative Filtering of Markovian Jump Neural Networks Subject to Incomplete Measurements and Stochastic Cyber-Attacks. *Xu*, *Y*, +, *TCYB March 2021 1370-1379*

- Event-Triggered/Self-Triggered Leader-Following Control of Stochastic Nonlinear Multiagent Systems Using High-Gain Method. *Li*, *Y*., +, *TCYB June 2021 2969-2978*
- Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. *Sun*, S., +, TCYB Dec. 2021 6213-6225
- Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Fuzzy Control and Filtering for Nonlinear Singularly Perturbed Markov Jump Systems. Wang, Y., +, TCYB Jan. 2021 297-308
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*
- Periodic Event-Triggered Output-Feedback Stabilization for Stochastic Systems. *Li*, F, +, TCYB Oct. 2021 5142-5155

Streaming media

Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams. *Rathore, P., +, TCYB Dec. 2021 5979-5992*

Suboptimal control

Periodic Event-Triggered Suboptimal Control With Sampling Period and Performance Analysis. Luo, B., +, TCYB March 2021 1253-1261

Sun

Output Consensus for Heterogeneous Linear Multiagent Systems With a Predictive Event-Triggered Mechanism. *Yang*, *Q*., +, *TCYB April 2021* 1993-2005

Sun sensors

Distributed H_{∞}-Consensus Filtering for Attitude Tracking Using Ground-Based Radars. *Qu, H.*, +, *TCYB July 2021 3767-3778*

Supervised learning

- Construction and Supervised Learning of Long-Term Grey Cognitive Networks. *Napoles, G.*, +, *TCYB Feb. 2021 686-695*
- Equivalent Continuous Formulation of General Hashing Problem. *Wang, S.*, +, *TCYB Aug. 2021 4089-4099*
- Fast Supervised Topic Models for Short Text Emotion Detection. *Pang, J.*, +, *TCYB Feb. 2021 815-828*
- Learning Kernel for Conditional Moment-Matching Discrepancy-Based Image Classification. Ren, C., +, TCYB April 2021 2006-2018
- Semisupervised Bayesian Gaussian Mixture Models for Non-Gaussian Soft Sensor. Shao, W., +, TCYB July 2021 3455-3468

Support vector machines

- Accelerating Sequential Minimal Optimization via Stochastic Subgradient Descent. Gu, B., +, TCYB April 2021 2215-2223
- Development of a Real-Time Objective Gas-Liquid Flow Regime Identifier Using Kernel Methods. *Eyo, E.N.*, +, *TCYB May 2021 2688-2698*
- Fragmentary Multi-Instance Classification. Wu, J., +, TCYB Oct. 2021 5156-5160
- Kernel Stability for Model Selection in Kernel-Based Algorithms. *Liu*, Y, +, TCYB Dec. 2021 5647-5658
- Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches. *Chen, L.*, +, *TCYB Aug.* 2021 4298-4311
- Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection. Wu, E.Q., +, TCYB Jan. 2021 332-345
- Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276
- Switching Structured Prediction for Simple and Complex Human Activity Recognition. Arzani, M.M., +, TCYB Dec. 2021 5859-5870

Suspensions (mechanical components)

A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. Zhang, M., +, TCYB April 2021 1743-1755

Switched systems

Distributed Stabilization of Multiple Heterogeneous Agents in the Strong—Weak Competition Network: A Switched System Approach. *Hu, H.*, +, *TCYB Nov. 2021 5328-5341*

Switches

- A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *Peng. C.*, +, *TCYB Nov. 2021 5546-5558*
- Adaptive Fuzzy Tracking Control for a Class of Uncertain Switched Nonlinear Systems With Full-State Constraints and Input Saturations. Wu, L., +, TCYB Dec. 2021 6054-6065
- Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation–Competition Networks. *Shao, J.*, +, *TCYB Nov. 2021 5225-5235*
- Cooperative Formation Control Under Switching Topology: An Experimental Case Study in Multirotors. Wang, Z., +, TCYB Dec. 2021 6141-6153
- Distributed Stabilization of Multiple Heterogeneous Agents in the Strong—Weak Competition Network: A Switched System Approach. *Hu, H.*, +, *TCYB Nov. 2021 5328-5341*
- Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology. *Chen, J.*, +, *TCYB Dec.* 2021 5993-6003
- Switching Structured Prediction for Simple and Complex Human Activity Recognition. *Arzani, M.M.*, +, *TCYB Dec. 2021 5859-5870*

Switching systems (control)

- Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks. Shi, J., +, TCYB May 2021 2540-2549
- HMM-Based Asynchronous H_{∞} Filtering for Fuzzy Singular Markovian Switching Systems With Retarded Time-Varying Delays. *Zhuang, G.*, +, *TCYB March 2021 1189-1203*
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. *Chen, Q.*, +, *TCYB Oct. 2021 5032-5045* Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Net-

works. Sang, H., +, TCYB April 2021 1968-1980 Symmetric matrices

- Layered Affine Formation Control of Networked Uncertain Systems: A Fully Distributed Approach Over Directed Graphs. Li, D., +, TCYB Dec. 2021 6119-6130
- Observer-Based Dissipativity Control for T–S Fuzzy Neural Networks With Distributed Time-Varying Delays. *Li*, *H*., +, *TCYB Nov. 2021 5248-5258*

Synchronization

- A New Method for Topology Identification of Complex Dynamical Networks. Zhu, S., +, TCYB April 2021 2224-2231
- A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149
- A Unified Framework Design for Finite-Time and Fixed-Time Synchronization of Discontinuous Neural Networks. *Xiao, J.*, +, *TCYB June 2021 3004-3016*
- Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks. Shi, J., +, TCYB May 2021 2540-2549
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*
- Event-Based Synchronization for Multiple Neural Networks With Time Delay and Switching Disconnected Topology. *Chen, J.*, +, *TCYB Dec.* 2021 5993-6003
- Event-Triggered Sampled Feedback Synchronization in an Array of Output-Coupled Boolean Control Networks. *Lu, J.*, +, *TCYB April 2021 2278-*2283
- Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay. Gong, S., +, TCYB June 2021 2944-2955
- Finite-Time Output Synchronization and H_{∞} Output Synchronization of Coupled Neural Networks With Multiple Output Couplings. Wang, J., +, $TCYB\ Dec.\ 2021\ 6041-6053$

- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fixed/Preassigned-Time Synchronization of Complex Networks via Improving Fixed-Time Stability. *Hu*, *C.*, +, *TCYB June 2021 2882-2892*
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang, R.*, +, *TCYB May 2021 2384-2397*
- Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors. *Li*, *L.*, +, *TCYB April 2021 2142-2152*
- Global Stochastic Synchronization of Kuramoto-Oscillator Networks With Distributed Control. Wu, J., +, TCYB Dec. 2021 5825-5835
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- Intermittent Control for Quasisynchronization of Delayed Discrete-Time Neural Networks. *Ding, S.*, +, *TCYB Feb. 2021 862-873*
- Nonseparation Method-Based Finite/Fixed-Time Synchronization of Fully Complex-Valued Discontinuous Neural Networks. Feng, L., +, TCYB June 2021 3212-3223
- Output Synchronization of Complex Dynamical Networks With Multiple Output or Output Derivative Couplings. *Wang, J.*, +, *TCYB Feb. 2021 927-937*
- Periodic Event-Triggered Synchronization of Multiple Memristive Neural Networks With Switching Topologies and Parameter Mismatch. *Wang, S.*, +, *TCYB Jan. 2021 427-437*
- PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu. H.*, +, *TCYB March 2021 1334-1346*
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- QUAD-Condition, Synchronization, Consensus of Multiagents, and Anti-Synchronization of Complex Networks. *Lu, W.*, +, *TCYB June 2021 3384-3388*
- Quantized Sampled-Data Synchronization of Delayed Reaction—Diffusion Neural Networks Under Spatially Point Measurements. *Wang, Z.*, +, *TCYB Dec.* 2021 5740-5751
- Sampled-Data-Based H_{∞} Synchronization of Switched Coupled Neural Networks. Sang, H., +, TCYB April 2021 1968-1980
- Synchronization Analysis for Complex Dynamical Networks With Coupling Delay via Event-Triggered Delayed Impulsive Control. Lv, X., +, TCYB Nov. 2021 5269-5278
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y, +, TCYB Jan. 2021 258-266
- Synchronization of Nonidentical Neural Networks With Unknown Parameters and Diffusion Effects via Robust Adaptive Control Techniques. Zhang, H., +, TCYB Feb. 2021 660-672
- Synchronization of Stochastic Complex Dynamical Networks Subject to Consecutive Packet Dropouts. *Hu*, *Z*., +, *TCYB July 2021 3779-3788*

Synchronous motors

Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*

Synthetic aperture radar

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

System dynamics

Fault Detection for a Class of Uncertain Sampled-Data Systems Using Deterministic Learning. Chen, T., +, TCYB Dec. 2021 5930-5940

T

Takagi-Sugeno model

Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. *Sun*, *S*., +, *TCYB Dec. 2021 6213-6225*

Tanks (containers)

Granular Prediction and Dynamic Scheduling Based on Adaptive Dynamic Programming for the Blast Furnace Gas System. *Zhao, J., +, TCYB April* 2021 2201-2214

Target tracking

Acoustic Target Tracking Through a Cluster of Mobile Agents. *Drioli, C.*, +, TCYB May 2021 2587-2600

Hierarchical Spatiotemporal Context-Aware Correlation Filters for Visual Tracking. Wang, W., +, TCYB Dec. 2021 6066-6079

Performance Evaluation Methodology for Long-Term Single-Object Tracking. *Lukezic*, A., +, TCYB Dec. 2021 6305-6318

Task analysis

3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation. *Huang, Y.*, +, *TCYB Nov. 2021 5397-5408*

A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation. Nguyen, B.H., +, TCYB Dec. 2021 6319-6332

Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes. Zhou, Y., +, TCYB Nov. 2021 5423-5432

Cognizant Multitasking in Multiobjective Multifactorial Evolution: MO-MFEA-II. Bali, K.K., +, TCYB April 2021 1784-1796

Efficient Heuristic Algorithms for Single-Vehicle Task Planning With Precedence Constraints. *Bai*, X., +, *TCYB Dec. 2021 6274-6283*

 ${
m H}_{\infty}$ Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling. Ma, L., +, TCYB Dec. 2021 5761-5772

Model Learning and Knowledge Sharing for Cooperative Multiagent Systems in Stochastic Environment. *Jiang, W.*, +, *TCYB Dec. 2021 5717-5727*

Multitask Feature Learning Meets Robust Tensor Decomposition for EEG Classification. Zheng, Q., +, TCYB April 2021 2242-2252

Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations. *Chen, B., +, TCYB Dec.* 2021 5786-5799

Switching Structured Prediction for Simple and Complex Human Activity Recognition. *Arzani, M.M.*, +, *TCYB Dec. 2021 5859-5870*

Telecommunication computing

A Knee-Guided Evolutionary Algorithm for Compressing Deep Neural Networks. Zhou, Y., +, TCYB March 2021 1626-1638

Telecommunication control

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

Telecommunication network planning

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Telecommunication network reliability

A New Method for Topology Identification of Complex Dynamical Networks. Zhu, S., +, TCYB April 2021 2224-2231

Telecommunication network topology

A New Method for Topology Identification of Complex Dynamical Networks. *Zhu, S., +, TCYB April 2021 2224-2231*

Telecommunication power management

Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. *Peng, L.*, +, *TCYB Feb. 2021 779-788*

Telecommunication scheduling

An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. Gan, R., +, TCYB Feb. 2021 994-1003

Telecommunication security

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. *Gan, R., +, TCYB Feb. 2021 994-1003*

Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. Wang, X., +, TCYB Oct. 2021 4924-4933

Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks. Xiao, S., +, TCYB July 2021 3676-3686

Event-Based Secure Leader-Following Consensus Control for Multiagent Systems With Multiple Cyber Attacks. *Liu, J., +, TCYB Jan. 2021 162-173* MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C., +, TCYB May 2021 2347-2358*

Telecommunication traffic

Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong, G.*, +, *TCYB Jan. 2021 309-317*

Telemedicine

Smart Supervision of Cardiomyopathy Based on Fuzzy Harris Hawks Optimizer and Wearable Sensing Data Optimization: A New Model. *Ding, W.*, +, *TCYB Oct. 2021 4944-4958*

Telerobotics

Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257

Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y., +, TCYB July 2021 3469-3482*

Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021 3724-3737*

Tensors

Elastic Net Constraint-Based Tensor Model for High-Order Graph Matching. Zhu, H., +, TCYB Aug. 2021 4062-4074

Mayer-Type Optimal Control of Probabilistic Boolean Control Network With Uncertain Selection Probabilities. *Toyoda, M.*, +, *TCYB June 2021* 3079-3092

Nonlocal Low-Rank Tensor Completion for Visual Data. Zhang, L., +, TCYB Feb. 2021 673-685

Probabilistic Rank-One Tensor Analysis With Concurrent Regularizations. *Zhou, Y., +, TCYB July 2021 3496-3509*

Terrain mapping

Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention. *Li*, *J*., +, *TCYB Dec. 2021 6029-6040*

Text analysis

Automatic Search-and-Replace From Examples With Coevolutionary Genetic Programming. *Bartoli*, A., +, *TCYB May 2021 2612-2624*

Emotion Correlation Mining Through Deep Learning Models on Natural Language Text. Wang, X., +, TCYB Sept. 2021 4400-4413

I-Keyboard: Fully Imaginary Keyboard on Touch Devices Empowered by Deep Neural Decoder. Kim, U., +, TCYB Sept. 2021 4528-4539

Interval Type-2 Fuzzy Logic for Semisupervised Multimodal Hashing. *Tian*, D., +, *TCYB July 2021 3802-3812*

Novel Efficient RNN and LSTM-Like Architectures: Recurrent and Gated Broad Learning Systems and Their Applications for Text Classification. *Du, J.*, +, *TCYB March 2021 1586-1597*

Object Activity Scene Description, Construction, and Recognition. *Feng, H.*, +, *TCYB Oct. 2021 5082-5092*

Vision-to-Language Tasks Based on Attributes and Attention Mechanism. Li, X., +, TCYB Feb. 2021 913-926

Text recognition

Visual–Textual Hybrid Sequence Matching for Joint Reasoning. *Huang, X.*, +, *TCYB Dec. 2021 5692-5705*

Thermal stability

Distance + Angle-Based Control of 2-D Rigid Formations. *Liu*, *T.*, +, *TCYB Dec.* 2021 5969-5978

Three-term control

PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu, H.*, +, *TCYB March 2021 1334-1346*

Time measurement

Information Granulation-Based Fuzzy Clustering of Time Series. Guo, H., +, TCYB Dec. 2021 6253-6261

Time-Series Clustering Based on the Characterization of Segment Typologies. *Guijo-Rubio*, D., +, TCYB Nov. 2021 5409-5422

Time series

- Basis Function Matrix-Based Flexible Coefficient Autoregressive Models: A Framework for Time Series and Nonlinear System Modeling. *Chen, G.*, +, *TCYB Feb. 2021 614-623*
- Convolutional Multitimescale Echo State Network. Ma, Q., +, TCYB March 2021 1613-1625
- Multitask Air-Quality Prediction Based on LSTM-Autoencoder Model. *Xu*, *X*., +, *TCYB May 2021 2577-2586*
- Relevance Vector Machines-Based Time Series Prediction for Incomplete Training Dataset: Two Comparative Approaches. *Chen, L.*, +, *TCYB Aug.* 2021 4298-4311

Time series analysis

- Information Granulation-Based Fuzzy Clustering of Time Series. *Guo*, *H*., +, *TCYB Dec. 2021 6253-6261*
- Time-Series Clustering Based on the Characterization of Segment Typologies. *Guijo-Rubio*, D., +, TCYB Nov. 2021 5409-5422

Time-frequency analysis

Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496

Time-varying systems

- A Dynamic Periodic Event-Triggered Approach to Consensus of Heterogeneous Linear Multiagent Systems With Time-Varying Communication Delays. *Deng, C.*, +, *TCYB April 2021 1812-1821*
- A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870
- A Unified Framework Design for Finite-Time and Fixed-Time Synchronization of Discontinuous Neural Networks. *Xiao, J.*, +, *TCYB June 2021* 3004-3016
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. Wang, Y., +, TCYB Nov. 2021 5279-5290
- Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*
- Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*
- Adaptive Observer-Based Output Regulation of Multiagent Systems With Communication Constraints. Su, H., +, TCYB Nov. 2021 5259-5268
- Almost Periodicity in Impulsive Fractional-Order Reaction—Diffusion Neural Networks With Time-Varying Delays. Cao, J., +, TCYB Jan. 2021 151-161
- Anti-Synchronization of Delayed State-Based Switched Inertial Neural Networks. Shi, J., +, TCYB May 2021 2540-2549
- Asynchronous Sampled-Data Filtering Design for Fuzzy-Affine-Model-Based Stochastic Nonlinear Systems. *Qiu, J.*, +, *TCYB Aug. 2021 3964-3974*
- Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257
- Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*
- Connectivity-Preserving Synchronization of Time-Delay Euler-Lagrange Networks With Bounded Actuation. *Yang, Y.*, +, *TCYB July 2021 3469-3482*
- Consensus Control of Second-Order Time-Delayed Multiagent Systems in Noisy Environments Using Absolute Velocity and Relative Position Measurements. Zhang, Y., +, TCYB Nov. 2021 5364-5374
- Consensus Tracking Control of Uncertain Multiagent Systems With Sampled Data and Time-Varying Delay. Zhou, D., +, TCYB Dec. 2021 5681-5691
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July 2021 3710-3723*

- Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*
- Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. *Wang*, *X*., +, *TCYB Oct.* 2021 4924-4933
- Design and Analysis of a Novel Integral Recurrent Neural Network for Solving Time-Varying Sylvester Equation. Zhang, Z., +, TCYB Aug. 2021 4312-4326
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. *Ge, C.*, +, *TCYB Feb. 2021 961-969*
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long, J., +, TCYB Aug. 2021 4050-4061
- Distributed Event-Triggered Formation Control of Multiagent Systems via Complex-Valued Laplacian. Zhu, W., +, TCYB April 2021 2178-2187
- Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J*., +, *TCYB Jan. 2021 462-472*
- Distributed Model Predictive Control for Tracking Consensus of Linear Multiagent Systems With Additive Disturbances and Time-Varying Communication Delays. Su, Y, +, TCYB July 2021 3813-3823
- Distributed Randomized Gradient-Free Optimization Protocol of Multiagent Systems Over Weight-Unbalanced Digraphs. Wang, D., +, TCYB Jan. 2021 473-482
- Event-Based Resilient Formation Control of Multiagent Systems. *Zhang, D.*, +, *TCYB May 2021 2490-2503*
- Event-Triggered Communication and Annular Finite-Time *H*∞ Filtering for Networked Switched Systems. *Zong, G.*, +, *TCYB Jan. 2021 309-317*
- Event-Triggered Controller Design With Varying Gains for T-S Fuzzy Systems. Wang, X., +, TCYB Aug. 2021 4125-4133
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. *Li*, *H*., +, *TCYB May 2021 2319-2326*
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Exponential Stabilization of Inertial Memristive Neural Networks With Multiple Time Delays. Sheng, Y., +, TCYB Feb. 2021 579-588
- Fault Estimation and Tolerant Control for Discrete-Time Multiple Delayed Fuzzy Stochastic Systems With Intermittent Sensor and Actuator Faults. Sun, S., +, TCYB Dec. 2021 6213-6225
- Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*
- Finite-Horizon H∞ Bipartite Consensus Control of Cooperation—Competition Multiagent Systems With Round-Robin Protocols. *Chen, W.*, +, *TCYB July 2021 3699-3709*
- Finite-Horizon H_{∞} Fault-Tolerant Constrained Consensus for Multiagent Systems With Communication Delays. *Li*, *J.*, +, *TCYB Jan. 2021 416-426*
- Finite-Time and Fixed-Time Synchronization of Coupled Memristive Neural Networks With Time Delay. *Gong, S., +, TCYB June 2021 2944-2955*
- Finite-Time L₂-Gain Asynchronous Control for Continuous-Time Positive Hidden Markov Jump Systems via T–S Fuzzy Model Approach. *Ren, C.*, +, *TCYB Jan. 2021 77-87*
- Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays. *Li, K.*, +, *TCYB Dec. 2021 5850*-5858
- Finite-Time Passivity and Synchronization of Complex Dynamical Networks With State and Derivative Coupling. Wang, J., +, TCYB July 2021 3845-3857
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Further Study on Stabilization for Continuous-Time Takagi-Sugeno Fuzzy Systems With Time Delay. Wang, L., +, TCYB Nov. 2021 5637-5643

- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct. 2021 4873-4884*
- Fuzzy Control Under Spatially Local Averaged Measurements for Nonlinear Distributed Parameter Systems With Time-Varying Delay. Wang, Z., +, TCYB March 2021 1359-1369
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu, Y.*, +, *TCYB March 2021 1380-1389*
- Fuzzy Sampled-Data Control for Synchronization of T–S Fuzzy Reaction—Diffusion Neural Networks With Additive Time-Varying Delays. *Zhang*, *R*., +, *TCYB May 2021 2384-2397*
- Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*
- Global Exponential Stability and Synchronization for Novel Complex-Valued Neural Networks With Proportional Delays and Inhibitory Factors. *Li*, *L.*, +, *TCYB April 2021 2142-2152*
- Guaranteed Synchronization Performance Control of Nonlinear Time-Delay MIMO Multiagent Systems With Actuator Faults. *Meng, W.*, +, *TCYB May* 2021 2446-2456
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- MAS-Based Distributed Resilient Control for a Class of Cyber-Physical Systems With Communication Delays Under DoS Attacks. *Deng, C.*, +, *TCYB May 2021 2347-2358*
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug.* 2021 4011-4020
- Nonseparation Method-Based Finite/Fixed-Time Synchronization of Fully Complex-Valued Discontinuous Neural Networks. Feng, L., +, TCYB June 2021 3212-3223
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021* 3724-3737
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. Wang, W., +, TCYB April 2021 2131-2141
- On Designing Distributed Prescribed Finite-Time Observers for Strict-Feedback Nonlinear Systems. Chang, L., +, TCYB Sept. 2021 4695-4706
- Pinning Stabilization of Boolean Control Networks via a Minimum Number of Controllers. Lu, J., +, TCYB Jan. 2021 373-381
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Reachable Set Estimation and Synthesis for Periodic Positive Systems. Chen, Y, +, TCYB Feb. 2021 501-511
- Reset Control for Consensus of Multiagent Systems with Event-Triggered Communication. Zhao, G., +, TCYB Nov. 2021 5387-5396
- Robust Stability of Recurrent Neural Networks With Time-Varying Delays and Input Perturbation. Zhang, F., +, TCYB June 2021 3027-3038
- Synchronization Analysis for Complex Dynamical Networks With Coupling Delay via Event-Triggered Delayed Impulsive Control. *Lv, X.*, +, *TCYB Nov. 2021 5269-5278*

Topology

- Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation–Competition Networks. *Shao, J.*, +, *TCYB Nov. 2021 5225-5235*
- Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions. Zhao, M., +, TCYB Nov. 2021 5609-5618
- Cooperative Formation Control Under Switching Topology: An Experimental Case Study in Multirotors. Wang, Z., +, TCYB Dec. 2021 6141-6153
- Distributed Stabilization of Multiple Heterogeneous Agents in the Strong—Weak Competition Network: A Switched System Approach. *Hu, H.*, +, *TCYB Nov. 2021 5328-5341*

- Finite-Time Observer-Based Leader-Following Consensus for Nonlinear Multiagent Systems With Input Delays. *Li, K.*, +, *TCYB Dec. 2021 5850-5858*
- Further Results for Edge Convergence of Directed Signed Networks. *Du*, *M*., +, *TCYB Dec. 2021 5659-5670*
- H_∞ Cluster Formation Control of Networked Multiagent Systems With Stochastic Sampling. Ma, L., +, TCYB Dec. 2021 5761-5772
- Output Consensus for Heterogeneous Linear Multiagent Systems With a Predictive Event-Triggered Mechanism. *Yang*. *Q*., +, *TCYB April 2021* 1993-2005
- PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu, H.*, +, *TCYB March 2021 1334-1346*

Torque control

On Robot Compliance: A Cerebellar Control Approach. *Abadia, I.,* +, *TCYB May 2021 2476-2489*

Torso

Audio-Driven Robot Upper-Body Motion Synthesis. Ondras, J., +, TCYB Nov. 2021 5445-5454

Touch sensitive screens

I-Keyboard: Fully Imaginary Keyboard on Touch Devices Empowered by Deep Neural Decoder. *Kim, U.*, +, *TCYB Sept. 2021 4528-4539*

Tracking

- A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742
- Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392
- Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. *Zhang*, X., +, TCYB March 2021 1121-1133
- Convergence and Robustness Analysis of Novel Adaptive Multilayer Neural Dynamics-Based Controllers of Multirotor UAVs. *Zheng, L.*, +, *TCYB July* 2021 3710-3723
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y., +, TCYB Sept. 2021 4755-4765
- Large-Angle Velocity-Free Attitude Tracking Control of Satellites: An Observer-Free Framework. *Xiao, B., +, TCYB Sept. 2021 4722-4732*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y, +, TCYB June 2021 2870-2881
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*

Traffic engineering computing

- An Evolutionary Multiobjective Route Grouping-Based Heuristic Algorithm for Large-Scale Capacitated Vehicle Routing Problems. *Xiao*, *J.*, +, *TCYB Aug.* 2021 4173-4186
- Building Personalized Transportation Model for Online Taxi-Hailing Demand Prediction. Liu, Z., +, TCYB Sept. 2021 4602-4610
- Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161

Training data

- Adversarial Learning for Multiscale Crowd Counting Under Complex Scenes. Zhou, Y., +, TCYB Nov. 2021 5423-5432
- AdvKin: Adversarial Convolutional Network for Kinship Verification. Zhang, L., +, TCYB Dec. 2021 5883-5896
- Distributed Semi-Supervised Learning With Missing Data. Xu, Z., +, TCYB Dec. 2021 6165-6178
- Diversity-Sensitive Generative Adversarial Network for Terrain Mapping Under Limited Human Intervention. Li, J., +, TCYB Dec. 2021 6029-6040
- Hierarchical Spatiotemporal Context-Aware Correlation Filters for Visual Tracking. Wang, W., +, TCYB Dec. 2021 6066-6079

Multitask Feature Learning Meets Robust Tensor Decomposition for EEG Classification. Zheng, Q., +, TCYB April 2021 2242-2252

Trajectory

Cluster Consensus of Multiagent Systems With Weighted Antagonistic Interactions. Zhao, M., +, TCYB Nov. 2021 5609-5618

Fault Detection for a Class of Uncertain Sampled-Data Systems Using Deterministic Learning. Chen, T., +, TCYB Dec. 2021 5930-5940

Further Results for Edge Convergence of Directed Signed Networks. *Du*, *M*., +, *TCYB Dec.* 2021 5659-5670

Robust Trajectory Tracking in Satellite Time-Varying Formation Flying. *Liu*, *H.*, +, *TCYB Dec.* 2021 5752-5760

Trajectory control

Efficient Nonlinear Model Predictive Control for Quadrotor Trajectory Tracking: Algorithms and Experiment. Wang, D., +, TCYB Oct. 2021 5057-5068

Multiobjective Overtaking Maneuver Planning for Autonomous Ground Vehicles. Chai, R., +, TCYB Aug. 2021 4035-4049

On Robot Compliance: A Cerebellar Control Approach. *Abadia*, *I.*, +, *TCYB May 2021 2476-2489*

Trajectory Generation by Chance-Constrained Nonlinear MPC With Probabilistic Prediction. *Zhang, X.*, +, *TCYB July 2021 3616-3629*

Transfer functions

Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia, M.*, +, *TCYB Aug. 2021 3913-3924*

Transfer learning

A Hybrid Evolutionary Computation Approach to Inducing Transfer Classifiers for Domain Adaptation. Nguyen, B.H., +, TCYB Dec. 2021 6319-6332

Transforms

Global Receptive-Based Neural Network for Target Recognition in SAR Images. Dong, G., +, TCYB April 2021 1954-1967

Transportation

Building Personalized Transportation Model for Online Taxi-Hailing Demand Prediction. *Liu*, Z., +, *TCYB Sept. 2021 4602-4610*

Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem. Feng, L., +, TCYB June 2021 3143-3156

Travel industry

A Bi-Objective Constrained Robust Gate Assignment Problem: Formulation, Instances and Algorithm. Cai, X., +, TCYB Sept. 2021 4488-4500

Traveling salesman problems

Deep Reinforcement Learning for Multiobjective Optimization. Li, K., +, TCYB June 2021 3103-3114

Trees (mathematics)

Concept Drift Detection via Equal Intensity k-Means Space Partitioning. Liu, A., +, TCYB June 2021 3198-3211

Consensus With Persistently Exciting Couplings and Its Application to Vision-Based Estimation. *Miao, Z.*, +, *TCYB May 2021 2801-2812*

Fast-RCM: Fast Tree-Based Unsupervised Rare-Class Mining. Weng, H., +, TCYB Oct. 2021 5198-5211

Interpretable Rule Discovery Through Bilevel Optimization of Split-Rules of Nonlinear Decision Trees for Classification Problems. *Dhebar, Y.*, +, *TCYB Nov. 2021 5573-5584*

PID Control for Synchronization of Complex Dynamical Networks With Directed Topologies. *Gu, H.*, +, *TCYB March 2021 1334-1346*

Semiglobal Cluster Consensus for Heterogeneous Systems With Input Saturation. Ren, L., +, TCYB Sept. 2021 4685-4694

Tumors

3-D RoI-Aware U-Net for Accurate and Efficient Colorectal Tumor Segmentation. *Huang, Y.*, +, *TCYB Nov. 2021 5397-5408*

Two-phase flow

Development of a Real-Time Objective Gas-Liquid Flow Regime Identifier Using Kernel Methods. *Eyo, E.N.*, +, *TCYB May 2021 2688-2698*

U

Ubiquitous computing

Context-Aware Correlation Filter Learning Toward Peak Strength for Visual Tracking. *Bouraffa, T.*, +, *TCYB Oct. 2021 5105-5115*

Uncertain systems

A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870

A Unified Event-Triggered Control Approach for Uncertain Pure-Feedback Systems With or Without State Constraints. *Cao, Y.*, +, *TCYB March 2021 1262-1271*

Adaptive Consensus Tracking Control of Uncertain Nonlinear Multiagent Systems With Predefined Accuracy. Lu, K., +, TCYB Jan. 2021 405-415

Adaptive Fuzzy Asymptotic Tracking for Nonlinear Systems With Nonstrict-Feedback Structure. *Liang, Y.*, +, *TCYB Feb. 2021 853-861*

Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing, Y., +, TCYB Feb. 2021 568-578*

Adaptive Fuzzy Output-Constrained Control for Nonlinear Stochastic Systems With Input Delay and Unknown Control Coefficients. *Wang, Y.*, +, *TCYB Nov. 2021 5279-5290*

Adaptive Fuzzy Tracking Control Design for a Class of Uncertain Nonstrict-Feedback Fractional-Order Nonlinear SISO Systems. *Yang, W.*, +, *TCYB June 2021 3039-3053*

Adaptive Neural Control Using Tangent Time-Varying BLFs for a Class of Uncertain Stochastic Nonlinear Systems With Full State Constraints. *Gao*, *T.*, +, *TCYB April 2021 1943-1953*

Adaptive Neural Network Fixed-Time Leader–Follower Consensus for Multiagent Systems With Constraints and Disturbances. Ni, J., +, TCYB April 2021 1835-1848

Adaptive Neural Network-Based Finite-Time Online Optimal Tracking Control of the Nonlinear System With Dead Zone. *Ding, L.*, +, *TCYB Jan. 2021* 382-392

Adaptive Neural-Network Boundary Control for a Flexible Manipulator With Input Constraints and Model Uncertainties. *Ren, Y.*, +, *TCYB Oct.* 2021 4796-4807

Adaptive Neural-Network Control of MIMO Nonaffine Nonlinear Systems With Asymmetric Time-Varying State Constraints. *Mishra, P.K.*, +, *TCYB April 2021 2042-2054*

Approximate Dynamic Programming for Nonlinear-Constrained Optimizations. *Yang*, X., +, *TCYB May 2021 2419-2432*

Barrier Lyapunov Function-Based Adaptive Fault-Tolerant Control for a Class of Strict-Feedback Stochastic Nonlinear Systems. *Yu, X.*, +, *TCYB Feb. 2021 938-946*

Bayesian Estimation of Human Impedance and Motion Intention for Human–Robot Collaboration. Yu, X., +, TCYB April 2021 1822-1834

Bilateral Teleoperation of Single-Master Multislave Systems With Semi-Markovian Jump Stochastic Interval Time-Varying Delayed Communication Channels. *Baranitha*, R., +, TCYB Jan. 2021 247-257

Co-Design of Dynamic Event-Triggered Communication Scheme and Resilient Observer-Based Control Under Aperiodic DoS Attacks. *Hu, S.*, +, *TCYB Sept. 2021 4591-4601*

Composite Neural Learning Fault-Tolerant Control for Underactuated Vehicles With Event-Triggered Input. *Zhang, G.*, +, *TCYB May 2021 2327-2338*

Compound Adaptive Fuzzy Quantized Control for Quadrotor and Its Experimental Verification. Zhang, X., +, TCYB March 2021 1121-1133

Cooperative Adaptive Dynamic Surface Control for a Class of High-Order Stochastic Nonlinear Multiagent Systems. Wu, Y., +, TCYB Nov. 2021 5214-5224

Cooperative Output Regulation Problem of Nonlinear Multiagent Systems With Proximity Graph via Output Feedback Control. *Dong, Y.*, +, *TCYB Aug. 2021 4201-4211*

Cooperative Output-Feedback Secure Control of Distributed Linear Cyber-Physical Systems Resist Intermittent DoS Attacks. *Wang*, X., +, *TCYB Oct.* 2021 4924-4933

- Decentralized Observer-Based Controller Synthesis for a Large-Scale Polynomial T–S Fuzzy System With Nonlinear Interconnection Terms. *Vu, V.*, +, *TCYB June 2021 3312-3324*
- Dissipativity Analysis for T–S Fuzzy System Under Memory Sampled-Data Control. Ge, C., +, TCYB Feb. 2021 961-969
- Dissipativity-Based Sliding-Mode Control of Cyber-Physical Systems Under Denial-of-Service Attacks. Ma, R., +, TCYB May 2021 2306-2318
- Distributed Adaptive Control for Asymptotically Consensus Tracking of Uncertain Nonlinear Systems With Intermittent Actuator Faults and Directed Communication Topology. Long, J., +, TCYB Aug. 2021 4050-4061
- Distributed Containment Control for Nonlinear Stochastic Multiagent Systems. Li, K., +, TCYB June 2021 3361-3370
- Distributed Finite-Horizon Extended Kalman Filtering for Uncertain Nonlinear Systems. *Duan, P.*, +, *TCYB Feb. 2021 512-520*
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992
- Event-Triggered Adaptive Fuzzy Tracking Control With Guaranteed Transient Performance for MIMO Nonlinear Uncertain Systems. *Zhang, Y.*, +, *TCYB Feb. 2021 736-749*
- Event-Triggered Output Feedback Control of Switched Nonlinear Systems With Input Saturation. Li, H., +, TCYB May 2021 2319-2326
- Event-Triggered Output-Feedback Control for Large-Scale Systems With Unknown Hysteresis. Cao, L., +, TCYB Nov. 2021 5236-5247
- Exponential Stability of Discrete-Time Neural Networks With Large Delay. Yang, B., +, TCYB May 2021 2824-2834
- Finite-Frequency H⁻/H^{\infty} Fault Detection for Discrete-Time T–S Fuzzy Systems With Unmeasurable Premise Variables. *Zhou, M.*, +, *TCYB June 2021* 3017-3026
- Finite-Horizon H_{∞} State Estimation for Stochastic Coupled Networks With Random Inner Couplings Using Round-Robin Protocol. *Chen, Y.*, +, *TCYB March 2021 1204-1215*
- Fully Adaptive Practical Time-Varying Output Formation Tracking for High-Order Nonlinear Stochastic Multiagent System With Multiple Leaders. Yu, J., +, TCYB April 2021 2265-2277
- Fuzzy Adaptive Two-Bit-Triggered Control for a Class of Uncertain Nonlinear Systems With Actuator Failures and Dead-Zone Constraint. *Zhang, C.*, +, *TCYB Jan. 2021 210-221*
- Fuzzy Approximation-Based Finite-Time Control for a Robot With Actuator Saturation Under Time-Varying Constraints of Work Space. *Kong, L.*, +, *TCYB Oct.* 2021 4873-4884
- Fuzzy Control of Uncertain Positive Markov Jump Fuzzy Systems With Input Constraint. *Lian, J.*, +, *TCYB April 2021 2032-2041*
- Fuzzy Observer Constraint Based on Adaptive Control for Uncertain Nonlinear MIMO Systems With Time-Varying State Constraints. *Liu*, Y, +, TCYB March 2021 1380-1389
- Globally Exponentially Stable Tracking Control of Self-Restructuring Nonlinear Systems. Song, Y, +, TCYB Sept. 2021 4755-4765
- Hankel-Norm-Based Model Reduction for Stochastic Discrete-Time Nonlinear Systems in Interval Type-2 T–S Fuzzy Framework. *Zeng, Y.*, +, *TCYB Oct. 2021 4934-4943*
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*
- Neural-Network Approximation-Based Adaptive Periodic Event-Triggered Output-Feedback Control of Switched Nonlinear Systems. *Li*, *S.*, +, *TCYB Aug*, 2021 4011-4020
- Neural-Network-Based Adaptive Singularity-Free Fixed-Time Attitude Tracking Control for Spacecrafts. Chen, Q., +, TCYB Oct. 2021 5032-5045
- Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain. *Liu, C.*, +, *TCYB May* 2021 2339-2346
- Novel Adaptive Finite-Time Control of Teleoperation System With Time-Varying Delays and Input Saturation. *Zhang, H.*, +, *TCYB July 2021* 3724-3737

- Observer Design and H_{∞} Performance for Discrete-Time Uncertain Fuzzy-Logic Systems. Wu, A., +, TCYB May 2021 2398-2408
- Observer-Based Event-Triggered Adaptive Fuzzy Control for Leader-Following Consensus of Nonlinear Strict-Feedback Systems. *Wang, W.*, +, *TCYB April 2021 2131-2141*
- Observer-Based Finite-Time Adaptive Fuzzy Control for Nontriangular Nonlinear Systems With Full-State Constraints. *Zhang, H.*, +, *TCYB March 2021 1110-1120*
- Observer-Based Fuzzy Adaptive Finite-Time Containment Control of Nonlinear Multiagent Systems With Input Delay. *Li*, *Y*., +, *TCYB Jan. 2021* 126-137
- Output Multiformation Tracking of Networked Heterogeneous Robotic Systems via Finite-Time Hierarchical Control. *Liang, C.*, +, *TCYB June 2021* 2893-2904
- Output Synchronization of Complex Dynamical Networks With Multiple Output or Output Derivative Couplings. *Wang, J.*, +, *TCYB Feb. 2021 927-037*
- Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T–S Fuzzy Systems. Vu, V., +, TCYB April 2021 1929-1942
- Position-Based Synchronization of Networked Harmonic Oscillators With Asynchronous Sampling and Communication Delays. *Yang, Y.*, +, *TCYB Aug. 2021 4337-4347*
- Quantized Adaptive Finite-Time Bipartite NN Tracking Control for Stochastic Multiagent Systems. Wu, Y., +, TCYB June 2021 2870-2881
- Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109
- Resilient Tracking Control of Networked Control Systems Under Cyber Attacks. Mousavinejad, E., +, TCYB April 2021 2107-2119
- Robust Adaptive Tracking Control for Hypersonic Vehicle Based on Interval Type-2 Fuzzy Logic System and Small-Gain Approach. *Tao, X.*, +, *TCYB May 2021 2504-2517*
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*
- Small Fault Detection of Discrete-Time Nonlinear Uncertain Systems. Zhang, J., +, TCYB Feb. 2021 750-764
- Synchronization of Coupled Harmonic Oscillators With Asynchronous Intermittent Communication. Xu, Y, +, TCYB Jan. 2021 258-266
- Zero-Error Consensus Tracking With Preassignable Convergence for Nonaffine Multiagent Systems. Wang, Y., +, TCYB March 2021 1300-1310

Uncertainty

- Iterative Learning Control for MIMO Nonlinear Systems With Iteration-Varying Trial Lengths Using Modified Composite Energy Function Analysis. *Jin, X., TCYB Dec. 2021 6080-6090*
- Robust Trajectory Tracking in Satellite Time-Varying Formation Flying. *Liu*, *H.*, +, *TCYB Dec. 2021 5752-5760*

Underwater vehicles

Bio-Inspired Approach for Long-Range Underwater Navigation Using Model Predictive Control. Zhang, Y., +, TCYB Aug. 2021 4286-4297

Unmanned aerial vehicles

- Cooperative Formation Control Under Switching Topology: An Experimental Case Study in Multirotors. Wang, Z., +, TCYB Dec. 2021 6141-6153
- Stochastic Robust Team Tracking Control of Multi-UAV Networked System Under Wiener and Poisson Random Fluctuations. *Chen, B., +, TCYB Dec.* 2021 5786-5799

Unsupervised learning

- Equivalent Continuous Formulation of General Hashing Problem. Wang, S., +, TCYB Aug. 2021 4089-4099
- Online and Unsupervised Anomaly Detection for Streaming Data Using an Array of Sliding Windows and PDDs. *Zhang, L.*, +, *TCYB April 2021 2284-2289*
- Person Reidentification via Unsupervised Cross-View Metric Learning. Feng, Y., +, TCYB April 2021 1849-1859
- Self-Adaptive Multiprototype-Based Competitive Learning Approach: A k-Means-Type Algorithm for Imbalanced Data Clustering. *Lu*, *Y*, +, *TCYB March 2021 1598-1612*

Solving Large-Scale Multiobjective Optimization Problems With Sparse Optimal Solutions via Unsupervised Neural Networks. *Tian, Y.*, +, *TCYB June 2021 3115-3128*

Upper bound

Bipartite Tracking Consensus of Generic Linear Agents With Discrete-Time Dynamics Over Cooperation–Competition Networks. *Shao, J.*, +, *TCYB Nov. 2021 5225-5235*

V

Variable structure systems

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- A General Position Control Method for Planar Underactuated Manipulators With Second-Order Nonholonomic Constraints. Wu, J., +, TCYB Sept. 2021 4733-4742
- A New Stochastic Sliding-Mode Design for Descriptor Fuzzy Systems With Time-Varying Delay. Wang, Y., +, TCYB July 2021 3858-3870
- A Packet Loss-Dependent Event-Triggered Cyber-Physical Cooperative Control Strategy for Islanded Microgrid. *Zhang, B.*, +, *TCYB Jan. 2021* 267-282
- A Unified Framework Design for Finite-Time and Fixed-Time Synchronization of Discontinuous Neural Networks. *Xiao, J.*, +, *TCYB June 2021* 3004-3016
- Adaptive Fuzzy Output Feedback Fault-Tolerant Compensation for Uncertain Nonlinear Systems With Infinite Number of Time-Varying Actuator Failures and Full-State Constraints. *Jing*, Y, +, TCYB Feb. 2021 568-578
- Co-Design of 2-D Event Generator and Sliding Mode Controller for 2-D Roesser Model via Genetic Algorithm. *Song, J.*, +, *TCYB Sept. 2021 4581-4590*
- Dissipativity-Based Sliding-Mode Control of Cyber-Physical Systems Under Denial-of-Service Attacks. Ma, R., +, TCYB May 2021 2306-2318
- Event-Triggered Adaptive Fuzzy Tracking Control for Uncertain Nonlinear Systems Preceded by Unknown Prandtl–Ishlinskii Hysteresis. Su, X., +, TCYB June 2021 2979-2992
- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. Wang, X., +, TCYB March 2021 1216-1229
- Genetic-Algorithm-Assisted Sliding-Mode Control for Networked State-Saturated Systems Over Hidden Markov Fading Channels. *Song, J.*, +, *TCYB July 2021 3664-3675*
- Memory-Based Integral Sliding-Mode Control for T–S Fuzzy Systems With PMSM via Disturbance Observer. *Kuppusamy, S.*, +, *TCYB May 2021 2457-2465*
- Neural-Network-Based Sliding-Mode Control of an Uncertain Robot Using Dynamic Model Approximated Switching Gain. *Liu, C.*, +, *TCYB May* 2021 2339-2346
- Robust Intelligent Control of SISO Nonlinear Systems Using Switching Mechanism. Xu, B., +, TCYB Aug. 2021 3975-3987
- Sliding-Mode Surface-Based Approximate Optimal Control for Uncertain Nonlinear Systems With Asymptotically Stable Critic Structure. *Zhao, B.,* +, *TCYB June 2021 2858-2869*

Vectors

- A Polar-Metric-Based Evolutionary Algorithm. Xu, H., +, TCYB July 2021 3429-3440
- Linguistic Distribution and Priority-Based Approximation to Linguistic Preference Relations With Flexible Linguistic Expressions in Decision Making. Wu, Y., +, TCYB Feb. 2021 649-659

Vegetation

Multiobjective Genome-Wide RNA-Binding Event Identification From CLIP-Seq Data. Li, X., +, TCYB Dec. 2021 5811-5824

Vehicle dynamic

- A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*
- Communication and Interaction With Semiautonomous Ground Vehicles by Force Control Steering. *Martinez-Garcia*, M., +, TCYB Aug. 2021 3913-3924

- Fault-Tolerant Attitude Control for Rigid Spacecraft Without Angular Velocity Measurements. *Wang, X.*, +, *TCYB March 2021 1216-1229*
- Learning Self-Triggered Controllers With Gaussian Processes. *Hashimoto*, K., +, TCYB Dec. 2021 6294-6304

Vehicle routing

- An Evolutionary Multiobjective Route Grouping-Based Heuristic Algorithm for Large-Scale Capacitated Vehicle Routing Problems. *Xiao*, *J.*, +, *TCYB Aug. 2021 4173-4186*
- Explicit Evolutionary Multitasking for Combinatorial Optimization: A Case Study on Capacitated Vehicle Routing Problem. Feng, L., +, TCYB June 2021 3143-3156
- Solving Generalized Vehicle Routing Problem With Occasional Drivers via Evolutionary Multitasking. Feng, L., +, TCYB June 2021 3171-3184

Vehicular ad hoc networks

A Secure Adaptive Control for Cooperative Driving of Autonomous Connected Vehicles in the Presence of Heterogeneous Communication Delays and Cyberattacks. *Petrillo*, A., +, TCYB March 2021 1134-1149

Velocity control

A Cyber-Physical System-Based Velocity-Profile Prediction Method and Case Study of Application in Plug-In Hybrid Electric Vehicle. *Zhang, Y.*, +, *TCYB Jan. 2021 40-51*

Vibration control

A Bioinspired Dynamics-Based Adaptive Fuzzy SMC Method for Half-Car Active Suspension Systems With Input Dead Zones and Saturations. *Zhang, M.*, +, *TCYB April 2021 1743-1755*

Vibrations

Automatic Feature Extraction and Construction Using Genetic Programming for Rotating Machinery Fault Diagnosis. *Peng, B.*, +, *TCYB Oct.* 2021 4909-4923

Identity Recognition Based on Bioacoustics of Human Body. Sim, J.Y., +, TCYB May 2021 2761-2772

Video sequences

RecapNet: Action Proposal Generation Mimicking Human Cognitive Process. Wang, T., +, TCYB Dec. 2021 6017-6028

Video signal processing

- A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, 1_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*
- Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions. Chang, M., +, TCYB Jan. 2021 2-15
- GreenSea: Visual Soccer Analysis Using Broad Learning System. Sheng, B., +, TCYB March 2021 1463-1477
- New Contour Cue-Based Hybrid Sparse Learning for Salient Object Detection. Wang, S., +, TCYB Aug. 2021 4212-4226
- Object Activity Scene Description, Construction, and Recognition. Feng, H., +, TCYB Oct. 2021 5082-5092
- Shared Linear Encoder-Based Multikernel Gaussian Process Latent Variable Model for Visual Classification. *Li*, *J*., +, *TCYB Feb. 2021 534-547*

Video streaming

Fast Online Video Pose Estimation by Dynamic Bayesian Modeling of Mode Transitions. *Chang, M.*, +, *TCYB Jan. 2021 2-15*

Video surveillance

- A Three-Way Optimization Technique for Noise Robust Moving Object Detection Using Tensor Low-Rank Approximation, I_{1/2}, and TTV Regularizations. *Tom, A.J.*, +, *TCYB Feb. 2021 1004-1014*
- Feature-Aware Adaptation and Density Alignment for Crowd Counting in Video Surveillance. *Gao, J., +, TCYB Oct. 2021 4822-4833*
- Trajectory-Based Scene Understanding Using Dirichlet Process Mixture Model. Santhosh, K.K., +, TCYB Aug. 2021 4148-4161

Videos

RecapNet: Action Proposal Generation Mimicking Human Cognitive Process. Wang, T., +, TCYB Dec. 2021 6017-6028

Virtual reality

Personalized Online Adaptation of Kinematic Synergies for Human-Prosthesis Interfaces. *Garcia-Rosas, R.*, +, *TCYB Feb. 2021 1070-1084*

Visual analystics

Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239

Visual analytics

Visual–Textual Hybrid Sequence Matching for Joint Reasoning. *Huang, X.*, +, *TCYB Dec. 2021 5692-5705*

Visual databases

2-D Stochastic Configuration Networks for Image Data Analytics. *Li*, *M.*, +, *TCYB Jan.* 2021 359-372

Visual perception

Divisively Normalized Sparse Coding: Toward Perceptual Visual Signal Representation. Zhang, X., +, TCYB Aug. 2021 4237-4250

Scene Categorization by Deeply Learning Gaze Behavior in a Semisupervised Context. Zhang, L., +, TCYB Aug. 2021 4265-4276

Visualization

A New Aggregation of DNN Sparse and Dense Labeling for Saliency Detection. *Yan, K.*, +, *TCYB Dec. 2021 5907-5920*

Hierarchical Deep Embedding for Aurora Image Retrieval. Yang, X., +, TCYB Dec. 2021 5773-5785

Hierarchical Spatiotemporal Context-Aware Correlation Filters for Visual Tracking. Wang, W., +, TCYB Dec. 2021 6066-6079

Intelligent Visual Acuity Estimation System With Hand Motion Recognition. Chiu, C., +, TCYB Dec. 2021 6226-6239

Performance Evaluation Methodology for Long-Term Single-Object Tracking. Lukezic, A., +, TCYB Dec. 2021 6305-6318

Visual Structural Assessment and Anomaly Detection for High-Velocity Data Streams. *Rathore, P., +, TCYB Dec, 2021 5979-5992*

Voltage control

Distributed Finite-Time Secondary Frequency and Voltage Control for Islanded Microgrids With Communication Delays and Switching Topologies. *Ning*, B., +, TCYB Aug. 2021 3988-3999

W

Wastewater treatment

Cooperative Optimal Controller and Its Application to Activated Sludge Process. Han, H., +, TCYB Aug. 2021 3938-3951

Dynamic MOPSO-Based Optimal Control for Wastewater Treatment Process. *Han, H.*, +, *TCYB May 2021 2518-2528*

Wavelet transforms

Rotated Sphere Haar Wavelet and Deep Contractive Auto-Encoder Network With Fuzzy Gaussian SVM for Pilot's Pupil Center Detection. Wu, E.Q., +, TCYB Jan. 2021 332-345

Wearable robots

Reduced Adaptive Fuzzy Decoupling Control for Lower Limb Exoskeleton. Sun, W., +, TCYB March 2021 1099-1109

Web sites

Fast Supervised Topic Models for Short Text Emotion Detection. *Pang, J.*, +, *TCYB Feb. 2021 815-828*

Weight measurement

A Cooperative Evolutionary Framework Based on an Improved Version of Directed Weight Vectors for Constrained Multiobjective Optimization With Deceptive Constraints. *Peng, C.*, +, *TCYB Nov. 2021 5546-5558*

Wigner distribution

Nonparametric Bayesian Prior Inducing Deep Network for Automatic Detection of Cognitive Status. Wu, E.Q., +, TCYB Nov. 2021 5483-5496

Wireless channels

An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. *Gan, R., +, TCYB Feb. 2021 994-1003* Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. *Peng, L., +, TCYB Feb. 2021 779-788*

Wireless sensor networks

An Analysis on Optimal Attack Schedule Based on Channel Hopping Scheme in Cyber-Physical Systems. *Gan, R.*, +, *TCYB Feb. 2021 994-1003* Asynchronous Distributed Event-Triggered Coordination for Multiagent

Coverage Control. Ajina, M., +, TCYB Dec. 2021 5941-5953

Consensus With Persistently Exciting Couplings and Its Application to Vision-Based Estimation. *Miao*, Z., +, *TCYB May 2021 2801-2812*

Distributed H_{∞} State Estimator Design for Time-Delay Periodic Systems Over Scheduling Sensor Networks. *Li*, *J*., +, *TCYB Jan.* 2021 462-472

Distributed Resilient Estimator Design for Positive Systems Under Topological Attacks. *Xiao*, S., +, *TCYB July 2021 3676-3686*

Efficient Deterministic Algorithm for Huge-Sized Noisy Sensor Localization Problems via Canonical Duality Theory. *Latorre, V.*, +, *TCYB Oct.* 2021 5069-5081

Intelligent Multisensor Cooperative Localization Under Cooperative Redundancy Validation. Yin, L., +, TCYB April 2021 2188-2200

Maximizing Lifetime of Range-Adjustable Wireless Sensor Networks: A Neighborhood-Based Estimation of Distribution Algorithm. *Chen, Z.*, +, *TCYB Nov. 2021 5433-5444*

Multimodal Fusion for Objective Assessment of Cognitive Workload: A Review. Debie, E., +, TCYB March 2021 1542-1555

Optimal Transmit Power Allocation for an Energy-Harvesting Sensor in Wireless Cyber-Physical Systems. Peng, L., +, TCYB Feb. 2021 779-788