

2020 Index

Transactions on Emerging Topics in Computational Intelligence

Vol. 4

This index covers all technical items—papers, correspondence, reviews, etc.—that appeared in this periodical during 2020, and items from previous years that were commented upon or corrected in 2020. 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

- Abbass, H.A.**, *see* Long, N.K., *TETCI Aug. 2020 523-537*
Abou-zeid, H., *see* Liu, Y., *TETCI Feb. 2020 83-94*
Alvin Yau, K., *see* Wu, C., *TETCI June 2020 202-205*
An, X., *see* Gu, Y., *TETCI June 2020 216-226*
Andreolini, M., *see* Apruzzese, G., *TETCI Aug. 2020 427-439*
Apruzzese, G., Andreolini, M., Colajanni, M., and Marchetti, M., Hardening Random Forest Cyber Detectors Against Adversarial Attacks; *TETCI Aug. 2020 427-439*
Arora, V., *see* Reddy, T.K., *TETCI April 2020 159-170*
Ashdown, J., *see* Hamedani, K., *TETCI June 2020 253-264*
Asim, M., Wang, Y., Wang, K., and Huang, P., A Review on Computational Intelligence Techniques in Cloud and Edge Computing; *TETCI Dec. 2020 742-763*

B

- Banerjee, A.**, *see* Sadeghi, K., *TETCI Aug. 2020 450-467*
Banerjee, B., *see* Kapourchali, M.H., *TETCI Dec. 2020 786-793*
Banerjee, R., and Pal, S.K., Zⁿ-Numbers, Data Structures, and Thinking in Machine-Mind Architecture; *TETCI Oct. 2020 686-695*
Behera, L., *see* Reddy, T.K., *TETCI April 2020 159-170*
Benlic, U., *see* Ding, J., *TETCI June 2020 385-397*
Bester, D., *see* Pan, I., *TETCI Dec. 2020 794-799*
Biswas, M., *see* Kuppili, V., *TETCI April 2020 180-200*
Boudreau, G., *see* Liu, Y., *TETCI Feb. 2020 83-94*

C

- Cao, X.**, *see* Du, W., *TETCI June 2020 312-323*
Cen, B., *see* Wang, J., *TETCI June 2020 398-412*
Cha, S., Wang, H., Tan, Z., Joung, Y., Tseng, Y., and Yeh, K., On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining; *TETCI Oct. 2020 641-652*
Chang, V., *see* Xu, X., *TETCI Oct. 2020 605-615*
Chaturvedi, A., and Tiwari, A., System Network Complexity: Network Evolution Subgraphs of System State Series; *TETCI April 2020 130-139*
Chaturvedi, A., and Garain, U., Attacking VQA Systems via Adversarial Background Noise; *TETCI Aug. 2020 490-499*
Chen, C., *see* Gong, M., *TETCI April 2020 108-118*
Chen, C., Ota, K., Dong, M., Yu, C., and Jin, H., WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal; *TETCI June 2020 206-215*
Chen, G., *see* Nekooei, S.M., *TETCI June 2020 336-350*
Chen, H., *see* Huang, Y., *TETCI June 2020 265-275*

- Chen, H.**, *see* Chen, L., *TETCI Oct. 2020 705-716*
Chen, L., Li, Y., Liu, J., Chen, H., and Tsai, M., Intelligent Item Searching With Gesture-Based Interfaces Through Mobile Cloud Computing; *TETCI Oct. 2020 705-716*
Chen, Y., Zhong, J., Feng, L., and Zhang, J., An Adaptive Archive-Based Evolutionary Framework for Many-Task Optimization; *TETCI June 2020 369-384*
Chen, Y., *see* Shan, N., *TETCI Oct. 2020 717-727*
Cheng, W., *see* Shan, N., *TETCI Oct. 2020 717-727*
Chiu, W., *see* Yeh, Y., *TETCI Aug. 2020 440-449*
Choo, K.R., *see* Jahromi, A.N., *TETCI Oct. 2020 630-640*
Colajanni, M., *see* Apruzzese, G., *TETCI Aug. 2020 427-439*

D

- da Silva, A.S.**, Ma, H., Mei, Y., and Zhang, M., A Survey of Evolutionary Computation for Web Service Composition: A Technical Perspective; *TETCI Aug. 2020 538-554*
Dai, F., *see* Xu, X., *TETCI Oct. 2020 605-615*
Davison, A.K., *see* Goyal, M., *TETCI Oct. 2020 728-739*
Dehghantanha, A., *see* Jahromi, A.N., *TETCI Oct. 2020 630-640*
Denekew, M.S., *see* Shan, N., *TETCI Oct. 2020 717-727*
Ding, J., Shen, L., Lu, Z., Xu, L., and Benlic, U., A Hybrid Memetic Algorithm for the Parallel Machine Scheduling Problem With Job Deteriorating Effects; *TETCI June 2020 385-397*
Dong, M., *see* Chen, C., *TETCI June 2020 206-215*
Dong, M., *see* Li, G., *TETCI Oct. 2020 653-665*
Du, W., Ying, W., Yang, P., Cao, X., Yan, G., Tang, K., and Wu, D., Network-Based Heterogeneous Particle Swarm Optimization and Its Application in UAV Communication Coverage; *TETCI June 2020 312-323*
Durrani, T.S., *see* Liang, Q., *TETCI Feb. 2020 1-4*

E

- Edla, D.R.**, *see* Kuppili, V., *TETCI April 2020 180-200*

F

- Feng, L.**, *see* Chen, Y., *TETCI June 2020 369-384*
Fleischhacker, L., *see* Sesum-Cavic, V., *TETCI June 2020 351-368*
Fu, S., *see* Xu, X., *TETCI Oct. 2020 605-615*
Fu, Y., *see* Xia, F., *TETCI April 2020 95-107*

G

- Gabbouj, M.**, *see* Passalis, N., *TETCI Dec. 2020 774-785*
Gao, H., *see* Xu, X., *TETCI Oct. 2020 605-615*
Gao, S., *see* Wang, J., *TETCI June 2020 398-412*
Garain, U., *see* Chaturvedi, A., *TETCI Aug. 2020 490-499*
Garratt, M., *see* Long, N.K., *TETCI Aug. 2020 523-537*
Ghosh, L., Konar, A., Rakshit, P., and Nagar, A.K., Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network; *TETCI Aug. 2020 571-588*
Gong, M., Chen, C., Xie, Y., and Wang, S., Community Preserving Network Embedding Based on Memetic Algorithm; *TETCI April 2020 108-118*
Goyal, M., Reeves, N.D., Davison, A.K., Rajbhandari, S., Spragg, J., and Yap, M.H., DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification; *TETCI Oct. 2020 728-739*
Gu, B., *see* Zhou, Z., *TETCI June 2020 227-240*

- Gu, Y.**, Wang, Y., Liu, T., Ji, Y., Liu, Z., Li, P., Wang, X., An, X., and Ren, F., EmoSense: Computational Intelligence Driven Emotion Sensing via Wireless Channel Data; *TETCI June 2020 216-226*
- Guan, X.**, see Huang, Y., *TETCI June 2020 265-275*
- Guo, H.**, Li, S., Qi, K., Guo, Y., and Xu, Z., Learning Automata Based Competition Scheme to Train Deep Neural Networks; *TETCI April 2020 151-158*
- Guo, Y.**, see Guo, H., *TETCI April 2020 151-158*
- Guo, Y.**, see Jiang, C., *TETCI June 2020 298-311*
- Gupta, S.K.S.**, see Sadeghi, K., *TETCI Aug. 2020 450-467*

H

- Hamedani, K.**, Liu, L., Hu, S., Ashdown, J., Wu, J., and Yi, Y., Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach; *TETCI June 2020 253-264*
- Hao, X.**, see Liu, S., *TETCI Feb. 2020 23-31*
- Hashemi, S.**, see Jahromi, A.N., *TETCI Oct. 2020 630-640*
- He, H.**, see Liu, X., *TETCI April 2020 119-129*
- He, H.**, see Jiang, C., *TETCI June 2020 298-311*
- Hou, W.**, see Xie, F., *TETCI June 2020 276-286*
- Hu, S.**, see Hamedani, K., *TETCI June 2020 253-264*
- Hua, K.**, see Shan, N., *TETCI Oct. 2020 717-727*
- Huang, M.**, see Zhang, Z., *TETCI Feb. 2020 51-60*
- Huang, P.**, Wang, Y., Wang, K., and Yang, K., Differential Evolution With a Variable Population Size for Deployment Optimization in a UAV-Assisted IoT Data Collection System; *TETCI June 2020 324-335*
- Huang, P.**, see Asim, M., *TETCI Dec. 2020 742-763*
- Huang, W.**, Luo, H., Hwang, H., Lo, C., Peng, Y., Tsao, Y., and Wang, H., Unsupervised Representation Disentanglement Using Cross Domain Features and Adversarial Learning in Variational Autoencoder Based Voice Conversion; *TETCI Aug. 2020 468-479*
- Huang, Y.**, Guan, X., Chen, H., Liang, Y., Yuan, S., and Ohtsuki, T., Risk Assessment of Private Information Inference for Motion Sensor Embedded IoT Devices; *TETCI June 2020 265-275*
- Hussain, A.**, see Scardapane, S., *TETCI April 2020 140-150*
- Hwang, H.**, see Huang, W., *TETCI Aug. 2020 468-479*

I

- Iosifidis, A.**, see Passalis, N., *TETCI Dec. 2020 774-785*

J

- Jahromi, A.N.**, Hashemi, S., Dehghantanha, A., Parizi, R.M., and Choo, K.R., An Enhanced Stacked LSTM Method With No Random Initialization for Malware Threat Hunting in Safety and Time-Critical Systems; *TETCI Oct. 2020 630-640*
- Ji, W.**, see Wang, R., *TETCI Oct. 2020 616-629*
- Ji, Y.**, see Gu, Y., *TETCI June 2020 216-226*
- Jia, M.**, see Liu, X., *TETCI Feb. 2020 5-12*
- Jiang, C.**, Ni, Z., Guo, Y., and He, H., Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human-Robot Interaction; *TETCI June 2020 298-311*
- Jiang, H.**, see Liu, X., *TETCI April 2020 119-129*
- Jiang, M.**, see Song, T., *TETCI Oct. 2020 696-704*
- Jiang, Q.**, see Zhou, M., *TETCI Feb. 2020 61-73*
- Jiang, Y.**, see Xie, F., *TETCI June 2020 276-286*
- Jiao, L.**, see Li, Y., *TETCI June 2020 287-297*
- Jin, H.**, see Chen, C., *TETCI June 2020 206-215*
- Jin, Y.**, see Wu, C., *TETCI June 2020 202-205*
- Joung, Y.**, see Cha, S., *TETCI Oct. 2020 641-652*

K

- Kanniainen, J.**, see Passalis, N., *TETCI Dec. 2020 774-785*
- Kapourchali, M.H.**, and Banerjee, B., State Estimation via Communication for Monitoring; *TETCI Dec. 2020 786-793*

- Konar, A.**, see Ghosh, L., *TETCI Aug. 2020 571-588*
- Kong, S.**, see Sun, Z., *TETCI Feb. 2020 13-22*
- Kong, X.**, see Xia, F., *TETCI April 2020 95-107*
- Kuhn, E.**, see Sesum-Cavic, V., *TETCI June 2020 351-368*
- Kuppili, V.**, Biswas, M., Edla, D.R., Prasad, K.J.R., and Suri, J.S., A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm; *TETCI April 2020 180-200*
- Kwong, S.**, see Pan, Z., *TETCI Aug. 2020 500-522*

L

- Lee, H.**, see Zhang, Z., *TETCI Aug. 2020 414-416*
- Lei, J.**, see Pan, Z., *TETCI Aug. 2020 500-522*
- Li, G.**, Dong, M., Yang, L.T., Ota, K., Wu, J., and Li, J., Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach; *TETCI Oct. 2020 653-665*
- Li, J.**, see Wu, C., *TETCI June 2020 202-205*
- Li, J.**, see Li, G., *TETCI Oct. 2020 653-665*
- Li, P.**, see Gu, Y., *TETCI June 2020 216-226*
- Li, P.**, see Xu, Q., *TETCI June 2020 241-252*
- Li, S.**, see Guo, H., *TETCI April 2020 151-158*
- Li, S.**, see Zhao, S., *TETCI Oct. 2020 666-674*
- Li, T.**, see Xiao, Y., *TETCI Aug. 2020 480-489*
- Li, W.**, see Xu, X., *TETCI Oct. 2020 605-615*
- Li, Y.**, Liu, G., Lu, G., Jiao, L., Marturi, N., and Shang, R., Hyper-Parameter Optimization Using MARS Surrogate for Machine-Learning Algorithms; *TETCI June 2020 287-297*
- Li, Y.**, see Chen, L., *TETCI Oct. 2020 705-716*
- Li, Z.**, see Liu, G., *TETCI Oct. 2020 675-685*
- Lian, C.**, see Liu, Z., *TETCI Dec. 2020 764-773*
- Liang, J.**, see Ren, J., *TETCI Feb. 2020 74-82*
- Liang, Q.**, Yen, G.G., Durrani, T.S., Wang, W., and Wang, X., Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing; *TETCI Feb. 2020 1-4*
- Liang, S.D.**, Optimization for Deep Convolutional Neural Networks: How Slim Can It Go?; *TETCI April 2020 171-179*
- Liang, Y.**, see Huang, Y., *TETCI June 2020 265-275*
- Liao, H.**, see Zhou, Z., *TETCI June 2020 227-240*
- Liao, R.**, see Xie, F., *TETCI June 2020 276-286*
- Lin, Y.**, see Zhou, M., *TETCI Feb. 2020 61-73*
- Liu, G.**, see Li, Y., *TETCI June 2020 287-297*
- Liu, G.**, Wang, Y., Zheng, B., Li, Z., and Zheng, K., Strong Social Graph Based Trust-Oriented Graph Pattern Matching With Multiple Constraints; *TETCI Oct. 2020 675-685*
- Liu, J.**, see Xia, F., *TETCI April 2020 95-107*
- Liu, J.**, see Chen, L., *TETCI Oct. 2020 705-716*
- Liu, L.**, see Hamedani, K., *TETCI June 2020 253-264*
- Liu, S.**, and Hao, X., Pedestrian Retrieval Using Generated Samples and Multistream Layer in Sensor Networks; *TETCI Feb. 2020 23-31*
- Liu, T.**, see Gu, Y., *TETCI June 2020 216-226*
- Liu, X.**, and Jia, M., Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio; *TETCI Feb. 2020 5-12*
- Liu, X.**, Jiang, H., Wang, Y., and He, H., A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation; *TETCI April 2020 119-129*
- Liu, Y.**, Wang, X., Boudreau, G., Sediq, A.B., and Abou-zeid, H., Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks; *TETCI Feb. 2020 83-94*
- Liu, Y.**, see Yeh, Y., *TETCI Aug. 2020 440-449*
- Liu, Z.**, see Gu, Y., *TETCI June 2020 216-226*
- Liu, Z.**, Zeng, Z., and Lian, C., Multidomain Features Fusion for Zero-Shot Learning; *TETCI Dec. 2020 764-773*
- Lo, C.**, see Huang, W., *TETCI Aug. 2020 468-479*
- Long, N.K.**, Sammut, K., Sgarioto, D., Garratt, M., and Abbass, H.A., A Comprehensive Review of Shepherding as a Bio-Inspired Swarm-Robotics Guidance Approach; *TETCI Aug. 2020 523-537*
- Lork, C.**, see Rajasekhar, B., *TETCI Aug. 2020 555-570*

Lu, G., *see* Li, Y., *TETCI June 2020 287-297*
Lu, Z., *see* Ding, J., *TETCI June 2020 385-397*
Luo, H., *see* Huang, W., *TETCI Aug. 2020 468-479*

M

Ma, H., *see* da Silva, A.S., *TETCI Aug. 2020 538-554*
Marchetti, M., *see* Apruzzese, G., *TETCI Aug. 2020 427-439*
Marturi, N., *see* Li, Y., *TETCI June 2020 287-297*
Mei, Y., *see* da Silva, A.S., *TETCI Aug. 2020 538-554*
Metaxas, D.n., *see* Zhang, Z., *TETCI Aug. 2020 414-416*
Mi, C., Xie, L., and Zhang, Y., Improving Adversarial Neural Machine Translation for Morphologically Rich Language; *TETCI Aug. 2020 417-426*
Mumtaz, S., *see* Zhou, Z., *TETCI June 2020 227-240*

N

Nagar, A.K., *see* Ghosh, L., *TETCI Aug. 2020 571-588*
Nekooei, S.M., and Chen, G., Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks; *TETCI June 2020 336-350*
Ni, Z., *see* Jiang, C., *TETCI June 2020 298-311*
Nie, H., *see* Xia, F., *TETCI April 2020 95-107*

O

Ohtsuki, T., *see* Huang, Y., *TETCI June 2020 265-275*
Ota, K., *see* Chen, C., *TETCI June 2020 206-215*
Ota, K., *see* Li, G., *TETCI Oct. 2020 653-665*

P

Pal, S.K., *see* Banerjee, R., *TETCI Oct. 2020 686-695*
Pan, I., and Bester, D., Marginal Likelihood Based Model Comparison in Fuzzy Bayesian Learning; *TETCI Dec. 2020 794-799*
Pan, Z., Yu, W., Wang, B., Xie, H., Sheng, V.S., Lei, J., and Kwong, S., Loss Functions of Generative Adversarial Networks (GANs): Opportunities and Challenges; *TETCI Aug. 2020 500-522*
Parizi, R.M., *see* Jahromi, A.N., *TETCI Oct. 2020 630-640*
Passalis, N., Tefas, A., Kannianen, J., Gabbouj, M., and Iosifidis, A., Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data; *TETCI Dec. 2020 774-785*
Peng, Y., *see* Huang, W., *TETCI Aug. 2020 468-479*
Pindoriya, N.M., *see* Rajasekhar, B., *TETCI Aug. 2020 555-570*
Prasad, K.J.R., *see* Kuppili, V., *TETCI April 2020 180-200*

Q

Qadir, J., *see* Wu, C., *TETCI June 2020 202-205*
Qi, K., *see* Guo, H., *TETCI April 2020 151-158*
Qi, L., *see* Zhao, S., *TETCI Oct. 2020 666-674*

R

Rajasekhar, B., Tushar, W., Lork, C., Zhou, Y., Yuen, C., Pindoriya, N.M., and Wood, K.L., A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management; *TETCI Aug. 2020 555-570*
Rajbhandari, S., *see* Goyal, M., *TETCI Oct. 2020 728-739*
Rakshit, P., *see* Ghosh, L., *TETCI Aug. 2020 571-588*
Reddy, T.K., Arora, V., and Behera, L., HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain-Computer Interface; *TETCI April 2020 159-170*
Reeves, N.D., *see* Goyal, M., *TETCI Oct. 2020 728-739*
Ren, F., *see* Gu, Y., *TETCI June 2020 216-226*
Ren, J., Liang, J., and Zhao, Y., Soil PH Measurement Based on Compressive Sensing and Deep Image Prior; *TETCI Feb. 2020 74-82*
Rodriguez, J., *see* Zhou, Z., *TETCI June 2020 227-240*

+ Check author entry for coauthors

S

Sadeghi, K., Banerjee, A., and Gupta, S.K.S., A System-Driven Taxonomy of Attacks and Defenses in Adversarial Machine Learning; *TETCI Aug. 2020 450-467*
Sammut, K., *see* Long, N.K., *TETCI Aug. 2020 523-537*
Scardapane, S., Van Vaerenbergh, S., Hussain, A., and Uncini, A., Complex-Valued Neural Networks With Nonparametric Activation Functions; *TETCI April 2020 140-150*
Schuller, B.W., *see* Zhang, Z., *TETCI Aug. 2020 414-416*
Seddiq, A.B., *see* Liu, Y., *TETCI Feb. 2020 83-94*
Sesum-Cavic, V., Kuhn, E., and Fleischhacker, L., Efficient Search and Lookup in Unstructured P2P Overlay Networks Inspired by Swarm Intelligence; *TETCI June 2020 351-368*
Sgarioto, D., *see* Long, N.K., *TETCI Aug. 2020 523-537*
Shan, N., Tan, D.S., Deneke, M.S., Chen, Y., Cheng, W., and Hua, K., Photobomb Defusal Expert: Automatically Remove Distracting People From Photos; *TETCI Oct. 2020 717-727*
Shang, R., *see* Li, Y., *TETCI June 2020 287-297*
Shen, L., *see* Ding, J., *TETCI June 2020 385-397*
Sheng, V.S., *see* Pan, Z., *TETCI Aug. 2020 500-522*
Song, H., *see* Xie, F., *TETCI June 2020 276-286*
Song, T., Zheng, P., Wong, M.L.D., Jiang, M., and Zeng, X., On the Computational Power of Asynchronous Axon Membrane Systems; *TETCI Oct. 2020 696-704*
Spragg, J., *see* Goyal, M., *TETCI Oct. 2020 728-739*
Su, Z., *see* Xu, Q., *TETCI June 2020 241-252*
Sun, W., *see* Zhou, Z., *TETCI Oct. 2020 593-604*
Sun, X., *see* Zhou, Z., *TETCI Oct. 2020 593-604*
Sun, Z., Kong, S., and Wang, W., Sparse Learning of Higher-Order Statistics for Communications and Sensing; *TETCI Feb. 2020 13-22*
Suri, J.S., *see* Kuppili, V., *TETCI April 2020 180-200*

T

Tan, D.S., *see* Shan, N., *TETCI Oct. 2020 717-727*
Tan, Z., *see* Cha, S., *TETCI Oct. 2020 641-652*
Tang, J., *see* Yuan, Y., *TETCI Oct. 2020 590-592*
Tang, K., *see* Du, W., *TETCI June 2020 312-323*
Tefas, A., *see* Passalis, N., *TETCI Dec. 2020 774-785*
Tian, Z., *see* Zhou, M., *TETCI Feb. 2020 61-73*
Tiwari, A., *see* Chaturvedi, A., *TETCI April 2020 130-139*
Tsai, M., *see* Chen, L., *TETCI Oct. 2020 705-716*
Tsao, Y., *see* Huang, W., *TETCI Aug. 2020 468-479*
Tseng, Y., *see* Cha, S., *TETCI Oct. 2020 641-652*
Tushar, W., *see* Rajasekhar, B., *TETCI Aug. 2020 555-570*

U

Uncini, A., *see* Scardapane, S., *TETCI April 2020 140-150*

V

Van Vaerenbergh, S., *see* Scardapane, S., *TETCI April 2020 140-150*

W

Wan, L., *see* Xia, F., *TETCI April 2020 95-107*
Wan, S., *see* Zhou, Z., *TETCI Oct. 2020 593-604*
Wang, B., *see* Pan, Z., *TETCI Aug. 2020 500-522*
Wang, H., *see* Huang, W., *TETCI Aug. 2020 468-479*
Wang, H., *see* Cha, S., *TETCI Oct. 2020 641-652*
Wang, J., Cen, B., Gao, S., Zhang, Z., and Zhou, Y., Cooperative Evolutionary Framework With Focused Search for Many-Objective Optimization; *TETCI June 2020 398-412*
Wang, K., *see* Huang, P., *TETCI June 2020 324-335*
Wang, K., *see* Asim, M., *TETCI Dec. 2020 742-763*

- Wang, R.**, and Ji, W., Computational Intelligence for Information Security: A Survey; *TETCI Oct. 2020 616-629*
- Wang, S.**, see Gong, M., *TETCI April 2020 108-118*
- Wang, W.**, see Liang, Q., *TETCI Feb. 2020 1-4*
- Wang, W.**, see Sun, Z., *TETCI Feb. 2020 13-22*
- Wang, W.**, and Zhang, M., Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things; *TETCI Feb. 2020 32-41*
- Wang, X.**, see Liu, Y., *TETCI Feb. 2020 83-94*
- Wang, X.**, see Liang, Q., *TETCI Feb. 2020 1-4*
- Wang, X.**, see Gu, Y., *TETCI June 2020 216-226*
- Wang, Y.**, see Liu, X., *TETCI April 2020 119-129*
- Wang, Y.**, see Gu, Y., *TETCI June 2020 216-226*
- Wang, Y.**, see Huang, P., *TETCI June 2020 324-335*
- Wang, Y.**, see Asim, M., *TETCI Dec. 2020 742-763*
- Wang, Y.**, see Liu, G., *TETCI Oct. 2020 675-685*
- Wang, Y.F.**, see Yeh, Y., *TETCI Aug. 2020 440-449*
- Wen, H.**, see Xie, F., *TETCI June 2020 276-286*
- Wong, M.L.D.**, see Song, T., *TETCI Oct. 2020 696-704*
- Wood, K.L.**, see Rajasekhar, B., *TETCI Aug. 2020 555-570*
- Wu, C.**, Jin, Y., Li, J., Alvin Yau, K., and Qadir, J., Guest Editorial Special Issue on Big Data and Computational Intelligence for Agile Wireless IoT; *TETCI June 2020 202-205*
- Wu, D.**, see Du, W., *TETCI June 2020 312-323*
- Wu, J.**, see Hamedani, K., *TETCI June 2020 253-264*
- Wu, J.**, see Xie, F., *TETCI June 2020 276-286*
- Wu, J.**, see Li, G., *TETCI Oct. 2020 653-665*
- Wu, Q.M.J.**, see Zhou, Z., *TETCI Oct. 2020 593-604*
- Wu, Z.**, see Zhang, X., *TETCI Feb. 2020 42-50*

X

- Xia, F.**, Liu, J., Nie, H., Fu, Y., Wan, L., and Kong, X., Random Walks: A Review of Algorithms and Applications; *TETCI April 2020 95-107*
- Xiao, Y.**, Zhao, H., and Li, T., Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition; *TETCI Aug. 2020 480-489*
- Xie, F.**, Wen, H., Wu, J., Hou, W., Song, H., Zhang, T., Liao, R., and Jiang, Y., Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration; *TETCI June 2020 276-286*
- Xie, H.**, see Pan, Z., *TETCI Aug. 2020 500-522*
- Xie, L.**, see Mi, C., *TETCI Aug. 2020 417-426*
- Xie, Y.**, see Gong, M., *TETCI April 2020 108-118*
- Xu, L.**, see Ding, J., *TETCI June 2020 385-397*
- Xu, L.D.**, see Zhao, S., *TETCI Oct. 2020 666-674*
- Xu, Q.**, Su, Z., Zhang, K., and Li, P., Intelligent Cache Pollution Attacks Detection for Edge Computing Enabled Mobile Social Networks; *TETCI June 2020 241-252*
- Xu, X.**, Fu, S., Li, W., Dai, F., Gao, H., and Chang, V., Multi-Objective Data Placement for Workflow Management in Cloud Infrastructure Using NSGA-II; *TETCI Oct. 2020 605-615*
- Xu, Z.**, see Guo, H., *TETCI April 2020 151-158*

Y

- Yan, G.**, see Du, W., *TETCI June 2020 312-323*
- Yang, K.**, see Huang, P., *TETCI June 2020 324-335*
- Yang, L.T.**, see Li, G., *TETCI Oct. 2020 653-665*
- Yang, P.**, see Du, W., *TETCI June 2020 312-323*
- Yang, X.**, see Zhou, M., *TETCI Feb. 2020 61-73*
- Yap, M.H.**, see Goyal, M., *TETCI Oct. 2020 728-739*
- Yeh, K.**, see Cha, S., *TETCI Oct. 2020 641-652*
- Yeh, Y.**, Liu, Y., Chiu, W., and Wang, Y.F., Static2Dynamic: Video Inference From a Deep Glimpse; *TETCI Aug. 2020 440-449*
- Yen, G.G.**, see Liang, Q., *TETCI Feb. 2020 1-4*
- Yi, Y.**, see Hamedani, K., *TETCI June 2020 253-264*
- Ying, W.**, see Du, W., *TETCI June 2020 312-323*
- Yu, C.**, see Chen, C., *TETCI June 2020 206-215*

- Yu, W.**, see Pan, Z., *TETCI Aug. 2020 500-522*
- Yuan, S.**, see Huang, Y., *TETCI June 2020 265-275*
- Yuan, Y.**, Zhang, X., and Tang, J., Guest Editorial Special Issue on Privacy and Security in Computational Intelligence; *TETCI Oct. 2020 590-592*
- Yuen, C.**, see Rajasekhar, B., *TETCI Aug. 2020 555-570*

Z

- Zeng, X.**, see Song, T., *TETCI Oct. 2020 696-704*
- Zeng, Z.**, see Liu, Z., *TETCI Dec. 2020 764-773*
- Zhang, J.**, see Chen, Y., *TETCI June 2020 369-384*
- Zhang, K.**, see Xu, Q., *TETCI June 2020 241-252*
- Zhang, M.**, see Wang, W., *TETCI Feb. 2020 32-41*
- Zhang, M.**, see da Silva, A.S., *TETCI Aug. 2020 538-554*
- Zhang, T.**, see Xie, F., *TETCI June 2020 276-286*
- Zhang, X.**, and Wu, Z., Utility- and Fairness-Based Spectrum Allocation of Cellular Networks by an Adaptive Particle Swarm Optimization Algorithm; *TETCI Feb. 2020 42-50*
- Zhang, X.**, see Zhang, X., *TETCI Feb. 2020 42-50*
- Zhang, X.**, see Yuan, Y., *TETCI Oct. 2020 590-592*
- Zhang, Y.**, see Mi, C., *TETCI Aug. 2020 417-426*
- Zhang, Z.**, and Huang, M., Person Re-Identification Based on Heterogeneous Part-Based Deep Network in Camera Networks; *TETCI Feb. 2020 51-60*
- Zhang, Z.**, see Wang, J., *TETCI June 2020 398-412*
- Zhang, Z.**, Metaxas, D.n., Lee, H., and Schuller, B.W., Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence; *TETCI Aug. 2020 414-416*
- Zhao, H.**, see Xiao, Y., *TETCI Aug. 2020 480-489*
- Zhao, N.**, see Zhou, M., *TETCI Feb. 2020 61-73*
- Zhao, S.**, Li, S., Qi, L., and Xu, L.D., Computational Intelligence Enabled Cybersecurity for the Internet of Things; *TETCI Oct. 2020 666-674*
- Zhao, Y.**, see Ren, J., *TETCI Feb. 2020 74-82*
- Zheng, B.**, see Liu, G., *TETCI Oct. 2020 675-685*
- Zheng, K.**, see Liu, G., *TETCI Oct. 2020 675-685*
- Zheng, P.**, see Song, T., *TETCI Oct. 2020 696-704*
- Zhong, J.**, see Chen, Y., *TETCI June 2020 369-384*
- Zhou, M.**, Lin, Y., Zhao, N., Jiang, Q., Yang, X., and Tian, Z., Indoor WLAN Intelligent Target Intrusion Sensing Using Ray-Aided Generative Adversarial Network; *TETCI Feb. 2020 61-73*
- Zhou, Y.**, see Wang, J., *TETCI June 2020 398-412*
- Zhou, Y.**, see Rajasekhar, B., *TETCI Aug. 2020 555-570*
- Zhou, Z.**, Liao, H., Gu, B., Mumtaz, S., and Rodriguez, J., Resource Sharing and Task Offloading in IoT Fog Computing: A Contract-Learning Approach; *TETCI June 2020 227-240*
- Zhou, Z.**, Wu, Q.M.J., Wan, S., Sun, W., and Sun, X., Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection; *TETCI Oct. 2020 593-604*

SUBJECT INDEX

Numeric

5G mobile communication

- Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y.*, +, *TETCI Feb. 2020 83-94*
- Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing. *Liang, Q.*, +, *TETCI Feb. 2020 1-4*

A

Access protocols

- Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M.*, +, *TETCI June 2020 336-350*

Activity recognition

- State Estimation via Communication for Monitoring. *Kapourchali, M.H.*, +, *TETCI Dec. 2020 786-793*

Adaptive signal processing

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y., +, TETCI Feb. 2020 83-94*

Agriculture

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J., +, TETCI Feb. 2020 74-82*

Air conditioning

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B., +, TETCI Aug. 2020 555-570*

Antenna arrays

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y., +, TETCI Feb. 2020 83-94*

Array signal processing

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y., +, TETCI Feb. 2020 83-94*

Artificial intelligence

Z^* -Numbers, Data Structures, and Thinking in Machine-Mind Architecture. *Banerjee, R., +, TETCI Oct. 2020 686-695*

Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach. *Li, G., +, TETCI Oct. 2020 653-665*

Assistive technology

State Estimation via Communication for Monitoring. *Kapourchali, M.H., +, TETCI Dec. 2020 786-793*

Auditing

Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach. *Li, G., +, TETCI Oct. 2020 653-665*

Authorization

Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration. *Xie, F., +, TETCI June 2020 276-286*

Autonomous aerial vehicles

Differential Evolution With a Variable Population Size for Deployment Optimization in a UAV-Assisted IoT Data Collection System. *Huang, P., +, TETCI June 2020 324-335*

Network-Based Heterogeneous Particle Swarm Optimization and Its Application in UAV Communication Coverage. *Du, W., +, TETCI June 2020 312-323*

B**Bayes methods**

Marginal Likelihood Based Model Comparison in Fuzzy Bayesian Learning. *Pan, I., +, TETCI Dec. 2020 794-799*

Optimization for Deep Convolutional Neural Networks: How Slim Can It Go?. *Liang, S.D., TETCI April 2020 171-179*

Behavioral sciences

Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human-Robot Interaction. *Jiang, C., +, TETCI June 2020 298-311*

Benchmark testing

HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain-Computer Interface. *Reddy, T.K., +, TETCI April 2020 159-170*

Big Data

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V., +, TETCI April 2020 180-200*

Guest Editorial Special Issue on Big Data and Computational Intelligence for Agile Wireless IoT. *Wu, C., +, TETCI June 2020 202-205*

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W., +, TETCI Feb. 2020 32-41*

Biocomputing

On the Computational Power of Asynchronous Axon Membrane Systems. *Song, T., +, TETCI Oct. 2020 696-704*

Body area networks

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M., +, TETCI June 2020 336-350*

Body sensor networks

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M., +, TETCI June 2020 336-350*

Boltzmann machines

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V., +, TETCI April 2020 180-200*

Building management systems

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B., +, TETCI Aug. 2020 555-570*

C**Cache storage**

Intelligent Cache Pollution Attacks Detection for Edge Computing Enabled Mobile Social Networks. *Xu, Q., +, TETCI June 2020 241-252*

Cellular radio

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y., +, TETCI Feb. 2020 83-94*

Utility- and Fairness-Based Spectrum Allocation of Cellular Networks by an Adaptive Particle Swarm Optimization Algorithm. *Zhang, X., +, TETCI Feb. 2020 42-50*

Cloud computing

A Review on Computational Intelligence Techniques in Cloud and Edge Computing. *Asim, M., +, TETCI Dec. 2020 742-763*

Guest Editorial Special Issue on Privacy and Security in Computational Intelligence. *Yuan, Y., +, TETCI Oct. 2020 590-592*

Intelligent Item Searching With Gesture-Based Interfaces Through Mobile Cloud Computing. *Chen, L., +, TETCI Oct. 2020 705-716*

Multi-Objective Data Placement for Workflow Management in Cloud Infrastructure Using NSGA-II. *Xu, X., +, TETCI Oct. 2020 605-615*

On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining. *Cha, S., +, TETCI Oct. 2020 641-652*

Resource Sharing and Task Offloading in IoT Fog Computing: A Contract-Learning Approach. *Zhou, Z., +, TETCI June 2020 227-240*

Cognition

Z^* -Numbers, Data Structures, and Thinking in Machine-Mind Architecture. *Banerjee, R., +, TETCI Oct. 2020 686-695*

Cognitive radio

Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio. *Liu, X., +, TETCI Feb. 2020 5-12*

Utility- and Fairness-Based Spectrum Allocation of Cellular Networks by an Adaptive Particle Swarm Optimization Algorithm. *Zhang, X., +, TETCI Feb. 2020 42-50*

Cognitive systems

Z^* -Numbers, Data Structures, and Thinking in Machine-Mind Architecture. *Banerjee, R., +, TETCI Oct. 2020 686-695*

Common-sense reasoning

Z^* -Numbers, Data Structures, and Thinking in Machine-Mind Architecture. *Banerjee, R., +, TETCI Oct. 2020 686-695*

Complex networks

Community Preserving Network Embedding Based on Memetic Algorithm. *Gong, M., +, TETCI April 2020 108-118*

Compressed sensing

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J., +, TETCI Feb. 2020 74-82*

Computational complexity

Random Walks: A Review of Algorithms and Applications. *Xia, F., +, TETCI April 2020 95-107*

Sparse Learning of Higher-Order Statistics for Communications and Sensing. *Sun, Z., +, TETCI Feb. 2020 13-22*

Strong Social Graph Based Trust-Oriented Graph Pattern Matching With Multiple Constraints. *Liu, G., +, TETCI Oct. 2020 675-685*

System Network Complexity: Network Evolution Subgraphs of System State Series. *Chaturvedi, A., +, TETCI April 2020 130-139*

Computational intelligence

A Review on Computational Intelligence Techniques in Cloud and Edge Computing. *Asim, M., +, TETCI Dec. 2020 742-763*

Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence. *Zhang, Z.*, +, *TETCI Aug. 2020 414-416*

Guest Editorial Special Issue on Big Data and Computational Intelligence for Agile Wireless IoT. *Wu, C.*, +, *TETCI June 2020 202-205*

Guest Editorial Special Issue on Privacy and Security in Computational Intelligence. *Yuan, Y.*, +, *TETCI Oct. 2020 590-592*

Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing. *Liang, Q.*, +, *TETCI Feb. 2020 1-4*

Computer network security

Computational Intelligence Enabled Cybersecurity for the Internet of Things. *Zhao, S.*, +, *TETCI Oct. 2020 666-674*

Intelligent Cache Pollution Attacks Detection for Edge Computing Enabled Mobile Social Networks. *Xu, Q.*, +, *TETCI June 2020 241-252*

Computer networks

Community Preserving Network Embedding Based on Memetic Algorithm. *Gong, M.*, +, *TETCI April 2020 108-118*

Computer vision

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Computerized monitoring

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Control engineering computing

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

Convolutional neural nets

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection. *Zhou, Z.*, +, *TETCI Oct. 2020 593-604*

Learning Automata Based Competition Scheme to Train Deep Neural Networks. *Guo, H.*, +, *TETCI April 2020 151-158*

Optimization for Deep Convolutional Neural Networks: How Slim Can It Go?. *Liang, S.D.*, *TETCI April 2020 171-179*

Photobomb Defusal Expert: Automatically Remove Distracting People From Photos. *Shan, N.*, +, *TETCI Oct. 2020 717-727*

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Cryptography

Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach. *Li, G.*, +, *TETCI Oct. 2020 653-665*

D

Data acquisition

Multi-Objective Data Placement for Workflow Management in Cloud Infrastructure Using NSGA-II. *Xu, X.*, +, *TETCI Oct. 2020 605-615*

Sparse Learning of Higher-Order Statistics for Communications and Sensing. *Sun, Z.*, +, *TETCI Feb. 2020 13-22*

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W.*, +, *TETCI Feb. 2020 32-41*

Data analysis

Differential Evolution With a Variable Population Size for Deployment Optimization in a UAV-Assisted IoT Data Collection System. *Huang, P.*, +, *TETCI June 2020 324-335*

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W.*, +, *TETCI Feb. 2020 32-41*

Data handling

Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration. *Xie, F.*, +, *TETCI June 2020 276-286*

Data mining

EmoSense: Computational Intelligence Driven Emotion Sensing via Wireless Channel Data. *Gu, Y.*, +, *TETCI June 2020 216-226*

On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining. *Cha, S.*, +, *TETCI Oct. 2020 641-652*

System Network Complexity: Network Evolution Subgraphs of System State Series. *Chaturvedi, A.*, +, *TETCI April 2020 130-139*

Data models

Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data. *Passalis, N.*, +, *TETCI Dec. 2020 774-785*

Data privacy

Computational Intelligence Enabled Cybersecurity for the Internet of Things. *Zhao, S.*, +, *TETCI Oct. 2020 666-674*

Guest Editorial Special Issue on Privacy and Security in Computational Intelligence. *Yuan, Y.*, +, *TETCI Oct. 2020 590-592*

Multi-Objective Data Placement for Workflow Management in Cloud Infrastructure Using NSGA-II. *Xu, X.*, +, *TETCI Oct. 2020 605-615*

On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining. *Cha, S.*, +, *TETCI Oct. 2020 641-652*

Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach. *Li, G.*, +, *TETCI Oct. 2020 653-665*

Risk Assessment of Private Information Inference for Motion Sensor Embedded IoT Devices. *Huang, Y.*, +, *TETCI June 2020 265-275*

Data structures

Z^* -Numbers, Data Structures, and Thinking in Machine-Mind Architecture. *Banerjee, R.*, +, *TETCI Oct. 2020 686-695*

Decision making

Network-Based Heterogeneous Particle Swarm Optimization and Its Application in UAV Communication Coverage. *Du, W.*, +, *TETCI June 2020 312-323*

On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining. *Cha, S.*, +, *TETCI Oct. 2020 641-652*

Deep learning

Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing. *Liang, Q.*, +, *TETCI Feb. 2020 1-4*

Demand side management

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

Directive antennas

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y.*, +, *TETCI Feb. 2020 83-94*

Diseases

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Distributed control

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

Distributed power generation

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

Dynamic programming

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human-Robot Interaction. *Jiang, C.*, +, *TETCI June 2020 298-311*

E

Edge computing

A Review on Computational Intelligence Techniques in Cloud and Edge Computing. *Asim, M.*, +, *TETCI Dec. 2020 742-763*

Eigenvalues and eigenfunctions

Sparse Learning of Higher-Order Statistics for Communications and Sensing. *Sun, Z.*, +, *TETCI Feb. 2020 13-22*

Electroencephalography

HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain-Computer Interface. *Reddy, T.K.*, +, *TETCI April 2020 159-170*

Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network. *Ghosh, L.*, +, *TETCI Aug. 2020 571-588*

Electronic commerce

On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining. *Cha, S.*, +, *TETCI Oct. 2020 641-652*

Emotion recognition

EmoSense: Computational Intelligence Driven Emotion Sensing via Wireless Channel Data. *Gu, Y.*, +, *TETCI June 2020 216-226*

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y.*, +, *TETCI Aug. 2020 480-489*

Energy conservation

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

Entropy

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V.*, +, *TETCI April 2020 180-200*

Person Re-Identification Based on Heterogeneous Part-Based Deep Network in Camera Networks. *Zhang, Z.*, +, *TETCI Feb. 2020 51-60*

Evolutionary computation

A Review on Computational Intelligence Techniques in Cloud and Edge Computing. *Asim, M.*, +, *TETCI Dec. 2020 742-763*

A Survey of Evolutionary Computation for Web Service Composition: A Technical Perspective. *da Silva, A.S.*, +, *TETCI Aug. 2020 538-554*

An Adaptive Archive-Based Evolutionary Framework for Many-Task Optimization. *Chen, Y.*, +, *TETCI June 2020 369-384*

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M.*, +, *TETCI June 2020 336-350*

Cooperative Evolutionary Framework With Focused Search for Many-Objective Optimization. *Wang, J.*, +, *TETCI June 2020 398-412*

F**Feature extraction**

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y.*, +, *TETCI Feb. 2020 83-94*

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Guest Editorial Special Issue on Privacy and Security in Computational Intelligence. *Yuan, Y.*, +, *TETCI Oct. 2020 590-592*

Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection. *Zhou, Z.*, +, *TETCI Oct. 2020 593-604*

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y.*, +, *TETCI Aug. 2020 480-489*

Multidomain Features Fusion for Zero-Shot Learning. *Liu, Z.*, +, *TETCI Dec. 2020 764-773*

Pedestrian Retrieval Using Generated Samples and Multistream Layer in Sensor Networks. *Liu, S.*, +, *TETCI Feb. 2020 23-31*

Person Re-Identification Based on Heterogeneous Part-Based Deep Network in Camera Networks. *Zhang, Z.*, +, *TETCI Feb. 2020 51-60*

Photobomb Defusal Expert: Automatically Remove Distracting People From Photos. *Shan, N.*, +, *TETCI Oct. 2020 717-727*

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J.*, +, *TETCI Feb. 2020 74-82*

State Estimation via Communication for Monitoring. *Kapourchali, M.H.*, +, *TETCI Dec. 2020 786-793*

Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data. *Passalis, N.*, +, *TETCI Dec. 2020 774-785*

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W.*, +, *TETCI Feb. 2020 32-41*

Feedback

Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network. *Ghosh, L.*, +, *TETCI Aug. 2020 571-588*

Fingerprint identification

Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration. *Xie, F.*, +, *TETCI June 2020 276-286*

Forecasting

Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data. *Passalis, N.*, +, *TETCI Dec. 2020 774-785*

Fuzzy control

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M.*, +, *TETCI June 2020 336-350*

Fuzzy logic

Marginal Likelihood Based Model Comparison in Fuzzy Bayesian Learning. *Pan, L.*, +, *TETCI Dec. 2020 794-799*

Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network. *Ghosh, L.*, +, *TETCI Aug. 2020 571-588*

Fuzzy set theory

Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network. *Ghosh, L.*, +, *TETCI Aug. 2020 571-588*

Fuzzy systems

A Review on Computational Intelligence Techniques in Cloud and Edge Computing. *Asim, M.*, +, *TETCI Dec. 2020 742-763*

G**Game theory**

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

Gaussian processes

Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration. *Xie, F.*, +, *TETCI June 2020 276-286*

General adversarial networks

Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence. *Zhang, Z.*, +, *TETCI Aug. 2020 414-416*

Genetic algorithms

Community Preserving Network Embedding Based on Memetic Algorithm. *Gong, M.*, +, *TETCI April 2020 108-118*

Differential Evolution With a Variable Population Size for Deployment Optimization in a UAV-Assisted IoT Data Collection System. *Huang, P.*, +, *TETCI June 2020 324-335*

Multi-Objective Data Placement for Workflow Management in Cloud Infrastructure Using NSGA-II. *Xu, X.*, +, *TETCI Oct. 2020 605-615*

Gesture recognition

Intelligent Item Searching With Gesture-Based Interfaces Through Mobile Cloud Computing. *Chen, L.*, +, *TETCI Oct. 2020 705-716*

Gradient methods

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y.*, +, *TETCI Aug. 2020 480-489*

Graph theory

Strong Social Graph Based Trust-Oriented Graph Pattern Matching With Multiple Constraints. *Liu, G.*, +, *TETCI Oct. 2020 675-685*

System Network Complexity: Network Evolution Subgraphs of System State Series. *Chaturvedi, A.*, +, *TETCI April 2020 130-139*

H**Health care**

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Hebbian learning

Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network. *Ghosh, L.*, +, *TETCI Aug. 2020 571-588*

Hidden Markov models

Intelligent Cache Pollution Attacks Detection for Edge Computing Enabled Mobile Social Networks. *Xu, Q.*, +, *TETCI June 2020 241-252*

Higher order statistics

Sparse Learning of Higher-Order Statistics for Communications and Sensing. *Sun, Z.*, +, *TETCI Feb. 2020 13-22*

Human computer interaction

Zⁿ-Numbers, Data Structures, and Thinking in Machine-Mind Architecture. *Banerjee, R.*, +, *TETCI Oct. 2020 686-695*

Human-robot interaction

Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human–Robot Interaction. *Jiang, C.*, +, *TETCI June 2020 298-311*

I**IEEE publishing**

2020 List of Reviewers. *TETCI Dec. 2020 800-804*

Image classification

Attacking VQA Systems via Adversarial Background Noise. *Chaturvedi, A.*, +, *TETCI Aug. 2020 490-499*

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection. *Zhou, Z.*, +, *TETCI Oct. 2020 593-604*

Learning Automata Based Competition Scheme to Train Deep Neural Networks. *Guo, H.*, +, *TETCI April 2020 151-158*

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y.*, +, *TETCI Aug. 2020 480-489*

Multidomain Features Fusion for Zero-Shot Learning. *Liu, Z.*, +, *TETCI Dec. 2020 764-773*

Pedestrian Retrieval Using Generated Samples and Multistream Layer in Sensor Networks. *Liu, S.*, +, *TETCI Feb. 2020 23-31*

Image denoising

Attacking VQA Systems via Adversarial Background Noise. *Chaturvedi, A.*, +, *TETCI Aug. 2020 490-499*

Image matching

Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection. *Zhou, Z.*, +, *TETCI Oct. 2020 593-604*

Image motion analysis

Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human–Robot Interaction. *Jiang, C.*, +, *TETCI June 2020 298-311*

Image recognition

Person Re-Identification Based on Heterogeneous Part-Based Deep Network in Camera Networks. *Zhang, Z.*, +, *TETCI Feb. 2020 51-60*

Image representation

Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection. *Zhou, Z.*, +, *TETCI Oct. 2020 593-604*

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y.*, +, *TETCI Aug. 2020 480-489*

Person Re-Identification Based on Heterogeneous Part-Based Deep Network in Camera Networks. *Zhang, Z.*, +, *TETCI Feb. 2020 51-60*

Photobomb Defusal Expert: Automatically Remove Distracting People From Photos. *Shan, N.*, +, *TETCI Oct. 2020 717-727*

Image retrieval

Attacking VQA Systems via Adversarial Background Noise. *Chaturvedi, A.*, +, *TETCI Aug. 2020 490-499*

Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection. *Zhou, Z.*, +, *TETCI Oct. 2020 593-604*

Multidomain Features Fusion for Zero-Shot Learning. *Liu, Z.*, +, *TETCI Dec. 2020 764-773*

Image segmentation

Photobomb Defusal Expert: Automatically Remove Distracting People From Photos. *Shan, N.*, +, *TETCI Oct. 2020 717-727*

Image sequences

Static2Dynamic: Video Inference From a Deep Glimpse. *Yeh, Y.*, +, *TETCI Aug. 2020 440-449*

Indoor radio

Indoor WLAN Intelligent Target Intrusion Sensing Using Ray-Aided Generative Adversarial Network. *Zhou, M.*, +, *TETCI Feb. 2020 61-73*

Inference mechanisms

Z⁻-Numbers, Data Structures, and Thinking in Machine-Mind Architecture. *Banerjee, R.*, +, *TETCI Oct. 2020 686-695*

Intelligent sensors

State Estimation via Communication for Monitoring. *Kapourchali, M.H.*, +, *TETCI Dec. 2020 786-793*

Internet of Things

Computational Intelligence Enabled Cybersecurity for the Internet of Things. *Zhao, S.*, +, *TETCI Oct. 2020 666-674*

Differential Evolution With a Variable Population Size for Deployment Optimization in a UAV-Assisted IoT Data Collection System. *Huang, P.*, +, *TETCI June 2020 324-335*

Guest Editorial Special Issue on Privacy and Security in Computational Intelligence. *Yuan, Y.*, +, *TETCI Oct. 2020 590-592*

Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing. *Liang, Q.*, +, *TETCI Feb. 2020 1-4*

Intelligent Item Searching With Gesture-Based Interfaces Through Mobile Cloud Computing. *Chen, L.*, +, *TETCI Oct. 2020 705-716*

Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach. *Li, G.*, +, *TETCI Oct. 2020 653-665*

Resource Sharing and Task Offloading in IoT Fog Computing: A Contract-Learning Approach. *Zhou, Z.*, +, *TETCI June 2020 227-240*

Risk Assessment of Private Information Inference for Motion Sensor Embedded IoT Devices. *Huang, Y.*, +, *TETCI June 2020 265-275*

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W.*, +, *TETCI Feb. 2020 32-41*

Invasive software

An Enhanced Stacked LSTM Method With No Random Initialization for Malware Threat Hunting in Safety and Time-Critical Systems. *Jahromi, A.N.*, +, *TETCI Oct. 2020 630-640*

Computational Intelligence Enabled Cybersecurity for the Internet of Things. *Zhao, S.*, +, *TETCI Oct. 2020 666-674*

Invoicing

On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining. *Cha, S.*, +, *TETCI Oct. 2020 641-652*

Iterative learning control

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

J**Job shop scheduling**

A Hybrid Memetic Algorithm for the Parallel Machine Scheduling Problem With Job Deteriorating Effects. *Ding, J.*, +, *TETCI June 2020 385-397*

L**Language translation**

Improving Adversarial Neural Machine Translation for Morphologically Rich Language. *Mi, C.*, +, *TETCI Aug. 2020 417-426*

Learning (artificial intelligence)

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V.*, +, *TETCI April 2020 180-200*

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

An Enhanced Stacked LSTM Method With No Random Initialization for Malware Threat Hunting in Safety and Time-Critical Systems. *Jahromi, A.N.*, +, *TETCI Oct. 2020 630-640*

Community Preserving Network Embedding Based on Memetic Algorithm. *Gong, M.*, +, *TETCI April 2020 108-118*

Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration. *Xie, F.*, +, *TETCI June 2020 276-286*

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y.*, +, *TETCI Feb. 2020 83-94*

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain–Computer Interface. *Reddy, T.K.*, +, *TETCI April 2020 159-170*

Hyper-Parameter Optimization Using MARS Surrogate for Machine-Learning Algorithms. *Li, Y.*, +, *TETCI June 2020 287-297*

Learning Automata Based Competition Scheme to Train Deep Neural Networks. *Guo, H., +, TETCI April 2020 151-158*

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y., +, TETCI Aug. 2020 480-489*

Loss Functions of Generative Adversarial Networks (GANs): Opportunities and Challenges. *Pan, Z., +, TETCI Aug. 2020 500-522*

On the Computational Power of Asynchronous Axon Membrane Systems. *Song, T., +, TETCI Oct. 2020 696-704*

Optimization for Deep Convolutional Neural Networks: How Slim Can It Go?. *Liang, S.D., TETCI April 2020 171-179*

Pedestrian Retrieval Using Generated Samples and Multistream Layer in Sensor Networks. *Liu, S., +, TETCI Feb. 2020 23-31*

Person Re-Identification Based on Heterogeneous Part-Based Deep Network in Camera Networks. *Zhang, Z., +, TETCI Feb. 2020 51-60*

Photobomb Defusal Expert: Automatically Remove Distracting People From Photos. *Shan, N., +, TETCI Oct. 2020 717-727*

Resource Sharing and Task Offloading in IoT Fog Computing: A Contract-Learning Approach. *Zhou, Z., +, TETCI June 2020 227-240*

Risk Assessment of Private Information Inference for Motion Sensor Embedded IoT Devices. *Huang, Y., +, TETCI June 2020 265-275*

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J., +, TETCI Feb. 2020 74-82*

Sparse Learning of Higher-Order Statistics for Communications and Sensing. *Sun, Z., +, TETCI Feb. 2020 13-22*

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W., +, TETCI Feb. 2020 32-41*

Unsupervised Representation Disentanglement Using Cross Domain Features and Adversarial Learning in Variational Autoencoder Based Voice Conversion. *Huang, W., +, TETCI Aug. 2020 468-479*

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C., +, TETCI June 2020 206-215*

Learning automata

Learning Automata Based Competition Scheme to Train Deep Neural Networks. *Guo, H., +, TETCI April 2020 151-158*

Learning systems

Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence. *Zhang, Z., +, TETCI Aug. 2020 414-416*

M

Machine learning

Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence. *Zhang, Z., +, TETCI Aug. 2020 414-416*

Marginal Likelihood Based Model Comparison in Fuzzy Bayesian Learning. *Pan, I., +, TETCI Dec. 2020 794-799*

Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data. *Passalis, N., +, TETCI Dec. 2020 774-785*

Mathematical model

Marginal Likelihood Based Model Comparison in Fuzzy Bayesian Learning. *Pan, I., +, TETCI Dec. 2020 794-799*

Matrix algebra

Sparse Learning of Higher-Order Statistics for Communications and Sensing. *Sun, Z., +, TETCI Feb. 2020 13-22*

Medical image processing

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M., +, TETCI Oct. 2020 728-739*

Medical signal processing

HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain-Computer Interface. *Reddy, T.K., +, TETCI April 2020 159-170*

Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network. *Ghosh, L., +, TETCI Aug. 2020 571-588*

Microcomputers

Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach. *Li, G., +, TETCI Oct. 2020 653-665*

Minimization

A Hybrid Memetic Algorithm for the Parallel Machine Scheduling Problem With Job Deteriorating Effects. *Ding, J., +, TETCI June 2020 385-397*

Utility- and Fairness-Based Spectrum Allocation of Cellular Networks by an Adaptive Particle Swarm Optimization Algorithm. *Zhang, X., +, TETCI Feb. 2020 42-50*

Mobile antennas

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y., +, TETCI Feb. 2020 83-94*

Mobile computing

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V., +, TETCI April 2020 180-200*

Intelligent Cache Pollution Attacks Detection for Edge Computing Enabled Mobile Social Networks. *Xu, Q., +, TETCI June 2020 241-252*

Intelligent Item Searching With Gesture-Based Interfaces Through Mobile Cloud Computing. *Chen, L., +, TETCI Oct. 2020 705-716*

On Privacy Aware Carriers for Value-Possessed e-Invoices Considering Intelligence Mining. *Cha, S., +, TETCI Oct. 2020 641-652*

Resource Sharing and Task Offloading in IoT Fog Computing: A Contract-Learning Approach. *Zhou, Z., +, TETCI June 2020 227-240*

Mobile robots

Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human-Robot Interaction. *Jiang, C., +, TETCI June 2020 298-311*

Motion sensors

Risk Assessment of Private Information Inference for Motion Sensor Embedded IoT Devices. *Huang, Y., +, TETCI June 2020 265-275*

Multi-agent systems

A Comprehensive Review of Shepherding as a Bio-Inspired Swarm-Robotics Guidance Approach. *Long, N.K., +, TETCI Aug. 2020 523-537*

State Estimation via Communication for Monitoring. *Kapourchali, M.H., +, TETCI Dec. 2020 786-793*

Multi-robot systems

A Comprehensive Review of Shepherding as a Bio-Inspired Swarm-Robotics Guidance Approach. *Long, N.K., +, TETCI Aug. 2020 523-537*

Multilayer perceptrons

Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K., +, TETCI June 2020 253-264*

N

Natural language processing

Improving Adversarial Neural Machine Translation for Morphologically Rich Language. *Mi, C., +, TETCI Aug. 2020 417-426*

Nearest neighbor methods

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V., +, TETCI April 2020 180-200*

Network theory (graphs)

Community Preserving Network Embedding Based on Memetic Algorithm. *Gong, M., +, TETCI April 2020 108-118*

Neural networks

Attacking VQA Systems via Adversarial Background Noise. *Chaturvedi, A., +, TETCI Aug. 2020 490-499*

Complex-Valued Neural Networks With Nonparametric Activation Functions. *Scardapane, S., +, TETCI April 2020 140-150*

HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain-Computer Interface. *Reddy, T.K., +, TETCI April 2020 159-170*

Hyper-Parameter Optimization Using MARS Surrogate for Machine-Learning Algorithms. *Li, Y., +, TETCI June 2020 287-297*

Improving Adversarial Neural Machine Translation for Morphologically Rich Language. *Mi, C., +, TETCI Aug. 2020 417-426*

Indoor WLAN Intelligent Target Intrusion Sensing Using Ray-Aided Generative Adversarial Network. *Zhou, M., +, TETCI Feb. 2020 61-73*

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y., +, TETCI Aug. 2020 480-489*

Loss Functions of Generative Adversarial Networks (GANs): Opportunities and Challenges. *Pan, Z., +, TETCI Aug. 2020 500-522*

On the Computational Power of Asynchronous Axon Membrane Systems. *Song, T.*, +, *TETCI Oct. 2020 696-704*

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J.*, +, *TETCI Feb. 2020 74-82*

Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data. *Passalis, N.*, +, *TETCI Dec. 2020 774-785*

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W.*, +, *TETCI Feb. 2020 32-41*

Unsupervised Representation Disentanglement Using Cross Domain Features and Adversarial Learning in Variational Autoencoder Based Voice Conversion. *Huang, W.*, +, *TETCI Aug. 2020 468-479*

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Neurophysiology

Mimicking Short-Term Memory in Shape-Reconstruction Task Using an EEG-Induced Type-2 Fuzzy Deep Brain Learning Network. *Ghosh, L.*, +, *TETCI Aug. 2020 571-588*

O

Object detection

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Learning Automata Based Competition Scheme to Train Deep Neural Networks. *Guo, H.*, +, *TETCI April 2020 151-158*

Pedestrian Retrieval Using Generated Samples and Multistream Layer in Sensor Networks. *Liu, S.*, +, *TETCI Feb. 2020 23-31*

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Optimal control

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain-Computer Interface. *Reddy, T.K.*, +, *TETCI April 2020 159-170*

Optimization

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

An Adaptive Archive-Based Evolutionary Framework for Many-Task Optimization. *Chen, Y.*, +, *TETCI June 2020 369-384*

Hyper-Parameter Optimization Using MARS Surrogate for Machine-Learning Algorithms. *Li, Y.*, +, *TETCI June 2020 287-297*

Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio. *Liu, X.*, +, *TETCI Feb. 2020 5-12*

Overlay networks

Efficient Search and Lookup in Unstructured P2P Overlay Networks Inspired by Swarm Intelligence. *Sesum-Cavic, V.*, +, *TETCI June 2020 351-368*

P

Pareto optimization

Cooperative Evolutionary Framework With Focused Search for Many-Objective Optimization. *Wang, J.*, +, *TETCI June 2020 398-412*

Multi-Objective Data Placement for Workflow Management in Cloud Infrastructure Using NSGA-II. *Xu, X.*, +, *TETCI Oct. 2020 605-615*

Particle swarm optimization

A Review on Computational Intelligence Techniques in Cloud and Edge Computing. *Asim, M.*, +, *TETCI Dec. 2020 742-763*

Efficient Search and Lookup in Unstructured P2P Overlay Networks Inspired by Swarm Intelligence. *Sesum-Cavic, V.*, +, *TETCI June 2020 351-368*

Network-Based Heterogeneous Particle Swarm Optimization and Its Application in UAV Communication Coverage. *Du, W.*, +, *TETCI June 2020 312-323*

Utility- and Fairness-Based Spectrum Allocation of Cellular Networks by an Adaptive Particle Swarm Optimization Algorithm. *Zhang, X.*, +, *TETCI Feb. 2020 42-50*

Path planning

A Comprehensive Review of Shepherding as a Bio-Inspired Swarm-Robotics Guidance Approach. *Long, N.K.*, +, *TETCI Aug. 2020 523-537*

Patient treatment

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Pattern classification

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V.*, +, *TETCI April 2020 180-200*

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J.*, +, *TETCI Feb. 2020 74-82*

Pattern clustering

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V.*, +, *TETCI April 2020 180-200*

Pattern matching

Strong Social Graph Based Trust-Oriented Graph Pattern Matching With Multiple Constraints. *Liu, G.*, +, *TETCI Oct. 2020 675-685*

Pattern recognition

Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K.*, +, *TETCI June 2020 253-264*

Pedestrians

Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human-Robot Interaction. *Jiang, C.*, +, *TETCI June 2020 298-311*

Pedestrian Retrieval Using Generated Samples and Multistream Layer in Sensor Networks. *Liu, S.*, +, *TETCI Feb. 2020 23-31*

Peer-to-peer computing

Efficient Search and Lookup in Unstructured P2P Overlay Networks Inspired by Swarm Intelligence. *Sesum-Cavic, V.*, +, *TETCI June 2020 351-368*

Performance index

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

pH measurement

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J.*, +, *TETCI Feb. 2020 74-82*

Power consumption

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

Power engineering computing

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K.*, +, *TETCI June 2020 253-264*

Power generation control

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

Power generation dispatch

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

Predictive coding

State Estimation via Communication for Monitoring. *Kapourchali, M.H.*, +, *TETCI Dec. 2020 786-793*

Predictive control

A Survey of Computational Intelligence Techniques for Air-Conditioners Energy Management. *Rajasekhar, B.*, +, *TETCI Aug. 2020 555-570*

Predictive models

Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data. *Passalis, N.*, +, *TETCI Dec. 2020 774-785*

Probability

Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio. *Liu, X.*, +, *TETCI Feb. 2020 5-12*

Q

Quality of experience

Intelligent Cache Pollution Attacks Detection for Edge Computing Enabled Mobile Social Networks. *Xu, Q.*, +, *TETCI June 2020 241-252*

Quality of service

A Survey of Evolutionary Computation for Web Service Composition: A Technical Perspective. *da Silva, A.S.*, +, *TETCI Aug. 2020 538-554*
Utility- and Fairness-Based Spectrum Allocation of Cellular Networks by an Adaptive Particle Swarm Optimization Algorithm. *Zhang, X.*, +, *TETCI Feb. 2020 42-50*

Quantum theory

Random Walks: A Review of Algorithms and Applications. *Xia, F.*, +, *TETCI April 2020 95-107*

Query processing

Improving Adversarial Neural Machine Translation for Morphologically Rich Language. *Mi, C.*, +, *TETCI Aug. 2020 417-426*

Question answering (information retrieval)

Attacking VQA Systems via Adversarial Background Noise. *Chaturvedi, A.*, +, *TETCI Aug. 2020 490-499*

R

Radar computing

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J.*, +, *TETCI Feb. 2020 74-82*

Radio networks

Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio. *Liu, X.*, +, *TETCI Feb. 2020 5-12*
WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Radio spectrum management

Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio. *Liu, X.*, +, *TETCI Feb. 2020 5-12*

Radiofrequency interference

Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio. *Liu, X.*, +, *TETCI Feb. 2020 5-12*

Radionavigation

Indoor WLAN Intelligent Target Intrusion Sensing Using Ray-Aided Generative Adversarial Network. *Zhou, M.*, +, *TETCI Feb. 2020 61-73*

Random forests

Hardening Random Forest Cyber Detectors Against Adversarial Attacks. *Apruzzese, G.*, +, *TETCI Aug. 2020 427-439*

Random processes

Random Walks: A Review of Algorithms and Applications. *Xia, F.*, +, *TETCI April 2020 95-107*

Ray tracing

Indoor WLAN Intelligent Target Intrusion Sensing Using Ray-Aided Generative Adversarial Network. *Zhou, M.*, +, *TETCI Feb. 2020 61-73*

Recurrent neural networks

An Enhanced Stacked LSTM Method With No Random Initialization for Malware Threat Hunting in Safety and Time-Critical Systems. *Jahromi, A.N.*, +, *TETCI Oct. 2020 630-640*

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y.*, +, *TETCI Feb. 2020 83-94*

Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K.*, +, *TETCI June 2020 253-264*

Static2Dynamic: Video Inference From a Deep Glimpse. *Yeh, Y.*, +, *TETCI Aug. 2020 440-449*

Recursive functions

On the Computational Power of Asynchronous Axon Membrane Systems. *Song, T.*, +, *TETCI Oct. 2020 696-704*

Regression analysis

Optimization for Deep Convolutional Neural Networks: How Slim Can It Go?. *Liang, S.D.*, *TETCI April 2020 171-179*

Resource allocation

Intelligent Spectrum Resource Allocation Based on Joint Optimization in Heterogeneous Cognitive Radio. *Liu, X.*, +, *TETCI Feb. 2020 5-12*

Resource Sharing and Task Offloading in IoT Fog Computing: A Contract-Learning Approach. *Zhou, Z.*, +, *TETCI June 2020 227-240*

Resource management

Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing. *Liang, Q.*, +, *TETCI Feb. 2020 1-4*

Risk management

Risk Assessment of Private Information Inference for Motion Sensor Embedded IoT Devices. *Huang, Y.*, +, *TETCI June 2020 265-275*

Road vehicles

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

S

Safety-critical software

An Enhanced Stacked LSTM Method With No Random Initialization for Malware Threat Hunting in Safety and Time-Critical Systems. *Jahromi, A.N.*, +, *TETCI Oct. 2020 630-640*

Sampling methods

Marginal Likelihood Based Model Comparison in Fuzzy Bayesian Learning. *Pan, L.*, +, *TETCI Dec. 2020 794-799*

Search problems

A Hybrid Memetic Algorithm for the Parallel Machine Scheduling Problem With Job Deteriorating Effects. *Ding, J.*, +, *TETCI June 2020 385-397*
Community Preserving Network Embedding Based on Memetic Algorithm. *Gong, M.*, +, *TETCI April 2020 108-118*
Cooperative Evolutionary Framework With Focused Search for Many-Objective Optimization. *Wang, J.*, +, *TETCI June 2020 398-412*
Efficient Search and Lookup in Unstructured P2P Overlay Networks Inspired by Swarm Intelligence. *Sesum-Cavic, V.*, +, *TETCI June 2020 351-368*
Hyper-Parameter Optimization Using MARS Surrogate for Machine-Learning Algorithms. *Li, Y.*, +, *TETCI June 2020 287-297*

Security

Guest Editorial Special Issue on Privacy and Security in Computational Intelligence. *Yuan, Y.*, +, *TETCI Oct. 2020 590-592*

Security of data

A System-Driven Taxonomy of Attacks and Defenses in Adversarial Machine Learning. *Sadeghi, K.*, +, *TETCI Aug. 2020 450-467*
Attacking VQA Systems via Adversarial Background Noise. *Chaturvedi, A.*, +, *TETCI Aug. 2020 490-499*
Computational Intelligence for Information Security: A Survey. *Wang, R.*, +, *TETCI Oct. 2020 616-629*
Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K.*, +, *TETCI June 2020 253-264*
Hardening Random Forest Cyber Detectors Against Adversarial Attacks. *Apruzzese, G.*, +, *TETCI Aug. 2020 427-439*

Semantics

Multidomain Features Fusion for Zero-Shot Learning. *Liu, Z.*, +, *TETCI Dec. 2020 764-773*

Sensitivity analysis

Efficient Search and Lookup in Unstructured P2P Overlay Networks Inspired by Swarm Intelligence. *Sesum-Cavic, V.*, +, *TETCI June 2020 351-368*

Service-oriented architecture

A Survey of Evolutionary Computation for Web Service Composition: A Technical Perspective. *da Silva, A.S.*, +, *TETCI Aug. 2020 538-554*

Signal classification

Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration. *Xie, F.*, +, *TETCI June 2020 276-286*
HJB-Equation-Based Optimal Learning Scheme for Neural Networks With Applications in Brain-Computer Interface. *Reddy, T.K.*, +, *TETCI April 2020 159-170*

Signal processing

Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing. *Liang, Q.*, +, *TETCI Feb. 2020 1-4*
Sparse Learning of Higher-Order Statistics for Communications and Sensing. *Sun, Z.*, +, *TETCI Feb. 2020 13-22*

Singular value decomposition

Optimization for Deep Convolutional Neural Networks: How Slim Can It Go?. *Liang, S.D.*, *TETCI April 2020 171-179*

Skin

DFUNet: Convolutional Neural Networks for Diabetic Foot Ulcer Classification. *Goyal, M.*, +, *TETCI Oct. 2020 728-739*

Smart power grids

Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K.*, +, *TETCI June 2020 253-264*

Social networking (online)

Intelligent Cache Pollution Attacks Detection for Edge Computing Enabled Mobile Social Networks. *Xu, Q.*, +, *TETCI June 2020 241-252*

Strong Social Graph Based Trust-Oriented Graph Pattern Matching With Multiple Constraints. *Liu, G.*, +, *TETCI Oct. 2020 675-685*

Soil

Soil PH Measurement Based on Compressive Sensing and Deep Image Prior. *Ren, J.*, +, *TETCI Feb. 2020 74-82*

Spatiotemporal phenomena

Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K.*, +, *TETCI June 2020 253-264*

Speaker recognition

Unsupervised Representation Disentanglement Using Cross Domain Features and Adversarial Learning in Variational Autoencoder Based Voice Conversion. *Huang, W.*, +, *TETCI Aug. 2020 468-479*

Special issues and sections

Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence. *Zhang, Z.*, +, *TETCI Aug. 2020 414-416*

Guest Editorial Special Issue on Big Data and Computational Intelligence for Agile Wireless IoT. *Wu, C.*, +, *TETCI June 2020 202-205*

Guest Editorial Special Issue on Privacy and Security in Computational Intelligence. *Yuan, Y.*, +, *TETCI Oct. 2020 590-592*

Guest Editorial: Special Issue on Computational Intelligence for Communications and Sensing. *Liang, Q.*, +, *TETCI Feb. 2020 1-4*

Speech processing

Unsupervised Representation Disentanglement Using Cross Domain Features and Adversarial Learning in Variational Autoencoder Based Voice Conversion. *Huang, W.*, +, *TETCI Aug. 2020 468-479*

Speech recognition

Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence. *Zhang, Z.*, +, *TETCI Aug. 2020 414-416*

Learning Class-Aligned and Generalized Domain-Invariant Representations for Speech Emotion Recognition. *Xiao, Y.*, +, *TETCI Aug. 2020 480-489*

Splines (mathematics)

Hyper-Parameter Optimization Using MARS Surrogate for Machine-Learning Algorithms. *Li, Y.*, +, *TETCI June 2020 287-297*

State estimation

State Estimation via Communication for Monitoring. *Kapourchali, M.H.*, +, *TETCI Dec. 2020 786-793*

Statistical distributions

Optimization for Deep Convolutional Neural Networks: How Slim Can It Go?. *Liang, S.D.*, *TETCI April 2020 171-179*

Stochastic processes

Static2Dynamic: Video Inference From a Deep Glimpse. *Yeh, Y.*, +, *TETCI Aug. 2020 440-449*

Storage management

Computational Intelligence Enabled Cybersecurity for the Internet of Things. *Zhao, S.*, +, *TETCI Oct. 2020 666-674*

Supervised learning

A System-Driven Taxonomy of Attacks and Defenses in Adversarial Machine Learning. *Sadeghi, K.*, +, *TETCI Aug. 2020 450-467*

Detecting Dynamic Attacks in Smart Grids Using Reservoir Computing: A Spiking Delayed Feedback Reservoir Based Approach. *Hamedani, K.*, +, *TETCI June 2020 253-264*

Support vector machines

Data Augmentation for Radio Frequency Fingerprinting via Pseudo-Random Integration. *Xie, F.*, +, *TETCI June 2020 276-286*

Hyper-Parameter Optimization Using MARS Surrogate for Machine-Learning Algorithms. *Li, Y.*, +, *TETCI June 2020 287-297*

Swarm intelligence

A Comprehensive Review of Shepherding as a Bio-Inspired Swarm-Robotics Guidance Approach. *Long, N.K.*, +, *TETCI Aug. 2020 523-537*

T**Telecommunication computing**

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y.*, +, *TETCI Feb. 2020 83-94*

Telecommunication control

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M.*, +, *TETCI June 2020 336-350*

Telecommunication network reliability

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M.*, +, *TETCI June 2020 336-350*

Telecommunication network topology

Community Preserving Network Embedding Based on Memetic Algorithm. *Gong, M.*, +, *TETCI April 2020 108-118*

Telecommunication security

Preserving Edge Knowledge Sharing Among IoT Services: A Blockchain-Based Approach. *Li, G.*, +, *TETCI Oct. 2020 653-665*

Telecommunication traffic

Deep Learning Based Hotspot Prediction and Beam Management for Adaptive Virtual Small Cell in 5G Networks. *Liu, Y.*, +, *TETCI Feb. 2020 83-94*

Sensors

Tensor Deep Learning Model for Heterogeneous Data Fusion in Internet of Things. *Wang, W.*, +, *TETCI Feb. 2020 32-41*

Text analysis

A Mechanics-Based Similarity Measure for Text Classification in Machine Learning Paradigm. *Kuppili, V.*, +, *TETCI April 2020 180-200*

Time series analysis

Temporal Bag-of-Features Learning for Predicting Mid Price Movements Using High Frequency Limit Order Book Data. *Passalis, N.*, +, *TETCI Dec. 2020 774-785*

Traffic engineering computing

Pedestrian Flow Optimization to Reduce the Risk of Crowd Disasters Through Human-Robot Interaction. *Jiang, C.*, +, *TETCI June 2020 298-311*

Traffic information systems

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Training data

Guest Editorial Special Issue on Adversarial Learning in Computational Intelligence. *Zhang, Z.*, +, *TETCI Aug. 2020 414-416*

Transfer functions

Complex-Valued Neural Networks With Nonparametric Activation Functions. *Scardapane, S.*, +, *TETCI April 2020 140-150*

Transforms

Integrating SIFT and CNN Feature Matching for Partial-Duplicate Image Detection. *Zhou, Z.*, +, *TETCI Oct. 2020 593-604*

Turing machines

On the Computational Power of Asynchronous Axon Membrane Systems. *Song, T.*, +, *TETCI Oct. 2020 696-704*

U**Unsupervised learning**

Improving Adversarial Neural Machine Translation for Morphologically Rich Language. *Mi, C.*, +, *TETCI Aug. 2020 417-426*

Indoor WLAN Intelligent Target Intrusion Sensing Using Ray-Aided Generative Adversarial Network. *Zhou, M.*, +, *TETCI Feb. 2020 61-73*

V

Video signal processing

Attacking VQA Systems via Adversarial Background Noise. *Chaturvedi, A.*, +, *TETCI Aug. 2020 490-499*

Static2Dynamic: Video Inference From a Deep Glimpse. *Yeh, Y.*, +, *TETCI Aug. 2020 440-449*

Visualization

Multidomain Features Fusion for Zero-Shot Learning. *Liu, Z.*, +, *TETCI Dec. 2020 764-773*

Voltage control

A Distributed Iterative Learning Framework for DC Microgrids: Current Sharing and Voltage Regulation. *Liu, X.*, +, *TETCI April 2020 119-129*

W

Web services

A Survey of Evolutionary Computation for Web Service Composition: A Technical Perspective. *da Silva, A.S.*, +, *TETCI Aug. 2020 538-554*

Wireless channels

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M.*, +, *TETCI June 2020 336-350*

EmoSense: Computational Intelligence Driven Emotion Sensing via Wireless Channel Data. *Gu, Y.*, +, *TETCI June 2020 216-226*

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Wireless communication

Guest Editorial Special Issue on Big Data and Computational Intelligence for Agile Wireless IoT. *Wu, C.*, +, *TETCI June 2020 202-205*

Wireless LAN

EmoSense: Computational Intelligence Driven Emotion Sensing via Wireless Channel Data. *Gu, Y.*, +, *TETCI June 2020 216-226*

Indoor WLAN Intelligent Target Intrusion Sensing Using Ray-Aided Generative Adversarial Network. *Zhou, M.*, +, *TETCI Feb. 2020 61-73*

WITM: Intelligent Traffic Monitoring Using Fine-Grained Wireless Signal. *Chen, C.*, +, *TETCI June 2020 206-215*

Wireless sensor networks

Guest Editorial Special Issue on Big Data and Computational Intelligence for Agile Wireless IoT. *Wu, C.*, +, *TETCI June 2020 202-205*

Z

Zigbee

Cooperative Coevolution Design of Multilevel Fuzzy Logic Controllers for Media Access Control in Wireless Body Area Networks. *Nekooei, S.M.*, +, *TETCI June 2020 336-350*