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

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

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- Fan, C.**, see Jia, C., *TCBB Sept.-Oct. 2021* 1937-1945
- Fang, H.**, see Wang, C., *TCBB July-Aug. 2021* 1512-1523
- Fang, J.**, see Zhang, A., *TCBB July-Aug. 2021* 1350-1360
- Fang, Q.**, Su, D., Ng, W., and Feng, J., An Effective Biclustering-Based Framework for Identifying Cell Subpopulations From scRNA-seq Data; *TCBB Nov.-Dec. 2021* 2249-2260
- Fdez-Riverola, F.**, see Blanco, G., *TCBB Nov.-Dec. 2021* 2302-2313
- Fei, Z.**, see Zeng, M., *TCBB Jan.-Feb. 2021* 296-305
- Fei, Z.**, see Zeng, M., *TCBB Nov.-Dec. 2021* 2353-2363
- Feng, J.**, see Fang, Q., *TCBB Nov.-Dec. 2021* 2249-2260
- Feng, R.**, see Chen, J., *TCBB Jan.-Feb. 2021* 103-113
- Feng, S.**, see Wang, X., *TCBB May-June 2021* 963-972
- Feng, S.**, see Yan, L., *TCBB May-June 2021* 922-931
- Feng, T.**, Davila, J.I., Liu, Y., Lin, S., Huang, S., and Wang, C., Semi-Supervised Topological Analysis for Elucidating Hidden Structures in High-Dimensional Transcriptome Datasets; *TCBB July-Aug. 2021* 1620-1631
- Feng, W.**, see Ji, X., *TCBB May-June 2021* 1113-1121
- Feng, X.**, see Li, J., *TCBB May-June 2021* 1049-1059
- Fernandez-Sanchez, J.**, see Casanellas, M., *TCBB Nov.-Dec. 2021* 2855-2861
- Fertin, G.**, see Oliveira, A.R., *TCBB Nov.-Dec. 2021* 2080-2093
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- Fu, Q.**, see Wu, H., *TCBB Sept.-Oct. 2021* 1752-1762
- Fu, Y.**, see Wang, L., *TCBB July-Aug. 2021* 1369-1383
- Fu, Y.**, see Guo, H., *TCBB Nov.-Dec. 2021* 2157-2166
- Fung, G.P.C.**, see Zhu, J., *TCBB March-April 2021* 797-803

G

- Gaggari, P.**, Kumar, M., and Mukhopadhyay, K., Genome-Scale Identification, in Silico Characterization and Interaction Study Between Wheat SNARE and NPSN Gene Families Involved in Vesicular Transport; *TCBB Nov.-Dec. 2021* 2492-2501

- Gao, H.**, see Chen, J., *TCBB Jan.-Feb. 2021 103-113*
- Gao, H.**, see Lu, H., *TCBB May-June 2021 863-870*
- Gao, H.**, see Lin, B., *TCBB Sept.-Oct. 2021 1699-1709*
- Gao, J.**, Tian, L., Lv, T., Wang, J., Song, B., and Hu, X., Protein2Vec: Aligning Multiple PPI Networks with Representation Learning; *TCBB Jan.-Feb. 2021 240-249*
- Gao, J.**, see Wei, H., *TCBB Sept.-Oct. 2021 2017-2022*
- Gao, L.**, see Wu, H., *TCBB Sept.-Oct. 2021 1752-1762*
- Gao, M.**, see Yin, M., *TCBB May-June 2021 1122-1129*
- Gao, R.**, see Li, B.N., *TCBB July-Aug. 2021 1396-1404*
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- Gao, Y.**, see Wang, L., *TCBB July-Aug. 2021 1369-1383*
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- Garcia-Pedrajas, N.**, see Perez-Rodriguez, J., *TCBB Nov.-Dec. 2021 2471-2482*
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- Garzon, M.H.**, see Mainali, S., *TCBB March-April 2021 777-783*
- Ge, X.**, see Raghu, V.K., *TCBB May-June 2021 811-822*
- Ge, Y.**, Rosendahl, P., Duran, C., Topfner, N., Ciucci, S., Guck, J., and Cannistraci, C.V., Cell Mechanics Based Computational Classification of Red Blood Cells Via Machine Intelligence Applied to Morpho-Rheological Markers; *TCBB July-Aug. 2021 1405-1415*
- Ghasemnejad, A.**, Bazmara, S., Shadmani, M., and Bagheri, K.P., Designing a New Multi-Epitope Pertussis Vaccine with Highly Population Coverage Based on a Novel Sequence and Structural Filtration Algorithm; *TCBB Sept.-Oct. 2021 1885-1892*
- Ghosh, P.**, see Pereira, G., *TCBB Nov.-Dec. 2021 2741-2746*
- Ginosyan, S.**, see Grabski, H., *TCBB Nov.-Dec. 2021 2835-2840*
- Gomez, A.M.**, see Villegas-Morcillo, A., *TCBB Nov.-Dec. 2021 2848-2854*
- Gondeau, A.**, Aouabed, Z., Hijri, M., Peres-Neto, P., and Makarenkov, V., Object Weighting: A New Clustering Approach to Deal with Outliers and Cluster Overlap in Computational Biology; *TCBB March-April 2021 633-643*
- Gong, L.**, see Wang, C., *TCBB July-Aug. 2021 1512-1523*
- Gong, M.**, see Ma, L., *TCBB Nov.-Dec. 2021 2598-2611*
- Gong, S.**, see Jin, Y., *TCBB Jan.-Feb. 2021 114-125*
- Gonzalez, M.**, Gutierrez, C., and Martinez, R., Bayesian Inference in Y-Linked Two-Sex Branching Processes with Mutations: ABC Approach; *TCBB March-April 2021 525-538*
- Gopinath, K.**, see Jokinen, E.M., *TCBB July-Aug. 2021 1281-1289*
- Gorecki, P.**, see Tabaszewski, P., *TCBB Jan.-Feb. 2021 149-161*
- Gorecki, P.**, Eulenstein, O., and Tiurny, J., The Unconstrained Diameters of the Duplication-Loss Cost and the Loss Cost; *TCBB Nov.-Dec. 2021 2125-2135*
- Goullar, D.**, see Er, F., *TCBB May-June 2021 1164-1173*
- Grabski, H.**, Ginosyan, S., and Tiratsuyan, S., Molecular Simulations and Markov State Modeling Reveal Inactive Form of Quorum Sensing Regulator SdiA of *Escherichia Coli*; *TCBB Nov.-Dec. 2021 2835-2840*
- Green, P.H.**, see Li, B.N., *TCBB July-Aug. 2021 1396-1404*
- Gromiha, M.M.**, see Huang, D., *TCBB Sept.-Oct. 2021 1730-1732*
- Gross, G.**, see Du, H., *TCBB Nov.-Dec. 2021 2144-2156*
- Grueter, M.**, Duran, K., Ramalingam, R., and Libeskind-Hadas, R., Reconciliation Reconsidered: In Search of a Most Representative Reconciliation in the Duplication-Transfer-Loss Model; *TCBB Nov.-Dec. 2021 2136-2143*
- Gu, J.**, see Chen, J., *TCBB Jan.-Feb. 2021 103-113*
- Gu, W.**, Zhang, Z., Xie, X., and He, Y., An Improved Multi-Task Learning Algorithm for Analyzing Cancer Survival Data; *TCBB March-April 2021 500-511*
- Gu, X.**, see Jiang, Y., *TCBB Jan.-Feb. 2021 40-52*
- Gu, X.**, Cao, Z., Jolfaei, A., Xu, P., Wu, D., Jung, T., and Lin, C., EEG-Based Brain-Computer Interfaces (BCIs): A Survey of Recent Studies on Signal Sensing Technologies and Computational Intelligence Approaches and Their Applications; *TCBB Sept.-Oct. 2021 1645-1666*
- Gu, X.**, Zhang, C., and Ni, T., A Hierarchical Discriminative Sparse Representation Classifier for EEG Signal Detection; *TCBB Sept.-Oct. 2021 1679-1687*
- Guan, J.**, Li, R., Yu, S., and Zhang, X., A Method for Generating Synthetic Electronic Medical Record Text; *TCBB Jan.-Feb. 2021 173-182*
- Guck, J.**, see Ge, Y., *TCBB July-Aug. 2021 1405-1415*
- Gudur, V.Y.**, see Maheshwari, S., *TCBB July-Aug. 2021 1426-1438*
- Gul, S.**, see Munir, F., *TCBB May-June 2021 1142-1150*
- Guo, C.**, see Steinauer, N., *TCBB Nov.-Dec. 2021 2109-2122*
- Guo, F.**, see Wang, Y., *TCBB Jan.-Feb. 2021 325-335*
- Guo, F.**, see Ding, Y., *TCBB Sept.-Oct. 2021 1986-1995*
- Guo, F.**, see Zhang, J., *TCBB Sept.-Oct. 2021 1831-1840*
- Guo, F.**, see Zheng, Y., *TCBB Nov.-Dec. 2021 2768-2774*
- Guo, F.**, see Lyu, Y., *TCBB Nov.-Dec. 2021 2809-2815*
- Guo, G.**, Chen, H., Yan, D., Cheng, J., Chen, J.Y., and Chong, Z., Scalable De Novo Genome Assembly Using a Pregel-Like Graph-Parallel System ; *TCBB March-April 2021 731-744*
- Guo, H.**, Fu, Y., Gao, Y., Li, J., Wang, Y., and Liu, B., deGSM: Memory Scalable Construction Of Large Scale de Bruijn Graph; *TCBB Nov.-Dec. 2021 2157-2166*
- Guo, L.**, see Du, L., *TCBB Jan.-Feb. 2021 227-239*
- Guo, M.**, see Yang, Z., *TCBB July-Aug. 2021 1384-1395*
- Guo, M.**, see Zhao, Y., *TCBB July-Aug. 2021 1439-1450*
- Guo, W.**, see Zhang, W., *TCBB March-April 2021 405-415*
- Guo, X.**, see Huo, H., *TCBB Nov.-Dec. 2021 2394-2408*
- Guo, Z.**, see Yi, H., *TCBB Nov.-Dec. 2021 2546-2554*
- Gupta, A.**, see Kumar, G., *TCBB Sept.-Oct. 2021 1864-1874*
- Gustovic, A.**, see Pognonec, P., *TCBB Nov.-Dec. 2021 2828-2834*
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- Haley, D.**, see Breik, K., *TCBB Jan.-Feb. 2021 283-295*
- Halim, Z.**, see Iqbal, S., *TCBB Sept.-Oct. 2021 1970-1985*
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- Hang, W.**, see Jiang, Y., *TCBB Jan.-Feb. 2021 40-52*
- Hao, X.**, see Wang, M., *TCBB July-Aug. 2021 1549-1561*
- Hartmann, T.**, Bannach, M., and Middendorf, M., Sorting Signed Permutations by Inverse Tandem Duplication Random Losses; *TCBB Nov.-Dec. 2021 2177-2188*
- Hayes, W.**, see Maharaj, S., *TCBB Jan.-Feb. 2021 16-26*
- He, K.**, see Lu, X., *TCBB Sept.-Oct. 2021 1773-1783*
- He, Q.**, see Zou, B., *TCBB Nov.-Dec. 2021 2586-2597*
- He, S.**, see Chen, J., *TCBB Sept.-Oct. 2021 1914-1923*
- He, S.**, see Li, D., *TCBB Nov.-Dec. 2021 2239-2248*
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- He, Y.**, see Gu, W., *TCBB March-April 2021 500-511*
- He, Z.**, see Liu, Y., *TCBB Nov.-Dec. 2021 2788-2794*
- Hernandez, A.**, see Davidov, N., *TCBB Nov.-Dec. 2021 2823-2827*
- Hey, S.**, see Kamruzzaman, M., *TCBB July-Aug. 2021 1535-1548*
- Hijri, M.**, see Gondeau, A., *TCBB March-April 2021 633-643*
- Hojcka, M.**, see Bokes, P., *TCBB Jan.-Feb. 2021 272-282*
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- Hong, Q.**, see Huang, C., *TCBB Jan.-Feb. 2021 62-69*
- Hong, Q.**, see Wang, Z., *TCBB Nov.-Dec. 2021 2218-2229*
- Hossain, M.E.**, Khan, A., Moni, M.A., and Uddin, S., Use of Electronic Health Data for Disease Prediction: A Comprehensive Literature Review; *TCBB March-April 2021 745-758*
- Hou, J.**, see Chen, J., *TCBB Nov.-Dec. 2021 2261-2270*
- Houghten, S.**, see Morales, V.S., *TCBB Sept.-Oct. 2021 1958-1969*
- Hsiao, Y.**, see Chao, K., *TCBB Sept.-Oct. 2021 2023-2031*

Hsieh, S., see Chou, H., *TCBB March-April 2021 455-462*
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Hu, G., see Li, D., *TCBB Nov.-Dec. 2021 2239-2248*
Hu, J., see Zhang, G., *TCBB March-April 2021 697-707*
Hu, S., Xia, D., Su, B., Chen, P., Wang, B., and Li, J., A Convolutional Neural Network System to Discriminate Drug-Target Interactions; *TCBB July-Aug. 2021 1315-1324*
Hu, W., see Zhang, A., *TCBB July-Aug. 2021 1350-1360*
Hu, X., see Gao, J., *TCBB Jan.-Feb. 2021 240-249*
Hu, Y., Liu, J., Gao, Y., and Shang, J., DSTPCA: Double-Sparse Constrained Tensor Principal Component Analysis Method for Feature Selection; *TCBB July-Aug. 2021 1481-1491*
Hua, L., see Ji, X., *TCBB May-June 2021 1113-1121*
Huang, C., Lan, Y., Xu, G., Zhai, X., Wu, J., Lin, F., Zeng, N., Hong, Q., Ng, E.Y.K., Peng, Y., Chen, F., and Zhang, G., A Deep Segmentation Network of Multi-Scale Feature Fusion Based on Attention Mechanism for IVOCT Lumen Contour; *TCBB Jan.-Feb. 2021 62-69*
Huang, C., see Zhu, J., *TCBB March-April 2021 797-803*
Huang, C., see Cui, C., *TCBB July-Aug. 2021 1230-1233*
Huang, C., Xiao, Y., and Xu, G., Predicting Human Intention-Behavior Through EEG Signal Analysis Using Multi-Scale CNN; *TCBB Sept.-Oct. 2021 1722-1729*
Huang, D., see Zhang, Q., *TCBB March-April 2021 667-676*
Huang, D., see Zhang, Q., *TCBB Sept.-Oct. 2021 1793-1800*
Huang, D., Bevilacqua, V., and Gromiha, M.M., Guest Editorial for Special Section on the 15th International Conference on Intelligent Computing (ICIC); *TCBB Sept.-Oct. 2021 1730-1732*
Huang, D., see Zhang, Q., *TCBB Sept.-Oct. 2021 1743-1751*
Huang, D., see Yi, H., *TCBB Nov.-Dec. 2021 2546-2554*
Huang, F., see Zhang, W., *TCBB March-April 2021 405-415*
Huang, H., and Liang, Y., A Novel Cox Proportional Hazards Model for High-Dimensional Genomic Data in Cancer Prognosis; *TCBB Sept.-Oct. 2021 1821-1830*
Huang, J., see Ma, L., *TCBB Nov.-Dec. 2021 2598-2611*
Huang, J., see Ke, Y., *TCBB Nov.-Dec. 2021 2459-2470*
Huang, L., Wang, C., and Chao, H., oComm: Overlapping Community Detection in Multi-View Brain Network; *TCBB July-Aug. 2021 1582-1595*
Huang, M., see Chen, D., *TCBB May-June 2021 891-901*
Huang, N., see An, Y., *TCBB May-June 2021 1093-1105*
Huang, S., see Feng, T., *TCBB July-Aug. 2021 1620-1631*
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Huang, Y., see Lin, J., *TCBB Nov.-Dec. 2021 2724-2732*
Huang, Z., see Song, Y., *TCBB Nov.-Dec. 2021 2775-2780*
Huo, H., Chen, X., Guo, X., and Vitter, J.S., Efficient Compression and Indexing for Highly Repetitive DNA Sequence Collections; *TCBB Nov.-Dec. 2021 2394-2408*
Hussain, W., see Awais, M., *TCBB March-April 2021 596-610*
Hussain, W., see Akmal, M.A., *TCBB Sept.-Oct. 2021 2045-2056*
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Iqbal, S., and Halim, Z., Orienting Conflicted Graph Edges Using Genetic Algorithms to Discover Pathways in Protein-Protein Interaction Networks; *TCBB Sept.-Oct. 2021 1970-1985*
Islam, M.R., Islam, M.S., and Sakeef, N., RNA Secondary Structure Prediction with Pseudoknots Using Chemical Reaction Optimization Algorithm; *TCBB May-June 2021 1195-1207*
Islam, M.S., see Islam, M.R., *TCBB May-June 2021 1195-1207*
Islam, S., see Zhang, Y., *TCBB Sept.-Oct. 2021 1875-1884*

Islam, T., Ranjan, D., Zubair, M., Young, E., Xiao, M., and Riethman, H., Analysis of Subtelomeric REXTAL Assemblies Using QUAST; *TCBB Jan.-Feb. 2021 365-372*
Iwamoto, Y., see Kitrungrotsakul, T., *TCBB March-April 2021 396-404*

J

Javadi, A., Keighobadi, F., Nekoukar, V., and Ebrahimi, M., Finite-Set Model Predictive Control of Melanoma Cancer Treatment Using Signaling Pathway Inhibitor of Cancer Stem Cell; *TCBB July-Aug. 2021 1504-1511*
Jaysawal, B.P., see Ke, Y., *TCBB Nov.-Dec. 2021 2459-2470*
Jean, G., see Oliveira, A.R., *TCBB Nov.-Dec. 2021 2080-2093*
Jean, G., see Oliveira, A.R., *TCBB Nov.-Dec. 2021 2870-2876*
Ji, J., and Yao, Y., Convolutional Neural Network With Graphical Lasso to Extract Sparse Topological Features for Brain Disease Classification; *TCBB Nov.-Dec. 2021 2327-2338*
Ji, X., Wang, L., Hua, L., Wang, X., Zhang, P., Shendre, A., Feng, W., Li, J., and Li, L., Improved Adverse Drug Event Prediction Through Information Component Guided Pharmacological Network Model (IC-PNM); *TCBB May-June 2021 1113-1121*
Ji, X., see Cui, C., *TCBB July-Aug. 2021 1230-1233*
Ji, Z., see Wang, W., *TCBB May-June 2021 1026-1034*
Ji, Z., see Yan, K., *TCBB May-June 2021 850-851*
Jia, C., Zhang, M., Fan, C., Li, F., and Song, J., Formator: Predicting Lysine Formylation Sites Based on the Most Distant Undersampling and Safe-Level Synthetic Minority Oversampling; *TCBB Sept.-Oct. 2021 1937-1945*
Jian, J., see Davidov, N., *TCBB Nov.-Dec. 2021 2823-2827*
Jiang, H., see Qiu, Y., *TCBB Nov.-Dec. 2021 2714-2723*
Jiang, M., see Jiang, T., *TCBB May-June 2021 823-835*
Jiang, M., see Wu, H., *TCBB Sept.-Oct. 2021 1752-1762*
Jiang, T., Zeng, Q., Zhao, T., Qin, B., Liu, T., Chawla, N.V., and Jiang, M., Biomedical Knowledge Graphs Construction From Conditional Statements; *TCBB May-June 2021 823-835*
Jiang, X., Li, J., Kan, Y., Yu, T., Chang, S., Sha, X., Zheng, H., Luo, Y., and Wang, S., MRI Based Radiomics Approach With Deep Learning for Prediction of Vessel Invasion in Early-Stage Cervical Cancer; *TCBB May-June 2021 995-1002*
Jiang, X., see Bian, A., *TCBB May-June 2021 1184-1194*
Jiang, Y., Gu, X., Wu, D., Hang, W., Xue, J., Qiu, S., and Lin, C., A Novel Negative-Transfer-Resistant Fuzzy Clustering Model With a Shared Cross-Domain Transfer Latent Space and its Application to Brain CT Image Segmentation; *TCBB Jan.-Feb. 2021 40-52*
Jiang, Y., see Xia, K., *TCBB Sept.-Oct. 2021 1643-1644*
Jiao, H., Shen, Q., Shi, Y., and Shi, P., Adaptive Tracking Control for Uncertain Cancer-Tumor-Immune Systems; *TCBB Nov.-Dec. 2021 2753-2758*
Jiao, J., see Chen, J., *TCBB Sept.-Oct. 2021 1914-1923*
Jin, Q., see Chen, Y., *TCBB May-June 2021 902-911*
Jin, Q., see Yan, K., *TCBB May-June 2021 850-851*
Jin, Q., see Wang, Y., *TCBB May-June 2021 951-962*
Jin, Y., Qian, Z., Gong, S., and Yang, W., Learning Transferable Driven and Drone Assisted Sustainable and Robust Regional Disease Surveillance for Smart Healthcare; *TCBB Jan.-Feb. 2021 114-125*
Jin, Y., see Yu, Z., *TCBB July-Aug. 2021 1305-1314*
Jing, F., Zhang, S., Cao, Z., and Zhang, S., An Integrative Framework for Combining Sequence and Epigenomic Data to Predict Transcription Factor Binding Sites Using Deep Learning; *TCBB Jan.-Feb. 2021 355-364*
Jokinen, E.M., Gopinath, K., Kurkinen, S.T., and Pentikainen, O.T., Detection of Binding Sites on SARS-CoV-2 Spike Protein Receptor-Binding Domain by Molecular Dynamics Simulations in Mixed Solvents; *TCBB July-Aug. 2021 1281-1289*
Jolfaei, A., see Gu, X., *TCBB Sept.-Oct. 2021 1645-1666*
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- Kadry, S.**, *see* Yu, X., *TCBB Jan.-Feb. 2021 94-102*
- Kahveci, T.**, *see* Chow, K., *TCBB March-April 2021 512-524*
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- Kalyanaraman, A.**, *see* Kamruzzaman, M., *TCBB July-Aug. 2021 1535-1548*
- Kamruzzaman, M.**, Kalyanaraman, A., Krishnamoorthy, B., Hey, S., and Schnable, P.S., Hyppo-X: A Scalable Exploratory Framework for Analyzing Complex Phenomics Data ; *TCBB July-Aug. 2021 1535-1548*
- Kan, Y.**, *see* Jiang, X., *TCBB May-June 2021 995-1002*
- Kang, C.**, *see* Yu, X., *TCBB Jan.-Feb. 2021 94-102*
- Karbalayghareh, A.**, Qian, X., and Dougherty, E.R., Optimal Bayesian Transfer Learning for Count Data; *TCBB March-April 2021 644-655*
- Kaushik, A.C.**, *see* Wei, D., *TCBB July-Aug. 2021 1227-1229*
- Kaushik, A.C.**, Mehmood, A., Selvaraj, G., Dai, X., Pan, Y., and Wei, D., CoronaPep: An Anti-Coronavirus Peptide Generation Tool; *TCBB July-Aug. 2021 1299-1304*
- Ke, Y.**, Huang, J., Lin, W., and Jaysawal, B.P., Finding Possible Promoter Binding Sites in DNA Sequences by Sequential Patterns Mining With Specific Numbers of Gaps; *TCBB Nov.-Dec. 2021 2459-2470*
- Keighobadi, F.**, *see* Javadi, A., *TCBB July-Aug. 2021 1504-1511*
- Keyvanpour, M.R.**, *see* Sadeghi, S.S., *TCBB March-April 2021 472-488*
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- Khan, S.A.**, *see* Awais, M., *TCBB March-April 2021 596-610*
- Khan, S.A.**, *see* Akmal, M.A., *TCBB Sept.-Oct. 2021 2045-2056*
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- Khan, Y.D.**, *see* Akmal, M.A., *TCBB Sept.-Oct. 2021 2045-2056*
- Kim, S.**, *see* Lee, S., *TCBB May-June 2021 1174-1183*
- Kim, Y.**, *see* Zhang, Y., *TCBB Sept.-Oct. 2021 1875-1884*
- Kimmel, J.C.**, Brack, A.S., and Marshall, W.F., Deep Convolutional and Recurrent Neural Networks for Cell Motility Discrimination and Prediction; *TCBB March-April 2021 562-574*
- Kinnebrew, G.H.**, *see* Liu, E., *TCBB July-Aug. 2021 1325-1335*
- Kitrungrotsakul, T.**, Han, X., Iwamoto, Y., Takemoto, S., Yokota, H., Ipponjima, S., Nemoto, T., Xiong, W., and Chen, Y., A Cascade of 2.5D CNN and Bidirectional LSTM Network for Mitotic Cell Detection in 4D Microscopy Image; *TCBB March-April 2021 396-404*
- Knaus, J.**, *see* Schlosser, P., *TCBB Nov.-Dec. 2021 2635-2648*
- Knittel, M.**, *see* Du, H., *TCBB Nov.-Dec. 2021 2144-2156*
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- Kugler, H.**, *see* Occhipinti, A., *TCBB Nov.-Dec. 2021 2339-2352*
- Kumar, A.**, *see* Singh, R., *TCBB Jan.-Feb. 2021 83-93*
- Kumar, G.**, Kumar, R., Pal, M.K., Pramanik, N., Lahiri, T., Gupta, A., and Pandey, S., APT: An Automated Probe Tracker From Gene Expression Data; *TCBB Sept.-Oct. 2021 1864-1874*
- Kumar, M.**, *see* Gaggar, P., *TCBB Nov.-Dec. 2021 2492-2501*
- Kumar, R.**, *see* Kumar, G., *TCBB Sept.-Oct. 2021 1864-1874*
- Kumari, C.**, Abulaish, M., and Subbarao, N., Exploring Molecular Descriptors and Fingerprints to Predict mTOR Kinase Inhibitors using Machine Learning Techniques; *TCBB Sept.-Oct. 2021 1902-1913*
- Kuo, P.**, *see* Lee, C., *TCBB Nov.-Dec. 2021 2862-2869*
- Kuo, W.**, *see* Lin, J., *TCBB Nov.-Dec. 2021 2724-2732*
- Kurkinen, S.T.**, *see* Jokinen, E.M., *TCBB July-Aug. 2021 1281-1289*
- Le, T.**, Sy, A., Molloy, E.K., Zhang, Q., Rao, S., and Warnow, T., Using Constrained-INC for Large-Scale Gene Tree and Species Tree Estimation; *TCBB Jan.-Feb. 2021 2-15*
- Le, T.D.**, *see* Nguyen, T., *TCBB Nov.-Dec. 2021 2841-2847*
- Lee, C.**, *see* Chao, K., *TCBB Sept.-Oct. 2021 2023-2031*
- Lee, C.**, Zeng, J., Lee, S., Lu, R., and Kuo, P., SNP Data Science for Classification of Bipolar Disorder I and Bipolar Disorder II; *TCBB Nov.-Dec. 2021 2862-2869*
- Lee, S.**, Lee, T., Noh, Y., and Kim, S., Ranked k-Spectrum Kernel for Comparative and Evolutionary Comparison of Exons, Introns, and CpG Islands; *TCBB May-June 2021 1174-1183*
- Lee, S.**, *see* Lee, C., *TCBB Nov.-Dec. 2021 2862-2869*
- Lee, S.C.**, *see* Nguyen, T., *TCBB Nov.-Dec. 2021 2841-2847*
- Lee, T.**, *see* Lee, S., *TCBB May-June 2021 1174-1183*
- Lee, Y.**, *see* Chao, K., *TCBB Sept.-Oct. 2021 2023-2031*
- Lei, S.**, *see* Wang, C., *TCBB July-Aug. 2021 1512-1523*
- Li, B.N.**, Wang, X., Wang, R., Zhou, T., Gao, R., Ciaccio, E.J., and Green, P.H., Celiac Disease Detection From Videocapsule Endoscopy Images Using Strip Principal Component Analysis; *TCBB July-Aug. 2021 1396-1404*
- Li, C.**, Xu, J., Liu, Q., Zhou, Y., Mou, L., Pu, Z., Xia, Y., Zheng, H., and Wang, S., Multi-View Mammographic Density Classification by Dilated and Attention-Guided Residual Learning; *TCBB May-June 2021 1003-1013*
- Li, D.**, Pan, Z., Hu, G., Anderson, G., and He, S., Active Module Identification From Multilayer Weighted Gene Co-Expression Networks: A Continuous Optimization Approach; *TCBB Nov.-Dec. 2021 2239-2248*
- Li, F.**, *see* Peng, S., *TCBB July-Aug. 2021 1464-1473*
- Li, F.**, *see* Jia, C., *TCBB Sept.-Oct. 2021 1937-1945*
- Li, F.**, *see* Li, M., *TCBB Sept.-Oct. 2021 1801-1810*
- Li, G.**, *see* Ding, P., *TCBB July-Aug. 2021 1562-1571*
- Li, G.**, *see* Zhang, L., *TCBB Nov.-Dec. 2021 2123-2124*
- Li, H.**, *see* Xu, Y., *TCBB March-April 2021 431-442*
- Li, H.**, *see* Wu, H., *TCBB Sept.-Oct. 2021 1752-1762*
- Li, H.**, *see* Yuan, S., *TCBB Nov.-Dec. 2021 2281-2290*
- Li, H.**, Wang, Y., Zhang, Z., Tan, Y., Chen, Z., Wang, X., Pei, T., and Wang, L., Identifying Microbe-Disease Association Based on a Novel Back-Propagation Neural Network Model; *TCBB Nov.-Dec. 2021 2502-2513*
- Li, J.**, Zhao, H., Xuan, Z., Yu, J., Feng, X., Liao, B., and Wang, L., A Novel Approach for Potential Human LncRNA-Disease Association Prediction Based on Local Random Walk; *TCBB May-June 2021 1049-1059*
- Li, J.**, *see* Jiang, X., *TCBB May-June 2021 995-1002*
- Li, J.**, *see* Ji, X., *TCBB May-June 2021 1113-1121*
- Li, J.**, *see* Liu, E., *TCBB July-Aug. 2021 1325-1335*
- Li, J.**, *see* Hu, S., *TCBB July-Aug. 2021 1315-1324*
- Li, J.**, *see* Lu, X., *TCBB Sept.-Oct. 2021 1773-1783*
- Li, J.**, *see* Xie, J., *TCBB Sept.-Oct. 2021 1784-1792*
- Li, J.**, *see* Li, M., *TCBB Sept.-Oct. 2021 1801-1810*
- Li, J.**, *see* Yuan, X., *TCBB Sept.-Oct. 2021 1811-1820*
- Li, J.**, *see* Li, X., *TCBB Nov.-Dec. 2021 2483-2491*
- Li, J.**, *see* Ma, L., *TCBB Nov.-Dec. 2021 2598-2611*
- Li, J.**, *see* Lyu, Y., *TCBB Nov.-Dec. 2021 2809-2815*
- Li, J.**, *see* Guo, H., *TCBB Nov.-Dec. 2021 2157-2166*
- Li, J.**, *see* Wang, S., *TCBB Nov.-Dec. 2021 2733-2740*
- Li, L.**, and Cai, M., Cross-species Data Classification by Domain Adaptation via Discriminative Heterogeneous Maximum Mean Discrepancy; *TCBB Jan.-Feb. 2021 312-324*
- Li, L.**, *see* Lian, S., *TCBB May-June 2021 852-862*
- Li, L.**, *see* Ji, X., *TCBB May-June 2021 1113-1121*
- Li, L.**, *see* Liu, E., *TCBB July-Aug. 2021 1325-1335*
- Li, L.**, *see* Song, Y., *TCBB Nov.-Dec. 2021 2775-2780*
- Li, M.**, *see* Zeng, M., *TCBB Jan.-Feb. 2021 296-305*
- Li, M.**, *see* Zheng, R., *TCBB Jan.-Feb. 2021 347-354*
- Li, M.**, Wang, Y., Zheng, R., Shi, X., Li, Y., Wu, F., and Wang, J., DeepDSC: A Deep Learning Method to Predict Drug Sensitivity of Cancer Cell Lines ; *TCBB March-April 2021 575-582*
- Li, M.**, *see* Luo, H., *TCBB March-April 2021 463-471*
- Li, M.**, *see* Zhang, Z., *TCBB May-June 2021 1070-1081*
- Li, M.**, *see* Liao, X., *TCBB July-Aug. 2021 1492-1503*

L

- Lahiri, T.**, *see* Kumar, G., *TCBB Sept.-Oct. 2021 1864-1874*
- Lai, D.**, *see* Chen, Q., *TCBB May-June 2021 1106-1112*
- Lai, L.**, *see* Chao, K., *TCBB Sept.-Oct. 2021 2023-2031*
- Lai, Z.**, *see* Luo, J., *TCBB Nov.-Dec. 2021 2535-2545*
- Lan, W.**, *see* Chen, Q., *TCBB May-June 2021 1106-1112*
- Lan, Y.**, *see* Huang, C., *TCBB Jan.-Feb. 2021 62-69*
- Le, N.**, and Nguyen, B.P., Prediction of FMN Binding Sites in Electron Transport Chains Based on 2-D CNN and PSSM Profiles; *TCBB Nov.-Dec. 2021 2189-2197*

- Li, M.**, see Zhang, W., *TCBB July-Aug. 2021 1416-1425*
- Li, M.**, Wang, Y., Li, F., Zhao, Y., Liu, M., Zhang, S., Bin, Y., Smith, A.I., Webb, G.I., Li, J., Song, J., and Xia, J., A Deep Learning-Based Method for Identification of Bacteriophage-Host Interaction; *TCBB Sept.-Oct. 2021 1801-1810*
- Li, M.**, see Zeng, M., *TCBB Nov.-Dec. 2021 2353-2363*
- Li, M.**, see Li, X., *TCBB Nov.-Dec. 2021 2483-2491*
- Li, M.**, see Zhang, F., *TCBB Nov.-Dec. 2021 2208-2217*
- Li, P.**, see Zhang, Q., *TCBB May-June 2021 882-890*
- Li, R.**, see Guan, J., *TCBB Jan.-Feb. 2021 173-182*
- Li, S.**, see Lian, S., *TCBB May-June 2021 852-862*
- Li, S.**, see Zhu, Z., *TCBB Nov.-Dec. 2021 2420-2430*
- Li, T.**, see Long, W., *TCBB Jan.-Feb. 2021 194-204*
- Li, W.**, see Chen, W., *TCBB March-April 2021 773-776*
- Li, W.**, see Chen, D., *TCBB May-June 2021 891-901*
- Li, W.**, see Deng, L., *TCBB July-Aug. 2021 1572-1581*
- Li, W.**, see Liu, Y., *TCBB Sept.-Oct. 2021 1763-1772*
- Li, X.**, see Wang, C., *TCBB July-Aug. 2021 1512-1523*
- Li, X.**, Xiang, J., Wang, J., Li, J., Wu, F., and Li, M., FUNMarker: Fusion Network-Based Method to Identify Prognostic and Heterogeneous Breast Cancer Biomarkers; *TCBB Nov.-Dec. 2021 2483-2491*
- Li, X.**, see Wang, Y., *TCBB Nov.-Dec. 2021 2431-2444*
- Li, X.**, see Nguyen, T., *TCBB Nov.-Dec. 2021 2841-2847*
- Li, X.**, Zhang, S., and Wong, K., Evolving Transcriptomic Profiles From Single-Cell RNA-Seq Data Using Nature-Inspired Multiobjective Optimization; *TCBB Nov.-Dec. 2021 2445-2458*
- Li, Y.**, see Zeng, M., *TCBB Jan.-Feb. 2021 296-305*
- Li, Y.**, see Peng, C., *TCBB March-April 2021 621-632*
- Li, Y.**, see Li, M., *TCBB March-April 2021 575-582*
- Li, Y.**, see Zhou, X., *TCBB May-June 2021 912-921*
- Li, Y.**, see Zheng, K., *TCBB Sept.-Oct. 2021 1733-1742*
- Li, Y.**, see Zeng, M., *TCBB Nov.-Dec. 2021 2353-2363*
- Li, Y.**, see Zhang, F., *TCBB Nov.-Dec. 2021 2208-2217*
- Li, Z.**, see Yuan, X., *TCBB March-April 2021 539-549*
- Li, Z.**, see Zhang, W., *TCBB March-April 2021 405-415*
- Li, Z.**, see Xing, J., *TCBB Nov.-Dec. 2021 2555-2565*
- Li-Ling, J.**, see Qin, R., *TCBB Jan.-Feb. 2021 183-193*
- Lian, G.**, see Lian, S., *TCBB May-June 2021 852-862*
- Lian, S.**, Li, L., Lian, G., Xiao, X., Luo, Z., and Li, S., A Global and Local Enhanced Residual U-Net for Accurate Retinal Vessel Segmentation; *TCBB May-June 2021 852-862*
- Liang, C.**, see Ding, P., *TCBB July-Aug. 2021 1562-1571*
- Liang, Q.**, see Liang, S., *TCBB Nov.-Dec. 2021 2072-2079*
- Liang, S.**, Liang, Q., Chen, R., and Chen, K., Stratified Test Accurately Identifies Differentially Expressed Genes Under Batch Effects in Single-Cell Data; *TCBB Nov.-Dec. 2021 2072-2079*
- Liang, W.**, see Zhou, X., *TCBB May-June 2021 912-921*
- Liang, Y.**, see Huang, H., *TCBB Sept.-Oct. 2021 1821-1830*
- Liang, Z.**, see Zhang, W., *TCBB July-Aug. 2021 1416-1425*
- Liao, B.**, see Li, J., *TCBB May-June 2021 1049-1059*
- Liao, Q.**, see Wei, H., *TCBB Sept.-Oct. 2021 1946-1957*
- Liao, X.**, see Peng, S., *TCBB July-Aug. 2021 1464-1473*
- Liao, X.**, Li, M., Luo, J., Zou, Y., Wu, F., Yi-Pan, Luo, F., and Wang, J., EPGA-SC : A Framework for *de novo* Assembly of Single-Cell Sequencing Reads; *TCBB July-Aug. 2021 1492-1503*
- Libeskind-Hadas, R.**, see Grueter, M., *TCBB Nov.-Dec. 2021 2136-2143*
- Libeskind-Hadas, R.**, see Du, H., *TCBB Nov.-Dec. 2021 2144-2156*
- Lim, H.**, and Xie, L., A New Weighted Imputed Neighborhood-Regularized Tri-Factorization One-Class Collaborative Filtering Algorithm: Application to Target Gene Prediction of Transcription Factors; *TCBB Jan.-Feb. 2021 126-137*
- Lin, B.**, Deng, S., Gao, H., and Yin, J., A Multi-Scale Activity Transition Network for Data Translation in EEG Signals Decoding; *TCBB Sept.-Oct. 2021 1699-1709*
- Lin, C.**, see Jiang, Y., *TCBB Jan.-Feb. 2021 40-52*
- Lin, C.**, see Gu, X., *TCBB Sept.-Oct. 2021 1645-1666*
- Lin, C.**, see Zhang, Y., *TCBB Sept.-Oct. 2021 1667-1678*
- Lin, F.**, see Huang, C., *TCBB Jan.-Feb. 2021 62-69*
- Lin, J.**, Kuo, W., Huang, Y., Jong, T., Hsu, A., and Hsu, W., Using Convolutional Neural Networks to Measure the Physiological Age of *Caenorhabditis elegans*; *TCBB Nov.-Dec. 2021 2724-2732*
- Lin, Q.**, see Ma, L., *TCBB Nov.-Dec. 2021 2598-2611*
- Lin, S.**, see Feng, T., *TCBB July-Aug. 2021 1620-1631*
- Lin, W.**, see Shi, K., *TCBB Nov.-Dec. 2021 2514-2525*
- Lin, W.**, see Ke, Y., *TCBB Nov.-Dec. 2021 2459-2470*
- Lin, Y.**, see Chou, H., *TCBB March-April 2021 455-462*
- Lin, Y.**, see Lu, F., *TCBB Nov.-Dec. 2021 2781-2787*
- Ling, H.**, see Wu, H., *TCBB Sept.-Oct. 2021 1752-1762*
- Liu, B.**, see Zhang, J., *TCBB July-Aug. 2021 1451-1463*
- Liu, B.**, see Wei, H., *TCBB Sept.-Oct. 2021 1946-1957*
- Liu, B.**, see Yan, K., *TCBB Sept.-Oct. 2021 2008-2016*
- Liu, B.**, see Yan, K., *TCBB Nov.-Dec. 2021 2682-2691*
- Liu, B.**, see Guo, H., *TCBB Nov.-Dec. 2021 2157-2166*
- Liu, E.**, Li, J., Kinnebrew, G.H., Zhang, P., Zhang, Y., Cheng, L., and Li, L., A Fast and Furious Bayesian Network and Its Application of Identifying Colon Cancer to Liver Metastasis Gene Regulatory Networks; *TCBB July-Aug. 2021 1325-1335*
- Liu, G.**, see Xiao, M., *TCBB July-Aug. 2021 1250-1261*
- Liu, G.**, see Zou, B., *TCBB Nov.-Dec. 2021 2586-2597*
- Liu, J.**, see Yu, T., *TCBB May-June 2021 1082-1092*
- Liu, J.**, see Chen, Q., *TCBB May-June 2021 1106-1112*
- Liu, J.**, see Yin, M., *TCBB May-June 2021 1122-1129*
- Liu, J.**, see Hu, Y., *TCBB July-Aug. 2021 1481-1491*
- Liu, J.**, see Wang, L., *TCBB July-Aug. 2021 1369-1383*
- Liu, J.**, see Yan, K., *TCBB Sept.-Oct. 2021 2008-2016*
- Liu, J.**, see Wang, C., *TCBB Nov.-Dec. 2021 2375-2383*
- Liu, K.**, see Du, L., *TCBB Jan.-Feb. 2021 227-239*
- Liu, L.**, Zare, R., and Wang, S., Guest Editorial: Transfer Learning Methods Used in Medical Imaging and Health Informatics; *TCBB Jan.-Feb. 2021 38-39*
- Liu, M.**, Liu, Y., Qian, W., and Wang, Y., DeepSeed Local Graph Matching for Densely Packed Cells Tracking; *TCBB May-June 2021 1060-1069*
- Liu, M.**, see Li, M., *TCBB Sept.-Oct. 2021 1801-1810*
- Liu, N.**, see Du, H., *TCBB Nov.-Dec. 2021 2144-2156*
- Liu, Q.**, see Qiu, J., *TCBB March-April 2021 677-685*
- Liu, Q.**, see Li, C., *TCBB May-June 2021 1003-1013*
- Liu, S.**, Wang, X., Zhao, L., Zhao, J., Xin, Q., and Wang, S., Subject-Independent Emotion Recognition of EEG Signals Based on Dynamic Empirical Convolutional Neural Network; *TCBB Sept.-Oct. 2021 1710-1721*
- Liu, T.**, see Jiang, T., *TCBB May-June 2021 820-835*
- Liu, W.**, see Peng, S., *TCBB July-Aug. 2021 1464-1473*
- Liu, W.**, see Zhang, Y., *TCBB Sept.-Oct. 2021 1667-1678*
- Liu, X.**, see Chen, J., *TCBB Jan.-Feb. 2021 103-113*
- Liu, Y.**, see Qian, P., *TCBB Jan.-Feb. 2021 70-82*
- Liu, Y.**, see Wang, L., *TCBB March-April 2021 784-789*
- Liu, Y.**, see Liu, M., *TCBB May-June 2021 1060-1069*
- Liu, Y.**, see Feng, T., *TCBB July-Aug. 2021 1620-1631*
- Liu, Y.**, Wang, S., Zhang, J., Zhang, W., Zhou, S., and Li, W., DMFMDA: Prediction of Microbe-Disease Associations Based on Deep Matrix Factorization Using Bayesian Personalized Ranking; *TCBB Sept.-Oct. 2021 1763-1772*
- Liu, Y.**, Chen, W., and He, Z., Essential Protein Recognition via Community Significance; *TCBB Nov.-Dec. 2021 2788-2794*
- Liu, Z.**, see Shang, H., *TCBB Jan.-Feb. 2021 336-346*
- Liu, Z.**, see Zhang, J., *TCBB March-April 2021 583-595*
- Liuliu, H.**, see Wang, L., *TCBB March-April 2021 784-789*
- Lones, M.**, see Taou, N., *TCBB Nov.-Dec. 2021 2649-2658*
- Long, W.**, Li, T., Yang, Y., and Shen, H., FlyIT: *Drosophila* Embryogenesis Image Annotation based on Image Tiling and Convolutional Neural Networks; *TCBB Jan.-Feb. 2021 194-204*
- Lopez-Lopera, A.F.**, Durrande, N., and Alvarez, M.A., Physically-Inspired Gaussian Process Models for Post-Transcriptional Regulation in *Drosophila*; *TCBB March-April 2021 656-666*
- Lourenco, A.**, see Blanco, G., *TCBB Nov.-Dec. 2021 2302-2313*

- Lu, C.**, *see* Zeng, M., *TCBB Nov.-Dec. 2021 2353-2363*
- Lu, F.**, Lin, Y., Yuan, C., Zhang, X., and Ou-Yang, L., EnTSSR: A Weighted Ensemble Learning Method to Impute Single-Cell RNA Sequencing Data ; *TCBB Nov.-Dec. 2021 2781-2787*
- Lu, H.**, Gao, H., Ye, M., and Wang, X., A Hybrid Ensemble Algorithm Combining AdaBoost and Genetic Algorithm for Cancer Classification with Gene Expression Data; *TCBB May-June 2021 863-870*
- Lu, J.**, *see* Yu, Z., *TCBB July-Aug. 2021 1305-1314*
- Lu, M.**, *see* Xu, B., *TCBB Sept.-Oct. 2021 1850-1863*
- Lu, R.**, *see* Lee, C., *TCBB Nov.-Dec. 2021 2862-2869*
- Lu, T.**, *see* Chao, K., *TCBB Sept.-Oct. 2021 2023-2031*
- Lu, W.**, *see* Wu, H., *TCBB Sept.-Oct. 2021 1752-1762*
- Lu, X.**, Wang, X., Ding, L., Li, J., Gao, Y., and He, K., frDriver: A Functional Region Driver Identification for Protein Sequence; *TCBB Sept.-Oct. 2021 1773-1783*
- Lubbert, M.**, *see* Schlosser, P., *TCBB Nov.-Dec. 2021 2635-2648*
- Luncasu, V.**, and Raschip, M., A Graph-Based Approach for the DNA Word Design Problem ; *TCBB Nov.-Dec. 2021 2747-2752*
- Luo, F.**, *see* Xu, Y., *TCBB March-April 2021 431-442*
- Luo, F.**, *see* Liao, X., *TCBB July-Aug. 2021 1492-1503*
- Luo, H.**, Wang, J., Yan, C., Li, M., Wu, F., and Pan, Y., A Novel Drug Repositioning Approach Based on Collaborative Metric Learning; *TCBB March-April 2021 463-471*
- Luo, J.**, *see* Zhang, Z., *TCBB May-June 2021 1070-1081*
- Luo, J.**, *see* Ding, P., *TCBB July-Aug. 2021 1562-1571*
- Luo, J.**, *see* Liao, X., *TCBB July-Aug. 2021 1492-1503*
- Luo, J.**, Shen, C., Lai, Z., Cai, J., and Ding, P., Incorporating Clinical, Chemical and Biological Information for Predicting Small Molecule-microRNA Associations Based on Non-Negative Matrix Factorization; *TCBB Nov.-Dec. 2021 2535-2545*
- Luo, Y.**, *see* Jiang, X., *TCBB May-June 2021 995-1002*
- Luo, Z.**, *see* Lian, S., *TCBB May-June 2021 852-862*
- Luo, Z.**, *see* Zhang, W., *TCBB July-Aug. 2021 1416-1425*
- Lv, J.**, Tu, S., and Xu, L., Detection of Phenotype-Related Mutations of COVID-19 via the Whole Genomic Data ; *TCBB July-Aug. 2021 1242-1249*
- Lv, T.**, *see* Gao, J., *TCBB Jan.-Feb. 2021 240-249*
- Lv, Z.**, Qiao, L., Wang, Q., and Piccialli, F., Advanced Machine-Learning Methods for Brain-Computer Interfacing; *TCBB Sept.-Oct. 2021 1688-1698*
- Lyne, A.**, and Perie, L., Comparing Phylogenetic Approaches to Reconstructing Cell Lineage From Microsatellites With Missing Data; *TCBB Nov.-Dec. 2021 2291-2301*
- Lyu, Y.**, Zhang, Z., Li, J., He, W., Ding, Y., and Guo, F., iEnhancer-KL: A Novel Two-Layer Predictor for Identifying Enhancers by Position Specific of Nucleotide Composition; *TCBB Nov.-Dec. 2021 2809-2815*

M

- Ma, C.**, *see* Yuan, X., *TCBB Nov.-Dec. 2021 2692-2701*
- Ma, L.**, Wang, S., Lin, Q., Li, J., You, Z., Huang, J., and Gong, M., Multi-Neighborhood Learning for Global Alignment in Biological Networks; *TCBB Nov.-Dec. 2021 2598-2611*
- Ma, Z.**, *see* Wang, Y., *TCBB Nov.-Dec. 2021 2431-2444*
- Maharaj, S.**, Qian, T., Ohiba, Z., and Hayes, W., Common Neighbors Extension of the Sticky Model for PPI Networks Evaluated by Global and Local Graphlet Similarity; *TCBB Jan.-Feb. 2021 16-26*
- Maheshwari, S.**, Gudur, V.Y., Shafik, R., Wilson, I., Yakovlev, A., and Acharyya, A., CORAL: Verification-Aware OpenCL Based Read Mapper for Heterogeneous Systems; *TCBB July-Aug. 2021 1426-1438*
- Maicas, S.**, and Segura-Garcia, J., Spatial Distribution of Antibiotic-Producing Bacteria in Urban Areas. A Case Study in València (Spain); *TCBB Nov.-Dec. 2021 2877-2883*
- Mainali, S.**, Colorado, F.A., and Garzon, M.H., Foretelling the Phenotype of a Genomic Sequence; *TCBB March-April 2021 777-783*
- Makarenkov, V.**, *see* Gondeau, A., *TCBB March-April 2021 633-643*
- Mandal, K.**, Sarmah, R., and Bhattacharyya, D.K., POPBic: Pathway-Based Order Preserving Biclustering Algorithm Towards the Analysis of Gene Expression Data; *TCBB Nov.-Dec. 2021 2659-2670*

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N

- Margolles, A.**, *see* Blanco, G., *TCBB Nov.-Dec. 2021 2302-2313*
- Markin, A.**, *see* Tabaszewski, P., *TCBB Jan.-Feb. 2021 149-161*
- Marshall, W.F.**, *see* Kimmel, J.C., *TCBB March-April 2021 562-574*
- Martin-Vide, C.**, and Vega-Rodriguez, M.A., Algorithms for Computational Biology: Sixth Edition ; *TCBB Jan.-Feb. 2021 1*
- Martinez, R.**, *see* Gonzalez, M., *TCBB March-April 2021 525-538*
- Marty, B.**, *see* Ozden, F., *TCBB July-Aug. 2021 1474-1480*
- Mawhorter, R.**, *see* Du, H., *TCBB Nov.-Dec. 2021 2144-2156*
- McGee, F.**, *see* Nielsen, S.S., *TCBB May-June 2021 1130-1141*
- McGrath, A.**, *see* Amin, N., *TCBB Nov.-Dec. 2021 2795-2801*
- McKenna, P.**, *see* Davidov, N., *TCBB Nov.-Dec. 2021 2823-2827*
- Medhat, B.**, and Shawish, A., FLR: A Revolutionary Alignment-Free Similarity Analysis Methodology for DNA-Sequences; *TCBB Sept.-Oct. 2021 1924-1936*
- Medlin, K.**, *see* Davidov, N., *TCBB Nov.-Dec. 2021 2823-2827*
- Mehmood, A.**, *see* Kaushik, A.C., *TCBB July-Aug. 2021 1299-1304*
- Mei, C.**, *see* Wang, B., *TCBB May-June 2021 985-994*
- Middendorf, M.**, *see* Hartmann, T., *TCBB Nov.-Dec. 2021 2177-2188*
- Minhas, F.A.**, *see* Munir, F., *TCBB May-June 2021 1142-1150*
- Mitra, P.**, *see* Biswas, S., *TCBB March-April 2021 708-717*
- Mitra, P.**, *see* Banerjee, A., *TCBB March-April 2021 489-499*
- Mojumder, R.**, *see* Davidov, N., *TCBB Nov.-Dec. 2021 2823-2827*
- Molloy, E.K.**, *see* Le, T., *TCBB Jan.-Feb. 2021 2-15*
- Moni, M.A.**, *see* Hossain, M.E., *TCBB March-April 2021 745-758*
- Montagna, S.**, Braccini, M., and Roli, A., The Impact of Self-Loops on Boolean Networks Attractor Landscape and Implications for Cell Differentiation Modelling; *TCBB Nov.-Dec. 2021 2702-2713*
- Monteiro, N.R.C.**, Ribeiro, B., and Arrais, J.P., Drug-Target Interaction Prediction: End-to-End Deep Learning Approach; *TCBB Nov.-Dec. 2021 2364-2374*
- Morales, V.S.**, and Houghten, S., Lossy Compression of Quality Values in Sequencing Data; *TCBB Sept.-Oct. 2021 1958-1969*
- Morales-Cordovilla, J.A.**, *see* Villegas-Morcillo, A., *TCBB Nov.-Dec. 2021 2848-2854*
- Morgera, S.**, *see* Chawla, A., *TCBB March-April 2021 790-796*
- Mou, L.**, *see* Li, C., *TCBB May-June 2021 1003-1013*
- Mu, Q.**, and Wang, J., CNAPE: A Machine Learning Method for Copy Number Alteration Prediction from Gene Expression; *TCBB Jan.-Feb. 2021 306-311*
- Mukhopadhyay, K.**, *see* Gagar, P., *TCBB Nov.-Dec. 2021 2492-2501*
- Mulligan, B.**, *see* Carrillo-Cabada, H., *TCBB July-Aug. 2021 1336-1349*
- Munir, F.**, Gul, S., Asif, A., and Minhas, F.A., MILAMP: Multiple Instance Prediction of Amyloid Proteins; *TCBB May-June 2021 1142-1150*
- Muzic, R.F.**, *see* Qian, P., *TCBB Jan.-Feb. 2021 70-82*
- Nandi, A.K.**, *see* Zhang, Q., *TCBB Sept.-Oct. 2021 1793-1800*
- Nekoukar, V.**, *see* Javadi, A., *TCBB July-Aug. 2021 1504-1511*
- Nemoto, T.**, *see* Kitrungrotsakul, T., *TCBB March-April 2021 396-404*
- Nener, B.**, *see* Xu, B., *TCBB Sept.-Oct. 2021 1850-1863*
- Ng, E.Y.K.**, *see* Huang, C., *TCBB Jan.-Feb. 2021 62-69*
- Ng, W.**, *see* Fang, Q., *TCBB Nov.-Dec. 2021 2249-2260*
- Nguyen, B.P.**, *see* Le, N., *TCBB Nov.-Dec. 2021 2189-2197*
- Nguyen, T.**, *see* Araghi, S., *TCBB March-April 2021 443-454*
- Nguyen, T.**, Lee, S.C., Quinn, T.P., Truong, B., Li, X., Tran, T., Venkatesh, S., and Le, T.D., PAN: Personalized Annotation-Based Networks for the Prediction of Breast Cancer Relapse; *TCBB Nov.-Dec. 2021 2841-2847*
- Ni, T.**, *see* Xia, K., *TCBB Jan.-Feb. 2021 53-61*
- Ni, T.**, *see* Gu, X., *TCBB Sept.-Oct. 2021 1679-1687*
- Nie, Q.**, *see* Xie, J., *TCBB Sept.-Oct. 2021 1784-1792*
- Nielsen, S.S.**, Ostaszewski, M., McGee, F., Hoksza, D., and Zorzan, S., Machine Learning to Support the Presentation of Complex Pathway Graphs; *TCBB May-June 2021 1130-1141*
- Noh, Y.**, *see* Lee, S., *TCBB May-June 2021 1174-1183*

O

- Occhipinti, A.**, Hamadi, Y., Kugler, H., Wintersteiger, C.M., Yordanov, B., and Angione, C., Discovering Essential Multiple Gene Effects Through Large Scale Optimization: An Application to Human Cancer Metabolism; *TCBB Nov.-Dec. 2021 2339-2352*
- Ogundijo, O.E.**, Zhu, K., Wang, X., and Anastassiou, D., Characterizing Intra-Tumor Heterogeneity From Somatic Mutations Without Copy-Neutral Assumption; *TCBB Nov.-Dec. 2021 2271-2280*
- Ohiba, Z.**, see Maharaj, S., *TCBB Jan.-Feb. 2021 16-26*
- Oliveira, A.R.**, Jean, G., Fertin, G., Brito, K.L., Dias, U., and Dias, Z., Sorting Permutations by Intergenic Operations; *TCBB Nov.-Dec. 2021 2080-2093*
- Oliveira, A.R.**, Jean, G., Fertin, G., Brito, K.L., Bulteau, L., Dias, U., and Dias, Z., Sorting Signed Permutations by Intergenic Reversals; *TCBB Nov.-Dec. 2021 2870-2876*
- Oneto, L.**, see Chicco, D., *TCBB Nov.-Dec. 2021 2759-2765*
- Ong, Y.S.**, see Du, H., *TCBB Nov.-Dec. 2021 2144-2156*
- Ostaszewski, M.**, see Nielsen, S.S., *TCBB May-June 2021 1130-1141*
- Ou-Yang, L.**, see Xu, T., *TCBB July-Aug. 2021 1632-1642*
- Ou-Yang, L.**, see Lu, F., *TCBB Nov.-Dec. 2021 2781-2787*
- Ou-Yang, L.**, see Sun, Y., *TCBB Nov.-Dec. 2021 2891-2897*
- Ouyang, W.**, see Ding, P., *TCBB July-Aug. 2021 1562-1571*
- Owen, M.**, see Davidov, N., *TCBB Nov.-Dec. 2021 2823-2827*
- Ozden, F.**, Siper, M.C., Acarsoy, N., Elmas, T., Marty, B., Qi, X., and Cicek, A.E., DORMAN: Database of Reconstructed Metabolic Networks; *TCBB July-Aug. 2021 1474-1480*
- Ozgul, O.F.**, Bardak, B., and Tan, M., A Convolutional Deep Clustering Framework for Gene Expression Time Series; *TCBB Nov.-Dec. 2021 2198-2207*

P

- Pal, A.**, Haliti, P., Dharmadhikari, B., Qi, W., and Patra, P., Manipulating Extracellular Matrix Organizations and Parameters to Control Local Cancer Invasion; *TCBB Nov.-Dec. 2021 2566-2576*
- Pal, J.K.**, Ray, S.S., and Pal, S.K., Identifying Drug Resistant miRNAs Using Entropy Based Ranking; *TCBB May-June 2021 973-984*
- Pal, K.**, see Banerjee, A., *TCBB March-April 2021 489-499*
- Pal, M.K.**, see Kumar, G., *TCBB Sept.-Oct. 2021 1864-1874*
- Pal, S.K.**, see Pal, J.K., *TCBB May-June 2021 973-984*
- Pan, J.**, see Qiu, J., *TCBB March-April 2021 677-685*
- Pan, W.**, see Zhang, Y., *TCBB Sept.-Oct. 2021 1667-1678*
- Pan, Y.**, see Zeng, M., *TCBB Jan.-Feb. 2021 296-305*
- Pan, Y.**, see Zheng, R., *TCBB Jan.-Feb. 2021 347-354*
- Pan, Y.**, see Xu, Y., *TCBB March-April 2021 431-442*
- Pan, Y.**, see Yan, C., *TCBB March-April 2021 611-620*
- Pan, Y.**, see Luo, H., *TCBB March-April 2021 463-471*
- Pan, Y.**, see Zhang, Z., *TCBB May-June 2021 1070-1081*
- Pan, Y.**, see Wei, D., *TCBB July-Aug. 2021 1227-1229*
- Pan, Y.**, see Kaushik, A.C., *TCBB July-Aug. 2021 1299-1304*
- Pan, Y.**, see Zhang, F., *TCBB Nov.-Dec. 2021 2208-2217*
- Pan, Z.**, see Li, D., *TCBB Nov.-Dec. 2021 2239-2248*
- Pandey, A.K.**, see Singh, R., *TCBB Jan.-Feb. 2021 83-93*
- Pandey, S.**, see Kumar, G., *TCBB Sept.-Oct. 2021 1864-1874*
- Pang, J.**, see Su, C., *TCBB Nov.-Dec. 2021 2167-2176*
- Pang, S.**, see Yang, B., *TCBB Jan.-Feb. 2021 216-226*
- Panwar, U.**, see Selvaraj, C., *TCBB July-Aug. 2021 1262-1270*
- Pathak, Y.**, Shukla, P.K., and Arya, K.V., Deep Bidirectional Classification Model for COVID-19 Disease Infected Patients; *TCBB July-Aug. 2021 1234-1241*
- Patil, N.**, see Bankapur, S., *TCBB Nov.-Dec. 2021 2409-2419*
- Patra, P.**, see Pal, A., *TCBB Nov.-Dec. 2021 2566-2576*
- Pattabiraman, S.**, and Warnow, T., Profile Hidden Markov Models Are Not Identifiable; *TCBB Jan.-Feb. 2021 162-172*
- Paul, S.**, see Su, C., *TCBB Nov.-Dec. 2021 2167-2176*
- Pavlova, N.**, see Penchovsky, R., *TCBB March-April 2021 804-808*
- Pei, T.**, see Li, H., *TCBB Nov.-Dec. 2021 2502-2513*

- Penchovsky, R.**, Pavlova, N., and Kaloudas, D., RSwitch: A Novel Bioinformatics Database on Riboswitches as Antibacterial Drug Targets; *TCBB March-April 2021 804-808*
- Peng, C.**, Wu, X., Yuan, W., Zhang, X., Zhang, Y., and Li, Y., MGRFE: Multi-layer Recursive Feature Elimination Based on an Embedded Genetic Algorithm for Cancer Classification; *TCBB March-April 2021 621-632*
- Peng, J.**, see Yan, L., *TCBB May-June 2021 922-931*
- Peng, S.**, Yang, Y., Liu, W., Li, F., and Liao, X., Discriminant Projection Shared Dictionary Learning for Classification of Tumors Using Gene Expression Data; *TCBB July-Aug. 2021 1464-1473*
- Peng, S.**, see Zhou, D., *TCBB July-Aug. 2021 1290-1298*
- Peng, S.**, see Zhang, L., *TCBB Nov.-Dec. 2021 2123-2124*
- Peng, Y.**, see Huang, C., *TCBB Jan.-Feb. 2021 62-69*
- Peng, Y.**, see Yan, L., *TCBB May-June 2021 922-931*
- Pentikainen, O.T.**, see Jokinen, E.M., *TCBB July-Aug. 2021 1281-1289*
- Pereira, G.**, Ghosh, P., and Santos, A., A Bridging Centrality Plugin for GEPHI and a Case Study for *Mycobacterium Tuberculosis* H37Rv; *TCBB Nov.-Dec. 2021 2741-2746*
- Peres-Neto, P.**, see Gondeau, A., *TCBB March-April 2021 633-643*
- Perez-Rodriguez, J.**, de Haro-Garcia, A., and Garcia-Pedrajas, N., Floating Search Methodology for Combining Classification Models for Site Recognition in DNA Sequences; *TCBB Nov.-Dec. 2021 2471-2482*
- Perie, L.**, see Lyne, A., *TCBB Nov.-Dec. 2021 2291-2301*
- Piccialli, F.**, see Lv, Z., *TCBB Sept.-Oct. 2021 1688-1698*
- Plass, C.**, see Schlosser, P., *TCBB Nov.-Dec. 2021 2635-2648*
- Plastino, A.**, see da Silva, P.N., *TCBB Nov.-Dec. 2021 2230-2238*
- Pliakos, K.**, Vens, C., and Tsoumakas, G., Predicting Drug-Target Interactions With Multi-Label Classification and Label Partitioning; *TCBB July-Aug. 2021 1596-1607*
- Pognonec, P.**, Gustovic, A., Djabari, Z., Pourcher, T., and Barlaud, M., Mitotic Index Determination on Live Cells From Label-Free Acquired Quantitative Phase Images Using a Supervised Autoencoder; *TCBB Nov.-Dec. 2021 2828-2834*
- Pourcher, T.**, see Pognonec, P., *TCBB Nov.-Dec. 2021 2828-2834*
- Pradhan, G.**, see Singh, P., *TCBB March-April 2021 759-764*
- Pramanik, N.**, see Kumar, G., *TCBB Sept.-Oct. 2021 1864-1874*
- Pu, L.**, see Zhang, J., *TCBB Sept.-Oct. 2021 1831-1840*
- Pu, Z.**, see Li, C., *TCBB May-June 2021 1003-1013*
- Pyne, S.**, and Anand, A., Rapid Reconstruction of Time-varying Gene Regulatory Networks with Limited Main Memory; *TCBB July-Aug. 2021 1608-1619*

Q

- Qi, W.**, see Pal, A., *TCBB Nov.-Dec. 2021 2566-2576*
- Qi, X.**, see Ozden, F., *TCBB July-Aug. 2021 1474-1480*
- Qi, Y.**, see Xing, J., *TCBB Nov.-Dec. 2021 2555-2565*
- Qian, P.**, Zheng, J., Zheng, Q., Liu, Y., Wang, T., Al Helo, R., Baydoun, A., Avril, N., Ellis, R.J., Friel, H., Traugher, M.S., Devaraj, A., Traugher, B., and Muzic, R.F., Transforming UTE-mDixon MR Abdomen-Pelvis Images Into CT by Jointly Leveraging Prior Knowledge and Partial Supervision; *TCBB Jan.-Feb. 2021 70-82*
- Qian, T.**, see Maharaj, S., *TCBB Jan.-Feb. 2021 16-26*
- Qian, W.**, see Liu, M., *TCBB May-June 2021 1060-1069*
- Qian, X.**, see Karbalayghareh, A., *TCBB March-April 2021 644-655*
- Qian, Y.**, Zhang, Y., and Zhang, J., Alignment-Free Sequence Comparison With Multiple k Values; *TCBB Sept.-Oct. 2021 1841-1849*
- Qian, Z.**, see Jin, Y., *TCBB Jan.-Feb. 2021 114-125*
- Qiao, L.**, see Lv, Z., *TCBB Sept.-Oct. 2021 1688-1698*
- Qin, B.**, see Jiang, T., *TCBB May-June 2021 823-835*
- Qin, J.**, see Chen, J., *TCBB Sept.-Oct. 2021 1914-1923*
- Qin, R.**, Duan, L., Zheng, H., Li-Ling, J., Song, K., and Zhang, Y., An Ontology-Independent Representation Learning for Similar Disease Detection Based on Multi-Layer Similarity Network; *TCBB Jan.-Feb. 2021 183-193*
- Qiu, J.**, Qiu, T., Dong, Q., Xu, D., Wang, X., Zhang, Q., Pan, J., and Liu, Q., Predicting the Antigenic Relationship of Foot-and-Mouth Disease Virus for

Vaccine Selection Through a Computational Model; *TCBB March-April 2021 677-685*

Qiu, S., see Jiang, Y., *TCBB Jan.-Feb. 2021 40-52*

Qiu, T., see Qiu, J., *TCBB March-April 2021 677-685*

Qiu, Y., Jiang, H., and Ching, W., Unsupervised Learning Framework With Multidimensional Scaling in Predicting Epithelial-Mesenchymal Transitions; *TCBB Nov.-Dec. 2021 2714-2723*

Qiu, Z., see Wang, L., *TCBB March-April 2021 784-789*

Quijano, A., see Davidov, N., *TCBB Nov.-Dec. 2021 2823-2827*

Quinn, T.P., see Nguyen, T., *TCBB Nov.-Dec. 2021 2841-2847*

R

Raghu, V.K., Ge, X., Balajjee, A., Shirer, D.J., Das, I., Benos, P.V., and Chrysanthis, P.K., A Pipeline for Integrated Theory and Data-Driven Modeling of Biomedical Data; *TCBB May-June 2021 811-822*

Rahman, M.A., Ang, L., and Seng, K.P., Data Convexity and Parameter Independent Clustering for Biomedical Datasets; *TCBB March-April 2021 765-772*

Rai, A., see Angadi, U.B., *TCBB July-Aug. 2021 1361-1368*

Rajasekaran, S., see Xiao, P., *TCBB Jan.-Feb. 2021 27-37*

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Ruiz, L., see Blanco, G., *TCBB Nov.-Dec. 2021 2302-2313*

S

Sadeghi, S.S., and Keyvanpour, M.R., An Analytical Review of Computational Drug Repurposing; *TCBB March-April 2021 472-488*

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Sanchez, B., see Blanco, G., *TCBB Nov.-Dec. 2021 2302-2313*

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Saykin, A.J., see Du, L., *TCBB Jan.-Feb. 2021 227-239*

Schlosser, P., Knaus, J., Schmutz, M., Dohner, K., Plass, C., Bullinger, L., Claus, R., Binder, H., Lubbert, M., and Schumacher, M., Netboost: Boosting-Supported Network Analysis Improves High-Dimensional Omics Prediction in Acute Myeloid Leukemia and Huntington's Disease; *TCBB Nov.-Dec. 2021 2635-2648*

Schmutz, M., see Schlosser, P., *TCBB Nov.-Dec. 2021 2635-2648*

Schnable, P.S., see Kamruzzaman, M., *TCBB July-Aug. 2021 1535-1548*

Schultz, D.W., and Xu, B., Parallel Methods for Finding k -Mismatch Shortest Unique Substrings Using GPU; *TCBB Jan.-Feb. 2021 386-395*

Schumacher, M., see Schlosser, P., *TCBB Nov.-Dec. 2021 2635-2648*

Schwob, M.R., Zhan, J., and Dempsey, A., Modeling Cell Communication with Time-Dependent Signaling Hypergraphs; *TCBB May-June 2021 1151-1163*

Segura-Garcia, J., see Maicas, S., *TCBB Nov.-Dec. 2021 2877-2883*

Selvaraj, C., Dinesh, D.C., Panwar, U., Boura, E., and Singh, S.K., High-Throughput Screening and Quantum Mechanics for Identifying Potent Inhibitors Against Mac1 Domain of SARS-CoV-2 Nsp3; *TCBB July-Aug. 2021 1262-1270*

Selvaraj, G., see Wei, D., *TCBB July-Aug. 2021 1227-1229*

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Shadmani, M., see Ghasemnejad, A., *TCBB Sept.-Oct. 2021 1885-1892*

Shafik, R., see Maheshwari, S., *TCBB July-Aug. 2021 1426-1438*

Shan, B., see Zhang, W., *TCBB July-Aug. 2021 1416-1425*

Shang, H., and Liu, Z., Prioritizing Type 2 Diabetes Genes by Weighted PageRank on Bilayer Heterogeneous Networks; *TCBB Jan.-Feb. 2021 336-346*

Shang, J., see Yuan, X., *TCBB March-April 2021 539-549*

Shang, J., see Zhang, Z., *TCBB May-June 2021 1070-1081*

Shang, J., see Hu, Y., *TCBB July-Aug. 2021 1481-1491*

Shang, X., see Yang, B., *TCBB Jan.-Feb. 2021 216-226*

Shao, W., see Wang, M., *TCBB July-Aug. 2021 1549-1561*

Sharma, G., Rana, P.S., and Bawa, S., Hybrid Machine Learning Models for Predicting Types of Human T-cell Lymphotropic Virus; *TCBB July-Aug. 2021 1524-1534*

Shawish, A., see Medhat, B., *TCBB Sept.-Oct. 2021 1924-1936*

Shen, C., see Luo, J., *TCBB Nov.-Dec. 2021 2535-2545*

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Shendre, A., see Ji, X., *TCBB May-June 2021 1113-1121*

Shi, J., see Xu, B., *TCBB Sept.-Oct. 2021 1850-1863*

Shi, K., Lin, W., and Zhao, X., Identifying Molecular Biomarkers for Diseases With Machine Learning Based on Integrative Omics; *TCBB Nov.-Dec. 2021 2514-2525*

Shi, P., see Yan, X., *TCBB May-June 2021 871-881*

Shi, P., see Jiao, H., *TCBB Nov.-Dec. 2021 2753-2758*

Shi, X., see Li, M., *TCBB March-April 2021 575-582*

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Si, W., see Xia, K., *TCBB Sept.-Oct. 2021 1643-1644*

Sikolenko, M.A., and Valentovich, L.N., Barapost: Binning of Nucleotide Sequences According to Taxonomic Annotation; *TCBB Nov.-Dec. 2021 2766-2767*

Singh, A., see Bokes, P., *TCBB Jan.-Feb. 2021 272-282*

Singh, A.K., see Singh, R., *TCBB Jan.-Feb. 2021 83-93*

Singh, P., and Pradhan, G., A New ECG Denoising Framework Using Generative Adversarial Network; *TCBB March-April 2021 759-764*

Singh, R., Ahmed, T., Kumar, A., Singh, A.K., Pandey, A.K., and Singh, S.K., Imbalanced Breast Cancer Classification Using Transfer Learning; *TCBB Jan.-Feb. 2021 83-93*

Singh, S.K., see Singh, R., *TCBB Jan.-Feb. 2021 83-93*

Singh, S.K., see Selvaraj, C., *TCBB July-Aug. 2021 1262-1270*

Siper, M.C., see Ozden, F., *TCBB July-Aug. 2021 1474-1480*

Siqueira, G., Brito, K.L., Dias, U., and Dias, Z., Heuristics for Genome Rearrangement Distance With Replicated Genes; *TCBB Nov.-Dec. 2021 2094-2108*

Smith, A.I., see Li, M., *TCBB Sept.-Oct. 2021 1801-1810*

Snider, A., see Chawla, A., *TCBB March-April 2021 790-796*

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Song, J., see Li, M., *TCBB Sept.-Oct. 2021* 1801-1810
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Song, M., see Debnath, T., *TCBB Nov.-Dec. 2021* 2061-2071
Song, S., see Song, X., *TCBB March-April 2021* 718-730
Song, X., Wang, M., Song, S., and Ahn, C.K., Sampled-Data State Estimation of Reaction Diffusion Genetic Regulatory Networks via Space-Dividing Approaches; *TCBB March-April 2021* 718-730
Song, Y., Zheng, S., Li, L., Zhang, X., Zhang, X., Huang, Z., Chen, J., Wang, R., Zhao, H., Chong, Y., Shen, J., Zha, Y., and Yang, Y., Deep Learning Enables Accurate Diagnosis of Novel Coronavirus (COVID-19) With CT Images; *TCBB Nov.-Dec. 2021* 2775-2780
Souza, M.G., Vallejo, E.E., and Estrada, K., Detecting Clustered Independent Rare Variant Associations Using Genetic Algorithms; *TCBB May-June 2021* 932-939
Spirko-Burns, L., and Devarajan, K., Supervised Dimension Reduction for Large-Scale “Omics” Data With Censored Survival Outcomes Under Possible Non-Proportional Hazards; *TCBB Sept.-Oct. 2021* 2032-2044
Sreedharan, J.K., Turowski, K., and Szpankowski, W., Revisiting Parameter Estimation in Biological Networks: Influence of Symmetries; *TCBB May-June 2021* 836-849
Srivastava, S., see Angadi, U.B., *TCBB July-Aug. 2021* 1361-1368
St. John, K., see Davidov, N., *TCBB Nov.-Dec. 2021* 2823-2827
Steinauer, N., Zhang, K., Guo, C., and Zhang, J., Computational Modeling of Gene-Specific Transcriptional Repression, Activation and Chromatin Interactions in Leukemogenesis by LASSO-Regularized Logistic Regression; *TCBB Nov.-Dec. 2021* 2109-2122
Stoye, J., see Willing, E., *TCBB Nov.-Dec. 2021* 2314-2326
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Su, C., Pang, J., and Paul, S., Towards Optimal Decomposition of Boolean Networks; *TCBB Nov.-Dec. 2021* 2167-2176
Su, D., see Fang, Q., *TCBB Nov.-Dec. 2021* 2249-2260
Su, Y., see Zou, B., *TCBB Nov.-Dec. 2021* 2586-2597
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Sun, Y., Ou-Yang, L., and Dai, D., WMLRR: A Weighted Multi-View Low Rank Representation to Identify Cancer Subtypes From Multiple Types of Omics Data; *TCBB Nov.-Dec. 2021* 2891-2897
Swenson, K.M., see Wang, B., *TCBB March-April 2021* 416-430
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T

Tabaszewski, P., Gorecki, P., Markin, A., Anderson, T., and Eulenstein, O., Consensus of All Solutions for Intractable Phylogenetic Tree Inference; *TCBB Jan.-Feb. 2021* 149-161
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Tang, J., see Zhang, J., *TCBB Sept.-Oct. 2021* 1831-1840
Tang, R., see Zou, B., *TCBB Nov.-Dec. 2021* 2586-2597
Taou, N., and Lones, M., Optimising Boolean Synthetic Regulatory Networks to Control Cell States; *TCBB Nov.-Dec. 2021* 2649-2658
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Taufner, M., see Carrillo-Cabada, H., *TCBB July-Aug. 2021* 1336-1349
Tayara, H., and Chong, K.T., Improved Predicting of The Sequence Specificities of RNA Binding Proteins by Deep Learning; *TCBB Nov.-Dec. 2021* 2526-2534

Thai, K., see Davidov, N., *TCBB Nov.-Dec. 2021* 2823-2827
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Vilallonga, G., Riesco, D., de Almeida, A.G., Rodrigues, A.M., and Campos, S.V.A., In Silico Laboratory Experiments Using Statistical Model Checking: A New Model of the Palytoxin-Induced Pump Channel as Case Study; *TCBB Nov.-Dec. 2021* 2816-2822
Villegas-Morcillo, A., Gomez, A.M., Morales-Cordovilla, J.A., and Sanchez, V., Protein Fold Recognition From Sequences Using Convolutional and Recurrent Neural Networks; *TCBB Nov.-Dec. 2021* 2848-2854
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Wang, B., Mei, C., Wang, Y., Zhou, Y., Cheng, M., Zheng, C., Wang, L., Zhang, J., Chen, P., and Xiong, Y., Imbalance Data Processing Strategy for Protein Interaction Sites Prediction; *TCBB May-June 2021* 985-994
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Wang, C., Gong, L., Lei, S., Fang, H., Li, X., Wang, A., and Zhou, X., GenSeq+: A Scalable High-Performance Accelerator for Genome Sequencing; *TCBB July-Aug. 2021* 1512-1523
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- Wang, J., see Wang, C., *TCBB Nov.-Dec. 2021* 2375-2383
- Wang, J., see Li, X., *TCBB Nov.-Dec. 2021* 2483-2491
- Wang, L., Zheng, S., Zhang, H., Qiu, Z., Zhong, X., Liuliu, H., and Liu, Y., ncRFP: A Novel end-to-end Method for Non-Coding RNAs Family Prediction Based on Deep Learning; *TCBB March-April 2021* 784-789
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- Wang, L., see Yan, L., *TCBB May-June 2021* 922-931
- Wang, L., see Ji, X., *TCBB May-June 2021* 1113-1121
- Wang, L., Wang, Y., Fu, Y., Gao, Y., Du, J., Yang, C., and Liu, J., AFSBN: A Method of Artificial Fish Swarm Optimizing Bayesian Network for Epistasis Detection; *TCBB July-Aug. 2021* 1369-1383
- Wang, L., see Cui, C., *TCBB July-Aug. 2021* 1230-1233
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- Wang, M., see Song, X., *TCBB March-April 2021* 718-730
- Wang, M., Shao, W., Hao, X., Shen, L., and Zhang, D., Identify Consistent Cross-Modality Imaging Genetic Patterns via Discriminant Sparse Canonical Correlation Analysis; *TCBB July-Aug. 2021* 1549-1561
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- Wang, W., Zhou, Y., Cheng, M., Wang, Y., Zheng, C., Xiong, Y., Chen, P., Ji, Z., and Wang, B., Potential Pathogenic Genes Prioritization Based on Protein Domain Interaction Network Analysis; *TCBB May-June 2021* 1026-1034
- Wang, X., see Qiu, J., *TCBB March-April 2021* 677-685
- Wang, X., Feng, S., and Yan, W.Q., Human Gait Recognition Based on Self-Adaptive Hidden Markov Model; *TCBB May-June 2021* 963-972
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- Wang, Y., Ding, Y., Tang, J., Dai, Y., and Guo, F., CrystalM: A Multi-View Fusion Approach for Protein Crystallization Prediction; *TCBB Jan.-Feb. 2021* 325-335
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- Wang, Y., see Chen, Y., *TCBB May-June 2021* 902-911
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- Wang, Y., Sun, L., and Jin, Q., Enhanced Diagnosis of Pneumothorax with an Improved Real-Time Augmentation for Imbalanced Chest X-rays Data Based on DCNN; *TCBB May-June 2021* 951-962
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- Wang, Y., see Zhang, A., *TCBB July-Aug. 2021* 1350-1360
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- Wang, Z., see Zhang, J., *TCBB March-April 2021* 583-595
- Wang, Z., see Yan, X., *TCBB May-June 2021* 871-881
- Wang, Z., Hong, Q., and Wang, X., A Memristive Circuit Implementation of Eyes State Detection in Fatigue Driving Based on Biological Long Short-Term Memory Rule; *TCBB Nov.-Dec. 2021* 2218-2229
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- Webb, G.I., see Li, M., *TCBB Sept.-Oct. 2021* 1801-1810
- Wei, D., Kaushik, A.C., Selvaraj, G., and Pan, Y., Editorial: Computational Genomics and Molecular Medicine for Emerging COVID-19; *TCBB July-Aug. 2021* 1227-1229
- Wei, D., see Kaushik, A.C., *TCBB July-Aug. 2021* 1299-1304
- Wei, D., see Zhou, D., *TCBB July-Aug. 2021* 1290-1298
- Wei, H., Wang, B., Yang, J., and Gao, J., RNA Flexibility Prediction With Sequence Profile and Predicted Solvent Accessibility; *TCBB Sept.-Oct. 2021* 2017-2022
- Wei, H., Liao, Q., and Liu, B., iLncRNADis-FB: Identify lncRNA-Disease Associations by Fusing Biological Feature Blocks Through Deep Neural Network; *TCBB Sept.-Oct. 2021* 1946-1957
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- Willing, E., Stoye, J., and Braga, M.D.V., Computing the Inversion-Indel Distance; *TCBB Nov.-Dec. 2021* 2314-2326
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- Wu, F., see Li, X., *TCBB Nov.-Dec. 2021* 2483-2491
- Wu, F., see Zhang, F., *TCBB Nov.-Dec. 2021* 2208-2217
- Wu, H., Ling, H., Gao, L., Fu, Q., Lu, W., Ding, Y., Jiang, M., and Li, H., Empirical Potential Energy Function Toward ab Initio Folding G Protein-Coupled Receptors; *TCBB Sept.-Oct. 2021* 1752-1762
- Wu, J., see Chen, J., *TCBB Jan.-Feb. 2021* 103-113
- Wu, J., see Huang, C., *TCBB Jan.-Feb. 2021* 62-69
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 Xia, K., Ni, T., Yin, H., and Chen, B., Cross-Domain Classification Model With Knowledge Utilization Maximization for Recognition of Epileptic EEG Signals; *TCBB Jan.-Feb. 2021 53-61*
 Xia, K., Jiang, Y., Zhang, Y., and Si, W., Guest Editorial: Advanced Machine-Learning Methods for Brain-Machine Interfacing or Brain-Computer Interfacing; *TCBB Sept.-Oct. 2021 1643-1644*
 Xia, Y., *see* Zhou, Y., *TCBB May-June 2021 940-950*
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 Xiao, M., Liu, G., Xie, J., Dai, Z., Wei, Z., Ren, Z., Yu, J., and Zhang, L., 2019nCoVAS: Developing the Web Service for Epidemic Transmission Prediction, Genome Analysis, and Psychological Stress Assessment for 2019-nCoV; *TCBB July-Aug. 2021 1250-1261*
 Xiao, P., Cai, X., and Rajasekaran, S., EMS3: An Improved Algorithm for Finding Edit-Distance Based Motifs; *TCBB Jan.-Feb. 2021 27-37*
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 Xing, J., Li, Z., Wang, B., Qi, Y., Yu, B., Zanjani, F.G., Zheng, A., Duits, R., and Tan, T., Lesion Segmentation in Ultrasound Using Semi-Pixel-Wise Cycle Generative Adversarial Nets; *TCBB Nov.-Dec. 2021 2555-2565*
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 Xu, Y., Li, H., Pan, Y., Luo, F., Wu, F., and Wang, J., A Gene Rank Based Approach for Single Cell Similarity Assessment and Clustering; *TCBB March-April 2021 431-442*
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 Yan, D., *see* Guo, G., *TCBB March-April 2021 731-744*
 Yan, D., Thankachan, S., and Chen, J.Y., Guest Editorial for Selected Papers From BIOKDD 2019; *TCBB May-June 2021 809-810*
 Yan, H., *see* Xu, T., *TCBB July-Aug. 2021 1632-1642*
 Yan, K., Ji, Z., Jin, Q., and Wang, Q., Guest Editorial: Machine Learning for AI-Enhanced Healthcare and Medical Services: New Development and Promising Solution; *TCBB May-June 2021 850-851*
 Yan, K., Wen, J., Liu, J., Xu, Y., and Liu, B., Protein Fold Recognition by Combining Support Vector Machines and Pairwise Sequence Similarity Scores; *TCBB Sept.-Oct. 2021 2008-2016*
 Yan, K., Wen, J., Xu, Y., and Liu, B., Protein Fold Recognition Based on Auto-Weighted Multi-View Graph Embedding Learning Model; *TCBB Nov.-Dec. 2021 2682-2691*
 Yan, L., Huang, W., Wang, L., Feng, S., Peng, Y., and Peng, J., Data-Enabled Digestive Medicine: A New Big Data Analytics Platform; *TCBB May-June 2021 922-931*
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 Yan, X., Cui, B., Xu, Y., Shi, P., and Wang, Z., A Method of Information Protection for Collaborative Deep Learning under GAN Model Attack; *TCBB May-June 2021 871-881*
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- Yi, H.**, You, Z., Guo, Z., Huang, D., and Chan, K.C.C., Learning Representation of Molecules in Association Network for Predicting Intermolecular Associations; *TCBB Nov.-Dec. 2021 2546-2554*
- Yi-Pan**, see Liao, X., *TCBB July-Aug. 2021 1492-1503*
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- Yin, H.**, see Xia, K., *TCBB Jan.-Feb. 2021 53-61*
- Yin, J.**, see Lin, B., *TCBB Sept.-Oct. 2021 1699-1709*
- Yin, M.**, Cui, Z., Gao, M., Liu, J., and Gao, Y., LWPCMF: Logistic Weighted Profile-Based Collaborative Matrix Factorization for Predicting MiRNA-Disease Associations; *TCBB May-June 2021 1122-1129*
- Yin, M.**, see Zhao, X., *TCBB Nov.-Dec. 2021 2577-2585*
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Detection of Binding Sites on SARS-CoV-2 Spike Protein Receptor-Binding Domain by Molecular Dynamics Simulations in Mixed Solvents. *Jokinen, E.M., +, TCBB July-Aug. 2021 1281-1289*

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Empirical Potential Energy Function Toward ab Initio Folding G Protein-Coupled Receptors. *Wu, H., +, TCBB Sept.-Oct. 2021 1752-1762*

Exploring Molecular Descriptors and Fingerprints to Predict mTOR Kinase Inhibitors using Machine Learning Techniques. *Kumari, C., +, TCBB Sept.-Oct. 2021 1902-1913*

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Personalized Metabolic Analysis of Diseases. *Cakmak, A., +, TCBB May-June 2021 1014-1025*

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Bioinformatics

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Guest Editorial for Selected Papers From BIODDD 2019. *Yan, D.*, +, *TCBB May-June 2021 809-810*

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- Celiac Disease Detection From Videocapsule Endoscopy Images Using Strip Principal Component Analysis. *Li, B.N.*, +, *TCBB July-Aug. 2021 1396-1404*
- Data-Enabled Digestive Medicine: A New Big Data Analytics Platform. *Yan, L.*, +, *TCBB May-June 2021 922-931*
- Entropy**
- Identifying Drug Resistant miRNAs Using Entropy Based Ranking. *Pal, J.K.*, +, *TCBB May-June 2021 973-984*
- Programming Substrate-Independent Kinetic Barriers With Thermodynamic Binding Networks. *Breik, K.*, +, *TCBB Jan.-Feb. 2021 283-295*
- Protein Structure Prediction Using Population-Based Algorithm Guided by Information Entropy. *Zhang, G.*, +, *TCBB March-April 2021 697-707*
- RSwitch: A Novel Bioinformatics Database on Riboswitches as Antibacterial Drug Targets. *Penchovsky, R.*, +, *TCBB March-April 2021 804-808*
- Subject-Independent Emotion Recognition of EEG Signals Based on Dynamic Empirical Convolutional Neural Network. *Liu, S.*, +, *TCBB Sept.-Oct. 2021 1710-1721*
- Unsupervised Learning Framework With Multidimensional Scaling in Predicting Epithelial-Mesenchymal Transitions. *Qiu, Y.*, +, *TCBB Nov.-Dec. 2021 2714-2723*
- Enzymes**
- AGTR2, One Possible Novel Key Gene for the Entry of SARS-CoV-2 Into Human Cells. *Cui, C.*, +, *TCBB July-Aug. 2021 1230-1233*
- Detection of Binding Sites on SARS-CoV-2 Spike Protein Receptor-Binding Domain by Molecular Dynamics Simulations in Mixed Solvents. *Jokinen, E.M.*, +, *TCBB July-Aug. 2021 1281-1289*
- Exploring Molecular Descriptors and Fingerprints to Predict mTOR Kinase Inhibitors using Machine Learning Techniques. *Kumari, C.*, +, *TCBB Sept.-Oct. 2021 1902-1913*
- High-Throughput Screening and Quantum Mechanics for Identifying Potent Inhibitors Against Mac1 Domain of SARS-CoV-2 Nsp3. *Selvaraj, C.*, +, *TCBB July-Aug. 2021 1262-1270*
- Hybrid Machine Learning Models for Predicting Types of Human T-cell Lymphotropic Virus. *Sharma, G.*, +, *TCBB July-Aug. 2021 1524-1534*
- iPhosH-PseAAC: Identify Phosphohistidine Sites in Proteins by Blending Statistical Moments and Position Relative Features According to the Chou's 5-Step Rule and General Pseudo Amino Acid Composition. *Awais, M.*, +, *TCBB March-April 2021 596-610*
- Network-Based Analysis of Fatal Comorbidities of COVID-19 and Potential Therapeutics. *Chakrabarty, B.*, +, *TCBB July-Aug. 2021 1271-1280*
- Probing the Relation Between Community Evolution in Dynamic Residue Interaction Networks and Xylanase Thermostability. *Zhang, C.*, +, *TCBB March-April 2021 686-696*
- RSwitch: A Novel Bioinformatics Database on Riboswitches as Antibacterial Drug Targets. *Penchovsky, R.*, +, *TCBB March-April 2021 804-808*
- Epidemics**
- 2019nCoVAS: Developing the Web Service for Epidemic Transmission Prediction, Genome Analysis, and Psychological Stress Assessment for 2019-nCoV. *Xiao, M.*, +, *TCBB July-Aug. 2021 1250-1261*
- AGTR2, One Possible Novel Key Gene for the Entry of SARS-CoV-2 Into Human Cells. *Cui, C.*, +, *TCBB July-Aug. 2021 1230-1233*
- Consensus of All Solutions for Intractable Phylogenetic Tree Inference. *Tabaszewski, P.*, +, *TCBB Jan.-Feb. 2021 149-161*
- CoronaPep: An Anti-Coronavirus Peptide Generation Tool. *Kaushik, A.C.*, +, *TCBB July-Aug. 2021 1299-1304*
- Detection of Binding Sites on SARS-CoV-2 Spike Protein Receptor-Binding Domain by Molecular Dynamics Simulations in Mixed Solvents. *Jokinen, E.M.*, +, *TCBB July-Aug. 2021 1281-1289*
- Detection of Phenotype-Related Mutations of COVID-19 via the Whole Genomic Data. *Lv, J.*, +, *TCBB July-Aug. 2021 1242-1249*
- High-Throughput Screening and Quantum Mechanics for Identifying Potent Inhibitors Against Mac1 Domain of SARS-CoV-2 Nsp3. *Selvaraj, C.*, +, *TCBB July-Aug. 2021 1262-1270*
- Network-Based Analysis of Fatal Comorbidities of COVID-19 and Potential Therapeutics. *Chakrabarty, B.*, +, *TCBB July-Aug. 2021 1271-1280*
- Estimation**
- Adaptive Tracking Control for Uncertain Cancer-Tumor-Immune Systems. *Jiao, H.*, +, *TCBB Nov.-Dec. 2021 2753-2758*
- Categorical Matrix Completion With Active Learning for High-Throughput Screening. *Chen, J.*, +, *TCBB Nov.-Dec. 2021 2261-2270*
- Estimating Functional Connectivity by Integration of Inherent Brain Function Activity Pattern Priors. *Zhu, Z.*, +, *TCBB Nov.-Dec. 2021 2420-2430*
- STIC: Predicting Single Nucleotide Variants and Tumor Purity in Cancer Genome. *Yuan, X.*, +, *TCBB Nov.-Dec. 2021 2692-2701*

Evolution (biological)

Definition and Usage of Texture Feature for Biological Sequence. *Chen, W.*, +, *TCBB March-April 2021 773-776*

Ranked k-Spectrum Kernel for Comparative and Evolutionary Comparison of Exons, Introns, and CpG Islands. *Lee, S.*, +, *TCBB May-June 2021 1174-1183*

Revisiting Parameter Estimation in Biological Networks: Influence of Symmetries. *Sreedharan, J.K.*, +, *TCBB May-June 2021 836-849*

Using Constrained-INC for Large-Scale Gene Tree and Species Tree Estimation. *Le, T.*, +, *TCBB Jan.-Feb. 2021 2-15*

Evolution (biology)

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Evolutionary computation

A Graph-Based Approach for the DNA Word Design Problem. *Luncasu, V.*, +, *TCBB Nov.-Dec. 2021 2747-2752*

CCFS: A Confidence-Based Cost-Effective Feature Selection Scheme for Healthcare Data Classification. *Chen, Y.*, +, *TCBB May-June 2021 902-911*

Deep Bidirectional Classification Model for COVID-19 Disease Infected Patients. *Pathak, Y.*, +, *TCBB July-Aug. 2021 1234-1241*

Optimising Boolean Synthetic Regulatory Networks to Control Cell States. *Taou, N.*, +, *TCBB Nov.-Dec. 2021 2649-2658*

Extracellular

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Extremities

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Eye

A Global and Local Enhanced Residual U-Net for Accurate Retinal Vessel Segmentation. *Lian, S.*, +, *TCBB May-June 2021 852-862*

F**Fatigue**

A Memristive Circuit Implementation of Eyes State Detection in Fatigue Driving Based on Biological Long Short-Term Memory Rule. *Wang, Z.*, +, *TCBB Nov.-Dec. 2021 2218-2229*

Fats

Transforming UTE-mDixon MR Abdomen-Pelvis Images Into CT by Jointly Leveraging Prior Knowledge and Partial Supervision. *Qian, P.*, +, *TCBB Jan.-Feb. 2021 70-82*

Feature extraction

A Deep Segmentation Network of Multi-Scale Feature Fusion Based on Attention Mechanism for IVOCT Lumen Contour. *Huang, C.*, +, *TCBB Jan.-Feb. 2021 62-69*

A Hierarchical Discriminative Sparse Representation Classifier for EEG Signal Detection. *Gu, X.*, +, *TCBB Sept.-Oct. 2021 1679-1687*

A Multi-Scale Activity Transition Network for Data Translation in EEG Signals Decoding. *Lin, B.*, +, *TCBB Sept.-Oct. 2021 1699-1709*

A Novel Feature Selection Method for Uncertain Features: An Application to the Prediction of Pro-/Anti-Longevity Genes. *da Silva, P.N.*, +, *TCBB Nov.-Dec. 2021 2230-2238*

AIÉpred: An Ensemble Predictive Model of Classifier Chain to Identify Anti-Inflammatory Peptides. *Zhang, J.*, +, *TCBB Sept.-Oct. 2021 1831-1840*

Celiac Disease Detection From Videocapsule Endoscopy Images Using Strip Principal Component Analysis. *Li, B.N.*, +, *TCBB July-Aug. 2021 1396-1404*

CEPZ: A Novel Predictor for Identification of DNase I Hypersensitive Sites. *Zheng, Y.*, +, *TCBB Nov.-Dec. 2021 2768-2774*

Convolutional Neural Network With Graphical Lasso to Extract Sparse Topological Features for Brain Disease Classification. *Ji, J.*, +, *TCBB Nov.-Dec. 2021 2327-2338*

CrystalM: A Multi-View Fusion Approach for Protein Crystallization Prediction. *Wang, Y.*, +, *TCBB Jan.-Feb. 2021 325-335*

Deep Convolutional and Recurrent Neural Networks for Cell Motility Discrimination and Prediction. *Kimmel, J.C.*, +, *TCBB March-April 2021 562-574*

Deep Learning Enables Accurate Diagnosis of Novel Coronavirus (COVID-19) With CT Images. *Song, Y.*, +, *TCBB Nov.-Dec. 2021 2775-2780*

DeepSeed Local Graph Matching for Densely Packed Cells Tracking. *Liu, M.*, +, *TCBB May-June 2021 1060-1069*

Definition and Usage of Texture Feature for Biological Sequence. *Chen, W.*, +, *TCBB March-April 2021 773-776*

Enhanced Diagnosis of Pneumothorax with an Improved Real-Time Augmentation for Imbalanced Chest X-rays Data Based on DCNN. *Wang, Y.*, +, *TCBB May-June 2021 951-962*

Enhanced Protein Structural Class Prediction Using Effective Feature Modeling and Ensemble of Classifiers. *Bankapur, S.*, +, *TCBB Nov.-Dec. 2021 2409-2419*

Exploring Molecular Descriptors and Fingerprints to Predict mTOR Kinase Inhibitors using Machine Learning Techniques. *Kumari, C.*, +, *TCBB Sept.-Oct. 2021 1902-1913*

Few-Shot Breast Cancer Metastases Classification via Unsupervised Cell Ranking. *Chen, J.*, +, *TCBB Sept.-Oct. 2021 1914-1923*

FexRNA: Exploratory Data Analysis and Feature Selection of Non-Coding RNA. *Amin, N.*, +, *TCBB Nov.-Dec. 2021 2795-2801*

Formator: Predicting Lysine Formylation Sites Based on the Most Distant Undersampling and Safe-Level Synthetic Minority Oversampling. *Jia, C.*, +, *TCBB Sept.-Oct. 2021 1937-1945*

High-Risk Prediction of Cardiovascular Diseases via Attention-Based Deep Neural Networks. *An, Y.*, +, *TCBB May-June 2021 1093-1105*

Human Gait Recognition Based on Self-Adaptive Hidden Markov Model. *Wang, X.*, +, *TCBB May-June 2021 963-972*

Identifying Molecular Biomarkers for Diseases With Machine Learning Based on Integrative Omics. *Shi, K.*, +, *TCBB Nov.-Dec. 2021 2514-2525*

iEnhancer-KL: A Novel Two-Layer Predictor for Identifying Enhancers by Position Specific of Nucleotide Composition. *Lyu, Y.*, +, *TCBB Nov.-Dec. 2021 2809-2815*

KenDTI: An Ensemble Model for Predicting Drug-Target Interaction by Integrating Multi-Source Information. *Yu, Z.*, +, *TCBB July-Aug. 2021 1305-1314*

MGRFE: Multilayer Recursive Feature Elimination Based on an Embedded Genetic Algorithm for Cancer Classification. *Peng, C.*, +, *TCBB March-April 2021 621-632*

Multi-Label Classification Scheme Based on Local Regression for Retinal Vessel Segmentation. *Zou, B.*, +, *TCBB Nov.-Dec. 2021 2586-2597*

Multi-Scale Capsule Network for Predicting DNA-Protein Binding Sites. *Zhang, Q.*, +, *TCBB Sept.-Oct. 2021 1793-1800*

ncRFP: A Novel end-to-end Method for Non-Coding RNAs Family Prediction Based on Deep Learning. *Wang, L.*, +, *TCBB March-April 2021 784-789*

Netboost: Boosting-Supported Network Analysis Improves High-Dimensional Omics Prediction in Acute Myeloid Leukemia and Huntington's Disease. *Schlosser, P.*, +, *TCBB Nov.-Dec. 2021 2635-2648*

Predicting Human Intention-Behavior Through EEG Signal Analysis Using Multi-Scale CNN. *Huang, C.*, +, *TCBB Sept.-Oct. 2021 1722-1729*

Predicting TF-DNA Binding Motifs from CHIP-seq Datasets Using the Bag-Based Classifier Combined With a Multi-Fold Learning Scheme. *Zhang, Q.*, +, *TCBB Sept.-Oct. 2021 1743-1751*

Prediction of FMN Binding Sites in Electron Transport Chains Based on 2-D CNN and PSSM Profiles. *Le, N.*, +, *TCBB Nov.-Dec. 2021 2189-2197*

Protein Family Classification from Scratch: A CNN Based Deep Learning Approach. *Zhang, D.*, +, *TCBB Sept.-Oct. 2021 1996-2007*

Protein Fold Recognition Based on Auto-Weighted Multi-View Graph Embedding Learning Model. *Yan, K.*, +, *TCBB Nov.-Dec. 2021 2682-2691*

Protein Fold Recognition From Sequences Using Convolutional and Recurrent Neural Networks. *Villegas-Morcillo, A.*, +, *TCBB Nov.-Dec. 2021 2848-2854*

SNP Data Science for Classification of Bipolar Disorder I and Bipolar Disorder II. *Lee, C.*, +, *TCBB Nov.-Dec. 2021 2862-2869*

STIC: Predicting Single Nucleotide Variants and Tumor Purity in Cancer Genome. *Yuan, X.*, +, *TCBB Nov.-Dec. 2021 2692-2701*

Subject-Independent Emotion Recognition of EEG Signals Based on Dynamic Empirical Convolutional Neural Network. *Liu, S.*, +, *TCBB Sept.-Oct. 2021 1710-1721*

Transforming UTE-mDixon MR Abdomen-Pelvis Images Into CT by Jointly Leveraging Prior Knowledge and Partial Supervision. *Qian, P.*, +, *TCBB Jan.-Feb. 2021 70-82*

Unsupervised Learning Framework With Multidimensional Scaling in Predicting Epithelial-Mesenchymal Transitions. *Qiu, Y.*, +, *TCBB Nov.-Dec. 2021 2714-2723*

Using Constrained-INC for Large-Scale Gene Tree and Species Tree Estimation. *Le, T.*, +, *TCBB Jan.-Feb. 2021 2-15*

Feature selection

A Deep Learning Framework for Identifying Essential Proteins by Integrating Multiple Types of Biological Information. *Zeng, M.*, +, *TCBB Jan.-Feb. 2021 296-305*

CCFS: A Confidence-Based Cost-Effective Feature Selection Scheme for Healthcare Data Classification. *Chen, Y.*, +, *TCBB May-June 2021 902-911*

DSTPCA: Double-Sparse Constrained Tensor Principal Component Analysis Method for Feature Selection. *Hu, Y.*, +, *TCBB July-Aug. 2021 1481-1491*

High-Risk Prediction of Cardiovascular Diseases via Attention-Based Deep Neural Networks. *An, Y.*, +, *TCBB May-June 2021 1093-1105*

Hybrid Machine Learning Models for Predicting Types of Human T-cell Lymphotropic Virus. *Sharma, G.*, +, *TCBB July-Aug. 2021 1524-1534*

Feedback

Synthesis of the Dynamical Properties of Feedback Loops in Bio-Pathways. *Zhou, J.*, +, *TCBB May-June 2021 1217-1226*

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MicroRNA Based Feedforward Control of Intrinsic Gene Expression Noise. *Bokes, P.*, +, *TCBB Jan.-Feb. 2021 272-282*

Field programmable gate arrays

GenSeq+: A Scalable High-Performance Accelerator for Genome Sequencing. *Wang, C.*, +, *TCBB July-Aug. 2021 1512-1523*

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A New ECG Denoising Framework Using Generative Adversarial Network. *Singh, P.*, +, *TCBB March-April 2021 759-764*

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Filtration

Designing a New Multi-Epitope Pertussis Vaccine with Highly Population Coverage Based on a Novel Sequence and Structural Filtration Algorithm. *Ghasemnejad, A.*, +, *TCBB Sept.-Oct. 2021 1885-1892*

Fluorescence

Cell Mechanics Based Computational Classification of Red Blood Cells Via Machine Intelligence Applied to Morpho-Rheological Markers. *Ge, Y.*, +, *TCBB July-Aug. 2021 1405-1415*

Hybrid Machine Learning Models for Predicting Types of Human T-cell Lymphotropic Virus. *Sharma, G.*, +, *TCBB July-Aug. 2021 1524-1534*

Mitotic Index Determination on Live Cells From Label-Free Acquired Quantitative Phase Images Using a Supervised Autoencoder. *Pognonec, P.*, +, *TCBB Nov.-Dec. 2021 2828-2834*

Fourier transforms

Predicting Human Intention-Behavior Through EEG Signal Analysis Using Multi-Scale CNN. *Huang, C.*, +, *TCBB Sept.-Oct. 2021 1722-1729*

Free energy

RNA Secondary Structure Prediction with Pseudoknots Using Chemical Reaction Optimization Algorithm. *Islam, M.R.*, +, *TCBB May-June 2021 1195-1207*

RSwitch: A Novel Bioinformatics Database on Riboswitches as Antibacterial Drug Targets. *Penchovsky, R.*, +, *TCBB March-April 2021 804-808*

Full-text databases

GrantExtractor: Accurate Grant Support Information Extraction from Biomedical Fulltext Based on Bi-LSTM-CRF. *Dai, S.*, +, *TCBB Jan.-Feb. 2021 205-215*

Functional magnetic resonance imaging

Estimating Functional Connectivity by Integration of Inherent Brain Function Activity Pattern Priors. *Zhu, Z.*, +, *TCBB Nov.-Dec. 2021 2420-2430*

Fuzzy set theory

A Novel Negative-Transfer-Resistant Fuzzy Clustering Model With a Shared Cross-Domain Transfer Latent Space and its Application to Brain CT Image Segmentation. *Jiang, Y.*, +, *TCBB Jan.-Feb. 2021 40-52*

Epilepsy Signal Recognition Using Online Transfer TSK Fuzzy Classifier Underlying Classification Error and Joint Distribution Consensus Regularization. *Zhang, Y.*, +, *TCBB Sept.-Oct. 2021 1667-1678*

Protein Crystallization Identification via Fuzzy Model on Linear Neighborhood Representation. *Ding, Y.*, +, *TCBB Sept.-Oct. 2021 1986-1995*

Transforming UTE-mDixon MR Abdomen-Pelvis Images Into CT by Jointly Leveraging Prior Knowledge and Partial Supervision. *Qian, P.*, +, *TCBB Jan.-Feb. 2021 70-82*

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Human Gait Recognition Based on Self-Adaptive Hidden Markov Model. *Wang, X.*, +, *TCBB May-June 2021 963-972*

Gaussian processes

A Latent Gaussian Copula Model for Mixed Data Analysis in Brain Imaging Genetics. *Zhang, A.*, +, *TCBB July-Aug. 2021 1350-1360*

LWPCMF: Logistic Weighted Profile-Based Collaborative Matrix Factorization for Predicting MiRNA-Disease Associations. *Yin, M.*, +, *TCBB May-June 2021 1122-1129*

MCHMDA: Predicting Microbe-Disease Associations Based on Similarities and Low-Rank Matrix Completion. *Yan, C.*, +, *TCBB March-April 2021 611-620*

Physically-Inspired Gaussian Process Models for Post-Transcriptional Regulation in Drosophila. *Lopez-Lopera, A.F.*, +, *TCBB March-April 2021 656-666*

Gender issues

Bayesian Inference in Y-Linked Two-Sex Branching Processes with Mutations: ABC Approach. *Gonzalez, M.*, +, *TCBB March-April 2021 525-538*

Gene expression

A Convolutional Deep Clustering Framework for Gene Expression Time Series. *Ozgul, O.F.*, +, *TCBB Nov.-Dec. 2021 2198-2207*

Active Module Identification From Multilayer Weighted Gene Co-Expression Networks: A Continuous Optimization Approach. *Li, D.*, +, *TCBB Nov.-Dec. 2021 2239-2248*

An Effective Bicustering-Based Framework for Identifying Cell Subpopulations From scRNA-seq Data. *Fang, Q.*, +, *TCBB Nov.-Dec. 2021 2249-2260*

An Enhanced Random Forests Approach to Predict Heart Failure From Small Imbalanced Gene Expression Data. *Chicco, D.*, +, *TCBB Nov.-Dec. 2021 2759-2765*

Discovering Essential Multiple Gene Effects Through Large Scale Optimization: An Application to Human Cancer Metabolism. *Occhipinti, A.*, +, *TCBB Nov.-Dec. 2021 2339-2352*

Evolving Multiobjective Cancer Subtype Diagnosis From Cancer Gene Expression Data. *Wang, Y.*, +, *TCBB Nov.-Dec. 2021 2431-2444*

Evolving Transcriptomic Profiles From Single-Cell RNA-Seq Data Using Nature-Inspired Multiobjective Optimization. *Li, X.*, +, *TCBB Nov.-Dec. 2021 2445-2458*

FUNMarker: Fusion Network-Based Method to Identify Prognostic and Heterogeneous Breast Cancer Biomarkers. *Li, X.*, +, *TCBB Nov.-Dec. 2021 2483-2491*

Multi-objective Simulated Annealing Variants to Infer Gene Regulatory Network: A Comparative Study. *Biswas, S.*, +, *TCBB Nov.-Dec. 2021 2612-2623*

Netboost: Boosting-Supported Network Analysis Improves High-Dimensional Omics Prediction in Acute Myeloid Leukemia and Huntington's Disease. *Schlosser, P.*, +, *TCBB Nov.-Dec. 2021 2635-2648*

PAN: Personalized Annotation-Based Networks for the Prediction of Breast Cancer Relapse. *Nguyen, T.*, +, *TCBB Nov.-Dec. 2021 2841-2847*

- POPbic: Pathway-Based Order Preserving Bicustering Algorithm Towards the Analysis of Gene Expression Data. *Mandal, K.*, +, *TCBB Nov.-Dec. 2021 2659-2670*
- Stratified Test Accurately Identifies Differentially Expressed Genes Under Batch Effects in Single-Cell Data. *Liang, S.*, +, *TCBB Nov.-Dec. 2021 2072-2079*
- Unsupervised Learning Framework With Multidimensional Scaling in Predicting Epithelial-Mesenchymal Transitions. *Qiu, Y.*, +, *TCBB Nov.-Dec. 2021 2714-2723*
- Genetic algorithms**
- A Hybrid Ensemble Algorithm Combining AdaBoost and Genetic Algorithm for Cancer Classification with Gene Expression Data. *Lu, H.*, +, *TCBB May-June 2021 863-870*
- Alignment-Free Sequence Comparison With Multiple k Values. *Qian, Y.*, +, *TCBB Sept.-Oct. 2021 1841-1849*
- Detecting Clustered Independent Rare Variant Associations Using Genetic Algorithms. *Souza, M.G.*, +, *TCBB May-June 2021 932-939*
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- Multi-Neighborhood Learning for Global Alignment in Biological Networks. *Ma, L.*, +, *TCBB Nov.-Dec. 2021 2598-2611*
- Orienting Conflicted Graph Edges Using Genetic Algorithms to Discover Pathways in Protein-Protein Interaction Networks. *Iqbal, S.*, +, *TCBB Sept.-Oct. 2021 1970-1985*
- Genetic communication**
- A Graph-Based Approach for the DNA Word Design Problem. *Lunacasu, V.*, +, *TCBB Nov.-Dec. 2021 2747-2752*
- Genetics**
- AGTR2, One Possible Novel Key Gene for the Entry of SARS-CoV-2 Into Human Cells. *Cui, C.*, +, *TCBB July-Aug. 2021 1230-1233*
- ANCA: Alignment-Based Network Construction Algorithm. *Chow, K.*, +, *TCBB March-April 2021 512-524*
- A Deep Learning Framework for Identifying Essential Proteins by Integrating Multiple Types of Biological Information. *Zeng, M.*, +, *TCBB Jan.-Feb. 2021 296-305*
- A Deep Learning-Based Method for Identification of Bacteriophage-Host Interaction. *Li, M.*, +, *TCBB Sept.-Oct. 2021 1801-1810*
- A Fast and Furious Bayesian Network and Its Application of Identifying Colon Cancer to Liver Metastasis Gene Regulatory Networks. *Liu, E.*, +, *TCBB July-Aug. 2021 1325-1335*
- A Faster Algorithm for Computing the Kernel of Maximum Agreement Subtrees. *Wang, B.*, +, *TCBB March-April 2021 416-430*
- A Gene Rank Based Approach for Single Cell Similarity Assessment and Clustering. *Xu, Y.*, +, *TCBB March-April 2021 431-442*
- A Hybrid Supervised Approach to Human Population Identification Using Genomics Data. *Araghi, S.*, +, *TCBB March-April 2021 443-454*
- A Latent Gaussian Copula Model for Mixed Data Analysis in Brain Imaging Genetics. *Zhang, A.*, +, *TCBB July-Aug. 2021 1350-1360*
- A Local Outlier Factor-Based Detection of Copy Number Variations From NGS Data. *Yuan, X.*, +, *TCBB Sept.-Oct. 2021 1811-1820*
- A New Weighted Imputed Neighborhood-Regularized Tri-Factorization One-Class Collaborative Filtering Algorithm: Application to Target Gene Prediction of Transcription Factors. *Lim, H.*, +, *TCBB Jan.-Feb. 2021 126-137*
- A Novel Approach for Potential Human LncRNA-Disease Association Prediction Based on Local Random Walk. *Li, J.*, +, *TCBB May-June 2021 1049-1059*
- A Pipeline for Integrated Theory and Data-Driven Modeling of Biomedical Data. *Raghu, V.K.*, +, *TCBB May-June 2021 811-822*
- Alignment-Free Sequence Comparison With Multiple k Values. *Qian, Y.*, +, *TCBB Sept.-Oct. 2021 1841-1849*
- An Ensemble Method to Reconstruct Gene Regulatory Networks Based on Multivariate Adaptive Regression Splines. *Zheng, R.*, +, *TCBB Jan.-Feb. 2021 347-354*
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- APT: An Automated Probe Tracker From Gene Expression Data. *Kumar, G.*, +, *TCBB Sept.-Oct. 2021 1864-1874*
- Bayesian Inference in Y-Linked Two-Sex Branching Processes with Mutations: ABC Approach. *Gonzalez, M.*, +, *TCBB March-April 2021 525-538*
- Branching Out to Speciation in a Model of Fractionation: The Malvaceae. *Zhang, Y.*, +, *TCBB Sept.-Oct. 2021 1875-1884*
- CDPath: Cooperative Driver Pathways Discovery Using Integer Linear Programming and Markov Clustering. *Yang, Z.*, +, *TCBB July-Aug. 2021 1384-1395*
- Classification of Mild Cognitive Impairment With Multimodal Data Using Both Labeled and Unlabeled Samples. *Yuan, S.*, +, *TCBB Nov.-Dec. 2021 2281-2290*
- CNAPE: A Machine Learning Method for Copy Number Alteration Prediction from Gene Expression. *Mu, Q.*, +, *TCBB Jan.-Feb. 2021 306-311*
- CNV_IFTV: An Isolation Forest and Total Variation-Based Detection of CNVs from Short-Read Sequencing Data. *Yuan, X.*, +, *TCBB March-April 2021 539-549*
- Consensus of All Solutions for Intractable Phylogenetic Tree Inference. *Tabaszewski, P.*, +, *TCBB Jan.-Feb. 2021 149-161*
- CoronaPep: An Anti-Coronavirus Peptide Generation Tool. *Kaushik, A.C.*, +, *TCBB July-Aug. 2021 1299-1304*
- Cross-Species Protein Function Prediction with Asynchronous-Random Walk. *Zhao, Y.*, +, *TCBB July-Aug. 2021 1439-1450*
- Deep Bidirectional Classification Model for COVID-19 Disease Infected Patients. *Pathak, Y.*, +, *TCBB July-Aug. 2021 1234-1241*
- Deep Pathway Analysis V2.0: A Pathway Analysis Framework Incorporating Multi-Dimensional Omics Data. *Zhao, Y.*, +, *TCBB Jan.-Feb. 2021 373-385*
- DeepDRBP-2L: A New Genome Annotation Predictor for Identifying DNA-Binding Proteins and RNA-Binding Proteins Using Convolutional Neural Network and Long Short-Term Memory. *Zhang, J.*, +, *TCBB July-Aug. 2021 1451-1463*
- DeepDSC: A Deep Learning Method to Predict Drug Sensitivity of Cancer Cell Lines. *Li, M.*, +, *TCBB March-April 2021 575-582*
- Definition and Usage of Texture Feature for Biological Sequence. *Chen, W.*, +, *TCBB March-April 2021 773-776*
- Deletion Detection Method Using the Distribution of Insert Size and a Precise Alignment Strategy. *Zhang, Z.*, +, *TCBB May-June 2021 1070-1081*
- Designing a New Multi-Epitope Pertussis Vaccine with Highly Population Coverage Based on a Novel Sequence and Structural Filtration Algorithm. *Ghasemnejad, A.*, +, *TCBB Sept.-Oct. 2021 1885-1892*
- Detecting Clustered Independent Rare Variant Associations Using Genetic Algorithms. *Souza, M.G.*, +, *TCBB May-June 2021 932-939*
- Detection of Phenotype-Related Mutations of COVID-19 via the Whole Genomic Data. *Lv, J.*, +, *TCBB July-Aug. 2021 1242-1249*
- Discriminant Projection Shared Dictionary Learning for Classification of Tumors Using Gene Expression Data. *Peng, S.*, +, *TCBB July-Aug. 2021 1464-1473*
- Dissipativity-Based Filtering for Switched Genetic Regulatory Networks with Stochastic Disturbances and Time-Varying Delays. *Yu, T.*, +, *TCBB May-June 2021 1082-1092*
- EPGA-SC : A Framework for *de novo* Assembly of Single-Cell Sequencing Reads. *Liao, X.*, +, *TCBB July-Aug. 2021 1492-1503*
- FlyIT: *Drosophila* Embryogenesis Image Annotation based on Image Tiling and Convolutional Neural Networks. *Long, W.*, +, *TCBB Jan.-Feb. 2021 194-204*
- Foretelling the Phenotype of a Genomic Sequence. *Mainali, S.*, +, *TCBB March-April 2021 777-783*

- Formal Analysis of Network Motifs Links Structure to Function in Biological Programs. *Dunn, S.*, +, *TCBB Jan.-Feb. 2021 261-271*
- Formator: Predicting Lysine Formylation Sites Based on the Most Distant Undersampling and Safe-Level Synthetic Minority Oversampling. *Jia, C.*, +, *TCBB Sept.-Oct. 2021 1937-1945*
- frDriver: A Functional Region Driver Identification for Protein Sequence. *Lu, X.*, +, *TCBB Sept.-Oct. 2021 1773-1783*
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- MicroRNA Based Feedforward Control of Intrinsic Gene Expression Noise. *Bokes, P.*, +, *TCBB Jan.-Feb. 2021 272-282*
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- ### Genomics
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A Novel Drug Repositioning Approach Based on Collaborative Metric Learning. *Luo, H.*, +, *TCBB March-April 2021 463-471*

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DMFLDA: A Deep Learning Framework for Predicting lncRNA–Disease Associations. *Zeng, M., +, TCBB Nov.-Dec. 2021 2353-2363*

Dual Hyper-Graph Regularized Supervised NMF for Selecting Differentially Expressed Genes and Tumor Classification. *Wang, C., +, TCBB Nov.-Dec. 2021 2375-2383*

iLncRNAdis-FB: Identify lncRNA–Disease Associations by Fusing Biological Feature Blocks Through Deep Neural Network. *Wei, H., +, TCBB Sept.-Oct. 2021 1946-1957*

LWPCMF: Logistic Weighted Profile-Based Collaborative Matrix Factorization for Predicting miRNA–Disease Associations. *Yin, M., +, TCBB May-June 2021 1122-1129*

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A Novel Approach for Potential Human LncRNA–Disease Association Prediction Based on Local Random Walk. *Li, J., +, TCBB May-June 2021 1049-1059*

A Novel Drug Repositioning Approach Based on Collaborative Metric Learning. *Luo, H., +, TCBB March-April 2021 463-471*

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An Ontology-Independent Representation Learning for Similar Disease Detection Based on Multi-Layer Similarity Network. *Qin, R., +, TCBB Jan.-Feb. 2021 183-193*

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- An Evolutionary Profile Guided Greedy Parallel Replica-Exchange Monte Carlo Search Algorithm for Rapid Convergence in Protein Design. *Banerjee, A., +, TCBB March-April 2021 489-499*
- An Integrative Framework for Combining Sequence and Epigenomic Data to Predict Transcription Factor Binding Sites Using Deep Learning. *Jing, F., +, TCBB Jan.-Feb. 2021 355-364*
- CoronaPep: An Anti-Coronavirus Peptide Generation Tool. *Kaushik, A.C., +, TCBB July-Aug. 2021 1299-1304*
- Cross-Species Protein Function Prediction with Asynchronous-Random Walk. *Zhao, Y., +, TCBB July-Aug. 2021 1439-1450*
- DeepDRBP-2L: A New Genome Annotation Predictor for Identifying DNA-Binding Proteins and RNA-Binding Proteins Using Convolutional Neural Network and Long Short-Term Memory. *Zhang, J., +, TCBB July-Aug. 2021 1451-1463*
- Detection of Binding Sites on SARS-CoV-2 Spike Protein Receptor-Binding Domain by Molecular Dynamics Simulations in Mixed Solvents. *Jokinen, E.M., +, TCBB July-Aug. 2021 1281-1289*
- Empirical Potential Energy Function Toward ab Initio Folding G Protein-Coupled Receptors. *Wu, H., +, TCBB Sept.-Oct. 2021 1752-1762*
- Formator: Predicting Lysine Formylation Sites Based on the Most Distant Undersampling and Safe-Level Synthetic Minority Oversampling. *Jia, C., +, TCBB Sept.-Oct. 2021 1937-1945*
- frDriver: A Functional Region Driver Identification for Protein Sequence. *Lu, X., +, TCBB Sept.-Oct. 2021 1773-1783*
- High-Throughput Screening and Quantum Mechanics for Identifying Potent Inhibitors Against Mac1 Domain of SARS-CoV-2 Nsp3. *Selvaraj, C., +, TCBB July-Aug. 2021 1262-1270*
- iPhosH-PseAAC: Identify Phosphohistidine Sites in Proteins by Blending Statistical Moments and Position Relative Features According to the Chou's 5-Step Rule and General Pseudo Amino Acid Composition. *Awais, M., +, TCBB March-April 2021 596-610*
- MILAMP: Multiple Instance Prediction of Amyloid Proteins. *Munir, F., +, TCBB May-June 2021 1142-1150*

Predicting *in-vitro* Transcription Factor Binding Sites Using DNA Sequence + Shape. Zhang, Q., +, *TCBB March-April 2021* 667-676

Probing the Relation Between Community Evolution in Dynamic Residue Interaction Networks and Xylanase Thermostability. Zhang, C., +, *TCBB March-April 2021* 686-696

Protein Family Classification from Scratch: A CNN Based Deep Learning Approach. Zhang, D., +, *TCBB Sept.-Oct. 2021* 1996-2007

Protein Structure Prediction Using Population-Based Algorithm Guided by Information Entropy. Zhang, G., +, *TCBB March-April 2021* 697-707

RNA Flexibility Prediction With Sequence Profile and Predicted Solvent Accessibility. Wei, H., +, *TCBB Sept.-Oct. 2021* 2017-2022

RNA Secondary Structure Prediction with Pseudoknots Using Chemical Reaction Optimization Algorithm. Islam, M.R., +, *TCBB May-June 2021* 1195-1207

RSwitch: A Novel Bioinformatics Database on Riboswitches as Antibacterial Drug Targets. Penchovsky, R., +, *TCBB March-April 2021* 804-808

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A Graphic Encoding Method for Quantitative Classification of Protein Structure and Representation of Conformational Changes. Carrillo-Cabada, H., +, *TCBB July-Aug. 2021* 1336-1349

An Evolutionary Profile Guided Greedy Parallel Replica-Exchange Monte Carlo Search Algorithm for Rapid Convergence in Protein Design. Banerjee, A., +, *TCBB March-April 2021* 489-499

Detection of Binding Sites on SARS-CoV-2 Spike Protein Receptor-Binding Domain by Molecular Dynamics Simulations in Mixed Solvents. Jokinen, E.M., +, *TCBB July-Aug. 2021* 1281-1289

High-Throughput Screening and Quantum Mechanics for Identifying Potent Inhibitors Against Mac1 Domain of SARS-CoV-2 Nsp3. Selvaraj, C., +, *TCBB July-Aug. 2021* 1262-1270

Probing the Relation Between Community Evolution in Dynamic Residue Interaction Networks and Xylanase Thermostability. Zhang, C., +, *TCBB March-April 2021* 686-696

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An Evolutionary Profile Guided Greedy Parallel Replica-Exchange Monte Carlo Search Algorithm for Rapid Convergence in Protein Design. Banerjee, A., +, *TCBB March-April 2021* 489-499

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Celiac Disease Detection From Videocapsule Endoscopy Images Using Strip Principal Component Analysis. Li, B.N., +, *TCBB July-Aug. 2021* 1396-1404

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Network theory (graphs)

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Formal Analysis of Network Motifs Links Structure to Function in Biological Programs. Dunn, S., +, *TCBB Jan.-Feb. 2021* 261-271

Orienting Conflicted Graph Edges Using Genetic Algorithms to Discover Pathways in Protein-Protein Interaction Networks. Iqbal, S., +, *TCBB Sept.-Oct. 2021* 1970-1985

Neural network architecture

D-UNet: A Dimension-Fusion U Shape Network for Chronic Stroke Lesion Segmentation. Zhou, Y., +, *TCBB May-June 2021* 940-950

FlyIT: *Drosophila* Embryogenesis Image Annotation based on Image Tiling and Convolutional Neural Networks. Long, W., +, *TCBB Jan.-Feb. 2021* 194-204

Multi-Scale Capsule Network for Predicting DNA-Protein Binding Sites. Zhang, Q., +, *TCBB Sept.-Oct. 2021* 1793-1800

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A Graphic Encoding Method for Quantitative Classification of Protein Structure and Representation of Conformational Changes. Carrillo-Cabada, H., +, *TCBB July-Aug. 2021* 1336-1349

A Method for Generating Synthetic Electronic Medical Record Text. Guan, J., +, *TCBB Jan.-Feb. 2021* 173-182

A Multi-Scale Activity Transition Network for Data Translation in EEG Signals Decoding. Lin, B., +, *TCBB Sept.-Oct. 2021* 1699-1709

A New ECG Denoising Framework Using Generative Adversarial Network. Singh, P., +, *TCBB March-April 2021* 759-764

An Integrative Framework for Combining Sequence and Epigenomic Data to Predict Transcription Factor Binding Sites Using Deep Learning. Jing, F., +, *TCBB Jan.-Feb. 2021* 355-364

Deep Convolutional and Recurrent Neural Networks for Cell Motility Discrimination and Prediction. Kimmel, J.C., +, *TCBB March-April 2021* 562-574

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GapPredict – A Language Model for Resolving Gaps in Draft Genome Assemblies. Chen, E., +, *TCBB Nov.-Dec. 2021* 2802-2808

Identifying Microbe-Disease Association Based on a Novel Back-Propagation Neural Network Model. Li, H., +, *TCBB Nov.-Dec. 2021* 2502-2513

Improved Predicting of The Sequence Specificities of RNA Binding Proteins by Deep Learning. Tayara, H., +, *TCBB Nov.-Dec. 2021* 2526-2534

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Multi-Task Sparse Canonical Correlation Analysis with Application to Multi-Modal Brain Imaging Genetics. *Du, L.*, +, *TCBB Jan.-Feb. 2021 227-239*

oComm: Overlapping Community Detection in Multi-View Brain Network. *Huang, L.*, +, *TCBB July-Aug. 2021 1582-1595*

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Few-Shot Breast Cancer Metastases Classification via Unsupervised Cell Ranking. *Chen, J.*, +, *TCBB Sept.-Oct. 2021 1914-1923*

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DeepSeed Local Graph Matching for Densely Packed Cells Tracking. *Liu, M.*, +, *TCBB May-June 2021 1060-1069*

Resolving Colliding Larvae by Fitting ASM to Random Walker-Based Pre-Segmentations. *Bian, A.*, +, *TCBB May-June 2021 1184-1194*

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Pregnancy Associated Breast Cancer Gene Expressions : New Insights on Their Regulation Based on Rare Correlated Patterns. *Bouasker, S.*, +, *TCBB May-June 2021 1035-1048*

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PAN: Personalized Annotation-Based Networks for the Prediction of Breast Cancer Relapse. *Nguyen, T.*, +, *TCBB Nov.-Dec. 2021 2841-2847*

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AFSBN: A Method of Artificial Fish Swarm Optimizing Bayesian Network for Epistasis Detection. *Wang, L.*, +, *TCBB July-Aug. 2021 1369-1383*

Celiac Disease Detection From Videocapsule Endoscopy Images Using Strip Principal Component Analysis. *Li, B.N.*, +, *TCBB July-Aug. 2021 1396-1404*

EBST: An Evolutionary Multi-Objective Optimization Based Tool for Discovering Potential Biomarkers in Ovarian Cancer. *Yaghoobi, H.*, +, *TCBB Nov.-Dec. 2021 2384-2393*

Evolving Multiobjective Cancer Subtype Diagnosis From Cancer Gene Expression Data. *Wang, Y.*, +, *TCBB Nov.-Dec. 2021 2431-2444*

Evolving Transcriptomic Profiles From Single-Cell RNA-Seq Data Using Nature-Inspired Multiobjective Optimization. *Li, X.*, +, *TCBB Nov.-Dec. 2021 2445-2458*

Multi-Neighborhood Learning for Global Alignment in Biological Networks. *Ma, L.*, +, *TCBB Nov.-Dec. 2021 2598-2611*

Multi-objective Simulated Annealing Variants to Infer Gene Regulatory Network: A Comparative Study. *Biswas, S.*, +, *TCBB Nov.-Dec. 2021 2612-2623*

RNA Secondary Structure Prediction with Pseudoknots Using Chemical Reaction Optimization Algorithm. *Islam, M.R.*, +, *TCBB May-June 2021 1195-1207*

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Guest Editorial: Machine Learning for AI-Enhanced Healthcare and Medical Services: New Development and Promising Solution. *Yan, K.*, +, *TCBB May-June 2021 850-851*

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Improve the Resolution and Parallel Performance of the Three-Dimensional Refine Algorithm in RELION Using CUDA and MPI. *Zhang, J.*, +, *TCBB March-April 2021 583-595*

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A Unified Smart Chinese Medicine Framework for Healthcare and Medical Services. *Zhang, Q.*, +, *TCBB May-June 2021 882-890*

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A Unified Smart Chinese Medicine Framework for Healthcare and Medical Services. *Zhang, Q.*, +, *TCBB May-June 2021 882-890*

CNN-RNN Based Intelligent Recommendation for Online Medical Pre-Diagnosis Support. *Zhou, X.*, +, *TCBB May-June 2021 912-921*

Deep Bidirectional Classification Model for COVID-19 Disease Infected Patients. *Pathak, Y.*, +, *TCBB July-Aug. 2021 1234-1241*

High-Risk Prediction of Cardiovascular Diseases via Attention-Based Deep Neural Networks. *An, Y.*, +, *TCBB May-June 2021 1093-1105*

High-Throughput Screening and Quantum Mechanics for Identifying Potent Inhibitors Against Mac1 Domain of SARS-CoV-2 Nsp3. *Selvaraj, C.*, +, *TCBB July-Aug. 2021 1262-1270*

Hybrid Machine Learning Models for Predicting Types of Human T-cell Lymphotropic Virus. *Sharma, G.*, +, *TCBB July-Aug. 2021 1524-1534*

ILDMSF: Inferring Associations Between Long Non-Coding RNA and Disease Based on Multi-Similarity Fusion. *Chen, Q.*, +, *TCBB May-June 2021 1106-1112*

Integrating Multi-Omic Data With Deep Subspace Fusion Clustering for Cancer Subtype Prediction. *Yang, B.*, +, *TCBB Jan.-Feb. 2021 216-226*

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A Fast Linear Neighborhood Similarity-Based Network Link Inference Method to Predict MicroRNA-Disease Associations. *Zhang, W.*, +, *TCBB March-April 2021 405-415*

A Unified Smart Chinese Medicine Framework for Healthcare and Medical Services. *Zhang, Q.*, +, *TCBB May-June 2021 882-890*

Finite-Set Model Predictive Control of Melanoma Cancer Treatment Using Signaling Pathway Inhibitor of Cancer Stem Cell. *Javadi, A.*, +, *TCBB July-Aug. 2021 1504-1511*

Identifying Drug Resistant miRNAs Using Entropy Based Ranking. *Pal, J.K.*, +, *TCBB May-June 2021 973-984*

Integrating Multi-Omic Data With Deep Subspace Fusion Clustering for Cancer Subtype Prediction. *Yang, B.*, +, *TCBB Jan.-Feb. 2021 216-226*

Network-Based Analysis of Fatal Comorbidities of COVID-19 and Potential Therapeutics. *Chakrabarty, B.*, +, *TCBB July-Aug. 2021 1271-1280*

Personalized Metabolic Analysis of Diseases. *Cakmak, A.*, +, *TCBB May-June 2021 1014-1025*

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A Graphic Encoding Method for Quantitative Classification of Protein Structure and Representation of Conformational Changes. *Carrillo-Cabada, H.*, +, *TCBB July-Aug. 2021 1336-1349*

A Hybrid Ensemble Algorithm Combining AdaBoost and Genetic Algorithm for Cancer Classification with Gene Expression Data. *Lu, H.*, +, *TCBB May-June 2021 863-870*

AIePred: An Ensemble Predictive Model of Classifier Chain to Identify Anti-Inflammatory Peptides. *Zhang, J.*, +, *TCBB Sept.-Oct. 2021 1831-1840*

CCFS: A Confidence-Based Cost-Effective Feature Selection Scheme for Healthcare Data Classification. *Chen, Y.*, +, *TCBB May-June 2021 902-911*

Cross-species Data Classification by Domain Adaptation via Discriminative Heterogeneous Maximum Mean Discrepancy. *Li, L.*, +, *TCBB Jan.-Feb. 2021 312-324*

CrystalM: A Multi-View Fusion Approach for Protein Crystallization Prediction. *Wang, Y.*, +, *TCBB Jan.-Feb. 2021 325-335*

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Discriminant Projection Shared Dictionary Learning for Classification of Tumors Using Gene Expression Data. *Peng, S.*, +, *TCBB July-Aug. 2021 1464-1473*

Epilepsy Signal Recognition Using Online Transfer TSK Fuzzy Classifier Underlying Classification Error and Joint Distribution Consensus Regularization. *Zhang, Y.*, +, *TCBB Sept.-Oct. 2021 1667-1678*

Few-Shot Breast Cancer Metastases Classification via Unsupervised Cell Ranking. *Chen, J.*, +, *TCBB Sept.-Oct. 2021 1914-1923*

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GrantExtractor: Accurate Grant Support Information Extraction from Biomedical Fulltext Based on Bi-LSTM-CRF. *Dai, S.*, +, *TCBB Jan.-Feb. 2021 205-215*

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LDAH2V: Exploring Meta-Paths Across Multiple Networks for lncRNA-Disease Association Prediction. *Deng, L.*, +, *TCBB July-Aug. 2021 1572-1581*

MGRFE: Multilayer Recursive Feature Elimination Based on an Embedded Genetic Algorithm for Cancer Classification. *Peng, C.*, +, *TCBB March-April 2021 621-632*

MISSIM: An Incremental Learning-Based Model With Applications to the Prediction of miRNA-Disease Association. *Zheng, K.*, +, *TCBB Sept.-Oct. 2021 1733-1742*

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Personalized Metabolic Analysis of Diseases. *Cakmak, A.*, +, *TCBB May-June 2021 1014-1025*

Predicting Drug-Target Interactions With Multi-Label Classification and Label Partitioning. *Pliakos, K.*, +, *TCBB July-Aug. 2021 1596-1607*

Predicting TF-DNA Binding Motifs from ChIP-seq Datasets Using the Bag-Based Classifier Combined With a Multi-Fold Learning Scheme. *Zhang, Q.*, +, *TCBB Sept.-Oct. 2021 1743-1751*

Protein Fold Recognition by Combining Support Vector Machines and Pairwise Sequence Similarity Scores. *Yan, K.*, +, *TCBB Sept.-Oct. 2021 2008-2016*

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A Deep Learning-Based Method for Identification of Bacteriophage-Host Interaction. *Li, M.*, +, *TCBB Sept.-Oct. 2021 1801-1810*

A Gene Rank Based Approach for Single Cell Similarity Assessment and Clustering. *Xu, Y.*, +, *TCBB March-April 2021 431-442*

A Hybrid Supervised Approach to Human Population Identification Using Genomics Data. *Araghi, S.*, +, *TCBB March-April 2021 443-454*

A Novel Approach for Potential Human lncRNA-Disease Association Prediction Based on Local Random Walk. *Li, J.*, +, *TCBB May-June 2021 1049-1059*

A Novel Negative-Transfer-Resistant Fuzzy Clustering Model With a Shared Cross-Domain Transfer Latent Space and its Application to Brain CT Image Segmentation. *Jiang, Y.*, +, *TCBB Jan.-Feb. 2021 40-52*

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Data Convexity and Parameter Independent Clustering for Biomedical Datasets. *Rahman, M.A.*, +, *TCBB March-April 2021 765-772*

Definition and Usage of Texture Feature for Biological Sequence. *Chen, W.*, +, *TCBB March-April 2021 773-776*

iLncRNAdis-FB: Identify lncRNA-Disease Associations by Fusing Biological Feature Blocks Through Deep Neural Network. *Wei, H.*, +, *TCBB Sept.-Oct. 2021 1946-1957*

Integrating Multi-Omic Data With Deep Subspace Fusion Clustering for Cancer Subtype Prediction. *Yang, B.*, +, *TCBB Jan.-Feb. 2021 216-226*

LDAH2V: Exploring Meta-Paths Across Multiple Networks for lncRNA-Disease Association Prediction. *Deng, L.*, +, *TCBB July-Aug. 2021 1572-1581*

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POPbic: Pathway-Based Order Preserving Biclustering Algorithm Towards the Analysis of Gene Expression Data. *Mandal, K.*, +, *TCBB Nov.-Dec. 2021 2659-2670*

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SAQ: Semi-Algebraic Quartet Reconstruction. *Casanellas, M.*, +, *TCBB Nov.-Dec. 2021 2855-2861*

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Protein Fold Recognition Based on Auto-Weighted Multi-View Graph Embedding Learning Model. *Yan, K.*, +, *TCBB Nov.-Dec. 2021 2682-2691*

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Finite-Set Model Predictive Control of Melanoma Cancer Treatment Using Signaling Pathway Inhibitor of Cancer Stem Cell. *Javadi, A.*, +, *TCBB July-Aug. 2021 1504-1511*

Predictive models

A Novel Feature Selection Method for Uncertain Features: An Application to the Prediction of Pro-/Anti-Longevity Genes. *da Silva, P.N.*, +, *TCBB Nov.-Dec. 2021 2230-2238*

Categorical Matrix Completion With Active Learning for High-Throughput Screening. *Chen, J.*, +, *TCBB Nov.-Dec. 2021 2261-2270*

DMFLDA: A Deep Learning Framework for Predicting lncRNA-Disease Associations. *Zeng, M.*, +, *TCBB Nov.-Dec. 2021 2353-2363*

Drug-Target Interaction Prediction: End-to-End Deep Learning Approach. *Monteiro, N.R.C.*, +, *TCBB Nov.-Dec. 2021 2364-2374*

Enhanced Protein Structural Class Prediction Using Effective Feature Modeling and Ensemble of Classifiers. *Bankapur, S.*, +, *TCBB Nov.-Dec. 2021 2409-2419*

GapPredict – A Language Model for Resolving Gaps in Draft Genome Assemblies. *Chen, E.*, +, *TCBB Nov.-Dec. 2021 2802-2808*

Identifying Microbe-Disease Association Based on a Novel Back-Propagation Neural Network Model. *Li, H.*, +, *TCBB Nov.-Dec. 2021 2502-2513*

Incorporating Clinical, Chemical and Biological Information for Predicting Small Molecule-microRNA Associations Based on Non-Negative Matrix Factorization. *Luo, J.*, +, *TCBB Nov.-Dec. 2021 2535-2545*

NegStacking: Drug-Target Interaction Prediction Based on Ensemble Learning and Logistic Regression. *Yang, J.*, +, *TCBB Nov.-Dec. 2021 2624-2634*

Prediction of Drug-Target Interactions Based on Network Representation Learning and Ensemble Learning. *Xuan, P.*, +, *TCBB Nov.-Dec. 2021 2671-2681*

Protein Fold Recognition Based on Auto-Weighted Multi-View Graph Embedding Learning Model. *Yan, K.*, +, *TCBB Nov.-Dec. 2021 2682-2691*

WMMDCA: Prediction of Drug Responses by Weight-Based Modular Mapping in Cancer Cell Lines. *Wang, S.*, +, *TCBB Nov.-Dec. 2021 2733-2740*

Principal component analysis

A Hybrid Supervised Approach to Human Population Identification Using Genomics Data. *Araghi, S.*, +, *TCBB March-April 2021 443-454*

An Effective Biclustering-Based Framework for Identifying Cell Subpopulations From scRNA-seq Data. *Fang, Q.*, +, *TCBB Nov.-Dec. 2021 2249-2260*

DSTPCA: Double-Sparse Constrained Tensor Principal Component Analysis Method for Feature Selection. *Hu, Y.*, +, *TCBB July-Aug. 2021 1481-1491*

Probability

A Novel Drug Repositioning Approach Based on Collaborative Metric Learning. *Luo, H.*, +, *TCBB March-April 2021 463-471*

An Automated Cell Tracking Approach With Multi-Bernoulli Filtering and Ant Colony Labor Division. *Xu, B.*, +, *TCBB Sept.-Oct. 2021 1850-1863*

Identifying Drug Resistant miRNAs Using Entropy Based Ranking. *Pal, J.K.*, +, *TCBB May-June 2021 973-984*

Probability density function

Characterizing Intra-Tumor Heterogeneity From Somatic Mutations Without Copy-Neutral Assumption. *Ogundijo, O.E.*, +, *TCBB Nov.-Dec. 2021 2271-2280*

Probability distribution

iEnhancer-KL: A Novel Two-Layer Predictor for Identifying Enhancers by Position Specific of Nucleotide Composition. *Lyu, Y.*, +, *TCBB Nov.-Dec. 2021 2809-2815*

Progenitor cells

Comparing Phylogenetic Approaches to Reconstructing Cell Lineage From Microsatellites With Missing Data. *Lyne, A.*, +, *TCBB Nov.-Dec. 2021 2291-2301*

Protein engineering

Learning Representation of Molecules in Association Network for Predicting Intermolecular Associations. *Yi, H.*, +, *TCBB Nov.-Dec. 2021 2546-2554*

Protein sequence

Protein Fold Recognition Based on Auto-Weighted Multi-View Graph Embedding Learning Model. *Yan, K.*, +, *TCBB Nov.-Dec. 2021 2682-2691*

Proteins

- AGTR2*, One Possible Novel Key Gene for the Entry of SARS-CoV-2 Into Human Cells. *Cui, C.*, +, *TCBB July-Aug. 2021 1230-1233*
- ANCA*: Alignment-Based Network Construction Algorithm. *Chow, K.*, +, *TCBB March-April 2021 512-524*
- A Bridging Centrality Plugin for GEPHI and a Case Study for *Mycobacterium Tuberculosis* H37Rv. *Pereira, G.*, +, *TCBB Nov.-Dec. 2021 2741-2746*
- A Convolutional Neural Network System to Discriminate Drug-Target Interactions. *Hu, S.*, +, *TCBB July-Aug. 2021 1315-1324*
- A Deep Learning Framework for Gene Ontology Annotations With Sequence- and Network-Based Information. *Zhang, F.*, +, *TCBB Nov.-Dec. 2021 2208-2217*
- A Deep Learning Framework for Identifying Essential Proteins by Integrating Multiple Types of Biological Information. *Zeng, M.*, +, *TCBB Jan.-Feb. 2021 296-305*
- A Deep Learning-Based Method for Identification of Bacteriophage-Host Interaction. *Li, M.*, +, *TCBB Sept.-Oct. 2021 1801-1810*
- A Graphic Encoding Method for Quantitative Classification of Protein Structure and Representation of Conformational Changes. *Carrillo-Cabada, H.*, +, *TCBB July-Aug. 2021 1336-1349*
- A New Weighted Imputed Neighborhood-Regularized Tri-Factorization One-Class Collaborative Filtering Algorithm: Application to Target Gene Prediction of Transcription Factors. *Lim, H.*, +, *TCBB Jan.-Feb. 2021 126-137*
- A Novel Branch-and-Bound Algorithm for the Protein Folding Problem in the 3D HP Model. *Chou, H.*, +, *TCBB March-April 2021 455-462*
- A Novel Feature Selection Method for Uncertain Features: An Application to the Prediction of Pro-/Anti-Longevity Genes. *da Silva, P.N.*, +, *TCBB Nov.-Dec. 2021 2230-2238*
- A Novel Way of Comparing Protein 3D Structure Using Graph Partitioning Approach. *Angadi, U.B.*, +, *TCBB July-Aug. 2021 1361-1368*
- Active Module Identification From Multilayer Weighted Gene Co-Expression Networks: A Continuous Optimization Approach. *Li, D.*, +, *TCBB Nov.-Dec. 2021 2239-2248*
- AIepred: An Ensemble Predictive Model of Classifier Chain to Identify Anti-Inflammatory Peptides. *Zhang, J.*, +, *TCBB Sept.-Oct. 2021 1831-1840*
- An Evolutionary Profile Guided Greedy Parallel Replica-Exchange Monte Carlo Search Algorithm for Rapid Convergence in Protein Design. *Banerjee, A.*, +, *TCBB March-April 2021 489-499*
- An Integrative Framework for Combining Sequence and Epigenomic Data to Predict Transcription Factor Binding Sites Using Deep Learning. *Jing, F.*, +, *TCBB Jan.-Feb. 2021 355-364*
- Categorical Matrix Completion With Active Learning for High-Throughput Screening. *Chen, J.*, +, *TCBB Nov.-Dec. 2021 2261-2270*
- CEPZ: A Novel Predictor for Identification of DNase I Hypersensitive Sites. *Zheng, Y.*, +, *TCBB Nov.-Dec. 2021 2768-2774*
- Colored Network Motif Analysis by Dynamic Programming Approach: An Application in Host Pathogen Interaction Network. *Biswas, S.*, +, *TCBB March-April 2021 550-561*
- Common Neighbors Extension of the Sticky Model for PPI Networks Evaluated by Global and Local Graphlet Similarity. *Maharaj, S.*, +, *TCBB Jan.-Feb. 2021 16-26*
- Computational Modeling of Gene-Specific Transcriptional Repression, Activation and Chromatin Interactions in Leukemogenesis by LASSO-Regularized Logistic Regression. *Steinauer, N.*, +, *TCBB Nov.-Dec. 2021 2109-2122*
- CoronaPep: An Anti-Coronavirus Peptide Generation Tool. *Kaushik, A.C.*, +, *TCBB July-Aug. 2021 1299-1304*
- Cross-Species Protein Function Prediction with Asynchronous-Random Walk. *Zhao, Y.*, +, *TCBB July-Aug. 2021 1439-1450*
- CrystalM: A Multi-View Fusion Approach for Protein Crystallization Prediction. *Wang, Y.*, +, *TCBB Jan.-Feb. 2021 325-335*
- DeepDRBP-2L: A New Genome Annotation Predictor for Identifying DNA-Binding Proteins and RNA-Binding Proteins Using Convolutional Neural Network and Long Short-Term Memory. *Zhang, J.*, +, *TCBB July-Aug. 2021 1451-1463*
- Designing a New Multi-Epitope Pertussis Vaccine with Highly Population Coverage Based on a Novel Sequence and Structural Filtration Algorithm. *Ghasemnejad, A.*, +, *TCBB Sept.-Oct. 2021 1885-1892*
- Drug-Target Interaction Prediction: End-to-End Deep Learning Approach. *Monteiro, N.R.C.*, +, *TCBB Nov.-Dec. 2021 2364-2374*
- Empirical Potential Energy Function Toward ab Initio Folding G Protein-Coupled Receptors. *Wu, H.*, +, *TCBB Sept.-Oct. 2021 1752-1762*
- EMS3: An Improved Algorithm for Finding Edit-Distance Based Motifs. *Xiao, P.*, +, *TCBB Jan.-Feb. 2021 27-37*
- Enhanced Protein Structural Class Prediction Using Effective Feature Modeling and Ensemble of Classifiers. *Bankapur, S.*, +, *TCBB Nov.-Dec. 2021 2409-2419*
- Essential Protein Recognition via Community Significance. *Liu, Y.*, +, *TCBB Nov.-Dec. 2021 2788-2794*
- FexRNA: Exploratory Data Analysis and Feature Selection of Non-Coding RNA. *Amin, N.*, +, *TCBB Nov.-Dec. 2021 2795-2801*
- Finding Possible Promoter Binding Sites in DNA Sequences by Sequential Patterns Mining With Specific Numbers of Gaps. *Ke, Y.*, +, *TCBB Nov.-Dec. 2021 2459-2470*
- Formator: Predicting Lysine Formylation Sites Based on the Most Distant Undersampling and Safe-Level Synthetic Minority Oversampling. *Jia, C.*, +, *TCBB Sept.-Oct. 2021 1937-1945*
- frDriver: A Functional Region Driver Identification for Protein Sequence. *Lu, X.*, +, *TCBB Sept.-Oct. 2021 1773-1783*
- FUNMarker: Fusion Network-Based Method to Identify Prognostic and Heterogeneous Breast Cancer Biomarkers. *Li, X.*, +, *TCBB Nov.-Dec. 2021 2483-2491*
- Genome-Scale Identification, in Silico Characterization and Interaction Study Between Wheat SNARE and NPSN Gene Families Involved in Vesicular Transport. *Gaggar, P.*, +, *TCBB Nov.-Dec. 2021 2492-2501*
- Imbalance Data Processing Strategy for Protein Interaction Sites Prediction. *Wang, B.*, +, *TCBB May-June 2021 985-994*
- Improved Predicting of The Sequence Specificities of RNA Binding Proteins by Deep Learning. *Tayara, H.*, +, *TCBB Nov.-Dec. 2021 2526-2534*
- KenDTI: An Ensemble Model for Predicting Drug-Target Interaction by Integrating Multi-Source Information. *Yu, Z.*, +, *TCBB July-Aug. 2021 1305-1314*
- Learning Representation of Molecules in Association Network for Predicting Intermolecular Associations. *Yi, H.*, +, *TCBB Nov.-Dec. 2021 2546-2554*
- MicroRNA Based Feedforward Control of Intrinsic Gene Expression Noise. *Bokes, P.*, +, *TCBB Jan.-Feb. 2021 272-282*
- MILAMP: Multiple Instance Prediction of Amyloid Proteins. *Munir, F.*, +, *TCBB May-June 2021 1142-1150*
- Modeling Cell Communication with Time-Dependent Signaling Hypergraphs. *Schwob, M.R.*, +, *TCBB May-June 2021 1151-1163*
- Molecular Simulations and Markov State Modeling Reveal Inactive Form of Quorum Sensing Regulator SdiA of *Escherichia Coli*. *Grabski, H.*, +, *TCBB Nov.-Dec. 2021 2835-2840*
- Multi-Neighborhood Learning for Global Alignment in Biological Networks. *Ma, L.*, +, *TCBB Nov.-Dec. 2021 2598-2611*
- Multi-Scale Capsule Network for Predicting DNA-Protein Binding Sites. *Zhang, Q.*, +, *TCBB Sept.-Oct. 2021 1793-1800*
- NegStacking: Drug-Target Interaction Prediction Based on Ensemble Learning and Logistic Regression. *Yang, J.*, +, *TCBB Nov.-Dec. 2021 2624-2634*
- Orienting Conflicted Graph Edges Using Genetic Algorithms to Discover Pathways in Protein-Protein Interaction Networks. *Iqbal, S.*, +, *TCBB Sept.-Oct. 2021 1970-1985*
- Physically-Inspired Gaussian Process Models for Post-Transcriptional Regulation in *Drosophila*. *Lopez-Lopera, A.F.*, +, *TCBB March-April 2021 656-666*
- Potential Pathogenic Genes Prioritization Based on Protein Domain Interaction Network Analysis. *Wang, W.*, +, *TCBB May-June 2021 1026-1034*
- Predicting *in-vitro* Transcription Factor Binding Sites Using DNA Sequence + Shape. *Zhang, Q.*, +, *TCBB March-April 2021 667-676*

Predicting the Antigenic Relationship of Foot-and-Mouth Disease Virus for Vaccine Selection Through a Computational Model. *Qiu, J.*, +, *TCBB March-April 2021 677-685*

Prediction of Drug–Target Interactions Based on Network Representation Learning and Ensemble Learning. *Xuan, P.*, +, *TCBB Nov.-Dec. 2021 2671-2681*

Prediction of FMN Binding Sites in Electron Transport Chains Based on 2-D CNN and PSSM Profiles. *Le, N.*, +, *TCBB Nov.-Dec. 2021 2189-2197*

Prioritizing Type 2 Diabetes Genes by Weighted PageRank on Bilayer Heterogeneous Networks. *Shang, H.*, +, *TCBB Jan.-Feb. 2021 336-346*

Profile Hidden Markov Models Are Not Identifiable. *Pattabiraman, S.*, +, *TCBB Jan.-Feb. 2021 162-172*

Protein Complexes Detection Based on Semi-Supervised Network Embedding Model. *Zhu, J.*, +, *TCBB March-April 2021 797-803*

Protein Crystallization Identification via Fuzzy Model on Linear Neighborhood Representation. *Ding, Y.*, +, *TCBB Sept.-Oct. 2021 1986-1995*

Protein Family Classification from Scratch: A CNN Based Deep Learning Approach. *Zhang, D.*, +, *TCBB Sept.-Oct. 2021 1996-2007*

Protein Fold Recognition Based on Auto-Weighted Multi-View Graph Embedding Learning Model. *Yan, K.*, +, *TCBB Nov.-Dec. 2021 2682-2691*

Protein Fold Recognition by Combining Support Vector Machines and Pairwise Sequence Similarity Scores. *Yan, K.*, +, *TCBB Sept.-Oct. 2021 2008-2016*

Protein Fold Recognition From Sequences Using Convolutional and Recurrent Neural Networks. *Villegas-Morcillo, A.*, +, *TCBB Nov.-Dec. 2021 2848-2854*

Protein Structure Prediction Using Population-Based Algorithm Guided by Information Entropy. *Zhang, G.*, +, *TCBB March-April 2021 697-707*

Protein2Vec: Aligning Multiple PPI Networks with Representation Learning. *Gao, J.*, +, *TCBB Jan.-Feb. 2021 240-249*

Revisiting Parameter Estimation in Biological Networks: Influence of Symmetries. *Sreedharan, J.K.*, +, *TCBB May-June 2021 836-849*

RNA Flexibility Prediction With Sequence Profile and Predicted Solvent Accessibility. *Wei, H.*, +, *TCBB Sept.-Oct. 2021 2017-2022*

Sampled-Data State Estimation of Reaction Diffusion Genetic Regulatory Networks via Space-Dividing Approaches. *Song, X.*, +, *TCBB March-April 2021 718-730*

Using CHOU'S 5-Steps Rule to Predict O-Linked Serine Glycosylation Sites by Blending Position Relative Features and Statistical Moment. *Akmal, M.A.*, +, *TCBB Sept.-Oct. 2021 2045-2056*

Proteomics

ChimST: An Efficient Spectral Library Search Tool for Peptide Identification from Chimeric Spectra in Data-Dependent Acquisition. *Zhang, W.*, +, *TCBB July-Aug. 2021 1416-1425*

Editorial: Computational Genomics and Molecular Medicine for Emerging COVID-19. *Wei, D.*, +, *TCBB July-Aug. 2021 1227-1229*

Prioritizing Type 2 Diabetes Genes by Weighted PageRank on Bilayer Heterogeneous Networks. *Shang, H.*, +, *TCBB Jan.-Feb. 2021 336-346*

Protein2Vec: Aligning Multiple PPI Networks with Representation Learning. *Gao, J.*, +, *TCBB Jan.-Feb. 2021 240-249*

Psychiatry

SNP Data Science for Classification of Bipolar Disorder I and Bipolar Disorder II. *Lee, C.*, +, *TCBB Nov.-Dec. 2021 2862-2869*

Psychology

2019nCoVAS: Developing the Web Service for Epidemic Transmission Prediction, Genome Analysis, and Psychological Stress Assessment for 2019-nCoV. *Xiao, M.*, +, *TCBB July-Aug. 2021 1250-1261*

Public domain software

Hyppo-X: A Scalable Exploratory Framework for Analyzing Complex Phenomics Data. *Kamruzzaman, M.*, +, *TCBB July-Aug. 2021 1535-1548*

Q

Query processing

Parallel Methods for Finding *k*-Mismatch Shortest Unique Substrings Using GPU. *Schultz, D.W.*, +, *TCBB Jan.-Feb. 2021 386-395*

Protein Fold Recognition by Combining Support Vector Machines and Pairwise Sequence Similarity Scores. *Yan, K.*, +, *TCBB Sept.-Oct. 2021 2008-2016*

Queueing analysis

A Deep Learning Framework for Gene Ontology Annotations With Sequence- and Network-Based Information. *Zhang, F.*, +, *TCBB Nov.-Dec. 2021 2208-2217*

R

R language

RNASeqR: An R Package for Automated Two-Group RNA-Seq Analysis Workflow. *Chao, K.*, +, *TCBB Sept.-Oct. 2021 2023-2031*

Radiation therapy

Transforming UTE-mDixon MR Abdomen-Pelvis Images Into CT by Jointly Leveraging Prior Knowledge and Partial Supervision. *Qian, P.*, +, *TCBB Jan.-Feb. 2021 70-82*

Random access memory

deGSM: Memory Scalable Construction Of Large Scale de Bruijn Graph. *Guo, H.*, +, *TCBB Nov.-Dec. 2021 2157-2166*

Random forests

An Enhanced Random Forests Approach to Predict Heart Failure From Small Imbalanced Gene Expression Data. *Chicco, D.*, +, *TCBB Nov.-Dec. 2021 2759-2765*

Exploring Molecular Descriptors and Fingerprints to Predict mTOR Kinase Inhibitors using Machine Learning Techniques. *Kumari, C.*, +, *TCBB Sept.-Oct. 2021 1902-1913*

Prediction of Essential Genes in Comparison States Using Machine Learning. *Xie, J.*, +, *TCBB Sept.-Oct. 2021 1784-1792*

Random processes

A Novel Approach for Potential Human LncRNA-Disease Association Prediction Based on Local Random Walk. *Li, J.*, +, *TCBB May-June 2021 1049-1059*

Cross-Species Protein Function Prediction with Asynchronous-Random Walk. *Zhao, Y.*, +, *TCBB July-Aug. 2021 1439-1450*

Resolving Colliding Larvae by Fitting ASM to Random Walker-Based Pre-Segmentations. *Bian, A.*, +, *TCBB May-June 2021 1184-1194*

Reaction kinetics theory

Composable Rate-Independent Computation in Continuous Chemical Reaction Networks. *Chalk, C.*, +, *TCBB Jan.-Feb. 2021 250-260*

Programming Substrate-Independent Kinetic Barriers With Thermodynamic Binding Networks. *Breik, K.*, +, *TCBB Jan.-Feb. 2021 283-295*

Receivers

Stratified Test Accurately Identifies Differentially Expressed Genes Under Batch Effects in Single-Cell Data. *Liang, S.*, +, *TCBB Nov.-Dec. 2021 2072-2079*

Receptor (biochemistry)

Computational Modeling of Gene-Specific Transcriptional Repression, Activation and Chromatin Interactions in Leukemogenesis by LASSO-Regularized Logistic Regression. *Steinauer, N.*, +, *TCBB Nov.-Dec. 2021 2109-2122*

Recommender systems

CNN-RNN Based Intelligent Recommendation for Online Medical Pre-Diagnosis Support. *Zhou, X.*, +, *TCBB May-June 2021 912-921*

Reconstruction algorithms

Comparing Phylogenetic Approaches to Reconstructing Cell Lineage From Microsatellites With Missing Data. *Lyne, A.*, +, *TCBB Nov.-Dec. 2021 2291-2301*

SAQ: Semi-Algebraic Quartet Reconstruction. *Casanellas, M.*, +, *TCBB Nov.-Dec. 2021 2855-2861*

Recurrent neural networks

A Deep Learning Framework for Identifying Essential Proteins by Integrating Multiple Types of Biological Information. *Zeng, M.*, +, *TCBB Jan.-Feb. 2021 296-305*

A Multi-Scale Activity Transition Network for Data Translation in EEG Signals Decoding. *Lin, B.*, +, *TCBB Sept.-Oct. 2021 1699-1709*

Deep Convolutional and Recurrent Neural Networks for Cell Motility Discrimination and Prediction. *Kimmel, J.C.*, +, *TCBB March-April 2021 562-574*

- DeepDRBP-2L: A New Genome Annotation Predictor for Identifying DNA-Binding Proteins and RNA-Binding Proteins Using Convolutional Neural Network and Long Short-Term Memory. *Zhang, J.*, +, *TCBB July-Aug. 2021 1451-1463*
- GrantExtractor: Accurate Grant Support Information Extraction from Biomedical Fulltext Based on Bi-LSTM-CRF. *Dai, S.*, +, *TCBB Jan.-Feb. 2021 205-215*
- Knowledge-Powered Deep Breast Tumor Classification With Multiple Medical Reports. *Chen, D.*, +, *TCBB May-June 2021 891-901*
- Multi-objective Simulated Annealing Variants to Infer Gene Regulatory Network: A Comparative Study. *Biswas, S.*, +, *TCBB Nov.-Dec. 2021 2612-2623*
- Protein Fold Recognition From Sequences Using Convolutional and Recurrent Neural Networks. *Villegas-Morcillo, A.*, +, *TCBB Nov.-Dec. 2021 2848-2854*
- Regression analysis**
- A Hybrid Supervised Approach to Human Population Identification Using Genomics Data. *Araghi, S.*, +, *TCBB March-April 2021 443-454*
- An Ensemble Method to Reconstruct Gene Regulatory Networks Based on Multivariate Adaptive Regression Splines. *Zheng, R.*, +, *TCBB Jan.-Feb. 2021 347-354*
- An Improved Multi-Task Learning Algorithm for Analyzing Cancer Survival Data. *Gu, W.*, +, *TCBB March-April 2021 500-511*
- Computational Modeling of Gene-Specific Transcriptional Repression, Activation and Chromatin Interactions in Leukemogenesis by LASSO-Regularized Logistic Regression. *Steinauer, N.*, +, *TCBB Nov.-Dec. 2021 2109-2122*
- frDriver: A Functional Region Driver Identification for Protein Sequence. *Lu, X.*, +, *TCBB Sept.-Oct. 2021 1773-1783*
- Supervised Dimension Reduction for Large-Scale “Omics” Data With Censored Survival Outcomes Under Possible Non-Proportional Hazards. *Spirko-Burns, L.*, +, *TCBB Sept.-Oct. 2021 2032-2044*
- Regulation**
- Computational Modeling of Gene-Specific Transcriptional Repression, Activation and Chromatin Interactions in Leukemogenesis by LASSO-Regularized Logistic Regression. *Steinauer, N.*, +, *TCBB Nov.-Dec. 2021 2109-2122*
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- Fast Optimal Circular Clustering and Applications on Round Genomes. *Debnath, T.*, +, *TCBB Nov.-Dec. 2021 2061-2071*
- Resource management**
- Characterizing Intra-Tumor Heterogeneity From Somatic Mutations Without Copy-Neutral Assumption. *Ogundijo, O.E.*, +, *TCBB Nov.-Dec. 2021 2271-2280*
- Retinal vessels**
- Multi-Label Classification Scheme Based on Local Regression for Retinal Vessel Segmentation. *Zou, B.*, +, *TCBB Nov.-Dec. 2021 2586-2597*
- Risk analysis**
- Use of Electronic Health Data for Disease Prediction: A Comprehensive Literature Review. *Hossain, M.E.*, +, *TCBB March-April 2021 745-758*
- RNA**
- A Fast Linear Neighborhood Similarity-Based Network Link Inference Method to Predict MicroRNA-Disease Associations. *Zhang, W.*, +, *TCBB March-April 2021 405-415*
- A Gene Rank Based Approach for Single Cell Similarity Assessment and Clustering. *Xu, Y.*, +, *TCBB March-April 2021 431-442*
- A Novel Approach for Potential Human LncRNA-Disease Association Prediction Based on Local Random Walk. *Li, J.*, +, *TCBB May-June 2021 1049-1059*
- CNAPE: A Machine Learning Method for Copy Number Alteration Prediction from Gene Expression. *Mu, Q.*, +, *TCBB Jan.-Feb. 2021 306-311*
- DeepDRBP-2L: A New Genome Annotation Predictor for Identifying DNA-Binding Proteins and RNA-Binding Proteins Using Convolutional Neural Network and Long Short-Term Memory. *Zhang, J.*, +, *TCBB July-Aug. 2021 1451-1463*
- Editorial: Computational Genomics and Molecular Medicine for Emerging COVID-19. *Wei, D.*, +, *TCBB July-Aug. 2021 1227-1229*
- EnTSSR: A Weighted Ensemble Learning Method to Impute Single-Cell RNA Sequencing Data. *Lu, F.*, +, *TCBB Nov.-Dec. 2021 2781-2787*
- FexRNA: Exploratory Data Analysis and Feature Selection of Non-Coding RNA. *Amin, N.*, +, *TCBB Nov.-Dec. 2021 2795-2801*
- Finding Possible Promoter Binding Sites in DNA Sequences by Sequential Patterns Mining With Specific Numbers of Gaps. *Ke, Y.*, +, *TCBB Nov.-Dec. 2021 2459-2470*
- Identifying Drug Resistant miRNAs Using Entropy Based Ranking. *Pal, J.K.*, +, *TCBB May-June 2021 973-984*
- ILDMSF: Inferring Associations Between Long Non-Coding RNA and Disease Based on Multi-Similarity Fusion. *Chen, Q.*, +, *TCBB May-June 2021 1106-1112*
- iLncRNADis-FB: Identify lncRNA-Disease Associations by Fusing Biological Feature Blocks Through Deep Neural Network. *Wei, H.*, +, *TCBB Sept.-Oct. 2021 1946-1957*
- Improved Predicting of The Sequence Specificities of RNA Binding Proteins by Deep Learning. *Tayara, H.*, +, *TCBB Nov.-Dec. 2021 2526-2534*
- LDAH2V: Exploring Meta-Paths Across Multiple Networks for lncRNA-Disease Association Prediction. *Deng, L.*, +, *TCBB July-Aug. 2021 1572-1581*
- LWPCMF: Logistic Weighted Profile-Based Collaborative Matrix Factorization for Predicting miRNA-Disease Associations. *Yin, M.*, +, *TCBB May-June 2021 1122-1129*
- MHRWR: Prediction of lncRNA-Disease Associations Based on Multiple Heterogeneous Networks. *Zhao, X.*, +, *TCBB Nov.-Dec. 2021 2577-2585*
- MicroRNA Based Feedforward Control of Intrinsic Gene Expression Noise. *Bokes, P.*, +, *TCBB Jan.-Feb. 2021 272-282*
- MISSIM: An Incremental Learning-Based Model With Applications to the Prediction of miRNA-Disease Association. *Zheng, K.*, +, *TCBB Sept.-Oct. 2021 1733-1742*
- ncRFP: A Novel end-to-end Method for Non-Coding RNAs Family Prediction Based on Deep Learning. *Wang, L.*, +, *TCBB March-April 2021 784-789*
- Optimal Bayesian Transfer Learning for Count Data. *Karbalayghareh, A.*, +, *TCBB March-April 2021 644-655*
- Physically-Inspired Gaussian Process Models for Post-Transcriptional Regulation in Drosophila. *Lopez-Lopera, A.F.*, +, *TCBB March-April 2021 656-666*
- Predicting the Antigenic Relationship of Foot-and-Mouth Disease Virus for Vaccine Selection Through a Computational Model. *Qiu, J.*, +, *TCBB March-April 2021 677-685*
- RNA Flexibility Prediction With Sequence Profile and Predicted Solvent Accessibility. *Wei, H.*, +, *TCBB Sept.-Oct. 2021 2017-2022*
- RNA Secondary Structure Prediction with Pseudoknots Using Chemical Reaction Optimization Algorithm. *Islam, M.R.*, +, *TCBB May-June 2021 1195-1207*
- RNASeqR: An R Package for Automated Two-Group RNA-Seq Analysis Workflow. *Chao, K.*, +, *TCBB Sept.-Oct. 2021 2023-2031*
- RSwitch: A Novel Bioinformatics Database on Riboswitches as Antibacterial Drug Targets. *Penchovsky, R.*, +, *TCBB March-April 2021 804-808*
- Robustness**
- The Impact of Self-Loops on Boolean Networks Attractor Landscape and Implications for Cell Differentiation Modelling. *Montagna, S.*, +, *TCBB Nov.-Dec. 2021 2702-2713*
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- Fast Optimal Circular Clustering and Applications on Round Genomes. *Debnath, T.*, +, *TCBB Nov.-Dec. 2021 2061-2071*
- Multiple Optimal Reconciliations Under the Duplication-Loss-Coalescence Model. *Du, H.*, +, *TCBB Nov.-Dec. 2021 2144-2156*

S

Search methods

Understanding the Limit of Open Search in the Identification of Peptides With Post-translational Modifications — A Simulation-Based Study. *Dai, J.*, +, *TCBB Nov.-Dec. 2021 2884-2890*

Search problems

A Fast and Furious Bayesian Network and Its Application of Identifying Colon Cancer to Liver Metastasis Gene Regulatory Networks. *Liu, E.*, +, *TCBB July-Aug. 2021 1325-1335*

Consensus of All Solutions for Intractable Phylogenetic Tree Inference. *Tabaszewski, P.*, +, *TCBB Jan.-Feb. 2021 149-161*

EMS3: An Improved Algorithm for Finding Edit-Distance Based Motifs. *Xiao, P.*, +, *TCBB Jan.-Feb. 2021 27-37*

Floating Search Methodology for Combining Classification Models for Site Recognition in DNA Sequences. *Perez-Rodriguez, J.*, +, *TCBB Nov.-Dec. 2021 2471-2482*

Semantic networks

Biomedical Knowledge Graphs Construction From Conditional Statements. *Jiang, T.*, +, *TCBB May-June 2021 823-835*

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MHRWR: Prediction of lncRNA-Disease Associations Based on Multiple Heterogeneous Networks. *Zhao, X.*, +, *TCBB Nov.-Dec. 2021 2577-2585*

Sensitivity

Stratified Test Accurately Identifies Differentially Expressed Genes Under Batch Effects in Single-Cell Data. *Liang, S.*, +, *TCBB Nov.-Dec. 2021 2072-2079*

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