Dr. Shibiao WAN

Assistant Professor

Assistant Director for Bioinformatics and Systems Biology Core

University of Nebraska Medical Center

Address: DRC I 6014, 985805 Nebraska Medical Center, Omaha, NE 68198
Office: +1-402-559-6560
Official Website: https://www.unmc.edu/genetics/faculty/bios/wan.html
Lab Website: https://wan-mlab.github.io/
Email: swan@unmc.edu

Highlights

- >13 years of experience in bioinformatics, machine learning and computational biology
- >50 publications (including one book and >40 top-tier journal articles)
- Google Scholar Citations: >1200
- Editor-in-Chief for *Current Proteomics*
- Editorial Board Member for *Briefings in Functional Genomics*
- Editorial Board Member for *BMC Bioinformatics*
- Editorial Board Member for *Heliyon*
- Editorial Board Member for *PeerJ Computer Science*
- Editorial Board Member for *BioMed Research International*
- Editorial Board Member for *Computational and Mathematical Methods*
- Guest Associate Editor for *Frontiers in Immunology*
- Guest Associate Editor for *Frontiers in Cell and Developmental Biology*
- Guest Associate Editor for *Frontiers in Pharmacology*
- Guest Associate Editor for *Frontiers in Oncology*
- Guest Associate Editor for *Biology*
- Guest Associate Editor for *Frontiers in Genetics*
- Guest Associate Editor for *Genes*
- Guest Associate Editor for *Frontiers in Psychology*
- TPC Member for >20 machine learning international conferences including *IEEE ICTAI*
- Reviewer for >50 journals including *Nature Computational Science*, *Nucleic Acids Research*, *Genome Medicine*, *Cancer Research*, *Briefings in Bioinformatics*
- Top Reviewers (top 1%) in *Cross-Field*, and *Biology and Biochemistry* awarded by Clarivate
- Outstanding Young Alumni Awardee (2021-2022)
- Developed 15 highly accessed bioinformatics tools
- IEEE Senior Member

ACADEMIC EXPERIENCE

2022 - present	*Assistant Professor*, University of Nebraska Medical Center, Omaha, NE, USA
2022 - present	*Assistant Director for Bioinformatics and Systems Biology Core*, University of Nebraska Medical Center, Omaha, NE, USA
2019 - 2022	*Bioinformatics Research Scientist*, St. Jude Children's Research Hospital, Memphis, TN, USA
2017 – 2019	*Postdoctoral Researcher*, University of Pennsylvania, Philadelphia, PA, USA
2016 – 2017	*Postdoctoral Research Associate*, Princeton University, Princeton, NJ, USA
2014 – 2016	*Postdoctoral Fellow*, The Hong Kong Polytechnic University, Hong Kong SAR
2014	*Research Associate*, The Hong Kong Polytechnic University, Hong Kong SAR
2013	*Visiting Scholar*, Johns Hopkins University School of Medicine, MD, USA and CBIL lab of Virginia Tech, VA, USA.

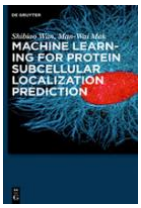
EDUCATION

2010 – 2014	*Ph.D.*, The Hong Kong Polytechnic University, Hong Kong SAR Dissertation Advisor: Dr. Man-Wai Mak
2006 – 2010	*B.Eng.*, Wuhan University, Wuhan, China. Thesis Advisor: Prof. Deshi Li

RESEARCH INTERESTS

- **Bioinformatics and Computational Biology**:
  - Single-Cell Analysis, Spatial Transcriptomics.
  - Multi-Omics Analysis, Transcriptomics, Alternative Splicing.
  - NGS Data Analysis, Genomics, Epigenomics, Proteomics.
  - Cancer Research, Leukemia Subtyping, Cancer Disparities.
  - Intelligent Healthcare, Precision Medicine, Alzheimer's Disease, Parkinson's Disease.
  - Sequence Analysis, Antimicrobial Peptide Identification, Protein Subcellular Localization.
  - Bioinformatics Tool Development.
- **Machine Learning/Artificial Intelligence**:
  - Deep Learning, Transfer Learning, Interpretable Machine Learning.
  - Big Data Analytics, High-Dimensional Data Analysis, Dimension Reduction.
  - Unsupervised Learning, Supervised Learning, Data and Text Mining, Computational Modeling.
  - Semi-Supervised Learning, Transductive Learning, Kernel Learning, Ensemble Learning.
  - Multi-Label Classification, Discriminative Models, Regression Analysis, Optimization.

PUBLICATIONS



BOOK

1. **S. Wan** and M. W. Mak, "*Machine Learning for Protein Subcellular Localization Prediction*", ISBN 978-1-5015-0150-0, published by ***De Gruyter***, Germany, 2015.
2. **S. Wan**, Y. Fan, C. Jiang and S. Li, "*Bioinformatics and Machine Learning for Cancer Biology*", published by ***MDPI***, ISBN 978-3-0365-4814-2, Switzerland, 2022. (Edited Book)

JOURNALS *(Impact Factor (IF) from Journal Citation Reports (JCR); *: corresponding author)*

3. J. Zeng, Y. Weng, T. Lai, L. Chen, Y. Li, Q. Huang, S. Zhong, **S. Wan***, L. Luo*, "Procyanidin alleviates ferroptosis and inflammation of LPS-induced RAW264.7 cell via the Nrf2/HO-1 pathway", ***Naunyn-Schmiedeberg's Archives of Pharmacology***, 2023. (***JCR Q2; Rank: 114/278; IF: 3.6***)
4. M. Sun, L. Li, H. Xiao, J. Feng, J. Wang, and **S. Wan***, "Editorial: Bioinformatics Analysis of Omics Data for Biomarker Identification in Clinical Research, Volume II", ***Frontiers in Genetics***, 2023, vol. 14, 1256468. (***JCR Q2; Rank: 48/176; IF: 4.599***)
5. H. J. Mallard, **S. Wan**, P. Nidhi, Y. D. Hanscom-Trofy, B. Mohapatra, N. T Woods, J. A. Lopez-Guerrero, A. Llombart-Bosch, I. Machado, K. Scotlandi, N. F. Kreiling, M. C. Perry, S. Mirza, D. W. Coulter, V. Band, H. Band, and G. Ghosal, "USP1 expression driven by EWS::FLI1 transcription factor stabilizes Survivin and mitigates replication stress in Ewing sarcoma", ***Molecular Cancer Research***, 2023, vol. 21, no. 11, pp. 1186-1204. (***JCR Q2; Rank: 72/241; IF: 5.2***)
6. Y. Liang, Z. Su, X. Mao, **S. Wan*** and L. Luo*, "Editorial: Ferroptosis as a Novel Therapeutic Target for Inflammation-Related Diseases", ***Frontiers in Pharmacology***, 2023, vol. 14, article 1152326. (***JCR Q1; Rank: 50/279; IF: 5.988***)
7. W. Shi, S. Mirza, M. Kuss, B. Liu, A. Hartin, **S. Wan**, Y. Kong, B. Mohapatra, H. Band, V. Band and B. Duan, "Embedded bioprinting of breast tumor cells and organoids using low concentration collagen based bioinks", ***Advanced Healthcare Materials***, 2023, 2300905. (***JCR Q1; Rank: 8/96; IF: 10.0***)
8. J. Wang and **S. Wan***, "Editorial: Single Cell Meets Metabolism and Cancer Biology", ***Frontiers in Oncology***, 2023, vol. 13, article 1125186. (***JCR Q2; Rank: 78/245; IF: 5.738***)
9. Y. Liu, J. Klein, R. Bajpai, Q. Tran, P. Kolekar, J. L. Smith, R. E. Ries, L. Dong, B. J. Huang, J. Wang, T. Alonzo, L. Tian, H. L. Mulder, K. Szlachta, T. I. Shaw, J. Ma, M. Walsh, G. Song, T. Westover, R. Autry, A. Gout, D. Wheeler, **S. Wan**, G. Wu, J. J. Yang, W. Evans, M. Loh, J. Easton, J. M. Klco, S. Meshinchi, P. A. Brown, S. M. Pruett-Miller and X. Ma, "Etiology of oncogenic fusions in 5,190 childhood cancers and its clinical and therapeutic implication", ***Nature Communications***, 2023, vol. 14, no. 1739, pp. 1-18. (***JCR Q1; Rank: 4/72; IF: 14.919***)
10. **S. Wan***, C. Jiang, S. Li and Y. Fan, "Special Issue on Bioinformatics and Machine Learning for Cancer Biology", ***Biology***, 2022, vol. 11, no. 3, 361. (***JCR Q1; Rank: 16/93; IF: 5.079***)

11. T. Sakamoto, K. Batmanov, **S. Wan**, Y. Guo, L. Lai, R. B. Vega and D. P. Kelly, "The Nuclear Receptor ERR Cooperates with the Cardiogenic Factor GATA4 to Orchestrate Transcriptional Control of Cardiomyocyte Differentiation", ***Nature Communications***, 2022, vol. 13, no. 1991, pp. 1-20. (***JCR Q1; Rank: 4/72; IF: 14.919***)
12. **S. Wan*** and J. Wang*, "A Sequence Obfuscation Method for Protecting Personal Genomic Privacy", ***Frontiers in Genetics***, 2022, vol. 13, article 876686. (***JCR Q2; Rank: 48/176; IF: 4.599***)
13. R. Wang, X. Zheng, J. Wang, **S. Wan**, M. H. Wong, K. S. Leung and L. Cheng, "Improving Bulk RNA-seq Classification by Transferring Gene Signature from Single Cells in Acute Myeloid Leukemia", ***Briefings in Bioinformatics***, 2022, vol. 23, no. 2, bbac002. (***JCR Q1; Rank: 3/78; IF: 11.622***)
14. V. Honnell, J. Norrie, A. Patel, C. Ramirez, J. Zhang, K. Lai, **S. Wan** and M. A. Dyer, "Identification of a Modular Super-Enhancer in Murine Retinal Development", ***Nature Communications***, 2022, vol. 13, no. 253, pp. 1-13. (***JCR Q1; Rank: 4/72; IF: 14.919***)
15. W. Qi, W. Rosikiewicz, Z. Yin, B. Xu, H. Jiang, **S. Wan**, Y. Fan, G. Wu and L. Wang, "Genomic Profiling Identifies Genes and Pathways Dysregulated by *HEY1-NCOA2* Fusion and Shed a Light on Mesenchymal Chondrosarcoma Tumorigenesis", ***Journal of Pathology***, 2022, vol. 257, no. 5, pp. 579-592. (***JCR Q1; Rank: 5/77; IF: 7.996***)
16. P. C. Chen, X. Han, T. Shaw, H. Sun, M. Niu, Z. Wang, Y. Jiao, B. Teubner, D. Eddins, L. Beloate, B. Bai, J. Mertz, Y. Li , Y. Fu , J. H. Cho , X. Wang , Z. Wu , S. Poudel , Z. F. Yuan, A. Mancieri, J. Low, H. M. Lee, M. Patton, L. Earls, E. Stewart, P. Vogel, **S. Wan**, G. Serrano, T. Beach, M. Dyer, R. Smeyne, T. Moldoveanu, T. Chen, G. Wu, S. Zakharenko, G. Yu and J. Peng, "Alzheimer's Disease-Associated U1 snRNP Splicing Dysfunction Causes Neuronal Hyperexcitability and Cognitive Impairment", ***Nature Aging***, 2022, vol. 2, pp. 923-940. (***JCR Q1; Rank: 1/69; IF: 16.6***)
17. C. Jiang, **S. Wan**, P. Hu, Y. Li and S. Li, "Editorial: Transcriptional Regulation in Metabolism and Immunology", ***Frontiers in Genetics***, 2022, vol. 13, article 845697. (***JCR Q2; Rank: 48/176; IF: 4.599***)
18. **S. Wan***, J. Wang, G. Wu and Y. Fan*, "Robust and Ultrafast Clustering of Large-Scale Single Cell RNA-seq Data", ***Briefings in Bioinformatics***, 2022, submitted. (***JCR Q1; Rank: 3/78; IF: 11.622***)
19. S. Singh, W. Quarni, M. Goralski, **S. Wan**, H. Jin, L. A. Van de Velde, J. Fang, R. Sing, Y. Fan, M. Johnson, W. Akers, P. Murray, P. G. Thomas, D. Nijhawan, A. M. Davidoff and J. Yang, "Targeting the Spliceosome through RBM39 Degradation Results in Exceptional Responses in High-Risk Neuroblastoma Models", ***Science Advances***, 2021, vol. 7, no. 47, eabj5405. (***JCR Q1; Rank: 5/73; IF: 14.136***)
20. A. Lavado, R. Gangwar, J. Pare, **S. Wan**, Y. Fan and X. Cao, "YAP/TAZ Maintain the Proliferative Capacity and Structural Organization of Radial Glial Cells during Brain Development", ***Developmental Biology***, 2021, vol. 480, pp. 39-49. (***JCR Q2; Rank: 15/41; IF: 3.582***)
21. **S. Wan*** and J. Q. Wang, "KLNP-Chlo: Multi-Label Ensemble Kernelized Neighbourhood Propagation for Predicting Localization of Chloroplast Proteins", ***Bioinformatics***, 2021, submitted. (***JCR Q1; Rank: 3/58; IF: 6.937***)
22. **S. Wan***, J. Z. Hu and J. Q. Wang, "Improving Prediction of Multi-Location Protein Subcellular Localization with Confidence-Weighted Gene Ontology Features", ***Bioinformatics***, 2021, submitted. (***JCR Q1; Rank: 3/58; IF: 6.937***)

23. M. Zanin, S. S. Wong, P. Schreiner, **S. Wan**, P. Vogel, Z. Cheng, R. El-Shesheny, D. F. Boyd, J. C. Jones, J. DeBeauchamp, Z. A Kocer, P. Thomas, S. Barman, T. C. Chang, Y. Fan, R. Webster, R. Webby, "Airborne Transmission of Influenza Viruses is Associated with a Distinct Host Transcriptomic Response in the Nasal Epithelium", ***Proceedings of the National Academy of Sciences of the United States of America (PNAS)***, 2021, submitted. (***JCR Q1; Rank: 8/73; IF: 11.205***)
24. C. Jablonowski, G. Wu, W. Quarni, H. Hu, S. Singh, D. Bostanthirige, H. Jin, T. C. Chang, **S. Wan**, D. Finkelstein, J. H. Cho, D. Hu, V. Pagala, S. Miller, R. Wang, A. Murphy, K. Freeman, A. B. Shyu, A. M. Davidoff, J. Peng, J. Yang, "Metabolic Reprogramming of Cancer Cells by JMJD6-Mediated Alternative Splicing", ***Science Advances***, 2021, submitted. (***JCR Q1; Rank: 5/73; IF: 14.136***)
25. T. I. Shaw, Y. Li, H. Wang, A. Gout, X. Von Buttlar, **S. Wan**, X. Ma, A. C. Tan, "Analytical Challenges of Alternative Splicing in Cancer", ***Frontiers in Oncology***, 2021, submitted. (***JCR Q2; Rank: 62/242; IF: 6.244***)
26. **S. Wan**, J. Kim and K. J. Won, "SHARP: Hyper-Fast and Accurate Processing of Single-Cell RNA-seq Data via Ensemble Random Projection", ***Genome Research***, 2020, vol. 30, pp. 205-213. (***JCR Q1; Rank: 6/177; IF: 11.093***)
27. T. Sakamoto, T. Matsuura, **S. Wan**, D. Ryba, J. Kim, K. J. Won, L. Lai, C. Petucci, N. Petrenko, K. Musunuru, R. Vega, D. Kelly, "A Critical Role for Estrogen-Related Receptor Signaling in Cardiac Maturation", ***Circulation Research***, 2020, vol. 126, pp. 1685-1702. (***JCR Q1; Rank: 5/138; IF: 14.467***)
28. B. Ahn, **S. Wan**, N. Jaiswal, R. Vega, D. E. Ayer, P. M. Titchenell, X. Han, K. J. Won, and D. P. Kelly, "MondoA Coordinately Drives Muscle Lipid Accumulation and Insulin Resistance", ***JCI Insight***, 2019, 4(15): e129119. (***JCR Q1; Rank: 14/138; IF: 6.205***)
29. **S. Wan*** and M. W. Mak*, "Predicting Subcellular Localization of Multi-Location Proteins by Improving Support Vector Machines with Adaptive-Decision Schemes", ***International Journal of Machine Learning and Cybernetics***, 2018, vol. 9, pp. 399–411. (***JCR Q1; Rank: 31/134; IF: 3.844***)
30. **S. Wan***, M. W. Mak*, and S. Y. Kung, "FUEL-mLoc: Feature-Unified Prediction and Explanation of Multi-Localization of Cellular Proteins in Multiple Organisms", ***Bioinformatics***, 2017, vol. 33, no. 5, pp. 749–750. (***JCR Q1; Rank: 3/58; IF: 6.937***)
31. **S. Wan***, M. W. Mak*, and S. Y. Kung, "Transductive Learning for Multi-Label Protein Subchloroplast Localization Prediction", ***IEEE/ACM Transactions on Computational Biology and Bioinformatics***, 2017, vol. 14, pp. 212–224. ***(JCR Q1; Rank: 15/125; IF: 3.710)***
32. **S. Wan***, M. W. Mak*, and S. Y. Kung, "Gram-LocEN: Interpretable Prediction of Multi-Location Gram-Positive and Gram-Negative Bacterial Protein Subcellular Localization ", ***Chemometrics and Intelligent Laboratory Systems***, 2017, vol. 162, pp. 1–9. (***JCR Q1; Rank: 11/123; IF: 2.895***)
33. J. Q. Wang, C. C. Zhang, **S. Wan** and G. Peng. "Is Congenital Amusia a Connectome Disorder?: A Diffusion MRI Study Combining Tract- and Network-Based Analysis", ***Frontiers in Human Neurosciences***, 2017, vol. 11, pp. 473. doi: 10.3389/fnhum.2017.00473. (***JCR Q2; Rank: 24/77; IF: 2.673***)

34. **S. Wan***, M. W. Mak*, and S. Y. Kung, "Ensemble Linear Neighbourhood Propagation for Predicting Subchloroplast Localization of Multi-Location Proteins", ***Journal of Proteome Research***, 2016, vol. 15, pp. 4755–4762. (***JCR Q1; Rank: 17/78; IF: 4.466***)
35. **S. Wan***, M. W. Mak*, and S. Y. Kung, "Sparse Regressions for Predicting and Interpreting Subcellular Localization of Multi-Label Proteins", ***BMC Bioinformatics***, 2016, 17:97. ***(JCR Q1; Rank: 9/59; IF: 3.242)***
36. **S. Wan***, M. W. Mak*, and S. Y. Kung, "Mem-mEN: Predicting Multi-Functional Types of Membrane Proteins by Interpretable Elastic Nets", ***IEEE/ACM Transactions on Computational Biology and Bioinformatics***, 2016, vol. 13, pp. 706–718. ***(JCR Q1; Rank: 15/125; IF: 3.710)***
37. **S. Wan***, M. W. Mak*, and S. Y. Kung, "Benchmark Data for Identifying Multi-Functional Types of Membrane Proteins", ***Data in Brief***, 2016, vol. 8, pp. 105–107. ***(JCR Q2; Rank: 58/128; IF: 1.2)***
38. **S. Wan***, M. W. Mak*, and S. Y. Kung, "Mem-ADSVM: A Two-Layer Multi-Label Predictor for Identifying Multi-Functional Types of Membrane Proteins", ***Journal of Theoretical Biology***, 2016, vol. 398, pp. 32–42. ***(JCR Q1; Rank: 13/57; IF: 2.113)***
39. **S. Wan***, M. W. Mak, and S. Y. Kung, "mLASSO-Hum: A LASSO-Based Interpretable Human-Protein Subcellular Localization Predictor", ***Journal of Theoretical Biology***, 2015, vol. 382, pp. 223–234. ***(JCR Q1; Rank: 13/57; IF: 2.113)***
40. **S. Wan**, M. W. Mak, and S. Y. Kung, "mPLR-Loc: An Adaptive-Decision Multi-Label Classifier Based on Penalized Logistic Regression for Protein Subcellular Localization Prediction", ***Analytical Biochemistry***, 2015, vol. 473, pp. 14–27. ***(JCR Q2; Rank: 33/86; IF: 2.877)***
41. **S. Wan**, M. W. Mak, and S.Y. Kung, "HybridGO-Loc: Mining Hybrid Features on Gene Ontology for Predicting Subcellular Localization of Multi-Location Proteins", ***PLoS ONE***, 2014, 9(3): e89545. ***(JCR Q1; Rank: 15/64; IF: 2.806)***
42. **S. Wan**, M. W. Mak, and S. Y. Kung, "R3P-Loc: A Compact Multi-Label Predictor Using Ridge Regression and Random Projection for Protein Subcellular Localization", ***Journal of Theoretical Biology***, 2014, vol. 360, pp. 34–45. ***(JCR Q1; Rank: 13/57; IF: 2.113)***
43. **S. Wan**, M. W. Mak, and S. Y. Kung, "Semantic Similarity over Gene Ontology for Multi-Label Protein Subcellular Localization ", ***Engineering,*** 2013, vol. 5, pp. 68-72.
44. **S. Wan**, M. W. Mak, and S. Y. Kung, "GOASVM: A Subcellular Location Predictor by Incorporating Term-Frequency Gene Ontology into the General Form of Chou's Pseudo-Amino Acid Composition", ***Journal of Theoretical Biology***, 2013, vol. 323, pp. 40–48. ***(JCR Q1; Rank: 13/57; IF: 2.113)***
45. **S. Wan**, M. W. Mak, and S. Y. Kung, "mGOASVM: Multi-Label Protein Subcellular Localization Based on Gene Ontology and Support Vector Machines", ***BMC Bioinformatics***, 2012, 13:290. Highly accessed ***(JCR Q1; Rank: 9/59; IF: 3.242)***

CONFERENCE PAPERS

46. **S. Wan***, J. Kim, Y. Fan and K. J. Won*, "Hyper-Fast and Accurate Clustering of Ultra-Large-Scale Single-Cell Data with Ensemble Random Projection", ***The 2020 International Conference on Machine Learning (ICML) Workshop on Computational Biology***, virtual online, Jul. 2020. (**Highlights**)
47. **S. Wan***, J. Kim, Y. Fan and K. J. Won*, "Processing millions of single cells by SHARP", ***The 11th ACM Conference on Bioinformatics, Computational Biology and Health Informatics (ACM BCB 2020)***, virtual online, Sep. 2020. (**Highlights**)
48. **S. Wan**, M. W. Mak and S. Y. Kung, "Protecting Genomic Privacy by a Sequence-Based Obfuscation Method", 2017, arXiv preprint, arXiv: 1708.02629.
49. Mert Al, **S. Wan** and S. Y. Kung, "Ratio Utility and Cost Analysis for Privacy Preserving Subspace Projection", 2017, arXiv preprint, arXiv:1702.07976.
50. **S. Wan**, M. W. Mak, B. Zhang, Y. Wang and S. Y. Kung, "Ensemble Random Projection for Multi-Label Classification with Application to Protein Subcellular Localization", ***2014 IEEE International Conference on Acoustic Speech and Signal Processing (ICASSP'14)***, Florence, Italy, May 2014, pp. 6040-6044.
51. **S. Wan**, M. W. Mak, B. Zhang, Y. Wang and S. Y. Kung, "An Ensemble Classifier with Random Projection for Predicting Multi-Label Protein Subcellular Localization", ***The 2013 IEEE International Conference on Bioinformatics and Biomedicine (BIBM'2013)***, Shanghai, China, Dec. *2013*, pp. 35-42.
52. **S. Wan**, M. W. Mak, and S. Y. Kung, "Adaptive Thresholding for Multi-Label SVM Classification with Application to Protein Subcellular Localization Prediction", ***2013 IEEE International Conference on Acoustic Speech and Signal Processing (ICASSP'13)***, Vancouver, Canada, May 2013, pp. 3547-3551.
53. **S. Wan**, M. W. Mak, and S. Y. Kung, "GOASVM: Protein Subcellular Localization Prediction Based on Gene Ontology Annotation and SVM", ***2012 IEEE International Conference on Acoustic Speech and Signal Processing (ICASSP'12),*** Kyoto, Japan, Mar. 2012, pp. 2229-2232.
54. **S. Wan**, M. W. Mak, and S. Y. Kung, "Protein Subcellular Localization Prediction Based on Profile Alignment and Gene Ontology", ***2011 IEEE International Workshop on Machine Learning for Signal Processing (MLSP'11),*** Beijing, China, Sep. 2011, pp. 1-6.
55. **S. Wan**, C. Yao, Y. Hu, and G. Zhang, "A Method of Continuous Data Flow Embedded within Speech Signals", ***The 2-nd International Conference on Signal Acquisition and Processing (ICSAP'10),*** Bangalore, India, Feb. 2010, pp. 362-365.

CONFERENCE ABSTRACTS

56. L. Li, H. Xiao, J. Khoury, J. Wang and **S. Wan***, "RanBALL: Identifying B-Cell Acute Lymphoblastic Leukemia Subtypes Based on an Ensemble Random Projection Model", ***AACR Annual Meeting 2024***, San Diego, CA, Apr. 2024.
57. L. Li, J. Wang and **S. Wan***, "Reducing Health Disparities for Prostate Adenocarcinoma by Integrating Multi-Omics Data via a Multi-Modal Transfer Learning Approach", ***AACR Annual Meeting 2024***, San Diego, CA, Apr. 2024.

58. L. Li, H. Xiao and **S. Wan***, "B-Cell Acute Lymphoblastic Leukemia Subtype Identification with an Ensemble Random Projection-Based Machine Learning Model", ***CHRI Scientific Conference***, Omaha, NE, Nov. 2023.
59. L. Li and **S. Wan***, "Integrating Multi-Omics Data by a Multi-Modal Transfer Learning Model to Reduce Healthcare Disparities for Kidney Renal Clear Cell Carcinoma", ***CHRI Scientific Conference***, Omaha, NE, Nov. 2023.
60. J. Feng, M. Sun, W. Zhang, G. Wang and **S. Wan***, "SAMP: An Accurate Ensemble Model Based on Proportionalized Split Amino Acid Composition for Identifying Antimicrobial Peptides", ***Antimicrobial Peptides: Yesterday, Today and Tomorrow***, Omaha, NE, Oct. 2023.
61. L. Li, H. Xiao and **S. Wan***, "RanBALL: an Ensemble Random Projection-Based Model for Identifying B-Cell Acute Lymphoblastic Leukemia Subtypes", ***PCRG Symposium 2023***, Omaha, NE, Aug. 2023.
62. W. Qi, W. Rosikiewicz, Z. Yin, B. Xu, **S. Wan**, Y. Fan, G. Wu and L. Wang, "RNA-seq and ChIP-seq profiling identifies genes and pathways dysregulated by hey1-ncoa2 fusion and shed a light on mesenchymal chondrosarcoma tumorigenesis", ***AACR Annual Meeting 2021***, Philadelphia, PA, Apr. 2021.
63. T. Sakamoto, **S. Wan**, K. Batmanov, and D. P. Kelly, "The Estrogen-Related Receptor (ERR) Drives Cardiac Myocyte Maturation in Cooperation With GATA4", ***Circulation Research***, 2020, vol. 127 (Suppl_1), pp. A222-A222.
64. **S. Wan**, J. Kim, K. J. Won, and Y. Fan, "Hyper-Fast and Accurate Clustering of Ultra-Large-Scale Single-Cell Data with Ensemble Random Projection", ***Cell Symposia: The Conceptual Power of Single-Cell Biology***, San Francisco, CA, USA, Apr. 2020.
65. T. Sakamoto, **S. Wan**, K. J. Won, and D. P. Kelly, "The Estrogen-Related Receptor Coordinates Transcription of Genes Involved in Mitochondrial and Contractile Maturation in Human Induced Pluripotent Stem Cell-Derived Cardiac Myocytes", ***Circulation***, 2019, vol. 140 (Suppl_1), pp. A11803-11803. (presented in ***American Heart Association Scientific Sessions (AHA2019)***, Philadelphia, PA, USA, Nov. 2019)
66. T. R. Matsuura, T. Sakamoto, D. M. Ryba, **S. Wan**, and D. P. Kelly, "Estrogen-Related Receptor Signaling Is Critical for Postnatal Cardiac Maturation", Circulation, 2019, vol. 140 (Suppl_1), A13898-A13898. (presented in ***American Heart Association Scientific Sessions (AHA2019)***, Philadelphia, PA, USA, Nov. 2019)
67. B. Ahn, **S. Wan**, K. J. Won, N. Jaiswal, P. M. Titchenell, and D. P. Kelly, "MondoA Mediates Myocyte Lipid Accumulation and Insulin Resistance Driven by Chronic Nutrient Excess**",** ***American Diabetes Association's 79th Scientific Sessions***, San Francisco, CA, USA, Jun. 2019. (oral)
68. **S. Wan**, J. Kim and K. J. Won, "Hyper-Fast and Accurate Processing of Large-Scale Single-Cell Transcriptomics Data via Ensemble Random Projection", ***RECOMB/ISCB Conference on Regulatory & Systems Genomics with DREAM Challenges (RSG DREAM 2018),*** New York City, NY, USA, Dec. 2018.

GRANTS

Number: 3P30CA036727-37S5 (Cowan)

Role: Project Leader

Sponsor: DHHS/NIH/NCI (P30 CCSG Administrative Supplement)

Title: An Accurate Machine Learning Framework for Childhood Acute Myeloid Leukemia Subtype Identification by Integrating Bulk and Single-Cell Multi-Omics Data Within and Beyond the CCDI System

Dates: 09/26/2023 – 08/31/2024

Effort: 3.0 calendar month

Status: active

Number: IRG-22-146-07-IRG (Wan)

Role: PI

Sponsor: Fred & Pamela Buffett Cancer Center American Cancer Society Institutional Research Grant (BCC-ACS-IRG) Seed Grants Programs

Title: Tackling Racial Disparities for Prostate Cancer by a Multi-Modal Transfer Learning Framework

Dates: 02/01/2024 – 01/31/2025

Effort: 0.6 calendar month

Status: active

Number: 31-7210-6586 (Wan)

Role: PI

Sponsor: BCC-CHRI-PCRG Pilot Projects Program

Title: Advanced Machine Learning for Identifying Subtypes of B-Cell Acute Lymphoblastic Leukemia Based on Transcriptomic Profiling

Dates: 02/01/2023 – 01/31/2024

Effort: 1.0 calendar month

Status: active

Number: OIA-2044049 (Wan)

Role: PI

Sponsor: Nebraska EPSCoR FIRST Award

Title: A Unified Machine Learning Framework to Integrate Large-Scale Single Cell and Bulk Multi-Omics Data for Cancer Subtyping

Dates: 12/01/2023 – 11/30/2024

Effort: 0.6 calendar month

Status: active

Number: 1P50AA030407-01 Pilot Project (Wan)

Role: PI

Sponsor: Alcohol Center of Research-Nebraska (ACORN) Pilot Projects Program

Title: Machine Learning for Identifying Biomarkers Within and Between Brain Networks for Alcohol Use Disorder Diagnosis

Dates: 07/01/2023 – 06/30/2024

Effort: 0.6 calendar month

Status: active

Number: 3P20GM130447-04S1 (Dunaevsky)

Role: co-I

Sponsor: DHHS/NIH/NIGMS

Title: Cognitive Neuroscience of Development and Aging Center Team Science Administrative Supplement

Dates: 08/01/2023 – 01/31/2024

Effort: 1.2 calendar month

BIOINFORMATICS SOFTWARE TOOLS

- **SHARP**: Single-cell RNA-seq Hyper-fast and Accurate processing via ensemble Random Projection https://github.com/shibiaowan/SHARP
- **IterMegaBLAST**: A Sequence-Similarity Based Obfuscation Method for Genomic Privacy Protection https://github.com/shibiaowan/IterMegaBLAST
- **PolyU-Loc**: A Package of Web-Servers for Protein Subcellular Localization Prediction http://bioinfo.eie.polyu.edu.hk/Book_website/
- **Mem-mEN**: A Predictor for Membrane Protein Multi-Functional Type Prediction http://bioinfo.eie.polyu.edu.hk/MemmENServer/
- **SpaPredictor:** An Interface of Two Predictors for Interpretable Protein Subcellular Localization http://bioinfo.eie.polyu.edu.hk/SpaPredictorServer/
- **GOASVM**: Single-label Protein Subcellular Localization Prediction (for Eukaryote and Human) http://bioinfo.eie.polyu.edu.hk/mGoaSvmServer/GOASVM.html
- **mGOASVM**: Multi-label Protein Subcellular Localization Prediction (for Virus and Plant) http://bioinfo.eie.polyu.edu.hk/mGoaSvmServer/mGOASVM.html
- **HybridGO-Loc**: Mining Hybrid GO Features for Multi-label Protein Subcellular Localization Prediction (for Virus and Plant) http://bioinfo.eie.polyu.edu.hk/HybridGoServer/
- **R3P-Loc**: Compact Predictor for Multi-Label Protein Subcellular Localization (for Eukaryote and Plant) http://bioinfo.eie.polyu.edu.hk/R3PLocServer/

- **mPLR-Loc**: Probabilistic Predictor for Multi-label Protein Subcellular Localization (for Virus and Plant) http://bioinfo.eie.polyu.edu.hk/mPLRLocServer/
- **mLASSO-Hum**: An Interpretable Predictor for Human Protein Subcellular Localization http://bioinfo.eie.polyu.edu.hk/mLASSOHumServer/
- **Mem-ADSVM**: A Two-Layer Predictor for Multi-Label Membrane Protein Type Prediction http://bioinfo.eie.polyu.edu.hk/MemADSVMServer/
- **EnTrans-Chlo**: Transductive Learning for Protein Subchloroplast Localization Prediction http://bioinfo.eie.polyu.edu.hk/EnTransChloServer/
- **LNP-Chlo**: Linear Neighborhood Propagation for Protein Subchloroplast Localization Prediction http://bioinfo.eie.polyu.edu.hk/LNPChloServer/
- **FUEL-mLoc:** Feature-Unified Prediction and Explanation of Protein Multi-Localization of Cellular Proteins (for Eukaryote, Human, Plant, Gram-positive, Gram-negative and Virus) http://bioinfo.eie.polyu.edu.hk/FUEL-mLoc/
- **Gram-LocEN:** Interpretable Prediction of Subcellular Multi-Localization of Gram-Positive and Gram-Negative Bacterial Proteins (for Gram-positive Bacteria, Gram-negative Bacteria) http://bioinfo.eie.polyu.edu.hk/Gram-LocEN/

INVITED TALKS

1. "Artificial Intelligence for Omics-Based Biomedical Research", in *Department of Animal Sciences of* ***University of Nebraska-Lincoln***, Lincoln, NE, USA, March 2024.
2. "Machine Learning for Omics-Based Biomedical Research", in *VA Research Seminar of* ***VA Nebraska-Western Iowa Health Care System***, Omaha, NE, USA, January 2024.
3. "Artificial Intelligence for Omics-Based Biomedical Research", in *Surgery Research Forum of Department of Regenerative Medicine of* ***University of Nebraska Medical Center***, Omaha, NE, USA, January 2024.
4. "Machine Learning for Processing Large-Scale Biological Data", invited as a **Keynote Speaker** for ***The 2023 Midlands Society of Physiological Sciences (MSPS) Annual Meeting***, Omaha, NE, USA, October 2023.
5. "Machine Learning for Large-Scale Bioinformatics Analysis", in *Department of Biochemistry and Molecular Biology* of ***University of Nebraska Medical Center***, Omaha, NE, USA, June 2023.
6. "Machine Learning for Processing Large-Scale Biological Data", in *Department of Biostatistics* of ***University of Nebraska Medical Center***, Omaha, NE, USA, January 2023.
7. "Machine Learning for Processing Large-Scale Biological Data", in *Department of Genetics, Cell Biology and Anatomy* of ***University of Nebraska Medical Center***, Omaha, NE, USA, May 2022.
8. "Machine Learning for Processing Large-Scale Biological Data", in *Department of Chemistry and Chemical Biology* of ***Stevens Institute of Technology***, Hoboken, NJ, USA, April 2022.

9. "Machine Learning and Data Science for Biomedicine and Cancer Research", in ***BNU-HKBU United International College***, Zhuhai, China, April 2022.
10. "Machine Learning for Large-Scale Single-Cell Data Processing", in *Department of Chemical Biology and Therapeutics* of ***St. Jude Children's Research Hospital***, Memphis, TN, USA, February 2021.
11. "Supervised Learning", in *Center for Applied Bioinformatics* of ***St. Jude Children's Research Hospital***, Memphis, TN, USA, January 2021.
12. "Introduction to Machine Learning", in *Center for Applied Bioinformatics* of ***St. Jude Children's Research Hospital***, Memphis, TN, USA, November 2020.
13. "SHARP: Single-Cell RNA-seq Hyper-Fast and Accurate Clustering via Ensemble Random Projection", in *School of Computer Science and Technology* of ***Xidian University***, Xi'an, China, August 2020.
14. "Assessing Gene Expression Dynamics with SLAM-Seq", in *Center for Applied Bioinformatics* of ***St. Jude Children's Research Hospital***, Memphis, TN, USA, May 2020.
15. "SHARP: Hyper-fast and Accurate Processing of Single-Cell RNA-Seq Data via Ensemble Random Projection", in *Center for Applied Bioinformatics* of ***St. Jude Children's Research Hospital***, Memphis, TN, USA, February 2020.
16. "SHARP: Single-Cell RNA-Seq Hyper-fast and Accurate Processing via Ensemble Random Projection", in *Single-Cell Working Group* at *Smilow Center for Translational Research* of ***University of Pennsylvania***, Philadelphia, PA, USA, February 2019.
17. "Machine Learning for Bioinformatics Data Science", in *Department of Computational Biology* of ***St. Jude Children's Research Hospital***, Memphis, TN, USA, January 2019.
18. "Machine Learning for Bioinformatics Data Science: A Study on Protein Subcellular Localization", in *Department of Electronic Engineering* of **City University of Hong Kong**, Hong Kong SAR, China, June 2017.
19. "Machine Learning for Predicting Protein Subchloroplast Localization", in *Department of Computer Science* of **University of Bristol**, Bristol, UK, June 2017.
20. "Data Science in Bioinformatics: A Study on Protein Subcellular Localization", in *Center for Big Data Research of* ***Tsinghua-Berkeley Shenzhen Institute***, Shenzhen, China, May 2017.
21. "Predicting Protein Subcellular Localization by Bioinformatics Approaches", in *Department of Pediatrics of* ***The Children's Hospital of Philadelphia***, Philadelphia, PA, USA, April 2017.
22. "Combining Feature-Selection and Subspace Approaches for Utility-Privacy Tradeoff", in *Department of Electrical Engineering of* ***Princeton University***, Princeton, NJ, USA, March 2017.
23. "Bioinformatics Approaches for Protein Subcellular Localization Prediction", in *Institute for Diabetes, Obesity and Metabolism of Perelman School of Medicine at* ***University of Pennsylvania***, Philadelphia, PA, USA, March 2017.
24. "Linear and Kernelized Neighborhood Propagation: A Semi-Supervised Approach", in *Department of Electrical Engineering of* ***Princeton University***, Princeton, NJ, USA, December 2016.
25. "Semi-Supervised Multi-Kernel Learning in Image Classification", in *Department of Electrical Engineering of* ***Princeton University***, Princeton, NJ, USA, October 2016.

26. "Large-Scale in-Silico Prediction of Protein Subcellular Localization", in ***the 3-rd Wuhan University International Forum for Interdisciplinary Sciences and Engineering***, in *School of Electronic Information of* ***Wuhan University***, Wuhan, China, April 2016.
27. "Machine Learning for Multi-Label Protein Subcellular Localization", in *Department of Computer Science of* ***Hong Kong Baptist University***, Hong Kong SAR, China, May 2015.
28. "Machine Learning Approaches for Protein Subcellular Localization", in *Department of Statistics of* ***The Chinese University of Hong Kong***, Hong Kong SAR, China, Apr. 2015.
29. "CPTAC Sub-Project: Customized Sample-Specific Protein Sequence Database", in *Computational Bioinformatics and Bioimaging Laboratory (CBIL) of* ***Virginia Tech***, VA, USA, May 2013.
30. "mGOASVM: A Multi-Label Protein Subcellular Localization Predictor", in *Computational Bioinformatics and Bioimaging Laboratory (CBIL) of* ***Virginia Tech***, VA, USA, May 2013.
31. "Semantic Similarity over Gene Ontology for Multi-label Protein Subcellular Localization", in ***2013 International Conference on Bioinformatics and Biomedical Engineering (iCBBE2013)***, Beijing, China, Sep. 2013.
32. "Protein Subcellular Localization Prediction Based on Profile Alignment and Gene Ontology", in ***the 6-th Beijing-Hong Kong International Doctoral Forum 2011***, Hong Kong SAR, China, Aug. 2011.
33. "Support Vector Data Description (SVDD) vs Support Vector Machine (SVM)", in *Center for Multimedia Signal Processing of* ***The Hong Kong Polytechnic University***, Hong Kong SAR, China, Mar. 2011.

AWARDS & HONORS

- **FIRST Award of Nebraska EPSCoR Program**, Lincoln, NE, USA, 2023;
- **IEEE Senior Member**, Piscataway, NJ, USA, 2022;
- **EIE Outstanding Young Alumni Award**, Hong Kong SAR, China, 2022;
- **Top reviewers in Cross-Field (top 1%)**, awarded by Clarivate, USA, 2019;
- **Top reviewers in Biology and Biochemistry (top 1%)**, awarded by Clarivate, USA, 2019;
- **Brandeis Postdoctoral Fellowship**, Princeton, NJ, USA, 2016-2018;
- "**Best Poster Award**" in *the 6-th Beijing-Hong Kong International Doctoral Forum 2011*, Hong Kong SAR, August, 2011;
- **Postgraduate Scholarship**, The Hong Kong Polytechnic University, Hong Kong SAR, 2010-2014;
- **National Scholarship**, Wuhan, China, 2008-2009;
- **National Inspirational Scholarship**, Wuhan, China, 2007-2008;
- **Excellent Scholarship** (the 3-rd prize), Wuhan, China, 2007-2008;
- **The Freshmen Scholarship**, Wuhan, China, 2006-2007.

TEACHING COURSES

- **2024**

- *Modern Approaches in Cell Biology and Molecular Genetics* (MGCB912), University of Nebraska Medical Center
- *Principles and Methodologies of Cancer Research (CRGP880)*, University of Nebraska Medical Center

- **2023**
  - *Tools and Algorithms in Bioinformatics* (BISB815), University of Nebraska Medical Center
  - *Bioinformatics in Scientific Publications* (BISB903), University of Nebraska Medical Center
  - *Modern Approaches in Cell Biology and Molecular Genetics* (MGCB912), University of Nebraska Medical Center
  - *MGCB & BISB Fellowship Writing*, University of Nebraska Medical Center
- **2019-2022**
  - *Machine Learning for Applied Bioinformatics*, St Jude Children's Research Hospital
  - *Journal Club for Machine Learning for Applied Bioinformatics*, St Jude Children's Research Hospital
- **2017**
  - *Deep Neural Computing* (ELE571), Princeton University
- **2016**
  - *Kernel-Based Machine Learning* (ELE477), Princeton University
- **2015**
  - *Object-Oriented Design and Programming* (EIE320/EIE3375), The Hong Kong Polytechnic University
- **2014**
  - *Information Technology* (ENG2003), The Hong Kong Polytechnic University
  - *Database Systems* (EIE3114), The Hong Kong Polytechnic University
- **2013**
  - *Information Technology* (ENG2003), The Hong Kong Polytechnic University
  - *Object-Oriented Design and Programming* (EIE320/EIE3375), The Hong Kong Polytechnic University
  - *Database Systems (*EIE3114*)*, The Hong Kong Polytechnic University
  - *Distributed Systems and Network Programming* (EIE424/EIE4108), The Hong Kong Polytechnic University
- **2012**
  - *Object-Oriented Design and Programming* (EIE320/EIE3375), The Hong Kong Polytechnic University
  - *Distributed Systems and Network Programming* (EIE424/EIE4108), The Hong Kong Polytechnic University
  - *Communication Fundamentals* (EIE331), The Hong Kong Polytechnic University

MENTORED GRADUATES & UNDERGRATUATES

- University of Nebraska Medical Center

  - Three Graduate Students (Lusheng Li, Hanyu Xiao, and Mengtao Sun)
  - Six Research Interns (one in Harvard University, one in UCLA, one in University of Waterloo, one in University of Toronto, one in China Agricultural University, and one in Xidian University)
- Princeton University
  - Graduate Advisee: Mert Al (Supervisor: Prof. S. Y. Kung)
  - Undergraduate Advisee: Artur Filipowicz (Supervisor: Prof. S. Y. Kung)

SERVICE WITHIN UNMC

- **Administration Committee**
  - AI Task Force, UNMC/Nebraska Medicine, 2023 - present
  - BISB Graduate Committee, UNMC, 2022 - present
- **Graduate Student Supervisory Committee**
  - Ritesh Dey, Molecular Genetics and Cell Biology (MGCB) Graduate Program, UNMC
  - Farshid Oruji, Molecular Genetics and Cell Biology (MGCB) Graduate Program, UNMC
  - Ben Nolan, Bioinformatics and Systems Biology (BISB) Graduate Program, UNMC
  - Ashish Das, Immunology, Pathology and Infectious Diseases (IPID) Graduate Program, UNMC

PROFESSIONAL ACTIVITIES

- **Grant Reviewer** for
  - NIH Biodata Management and Analysis (BDMA) Study Section, 2023
  - NSF Graduate Research Fellowship Program (GRFP), 2023
  - NIH Early Career Reviewer (ECR) Program, 2023
  - UNMC Buffet Cancer Center Pilot Grant Review Panel, 2023
  - UNMC Graduate Studies Fellowship Study Section on Neuroscience, 2023
  - UNMC Graduate Studies Fellowship Study Section on Community & Population Health/Nursing/Clinical & Translational Research, 2023
  - UNMC Buffet Cancer Center Pilot Grant Review Panel, 2022
- **Editor-in-Chief** for *Current Proteomics* (SCI/JCR indexed)
- **Editorial Board Member** for
  - *Briefings in Functional Genomics* (**Impact Factor: 4.840; Oxford University Press**)
  - *BMC Bioinformatics* (**Impact Factor: 3.328; BioMed Central/Springer Nature**)
  - *Heliyon* (**Impact Factor: 4; Cell Press/Elsevier**)
  - *PeerJ Computer Science* (**Impact Factor: 2.411**)
  - *BioMed Research International* (**Impact Factor: 3.411**)
  - *Computational and Mathematical Methods in Medicine* (**Impact Factor: 2.809**)

- **Guest Associate Editor** for
  - *Frontiers in Psychology* (**Impact Factor: 3.8**) Research Topic on Subjective Well-Being and Human Decision Behaviors
  - *Frontiers in Immunology* (**Impact Factor: 8.786**) Research Topic on New Insight of Immunosenescence and Inflammaging in Geriatric Medicine and Multimorbidity
  - *Briefings in Functional Genomics* (**Impact Factor: 4.0**) Research Topic on Artificial Intelligence and Multi-Omics Research for Human Diseases
  - *BMC Methods* (**Springer New Journal)** Research Topic on Artificial Intelligence for Omics Data Analysis
  - *BMC Bioinformatics* (**Impact Factor: 3.328**) Research Topic on Evolutionary Studies
  - *Frontiers in Genetics* (**Impact Factor: 4.599**) Research Topic on Identification of Susceptibility Genes to Long COVID
  - *Frontiers in Pharmacology* (**Impact Factor: 5.988**) Research Topic on Ferroptosis as a Novel Therapeutic Target for Inflammation-Related Diseases
  - *Frontiers in Oncology* (**Impact Factor: 5.738**)
  - *Biology* (**Impact Factor: 5.079**) Research Topic on Bioinformatics and Machine Learning for Cancer Biology (Volume II)
  - *Genes* (**Impact Factor: 4.141**) Research Topic on Machine Learning Applications in Genetics
  - *Frontiers in Genetics* (**Impact Factor: 4.599**) Research Topic on Bioinformatics Analysis of Omics Data for Biomarker Identification in Clinical Research–Volume II
  - *Frontiers in Cell and Developmental Biology* (**Impact Factor: 6.684**) Research Topic on Single Cell Meets Metabolism and Cancer Biology
  - *Biology* (**Impact Factor: 5.079**) Research Topic on Bioinformatics and Machine Learning for Cancer Biology
  - *Frontiers in Genetics* (**Impact Factor: 4.599**) Research Topic on Transcriptional Regulation in Metabolism and Immunology
  - *Frontiers in Genetics* (**Impact Factor: 4.599**) Research Topic on Bioinformatics Analysis of Omics Data for Biomarker Identification in Clinical Research
- Editorial Board Member for *The Open Bioinformatics Journal*;
- Editorial Board Member for *Gene & Translational Bioinformatics (GTB)*;
- **TPC Member for International Conferences**
  - *The 2024 IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communication Technology (IAICT 2024);*
  - *The 2024 IEEE Symposium on Future Telecommunication Technologies (SOFTT'2024);*
  - *The 35th International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2023);*
  - *The 9th International Workshop on Mobile Applications (MobiApps 2023);*

- *The 2023 IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communication Technology (IAICT 2023);*
- *The 2023 IEEE Symposium on Future Telecommunication Technologies (SOFTT'2023);*
- *The 34th International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2022);*
- *The 2022 IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communication Technology (IAICT 2022);*
- *The 2022 IEEE Symposium on Future Telecommunication Technologies (SOFTT'2022);*
- *The 2022 IEEE International Conference on Internet of Things and Intelligence Systems (IoTaIS 2022);*
- *The 2022 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT'2022);*
- *The 2022 International Conference on Decision Aid Sciences and Applications (DASA'2022);*
- *The 33rd International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2021);*
- *The 2021 IEEE International Conference on Internet of Things and Intelligent Systems (IoTaIS 2021);*
- *The 2021 IEEE International Conference on Industry 4.0, Artificial Intelligence, and Communication Technology (IAICT 2021);*
- *The 2021 IEEE Symposium on Future Telecommunication Technologies (SOFTT'2021);*
- *The 2021 International Conference on Data Analytics for Business and Industry (DATA'21);*
- *2021 International Conference on Innovation and Intelligence for Informatics, Computing and Technologies (3ICT 2021);*
- *The 32nd International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2020);*
- *The Second International Conference on Big Data and Advanced Wireless Technologies (BDAW 2020)*
- *The 1st Conference on Internet of Things and Embedded Intelligence (CITEI 2020)*
- *International Journal of Computing and Digital Systems'20 (IJCDS 2020)*
- *Bulletin of Electrical Engineering and Informatics (BEEI 2020);*
- *The 7th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2020);*
- *The 2nd Ahmad Dahlan International Conference Series on Engineering, Science and Information Technology (ADICS-ESIT 2020);*
- *The International Conference on Smart Education and Applied Social Sciences (SEAS 2020);*
- *The 31st International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2019);*
- *The 6th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2019);*
- *International Conference on Industry 4.0 and Artificial Intelligence Technologies (INAIT) 2019;*
- *International Conference on Digital Image and Signal Processing (DISP'2019) 2019*;

- *The 1st International Conference on Computer Science, Information Technology and Electrical Engineering (ICOMITEE'2019) 2019*;
- *Society of Engineering Science (SES'19) 2019*;
- *The 30th International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2018);*
- *The First IEEE International Conference on Artificial Intelligence for Industries (AI4I 2018);*
- *2018 International Conference on Computer Intelligent Systems & Networking (ICCISN 2018);*
- *The 5th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2018);*
- *21st Saudi Computer Society National Computer Conference (SCS-NCC 2018);*
- *The 1st International Conference and Workshop on Telecommunication, Computing, Electronics and Control 2018 (ICW-TELKOMNIKA 2018);*
- *The 29th International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2017);*
- *The 28th International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2016);*

- **Reviewer** for Journals
  - *Nature Computational Science*;
  - *IEEE Transactions on Neural Networks and Learning Systems (IEEE TNNLS)*;
  - *Genome Medicine*;
  - *Cancer Research*;
  - *Nucleic Acids Research*;
  - *British Journal of Cancer*;
  - *Bioinformatics*;
  - *Briefings in Bioinformatics*;
  - *Briefings in Functional Genomics*;
  - *Journal of Proteome Research*;
  - *Cancer Medicine*;
  - *Knowledge-Based Systems*;
  - *Expert Systems with Applications*;
  - *iMeta*;
  - *Frontiers in Cell and Developmental Biology*;
  - *Frontiers in Immunology*;
  - *Frontiers in Oncology*;
  - *Frontiers in Microbiology*;
  - *Frontiers in Public Health*;
  - *Frontiers in Genetics*;
  - *Frontiers in Human Neuroscience*;

- *PLoS Genetics*;
- *BMC Bioinformatics*;
- *Computational and Structural Biotechnology Journal*;
- *Journal of Chemical Information and Modeling*;
- *Cells*;
- *Genomics*;
- *Genes*;
- *Proteomes*;
- *Biochimie*;
- *Biosensors*;
- *Biotechnology Journal*;
- *IEEE/ACM Transactions on Computational Biology and Bioinformatics (IEEE/ACM TCBB)*;
- *IEEE Transactions on Nanobioscience (IEEE T-NB)*;
- *IEEE Access*;
- *Future Generation Computer Systems*;
- *Journal of Theoretical Biology (JTB)*;
- *Journal of Integrative Bioinformatics (JIB)*;
- *Analytical Biochemistry (AB)*;
- *Biology*;
- *Micromachines*;
- *Microorganisms*;
- *Molecules*;
- *Biomolecules*;
- *Diagnostics*;
- *Sensors*;
- *BioMed Research International*;
- *BMC Medical Informatics and Decision Making*;
- *International Journal of Molecular Sciences (IJMS)*;
- *International Journal of Machine Learning and Cybernetics (JMLC)*;
- *Journal of Ambient Intelligence and Humanized Computing (AIHC)*;
- *Symmetry*;
- *Computational Biology and Chemistry;*
- *Applied Mathematics and Computation (AMC)*;
- *Journal of Applied Mathematics (JAM)*;
- *Medicines*;

- *PLoS One*;
- *Advances in Artificial Neural Systems (AANS)*;
- *International Journal of Biomedical Imaging (IJBI)*;
- *Computer Methods and Programs in Biomedicine (CMPB)*;
- *International Journal of Disaster Risk Reduction (IJDRR)*;
- *International Journal of Environmental Research and Public Health (IJERPH)*;
- *Applied Sciences*;
- *Electronics*;
- *Cancers*;

- **Reviewer for International Conferences**
  - *2022 IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2022)*; (8 times)
  - *2021 IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2021)*; (8 times)
  - *The 2021 IEEE International Conference on Industry 4*.0, Artifical Intelligence, and Communication Technology (IAICT 2021); (2 times)
  - *The 2021 IEEE Symposium on Future Telecommunication Technologies (SOFTT'2021)*; (1 time)
  - *2020 IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2020)*; (7 times)
  - *The 1st Conference on Internet of Things and Embedded Intelligence (CITEI 2020)*; (2 times)
  - *Bulletin of Electrical Engineering and Informatics (BEEI 2020)*; (2 times)
  - *2019 IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2019)*; (8 times)
  - *The 1st International Conference on Computer Science, Information Technology and Electrical Engineering (ICOMITEE'2019)*; (1 time)
  - *The 6th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2019)*; (1 time)
  - *2018 IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2018)*; (3 times)
  - *The First IEEE International Conference on Artificial Intelligence for Industries (AI4I 2018)*; (2 times)
  - *The 5th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI 2018)*; (2 times)
  - *2017 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP2017)*; (3 times)
  - *2017 IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2017)*; (1 time)
  - *2016 IEEE International Conference on Tools with Artificial Intelligence (IEEE ICTAI 2016)*; (3 times)
  - *2015 IEEE International Conference on Bioinformatics and Biomedicine (IEEE BIBM 2015)–Workshop on Semantic Data Analytics and Bioinformatics (SDAB)*; (2 times)
- Registration coordinator for *The 8-th International Symposium on Chinese Spoken Language Processing (ISCSLP) 2012*
- Registration coordinator for *The 19-th International Conference on Digital Signal Processing (DSP) 2014*

- **Senior Member**, Institute of Electrical and Electronics Engineers (IEEE)
- **Member**, American Association of Cancer Research (AACR)
- **Member**, International Society for Computational Biology (ISCB)
- **Member**, Association for Computing Machinery (ACM)