

Curriculum Vitae

Hongyu Miao

CONTACT INFORMATION

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APPOINTMENT AND EXPERIENCE

- 04/22-present **Professor** (adjunct), Department of Statistics, Florida State University, Florida
- 03/22-present **Associate Director of Brain Science and Symptom Management Center** (BSSMC), Florida State University, Florida
- 01/22-present **Professor**, College of Nursing, Florida State University, Florida
- 05/17-01/22 **Director of Data Science Education Program**, Department of Biostatistics and Data Science, School of Public Health, University of Texas Health Science Center at Houston, Texas
- 05/17-01/22 **Director of Center for Biostatistics Collaboration and Data Services**, School of Public Health, University of Texas Health Science Center at Houston, Texas
- 09/15-01/22 **Associate Professor**, Department of Biostatistics and Data Science, School of Public Health, University of Texas Health Science Center at Houston, Texas
- 03/15-08/15 **Associate Professor**, Department of Biostatistics and Computational Biology, University of Rochester School of Medicine and Dentistry, Rochester, New York
- 04/13-09/15 **Associate Director**, Biostatistics, Bioinformatics and Computational Biology Core, Center for AIDS Research, University of Rochester School of Medicine and Dentistry, Rochester, New York
- 09/10-09/15 **Director**, Mathematical Modeling Core, Center for Biodefense Immune Modeling, University of Rochester School of Medicine and Dentistry, Rochester, New York
- 03/09-02/15 **Assistant Professor**, Department of Biostatistics and Computational Biology, University of Rochester School of Medicine and Dentistry, Rochester, New York
- 02/08-03/09 **Research Assistant Professor**, Department of Biostatistics and Computational Biology, University of Rochester School of Medicine and Dentistry, Rochester, New York
- 11/06-02/08 **Postdoctoral Research Associate**, Department of Biostatistics and Computational Biology, University of Rochester School of Medicine and Dentistry, Rochester, New York

RESEARCH INTEREST

- network analysis, time series analysis, non-Euclidean statistics, clinical trial design
- pain management, neuromodulation, mental health, infectious disease, digital health

EDUCATION

- 09/08-03/11 M.S., Biostatistics and Computational Biology, University of Rochester, Rochester, NY, USA
- 03/04-03/07 Ph.D., Mechanical Engineering, University of Rochester, Rochester, NY, USA
- 09/02-03/04 M.S., Mechanical Engineering, University of Rochester, Rochester, NY, USA
- 09/99-06/02 M.S., Engineering Mechanics, Tsinghua University, Beijing, China
- 09/95-06/99 B.S., Engineering Mechanics, Tsinghua University, Beijing, China

AWARDS AND HONORS

- Spring '22 Collaborative Collision, FSU, 1st Place Team, 2022
- IEEE EMBS Best Paper Award, Transactions on Neural Systems and Rehabilitation Engineering, 2nd Place, 2021
- Provost's Multidisciplinary Award, University of Rochester, 2008
- David P. Byar Young Investigator Travel Award, ASA Biometrics, 2008
- Full Assistantship for PHD program at University of Rochester, 2002-2006
- Outstanding Student Scholarship, Tsinghua University, 1996-1999

BOOK CHAPTER

- Gu, Y., Huang, Y., Ly, V., Yaseen, A., **Miao, H.**, "Chapter 10. EHR Data Analytics and Predictions: Machine Learning Methods", in *Statistics and Machine Learning Methods for EHR Data: From Data Extraction to Data Analytics* (Ed. by Wu, Yamal, Yaseen, Maroufy), CRC Press (Boca Raton, Florida, 2020)

JOURNAL ARTICLE

1. Martorella, G., **Miao, H.**, Wang, D., Park, L., Mathis, K., Park, J., Sheffler, J., Granville, L., Teixeira, A., Schulz, P.E., Ahn, H., "Feasibility, Acceptability, and Efficacy of Home-Based Transcranial Direct Current Stimulation on Pain in Older Adults with Alzheimer's Disease and Related Dementias: A Randomized Sham-Controlled Pilot Clinical Trial", *Journal of Clinical Medicine* 12(2), 401 (2023)
2. Chavarria, E., Christy, S.M., Feng, H., **Miao, H.**, Abdulla, R., Gutierrez, L., Lopez, D., Sanchez, J., Gwede, C.K., Meade, C.D., "Online Health Information Seeking and eHealth Literacy among Spanish Language-dominant Latinos Receiving Care in a Community Clinic: Secondary Analysis of Pilot Randomized Controlled Trial Data", *Journal of Medical Internet Research: Formative Research* 6(10), e37687 (2022)
3. Nigo, M., Tran, H.T.N., Xie, Z., Feng, H., Mao, B., Rasmy, L., **Miao, H.**, Zhi, D., "PK-RNN-V E: A Deep Learning Model Approach to Vancomycin Therapeutic Drug Monitoring Using Electronic Health Record Data", *Journal of Biomedical Informatics* 133, 104166 (2022)

4. Martorella, G., Mathis, K., **Miao, H.**, Wang, D., Park, L., Ahn, H., "Efficacy of Home-based Transcranial Direct Current Stimulation on Experimental Pain Sensitivity in Older Adults with Knee Osteoarthritis: A Randomized Sham-controlled Clinical Trial", ***Journal of Clinical Medicine*** 11(7), 5209 (2022)
5. Martorella, G., Mathis, K., **Miao, H.**, Wang, D., Park, L., Ahn, H., "Self-administered Transcranial Direct Current Stimulation for Pain in Older Adults with Knee Osteoarthritis: A Randomized Controlled Study", ***Brain Stimulation*** 15(4), 902-909 (2022)
6. Gober, J., Seymour, M., **Miao, H.**, Curry, D.J., Thomas, S.P., "Management of Severe Spasticity with and without Dystonia with Intrathecal Baclofen in the Pediatric Population: A Cross-sectional Study", ***World Journal of Pediatric Surgery*** 5:e000407 (2022)
7. Tami-Maury, I., Nethan, S., Feng, J., **Miao, H.**, Delclos, G., Mehrotra, R., "Evidence of Areca Nut Consumption in the United States Mainland: A Cross-sectional Study", ***BMC Public Health*** 22, 912 (2022)
8. Gao, S., Martcheva, M., **Miao, H.**, Rong, L., "The Impact of Vaccination on Human Papillomavirus Infection with Disassortative Geographical Mixing: A Two-patch Modeling Study", ***Journal of Mathematical Biology*** 84(6), 43 (2022)
9. Shropshire, W.C., Dinh, A.Q., Earley, M., Komarow, L., Panesso, D., Rydell, K., Gómez-Villegas, S.I., **Miao, H.**, Hill, C., Chen, L., Patel, R., Fries, B., Abbo, L., Cober, E., Revolinski, S., Luterback, C., Chambers, H., Fowler, V.G., Bonomo, R.A., Shelburne, S.A., Kreiswirth, B.A., van Duin, D., Hanson, B.M., Arias, C.A., "Accessory Genomes Drive Independent Spread of Carbapenem-Resistant *Klebsiella Pneumoniae* Clonal Groups 258 and 307 in Houston, TX", ***AAM mBio*** 13(2):e0049722 (2022)
10. Gao, S., Martcheva, M., **Miao, H.**, Rong, L., "A Two-sex Model of Human Papillomavirus Infection: Vaccination Strategies and A Case Study", ***Journal of Theoretical Biology*** 536, 111006 (2022)
11. Nascimbene, A., McAlister, C.A., Yo, D., Kumar, S., Hernandez, M., Jezovnik, M.K., Feng, H., **Miao, H.**, Basra, S., de Armas, I.A.S., Radovancevic, R., Gregoric, I.D., Kar, B., "Periprocedural Outcomes in TAVR: Focus on Calcium, Valve Position, and Pre-existing Conduction Defects", ***JACC: Cardiovascular Interventions*** 15 (4), 466-468 (2022)
12. Schor, L.I., Pearson, S.M., Shapiro, R.E., Zhang, W., Miao, H., Burish, M.J., "Cluster Headache Epidemiology Including Pediatric Onset, Sex, and ICHD Criteria: Results from the International Cluster Headache Questionnaire", ***Headache: The Journal of Head and Face Pain*** 61(10),1511-1520 (2021)
13. Burish, M.J., Winsvold, B.S., **Miao, H.**, "The Current State of Cluster Headache Genetics", ***Headache: The Journal of Head and Face Pain*** 61(7), 990-991 (2021)
14. Sorkpor, S., Galle, K., Teixeira, A.L., Colpo, G.D., Ahn, B., Jackson, N., **Miao, H.**, Ahn, H., "The Relationship between BDNF and Heat Pain Sensitivity in Older Adults with Knee Osteoarthritis", ***Biological Research for Nursing*** 23(4), 629-636 (2021)
15. Zhong, C., Xu, L., Peng, H.L., Tam, S., Xu, L., Dahlstrom, K.L., Wu, C.F., Fu, S., Chan, W., Sturgis, E.M., Ramondetta, L., Rong, L., Lairson, D.R., **Miao, H.**, "An Economic and Disease Transmission Model of Human Papillomavirus and Oropharyngeal Cancer in Texas", ***Scientific Reports*** 11(1), 1802 (2021)
16. Sorkpor, S.K., Johnson, C.M., Santa Maria, D.M., **Miao, H.**, Moore, C., Ahn, H., "The Effect of Music Listening on Pain in Adults Undergoing Colonoscopy: A Systematic Review and Meta-Analysis", ***Journal of PeriAnesthesia Nursing*** 36(5), 573-580.E1 (2021)

17. Li, D., Kim, S., Li, J., Gao, Q., Choi, J., Bian, F., Hu, J., Li, Y., Zhang, Y., Li, J., Lu, R., Li, Y., Pflugfelder, S.C., **Miao, H.**, Chen, R., “Single-Cell Transcriptomics Identifies Limbal Stem Cell Population and Cell Types Mapping Its Differentiation Trajectory in Limbal Basal Epithelium of Human Cornea”, *The Ocular Surface* 20, 20-32 (2021)
18. Debroy, P., Feng, H., **Miao, H.**, Guaraldi, G., Lake, J., “Changes in Central Adipose Tissue after Switching to Integrase Inhibitors”, *HIV Research & Clinical Practice* 21(6), 168-173 (2020)
19. Gao, S., Martcheva, M., **Miao, H.**, Rong, L., “A Dynamic Model to Assess Human Papillomavirus Vaccination Strategies in A Heterosexual Population Combined with Men Who Have Sex with Men”, *Bulletin of Mathematical Biology* 83(1), 5 (2020)
20. Pollonini, L., Montero-Hernandez, S., Park, L., **Miao, H.**, Mathis, K., Ahn, H., “Functional Near Infrared Spectroscopy to Assess Central Pain Responses in A Non-Pharmacologic Treatment Trial of Osteoarthritis”, *Journal of Neuroimaging* 30(6), 808-814 (2020)
21. Adrian, S., **Miao, H.**, Feng, H., Scherzinger, A., Guaraldi, G., Beghetto, B., Roncaglia, E., Ligabue, G., Milic, J., Guaraldi, G., Lake, J.E., Erlandson, K.M., “Effects of Atazanavir, Darunavir, and Raltegravir on Fat and Muscle among Persons Living with HIV”, *HIV Research and Clinical Practice* 24(1), 91-98 (2020)
22. Wang, S., Pan, Y., Wang, Q., **Miao, H.**, Brown, A.N., Rong, L., “Modeling the Viral Dynamics of SARS-CoV-2 Infection”, *Mathematical Bioscience* 328: 108438 (2020)
23. **Miao, H.**, Gao, Q., Feng, H., Zhong, C., Zhu, P., Wu, L., Swartz, M. D., Luo, X., DeSantis, S. M., Lai, D., Bauer, C., Pérez, A., Rong, L., Lairson, D., “Mathematical Modeling of Business Reopening when Facing SARS-CoV-2 Pandemic: Protection, Cost and Risk”, *Frontiers in Applied Mathematics and Statistics* 6(35), 1-16 (2020)
24. Ahn, H., Galle, K., Mathis, K., **Miao, H.**, Montero-Hernandez, S., Jackson, N., Ju, H., McCrackin, H., Goodwin C., Hargraves, A., Jain, B., Dinh, H., Abdul-Mooti, S., Park, L., Pollonini, L., “Feasibility and Efficacy of Remotely Supervised Cranial Electrical Stimulation for Pain in Older Adults with Knee Osteoarthritis: A Randomized Controlled Pilot Study”, *Journal of Clinical Neuroscience* 77, 128-133 (2020)
25. Pollonini, L., **Miao, H.**, Ahn, H., “Longitudinal Effect of Transcranial Direct Current Stimulation on Knee Osteoarthritis Patients Measured by Functional Infrared Spectroscopy: A Pilot Study”, *Neurophotonics* 7(2), 025004 (2020)
26. Williams, G., Maroufy, V., Rasmy, L., Brown, D., Yu, D., Zhu, H., Talebi, Y., Wang, X., Thomas, E., Zhu, G., Yaseen, A., **Miao, H.**, Novelo, L.L., Zhi, D., DeSantis, S., Zhu, H., Yamal, J.M., Aguilar, D., Wu, H., “Vasopressor Treatment and Mortality Following Non-Traumatic Subarachnoid Hemorrhage: A Nationwide EHR Analysis”, *Neurosurgical Focus* 48(5), E4 (2020)
27. Sun, J., Du, P., **Miao, H.**, Liang, H., “Robust Feature Screening Procedures for Single and Mixed Types of Data”, *Journal of Statistical Computation and Simulation* 90(7), 1173-1193 (2020)
28. Kang, J.J., Feng, H., **Miao, H.**, Chang, J.Y., “Predicting 5-year Progression and Survival Outcomes for Early-Stage Non-Small Cell Lung Cancer Treated with Stereotactic Ablative Radiotherapy: Development and Validation of Robust Prognostic Nomograms”, *International Journal of Radiation Oncology Biology Physics* 160(1), 90-99 (2019)
29. Ahn, H., Zhong, C., **Miao, H.**, Chaoul, A., Park, L., Yen, I.H., Vila, M.A., Sorkpor, S., Abdi, S., “Efficacy of Combining Home-Based Transcranial Direct Current Stimulation with Mindfulness-Based Meditation for Pain in Older Adults with Knee Osteoarthritis: A

- Randomized Controlled Pilot Study”, *Journal of Clinical Neuroscience* 70, 140-145 (2019)
30. Serpa, J.A., Huynh, G.N., Nickell, J.B., **Miao, H.**, “HIV Pre-Exposure Prophylaxis and Increased Incidence of Sexually Transmitted Infections in the United States”, *Clinical Infectious Diseases* 70(9),1884-1890 (2019). Impact factor: 9.12
 31. Ahn, H., Sorkpor, S., **Miao, H.**, Zhong, C., Jorge, R., Park, L., Abdi, S., Cho, R., "Home-based Self-administered Transcranial Direct Current Stimulation in Older Adults with Knee Osteoarthritis Pain: An Open-label Study", *Journal of Clinical Neuroscience* 66, 61-65 (2019)
 32. Deng, N., Rice, A., Arias, C., Ramirez, J., Wu, H., **Miao, H.**, Carey, M., “Investigation of Temporal and Spatial Heterogeneities of the Immune Responses to Bordetella Pertussis Infection in the Lung and Spleen of Mice via Analysis and Modeling of Dynamic Microarray Gene Expression Data”, *Infectious Disease Modelling* 4, 215-226 (2019)
 33. Ahn, H. Sorkpor, S., Kim, M.T., **Miao, H.**, Zhong, C., Wang, J., Choi, E., Fillingim, R.B., “The Relationship between Beta-Endorphin and Experimental Pain Sensitivity in Older Adults with Knee Osteoarthritis”, *Biological Research for Nursing* 21(4), 400-406 (2019)
 34. Ren, K., Yang, H., Zhao, Y., Chen, W., Xue, M., **Miao, H.**, Huang, S., Liu, J., “A Robust AUC Maximization Framework with Simultaneous Outlier Detection and Feature Selection for Positive-Unlabeled Classification”, *IEEE Transactions on Neural Networks and Learning Systems* 30(10), 3072 - 3083 (2019)
 35. Anokhina, V.S., McAnany, J.D., Ciesla, J.H., Santoso, N., **Miao, H.**, Miller, B.L., “Enhancing the Ligand Efficiency of Anti-HIV Compounds Targeting Frameshift-Stimulating RNA”, *Bioorganic and Medicinal Chemistry* 27(13), 2972-2977 (2019)
 36. Wang, Y., Luo, Y., Wu, H., **Miao, H.**, “Dynamic Structural Equation Models for Directed Cyclic Graphs: The Structural Identifiability Problem”, *Statistics and Its Interface* 12, 365-375 (2019)
 37. Ahn, H., Sorkpor, S., Kim, M.T., **Miao, H.**, Zhong, C., Wang, J., Choi, E., Fillingim, R.B., “The Relationship between Acculturation and Experimental Pain Sensitivity in Asian Americans with Knee Osteoarthritis”, *Pain Research and Management* 2018, 9128015 (2018)
 38. Liu, Z., Sin, T., Ding, H., Doan, H.A., Gao, S., **Miao, H.**, Wei, Y., Wang, Y., Zhang, G., Li, Y.P., “p38 β MAPK Mediates ULK1-Dependent Induction of Autophagy in Skeletal Muscle of Tumor-Bearing Mice”, *Cell Stress* 2(11), 311-324 (2018)
 39. Peng, H.L., Tam, S., Xu, L., Dahlstrom, K.R., Wu, C.F., Fu, S., Zhong, C., Chan, W., Sturgis, E.M., Ramondetta, L., Rong, L., Lairson, D.R., **Miao, H.**, “Age-Structured Population Modeling of HPV-related Cervical Cancer in Texas and US”, *Scientific Reports* 8(1), 14346 (2018)
 40. Ahn, H., Suchting, R., Woods, A.J., **Miao, H.**, Green, C., Cho, R., Choi, E., Fillingim, R.B., “Bayesian Analysis of the Effect of Transcranial Direct Current Stimulation on Experimental Pain Sensitivity in Older Adults with Knee Osteoarthritis: Randomized Sham-Controlled Pilot Clinical Study”, *Journal of Pain Research* 11, 2071-2082 (2018)
 41. Wang, J., Wang, J., **Miao, H.**, Marschollek, M., Wolf, K.H., Lynch, K.A., Gong, Y., “Leveraging Aging in Place Through Sensor-Enhanced In-Home Monitoring”, *Studies in Health Technology and Informatics* 250, 19-23 (2018)
 42. Wang, Y., Luo, Y., Wang, M., **Miao, H.**, “Time-invariant Biological Networks with Feedback Loops: Structural Equation Models and Structural Identifiability”, *IET Systems Biology*

- 12(6), 264-272 (2018)
43. Yu, B., Egbejimi, A., Dharmat, R., Xu, P., Zhao, Z., **Miao, H.**, Chen, R., Wensel, T., Cai, J., Chen, Y., "Phagocytosed Photoreceptor Outer Segments Activate Mtorc1 in the Retinal Pigment Epithelium", **Science Signaling** 11(532), eaag3315 (2018)
 44. Tam, S., Fu, S., Xu, L., Krause, K., Lairson, D.R., **Miao, H.**, Sturgis, E.M., Dahlstrom, K.R., "The Epidemiology of Oral Human Papillomavirus Infection in Healthy Populations: A Systematic Review and Meta-Analysis", **Oral Oncology** 82, 91-99 (2018)
 45. Song, J.J., Carey, M., Zhu, H., **Miao, H.**, Idarraga, R., Juan, C., Wu, H., "Identifying the Dynamic Gene Regulatory Network during Latent HIV-1 Reactivation using High-Dimensional Ordinary Differential Equations", **International Journal of Computational Biology and Drug Design** 11(1/2), 135-153 (2018)
 46. Saha, J.M., Liu, H., Hu, P.W., Wu, H., **Miao, H.**, Rice, A.P., "Proteomic Profiling of a Primary CD4+ T Cell Model of HIV-1 Latency Identifies Genes whose Differential Expression Correlates with Reactivation of Latent HIV-1", **AIDS Research and Human Retroviruses** 34(1), 103-110 (2018)
 47. Huang, H., Liu, S., Jean, M., Huang, H., Merkle, M., Hayashi, T., Kong, W., Rodriguez-Sanchez, I., Zhang, X., **Miao, H.**, Que, J., Kobie, J., Bradner, J., Santoso, N., Zhang, W., Zhu, J., "A Novel Bromodomain Inhibitor Reverses HIV-1 Latency through Specific Binding with BRD4 to Promote Tat and P-TEFb Association", **Frontiers in Microbiology** 8(1035), 1-11 (2017)
 48. Lu, N., Li, T., Ke, L., **Miao, H.**, "A Deep Learning Scheme for Motor Imagery Classification based on Restricted Boltzmann Machines", **IEEE Transactions on Neural System and Rehabilitation Engineering** 25(6), 566-576 (2017)
 49. Zhang, G., Liu, Z., Ding, H., **Miao, H.**, Garcia, J., Li, Y.P., "Toll-like Receptor 4 Mediates Lewis Lung Carcinoma-induced Muscle Wasting via Coordinate Activation of Protein Degradation Pathways", **Scientific Reports** 7: 2273 (2017)
 50. Dong, J., Yao, Z.J., Zhu, M.F., Wang, N.N., Lu, B., Chen, A.F., Lu, A.P., **Miao, H.**, Zeng, W.B., Cao, D.S., "ChemSAR: An Online Pipelining Platform for Molecular SAR Modeling", **Journal of Cheminformatics** 9(1), 27 (2017)
 51. Wang, Y., **Miao, H.**, "Parameter Identifiability-based Optimal Observation Remedy for Biological Networks", **BMC Systems Biology** 11(1), 53 (2017)
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 54. Liu, Z., **Miao, H.**, "Prediction of Protein-RNA Interactions Using Sequence and Structure Descriptors", **Neurocomputing** 206, 28-34 (2016)
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 57. Lu, N., Silva, J., Gu, Y., Wu, H., Gelbard, H., Dewhurst, S., **Miao, H.**, "Capillary Extraction

- by Detecting Polarity in Circular Profiles”, *IET Image Processing* 10(5), 339-348 (2016)
58. Lu, N., **Miao, H.**, “Structure Constrained Nonnegative Matrix Factorization for Pattern Clustering and Classification”, *Neurocomputing* 171, 400-411 (2016)
 59. Huang, H., Santoso, N., Power, D., Simpson, S., Dieringer, M., **Miao, H.**, Gurova, K., Giam, C.Z., Elledge, S., Zhu, J., “FACT Proteins, SUPT16H and SSRP1, are Transcriptional Suppressors of Human Retroviruses (HIV-1/HTLV-1) that Facilitate Viral Latency”, *Journal of Biological Chemistry* 290(45), 27297-27310 (2015)
 60. Dong, J., Cao, D.S., **Miao, H.**, Deng, B.C., Yun, Y.H., Wen, M., Wang, N.N., Zeng, W.B., Lu, A.P., Chen, A.F., “ChemDes: An Integrated Web-based Platform for Molecular Descriptor and Fingerprint Computation”, *Journal of Cheminformatics* 7(1): 60 (2015)
 61. Liu, Z., Wu, C., **Miao, H.**, Wu, H., “RegNetwork: An Integrated Database of Transcriptional and Post-transcriptional Regulatory Networks in Human and Mouse”, *Database*, doi:10.1093/database/bav095 (2015)
 62. Tong, X., Chen, J., **Miao, H.**, Li, T., Zhang, L., “Development of an Agent-based Model (ABM) to Simulate the Immune System and Integration of a Regression Method to Estimate the Key ABM Parameters by Fitting the Experimental Data”, *PLOS One* 10(11): e0141295 (2015)
 63. Lu, N., Li, T., Pan, J., Ren, X., Feng, Z., **Miao, H.**, “Structure Constrained Semi-Nonnegative Matrix Factorization for EEG-based Motor Imagery Classification”, *Computers in Biology and Medicine* 60, 32-39 (2015)
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 65. **Miao, H.**, Wu, H., Xue, H., “Generalized Ordinary Differential Equation Models”, *Journal of the American Statistical Association* 109(508), 1672-1682 (2014)
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 71. Lu, N., Silva, J., Gu, Y., Gerber, S., Wu, H., Lord, E., Gelbard, H., Dewhurst, S., **Miao, H.**, “Directional Histogram Ratio at Random Probes: A Local Thresholding Criterion for Capillary Images”, *Pattern Recognition* 46(7), 1933-1948 (2013)
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- Agent-based Modeling on Melanoma and Its Related Angiogenesis Analysis”, *Theoretical Biology and Medical Modeling* 10:41, (2013)
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 80. Liang, H., **Miao, H.**, and Wu, H., “Estimation of Constant and Time-varying Dynamic Parameters of HIV Infection in a Nonlinear Differential Equation Model”, *Annals of Applied Statistics* 4(1), 460-483 (2010)
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 82. Xue, H., **Miao, H.**, and Wu, H., “Sieve Estimation of Constant and Time-varying Coefficients in Nonlinear Ordinary Differential Equation Models by Considering both Numerical Error and Measurement Error”, *Annals of Statistics* 38(4), 2351-2387 (2010)
 83. **Miao, H.**, Dykes, C., Demeter, L.M., and Wu, H., “Differential Equation Modeling of HIV Viral Fitness Experiments: Model Identification, Model Selection, and Multi-model Inference”, *Biometrics* 65(1), 292-300 (2009).
 84. Lee, H. Y., Topham, D. J., Park, S. Y., Hollenbaugh, J., Treanor, J. J., Mosmann, T. R., Jin, X., Ward, B. , **Miao, H.**, Holden-Wiltse, J., Perelson, A. S., Zand, M. S., Wu, H., “Simulation and Prediction of the Adaptive Immune Response to Influenza A Virus Infection”, *Journal of Virology* 83(14), (2009).
 85. Wu, H., Zhu, H., **Miao, H.**, and Perelson, A.S., “Parameter Identifiability and Estimation of HIV/AIDS Dynamic Models,” *Bulletin of Mathematical Biology* 70(3), 785-799 (2008).
 86. **Miao, H.**, and Gracewski, S.M., “Coupled FEM and BEM Code for Simulating Acoustically Excited Bubbles near Deformable Structures”, *Computational Mechanics* 42(1), 95-106 (2008).
 87. **Miao, H.**, Dykes, C., Demeter, L.M., Cavenaugh, J., Parka, S.Y., Perelson, A.S., and

- Wu H., "Modeling and Estimation of Kinetic Parameters and Replication Fitness of HIV-1 from Flow-Cytometry-based Growth Competition Experiments," *Bulletin of Mathematical Biology* 70, 1749-1771 (2008).
88. **Miao, H.**, Gracewski, S.M., and Dalecki, D., "Ultrasonic Excitation of a Bubble inside a Deformable Tube: Implications for Ultrasonically-induced Hemorrhage," *Journal of the Acoustical Society of America* 124(4), 2374-2384 (2008).
89. **Miao, H.** and Gracewski, S.M., "Response of an Ultrasonically Excited Bubble near a Fixed Rigid Object," *Acoustic Research Letters Online* 6(3), 144-150 (2005).
90. Gracewski, S.M., **Miao, H.**, and Dalecki, D., "Ultrasonic Excitation of a Bubble near a Rigid or Deformable Sphere: Implications for Ultrasonically-induced Hemolysis," *Journal of the Acoustical Society of America* 117 (3), 1440-1447 (2005).
91. **Miao, H.**, Zhang, X., and Lu, M.W., "Fit-by-order Collocation Meshless Method," *Engineering Mechanics* (in Chinese) 20(5), 48-52 (2003).

CONFERENCE PAPER

92. Vallenilla, N.A., Montero-Hernandez, S., Ahn, H., **Miao, H.**, Pollonini, L., "Hemodynamic Response Function from Osteoarthritic Pain using functional Near-Infrared Spectroscopy," in Biophotonics Congress 2021, OSA Technical Digest, paper JT4A.32. (Optical Society of America, 2021)
93. Wang, J., Wang, J., **Miao, H.**, Marscholke, M., Wolf, K.H., Lynch, K.A., Gong, Y., "Leveraging Aging in Place through Sensor-enhanced In-home Monitoring", The 16th World Congress on Medical and Health Informatics (MEDINFO) (Xiamen, China, Aug. 2017)
94. Song, J., Carey, M., Zhu, H., **Miao, H.**, Ramirez, J.C., Wu, H., "Identifying the dynamic gene regulatory network during latent HIV-1 reactivation using high-dimensional ordinary differential equations", 2016 International Conference on Intelligent Biology and Medicine (Houston, TX, Dec. 2016)
95. Liu, Z., **Miao, H.**, "Prediction of Protein-RNA Interactions Using Sequence and Structure Descriptors", 17th IFAC Symposium on System Identification, 48(28), 1-6 (Beijing, China, Oct. 2015)
96. Lu, N., **Miao, H.**, "Featured Circular Profile for Vessel Thresholding", CISP-BMEI 2013, vol. 1, 437-442 (Hangzhou, China, Dec. 2013)
97. Wu, H., **Miao, H.**, Warnes, G.R., Wu, C., LeBlanc, A., Dykes, C., Demeter, L.M., "DEDiscover: A Computation and Simulation Tool for HIV Viral Fitness Research", International Conference on BioMedical Engineering and Informatics, vol. 1, 687-694 (Sanya, China, 2008)

CONFERENCE AND INVITED PRESENTATION

1. Ahn, H., Martorella, G., Mathis, K., **Miao, H.**, "Home-Based Transcranial Direct Current Stimulation and Clinical Pain in Older Adults: A Randomized Clinical Study", 2022 GSA Annual Scientific Meeting. Denver, CO (Oct., 2022)
2. Lake, J., Feng, H., **Miao, H.**, Debroy, P., Somasunderam, A., Utay, N.S., "Non-obese NAFLD is Associated with Higher SCD14 Concentrations in Adults with HIV", CROI 2022 (Mar. 2022)

3. **Miao, H.**, “Non-Euclidean Statistics for Novel Digital Biomarker Identification”, Department of Statistics, Kansas State University, Manhattan, KS (Feb., 2022)
4. Montero-Hernandez, S., **Miao, H.**, Pollonini, L., & Ahn, H., “Functional Connectivity in Nonpharmacological Pain Management”, fNIRS 2021 Virtual Conference. Boston, MA (Oct., 2021)
5. **Miao, H.**, “Two Sample Test of Networks – the Connection between Manifold Learning and Statistics”, School of Data Science, City University of Hongkong (Mar. 2021)
6. Lake, J., **Miao, H.**, Kettelhut, A., Clark, J.L., Lama, J.R., Reisner, S., Mayer, K.H., Perez-Brumer, A., Funderburg, N., “Feminizing Therapy Decreases D Dimer but Worsens Insulin Sensitivity in Trans Women”, CROI 2021 (Mar. 2021)
7. Kaur, H., **Miao, H.**, Arduino, R., Lake, J., Utay, N., “Weight Gain after Initiation of Anti-Retroviral Therapy in Acute HIV-1”, IDWeek 2020, Philadelphia, PA (Oct. 2020)
8. Lee, D.A., Silverberg, K.M., Picou, A., **Miao, H.**, Garcia, C.M., Propst, A.M., “Endometrial receptivity assay does not increase live birth rates in first frozen embryo transfer with a euploid blastocyst”, 75th ASRM Scientific Congress & Expo, Philadelphia, PA (Oct., 2019)
9. Ahn, H., Zhong, C., Park, L., Sorkpor, S., **Miao, H.**, “Self-administered Transcranial Direct Current Stimulation for Clinical Pain Severity in Older Adults with Knee Osteoarthritis”, the 34th Annual Conference of the Southern Nursing Research Society, New Orleans, LA (Mar., 2020)
10. Yo, D., Kumar, S., Hernandez, M., Jezovnik, M., Nascimbene, A., Feng, H., **Miao, H.**, Loyalka, P., Kar, B., Gregoric, I.D., “Impact of calcium burden and distribution on paravalvular leak in Edwards S3 TAVR”, CSI, San Francisco, CA (Nov., 2019)
11. Lake, J.E., Erlandson, K.M., Feng, H., Adrian, S., Scherzinger, A., Malagoli, A., Milic, J., **Miao, H.**, Guaraldi, G., “Traditional Risk Factors and Darunavir Use Associated with Muscle and Fat Quality and Quantity in Adults With HIV on Antiretroviral Therapy”, 10th International Workshop on HIV & Aging, New York City, NY (2019)
12. Engle, H., Thomas, E., Wang, X., **Miao, H.**, Yamal, J.M., Wu, H., “Conducting sensitivity analysis and mining heterogeneous causal effects on subarachnoid hemorrhage patients”, 4th International Conference on Big Data and Information Analytics: Theories, Algorithms and Applications in Data Science, Houston, TX (Dec., 2018).
13. Wang, X., Maroufy, V., Talebi, Y., Gindybekhet, L.R., Thomas, E.A., Engle, H., Yaseen, A., Yamal, J.M., Novelo, L.G.L., **Miao, H.**, Aguilar, D., Williams, G.W., Wu, H., “Electronic Health Record (EHR) Data Processing and Cleaning for Statistical Analysis”, 4th International Conference on Big Data and Information Analytics: Theories, Algorithms and Applications in Data Science, Houston, TX (Dec., 2018).
14. Offor, O.L., Gao, Q., Mellor-Crummey, L., **Miao, H.**, Barnett, B., Vigil, K.J., “Low Hepatitis C Virus Reinfection Rates after Sustained Viral Response in HIV coinfecting patients in Houston, Texas.”, IDWeek 2018, San Francisco, CA (Nov., 2018)
15. Lake, J., Feng, H., **Miao, H.**, La, K., Offor, L., Somasunderam, A., Utay, N.S., “Hepatic Steatosis Is Common in Both Lean and Obese Adults with HIV Infection and Associated with Divergent Immuno-Metabolic Profiles”, The 9th International Workshop on HIV & Aging, New York, NY (Sept., 2018)
16. Wang, J., **Miao, H.**, Marschollek, M., Wolf, K.H., Lynch, K., Gong, Y., “Towards Aging in Place: Next Stage of Sensor-enhanced In-home Monitoring”, The 14th International Conference on Nursing Informatics, Guadalajara, Mexico (June, 2018)
17. **Miao, H.**, “Revealing Genome-scale Regulatory Landscapes Based on Temporal Gene

- Expression Profiles”, 2nd International Conference on Genomic Medicine, Houston, TX (Feb., 2018)
18. Smith, D., Gao, Q., **Miao, H.**, Gutierrez, O., Martinez, C., Vigil, K.J., Utay, N., Arduino, R.C., “Acute HIV infection (AHI): Trained Service Linkage Workers and 4th Generation Assay Significantly Shorten Time to Antiretroviral Therapy Initiation”, IDWeek 2017, San Diego, CA (Oct., 2017)
 19. **Miao, H.**, “Statistical Inference of Network Structures in Ultra-high Dimensional Space”, Data Science Conference, Houston, TX (Oct., 2017)
 20. **Miao, H.**, “Machine Learning of Brain Vasculature Change in NeuroAIDS Studies using Two-photon Imaging”, SIAM Houston Imaging Sciences Symposium, Houston, TX (Oct., 2017)
 21. **Miao, H.**, “Sparsity Structure in Statistical Inference of Ultra-high Dimensional Dynamic Graphical Model”, Statistical and Computational Analytics for Big Data, Toronto, Canada (Sep., 2017)
 22. **Miao, H.**, “Structure identification of ultra-high dimensional biological systems from time course data”, Systems Engineering Institute, Xi’an Jiaotong University, ShannXi, China (Jun., 2017)
 23. **Miao, H.**, “Statistical Inference of Genome-wide Regulatory Landscapes from Temporal Gene Expression Data”, Department of Bioinformatics and Computational Biology, MD Anderson, Houston, TX (Mar., 2017)
 24. **Miao, H.**, “Inferring structures of ultra-high dimensional biological systems from time course data: How to handle half a million parameters?”, Department of Mathematics, University of Houston, Houston, TX (Sept., 2016)
 25. **Miao, H.**, “Dynamic modeling and inference for event detection”, ICSA 2016 Symposium, Atlanta, GA (June, 2016)
 26. **Miao, H.**, “Vascular Trees and the Machine Learning Strategy on Manifold”, Delaware Biotechnology Institute, University of Delaware, Newark, DE (Feb., 2016)
 27. **Miao, H.**, “Learning Tree Structures on Manifold”, Houston Area Chapter of the American Statistical Association Meeting, Houston, TX (Oct., 2015)
 28. Power, D., Santoso, N., Yu, J., Dieringer, M., van Twisk, D., Gao, G., Elledge, S., **Miao, H.**, Zhu, J., “TAT-Associated Proteins (TAPs) that Regulate HIV-1 Transcription and Latency”, Strategies for An HIV Cure 2014, Bethesda, MD (Oct., 2014)
 29. **Miao, H.**, “Identifiability of High-dimensional Models”, SIAM Conference on the Life Sciences 2014, Charlotte, NC (Aug., 2014)
 30. **Miao, H.**, “Semi-mechanistic Modeling and its Application in Understanding Immune Cell Migration”, Mathematical Biology and Physiology Seminar, Mathematics Department, Penn State University, PA (Apr., 2014)
 31. **Miao, H.**, “Systematic Identification of Genuine Regulatory Relationships during Influenza Virus Infection”, AMS Fall 2013 Central Sectional Meeting, St. Louis, MO (Oct., 2013)
 32. **Miao, H.**, “Clustering Tree-Structured Data on Manifold”, Joint Statistical Meetings, Montreal, Canada (Aug., 2013)
 33. **Miao, H.**, “Modeling, Identifiability, and Data Analysis of Complex Systems”, 1st Workshop on Viral Dynamics, Frankfurt am Main, Germany (July, 2013)
 34. **Miao, H.**, “Screening Core Pre- and Post-Transcriptional Regulations in Influenza Infection”, SMB Annual Meeting and Conference, Phoenix, Arizona (June, 2013)
 35. **Miao, H.**, “Detecting Genuine Regulatory Relationships among Transcription Factors,

- miRNAs and Target Genes post Influenza Virus Infection”, AAI Immunology 2013, Honolulu, Hawaii (May, 2013)
36. **Miao, H.**, “Inferring Pre- and Post-Transcriptional Regulations in Infectious Diseases”, GLBIO, Pittsburgh, Pennsylvania (May, 2013)
 37. **Miao, H.**, “Systems Approaches in Immunological Research“, Xi’an Jiaotong University (Xi’an, China), National Chengdu Center for Drug Safety Evaluation, West China Hospital (Chengdu, China), University of Electronic Science and Technology of China (Chengdu, China) (April, 2012)
 38. **Miao, H.**, “Will Different Types of Models Give Different Answers? A Case Study in Modeling CFSE Data to Understand Immune Cell Life Cycle“, AMS Spring Eastern Sectional Meeting, George Washington University, Washington, DC (March, 2012)
 39. **Miao, H.**, “Semi-mechanistic modeling of Two-Scale Immune Cell Kinetics post Influenza A Virus Infection”, System Approaches in Immunology, Santa Fe, New Mexico (Jan., 2012)
 40. **Miao, H.**, Liang, H., and Wu, H., “Identifiability and Estimation of Time-varying Parameters in ODE Models with Applications in Viral Dynamics”, Joint Statistical Meetings, Miami Beach, Florida (Aug., 2011)
 41. **Miao, H.**, “Understanding Immune Cell Growth, Loss, Migration and Class-Switching within Multiple Lymphatic Organs post Influenza A Virus Infection”, 6th Annual Symposium in Computational Immunology: Systems Biology of Influenza, New Haven, CT (June, 2011)
 42. **Miao, H.**, Topham, D., Wu, H., and Zand, M., “CD8+ T Cell Trafficking post Primary Influenza A Virus Infection”, 98th Annual Meeting of the American Association of Immunologists, San Francisco, California (May, 2011)
 43. **Miao, H.**, “Multilevel modeling of complex system dynamics in immune responses to influenza A virus infection”, 4th Annual CEIRS Network Meeting, Rochester, NY (Aug., 2010)
 44. **Miao, H.**, “Mathematical modeling in Virology Research”, UR Seminars for Virologists, Rochester, NY (Feb., 2010)
 45. **Miao, H.**, Dykes, C., Demeter, L.M., and Wu H., “Modeling HIV viral fitness and computing tool development”, University of Rochester Developmental Center for AIDS Research 1st World AIDS Day Symposium, Rochester, NY (Dec., 2009).
 46. **Miao, H.**, “Computational challenge in biomedical research”, URCS Seminars in Systems, Rochester, NY (Oct., 2009)
 47. Xue, H., **Miao, H.**, and Wu, H., “Sieve estimation of constant and time-varying coefficients in nonlinear ordinary differential equation models by considering both numerical error and measurement error”, Statistical Modeling for Biological Systems: A Conference in Memory of Andrei Yakovlev, Rochester, NY (2009)
 48. **Miao, H.**, Dykes, C., Demeter, L.M., and Wu H., “Differential equation modeling of HIV viral fitness experiments: model identification, model selection, and multi-model inference”, Joint Statistical Meetings, Denver, CO (2008).
 49. Gracewski, S.M. **Miao, H.**, Dalecki, D., “Simulation of an acoustically excited bubble within a compliant vessel,” J. Acoust. Soc. Am. 121(5), 3058 (Salt Lake City, UT, 2007).
 50. Gracewski, S.M., **Miao, H.**, Dalecki, D., “Vessel damage mechanisms by ultrasound or shock wave pulses,” J. Acoust. Soc. Am. 119(5), 3406 (Providence, RI, 2006).
 51. Gracewski, S.M., **Miao, H.**, Dalecki, D., Miller, M.W., “Simulation of an acoustically excited bubble near a simulated “cell”,” J. Acoust. Soc. Am. 115(5), 2561 (NYC, 2004).

SELECTED RESEARCH GRANT

• Principal/Co-Principal Investigator

- ❖ Non-Euclidean Statistical Methodology Development with Applications in Identification of Image-based Pain Biomarker, NSF/DMS, \$300,000 (PI, [pending](#)), 2023-2026
- ❖ Dynamics of Aged-related Mental Health Disparities and Corresponding Macrosocial Determinants, NIH/NIMH, \$1,141,583 (PI, [pending](#)), 2023-2026
- ❖ Pain-related Brain Mechanisms for Pain Catastrophizing Behavior in Response to Home-based Mindfulness-based Meditation Paired with Transcranial Direct Current Stimulation, NIH/NINR [3R01NR019051-03S1](#), \$484,992 (M-PI), 2022-2023
- ❖ ASCENT: Multimodal chest e-tattoo with customized IC and deep learning algorithm for tracking and predicting progressive pneumonia, NSF/ECCS [2133106](#), \$1,500,000 (Co-PI), 2021-2025
- ❖ Analysis of Longitudinal Multiscale Data in Immunological Bioinformatics - Feature Selection, Graphical Models, and Structure Identification, NSF/DMS [1620957](#), \$138,000 (PI), 2016-2020
- ❖ Targeting BRD4 and TAT-associated Inhibitory Proteins to Reactivate Latent HIV, NIH/NIAID [1 R21 AI116180-01](#), \$125,000 (Co-PI), 2014-2015
- ❖ Identification of Interferon Stimulated Genes Regulating Viral Latency, Collaborative Bioinformatics Pilot Award, Center for Integrative Bioinformatics and Experimental Mathematics, University of Rochester, \$50,000 (Co-PI), 2014-2015
- ❖ Interaction between Aging and HIV-associated Neurological Disorder, Collaborative Bioinformatics Pilot Award, Center for Integrative Bioinformatics and Experimental Mathematics, University of Rochester, \$42,219 (Co-PI), 2013-2014
- ❖ Computational Approaches for HIV Viral Fitness Research, Mentoring Award, University of Rochester Development Center for AIDS Research, \$20,000 (PI), 2008-2009
- ❖ Computational Approaches for HIV Viral Fitness Research, Provost's Multidisciplinary Awards, University of Rochester, \$70,000 (PI), 2008-2009

• Subcontract Principal Investigator

- ❖ Patient Satisfaction, Retention in HIV Care, and Adherence to ART, NIH/NIMH [5 K23 MH100965-04](#), \$9,072 (subcontract PI), 09/2017-12/2017
- ❖ Effect of Reducing Nucleotide Exposure on Bone Health, Stanford University/ViiV Healthcare, \$170,796 (subcontract PI), 11/2018-10/2021

• Key/Co-Investigator

- ❖ Metabolic impact of FGF-21 in adipose tissue and liver of PLWH, NIH/NIAID, [R01 DK126042](#), 2020–2025
- ❖ Texas Developmental Center for AIDS Research, NIH/NIAID, [P30 AI161943](#), 2021-2026
- ❖ Mechanism of chemotherapy potentiation of muscle wasting in cancer cachexia, [R01 CA249896](#), 2020-2025
- ❖ Deep learning enabled endovascular stroke therapy screening in community hospitals, [R01 NS121154](#), 2021-2026
- ❖ Combination Therapy of Home-based Transcranial Direct Current Stimulation and Mindfulness-based Meditation for Self-management of Clinical Pain and Symptoms

- in Older Adults with Knee Osteoarthritis, NIH/NINR, [R01NR019051](#), 2020-2025
- ❖ Comprehensive HIV+/- Analysis of inflammation in transGender women on Estrogen Supplementation: The CHANGES Study, NIH/NIAID [1 R21 AI143452-01](#), 2019-2020
- ❖ Self-Administered Transcranial Direct Current Stimulation for Pain in Older Adults with Knee Osteoarthritis: A Phase II Randomized Sham-Controlled Trial, NIH/NINR [1 R15NR018050-01A1](#), \$463,737, 2019-2022
- ❖ Health and Economic Consequences of HPV-related Disease in Texas, MD Anderson Moon Shots Program, \$900,000, 2016-2018
- ❖ Statistical Methods for ODE Models in AIDS Research, NIH/NIAID [5 R01 AI087135-07](#), \$1,250,000, 2015-2019
- ❖ A Host Restrictive Network Centering BRD4 in HIV Latency, University of Rochester CFAR Pilot Award, \$35,000, 2014-2015
- ❖ University of Rochester Center for AIDS Research, NIH/NIAID, [5 P30 AI078498-07](#), \$1,151,003, 2013-2015
- ❖ RNA-Targeted Small Molecules: Connecting Binding Kinetics to Sequence Selectivity (R01), NIH/DHHS/PHS [1 R01 GM100788-01](#), \$1,117,390, 2012-2015
- ❖ Estimation Methods for Nonlinear ODE Models in AIDS Research (R01), NIH/NIAID [5 R01 AI087135-04](#), \$930,469, 2010-2014
- ❖ University of Rochester Center for Biodefense Immune Modeling, NIH/NIAID [HHSN272201000055C](#), \$7,993,510, 2010-2015
- ❖ Novel Adjunctive Therapies for NeuroAIDS, NIH [5 P01 MH064570-10](#), \$1,199,772, 2011-2012
- ❖ Training in Biostatistics for HIV/AIDS, NIH/NIAID [1 T32 AI083206-01A1](#), \$992,185, 2010-2015
- ❖ B Cells in Health and Disease, UNIV/Emory [S920254](#), \$109,844, 2012-2015

TEACHING EXPERIENCE

Applied Multivariate Analysis (PH1821 at UTHHealth BADS, 2016-2022, Spring)
 Introduction to Data Science (PH1975 at UTHHealth BADS, 2017-2021, Fall)
 Generalized Linear Model (PH1916 at UTHHealth BADS, 2016, Fall)
 Modeling, Computing and Statistics in Immunology Research (UoR, 2012, 2015, Summer)
 Lab Rotation in Bioinformatics (BST 496 at UoR, 2015, Spring)
 PhD Readings (BST 591 at UoR, 2015, Spring)
 Computational Biology (BST 431 at UoR, 2014, Spring)
 Seminar in Statistical Literature (BST 497 at UoR, 2013, Fall)
 Introduction to Biostatistics (BST 463 at UoR, 2010-2012, Fall)
 Topics in Immunology: Mathematical Immunology (MBI 540 at UoR, 2011, Spring)
 Advanced Topics in Object Data Analysis (BST 550 at UoR, 2010, Fall)
 Computational Statistics (BST 550 at UoR, 2010, Spring)

PROFESSIONAL SERVICE

- Editorial Board
 - ❖ Associate Editor, *Frontiers in Public Health*, 2022-present

- ❖ Associate Editor, BMC Systems Biology, 2016-2020
- ❖ Lead Guest Editor, Computational and Mathematical Methods in Medicine, 2015
- Professional Committee & Board
 - ❖ Co-chair, Promotion and Tenure Committee, College of Nursing, Florida State University, 2022-present
 - ❖ Member, Faculty Search Committee, College of Nursing, Florida State University, 2022-present
 - ❖ Secretary, Houston Area Chapter of the American Statistical Association, 2016-2020 (<http://community.amstat.org/houston/home>)
 - ❖ Co-Chair, Data Science Faculty Search Committee, Department of Biostatistics and Data Science, University of Texas Health Science Center at Houston, 2017-2018
 - ❖ Board member, Single Cell Omics Cluster (SCOC), Golf Coast Consortium (GCC) at Texas Medical Center (TMC), Houston, 2019-2021
- Grant Review
 - ❖ NIH Panel Review
 - NST-1 Panel, NINDS, 2016-present
 - ❖ NSF Panel Review
 - SBIR/STTR, 2022
 - DMS, Biomedical Big Data, 2016
 - ❖ Clinical & Translational Science Institute (CTSI) Pilot Projects for Biostatistical and Epidemiological Methodology, 2012-2015
 - ❖ The German Israeli Foundation for Scientific Research and Development, 2015-2016
- Paper Review
 - ❖ Annals of Statistics, Biometrics, BioSystems, BMC Health Services Research, BMC Medical Research Methodology, BMC Systems Biology, Bulletin of Mathematical Biology, Computational Statistics and Data Analysis, Epidemics, Entropy, EURASIP Journal on Bioinformatics and Systems Biology, Frontiers in Physics, IEEE Transactions on Biomedical Engineering, IEEE Journal of Biomedical and Health Informatics, IEEE Transactions on Knowledge and Data Engineering, IEEE Conference on Decision and Control, Journal of Applied Mathematics, Journal of the American Statistical Association, Journal of Biological Systems, Journal of Computational and Graphical Statistics, Journal of Mathematical Biology, Journal of the Royal Society Interface, Journal of Symbolic Computation, Journal of Theoretical Biology, JP Journal of Biostatistics, Mathematical Review, Mathematical Medicine & Biology, Neurocomputing, Proceedings A of the Royal Society, PLoS Computational Biology, PLoS One, Scientific Reports, Statistics in Medicine, Statistica Sinica, Surveys in Mathematics and its Applications
- Book Review
 - ❖ An Introduction to Stochastic Processes with Applications to Biology (2nd Ed.), by Linda Allen, CRC, 2011
- Conference
 - ❖ Committee Chair (multiple roles), *the 4th International Conference on Big Data and Information Analytics* (Dec. 2018, Houston, TX)
 - ❖ Program Committee, *2018 IEEE International Conference on Bioinformatics and Biomedicine* (Dec. 2018, Madrid, Spain)

- ❖ Program Committee, *2017 IEEE International Conference on Bioinformatics and Biomedicine* (Nov. 2017, Kansas City, MO)
- ❖ Program Committee, *1st International Workshop on Artificial Immune Systems: Systems & Synthetic Immunology, Computational Immunology & Immune-Inspired Engineering* (July 2015, Taormina, Italy)
- ❖ Invited Reviewer, *2013 American Control Conference* (Jun. 2013, Washington, DC)
- ❖ Session Chair, *2012 Symposium on Modeling Immune Responses from Complex Data* (Jun. 2012, Rochester, NY)
- ❖ Invited Program Committee, *11th International Conference on Artificial Immune Systems* (Aug. 2012, Taormina, Italy)
- ❖ Invited session chair for Joint Statistical Meeting, *Modeling and Testing Using Imaging Data* (Aug. 2011, Miami Beach, Florida)

PROFESSIONAL AFFILIATIONS

- International Society for Computational Biology (2012-present)
- Society for Industrial and Applied Mathematics (2011-present)
- Institute of Mathematical Statistics (2009-present)
- American Statistical Association (2008-present)

COMPUTING SKILLS

- **Programming Languages**
R, SAS, Matlab, Python, Julia, SQL, C++
- **Productivity Tools**
LaTeX, MS Office, EndNote, Adobe Acrobat, Adobe Illustrator