Genevera I. Allen

CONTACT INFORMATION	Department of Statistics 1255 Amsterdam Ave. New York, NY, 10027	*Office:* SSW 1026 *Office:* JLG L5.068 *E-mail:* `genevera.allen@columbia.edu`	

RESEARCH
INTERESTS

Statistical Machine Learning; Interpretable Machine Learning; Multivariate Analysis; Data Integration; Graphical Models; High-Dimensional Data; Applications in Bioinformatics and Neuroscience.

EDUCATION

Stanford University, Stanford CA

P.h.D., Statistics, June 2010.

- Advisor: Robert Tibshirani.
- Thesis: "Transposable Regularized Covariance Models with Applications to High-Dimensional Data".

Rice University, Houston TX

B.A., Statistics, *cum laude*, May 2006.

ACADEMIC
EXPERIENCE

Columbia University, New York, NY.

Professor,   July 2024 - present
Department of Statistics,
Center for Theoretical Neuroscience, Zuckerman Institute for Mind, Brain, and Behavior,
Irving Institute for Cancer Dynamics.

Rice University & **Baylor College of Medicine**, Houston, TX.

Founder & Faculty Director,   July 2018 - June 2022
Center for Transforming Data to Knowledge (D2K Lab), Rice University.

Associate Professor,   July 2019 - June 2024
Department of Electrical and Computer Engineering, Department of Statistics (by courtesy),
and Department of Computer Science (by courtesy), Rice University.

Associate Professor, (Joint appointment)   July 2017 - June 2024
Department of Pediatrics-Neurology, Baylor College of Medicine & Jan and Dan Duncan
Neurological Research Institute, Texas Children's Hospital.

Associate Professor,   July 2017 - July 2019
Department of Statistics, Department of Electrical and Computer Engineering (by courtesy),
and Department of Computer Science (by courtesy), Rice University.

Dobelman Family Junior Chair, Rice University   July 2013 - June 2017

Assistant Professor, (Tenure-track at Rice)   July 2012 - June 2017
Department of Statistics, Department of Electrical and Computer Engineering (by courtesy),
and Department of Computer Science (by courtesy), Rice University.

Assistant Professor, (Tenure-track at BCM & Rice)   July 2010 - June 2012

- Elected Fellow of the Institute for Mathematical Statistics (IMS), 2024.

- Elected Fellow of the American Statistical Association (ASA), 2022.

- Elected Member, International Statistics Institute (ISI), 2021.

- Charles W. Duncan Achievement Award for Outstanding Faculty, Rice University, 2021.

- Curriculum Innovation Award, George R. Brown School of Engineering, Rice University, 2020.

- Research and Teaching Excellence $(T+R)^2$ Award, George R. Brown School of Engineering, Rice University, 2017.

- Ihaka Lectureship, University of Auckland, New Zealand, 2017.

- NSF CAREER Award, 2016.

- Chosen to represent the American Statistical Association at the Coalition for National Science Funding Congressional Exhibition, May 2014.

- Named to Forbes '30 under 30 in Science and Healthcare' list, January 2014.

- Dobelman Family Junior Chair, Department of Statistics, Rice University, July 2013.

- Chosen to represent the American Statistical Association at the Coalition for National Science Funding Congressional Exhibition, May 2013.

- International Biometrics Society Young Statistician Showcase (North America representative), IBS 2012 in Kobe, Japan, 2012.

- David P. Byar Young Investigator Travel Award, Biometrics Section, American Statistical Association, 2011.

Best Paper Awards and Student Paper Awards:

- Biometrics Section Student Paper Award to Minjie Wang for "Integrative Generalized Convex Clustering Optimization and Feature Selection for Mixed Multi-View Data", 2020.

- Statistical Learning and Data Science Conference Student Paper Award to Minjie Wang for "Supervised Convex Clustering", 2020.

- David P. Byar Young Investigator Award, Biometrics Section of the ASA to Tiffany Tang for "Integrated Principal Components Analysis", 2019.

- Distinguished Student Paper Award, Eastern North America Region of the International Biometric Society to Manjari Narayan for "Two Sample Inference for Populations of Graphical Models with Applications to Functional Connectivity", 2016.

- Distinguished Student Paper Award, Eastern North America Region of the International Biometric Society to Yue Hu for "Local-Aggregate Modeling for Big-Data via Distributed Optimization: Applications to Neuroimaging", 2015.

Action Editor, *Journal of Machine Learning Research*, 2019 - present.

Series Editor, *Springer Texts in Statistics*, 2018 - present.

Editorial Committee Member, *Annual Review of Statistics and its Application*, 2023 - present.

Associate Editor, *Journal of the American Statistical Association: Theory & Methods*, 2023 - present.

Editorial Board Member, *Foundations and Trends in Machine Learning*, 2023 - present.

Associate Editor, *Journal of the Royal Statistical Society: Series B*, 2024 - present.

Guest Editorial Committee Member, *Annual Review of Statistics and its Application*, 2022.

Guest Editor, *Journal of Computational Neuroscience*, Special Issue: Statistical Analysis of Neuronal Data, 2017-2018.

Associate Editor, *Biometrics*, 2014 - 2018.

Associate Editor, *Electronic Journal of Statistics*, 2013 - 2016.

PUBLICATIONS

Note: Student and postdoctoral fellow co-authors are underlined.

Preprints:

99. L. Zheng*, A. Chang*, and **G. I. Allen**, "Cluster Quilting: Spectral Clustering for Patchwork Learning", (Submitted) arXiv:2406.13833, 2024. *Denotes equal contribution.*

98. C. O. Little, "Fair MP-BOOST: Fair and Interpretable Minipatch Boosting", (Submitted) arXiv:2404.01521, 2024.

97. J. Liu*, L. Zheng*, Z. Zhang, **G. I. Allen**, "Joint Semi-Symmetric Tensor PCA for Integrating Multi-modal Populations of Networks", arXiv:2312.14416, 2023. *Denotes equal contribution.*

96. A. Chang, L. Zheng and **G. I. Allen**, "Low-Rank Covariance Completion for Graph Quilting with Applications to Functional Connectivity", arXiv:2209.08273, 2022.

95. L. Gan*, L. Zheng* and **G. I. Allen**, "Model-Agnostic Confidence Intervals for Feature Importance: A Fast and Powerful Approach Using Minipatch Ensembles", arXiv:2206.02088, 2022.
Denotes equal contribution.

94. C. O. Little*, M. Weylandt* and **G. I. Allen**, "To the Fairness Frontier and Beyond: Identifying, Quantifying, and Optimizing the Fairness-Accuracy Pareto Frontier", arXiv:2206.00074, 2022.
Denotes equal contribution.

93. T. Yao, M. Wang, and **G. I. Allen**, "Fast and Accurate Graph Learning for Huge Data via Minipatch Ensembles", arXiv:2110.12067, 2021.

92. M. Navarro, **G. I. Allen**, and M. Weylandt, "Network Clustering for Latent State and Changepoint Detection", arXiv:2111.01273, 2021.

91. T. Yao and **G. I. Allen**, "Feature selection for huge data via minipatch learning", arXiv:2010.08529, 2020.

90. G. Vinci, G. Dasarathy, and **G. I. Allen**, "Graph Quilting: Graphical Model Selection from Partially Observed Covariances", arXiv:1912.05573, 2020.

Peer-Reviewed Journal Articles:

89. C. O. Little*, D. H. Lina*, and **G. I. Allen**, "Fair Feature Importance Scores for Interpreting Tree-Based Methods and Surrogates", (To Appear), *Transactions on Machine Learning Research*, arXiv:2310.04352, 2024.
Denotes equal contribution.

88. L. Zheng and **G. I. Allen**, "Graphical Model Inference with Erosely Measured Data", (To Appear) *Journal of American Statistical Association: Theory & Methods*, arXiv:2210.11625, 2023.

87. **G. I. Allen**, L. Gan, L. Zheng, "Interpretable Machine Learning for Discovery: Statistical Challenges and Opportunities", *Annual Review of Statistics and its Application*, **11**:97-121, 2024.

86. M. Wang, T. Yao, and **G. I. Allen**, "Supervised Convex Clustering", *Biometrics*, **79**:4, 3846-3858, 2023.

85. A. Chang, L. Zheng, G. Dasarthy, **G. I. Allen**, "Nonparanormal Graph Quilting with Applications to Calcium Imaging", *Stat*, **12**:1, e623, 2023.

84. A. Nunez-Thompson, A. Saterbak, C. Rincon, J. Stelling, **G. I. Allen**, M. Wettergreen, "Participation in a Team-based, First-year Engineering Design Course Associated with Improved Teaming Skills During Senior Capstone Engineering Design", *Advances in Engineering Education*, **11**:3, 2-28, 2023.

83. X. Han, W. Wang, L. Ma, I. A. Ramahi, J. Botas, K. MacKenzie, **G. I. Allen**, D. W. Young, Z. Liu, M. Maletic-Savatic, "SPA-STOCSY: An Automated Tool for Identification of Annotated and Non-Annotated Metabolites in High-Throughput NMR Spectra", *Bioinformatics*, **39**:10, btad593, 2023.

82. A. Chang and **G. I. Allen**, "Subbotin Graphical Models for Extreme Value Dependencies with Applications to Functional Neuronal Connectivity", *Annals of Applied Statistics*, **17**:3, 2364-2386, 2023.

81. M. Wang and **G. I. Allen**, "Thresholded Graphical Lasso Adjusts for Latent Variables", *Biometrika*, **110**:3, 681-697, 2023.

80. S. Lusk, C. S. Ward, A. Chang, A. Twitchell-Heyne, S. Fattig, **G. I. Allen**, J. Jankowsky, R. Ray, "An automated respiratory data pipeline for waveform characteristic analysis", *Journal of Physiology*, **38**:S1, 5734969, 2023.

79. M. Yu, H. Ye, R. B. De-Paula, C. G. Mangleburg, T. Wu, T. V. Lee, Y. Li, D. Duong, B. Phillips, C. Cruchaga, **G. I Allen**, N. T. Seyfried, I. Al-Ramahi, J. Botas, J. M. Shulman, "Functional screening of lysosomal storage disorder genes identifies modifiers of alpha-synuclein neurotoxicity", *PLOS Genetics*, **19**:5, e1010760, 2023.

78. L. Gan and **G. I. Allen**, "Fast and Interpretable Consensus Clustering via Minipatch Learning", *PLOS Computational Biology*, **18**:10, e1010577, 2022.

77. L. Gan, G. Vinci, and **G. I. Allen**, "Correlation Imputation for Single Cell RNA-seq", *Journal of Computational Biology*, **29**:5, 465-482, 2022.

76. S. Lusk, A. McKinney, P.J. Hunt, A. Chang, P.G. Fahey, J. Patel, J.J. Sun, V.K. Martinez, P.J. Zhu, J.R. Egbert, **G. I. Allen**, X. Jiang, B.R. Arenkiel, M. Costa-Mattioli, A. Tolias, and R. Ray, "A CRISPR toolbox for generating intersectional genetic mice for functional, molecular, and anatomical circuit mapping." *BMC Biology*, **20**:1, 1-26, 2022.

75. A. Chang, M. Wang, and **G. I. Allen**, "Sparse Regression for Extreme Values", *Electronic Journal of Statistics*, **15**:2, 5995-6035, 2021.

74. T. M. Tang and **G. I. Allen**, "Integrated Principal Components Analysis", *Journal of Machine Learning Research*, **22**:198, 1-71, 2021.

73. M. Wang and **G. I. Allen**, "Integrative Generalized Convex Clustering Optimization and Feature Selection for Mixed Multi-View Data", *Journal of Machine Learning Research*, **22**, 1-73, 2021.

72. T. S. Onur, A. Laitman, H. Zhao, R. Keyho, H. Kim, J. Wang, M. Mair, H. Wang, L. Li, A. Perez, M. Haro, Y. Wan, **G. I. Allen**, B. Lu, I. Al-Ramahi, Z. Liu, J. Botas, "Downregulation of glial genes involved in synaptic function mitigates Huntington's Disease pathogenesis", *ELife*, **10**:e64564, 2021.

71. J. S. Morris, M. M. Hassan, Y. E. Zohner, Z. Wang, L. Xiao, A. Rashid, A/ Haque, R. Abdel-Wahab, Y. I. Mohamed, K. L. Ballard, R. A. Wolff, B. George, L. Li, **G. I. Allen**, M. Weylandt, D. Li, W. Wang, K. Raghav, J. Yao, H. M. Amin, A. O. Kaseb, "HepatoScore-14: Measures of biological heterogeneity significantly improve prediction of hepatoceullar carcinoma risk", *Hepatology*, **73**:6, 2278-2292, 2021.

70. T. Yao, E. M. Sweeney, J. Nagorski, J. Shulman, and **G. I. Allen**, "Quantifying cognitive resilience in Alzheimer's Disease: The Alzheimer's Disease Cognitive Resilience Score", *PLOS One*, **15**:11, e0241707, 2020.

69. Y. Baker, T. M. Tang, and **G. I. Allen**, "Feature Selection for Data Integration with Mixed Multiview Data", *Annals of Applied Statistics*, **14**:4, 1676-1698, 2020.

68. M. Weylandt, J. Nagorski, and **G. I. Allen**, "Dynamic Visualization and Fast Computation for Convex Clustering via Algorithmic Regularization", *Journal of Computational and Graphical Statistics*, **29**:1, 87-96, 2020.

67. Z. Zhang, **G. I. Allen**, H. Zhu, D. Dunson, "Tensor Network Factorizations: Relationships between Human Brain Structural Connectomes and Traits", *NeuroImage*, **197**:330-343, 2019.

66. J. Nagorski and **G. I. Allen**, "Genomic Region Detection via Spatial Convex Clustering", *PLOS One*, **13**:9, e0203007, 2018.

65. H. Yi, A. T. Raman, H. Zhang, **G. I. Allen**, Z. Liu, "Detecting hidden batch factors through data-adaptive adjustment for biological effects", *Bioinformatics*, **34**: 7, 1141-1147, 2018.

64. F. Campbell and **G. I. Allen**, "Within Group Variable Selection through the Exclusive Lasso", *Electronic Journal of Statistics*, **11**:2, 4220-4257, 2017.

63. D. Inouye, E. Yang, **G. I. Allen**, and P. Ravikumar, "A Review of Multivariate Distributions for Count Data Derived from the Poisson Distribution", *Wiley Interdisciplinary Reviews: Computational Statistics*, **9**:3, 2017.

62. E. C. Chi, **G. I. Allen**, and R. Baraniuk, "Convex Biclustering", *Biometrics*, **73**:1, 10-19, 2017.

61. Y. W. Wan, **G. I. Allen**, and Z. Liu, "TCGA2STAT: Simple TCGA Data Access for Integrated Statistical Analysis in R", *Bioinformatics*, **32**:6, 952-954, 2016.

60. Y. W. Wan, **G. I. Allen**, Y. Baker, E. Yang, P. Ravikumar, and Z. Liu, "XMRF: An R package to fit Markov Networks to High-Throughput Genetics Data", *BMC Systems Biology*, **10**(S3):69, 2016.

59. M. Narayan and **G. I. Allen**, "Mixed Effects Models for Resampled Network Statistics Improves Statistical Power to Find Differences in Multi-Subject Functional Connectivity" *Frontiers in Neuroscience*, **10**:108, 2016.

58. **G. I. Allen** et al. (100+ authors in alphabetical order), "Crowdsourced estimation of cognitive decline and resilience in Alzheimer's disease", *Alzheimer's & Dementia*, **12**:6, 645-653, 2016.

57. S. Tomson, M. Schreiner, M. Narayan, T. Rosser; N. Enrique, A. J. Silva, **G. I. Allen**, S. Y. Bookheimer, and C. Bearden, "Resting state functional MRI reveals abnormal network connectivity in Neurofibromatosis 1", *Human Brain Mapping*, **36**:11, 4566-4581, 2015.

56. <u>Y. Hu</u> and **G. I. Allen**, "Local-Aggregate Modeling for Big-Data via Distributed Optimization: Applications to Neuroimaging", *Biometrics*, **71**:4, 905-917, 2015.

55. E. Yang, P. Ravikumar, **G. I. Allen**, and Z. Liu, "Graphical Models via Univariate Exponential Family Distributions", *Journal of Machine Learning Research*, **16**, 3813-3847, 2015.

54. **G. I. Allen**, L. Grosenick and J. Taylor, "A Generalized Least Squares Matrix Decomposition", *Journal of the American Statistical Association: Theory and Methods*, **109**:505, 145-159, 2014.

53. Y. Wan, C. M. Mach, **G. I. Allen**, M. L. Anderson, and Z. Liu, "On the Reproducibility of TCGA Ovarian Cancer MicroRNA Profiles", *PLoS ONE*, **9**:1, e87782, 2014.

52. **G. I. Allen** and Z. Liu, "A Local Poisson Graphical Model for Inferring Networks from Next Generation Sequencing Data", *IEEE Transactions on NanoBioscience*, **12**:3, 1-10, 2013.

51. S. Tomson, <u>M. Narayan</u>, **G. I. Allen**, D. Eagleman, "Neural Networks of Synesthesia", *Journal of Neuroscience*, **33**:35, 14098-14106, 2013.

50. W. Zhang, Y. Wan, **G. I. Allen**, K. Pang, M. L. Anderson, and Z. Liu, "Molecular pathway identification using biological network-regularized logistic models", *BMC Genomics*, **14**:(Suppl 8):S7, 2013.

49. **G. I. Allen**, C.B. Peterson, M. Vannucci, and M. Maletic-Savatic, "Regularized Partial Least Squares with an Application to NMR Spectroscopy", *Statistical Analysis and Data Mining*, **6**:4, 302-314, 2013.

48. **G. I. Allen**, "Automatic Feature Extraction via Weighted Kernels and Regularization", *Journal of Computational and Graphical Statistics*, **22**:2, 284-299, 2013.

47. L.C. Harshman, R.J. Yu, **G. I. Allen**, S. Srinivas, H.S. Gill, B.I. Chung, "Surgical outcomes and complications associated with presurgical tyrosine kinase inhibition for advanced renal cell carcinoma (RCC)", *Urologic Oncology*, **31**:3, 379-385, 2013.

46. **G. I. Allen** and R. Tibshirani, "Inference with Transposable Data: Modeling the Effects of Row and Column Correlations", *Journal of the Royal Statistical Society, Series B*, **74**:4, 1-23, 2012.

45. N. Bellance, L. Pabst, **G. I. Allen**, R. Rossignol, D. Nagarath, "Oncosecretomics coupled to bioenergetics identifies amino adipic acid, isoleucine and GABA as potential biomarkers of cancer: Differential expression of c-Myc, Oct1 and KLF4 coordinates metabolic changes", *Biochimica et Biophysica Acta (BBA) - Bioenergetics*, **1817**:11, 2060-2071, 2012.

44. **G. I. Allen** and M. Maletic-Savatic, "Sparse Non-negative Generalized PCA with Applications to Metabolomics", *Bioinformatics*, **27**:21, 3029-3035, 2011.

43. L.C. Harshman, G. Bepler, Z. Zheng, J.P. Higgins, **G. I. Allen**, S. Srinivas, "Ribonucleotide reductase subunit M1 expression in resectable, muscle-invasive urothelial cancer correlates with survival in younger patients", *British Journal of Urology International*, **106**:11,1805-1811, 2010.

42. **G. I. Allen** and R. Tibshirani, "Transposable regularized covariance models with an application to missing data imputation", *Annals of Applied Statistics*, **4**:2, 764-790, 2010.

Peer-Reviewed Conference Papers:

41. A. Barman, S. Chen, and **G. I. Allen**,"Evaluating Individual Contributions in Teams for Project-Based Learning in Data Science", (To Appear) In *IEEE Frontiers in Education*, 2024.

40. D. Ye, C. Santhirasegaran, R. Pai, **G. I. Allen**, and J. Young, "Addressing Confounds in Functional Connectivity Analyses of Calcium Imaging", In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, 2146-2150, 2024.

39. M. Navarro, <u>C. O. Little</u>, **G. I. Allen**, and S. Segarra, "Data Augmentation via Subgroup Mixup for Improving Fairness", In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, 7350-7354, 2024.

38. A. Barman, S. Chen, <u>A. Chang</u> and **G. I. Allen**, "Experiential Learning in Data Science Through a Novel Client-Facing Consulting Course", In *IEEE Frontiers in Education*, 1-9, 2022.

37. <u>L. Zheng</u>, <u>Z. Rewolinski</u>, **G. I. Allen**, "A Low-rank Tensor Completion Approach for Imputing Functional Neuronal Data from Multiple Recordings", In *IEEE Data Science and Learning Workshop (DSLW)*, 2022.

36. <u>L. Zheng</u> and **G. I. Allen**, "Learning Gaussian Graphical Models with Differing Pairwise Sample Sizes", In *International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 5588-5592, 2022.

35. S. Lusk, C. Ward, <u>A. Chang</u>, A. Twitchell-Heyne, **G. I. Allen**, R. Ray, "An Automated Respiratory Data Pipeline for Waveform Characteristic Analysis", In *The Federation of American Societies for Experimental Biology Journal*, **36**, 2022.

34. M. Weylandt, TM Roddenberry, **G. I. Allen**, "Simultaneous Grouping and Denoising via Sparse Convex Wavelet Clustering", In *IEEE Data Science & Learning Workshop (DSLW)*, arXiv:2012.04762, 2021.

33. **G. I. Allen**, "Experiential Learning in Data Science: Developing an Interdisciplinary, Client-Sponsored Capstone Program", In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE)*, 2021.

32. X. Tan, Y. Dai, A. I. Humayun, H. Chen, **G. I. Allen**, P. N. Jain, "Detection of junctional ectopic tachycardia by central venous pressure" In *Proceedings of the 19th International Conference on Artificial Intelligence in Medicine*, 2021.

31. <u>T. Yao</u>, D. LeJeune, H. Javadi, R. G. Baraniuk, and **G. I. Allen**, "Minipatch Learning as Implicit Ridge-Like Regularization", In *IEEE International Conference on Big Data and Smart Computing (BigComp)*, 2021.

30. <u>M. T. Toghani</u> and **G. I. Allen**, "MP-Boost: Minipatch Boosting via Adaptive Feature and Observation Sampling", In *IEEE International Conference on Big Data and Smart Computing (BigComp)*, 2021.

29. <u>K. Geyer</u>, F. Campbell, A. Chang, J. Magnotti, M. Beauchamp, **G. I. Allen**, "Interpretable Visualization and Higher-Order Dimension Reduction for ECoG Data", In *Proceedings of the The International Workshop on Big Data Reduction held with the 2020 IEEE International Conference on Big Data*, 2020.

28. <u>L. Gan</u>, <u>G. Vinci</u>, and **G. I. Allen**, "Correlation Imputation in Single-Cell TNA-Seq using Auxillary Information and Ensemble Learning", In *Proceedings of the 11th ACM International Conference on Bioinformatics, Computational Ciology and Health Informatics*, 1-6, 2020.

27. <u>T. Yao</u> and **G. I. Allen**, "Clustered Gaussian Graphical Model via Symmetric Convex Clustering", In *Proceedings of the IEEE Data Science Workshop*, 2019.

26. <u>A. Chang</u>, <u>T. Yao</u>, and **G. I. Allen**, "Graphical Models and Dynamic Factor Models for Modeling Functional Brain Connectivity", In *Proceedings of the IEEE Data Science Workshop*, 2019.

25. **G. I. Allen**, and M. Weylandt, "Sparse and Functional Principal Components Analysis", In *Proceedings of the IEEE Data Science Workshop*, 2019.

24. M. Narayan and **G. I. Allen**, "Population Inference for Node Level Differences in Functional Connectivity", In *IEEE International Workshop on Pattern Recognition in Neuroimaging (PRNI)*, oral presentation, 2015.

23. E. Yang, Y. Baker, P. Ravikumar, **G. I. Allen**, and Z. Liu, "Mixed Graphical Models via Exponential Families", *Artificial Intelligence and Statistics (AISTATS)*, oral presentation, 2014.

22. E. Yang, P. Ravikumar, **G. I. Allen**, and Z. Liu, "On Poisson Graphical Models", In *Advances in Neural Information Processing Systems (NIPS)*, 2013.

21. E. Yang, P. Ravikumar, **G. I. Allen**, and Z. Liu, "Conditional Random Fields via Univariate Exponential Families", In *Advances in Neural Information Processing Systems (NIPS)*, 2013.

20. E. Chi, **G. I. Allen**, H. Zhou, O. Kohannim, K. Lange, P. Thompson, "Imaging Genetics Via Sparse Canonical Correlation Analysis", In *IEEE International Symposium on Biomedical Imaging*, oral presentation, 2013.

19. M. Narayan and **G. I. Allen**, "Randomized Approach to Differential Inference in Multi-Subject Functional Connectivity", In *IEEE International Workshop on Pattern Recognition in Neuroimaging*, oral presentation, 2013.

18. Y. Hu and **G. I. Allen**, "Local-Aggregate Modeling for Multi-Subject Neuroimage Data via Distributed Optimization", In *IEEE International Workshop on Pattern Recognition in Neuroimaging*, 2013.

17. W. Y. Wan, J. Nagorski, **G. I. Allen**, Z. Li, and Z. Liu, "Identifying cancer biomarkers through a network regularized Cox model", In *IEEE International Workshop on Genomic Signal Processing and Statistics*, oral presentation, 2013.

16. **G. I. Allen**, "Multi-way Functional Principal Components Analysis", In *IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing*, 2013.

15. **G. I. Allen**, "Sparse Higher-Order Principal Components Analysis", In *Artificial Intelligence and Statistics (AISTATS)*, 27-36, 2012.

14. **G. I. Allen** and Z. Liu, "A Log-Linear Graphical Model for Inferring Genetic Networks from High-Throughput Sequencing Data", In *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*, oral presentation, 2012.

13. E. Yang, P. Ravikumar, **G. I. Allen**, and Z. Liu, "Graphical Models via Generalized Linear Models", In *Advances in Neural Information Processing Systems (NIPS)*, oral presentation, 2012.

Peer-Reviewed Book Chapters:

12. Y. Hu, E. C. Chi, and **G. I. Allen**, "ADMM Algorithmic Regularization Paths for Sparse Statistical Learning", In *Splitting Methods in Communication and Imaging, Science and Engineering*, R. Glowinski, W. Yin, and S. Osher (eds), Springer, 433-459, 2016.

11. **G. I. Allen** and P. O. Perry, "Singular value decomposition and high-dimensional data", *Encyclopedia of Environmetrics Second Edition*, A. H. El-Shaarawi and W. Piegorsch (eds), John Wiley & Sons Ltd, Chichester, UK, 2469-2472, 2012.

Invited Discussions, Book Reviews & Editorials:

10. **G. I. Allen**, "Review of *Handbook of Graphical Models*", *Journal of the American Statistical Association*, **115**:531, 1555-1557, 2020.

9. **G. I. Allen**, "Statistical Data Integration: Challenges and Opportunities", *Statistical Modeling*, **17**:4-5, 1-6, 2017.

8. Z. Liu, W. J. Zheng, **G. I. Allen**, Y. Liu, J. Ruan, and Z. Zhao, "The International Conference on Intelligent Biology and Medicine (ICIBM) 2016: from big data to big analytical tools", *BMC Bioniformatics*, **18**:Suppl(11), 405, 2017.

7. Z. Zhao, Z. Liu, K. Chen, Y. Guo, **G. I. Allen**, J. Zhang, W. J. Zheng, and J. Ruan, "The International Conference on Intelligent Biology and Medicine (ICIBM) 2016: summary and innovation in genomics", *BMC Genomics*, **18**:Suppl(6), 703, 2017.

6. **G. I. Allen**, <u>Y. Hu</u>, and <u>F. Campbell</u>, "Comments on 'Visualizing Statistical Models': Visualizing Modern Statistical Methods for Big Data", *Statistical Analysis and Data Mining*, **8**:4, 226-228, 2015.

5. Y. Liu and **G. I. Allen**, "Review of *Introduction to Statistical Learning with Applications in R*", *Journal of the American Statistical Association*, **109**:508, 1713-1714, 2014.

4. **G. I. Allen**, "Comment on Article by Hoff", *Bayesian Analysis*, **6**:2, 197-202, 2011.

Technical Reports:

3. <u>M. Narayan</u>, **G. I. Allen**, S. Tomson, "Two Sample Inference for Populations of Graphical Models with Applications to Functional Connectivity", arXiv:1502.03853, 2015.

2. E. Yang, P. Ravikumar, **G. I. Allen**, <u>Y. Baker</u>, Y. Wan, and Z. Liu, "A General Framework for Mixed Graphical Models", arXiv:1411.0288, 2014.

1. **G. I. Allen**, "Regularized Tensor Decompositions and Higher-Order PCA", arXiv:1202.2476, 2012.

Other Professional Publications:

R. E. Kass et. al, "Statistical Research and Training Under the BRAIN Initiative" American Statistical Association White Paper, 2014.
Available at: http://www.amstat.org/policy/pdfs/StatisticsBRAIN_April2014.pdf.

G. I. Allen, & J. Leek, "Changing Our Culture: Perspectives from Young Faculty", *AMSTAT News*, December 2013.

Thesis:

G. I. Allen, "Transposable Regularized Covariance Models with Applications to High-Dimensional Data", Stanford University, June 2010.

SELECTED MAJOR PUBLIC LECTURES & KEYNOTE TALKS

10. VI Applied Mathematics, Modeling, and Computational Science (AMMCS) International Conference, Waterloo, Ontario, CA, August 18, 2023 (Plenary Talk).

9. Classification and Data Science in the Digital Age, 17th Conference of the International Federation of Classification Societies, Porto Portugal, July 19-23, 2022 (Keynote Talk).

8. XXV Congress of the Portugese Statistical Society, (Virtual) October 14, 2021 (Plenary Talk).

7. University of Edinburgh Centre for Statistics: Public Lecture, (Virtual) December 8, 2020 (Public Lecture).

6. Goddard Scientific Colloquium, National Aeronautics and Space Administration, Goddard Space Flight Center, Maryland, December 11, 2019 (Public Lecture).

5. Data Science, Statistics, and Visualization, Kyoto Japan, August 13-16, 2019 (Plenary Talk).

4. European Meeting of Statisticians, Palmero Italy, July 22-26, 2019 (Plenary Talk).

3. R / Finance Conference, Chicago, IL, May 17, 2019 (Keynote Talk).

2. Ihaka Lectureship, University of Auckland, Auckland, New Zealand, March, 2017 (Public Lecture).

1. Australian Mathematical Sciences Institute Summer School Public Lecture, University of Sydney, Sydney Australia, January 2017 (Public Lecture).

INVITED
CONFERENCE
TALKS

88. Statistical Machine Learning for High Dimensional Data, IMS and National University of Singapore, Singapore, May 13-31, 2024.

87. Analysis of Complex Data: Tensors, Networks and Dynamic Systems, Banff International Research Station, Banff, Canada, May 13-17, 2024.

86. IMS International Conference on Statistics and Data Science, Lisbon, Portugal, December 18-21, 2023.

85. Third Penn Conference on Big Data in Biomedical and Population Health Sciences, Philadelphia, PA, September 19, 2023.

84. VI Applied Mathematics, Modeling, and Computational Science (AMMCS) International Conference, Waterloo, Ontario, CA, August 18, 2023 (Plenary Talk).

83. Joint Statistical Meetings, Toronto, Ontario, CA, August 10, 2023.

82. Lange Symposium on Computational Statistics, Los Angeles, CA, February 3, 2023.

81. IMS International Conference on Statistics and Data Science, Florence, Italy, December 13-16, 2022.

80. 4th Conference on Statistics and Data Science, Salvador, Brazil (Virtual), December 1-3, 2022 (Keynote Talk).

79. Workshop on Reading, Assembling, Analyzing, & Designing Genomic Data, Houston, TX, November 7, 2022.

78. Gulf Coast Consortia Single Cell Omics Symposium, Houston, TX, October 26, 2022.

77. Conference on Advances in Data Science: Theory, Methods, and Computation, College Station, TX, October 21-22, 2022.

76. Conference in Honor of Rob Tibshirani's 65th Birthday, Stanford, CA, September 16, 2022.

75. Joint Statistical Meetings, Washington D.C., August 7 - 11, 2022.

74. New Advances in Statistics and Data Science, Honolulu HI, May 24-26, 2022.

73. Conference on Advances in Bayesian and Frequentist Statistics, Rutgers University, New Brunswick, NJ, April 1-2, 2022.

72. 14th International Conference of the ERCIM WG on Computational and Methodological Statistics, (Virtual) December 18-20, 2021.

71. World Statistics Congress, International Statistics Institute, (Virtual) July 11-16, 2021.

70. Institute for Computational and Experimental Research in Mathematics Workshop on Safety and Security of Deep Learning, (Virtual) April 10-11, 2021.

69. Neuromatch Conference, Keynote Talk, (Virtual) October 27, 2020 (Keynote Talk).

68. Women in Data Science Houston Conference, Keynote Seminar, (Virtual) October 23, 2020 (Keynote Talk).

67. Data Science, Statistics, and Visualization, Kyoto Japan, (Plenary Talk) August 13-16, 2019.

66. Joint Statistical Meetings, Denver, CO, July 22 - 26, 2019.

65. European Meeting of Statisticians, Palmero Italy, July 22-26, 2019 (Keynote Talk).

64. R / Finance Conference, Chicago, IL, May 17, 2019 (Keynote Talk).

63. Oberwolfach Workshop on Statistical and Computational Aspects of Learning with Complex Structure, Oberwolfach, Germany, May 6, 2019.

62. Eastern North American Region (ENAR) of the International Biometric Society, Philadelphia, PA, March 27, 2019.

61. American Association for the Advancement of Science Symposium, Washington DC, February 15, 2019.

60. Voltage Imaging Conference, Columbia University, New York, NY, December 13-14, 2018.

59. Workshop on Higher-Order Asymptotics and Post-Selection Inference, St. Louis, Missouri, September 8 - 10, 2018.

58. Nonconvex Formulations and Algorithms in Data Science Workshop, Madison Wisconsin, June 30 - August 1, 2018.

57. Gatsby Tri-Center Meeting for Theoretical Neuroscience, New York City, New York, June 17-19, 2018.

56. Statistical Learning and Data Science Conference, New York City, New York, June 3 - 6, 2018.

55. Latin American Conference on Statistical Computing (LACSC), San Jose, Costa Rica, February 27 - March 2, 2018.

54. Data Science Conference, Rice University, Houston, TX, October 9-10, 2017.

53. Statistical Society of Australia Young Statistician's Conference (Keynote Talk), Gold Coast, Australia, September 25 - 27, 2017.

52. Cornell Day of Statistics, Cornell University, Ithaca, NY, September 8, 2017.

51. Rice Data Science Conference, Houston, TX, October 9-10, 2017.

50. Joint Statistical Meetings, Baltimore, MD, July 30 - August 3, 2017.

49. World Statistics Congress, International Statistics Institute, Marrakesh, Morocco, July 16-21, 2017.

48. Workshop on Data Mining for Medicine and Healthcare (Keynote Talk), Houston, TX, April 2-17.

47. Network of the Mind Workshop, Sydney, Australia, January, 2017.

46. Rice Machine Learning Workshop, Rice University, Houston, TX, January 2017.

45. Society for Neuroscience Webinar, December, 2016.

44. Cell Symposia on Technology, Biology, and Data Science, Berkeley, CA, October, 2016.

43. Workshop on Higher-Order Asymptotics and Post-Selection Inference, St. Louis, MO, October, 2016.

42. AI With the Best Conference, September 2016.

41. SAMSI Optimization Program Opening Workshop, Raleigh, NC, September 2016.

40. Mathematical Biosciences Institute Capstone Conference (Keynote Talk), Columbus, OH, August 2016.

39. Joint Statistical Meetings, Chicago, IL, August 2016.

38. Institute of Mathematical Statistics, World Congress in Probability and Statistics, Toronto, CA, July 2016.

37. American Statistical Association Statistics / Biostatistics Chairs Workshop, Washington, DC, July 2016.

36. Conference on Statistical Learning and Data Science, Chapel Hill, NC, June 2016.

35. International Biometrics Society, Eastern North American Region Spring Meetings (ENAR), Austin, TX, March 2016.

34. iBRIGHT Conference, MD Anderson Cancer Center, Houston, TX, November 3, 2015.

33. Gulf Coast Undergraduate Research Symposium, Houston, TX, October 17, 2015.

32. ASQ Annual Fall Technical Conference, Houston, TX, October 9, 2015.

31. NeuroEngineering Annual Symposium, Houston, TX, October 2, 2015.

30. Joint Statistical Meetings, Seattle, WA, August 8-13, 2015.

29. World Statistics Congress, International Statistics Institute, Rio de Janeiro, Brazil, July 26-31, 2015.

28. International Society for Business and Industrial Statistics (ISBIS) Satellite Conference, University of Campinas, Brazil, July 23-24, 2015.

27. SRCOS Summer Research Conference, Carolina Beach NC, June 7 - 10, 2015.

26. Big Data in Biomedicine Conference, Stanford University, May 20-22, 2015.

25. International Biometrics Society, Eastern North American Region Spring Meetings (ENAR), Miami, FL, March 2015.

24. INFORMS Annual Meeting, San Francisco, CA, November 2014.

23. Workshop: Quantifying Structure in Large Neural Datasets, Grossman Center for the Statistics of Mind, Columbia University, September, 2014.

22. Joint Statistical Meetings, Boston, MA, August 2014.

21. International Society of NonParametric Statistics Conference, Cadiz, Spain, June 2014.

20. International Symposium on Business and Industrial Statistics/ Conference of the American Statistical Association Section on Statistical Learning and Data Mining, Durham, NC, June 2014.

19. Southern Regional Council on Statistics Summer Research Conference, Galveston, TX, June 2014.

18. INFORMS Optimization Society Conference, Houston, TX, March 2014.

17. IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing, Saint Martin, December 2013.

16. International Statistics Institute World Statistics Congress, Hong Kong, China, August 2013.

15. Joint Statistical Meetings, Montreal, Canada, August 2013.

14. International Biometric Society, Eastern North American Region Spring Meetings, Orlando, FL, March 2013.

13. SACNAS Conference, Seattle, Washington, 2012.

12. International Biometrics Society, Kobe, Japan, 2012.

11. Joint Statistical Meetings, San Diego, CA, 2012.

10. International Chinese Statistical Association Symposium, Boston, MA, 2012.

9. Statistical Learning and Data Mining Workshop, Ann Arbor, MI, 2012

8. Interface 2012: The Future of Statistical Computing, Houston, TX, 2012.

7. Pan American Institute for Advanced Studies in Statistics and Probability, Xalapa, MX, August 2011.

6. Joint Statistical Meetings, Miami Beach, FL, August, 2011.

5. Fourth Erich Lehmann Symposium, Houston, TX, May, 2011.

4. Joint Statistical Meetings, Vancouver, BC, August 2010.

3. Pan American Institute for Advanced Studies in Statistics and Probability, Guanajuato, MX, May 2010.

2. SIAM Conference Mathematics for Industry: Challenges and Frontiers, San Francisco, CA, October 2009.

1. International Biometric Society, Eastern North American Region Spring Meetings, San Antonio, TX, March 2009.

INVITED
SEMINAR
TALKS

91. Biostatistics Seminar, University of Washington, Seattle, WA, November 2, 2023.

90. LIONS Seminar, School of Electrical, Computer, and Energy Engineering, Arizona State University, Phoenix, AZ, October 27, 2023.

89. Wilks Seminar, Department of Operations Research and Financial Engineering, Princeton University, Princeton, NJ, October 9, 2023.

88. Statistics Seminar, University of California, Irvine, Irvine, CA, April 13, 2023.

87. Neuroscience Seminar, Zuckerman Institute, Columbia University, New York, NY, February 28, 2023.

86. MD Anderson Cancer Center Data Science Forum, (Virtual), November 7, 2022.

85. International Seminar on Selective Inference, (Virtual), November 3, 2022.

84. Statistics Seminar, Columbia University, New York, NY, October 3, 2022.

83. NeuroGenomics and Informatics Center Special Seminar, Washington University, St. Louis, MO, September 15, 2022.

82. School of Electrical and Computer Engineering Seminar, Georgia Institute of Technology, Atlanta, GA, March 28, 2022.

81. Gerald M. Masson Distinguished Lecture, Department of Computer Science, Johns Hopkins University, (Virtual), October 28, 2021.

80. Distinguished Speaker Series, Data Science Institute, University of Chicago, Chicago, IL, October 18, 2021.

79. Statistics Seminar, University of Edinburgh, (Virtual) October 4, 2021.

78. Machine Learning in Medicine Seminar Series, University of Pittsburgh, Carnegie Mellon University, and the University of Pittsburgh Medical Center, (Virtual) March 17, 2021.

77. Statistics Seminar, École Polytechnique Fédérale de Lausanne (EPFL), (Virtual) March 12, 2020.

76. University of Edinburgh Centre for Statistics: Public Lecture, (Virtual) December 8, 2020 (Public Lecture).

75. International Speaker Seminar Series, Strategic Training for Advanced Genetic Epidemiology (STAGE) Program, Ontario Regional Centre of the Canadian Statistical Sciences Institute, (Virtual) November 6, 2020.

74. Statistics Seminar, Harvard University, (Virtual) November 2, 2020.

73. Computational and Integrative Biomedical Research Center Seminar Series, Baylor College of Medicine, (Virtual) October 14, 2020.

72. Statistics Seminar, Rutgers University, New Brunswick, NJ, March 4, 2020.

71. Goddard Scientific Colloquium, National Aeronautics and Space Administration, Goddard Space Flight Center, Maryland, December 11, 2019 (Public Lecture).

70. Statistics Seminar, University of Michigan, Ann Arbor, MI, October 18, 2019.

69. Statistics Seminar, University of Chicago, Chicago, IL, October 7, 2019.

68. Statistics and Data Science Seminar, Cornell University, Ithaca, NY, September 11, 2019.

67. Keller Computing and Mathematical Science Colloquium, California Institute of Technology, Pasadena, CA, March 4, 2019.

66. Biostatistics Seminar, University of Texas School of Public Health, Houston, TX, November 6, 2018.

65. Biostatistics Seminar, Memorial Sloan Kettering Cancer Center, New York, NY, June 17, 2018.

64. IBM Corporate Lecture Series, Department of Applied and Computational Mathematics and Statistics, University of Notre Dame, South Bend, IN, May 4, 2018.

63. Stochastics and Statistics Seminar, Massachusetts Institute of Technology, Boston, MA, April 27, 2018.

62. Visiting Fellow and Special Seminar, Initiative on Data Science in Business and Economics, Booth School of Business, University of Chicago, Chicago, IL, March 26 - April 6, 2018.

61. Stanford University Statistics Seminar, Palo Alto, CA, March 13, 2018.

60. Statistical Society of New South Wales Public Lecture, Sydney Australia, September 28, 2017.

59. Biomedical Informatics Seminar, University of Texas School of Public Health, Houston, TX, January, 11, 2017.

58. MD Anderson Cancer Center Biostatistics Seminar, Houston, TX, November 11, 2016.

57. University of Michigan Complex Systems Seminar, Ann Arbor, MI, April 12, 2016.

56. Australia National University Statistics Seminar, Canberra, Australia, April 1, 2016.

55. Monash University Statistics Seminar, Melbourne, Australia, March 30, 2016.

54. University of Otago Statistics Seminar, Dunedin, New Zealand, March 24, 2016.

53. University of Otago Computer Science Seminar, Dunedin, New Zealand, March 23, 2016.

52. University of Otago Molecular Biology Seminar, Dunedin, New Zealand, March 22, 2016.

51. University of Otago Preventative Medicine Seminar, Dunedin, New Zealand, March 21, 2016.

50. University of Auckland Statistics Seminar, Auckland, New Zealand, March 18, 2016.

49. University of Florida Informatics Institute Seminar, Gainesville, FL, February 12, 2016.

48. University of Florida Statistics Seminar, Gainesville, FL, February 11, 2016.

47. Ohio State University Statistics Seminar, Columbus, OH, November 5, 2015.

46. University of Houston Statistics Seminar, Houston, TX, October 30, 2015.

45. Brain and Behavior Seminar, University of Texas Dallas, May 1, 2015.

44. Department of Statistics Seminar, University of Virginia, March 20, 2015.

43. Statistics Seminar, Imperial College, London, UK, March 6, 2015.

42. Statistical Laboratory Seminar, Cambridge University, Cambridge, UK, March 5, 2015.

41. Computational and Biological Learning Seminar, Cambridge University, Cambridge, UK, March 4, 2015.

40. Department of Statistics Seminar, Texas A & M University, College Station, TX, October 24, 2014.

39. Rice University Cognitive Division Seminar, Houston, TX, October 8.

38. Human Genetics Seminar, University of Texas School of Public Health, Houston, TX, September 29, 2014.

37. UCLA Advanced Neuroimaging Summer Training Program, UCLA, July 28, 2014.

36. Special Biostatistics Seminar, University of Texas Medical Branch, July 2, 2014.

35. Department of Statistics, University of Michigan, April 4, 2014.

34. Keck Seminar, Gulf Coast Consortia, March 14, 2014.

33. Scientia Series, Rice University, March 11, 2014.

32. Department of Statistics, Purdue University, February 28, 2014.

31. Department of Biostatistics, University of Texas School of Public Health, February 14, 2014.

30. Neuroimaging Seminar, New York University, December 10, 2013.

29. Department of Statistics, Carnegie Mellon University, October 14, 2013.

28. Networks Seminar, University of Houston, September 20, 2013.

27. Department of Neuroscience, Baylor College of Medicine, May 10, 2013.

26. Department of Statistics Seminar, Florida State University, March 29, 2013.

25. Department of Biostatistics Seminar, University of North Carolina at Chapel Hill, February 27, 2013.

24. Department of Statistics Seminar, University of Washington, December 3, 2012.

23. XSEDE Scholars Webinar, November 7, 2012.

22. Grand Rounds, Pediatric-Neurology, Texas Children's Hospital, July 18, 2012.

21. Ken Kennedy Institute for Information Technology Seminar Series, Rice University, March 9, 2012.

20. Biostatistics Seminar, Johns Hopkins University School of Public Heath, Department of Biostatistics, February 15, 2012.

19. Statistics Seminar Series, University of North Carolina, Department of Statistics and Operations Research, April 9, 2012.

18. Biostatistics Seminar, University of Texas School of Public Health, Department of Biostatistics, September 13, 2011.

17. Seminar Series, Computational and Integrative Biomedical Research, Baylor College of Medicine, September 21, 2011.

16. Biostatistics Seminar, Johns Hopkins University School of Public Heath, Department of Biostatistics, October 5, 2011.

15. Seminar Series, Johns Hopkins University, Department of Applied Math and Statistics, October 6, 2011.

14. Statistics Seminar, Stanford University, Department of Statistics, October 11, 2011.

13. Texas Children's Research Seminar Series, Texas Children's Hospital, October 19, 2011.

12. Statistics Colloquium, Rice University Department of Statistics, Houston, TX, February 21, 2011.

11. Biostatistics Seminar, MD Anderson Cancer Center, Houston, TX, March 16, 2011.

10. Statistics Seminar, University of Texas at Austin, McCombs School of Business, Austin, TX, April, 1, 2011.

9. Webinar, SAMSI Hierarchical Modeling Group, April, 8, 2011.

8. Department Colloquia, Texas A&M University Department of Statistics, College Station, TX, October 7, 2010.

7. Houston Area Chapter of the American Statistical Association Meetings, Houston, TX, October 12, 2010.

6. Computational and Applied Mathematics Colloquium, Rice University, Houston, TX, November 22, 2010.

5. Computational Biology Symposium, Baylor College of Medicine, Houston, Texas, January 12, 2010.

4. Statistics Seminar Series, University of Florida Department of Statistics, Gainesville, Florida, January 19, 2010.

3. Statistics Seminar Series, University of Southern California Marshall School of Business, Los Angeles, January 26, 2010.

2. Seminar Series, Carnegie Mellon University Department of Statistics, Pittsburgh, PA, February 8, 2010.

1. Statistics Colloquium, Rice University Department of Statistics, Houston, TX, February 22, 2010.

FUNDING

Funding as a PI or Co-PI:

- 2022-2025 National Science Foundation DMS-2210837, "Minipatch Learning for Selection, Stability, Inference and Scalability", PI: **G. I. Allen**, $260,000.

- 2021 JP Morgan Faculty Research Awards Program, "Improving Fairness and Interpretability of AI Systems through Minipatch Learning", PI: **G. I. Allen**, $60,000.

- 2020-2023, National Institutes of Health / National Institute of General Medicine R01-GM140468, "Graphical Model Estimation from Partially Observed Interactions with Biomedicine Applications", PI: **G. I. Allen**, Co-PI: G. Dasarathy, $600,003.

- 2017-2023, National Science Foundation NeuroNex-1707400, "NeuroNex: Inferring interactions between neurons, stimuli, and behavior", PI: K. Josic, Co-PIs: **G. I. Allen**, X. Pitkow, A. Patel, R. Rosenbaum, A. Tolias, $4,400,000. (Rice PI: **G. I. Allen**)

- 2016-2021, National Science Foundation DMS-1554821, "CAREER: New Techniques for Statistical Learning and Multivariate Analysis", PI: **G. I. Allen**, $400,000.

- 2013-2017, National Science Foundation DMS-1264058, "Statistical Methods for Integrated Analysis of High-Throughput Biomedical Data", PI: **G. I. Allen**, Co-PIs: P. Ravikumar, Z. Liu, $1,330,000.

- 2013-2016, National Science Foundation CNS-1338099, "MRI: Acquisition of Big-Data Private-Cloud Research Cyberinfrastructure (BDPC)", PI: M. Vardi, Co-PIs: J. Odegard, L. Kavraki, **G. I. Allen**, S. Bradshaw, A.Veeraraghavan, $400,000.

- 2013, Computational and Integrative Biomedical Research Seed Grant, Baylor College of Medicine, "Population Level Differences in Functional Brain Connectivity", PI: **G. I. Allen**, Co-PI: D. Eagleman, $15,000.

- 2012-2015, National Science Foundation DMS-1209017, "Multivariate Methods for High-Dimensional Transposable Data", PI: **G. I. Allen**, $120,000.

- 2012-2013, Collaborative Advances in Biomedical Computing, Ken Kennedy Institute for Information Technology, Rice University, "Integrating Genetic Networks to Discover Biomarkers for Glioblastoma", PI: **G. I. Allen**, Co-PI: Z. Liu, $100,000.

- 2011-2012, Computational and Integrative Biomedical Research Seed Grant, Baylor College of Medicine, "Integrating Genetic Networks to Discover Biomarkers for Glioblastoma", PI: **G. I. Allen**, Co-PI: Z. Liu, $15,000.

Funding as a Co-I:

- 2018-2021, National Institutes of Health / National Institute of Mental Health R24-MH-117529, "RAVE: A New Open Software Tool for Analysis of Visualization of Electrocorticography Data", PI: M. Beauchamp; Role: Co-I with 5% salary effort.

- 2017-2020, CPRIT RP170387, "Development and Validation of a Network-guided, Multi-objective Optimization Model for Cancer Data Analysis", PI: Z. Liu, Role: Co-I with 5% salary effort.

- 2016-2020, National Institutes of Health / National Institute of General Medicine R01-GM-120033, "Advanced Computational Approaches for NMR Data-mining", PIs: M. Maletic-Savatic & Z. Liu; Role: Co-I with 10% salary effort.

- 2016-2018, Robert Belfer Neurodegeneration Consortium, "Identification of novel therapeutic targets for Alzheimer's disease", PIs: Zoghbi, Tsai, De Pinho; Role: Co-I with 5% effort.

- 2015, National Institutes of Health / National Institute on Drug Abuse R01-DA-026437, "Oxytocin and Brain Reward and Stress Responses to Infant Cues in Addicted Mothers", PIs: L. Strathearn & L. C. Mayes; Role: Co-I with 5% effort. (Note: Subcontract inactive as of 08/01/2015 as PI moved to University of Iowa).

- 2013-2016, National Science Foundation DMS-1317602, " Computation of large-scale, multi-dimensional sparse optimization problems", PI: W. Yin, Senior Personnel: **G. I. Allen** (Reviewed as Co-PI. Changed to Senior Personnel after W. Yin moved to UCLA).

PUBLISHED
SOFTWARE

Major Software Packages or Toolboxes:

- "minipatch-learning", Python toolbox, 2022.

- "clustRviz", R package, 2019.

- "MoMA: Modern Multivariate Analysis in R", 2019.

- "TCGA2STAT: Simple TCGA Data Access for Integrated Statistical Analysis in R", R package, 2015.

- "XMRF: An R package to fit Markov Networks to High-Throughput Genetics Data", R package, 2015.

- "MoNet: Markov Network Toolbox for Functional Connectivity", Matlab Toolbox, 2013.

Other Software:

- "IMPACC: Interpretable Minipatch Adaptive Consensus Clustering", R package, 2022.

- "iGecco: Integrative Generalized Convex Clustering Optimization", Matlab functions, 2021.

- "iPCA: Integrated Principal Components", R functions, 2021.

- "rho-PCA: Regularized Higher-Order PCA", Matlab functions, 2020.

- "Exclusive Lasso", R package, 2018.

- "SpaCCr: Spatial Convex Clustering", R package, 2016.

- "cvxbiclustr: Convex Biclustering Algorithm", R package, 2015.

- "Local-Aggregate Modeling", Matlab functions, 2014.

- "Sparse and Functional PCA", Matlab functions, 2013.

- "Sparse Higher-Order Principal Components", Matlab Toolbox, 2012.

- "sGPCA: Sparse Generalized PCA", R package and Matlab Toolbox, 2013.

- "Tsphere: Transposable Sphering for large-scale inference with correlated data", R package, 2011.

- "Sparse Non-Negative Generalized PCA", Matlab functions, 2011.

- "KNIFE: KerNel Iterative Feature Extraction", Matlab functions, 2011.

- "Transposable Regularized Covariance Models", R functions, 2011.

Columbia University

Courses Taught:

1. "Special Topics in Applied Statistics: Interpretable Machine Learning", STATGR 8001, Spring 2024.

Rice University

Courses Developed:

1. "Applied Machine Learning and Data Science Projects", DSCI 435 / 535.
   In this project-based experiential learning course, student teams complete semester long, real-world data science research or analysis projects sponsored by Rice or Texas Medical Center researchers, community partners, or companies. Students also learn best practices in applied data science.
   - Fall 2018.
   - Spring 2019.
   - Fall 2019.
   - Spring 2020.
   - Fall 2020.
   - Spring 2021.
   - Spring 2022.

2. "Data Science Consulting", DSCI 415 / 515.
   Students in this course advise clients from Rice and beyond in a data science consulting clinic, while learning best practices in consulting and gaining exposure to a wide variety of real data science problems.
   - Spring 2018.
   - Fall 2018.
   - Spring 2019.
   - Fall 2019.

3. "Introduction to Statistical Machine Learning", Statistics 413.
   Undergraduate survey course on practical statistical machine learning and data analysis.
   - Fall 2017.

4. "Statistical Machine Learning", Statistics 613.
   Ph.D. survey course on statistical machine learning theory and methods.
   - Fall 2017.

5. "Advanced Topics in Statistical Machine Learning", Statistics 620.
   Ph.D. advanced seminar course on statistical machine learning theory, methods, and computation.
   - Spring 2017.

Courses Taught:

1. "Introduction to Machine Learning", ELEC 478/578.
   Advanced introduction and survey of machine learning.
   - Fall 2020.
   - Fall 2021.
   - Fall 2022.
   - Fall 2023.

2. "Data Mining and Statistical Learning", Statistics 640.
   Ph.D. level survey course on statistical learning.

   - Fall 2016. *(Also offered as Statistics 444, an undergraduate level survey course.)*
   - Fall 2015. *(Also offered as Statistics 444, an undergraduate level survey course.)*
   - Fall 2014. *(Also offered as Statistics 444, an undergraduate level survey course.)*
   - Fall 2013.
   - Fall 2012.
   - Fall 2011.

3. "Probability and Statistics", Statistics 310.
   Undergraduate calculus-based introduction to mathematical probability and statistical inference.

   - Spring 2015.
   - Spring 2014.
   - Spring 2013.

4. "Big Data Analytics", Statistics 699, Fall 2014.
   Ph.D. level course focused on data mining for Big Data.

   - Students participated as a team (Rice Fighting Owl-zheimer's) in Alzheimer's Disease Big Data DREAM Challenge and came in 4th place.

5. "Statistical Learning: High-Dimensional Data", Statistics 699, Spring 2011. *Ph.D. level discussion course on statistical learning for high-dimensional data.*

Short Courses:

1. Summer Institute for Statistics in Big Data, University of Washington, Seattle, Washington; Module 4: "Unsupervised Methods for Statistical Machine Learning", Co-Instructor with Yufeng Liu.

   - August 2-4, 2023 (Virtual).
   - August 3-5, 2022 (Virtual).
   - July 19-21, 2021 (Virtual).
   - July 20-22, 2020 (Virtual).
   - July 23 - 25, 2018.
   - July 24-26, 2017.
   - July 25-27, 2016.
   - July 15-17, 2015.

2. K2I Summer Institute on Data Science, Rice University, Houston Texas; Instructor for Module 2: "Introduction to Unsupervised Learning".

   - August 6-7, 2018.
   - May 17, 2017.
   - May 25, 2016.
   - June 16, 2015.

3. Statistical Society of Australia, Sydney, Australia, "Introduction to Unsupervised Learning", September 29, 2017.

4. Eastern North American Region (ENAR) of the International Biometrics Society, Austin, TX; "Introduction to Statistical Learning", Co-Instructor with Yufeng Liu.

   - March 6, 2016.

Current Postdoctoral Fellows:

1. Tarek Zikry, PhD Biostatistics, 2024, University of North Carolina Chapel Hill.

Current PhD Students:

1. Camille Little, PhD Candidate, Electrical & Computer Engineering, Rice University (PhD expected 2025).
   - NSF Graduate Research Fellowship, 2021-2024.

Current Undergraduate Students:

1. Eric Chen, Mathematics and Computer Science, 2025.

2. Aman Choudhir, Mathemtics and Statistics, 2025.

Former Postdoctoral Fellows:

1. Lili Zheng, PhD Statistics 2021, University of Wisconsin; Now an Assistant Professor, Department of Statistics, University of Illinois Urbana-Champaign.

2. Giuseppe Vinci, PhD 2018, Carnegie Mellon University; Now an Assistant Professor, Department of Applied and Computational Mathematics and Statistics, Notre Dame University.
   - NeuroNex Postdoctoral Fellowship, 2019-2020.
   - Rice Academy Postdoctoral Fellowship, 2017-2019.

3. Elizabeth Sweeney, PhD 2016 Johns Hopkins University; Now an Assistant Professor, Biostatistics, University of Pennsylvania.
   - Rice Academy Postdoctoral Fellowship, 2016 - 2017.

Former PhD Students:

1. Luqin Gan, 2023 PhD Statistics, Rice University; Now at Quantitate in NYC.
   - Ken Kennedy Institute Shell Graduate Fellowship, 2021-2022.

2. Andersen Chang, 2022 PhD Statistics, Rice University; Now a postdoctoral fellow at Baylor College of Medicine.
   - Student Travel Award for IEEE Data Science Workshop (DSW), 2019.

3. Tianyi Yao, 2022 PhD Statistics, Rice University; Now at Microsoft Data Science.
   - Student Travel Award for IEEE Data Science Workshop (DSW), 2019.

4. Minjie Wang, 2021 PhD Statistics, Rice University; Now an Assistant Professor, Department of Mathematics and Statistics, Binghamton University.
   - Winner of JSM Biometrics Section 2020 Travel Award, American Statistical Association.
   - Winner of Statistical Learning and Data Science (SLDS) 2020 Conference Student Paper Competition Award, American Statistical Association.

5. Fredrick Campbell, 2018 PhD, Statistics, Rice University; Now at Microsoft Data Science.
   - Student Travel Award, Conference on Statistical Learning and Data Science, June 2016.
   - NSF Graduate Research Fellow, 2012-2015.

6. John Nagorski, 2018 PhD, Statistics, Rice University; Now at Encino Energy.
   - Student Travel Award, Southern Regional Council on Statistics Summer Conference, June 2015.

7. Yulia Baker, 2017 PhD, Statistics, Rice University; Now at Mindbody.
   - Student Travel Award, Southern Regional Council on Statistics Summer Conference, June 2014.

8. Yue Hu, 2016 PhD, Statistics, Rice University; Now at Liberty Mutual Insurance.
   - Distinguished Student Paper Award, Eastern North America Region of the International Biometric Society, March 2015.

9. Manjari Narayan, 2016 PhD, Electrical and Computer Engineering, Rice University; Now at Dyno Therapeutics.
   - Distinguished Student Paper Award, Eastern North America Region of the International Biometric Society, March 2016.
   - First Place, Conference of Texas Statisticians Student Poster Competition, March 2013.
   - Student Travel Award Pattern Recognition in Neuroimaging, June 2013
   - R. L. Anderson Student Poster Award, Southern Regional Council on Statistics Summer Conference, June 2014.

Former Masters Thesis Students:

1. Kelly Geyer, 2019 Master of Arts in Statistics, Rice University; Now a PhD student at Boston University.

Former Undergraduate Researchers & Senior Design Projects Supervised:

1. Chuk Uzowihe, Computer Science and Mathematics, Rice University, 2023-2024.

2. Zach Rewolinski, Statistics and Computer Science, Rice University, January 2021 - August 2023; Now a Berkeley Statistics PhD student.
   - NSF Graduate Research Fellowship, 2023.
   - First Place, 2022 Rice Datathon.

3. Quan Le, Computer Science and Mathematics, Rice University, January 2021 - August 2023; Now a Yale Statistics PhD student.
   - First Place, 2022 Rice Datathon.

4. Nathan Powell, Computer Science, Rice University, January 2021 - May 2022.

5. Tiffany Tang, Mathematics and Statistics, Rice University, January 2017 - May 2018; Now an Assistant Professor at Notre Dame.
   - NSF Graduate Research Fellowship, 2019.
   - David P. Byar Young Investigator Award, 2019.

6. Alex Hayes, Statistics, Rice University, Fall 2017.

7. William Deadrick, Statistics, Rice University, August 2017 - May 2018.

8. Andrew Dumit, Statistics, Rice University, August 2016 - May 2017.
   - First place, Rice Undergraduate Research Symposium (group project), April 2017.

9. Raymond Cano, Computer Science, Rice University, August 2016 - May 2017.
   - First place, Rice Undergraduate Research Symposium (group project), April 2017.

10. Tianyi Yao, Statistics & Electrical and Computer Engineering, Rice University, January 2016 - May 2017.

11. Joshua Lipshultz, Computer Science, Rice University, August 2015 - May 2016.

12. Emily Burnett, Statistics, Rice University, January 2016 - May 2016.

13. Jake Kornblau, Statistics & Computer Science, Rice University, January 2016 - May 2016.

14. Linda Zheng, Statistics & Computer Science, Rice University, January 2016 - May 2016.

15. Qijia Jiang, Rice University, Statistics & Electrical and Computer Engineering, Summer 2014 - Spring 2015.

16. Connor Barnhill, Statistics, Rice University, Spring 2015.

17. Jessica Gan, Statistics, Rice University, Spring 2014.

External Committees (Rice):

1. Lorenzo Luzi, PhD Electrical & Computer Engineering, Rice University, 2024.

2. Fan Yang, PhD Computer Science, Rice University, 2023.

3. Amruta Pai, PhD Electrical and Computer Engineering, Rice University, 2023.

4. Catalina Gonzalez, PhD Civil and Environmental Engineering, Rice University, 2022.

5. Daniel LeJeune, PhD Electrical and Computer Engineering, Rice University, 2022.

6. Aaron Conitz, DMA Viola Performance, Rice University, 2019.

7. Dingqiao Wen, PhD Computer Science, Rice University, 2017.

8. Yangyang Xu, PhD Computational and Applied Mathematics, Rice University, 2014.

9. Andrew Lan, PhD Electrical and Computer Engineering, Rice University, 2014.

10. Eva Dyer, PhD Electrical and Computer Engineering, Rice University, 2014.

11. Anna Drummond, PhD Computer Science, Rice University, 2014.

12. Rajoshi Biswas, Masters Electrical and Computer Engineering, Rice University, 2013.

13. Jay Ghosh, PhD Civil and Environmental Engineering, Rice University, 2013.

14. Benjamin Appiah, PhD Bioengineering, Rice University, 2011.

External Committees (Baylor College of Medicine):

1. Chaohao Gu, PhD Candidate, Quantitative and Computational Biosciences, Advisor: Zhandong Liu, PhD Expected 2022.

2. Linhua Wang, PhD Candidate Quantitative and Computational Biosciences, Advisor: Zhandong Liu, PhD 2023.

MAJOR UNIVERSITY SERVICE		
	Rice Center for Transforming Data to Knowledge (D2K Lab)	
	Founder	2018 - present
	Founder & Faculty Director	2018 - 2022

The Rice D2K Lab is a campus hub for innovative and interdisciplinary data science education. We provide students with engagement, enrichment, and experiential learning opportunities by connecting students with real-world data science challenges from companies, community organizations and researchers.

Highlights:

- Raised over $5M to establish and support the D2K Lab and Rice data science education.

- Developed and established an innovative capstone program where over 80 interdisciplinary student teams have used their data science and machine learning skills to make a real-world impact.

- Led efforts to revise and improve the Data Science Minor curriculum to promote accessibility and flexibility, changes which are expected to lead to growth in the minor and increased diversity in data science.

- Partnered with the Department of Computer Science and the Jones School of Business to launch the new Master of Data Science degree with on-campus and online options.

- Hired several great teaching-track faculty and worked with them to develop five new courses such as Introduction to Data Science, an accessible and project-based gateway into data science and machine learning.

- Worked with departments across campus to incorporate D2K courses as an elective or requirement in 12 different degree programs.

- Built and fostered data science partnerships with over 30 companies, over 20 community or government partners, and 5 Texas Medical Center partners.

- Supported student groups and clubs in data science and machine learning to run popular programs and events like the recent Rice Datathon which attracted over 450 students and awarded over $15,000 in prizes.

- Impacted over 1000 Rice students a year through D2K courses, programs and events.

DEPARTMENTAL & UNIVERSITY SERVICE

Rice University

University Service

Faculty Senate (Engineering Representative), 2020-2021.

Data Science Minor Committee (co-chair), 2020-2021.

Faculty Sponsor, Rice Data Science Club, 2017 - 2022.

Departmental Service (Electrical & Computer Engineering)

Faculty Search Committee, 2021-2022.

Chair, Ad-hoc Inter-departmental Faculty Search Committee, 2022.

Departmental Service (Statistics)

Graduate Admissions Committee, 2010-2011, 2011-2012, 2012-2013, 2013-2014, 2017-2018.

Faculty Search Committee, 2013-2014, 2016-2017, 2018-2019.

Graduate Curriculum Committee, 2014-2015.

Undergraduate Curriculum Committee, 2015-2016, 2018-2019.

External Service

Faculty Search Committee, Department of Electrical and Computer Engineering, 2016-2017.

Adviser, Data Science Search Committee, 2016-2017.

Faculty Search Committee, Department of Computer Science, 2014-2015, 2015-2016.

Baylor College of Medicine & **Texas Children's Hospital**

Statistical Consulting Office Hours. May 2011 - present. *This is a free drop-by consulting service lasting one hour per week where I offer statistical advice to the BCM / TCH community.*

Reviewer, Computational and Integrative Biomedical Research Seed Grants, 2011 & 2012.

- Data Divas Showcase Speaker, Houston, TX, June 2023.

- Girls Who Code Speaker Series, Bellaire High School, November, 2022; November, 2023.

- Kipp Houston Leadership Speaker Series, May, 2017.

- Rice Alumni Classroom Connect Keynote Speaker, April, 2017.

- Papadopoulos Fellow, Kinkaid School, April 2017.

- Australian Mathematical Sciences Institute, ChooseMaths campaign speaker, January 2017. Teacher's Workshop, guest speaker, June 2016.

- "This is Statistics" outreach video as part of the American Statistical Associations public relations campaign, August 2014. 2014.

- Association for Women in Mathematics, Salary Negotiation Workshop, panelist, March 2014.

- SACNAS Conference, Seattle, Washington, speaker and undergraduate judge / mentor, October 2012.

SELECTED
PRESS

- "Faculty, staff honored for excellence in teaching, mentoring, service", *Rice News*, April 2021.

- "Can we trust scientific discoveries made using machine learning?", This Week in Machine Learning & Artificial Intelligence podcast, May 16, 2019.

- "Why a data scientist warns against always trusting AI's scientific discoveries", by Maria Temming, *Science News*, February 20, 2019.

- "AAAS: Machine learning causing science crisis", by Pallab Ghosh, *BBC News*, February 19, 2019.

- "Can we trust scientific discoveries made using machine learning?", by Jade Boyd, *EurekAlert*, February 15, 2019.

- "Finding Meaning in Complexity: The search for theories that can propel neuroscience forward", by Carolyn Beans, *BioScience*, **68**:8, 545-551, 2018.

- "NSF funds Houston-based teams' quest to better understand the brain", *Rice News*, August 2017.

- "Maths set to hold back jobs in big data", *The Australian*, February 1, 2017. (Press for Australian Mathematical Sciences Institute summer public lecture).

- "Big Data's Prospects for Big Results", Houston Matters, August 30, 2016.

- "Rice statistician's persistence helps scientists interpret big data", *Houston Chronicle*, August 2016.

- "Rice's Genevera Allen wins NSF CAREER award", *Rice News*, April 2016.

- "PROFILES: Dr. Genevera Allen (Rice University)", *ISBIS News*, March 2015.

- "American Statistical Association PR Campaign Launches to Great Interest", *AMSTAT News*, October 2014.

- "The Crystal Ball Says. . . ", *AMSTAT News*, October 2014.

- "American Statistical Association Participates in Capitol Hill Event Highlighting NSF-Funded Research", *AMSTAT News*, July 2014.

- "Statistical Scientists Advance Federal Research Initiatives", *AMSTAT News*, July 2014.

- "miRNA profiling depends on platform", *Nature Methods* **11**, 369, March 2014.

- "30 under 30: Science & Healthcare", Forbes Magazine, January 2014.

- "New statistical tools being developed for mining cancer data", Rice News, November, 2013.

- Congressman McNerney highlights research in speech on the House floor, September 20, 2013.

- "American Statistical Association Takes Part in Annual Capitol Hill Exhibition", *AMSTAT News*, July 2013.

- "IBS Young Statistician Showcase", *IBS Biometric Bulletin*, **29**:4, December 2012.

- "Making Sense of Big Data", *Rice Engineering Magazine*, Fall 2012.

- "New Faculty Spotlight", *Rice Engineering Magazine*, Fall 2010.

- Sallie Ann Keller, "Vital Statistics", *Nature*, **467**, pg. 914, 2010.

PROFESSIONAL
MEMBERSHIPS American Statistical Association (ASA), Institute of Mathematical Statistics (IMS), International Statistics Institute (ISI), Association for Computing Machinery (ACM), Institute for Electrical and Electronics Engineers (IEEE).

PROFESSIONAL
SERVICE

1. Refereeing: *Journal of the American Statistical Association, Journal of the Royal Statistical Society Series B, Electronic Journal of Statistics, Annals of Statistics, Journal of Multivariate Analysis, Annals of Applied Statistics, Journal of Machine Learning Research, Journal of Statistical Computation and Simulation, Journal of Computational and Graphical Statistics, Statistica Sinica, Algorithms, Computational Statistics & Data Analysis, Bioinformatics, PLOS One, Statistical Analysis and Data Mining, IEEE Trans. on Signal Processing, IEEE Trans. on Neural Networks and Learning Systems, Biometrics, International Conference on Machine Learning, Artificial Intelligence and Statistics, Neural Information Processing Systems, International Conference on Pattern Recognition: Applications and Methods, Information & Inference, NeuroImage, WIREs Computational Statistics, IEEE Data Science & Advanced Analytics, Proceedings of the National Academy of Science, PLOS Computational Biology, Nature Neuroscience, Nature Computational Science, Journal of Computational Neuroscience, IEEE Big Data and Information Analytics, IEEE International Conference on Data Science and Advanced Analytics.*

2. Elected Positions:
   - 2016-2018 American Statistical Association Section on Statistical Computing Secretary / Treasurer.
   - 2016-2018 American Statistical Association Section on Statistical Learning and Data Mining Program Chair Elect and Program Chair.

3. Appointed Positions:
   - 2022 - 2023 IMS Outreach Committee.
   - 2021-2022 IMS Committee on Nominations.
   - 2017-2020 ASA Statistical Learning and Data Science Awards Chair.
   - 2016 Joint Statistical Meetings Poster Chair.
   - 2015-2016 National Academies of Sciences "Refining the Concept of Scientific Inference When Working With Big Data: A Workshop" Workshop Planning Committee.

4. Program Committee Chair:
   - (Associate) Program Committee Chair Joint Statistical Meetings, 2023.

- (Co-Chair) International Conference on Intelligent Biology and Medicine, 2016.

5. Program Committees: 2023 IMS International Conference on Statistics and Data Science (ICSDS); 2022 IMS ICSDS; Big Data and Information Analytics, 2018; Conference on Statistical Learning and Data Science, 2018; Conference on Statistical Learning and Data Mining, 2016; Interface 2012: The Future of Statistical Computing, 2012.

6. Sessions Organized / Chaired: IMS ICSDS 2023; Joint Statistical Meetings 2023; IMS ICSDS 2022; Joint Statistical Meetings 2022; Joint Statistical Meetings, 2019; Big Data and Information Analytics, 2018; Conference on Statistical Learning and Data Science, 2018; International Statistics Institute World Statistics Congress, 2017; International Conference on Intelligent Biology and Medicine, 2016; Joint Statistical Meetings, 2016; Conference on Statistical Learning and Data Science, 2016; Eastern North America Region (ENAR) of the International Biometric Society, 2016; International Statistics Institute World Statistics Congress, 2015; Joint Statistical Meetings, 2015; INFORMS, 2014; Statistical Learning and Data Mining Conference, 2014; Conference of Texas Statisticians, 2013; International Chinese Statistical Association 2012; Interface: The Future of Statistical Computing, 2012; Joint Statistical Meetings, 2011.

7. Professional Committees Served:
   - American Statistical Association Statistical Learning and Data Science student paper competition committee, 2016.
   - American Statistical Association Statistics in Imaging student paper competition committee, 2014-2015.
   - American Statistical Association white paper committee on Statistical Science and the BRAIN Initiative, 2014.
   - American Statistical Association Statistical Learning and Data Mining student paper competition committee, 2012-2013.

8. Roundtable Discussion Leader / Discussant / Panelist: Workshop on Reading, Assembling, Analyzing, & Designing Genomic Data 2022; International Statistics Institute World Statistics Congress 2015; Joint Statistical Meetings 2011; International Statistics Institute World Statistics Congress, 2017; Statistical Analysis of Neural Data Workshop, 2017; International Statistics Institute World Statistics Congress, 2015; SIAM International Conference on Data Mining, 2017.

9. Reviewer, Biostatistical Methods and Research Design Study Section (BMRD), National Institutes of Health (NIH):
   - June 2012.
   - October 2012.
   - July 2021.

10. National Science Foundation (NSF) Review Panelist:
    - DMS, 2013.
    - DMS, 2014.
    - NIH-NIGMS / NSF-DMS, 2015.
    - NIH / NSF-CRCNS, 2016.
    - (ad hoc) DMS, 2019 & MMS, 2019.
    - DMS, 2019.
    - CISE, 2021.
    - DMS, 2023.

REFERENCES

Available upon request.