Shane T. Jensen

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The Wharton School, University of Pennsylvania	Phone: 215-573-2211
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Philadelphia, PA 19104	U.S. Citizen

Employment History

University of Pennsylvania

Full Professor, Department of Statistics and Data Science, The Wharton School	2019-present
Affiliated Member, Graduate Group in Applied Mathematics and Computational Science	2014-present
Faculty Member, Graduate Group in Genomics and Computational Biology	2004-present
Doctoral Program Co-director, Department of Statistics, The Wharton School	2013-2015
Associate Professor, Department of Statistics, The Wharton School	2010-2019
Assistant Professor, Department of Statistics, The Wharton School	2004-2010

Education

Harvard University

Ph.D. Statistics	2004

    Thesis title: "Statistical methods for elucidating cell regulation."
    Winner of the **Leonard J. Savage Award** for best thesis in application methodology
    from the International Society for Bayesian Analysis

A.M. Statistics	2001

McGill University

M.Sc. Statistics, Dean's Honors List	1999

    Thesis title: "The Laguerre-Samuelson inequality, with extensions and applications
    in statistics and matrix theory."

B.Sc. with Great Distinction	1997

    Joint Major in Biology and Mathematics

Peer-reviewed Publications

1. Adams, C.J., Conery, M., Auerbach, B.J., Jensen, S.T., Mathieson, I. and Voight, B.F. (2023) "Regularized sequence-context mutational trees capture variation in mutation rates across the human genome". Accepted for publication in *PLOS Genetics*.

2. Humphrey, C., Gross, R., Small, D. and Jensen, S.T. (2023) "Using Predictability to Improve Matching of Urban Locations In Philadelphia" Accepted for publication in the *Annals of Applied Statistics*.

3. Balocchi, C., Deshpande, S.K., George, E.I. and Jensen, S.T. (2023) "Crime in Philadelphia: Bayesian Clustering with Particle Optimization" Accepted for publication in the *Journal of the American Statistical Association*.

4. Lin, D., Jensen, S.T., and Wachter, S. (2023). "The price effects of greening vacant lots: how neighborhood attributes matter." *Real Estate Economics* 51:573–610.

5. Finn, C.B., Wirtalla, C., Roberts, S.E., Collier, K., Mehta, S.J., Guerra, C.E., Airoldi, E., Zhang, X., Keele, L., Aarons, C.B., Jensen, S.T., and Kelz, R.R. (2023). "Comparison of Simulated Outcomes of Colorectal Cancer Surgery at the Highest-Performing vs Chosen Local Hospitals." *JAMA Network Open* 6(2):e2255999.

6. Cui, J., Jensen, S.T., and Macdonald, J. (2022). "The effects of vacant lot greening and the impact of land use and business presence on crime." *Environment and Planning B: Urban Analytics and City Science* 49:1147-1158.

7. Tran, T., Prusinski, M.A., White, J.L., Falco, R.C., Kokas, J., Vinci, V., Gall, W.K., Tober, K.J., Haight, J., Oliver, J., Sporn, L.A., Meehan, L., Banker, E., Backenson, P.B., Jensen, S.T., and Brisson, D. (2022). "Predicting spatio-temporal population patterns of *Borrelia burgdorferi*, the Lyme disease pathogen." *Journal of Applied Ecology* 59:2779–2789.

8. Sinchaisri, W.P. and Jensen, S.T. (2021). "Community vibrancy and its relationship with safety in Philadelphia." *PLoS ONE* 16: e0257530.

9. Macdonald, J., Nguyen, V., Jensen, S.T., and Branas, C.C. (2021). "Reducing crime by remediating vacant lots: the moderating effect of nearby land uses." *Journal of Experimental Criminology.* Published online 31 January 2021.

10. Tran, T., Tanner Porter, W., Salkeld, D.J., Prusinski, M.A., Jensen, S.T., Brisson, D. (2021). "Estimating disease vector population size from Citizen Science data." *Journal of the Royal Society Interface* 18:20210610.

11. Tran, T., Prusinski, M.A., White, J.L., Falco, R.C., Vinci, V., Gall, W.K., Tober, K., Oliver, J., Sporn, L., Meehan, L., Banker, E., Backenson, P.B., Jensen, S.T., and Brisson, D. (2021). "Spatio-temporal variation in environmental features predicts the distribution and abundance of Ixodes scapularis." *International Journal for Parasitology* 51:311–320.

12. Cappuccio, A., Jensen, S.T., Hartmann, B., Sealfon, S.C., Soumelis, V., and Zaslavsky, E. (2020). "Deciphering the combinatorial landscape of immunity." *eLife* 9:e62148.

13. Humphrey, C., Jensen, S.T., Small, D. and Thurston, R. (2020). "Analysis of urban vibrancy and safety in Philadelphia." *Environment and Planning B: Urban Analytics and City Science* 47:1573–1587.

14. Balocchi, C. and Jensen, S.T. (2019). "Spatial modeling of trends in crime over time in Philadelphia." *Annals of Applied Statistics* 13:2235–2259.

15. Luna, J.M., Gennatas, E.D., Ungar, L.H., Eaton, E., Diffenderfer, E.S., Jensen, S.T., Simone II, C.B., Friedman, J.H., Solberg, T.D. and Valdes, G. (2019). "Building more accurate decision trees with the additive tree." *Proceedings of the National Academy of Sciences* 116:19887–19893.

16. Humphrey, C.H., Small, D.S., Jensen, S.T., Asch, D.A., Volpp, K.G., Zhu, J. and Troxel, A.B. (2019). "Modeling lottery incentives for daily adherence." *Statistics in Medicine* 38:2847–2867.

17. Mulholland, J. and Jensen, S.T. (2019) "Optimizing the allocation of funds of an NFL team under the salary cap." *International Journal of Forecasting*, Special Issue on Forecasting in Sports 35:767–775.

18. Nandakumar, N. and Jensen, S.T. (2019) "Historical perspectives and current directions in hockey analytics" *Annual Review of Statistics and Its Application* 6:19–36.

19. Valdes, G., Chang, A.J., Interian, Y., Owen, K., Jensen, S.T., Ungar, L.H., Cunnan, A., Solberg, T.D. and Hsu, I-C. (2018) "Salvage HDR brachytherapy: multiple hypothesis testing vs machine learning analysis." *International Journal of Radiation Oncology · Biology · Physics* 101:694–703.

20. Kearney, V., Solberg, T., Jensen, S.T., Cheung, J., Chuang, C. and Valdes, G. (2018) "Correcting TG 119 confidence limits." *Medical Physics* 45:1001–1008.

21. Mulholland, J. and Jensen, S.T. (2018) "Predicting the future of free agent receivers and tight ends in the NFL." *Statistica Applicata - Italian Journal of Applied Statistics*, Special Issue on Sports Statistics, 30:269–294.

22. Satopää, V.A., Jensen, S.T., Pemantle, R. and Ungar, L.H. (2017) "Partial information framework: model-based aggregation of estimates from diverse information sources." *Electronic Journal of Statistics* 11:3781–3814.

23. Barth, D., Shore, S.H., and Jensen, S.T. (2017). "Identifying idiosyncratic career taste and skill with income risk." *Quantitative Economics* 8:553–587.

24. Parkin, J.D., San Antonio, J.D., Persikov, A., Dagher, H., Dalgleish, R., Jensen, S.T., Jeunemaitre, X., Savige, J. (2017). "The collagen III fibril has a 'flexi-rod' structure of flexible sequences interspersed with rigid bioactive domains including two with hemostatic roles." *PLoS ONE* 12(7): e0175582.

25. Yousefi, M, Li, N., Nakauka-Ddamba, A., Wang, S., Parada, K., Yu, Z., Jensen, S.T., Kharas, M., Lengner, C. and Schoenberger, J. (2016). "Msi RNA binding proteins control reserve intestinal stem cell quiescence." *Journal of Cell Biology* 215:401–413.

26. Wulsin, D.F., Jensen, S.T. and Litt, B. (2016). "Nonparametric multi-level clustering of human epilepsy seizures." *Annals of Applied Statistics* 10:667–689.

27. Li, N., Yousefi, M., Nakauka-Ddamba, A., Tobias, J., Jensen, S.T., Morrisey, E. and Lengner, C.J. (2016). "Heterogeneity in readouts of canonical Wnt pathway activity within intestinal crypts." *Developmental Dynamics* 245:822–833.

28. Li, N., Nakauka-Ddamba, A., Tobias, J., Jensen, S.T. and Lengner, C.J. (2016). "Mouse Label-Retaining Cells Are Molecularly And Functionally Distinct From Reserve Intestinal Stem Cells." *Gastroenterology* 151:298–310.

29. McCarthy, D. and Jensen, S.T. (2016). "Power-Weighted Densities for Time Series Data." *Annals of Applied Statistics.* 10:305–334.

30. Deshpande, S. and Jensen, S.T. (2016). "Estimating an NBA player's impact on his team's chances of winning." *Journal of Quantitative Analysis of Sports* 12:51–72. **Editor's Choice article**.

31. Abegglen, L.M., Caulin, A.F., Chan, A., Lee, K., Robinson, R., Campbell, M.S., Kiso, W.K., Schmitt, D.L., Waddell, P.J., Bhaskara, S., Jensen, S.T., Maley, C.C. and Schiffman, J.D. (2015). "Potential mechanisms for cancer resistance in elephants and comparative cellular response to DNA damage in humans." *Journal of the American Medical Association* 314:1850–1860.

32. Lengner, C.J., Yu, Z., Li, N. Yousefi, M., Nakauka-Ddamba, A., Li, F., Parada, K., Wang, S., Naqvi, A., Rao, S., Tobias, J., Minuesa, G., Katz, Y., Barlowe, T. Valvezan, A., Shankar, S. Deering, R., Klein, P., Jensen, S.T., Kharas, M. and Gregory, B. (2015). "The Msi family of RNA-binding proteins function redundantly as intestinal oncoproteins." *Cell Reports* 13:2440–2455.

33. Normoyle, A. and Jensen, S.T. (2015). "Bayesian Clustering of Player Styles for Multiplayer Games." *Proceedings of the Eleventh AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE-15)* pg. 163–169.

34. Entine, O.A., Small, D.S., Jensen, S.T., Sanchez, G., Bastos, M., Verastegui M.R. and Levy, M.Z. (2015). "Disease diagnosis from immunoassays with plate to plate variability: a hierarchical Bayesian approach." *Statistics in Biosciences* 7:206–224.

35. Chen, F., Bakic, P., Maidment, A., Jensen, S.T., Shi, X. and Pokrajac, D. (2015). "Description and Characterization of a Novel Method for Partial Volume Simulation in Software Breast Phantoms." *IEEE: Transactions on Medical Imaging* 34:2146–2161.

36. Das, A., Morley, M., Moravec, C., Tang, W.H.W., Hakonarson, H., MAGNet Consortium, Margulies, K.B., Cappola, T.P., Jensen, S.T., and Hannenhalli, S. (2015). "Bayesian integration of genetics and epigenetics detects causal regulatory SNPs underlying expression variability." *Nature Communications* 6:8555.

37. Jensen, S.T. and Shore, S.H. (2015). "Changes in the distribution of earnings volatility." *Journal of Human Resources* 50.3:811–836.

38. Baumer, B.S., Jensen, S.T. and Matthews, G.J. (2015). "OpenWAR: an open source system for evaluating overall player performance in major league baseball." *Journal of Quantitative Analysis of Sports* 11:69–84. **Editor's Choice article**.

39. Mulholland, J. and Jensen, S.T. (2014). "Predicting the Draft and Career Success of Tight Ends in the National Football League." *Journal of Quantitative Analysis of Sports* 10:381–396. **Editor's Choice article**.

40. Li, N., Yousefi, M., Nakauka-Ddamba, A., Jain, R., Tobias, J., Epstein, J.A., Jensen, S.T. and Lengner, C. (2014). "Single-cell analysis of proxy reporter allele-marked epithelial cells establishes intestinal stem cell hierarchy." *Stem Cell Reports* 3:876–891.

41. Bleich, J., Kapelner, A., George, E.I. and Jensen, S.T. (2014). "Variable selection for BART: an application to gene regulation." *Annals of Applied Statistics* 8:1750–1781.

42. Satopää, V.A., Jensen, S.T., Mellers, B.A., Tetlock, P.E., and Ungar, L.H. (2014). "Probability aggregation in time-series: dynamic hierarchical modeling of sparse expert beliefs." *Annals of Applied Statistics* 8:1256–1280.

43. Jensen, S.T. and Foster, D. (2014). "A level-set hit-and-run sampler for quasi-concave distributions." *Seventeenth International Conference on Artificial Intelligence and Statistics (AISTATS), JMLR W & CP* 33: 448–456.

44. Jensen, S.T., Park, J., Braunstein, A. and McAuliffe, J. (2013). "Bayesian hierarchical modeling of the HIV evolutionary response to therapy." *Journal of the American Statistical Association* 108: 1230–1242.

45. McShane, B.B., Jensen, S.T., Pack, A.I. and Wyner, A.J. (2013). "Statistical learning with time series dependence: an application to scoring sleep in mice." **Discussion paper with rejoinder.** *Journal of the American Statistical Association* 108: 1147–1172.

46. Thomas, A.C., Ventura, S.L., Jensen, S.T. and Ma, S. (2013). "Competing Process Hazard Function Models for Player Ratings in Ice Hockey." *Annals of Applied Statistics* 7:1497–1524.

47. Tsai, E.A., Berman, M.A., Conlin, L.K., Rehm, H.L., Francey, L.J., Deardorff, M.A., Holst, J., Kaur, M., Gallant, E., Clark, D.M., Glessner, J.T., Jensen, S.T., Grant, S., Gruber, P.J., Hakonarson, H., Spinner, N.B. and Krantz, I.D. (2013). "PECONPI: a novel software for uncovering pathogenic copy number variations in non-syndromic sensorineural hearing loss and other genetically heterogeneous disorders." *American Journal of Medical Genetics Part A* 161A:2134–2147.

48. Gramacy, R.B., Jensen, S.T. and Taddy, M. (2013). "Estimating player contribution in hockey with regularized logistic regression." *Journal of Quantitative Analysis in Sports* 9:97–111.

49. Wojcechowskyj, J.A., Didigu, C.A., Lee, J.Y., Parrish, N.F., Sinha, R., Hahn, B.H., Bushman, F.D., Jensen, S.T., Seeholzer, S.H., and Doms, R.W. (2013). "Quantitative Phosphoproteomics Reveals Extensive Cellular Reprogramming During HIV-1 Entry." *Cell Host and Microbe* 13: 613-623.

50. Piette, J. and Jensen, S.T. (2012). "Estimating fielding ability in baseball players over time." *Journal of Quantitative Analysis in Sports* 8: Issue 3, Manuscript 1463.

51. Wulsin, D., Jensen, S.T., and Litt, B. (2012). "A Hierarchical Dirichlet Process Model with Multiple Levels of Clustering for Human EEG Seizure Modeling." *29th International Conference on Machine Learning (ICML 2012)*.

52. McShane, B.B., Galante, R.J., Biber, M., Jensen, S.T., Wyner, A.J. and Pack, A.I. (2012). "Assessing REM Sleep in Mice Using Video Data." *Sleep* 35:433-442.

53. Jensen, S.T. and Shore, S. (2011). "Semiparametric Bayesian Modeling of Income Volatility Heterogeneity." *Journal of the American Statistical Association* 106:1280–1290.

54. McShane, B.B., Braunstein, A., Piette, J. and Jensen, S.T. (2011). "A Bayesian variable selection approach to major league baseball hitting metrics." *Journal of Quantitative Analysis in Sports* 7: Issue 4, Article 2.

55. Mukherjee, R., Jensen, S.T., Male, F., Bittinger, K., Hodinka, R., Miller, M.D., and Bushman, F. (2011). "Switching between raltegravir resistance pathways analyzed by deep sequencing." *AIDS* 25:1951–1959.

56. Everett, L.J., Jensen, S.T., and Hannenhalli, S. (2011). "Transcriptional regulation via TF-modifying enzymes: an integrative model-based analysis." *Nucleic Acids Research* 39:e78.

57. San Antonio, J.D., Schweitzer, M.H., Jensen, S.T., Kalluri, R., Buckley, M., and Orgel, J.P. (2011). "Dinosaur peptides suggest mechanisms of protein survival." *PLoS ONE* 6:e20381.

58. Winter, C.M., Austin, R.S., Blanvillain-Baufume, S., Reback, M.A., Monniaux, M., Wu, M., Sang, Y., Yamaguchi, A., Yamaguchi, N., Parker, J.E., Parcy, F., Jensen, S.T., Li, H., and Wagner, D. (2011). "LEAFY target genes reveal floral regulatory logic, cis motifs, and a link to biotic stimulus response." *Developmental Cell* 20:430–443.

59. George, E.I. and Jensen, S.T. (2011). "Commentary: a latent variable perspective of copula modeling." *Marketing Science* 30:22–24.

60. Parkin, J.D., San Antonio, J.D., Pedchenko, V., Hudson, B., Jensen, S.T., and Savige, J. (2011). "Mapping structural landmarks, ligand binding sites and missense mutations to the collagen IV heterotrimers predicts major functional domains, novel interactions, and variation in phenotypes in inherited diseases affecting basement membranes." *Human Mutation* 32:127–143.

61. Heller, R., Jensen, S.T., Rosenbaum, P.R. and Small, D.S. (2010). "Sensitivity analysis for the cross-match test, with applications in genomics." *Journal of the American Statistical Association* 105:1005–1013.

62. McShane, B.B., Galante, R.J., Jensen, S.T., Naidoo, N., Pack, A.I. and Wyner, A.J. (2010). "Characterization of the bout durations of sleep and wakefulness." *Journal of Neuroscience Methods* 193:321–333.

63. Piette, J., Braunstein, A., McShane, B.B. and Jensen, S.T. (2010). "A Point-Mass Mixture Random Effects Model for Pitching Metrics." *Journal of Quantitative Analysis in Sports* 6: Issue 3, Article 8.

64. Wallach, H.M., Jensen, S.T., Dicker, L. and Heller, K. (2010). "An alternative prior process for nonparametric Bayesian clustering." *Thirteenth International Conference on Artificial Intelligence and Statistics (AISTATS) 2010, JMLR W & CP* 9, pp. 892-899.

65. Megraw, M., Sethupathy, P., Gumireddy, K., Jensen, S.T., Huang, Q. and Hatzigeorgiou, A.G. (2010). "Isoform specific gene auto-regulation via miRNAs: a case study on miR-128b and ARPP-21." *Theoretical Chemistry Accounts: Theory, Computation, and Modeling (Theoretica Chimica Acta)* 125:593–598.

66. Jensen, S.T., McShane, B. and Wyner, A.J. (2009). "Hierarchical Bayesian modeling of hitting performance in baseball." **Discussion paper with rejoinder.** *Bayesian Analysis* 4: 631–674.

67. Jensen, S.T., Erkan, I., Arnardottir, E.S. and Small, D.S. (2009). "Bayesian testing of many hypotheses $\times$ many genes: a study of sleep apnea." *Annals of Applied Statistics* 3:1080–1101.

68. Jensen, S.T., Soi, S. and Wang, L. (2009). "A Bayesian approach to efficient differential allocation for resampling-based significance testing." *BMC Bioinformatics* 10:198.

69. Jensen, S.T., Shirley, K. and Wyner, A.J. (2009). "Bayesball: a Bayesian hierarchical model for evaluating fielding in major league baseball." *Annals of Applied Statistics* 3:491–520.

70. Megraw, M., Pereira, F., Jensen, S.T., Ohler, U. and Hatzigeorgiou, A. (2009). "A transcription factor affinity-based code for mammalian transcription initiation." *Genome Research* 19:644–656.

71. Braunstein, A., Wei, Z., Jensen, S.T. and McAuliffe, J. (2008). "A spatially varying two-sample recombinant coalescent, with applications to HIV escape response." *Advances in Neural Information Processing Systems 21* (NIPS 2008), pp. 193–200.

72. Tuteja, G., Jensen, S.T., White, P. and Kaestner, K.H. (2008). "Cis-regulatory modules in the mammalian liver: composition depends on strength of Foxa2 consensus site." *Nucleic Acids Research* 36:4149–4157.

73. Kandylas, V., Ungar, L.H., Sandler, T. and Jensen, S.T. (2008). "Multiway clustering for creating biomedical term sets." *IEEE International Conference on Bioinformatics and Biomedicine* (BIBM 2008), pp. 449–452.

74. Yan, B., Chen, G., Sigal, K., Yang, X., Jensen, S.T., Van Waes, C., Stoeckert, C.J. and Chen, Z. (2008). "Systems biology-defined NF-κB regulons, interacting signal pathways and networks are implicated in the malignant phenotype of head and neck cancer cell lines differing in p53 status." *Genome Biology* 9:R53.

75. Jensen, S. T. and Liu, J.S. (2008). "Bayesian clustering of transcription factor binding motifs." *Journal of the American Statistical Association* 103:188–200.

76. Che, D., Li, G., Jensen, S.T., Liu, J.S. and Xu, Ying. (2008). "PFP: a computational framework for phylogenetic footprinting in prokaryotic genomes." In *Bioinformatics Research and Applications*, Lecture Notes in Computer Science, Volume 4983, pp. 110–121.

77. Jensen, S.T., Chen, G. and Stoeckert, C. (2007). "Bayesian variable selection and data integration for biological regulatory networks." *Annals of Applied Statistics* 1:612–633.

78. Mackiewicz, M., Shockley, K.R., Romer, M.A., Galante, R.J., Zimmerman, J.E., Naidoo, N., Baldwin, D.A., Jensen, S.T., Churchill, G.A. and Pack, A.I. (2007). "Macromolecule biosynthesis: a key function of sleep." *Physiological Genomics* 31:441–457.

79. Carruth, M. and Jensen S.T. (2007). "Evaluating throwing ability in baseball." *Journal of Quantitative Analysis in Sports* 3: Issue 3, Article 2.

80. Chen, G., Jensen, S.T. and Stoeckert, C. (2007). "Clustering of genes into regulons using integrated modeling - COGRIM" *Genome Biology* 8:R4.

81. Megraw, M., Baev, V., Rusinov, V., Jensen, S.T., Kalantidis, K. and Hatzigeorgiou, A.G. (2006). "MicroRNA promoter element discovery in *Arabidopsis*." *RNA* 12:1612–1619.

82. Wei, Z. and Jensen, S.T. (2006). "GAME: detecting cis-regulatory elements using a genetic algorithm." *Bioinformatics* 22:1577–1584.

83. Wang, L., Jensen, S.T. and Hannenhalli, S. (2006). "An interaction-dependent model for transcription factor binding." In *Systems Biology and Regulatory Genomics*, Lecture Notes in Computer Science, Volume 4023, pp. 225–234.

84. Jensen, S.T., Shen, L. and Liu, J.S. (2005). "Combining phylogenetic motif discovery and motif clustering to predict co-regulated genes." *Bioinformatics* 21:3832–3839.

85. Che, D., Jensen, S.T., Cai, L. and Liu, J.S. (2005). "BEST: binding-site estimation suite of tools." *Bioinformatics* 21: 2909–2911.

86. Glickman, M.E. and Jensen, S.T. (2005). "Adaptive paired comparison design." *Journal of Statistical Planning and Inference* 127:279–293.

87. Eichenberger, P., Fujita, M., Jensen, S.T., Conlon, E.M., Rudner, D.Z., Wang, S., Ferguson, C., Sato, T., Liu, J.S. and Losick R. (2004). "The program of gene transcription for a single differentiating cell type during sporulation in *Bacillus subtilis*." *PLoS Biology* 2:e328.

88. Jensen, S.T. and Liu, J.S. (2004). "BioOptimizer: a Bayesian scoring function approach to motif discovery." *Bioinformatics* 20:1557–1564.

89. Jensen, S.T., Liu, X.S., Zhou, Q. and Liu, J.S. (2004). "Computational discovery of gene regulatory binding motifs: a Bayesian perspective." *Statistical Science* 19:188–204.

90. Molle, V., Fujita, M., Jensen, S.T., Eichenberger, P., Gonzalez-Pastor, E., Liu, J.S. and Losick, R. (2003). "The spo0A regulon of *Bacillus subtilis*." *Molecular Microbiology* 50:1683–1701.

91. Eichenberger, P., Jensen, S.T., Conlon, E.M., van Ooij, C., Silvaggi, J., Fujita, M., Ben-Yehuda, S., Stragier, P., Liu, J.S. and Losick, R. (2003). "The σ^E regulon and the identification of additional sporulation genes in *Bacillus subtilis*." *Journal of Molecular Biology* 327:945–972.

92. Lenzenweger, M., Jensen, S.T. and Rubin, D.B. (2003). "Finding the 'genuine' schizotype: a model and method for resolving heterogeneity in performance on laboratory measures in experimental psychopathology research." *Journal of Abnormal Psychology* 112:457–468.

93. Jensen, S.T., Lenzenweger, M. and Rubin, D.B. (2002). "A Bayesian approach to reducing heterogeneity in laboratory measures: an illustration from schizophrenia research." *Case Studies in Bayesian Statistics* 6:255–266.

94. Stirling, G., Fairbairn, D.J., Jensen, S. and Roff, D.A. (2001). "Does a negative genetic correlation between wing morph and early fecundity imply a functional constraint in *Gryllus firmus*?" *Evolutionary Ecology Research* 3:157–177.

95. Jensen, S.T. and Styan, G.P.H. (1999). "Some comments and a bibliography on the Laguerre-Samuelson inequality with extensions and applications in statistics and matrix theory." In *Analytical and Geometric Inequalities and Applications*. Kluwer Academic, pp. 151–182.

Awards

Wharton Teaching Excellence Award   2019, 2020, 2021, 2022
    The Wharton School, University of Pennsylvania

SABR Analytics Conference Research Award in Contemporary Baseball Analysis   2016
    for our paper "OpenWAR: an open source system for evaluating overall
    player performance in major league baseball."

Sports in Statistics Award for contributions to the statistics in sports community   2011
    Section on Statistics in Sports, American Statistical Association

David W. Hauck Award for Excellence in Undergraduate Teaching   2009
    The Wharton School, University of Pennsylvania

Leonard J. Savage Award for best thesis in application methodology   2004
    International Society for Bayesian Analysis

Certificate of Distinction in Teaching, Harvard University   2002, 2003

Recent Research Presentations

"Spatio-temporal Bayesian Modeling of Crime in Philadelphia."
    CFE-CMStatistics 2022. London, United Kingdom. December 17, 2022.

"Evaluating the Impact of Built Environment Interventions in Philadelphia."
    Penn IUR Advisory Board Fall Meeting, University of Pennsylvania. December 1, 2022.

"Spatial Modeling of Fielding in Baseball." (virtual)
    Baseball Analytics course at University of Illinois Urbana-Champaign, November 9, 2022.

"Spatio-temporal Bayesian Modeling of Crime in Philadelphia." (virtual)
    International Conference on Econometrics and Statistics (EcoSta), Kyoto, Japan. June 4, 2022.

"Evaluating the Impact of Built Environment Interventions in Philadelphia."
    CFE-CMStatistics 2021. London, United Kingdom. December 18, 2021.

"Recent Advances in Spatial and Temporal Modeling in Sports."
    Sports Analytics and Statistics Laboratory, University of Virginia. December 1, 2021.

"Modeling Crime Dynamics and Associations with the Built Environment in Philadelphia."
    CFE-CMStatistics 2019. London, United Kingdom. December 15, 2019.

Grants Received

Analytics at Wharton, University of Pennsylvania 2020
Amenity Value of Green Space

Wharton Social Impact Initiative, University of Pennsylvania 2018
Measuring Human Vibrancy and its Role in the Urban Development of Philadelphia

National Institute of Health and National Cancer Institute 2017
Determining and enhancing metabolite fitness for metabolomics measurements.

National Institute of Health 2016
Control of intestinal regeneration by an Msi-mTORC1 signaling axis.

Wharton Global Initiatives Research Program, University of Pennsylvania 2016
A Quantitative Case Study of Urban Issues in American Versus Asian Cities

Wharton Social Impact Initiative, University of Pennsylvania 2015
Urban Analytics: A Case Study in Philadelphia

Stuart and Jill Siegel Term Research Fund, University of Pennsylvania 2014
Prediction and Evaluation of Hockey Performance

TRIO Pilot Program, The Wharton School, University of Pennsylvania 2011
Income Volatility and Risk Aversion.

Wharton Sports Business Initiative, University of Pennsylvania 2008
Evaluation of Fielding in Major League Baseball.

National Institute on Aging 2006
Mechanisms of Alterations in Sleep with Age.

Center for AIDS Research, University of Pennsylvania 2006
Spatially-varying Evolutionary Models of Viral Escape Response.

University Research Foundation, University of Pennsylvania 2005
Integrating Multiple Data Sources to Improve Motif Discovery.

Entertainment and Sports Programming Network 2005
Wharton MLB Player Valuation Project and Development Venture.

Editorial Boards and Columns

arXiv: Moderator for stat.ME section	2018–2023
Journal of the American Statistical Association: Associate Editor	2010–2018
Bayesian Analysis: Associate Editor	2009–2018
Chance Magazine: Columnist for "A Statistician Reads the Sports Pages"	2011–2017
Statistical Science: Associate Editor	2011–2015

PhD Students Advised

Ryan Gross
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. in progress

Cecilia Balocchi
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2020
Thesis: "Bayesian Nonparametric Analysis of Spatial Variation with Discontinuities."
     Winner of the **2021 Savage Award in Applications Methodology**
     from the International Society for Bayesian Analysis
Placement: Lecturer, School of Mathematics, University of Edinburgh

Colman Humphrey
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2018
Thesis: "Matching: The Search for Control."
Placement: Chief Executive Officer, Slight

Daniel McCarthy
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2017
Placement: Assistant Professor, Emory University

Ville Satopää
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2016
Thesis: "Partial information framework: modeling, improving, and aggregating predictions."
Placement: Assistant Professor, INSEAD

Julie Beckley (Novak)
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2015
Thesis: "Bayesian modeling of consumer behavior in the presence of anonymous visits."
Placement: Data Science and Engineering Manager, Experimentation at Etsy

Aleah Caulin
Genomics and Computational Biology Graduate Group, University of Pennsylvania   Ph.D. 2013
Thesis: "Peto's paradox and the evolution of cancer suppression."
Placement: Clinical Computational Biology Lead: Driver Group, L.L.C.

James Piette
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2011
Thesis: "Estimating fielding ability in baseball players over time."
Placement: Co-Founder, CEO: Jindo Group

Blake McShane
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2010
Thesis: "Machine Learning Methods With Time Series Dependence."
Placement: Professor of Marketing, Kellogg School at Northwestern University

Alexander Braunstein
Department of Statistics, The Wharton School, University of Pennsylvania   Ph.D. 2009
Thesis: "Bayesian statistical models for HIV evolution."
Placement: Head of Evaluation Metrics: Apple, Inc.

Teaching Experience

Department of Statistics, The Wharton School

Statistics 102: Introduction to Business Statistics	2017-18
Statistics 111: Introduction to Statistics	2005-10,2015-16
Statistics 442: Introduction to Bayesian Data Analysis	2019-23
Statistics 540: Statistical Computing	2005-06
Statistics 542: Bayesian Methods and Computation	2007-16
Statistics 613: Regression Analysis for Business	2012-13
Statistics 927: Bayesian Modeling and Computation	2018,2020-23

Graduate Group in Genomic and Computational Biology

GCB 535: Introduction to Bioinformatics	2007,2010-15

Department of Statistics, Harvard University, Teaching Fellow

Statistics 100: Introduction to Statistics (Dr. Willis Davis)	2001-03
Statistics 101: Introduction to Statistics (Dr. Steve Wang)	1999
Statistics 102: Introduction to Biostatistics (Dr. Bernard Rosner)	2000
Statistics 104: Introduction to Statistics (Dr. Mark Irwin)	2003
Statistics 110: Introduction to Probability (Dr. Wing Wong)	2001
Statistics 111: Statistical Inference (Dr. Xiao-Li Meng, Dr. Samuel Kou)	2002-2003
Statistics 139: Regression Analysis (Dr. Steve Wang, Dr. Xiao-Li Meng)	2000,2002
Statistics 149: Generalized Linear Models (Dr. John Barnard)	2001
Statistics 220: Bayesian Data Analysis (Dr. David van Dyk)	2000

Department of Mathematics and Statistics, McGill University, Teaching Assistant

Mathematics 150: Calculus A (Dr. Stephen Drury)	1998
Mathematics 323: Probability Theory (Dr. George Styan)	1997,1999
Mathematics 324: Statistics (Dr. George Styan)	1999
Mathematics 423: Regression and Analysis of Variance (Dr. George Styan)	1998

Academic Service: Recent Thesis Committees

Emily Diana

Department of Statistics, University of Pennsylvania	Ph.D. in progress

Madison Herling

Department of Chemistry, University of Pennsylvania	Ph.D. in progress

David Wang

Graduate Group in Genomics and Computational Biology, University of Pennsylvania	Ph.D. in progress

Sam Luxenburg

Department of Statistics, George Washington University	Ph.D. 2022

Amber Weiner

Graduate Group in Genomics and Computational Biology, University of Pennsylvania	Ph.D. 2021

Tammy Tran

Graduate Group in Genomics and Computational Biology, University of Pennsylvania	Ph.D. 2020

Casey Bartow-Mckenney (Committee Chair)

Graduate Group in Genomics and Computational Biology, University of Pennsylvania	Ph.D. 2019

Gemma Moran

Department of Statistics, University of Pennsylvania	Ph.D. 2019

Dan McCarthy

Department of Statistics, University of Pennsylvania	Ph.D. 2017

Yuchao Jiang (Committee Chair)

Graduate Group in Genomics and Computational Biology, University of Pennsylvania	Ph.D. 2017

Academic Service: Recent Thesis Committees (cont'd)

Jacquelyn Meisel
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — Ph.D. 2017

Shi Gu
Applied Mathematics and Computational Science, University of Pennsylvania — Ph.D. 2016

Derek Oldridge
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — Ph.D. 2015

Sameer Soi (Committee Chair)
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — Ph.D. 2015

Brett Hannigan
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — Ph.D. 2013

Ellen Tsai (Committee Chair)
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — Ph.D. 2013

Sivan Aldor-Noiman
Department of Statistics, University of Pennsylvania — Ph.D. 2012

Sathyanarayan Anand
Department of Statistics, University of Pennsylvania — Ph.D. 2012

Jonathan Toung (Committee Chair)
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — Ph.D. 2012

Sira Sriswasdi (Committee Chair)
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — Ph.D. 2012

Academic Service: Recent Other Committees

Wharton Personnel Committee
The Wharton School, University of Pennsylvania — 2021-2023

PhD Admissions
Department of Statistics, The Wharton School — 2021-2023

Wharton School Representative on the Graduate Council of the Faculties
Graduate Council of the Faculties, University of Pennsylvania — 2020-2021

PhD Admissions (Chair)
Department of Statistics, The Wharton School — 2020-2021

Diversity Search Advisor
Department of Statistics, The Wharton School — 2020-2021

Review Committee for Graduate Group in Epidemiology and Biostatistics
Biomedical Graduate Studies, University of Pennsylvania — 2021

Teaching Excellence Committee
The Wharton School, University of Pennsylvania — 2019-2021

Faculty IT Steering Committee
The Wharton School, University of Pennsylvania — 2019-2021

MUSA Faculty Oversight Committee
Penn Institute for Urban Research — 2019-2021

CIRC: Curriculum Innovation and Review Committee
The Wharton School, University of Pennsylvania — 2019-2020

Dean's Advisory Council
The Wharton School, University of Pennsylvania — 2017-2020

GCB Curriculum Committee
Graduate Group in Genomics and Computational Biology, University of Pennsylvania — 2016-2018

Program Committee for JSM 2017
International Society for Bayesian Analysis — 2016

Doctoral Executive Committee
The Wharton School, University of Pennsylvania — 2014-2015

Academic Service: Paper Reviewing

American Statistician	2011, 2016
Annals of Applied Statistics	2006, 2011, 2014
Annals of Statistics	2005
Artificial Intelligence and Statistics (AISTATS)	2010-11
Asia Pacific Bioinformatics Conference (APBC)	2006-07
Bayesian Analysis	2008, 2011
Bioinformatics	2006-07, 2010-11
BMC Bioinformatics	2006
Biometrics	2006
Biostatistics	2017
Environment and Planning B: Urban Analytics and City Science	2017
IEEE Transactions on Computational Biology and Bioinformatics	2014-15
IEEE Transactions on Signal Processing	2007
IEEE Transactions on Pattern Analysis and Machine Intelligence	2011
International Conference on Machine Learning (ICML)	2006
Italian Journal of Applied Statistics	2017
Journal of the American Statistical Association	2005-07, 2010-11, 2016-18
Journal of Machine Learning and Research	2009
Journal of Quantitative Analysis in Sports	2007-10, 2016-18
Journal of Royal Statistical Society	2009, 2014
Journal of Statistical Planning and Inference	2006
Neural Information Processing Systems (NIPS)	2009
PLOS One	2008
Proceedings of the National Academy of Sciences	2006
Psychometrika	2005-07, 2016-17
Research in Computational Molecular Biology (RECOMB)	2004-05
Statistica Sinica	2007
Statistical Science	2009

References

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