

Last update: September 15, 2016

CURRICULUM VITAE

Yufeng Liu

Department of Statistics & Operations Research
Carolina Center for Genome Sciences
Department of Biostatistics
University of North Carolina at Chapel Hill
Chapel Hill, NC 27599
Email: yfliu@email.unc.edu
Website: <http://www.unc.edu/~yfliu>

EDUCATION

The Ohio State University, Columbus, Ohio

- Ph.D., Statistics, 6/2004
- M.S., Statistics, 6/2001

Nankai University, China

- B.S., Statistics, 7/1999

PROFESSIONAL EXPERIENCE

Full Professor (7/2013 – present), Associate Professor (with tenure) (7/2009 – 6/2013), Assistant Professor (tenure-track) (7/2004 – 6/2009), University of North Carolina, Chapel Hill, NC

- Department of Statistics and Operations Research 7/2004 – present
- Department of Genetics 3/2015 – present
- Department of Biostatistics 11/2012 – present
- Carolina Center for Genome Sciences 7/2004 – present
- Lineberger Comprehensive Cancer Center 6/2010 – present

Research Intern & Research/Teaching Assistant

- Research/Teaching Assistant, The Ohio State University. 1/2001 - 6/2003
- Summer Intern, Clinical Biostatistics, Merck Research Lab. 6/2002 - 9/2002
- Summer Intern, Production Engineering, Techneglas Inc. 6/2000 - 9/2000

HONORS

- Elected Member – The International Statistical Institute (ISI), 2014.

- Elected Fellow – The American Statistical Association (ASA), 2013.
- Research highlighted on the fall issue of *Carolina Arts & Sciences Magazine*, 2011.
- Ruth and Phillip Hettleman Prize for Artistic and Scholarly Achievement, UNC, 2010.
- Faculty Early Career Development (CAREER) Award, National Science Foundation (NSF), 2008 – 2013.
- Interviewed by *AMSTAT News* in the article of “Making a name: up and coming statisticians on the verge of great things” (the September 2008 issue) of American Statistical Association (ASA).
- Junior Faculty Development Award, University of North Carolina, 2006.
- Ransom and Marian Whitney Research Award, Statistics, The Ohio State University, 2004.
- Student Paper Competition Winner for the American Statistical Association’s Sections on Statistical Computing and Graphics, 2003.
- Student Paper Competition Winner at Spring Research Conference on Statistics in Industry and Technology Conference, 2002.
- Student Scholarship for Quality and Productivity Conference, 2002.
- Departmental Research Fellowship, Statistics, The Ohio State University, 2001.
- Distinguished University Fellowship, The Ohio State University, 1999 & 2004.
- Proctor & Gamble Scholarship, 1999.

REFEREED JOURNAL ARTICLES

Ph.D student or Post-doc co-authors are underlined

- 1 Xie, Y., Liu, Y., and Valdar, W. Joint Estimation of Multiple Dependent Gaussian Graphical Models with Applications to Mouse Genetics. *Biometrika*, in press.
This paper won the 2014 International Biometric Society’s Eastern North American Region (ENAR) Distinguished Student Paper Award.
- 2 Zhang, C., Lu X., Zhu, Z., Hu Y., Singh, D., Jones, C., Liu, J., Prins, J. F., and Liu, Y. REC: Fast Sparse Regression-based Multicategory Classification. *Statistics and Its Interface*, in press.
- 3 Lu, S. and Liu, Y., Liang, Y., and Zhang, K. Confidence Intervals and Regions for the LASSO Using Stochastic Variational Inequality Techniques in Optimization. *Journal of Royal Statistical Society*, Series B, in press.
- 4 Yu, G., Liu, Y., and Shen, D. Graph Guided Joint Prediction of Class Label and Clinical Scores for the Alzheimer’s Disease. *Brain Structure and Function*, in press.

This paper won the 2015 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.

- 5 Yu, G. and **Liu, Y.** Sparse Regression Incorporating Graphical Structure among Predictors. *Journal of the American Statistical Association*, in press.
This paper won the 2014 best paper award for Young Statisticians in Business and Industry, and the 2014 student Paper Competition for the American Statistical Association's Sections on Statistical Computing and Graphics.
- 6 Zhang, C., Liu, Y., Wang, J., and Zhu, H. Reinforced Angle-based Multicategory Support Vector Machines. *Journal of Computational and Graphical Statistics*, in press.
- 7 Kimes, P., Hayes, D. N., Marron, J.S., and Liu, Y. (2016). Large-Margin Classification with Multiple Decision Rules. *Statistical Analysis and Data Mining*, 9, 2, 89-105.
- 8 Zhang, C., Liu, Y. and Wu, Y. (2016). On Quantile Regression in Reproducing Kernel Hilbert Spaces with Data Sparsity Constraint. *Journal of Machine Learning Research*, 17, 40, 1-45.
- 9 Chen, G., Liu, Y., Shen, D., and Kosorok, M. R. (2016). Composite large margin classifiers with latent subclasses for heterogeneous biomedical data. *Statistical Analysis and Data Mining*, 9, 2, 75-88.
This paper won the 2015 International Biometric Society's Eastern North American Region (ENAR) Distinguished Student Paper Award.
- 10 Shin, S., Fine, J., and Liu, Y. (2016). Adaptive Estimation with Partially Overlapping Models. *Statistica Sinica*, 26, 235-253.
- 11 Huang, H., Liu, Y., Yuan, M., and Marron, J. S. (2015). Statistical significance of clustering through soft thresholding. *Journal of Computational and Graphical Statistics*, 24, 4, 975-993.
This paper was selected as the feature article for the Dec 2015 issue by the journal editor.
- 12 Sun, W., Liu, Y., Crowley, J., Chen, T. H., Zhou, H., Chu, H., Huang, S., Kuan, P. F., Li, Y., Miller, D., Shaw, G., Wu, Y., Zhabotynsky, V., McMillan, L., Zou, F., Sullivan, P., and Pardo-Manuel de Villena, F. (2015). IsoDOT Detects Differential RNA-isoform Usage with respect to a Categorical or Continuous Covariate with High Sensitivity and Specificity. *Journal of the American Statistical Association*, 110, 511, 975-986.
- 13 Lee, W. and Liu, Y. (2015). Joint Estimation of Multiple Graphical Models with Common Structures. *Journal of Machine Learning Research*, 16, 1035-1062.

- 14 The Cancer Genome Atlas Research Network. (2015). Comprehensive genomic characterization of head and neck squamous cell carcinomas. *Nature*, 517, 576-582.
- 15 Sun, Q., Zhu, H., **Liu, Y.**, Ibrahim, J. G. (2015). SPReM: Sparse Projection Regression Model for high-dimensional linear regression. *Journal of the American Statistical Association*, 110, 509, 289-302.
- 16 Kimes, P., Cabanski, C., Wilkerson, M., Zhao, N., Johnson, A., Perou, C., Makowski, L., Maher, C., **Liu, Y.**, Marron, J. S., and Hayes, D. N. (2014). SigFuge: single gene clustering of RNA-seq reveals differential isoform usage among cancer samples. *Nucleic Acids Research*, doi: 10.1093/nar/gku521.
- 17 Shin, S. J., Wu, Y., Zhang, H. H., and **Liu, Y.** (2014). Probability-Enhanced Sufficient Dimension Reduction for Binary Classification. *Biometrics*, 70, 546-555.
- 18 Zhang, C. and **Liu, Y.** (2014). Multicategory Angle-based Large-margin Classification. *Biometrika*, 101(3), 625-640.
This paper won the 2013 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.
- 19 Kruppa*, J., **Liu***, Y., Biau, G., Kohler, M., Knig, I. R., Malley, J. D., and Ziegler, A. (2014). Probability estimation with machine learning methods for dichotomous and multi-category outcome: Theory. *Biometrical Journal*, 56, 4, 534-563 (was discussed in the journal as a discussion paper).
- 20 Kruppa, J., **Liu, Y.**, Diener, H., Holste, T., Weimar, C., Knig, I. R., and Ziegler, A. (2014). Probability estimation with machine learning methods for dichotomous and multi-category outcome: Applications. *Biometrical Journal*, 56, 4, 564-583 (was discussed in the journal as a discussion paper).
- 21 Burgel, R-R, Paillasseur, J-L, Dusser, D., Roche, N., Liu, D., **Liu, Y.**, Furtwaengler, A., Metzendorf, N., and Decramer, M. (2014). Tiotropium might improve survival in subjects with COPD at high risk of mortality. *Respiratory Research*, 15:64.
- 22 An, B., Guo, J., and **Liu, Y.** (2014). Hypothesis Testing for Band Size Detection of High Dimensional Banded Precision Matrices. *Biometrika*, 101, 2, 477-483.
- 23 Qiao, X., **Liu, Y.**, and Marron, J. S. (2014). Pairwise variable selection for classification. *Statistics and Its Interface*, 7, 263-274.
This paper won the 2010 ICSA student paper award, and the 2010 JSM student award sponsored by the ASA Business and Economic Statistics Section.

- 24 Yu, G., Liu, Y., Thung, K. H., and Shen, D. (2014). Multi-task Linear Programming Discriminant Analysis for the Identification of Progressive MCI Individuals. *PLOS ONE*, 9(5): e96458.
- 25 Huang, H., Liu, Y., Du, Y., Perou, C. M., Hayes, D. N., Todd, M. J., and Marron, J. S. (2013). Multiclass distance weighted discrimination. *Journal of Computational and Graphical Statistics*, 22, 4, 953-969.
- 26 Hu, Y., Huang, Y., Du, Y., Orellana, C., Singh, D., Kuan, P., Scott, R., Scott, H., Chiang, D., Hayes, N., Jones, C., **Liu, Y.**, Prins, J., and Liu, J. (2013). DiffSplice: the Genome-Wide Detection of Differential Splicing Events with RNA-seq. *Nucleic Acids Research*, 41(2):e39.
- 27 Lee, M. H. and **Liu, Y.** (2013). Kernel Continuum Regression. *Computational Statistics and Data Analysis*, 68, 190-201.
- 28 Zhang, C. and Liu, Y. (2013). Multicategory Large-margin Unified Machines. *Journal of Machine Learning Research*, 14, 1349-1386.
- 29 Huang, Y., Hu, Y., Jones, C. D., MacLeod, J. N., Chiang, D. Y., **Liu, Y.**, Prins, J. F., and Liu, J. (2013). A robust method for transcript quantification with RNA-seq data. *Journal of Computational Biology*, 20(3), 167-187.
- 30 Zhang, C., Liu, Y., and Wu, Z. (2013). On the effect and remedies of shrinkage on classification probability estimation. *The American Statistician*, 67, 3, 134-142.
- 31 Wang, P., Dong, Q., Zhang, C., Kuan, P. F., **Liu, Y.**, Jeck, W.R., Andersen, J.B., Jiang W, Savich GL, Tan TX, Auman JT, Hoskins JM, Misher AD, Yourstone YM, Kim JW, Cibulskis K, Getz G, Hunt HV, Thorgeirsson SS, Roberts LR, Ye D, Guan KL, Xiong Y, Qin LX, Chiang DY. (2013). Mutations in isocitrate dehydrogenase 1 and 2 occur frequently in intrahepatic cholangiocarcinomas and share hypermethylation targets with glioblastomas. *Oncogene*, 32(25), 3091-3100.
- 32 Wu, Y. and **Liu, Y.** (2013). Adaptively weighted large margin classifiers. *Journal of Computational and Graphical Statistics*, 22, 2, 416-432.
- 33 Wu, Y. and **Liu, Y.** (2013). Functional robust support vector machines for sparse and irregular longitudinal data. *Journal of Computational and Graphical Statistics*, 22, 2, 379-395.

This paper was invited by the editor to present at JSM 2012 in the session “JCGS Highlights: Computational Innovations for Analyzing Massive Datasets”.

- 34 Janssens, W., **Liu, Y.**, Liu, D., Kesten, S., Tashkin, D. P., Celli, B. R., Decramer, M. (2013). Quality and reproducibility of spirometry in COPD patients in a randomized trial (UPLIFT), *Respiratory Medicine*, 107, 9, 1409-1416.
- 35 The Cancer Genome Atlas Research Network (2012). Comprehensive genomic characterization of squamous cell lung cancers. *Nature*, 489, 519-525.
- 36 Lee, W., Du, Y., Sun, W., Hayes, D. N. and **Liu, Y.** (2012). Multiple Response Regression for Gaussian Mixture Models with Known Labels. *Statistical Analysis and Data Mining*, 5, 6, 493-508.
This paper won the 2012 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.
- 37 Huang, H., **Liu, Y.**, and Marron, J. S. (2012). Bi-directional discrimination with application to data visualization. *Biometrika*, 99, 4, 851-864.
- 38 Huang, H., Lu, X., **Liu, Y.**, Haaland, P., and Marron, J. S. (2012). R/DWD: Distance Weighted Discrimination for Classification, Visualization and Batch Adjustment. *Bioinformatics*, 28, 8, 1182-1183.
- 39 Lee, W. and **Liu, Y.** (2012). Simultaneous Multiple Response Regression and Inverse Covariance Matrix Estimation via Penalized Gaussian Maximum Likelihood. *Journal of Multivariate Analysis*, 111, 241-255.
This paper won the 2011 International Biometric Society's Eastern North American Region (ENAR) Distinguished Student Paper Award, and the 2011 student Paper Competition for the American Statistical Association's Sections on Statistical Computing and Graphics.
- 40 Zhang, H. H., Cheng, G., and **Liu, Y.** (2011). Linear or nonlinear? Automatic structure discovery for partially linear models. *Journal of the American Statistical Association*, 106, 495, 1099-1112.
- 41 Samarov, D., Marron, J. S., **Liu, Y.**, Grulke, C., and Tropsha, A. E. (2011). Local kernel canonical correlation analysis with application to virtual screening. *Annals of Applied Statistics*, 5, 3, 2169-2196.
- 42 **Liu, Y.**, Zhang, H. H., and Wu, Y. (2011). Soft or hard classification? Large margin unified machines. *Journal of the American Statistical Association*, 106, 166-177.
- 43 **Liu, Y.** and Yuan, M. (2011) Reinforced multicategory support vector machines. *Journal of Computational and Graphical Statistics*, 20, 4, 901-919.

- 44 Ang, M. K., Patel, M. R., Yin, X. Y., Fritchie, K., Zhao, N., **Liu, Y.**, Wilkerson, M., Weissler, M. C., Shockley, W., Couch, M. E., Zanation, A. M., Hackman, T., Chera, B., Harris, S. L., Miller, C. R., Thorne, L. B., Hayward, M. C., Funkhouser, W. K., Olshan, A. F., Shores, C. G., and Hayes, D. N. (2011). High XRCC1 expression is associated with poorer survival in patients with head and neck squamous cell carcinoma. *Clinical Cancer Research*, 17, 20, 6542-6552.
- 45 Park, S. Y. and **Liu, Y.** (2011). Robust penalized logistic regression with truncated loss. *The Canadian Journal of Statistics*, 39, 2, 300-323.
This paper won the 2010 International Biometric Society's Eastern North American Region (ENAR) Distinguished Student Paper Award.
- 46 Fan, C., Prat, A., Parker, J., **Liu, Y.**, Carey, L., Troester, M., and Perou, C. (2011). Building prognostic models for breast cancer patients using clinical variables and hundreds of gene expression signatures. *BMC Medical Genomics*, 4, 3, 1-15.
- 47 **Liu, Y.** and Wu, Y. (2011). Simultaneous multiple non-crossing quantile regression estimation using kernel constraints. *Journal of Nonparametric Statistics*, 23, 2, 415-437.
- 48 Singh D., Orellana C., Hu Y., Jones C. D., **Liu Y.**, Chiang D., Liu J., Prins J. F. (2011). FDM: A Graph-based Statistical Method to Analyze Differential Transcription using RNA-seq data. *Bioinformatics*, 27, 2633-2640.
- 49 Wu, Y. and **Liu, Y.** (2011). Non-crossing large-margin probability estimation and its application to robust SVM via preconditioning. *Statistical Methodology*, 8, 56-67.
- 50 Wu, Y., Zhang, H. H., and **Liu, Y.** (2010). Robust model-free multiclass probability estimation. *Journal of the American Statistical Association*, 105, 489, 424-436.
- 51 Qiao, X., Zhang, H. H., **Liu, Y.**, Todd, M. J., Marron, J. S. (2010). Weighted distance weighted discrimination and its asymptotic properties. *Journal of the American Statistical Association*, 105, 489, 401-414.
- 52 Park, S. Y., **Liu, Y.**, Liu, D., and Scholl, P. (2010). Multicategory composite least-squares classifiers. *Statistical Analysis and Data Mining*, 3, 4, 272-286.
This paper won the 2010 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.
- 53 Wilkerson, M. D., Yin, X., Hoadley, K. A., **Liu, Y.**, Hayward, M. C., Miller, C. R., Randell, S. H., Socinski, M., Parsons, A. M., Funkhouser, W. K., Lee, C., Roberts, P., Thorne, L., Bernard, P. S., Perou, C. M., and Hayes, D. N. (2010). Lung squamous cell carcinoma mRNA expression subtypes are reproducible, clinically-important and correspond to different normal cell types. *Clinical Cancer Research*, 16, 4864-4875.

- 54 **Liu, Y.**, Wu, Y. and He, Q. (2010). Utility-based Weighted Multicategory Robust Support Vector Machines. *Statistics and Its Interface*, 3, 465-476.
- 55 Zhu, Z. and **Liu, Y.** (2009). Estimating spatial covariance using penalized likelihood with weighted L_1 penalty. *Journal of Nonparametric Statistics*, 21, 7, 925-942.
- 56 Qiao, X. and **Liu, Y.** (2009). Adaptive weighted learning for unbalanced multicategory classification. *Biometrics*, 65, 159-168.
- 57 Wu, Y. and **Liu, Y.** (2009). Variable selection in quantile regression. *Statistica Sinica*, 19, 801-817.
- 58 Park, S. Y. and **Liu, Y.** (2009). From the support vector machine to the bounded constraint machine. *Statistics and Its Interface*, 2, 285-298.
This paper won the 2009 Institute of Mathematical Statistics Laha Travel Award.
- 59 Wu, Y. and **Liu, Y.** (2009). Stepwise multiple quantile regression estimation using non-crossing constraints. *Statistics and Its Interface*, 2, 299-310.
- 60 **Liu, Y.**, Hayes, D. N., Nobel, A., and Marron, J. S. (2008). Statistical significance of clustering for high dimension low sample size data. *Journal of the American Statistical Association*, 103, 483, 1281-1293.
- 61 Zhang, H. H., **Liu, Y.**, Wu, Y., and Zhu, J. (2008). Variable selection for the multicategory SVM via adaptive sup-norm regularization. *Electronic Journal of Statistics*, 2, 149-167.
- 62 Wang, J., Shen, X., and **Liu, Y.** (2008). Probability estimation for large margin classifiers. *Biometrika*, 95, 1, 149-167.
- 63 **Liu, Y.** and Wu, Y. (2007). Variable selection via a combination of the L_0 and L_1 penalties. *Journal of Computational and Graphical Statistics*, 16, 4, 782-798.
- 64 Wu, Y. and **Liu, Y.** (2007). Robust truncated-hinge-loss support vector machines. *Journal of the American Statistical Association*, 102, 479, 974-983.
- 65 **Liu, Y.**, Zhang, H. H., Park, C., and Ahn, J. (2007). Support vector machines with adaptive L_q penalty. *Computational Statistics and Data Analysis*, 51, 12, 6380-6394.
- 66 Li, Y., **Liu, Y.**, and Zhu, J. (2007). Quantile regression in reproducing kernel Hilbert spaces. *Journal of the American Statistical Association*, 102, 477, 255-268.
- 67 **Liu, Y.**, Ruan, S., and Dean, A. M. (2007). Design and analysis of Es^2 efficient supersaturated designs. *Journal of Statistical Planning and Inference*, 137, 5, 1516-1529.

- 68 Alcorta, D., Barnes, D. A., Dooley, M. A., Sullivan, P., Jonas, B., **Liu, Y.**, Lionaki, S., Reddy, C. B., Chin, H., Dempsey, A. A., Jennette, J. C., and Falk, R. J. (2007). Leukocyte gene expression signatures in antineutrophil cytoplasmic autoantibody (ANCA) and lupus glomerulonephritis, *Kidney International*, 72, 853-864.
- 69 **Liu, Y.** and Shen, X. (2006). Multicategory ψ -learning. *Journal of the American Statistical Association*, 101, 474, 500-509.
- 70 **Liu, Y.** and Wu, Y. (2006). Optimizing ψ -learning via mixed integer programming. *Statistica Sinica*, 16, 2, 441-457.
- 71 **Liu, Y.**, Shen, X., and Doss, H. (2005). Multicategory ψ -learning and support vector machine: computational tools. *Journal of Computational and Graphical Statistics*, 14, 1, 219-236.
This paper won the 2003 student Paper Competition for the American Statistical Association's Sections on Statistical Computing and Graphics.
- 72 **Liu, Y.** and Dean, A. M. (2004). k -circulant supersaturated designs. *Technometrics*, 46, 1, 32-43.
This paper won the 2002 student paper competition at Spring Research Conference on Statistics in Industry and Technology Conference.

REFEREED CONFERENCE PROCEEDINGS

- 73 **Liu, Y.** (2007). Fisher consistency of multicategory support vector machines. *Proceedings of the Eleventh International Workshop on Artificial Intelligence and Statistics*, 289-296.
- 74 **Liu, Y.**, Zhang, H. H., Park, C., and Ahn, J. (2007). The L_q support vector machine. *Contemporary Mathematics*, 443, 35-48.
- 75 Wu, Y. and **Liu, Y.** (2007). On multicategory truncated-hinge-loss support vector machines. *Contemporary Mathematics*, 443, 49-58.

BOOK CHAPTERS

- 76 Huang, H., **Liu, Y.**, Hayes, D. N., Nobel, A., Marron, J. S., and Hennig, C. (2015). Significance testing in clustering. *Handbook of Cluster Analysis* (C. Hennig, M. Meila, F. Murtagh, R. Rocci eds), Chapman & Hall.
- 77 **Liu, Y.** and Wu, Y. (2010). Flexible Large Margin Classifiers. *High-dimensional Statistical Inference* (T. T. Cai and X. Shen, eds). World Scientific, New Jersey.

BOOK REVIEW

- 78 **Liu, Y.** and Allen, Genevera. (2014). Book review of “An Introduction to Statistical Learning: With Applications in R” by G. James, D. Witten, T. Hastie, and R. Tibshirani. *Journal of the American Statistical Association*, 109, 508, 1713–1714.

DISCUSSION

- 79 Chen, J., **Liu, Y.**, Zeng, D., Song, R., Zhao, Y., and Kosorok, M. R. Discussions on Bayesian Nonparametric Estimation for Dynamic Treatment Regimes with Sequential Transition Times. *Journal of the American Statistical Association*, to appear.
- 80 Huang, H., **Liu, Y.**, Marron, J. S., Shen, D., and Shen, H. (2013). Discussion of “large covariance estimation by thresholding principal orthogonal complements”. *Journal of Royal Statistical Society, Series B*, 75, 664-665.
- 81 **Liu, Y.** (2008). Discussion of “Sure independence screening for ultra-high dimensional feature space” by Fan and Lv. *Journal of Royal Statistical Society, Series B*, 70, 898-899.

TEACHING RECORDS

University of North Carolina at Chapel Hill

- Lecturer for STOR 151.2 (*Basic Statistics*)
 - Enrollment: 94 8/2007 – 12/2007
 - Enrollment: 93 1/2009 – 5/2009
- Lecturer for STOR 665 (*Applied Statistics II*)
 - Enrollment: 19 1/2010 – 5/2010
 - Enrollment: 22 1/2013 – 5/2013
- Lecturer for STOR 664 (*Applied Statistics I*)
 - Enrollment: 23 8/2007 – 12/2007
 - Enrollment: 45 8/2010 – 12/2010
 - Enrollment: 47 8/2015 – 12/2015
- Lecturer for STOR 891 (*Statistical Machine Learning and Data Mining*)
 - Enrollment: 20 1/2007 – 5/2007
 - Enrollment: 42 1/2015 – 5/2015
- Lecturer for STAT 11.1 & 11.2 (*Basic Statistics*)
 - Enrollment: Section 1: 71; Section 2: 86 1/2005 – 5/2005

- Enrollment: Section 1: 76; Section 2: 87 1/2006 – 5/2006

The Ohio State University

- Lecturer for STAT 428 (*Statistical Inference for Engineering Students*) 3/2003 – 6/2003
- Recitation Instructor for STAT 145 & 135 (*Basic Statistics*) 9/2002 – 12/2002
1/2000 – 6/2000

STUDENTS

Graduated

- Yu, Guan (Ph.D in Statistics; 6/2016)
 - Thesis Title: Flexible Supervised Learning Techniques with Applications in Neuroscience
 - Winner of the 2015 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.
 - Winner of the 2014 student Paper Competition for the American Statistical Association's Sections on Statistical Computing and Graphics.
 - ASA-NISS Best y-BIS Paper Award 2014, International Symposium on Business and Industrial Statistics/Conference of the ASA Section on Statistical Learning and Data Mining, Durham, NC, June 2014.
 - Current Position: Assistant Professor, Department of Biostatistics, University of Buffalo, The State University of New York, NY.
- Xie, Yuying (Ph.D in Statistics, 6/2015; joint with William Valdar in Genetics)
 - Thesis topic: Estimation of Graphical Models with Biological Applications.
 - Winner of the 2014 International Biometric Society's Eastern North American Region (ENAR) Distinguished Student Paper Award.
 - Current Position: Assistant Professor, Department of Computational Mathematics, Science and Engineering, Department of Statistics and Probability, Michigan State University.
- Kimes, Patrick (Ph.D in Statistics, 6/2015; joint with J.S. Marron and D. Neil Hayes)
 - Thesis topic: New Statistical Learning Approaches with Applications to RNA-seq Data.
 - Current Position: Principle Scientist at Roche Sequencing, CA.
- Yin, Liang (Ph.D in Operations Research, 6/2015; joint with Shu Lu)
 - Thesis topic: Confidence region and intervals for sparse penalized regression using variational inequality techniques.

- Winner of the 2014 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.
 - Current Position: Statistics and Operations Research Analyst at FedEx, Memphis, TN.
- Zhang, Chong (Ph.D in Statistics, 6/2014)
 - Thesis topic: Flexible Classification Techniques with Biomedical Applications.
 - Winner of the 2013 student Paper Competition for the American Statistical Association's Sections on Statistical Computing and Graphics.
 - Current position: Assistant Professor, Department of Statistics and Actuarial Science, University of Waterloo, Canada.
- Shin, Sunyoung (Ph.D in Statistics, 6/2014; joint with Jason Fine in Biostatistics)
 - Thesis topic: Topics on Penalized Estimation.
 - Winner of the 2013 IMS Travel Award.
 - Current Position: Postdoc, University of Wisconsin at Madison.
- Lee, Wonyul (Ph.D in Statistics, 6/2013)
 - Thesis topic: Statistical modeling of multiple high dimensional data.
 - Winner of the 2011 International Biometric Society's Eastern North American Region (ENAR) Distinguished Student Paper Award, the 2011 student Paper Competition for the American Statistical Association's Sections on Statistical Computing and Graphics, and the 2012 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.
 - Current Position: Postdoc, MD Anderson Cancer Center, Houston, TX.
- Huang, Hanwen (Ph.D in Statistics, 9/2011; joint with J. S. Marron)
 - Thesis topic: Some Contributions to High Dimensional Statistical Learning.
 - Current Position: Assistant Professor, University of Georgia, GA.
- Park, Seo Young (Ph.D in Statistics, 6/2010)
 - Thesis topic: Flexible margin-based classification techniques.
 - Winner of the 2009 Institute of Mathematical Statistics Laha Travel Award, the 2010 International Biometric Society's Eastern North American Region (ENAR) Distinguished Student Paper Award, and the 2010 student paper competition sponsored by the Statistical Learning and Data Mining Section of the American Statistical Association.
 - Current Position: Assistant Professor, Department of Medicine, University of

Pittsburg, PA.

- Qiao, Xingye (M.S., 2007; Ph.D in Statistics, 7/2010; joint with J. S. Marron)
 - Thesis topic: Weighted Distance Weighted Discrimination and pairwise variable selection.
 - Winner of the 2010 ICASA student paper award, and the 2010 JSM student award sponsored by the ASA Business and Economic Statistics Section.
 - Current position: Assistant Professor, Department of Mathematical Sciences, Binghamton University, State University of New York (SUNY), NY.
- Samarov, Daniel (Ph.D in Statistics, 7/2009; joint with J. S. Marron & A. Tropscha)
 - Thesis topic: The analysis and advanced extensions of canonical correlation analysis.
 - Current position: Research Statistician at National Institute of Standards and Technology (NIST), Gaithersburg, MD.

GRANTS

Awarded

Current

- PI on NSF grant “Graph-based Learning and Inference for Sparse Regularized Techniques”, 2014 – 2017. Total Amount: \$120,000.
- PI on NIH/NCI R01CA149569: “Flexible Statistical Machine Learning Techniques for Cancer-related Data”, 2010 – 2016. Total Award: \$1,519,658.
- Co-I on NIH/NCI P01CA142538: “Statistical Methods for Cancer Clinical Trials”, 2015-2020. PI: Kosorok, M. Total Award: \$12.5 M.
- Co-I on NIH/NIA R01AG041721: “Quantifying Brain Abnormality by Multimodality Neuroimage Analysis”, 2015 – 2020. Total Award: \$504,825.

Completed

- Co-I on NIH 1R01HG006272-01A1: “Unlocking Transcript Diversity via Differential Analysis of Splice Graphs”, 2012 – 2015. PI: Prins, J. Total Award: \$425,000.
- Co-I on NIH/NCI Grant U24 CA143848: “Integrated Analysis of Chromatin Structure and Gene Expression Patterns in Human Tumors”, 2009 – 2015. PI: Perou, C. Total Award: \$2,499,684.
- PI on NSF CAREER Grant DMS–0747575: “Flexible Statistical Learning for Complex Data”, 2008 – 2014. Total Award: \$400,000.
- Co-PI on NSF Grant DMS–0606577: “Collaborative Research: Statistical Learning

and Object Oriented Data Analysis”, 2006 – 2010. PI: Marron, J. S. Total Award: \$250,834.

- Co-PI on NIH Grant R21 GM076059: “Robust Computational Framework for Predictive ADME-Tox”, 2006 – 2009. PI: Tropsha, A. E. Total Award: \$349,361.
- Co-I on EPA Grant R832720: “The Carolina Environmental Bioinformatics Research Center”, 2005 – 2010. PI: Wright, F. Total Award: \$4,494,117.
- Co-PI on NIH Grant P20 HG003898: “Carolina Exploratory Center for Cheminformatics Research”, 2005 – 2007. PI: Tropsha, A. E. Total Award: \$761,702.
- PI on “Junior Faculty Development Award”, University of North Carolina, 2006. Total Award: \$7,500.
- PI on “University Research Council Grant” (3-12622), University of North Carolina, 2006 – 2007. Total Award: \$4,000.

INVITED TALKS

- 11/2016, Department of Biostatistics, Yale University.
- 8/2016, Joint Statistical Meetings, Chicago.
- 7/2016, Short course on Statistical Learning, 2nd Summer Institute in Statistics for Big Data, University of Washington, Seattle.
- 7/2016, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China.
- 7/2016, Center for Data Science, Beijing University of Posts and Telecommunications, Beijing, China.
- 7/2016, Short course on Statistical Machine Learning, University of Chinese Academy of Sciences, Beijing, China.
- 7/2016, ICSA Conference on Data Science, Dali, Yunnan, China.
- 5/2016, Short course on Statistical Machine Learning, Institute of Statistics, Nankai University.
- 4/2016, Department of Industrial and Systems Engineering, University of Southern California.
- 4/2016, Department of Statistics, University of Michigan.
- 3/2016 Short course, ENAR 2016 Spring Meetings, Austin, TX.
- 10/2015, Fall Technical Conference (FTC), Houston, TX.
- 10/2015, Departments of Statistics, Rice University, Houston, TX.
- 9/2015, The BASF BioScience Workshop: Trait engineering via molecular network

models, BASF, RTP, NC.

- 9/2015, Wilks Statistics Seminar, Princeton University.
- 8/2015, Joint Statistical Meetings, Seattle.
- 7/2015 The 60th World Statistics Congress, ISI, Brazil.
- 7/2015 Short course, 1st Summer Institute in Statistics for Big Data, University of Washington, Seattle.
- 7/2015, Nankai University, Tianjin, China.
- 7/2015, IMS-China International Conference on Statistics and Probability 2015, Kunming, China.
- 5/2015, Special invited Plenary Speaker, Modelling, Computation and Optimization in Information Systems and Management Sciences (MCO 2015), Metz, France.
- 3/2015, Department of Mathematics and Statistics, University of North Carolina at Charlotte, NC.
- 3/2015, Division of Biostatistics, Medical College of Wisconsin, Milwaukee, WI.
- 2/2015, SAMSI Workshop: Bioinformatics: Statistical and Computational Challenges in Omics Data Integration (SCC-ODI), Durham, NC.
- 11/2014, International Workshop on Big Data Statistics, Shanghai University of Finance and Economics & Fudan University, Shanghai, China.
- 10/2014, Department of Statistics, Florida State University.
- 8/2014, Joint Statistical Meetings, Boston.
- 7/2014, School of Mathematics and Statistics, Xi'an Jiaotong University, Xi'an, China.
- 7/2014, Lanzhou International Statistics Forum, Lanzhou University, Lanzhou, China.
- 7/2014, The 3rd Institute of Mathematical Statistics Asia Pacific Rim Meeting, Taipei.
- 6/2014, Big data workshop, The 31st International Conference on Machine Learning (ICML 2014), Beijing, China.
- 6/2014, Conference on Nonparametric Statistics in honor of Grace Wahba, Madison, Wisconsin.
- 4/2014, Department of Mathematics and Statistics, University of North Carolina at Greensboro, NC.
- 4/2014, Department of Biostatistics, University of Washington at Seattle.
- 2/2014, Department of Genetics, University of North Carolina at Chapel Hill, NC.
- 11/2013, Invited Participant at Future of the Statistical Sciences Workshop, London,

UK.

- 10/2013, Department of Statistics and Probability, Michigan State University.
- 8/2013, The 59th ISI World Statistics Congress, HongKong, China.
- 8/2013, Joint Statistical Meetings, Montreal, Canada.
- 7/2013, IMS International Conference on Statistics and Probability, Chengdu, China.
- 6/2013, Invited Discussant for the Plenary Talk by Prof. Grace Wahba, The Summer Research Conference (SRC), Nashville, TN.
- 6/2013, The tenth Annual Conference on Frontiers in Applied and Computational Mathematics (FACM), The New Jersey Institute of Technology (NJIT), Newark, NJ.
- 5/2013, Massive Datasets Transition Workshop, SAMSI, RTP, NC.
- 4/2013, Department of Statistics, Virginia Tech.
- 12/2012, Department of Statistics, University of Illinois at Urbana-Champaign.
- 12/2012, Department of Statistics and Actuarial Science, University of Waterloo, Canada.
- 12/2012, Department of Mathematics, University of Maryland at College Park, MD.
- 12/2012, Department of Statistics, Columbia University, New York City.
- 11/2012, Department of Epidemiology and Biostatistics, University of South Carolina, SC.
- 11/2012, Department of Statistical Sciences and Operations Research, Virginia Commonwealth University, VA.
- 10/2012, Department of Statistics, University of Toronto, Canada.
- 10/2012, Department of Mathematics, University of Maryland at College Park, MD.
- 10/2012, Meeting the Challenges of High Dimension – Statistical Methodology, Theory and Applications, IMS Singapore.
- 8/2012, The 21st International Symposium on Mathematical Programming (ISMP), Berlin, Germany.
- 8/2012, Instructor for the short course “An Introduction to Statistical Learning” (Continuing Education Course, co-teaching with Gareth James at USC), JSM, San Diego, CA.
- 7/2012, The Second Joint Biostatistics Symposium, Renmin University, Beijing, China.
- 6/2012, Invited short course on Statistical Learning, Nankai University, Tianjin, China.
- 6/2012, Conference for International Society for Nonparametric Statistics (ISNPS), Greece.

- 5/2012, International Workshop on Perspectives on High-dimensional Data Analysis, The Centre de recherches mathématiques (CRM), Montreal, Canada.
- 4/2012, ENAR 2012 Spring Meeting, Washington D.C.
- 3/2012, Department of Statistics, Temple University, PA.
- 2/2012, Department of Statistics, Purdue University, IN.
- 2/2012, Department of Statistics, University of South Carolina, SC.
- 1/2012, Department of Applied and Computational Mathematics and Statistics, University of Notre Dame, IN.
- 12/2011, Workshop on “Current challenges in statistical learning”, Banff International Research Station, Canada.
- 11/2011, Computational Social Science Brown Bag, The Odum Institute, UNC Chapel Hill.
- 11/2011, Session on high-dimensional statistical inference in the data mining cluster, INFORMS, Charlotte, NC.
- 11/2011, Department of Statistics, Iowa State University.
- 11/2011, School of Statistics, University of Minnesota.
- 10/2011, Marshall School of Business, University of Southern California.
- 10/2011, Joint seminar for Departments of Statistics and Biostatistics and Medical Informatics, University of Wisconsin, Madison.
- 10/2011, IBM Thomas J. Watson Research Center, Yorktown Heights, NY.
- 10/2011, Department of Biostatistics, School of Medicine, New York University.
- 10/2011, Department of Statistics, Columbia University.
- 9/2011, Special invited talk on Support Vector Machine (90mins talk, total 4 special invited speakers), Workshop on Probability Estimation in Prognostics, The 2nd Conference of the Central European Network: Bridging Biostatistical Theory and Application, Zurich, Switzerland.
- 7/2011, The Research Institute of Economics and Management, Southwestern University of Finance and Economics, Chengdu, China.
- 7/2011, IMS-China International Conference on Statistics and Probability 2011, XiAn, China.
- 7/2011, Invited short course on Statistical Learning, Northeast Normal University, Changchun, China.
- 7/2011, Workshop on graphical models and related topics, Changchun, China.

- 6/2011, International workshop on perspectives on high-dimensional data analysis, The Fields Institute, Toronto, Canada.
- 4/2011, Computational genetics seminar, Department of Computer Science, UNC Chapel Hill.
- 4/2011, The 2010/2011 Hettleman Lecture (Title: *Statistical Machine Learning in the -omics Era*), sponsored by the Chancellor Office, UNC Chapel Hill.
- 3/2011, ENAR 2011 Spring Meeting, Miami, FL.
- 10/2010, Department of Statistics, Iowa State University.
- 8/2010, IMS Annual Meeting, Gothenburg, Sweden.
- 8/2010, Joint Statistical Meetings, Vancouver, Canada.
- 6/2010, The fourteenth annual conference of the Southern Regional Council on Statistics (SRCOS), Norfolk, VA.
- 6/2010, The ICSA 2010 Applied Statistics Symposium, Indianapolis, Indiana.
- 5/2010, Conference on Nonparametric Statistics and Statistical Learning, Columbus, OH.
- 9/2009, School of Industrial and Systems Engineering, Georgia Institute of Technology.
- 9/2009, Department of Statistics, University of Georgia.
- 9/2009, Department of Mathematics and Statistics, Georgia State University.
- 8/2009, Joint Statistical Meetings, Washington, D.C.
- 7/2009, International Conference on Financial Statistics and Financial Econometrics, Chengdu, China.
- 7/2009, IMS-China International Conference on Statistics and Probability, Weihai, China.
- 6/2009, The 1st IMS-Asia Pacific Rim Meeting, Seoul, Korea.
- 10/2008, Department of Statistics, Yale University.
- 10/2008, Department of Statistics, University of Michigan.
- 10/2008, Department of Statistics and Actuarial Science, University of Waterloo.
- 10/2008, Department of Statistics, North Carolina State University.
- 7/2008, The 7th World Congress in Probability and Statistics, Singapore.
- 6/2008, International Conference on Machine Learning and Data Mining, Beijing, China.
- 6/2008, IMS-China International Conference on Statistics and Probability, Hangzhou,

China.

- 6/2008, The School of Statistics, Renmin University of China.
- 5/2008, Interface, Durham, NC.
- 3/2008, Biostatistics, Boehringer Ingelheim Pharmaceuticals, Ridgefield, CT.
- 1/2008, Department of Statistics, University of Illinois at Urbana-Champaign.
- 8/2007, Joint Statistical Meetings, Salt Lake City, UT.
- 6/2007, ICSA 2007 Applied Statistics Symposium, Raleigh, NC.
- 9/2006, Department of Electrical and Computer Engineering, North Carolina State University.
- 6/2006, AMS-IMS-SIAM Summer Research Conference on Machine and Statistical Learning: Predication and Discovery, Snowbird, UT.
- 3/2006, ENAR Spring Meetings, Tampa, FL.
- 10/2005, Department of Statistics, University of Michigan.
- 5/2005, International Conference on Design of Experiments: Theory and Applications, Memphis, TN.
- 3/2005, Department of Biostatistics, University of North Carolina at Chapel Hill.
- 2/2004, Department of Statistics, Carnegie Mellon University.
- 2/2004, Department of Statistics, University of Georgia.
- 2/2004, Department of Mathematics and Statistics, University of Massachusetts at Amherst.
- 2/2004, Department of Mathematics and Statistics, Utah State University.
- 2/2004, Department of Statistics and Operations Research, University of North Carolina.
- 1/2004, Department of Statistics, Northwestern University.
- 1/2004, Department of Statistics, The Ohio State University.
- 1/2004, Department of Statistics, Oklahoma State University.
- 10/2003, Department of Statistics, The Ohio State University.
- 8/2003, Joint Statistical Meetings, San Francisco, CA.
- 6/2003, AMS-IMS-SIAM Summer Research Conference on Machine Learning, Statistics and Discovery, Snowbird, UT.

OTHER PRESENTATIONS

- 3/2011, 12/2008, 11/2007, 3/2007, 6/2006, The Genetics and Statistics Study Group Meeting, University of North Carolina at Chapel Hill.
- 3/2007, The Eleventh International Workshop on Artificial Intelligence and Statistics, San Juan, Puerto Rico.
- 8/2005, Eighth North American Meeting of New Researchers in Statistics and Probability, Minneapolis, MN, 8/2005.
- 8/2005, Joint Statistical Meetings, Minneapolis, MN.
- 6/2005, The Joint Meeting of the Chinese Society of Probability and Statistics (CSPS) and the Institute of Mathematical Statistics (IMS), Beijing, China.
- 6/2002, Quality and Productivity Research Conference, Tempe, AZ.
- 5/2002, Spring Research Conference on Statistics in Industry and Technology, Ann Arbor, MI.

PROFESSIONAL SERVICE & ACTIVITIES

To Discipline

Editorial Service

- Associate Editor (3/2016 – present), *Journal of Multivariate Analysis*.
- Associate Editor (10/2013 – present), *Journal of Royal Statistical Society, Series B*.
- Associate Editor (10/2011 – 12/2014), *Statistica Sinica*.
- Guest Editor (2011 – 2012), A Special Issue for *Statistical and Its Interface*.
- Associate Editor (1/2008 – 9/2011), *Journal of the American Statistical Association* (Theory and Methods).

Grant Panel & Review

- Scientific Merit Review Panel in Health Services Research and Development, US Department of Veterans Affairs, 8/2016.
- Scientific Merit Review Panel in Health Services Research and Development, US Department of Veterans Affairs, 3/2016.
- NIH study session for RFA-CA-15-017: Big Data to Knowledge (BD2K) Development of software tools and methods for Biomedical Big Data in Targeted Areas of High Need (U01), 2016.
- Scientific Merit Review Panel in Health Services Research and Development, US Department of Veterans Affairs, 2015.
- NSF grant review panelist for Division of Mathematical Sciences (DMS), 2015.

- Scientific Merit Review Panel in Health Services Research and Development, US Department of Veterans Affairs, 2014.
- Discovery Grant reviewer for Natural Sciences and Engineering Research Council of Canada (NSERC), 2013.
- Grant reviewer for Czech Science Foundation, 2013.
- NSF/NIH BIGDATA grant review panelist for Division of Information and Intelligent Systems (IIS), 2012.
- NSF grant review panelist for Division of Mathematical Sciences (DMS), 2012.
- NSF grant review panelist for Division of Mathematical Sciences (DMS), 2011.
- NSF grant review panelist for Division of Computing and Communication Foundations (CCF), 2009.
- Grant reviewer for NSA Mathematical Sciences Grant Program, 2010, 2012, 2014.

Professional Committees & Service

- *Chair-Elect, Chair*, Section on Statistical Learning and Data Mining of ASA, 2014-2015.
- *Program Chair-Elect, Program Chair*, Section on Statistical Learning and Data Mining of ASA, 2012-2013.
- *Secretary* of Statistical Learning and Data Mining Section of ASA, 2010-2011.
- Best paper award committee member for *Journal of Nonparametric Statistics*, 2009-2010.

Reviewing

- **Journals** (more than 100 papers): Annals of Applied Statistics, Annals of Operations Research, Annals of Statistics, Bernoulli, Bioinformatics, Biometrics, Biometrika, BMC Bioinformatics, Communications in Statistics Theory & Methods, Computational Statistics and Data Analysis, Electronic Journal of Statistics, Genetics, IEEE Transactions on Neural Networks, IEEE Transactions on Systems, Man, and Cybernetics Part B, International Statistical Review, Genome Biology, Journal of Computational and Graphical Statistics, Journal of Knowledge and Information Systems (KAIS), Journal of the Korean Statistical Society, Journal of Machine Learning Research, Journal of Statistical Computation and Simulation, Journal of Statistical Planning and Inference, Journal of the American Statistical Association, Journal of the Royal Statistical Society-Series B, Neural Computation, Neural Networks, Optimization Methods and Software, Pattern Recognition, PLoS ONE, Soft Computing, Statistica Sinica, Statistical Methodology, Statistics and Computing, Statistics and Its Interface, Statistics and Probability Letters, Technometrics, The American Statistician,

and WIREs Data Mining and Knowledge Discovery.

- **Books:** Springer Verlag.
- **Conferences:** The 11th, 12th, 13th, 15th, 16th & 17th International Conference on Artificial Intelligence and Statistics (AISTAT 2007, 2009, 2010, 2012, 2013, 2014, 2015), The 5th International Conference on Computing, Communications and Control Technologies (CCCT, 2007), The International Conference on Nonconvex Programming: Local and Global Approaches. Theory, Algorithms, and Applications (NCP07, 2007), The Neural Information Processing Systems (NIPS, 2014).

Conference Organization

- Organizer of the invited session, “Recent developments on statistical machine learning”, The 9th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2016), Spain, 12/2016.
- Program Chair, Conference on Statistical Learning and Data Science, Chapel Hill, NC, 6/2016.
- Organizer of the invited session, “Recent advances in statistical machine learning and applications”, 60th World Statistics Congress, Rio de Janeiro, Brazil, 7/2015.
- Organizer of the invited session, “Recent developments of statistical machine learning and high dimensional data analysis”, The 5th IMS China International Conference in Statistics and Probability, Kunming, China, 7/2015.
- Organizer of the invited session, “Recent developments of statistical machine learning and complex data analysis”, INFORMS Computing Society Conference, Richmond, Virginia, 1/2015.
- Organizer of the invited session, “Recent developments in statistical machine learning”, International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, NC, 10/2014.
- Scientific program committee member, Organizer and chair of the invited session, “Recent Developments in High-Dimensional Data Analysis”, International Symposium on Business and Industrial Statistics/Conference of the ASA Section on Statistical Learning and Data Mining, Durham, NC, 6/2014.
- Organizer of the invited session, “Recent advances in statistical machine learning and its biomedical applications”, The 59th ISI World Statistics Congress, HongKong, China, 8/2013.
- Chair of the invited session, “Analysis of Covariance Matrices as Data Objects”, JSM, Montreal, Canada, 8/2013.
- Organizer of the topic contributed session, “Selections from Statistical Inference from

SAMSI Massive Data Program”, JSM, Montreal, Canada, 8/2013.

- Chair for the workshop of “Meeting the Challenges of High Dimension – Statistical Methodology, Theory and Applications”, IMS Singapore, 10/2012.
- Organizer and Chair of the invited session, “Recent advances in statistical machine learning”, JSM, San Diego, CA, 8/2012.
- Organizer of the invited session, “Recent Developments in Statistical Machine Learning and High Dimensional Data Analysis”, The 2nd IMS Asia Pacific Rim Meeting (IMS-APRM), Tsukuba, Japan, 7/2012.
- Organizer of the invited session, “Statistical machine learning and its biomedical applications”, ICSA, Boston, MA, 6/2012.
- Scientific Committee Member, “Conference on Statistical Learning and Data Mining”, Ann Arbor, MI, 6/2012.
- Organizer of the invited session, “Modern Statistical Machine Learning for Complex and High Dimensional Data”, ENAR, Washington, D.C., 4/2012.
- Organizer of the invited session, “Recent advances in statistical machine learning and model selection”, JSM, Miami, FL, 8/2011.
- Organizer of the invited session, “Recent developments in statistical machine learning and high dimensional data analysis”, IMS-China International Conference on Statistics and Probability, XiAn, China, 7/2011.
- Organizer of the invited session, “Topics in Statistical Machine Learning and High Dimensional Data Analysis”, The ICSA 2011 Applied Statistics Symposium, New York City, 6/2011.
- Chair of the session, “Applied Data Analysis”, ENAR Spring Meeting, Miami, FL, 3/2011.
- Organizer of the invited session, “Statistical machine learning and high dimensional data analysis”, JSM, Vancouver, Canada, 8/2010.
- Organizer of the invited session, “The interface of nonparametric statistics and statistical machine learning”, The ICSA 2010 Applied Statistics Symposium, Indianapolis, Indiana, 6/2010.
- Chair of the Wald Lecture Series No. II (given by Prof. Jerome H. Friedman from Stanford University), JSM, Washington, DC, 8/2009.
- Organizer of the invited session, “Flexible Statistical Machine Learning”, JSM, Washington, DC, 8/2009.
- Organizer of the invited session, “Flexible Variable and Function Selection”, The 1st IMS-Asia Pacific Rim Meeting, Seoul, Korea, 6/2009.

- Organizer of the invited session, “Modern Statistical Machine Learning”, Spring Research Conference on Statistics in Industry and Technology, Vancouver, Canada, 5/2009.
- Organizer of the topic contributed session, “Modern Statistical Machine Learning for Complex and High Dimensional Data”, JSM, Denver, CO, 8/2008.
- Organizer and chair of the session of introductory overview lectures, “Statistical Machine Learning and its Applications in Bioinformatics”, JSM, Salt Lake City, UT, 8/2007.
- Organizer of the invited session, “Robust Statistical Machine Learning”, JSM, Salt Lake City, UT, 8/2007.
- Program Committee of The Eleventh International Conference on Artificial Intelligence and Statistics, San Juan, Puerto Rico, 3/2007.
- Organizer and chair of the invited session, “New Directions in Machine Learning”, JSM, Seattle, WA, 8/2006.

Professional Organizations

- Life-time member of American Statistical Association (ASA).
- Life-time member of Institute of Mathematical Statistics (IMS).

Within UNC-Chapel Hill

- STOR post-tenure review committee, 2014 –2016.
- Optimization faculty search committee chair, 2014 – 2015.
- STOR junior faculty review committee, 2014 – present.
- STOR tenure & promotion committee chair, 2014.
- STOR Departmental Chair nomination committee chair, 2014.
- Statistics faculty search committee, 2012 – 2013.
- CCGS representative on the faculty search committee in Statistical Genetics/Genomics, 2008 – 2009.
- BCB student admission committee, 2008 – 2009.
- Ph.D dissertation defense committee member for Yichao Wu (Statistics), 4/2006; Jeongyoun Ahn (Statistics), 6/2006; Lingsong Zhang (Statistics), 5/2007; Myung Hee Lee (Statistics), 7/2007; Xuxin Liu (Statistics), 7/2007; Suman Kumar Sen (Statistics), 7/2008; Xuanyao He (Statistics), 5/2009; Yufan Zhao (Biostatistics), 6/2009; Daniel Samarov (Statistics), 6/2009; Seo Young Park (Statistics), 4/2010; Seungen Lee (Biostatistics), 4/2010; Hongyuan Cao (Statistics), 6/2010; Xingye Qiao (Statistics), 7/2010; Andrey Shabalin (Statistics), 7/2010; Victor J. Weigman Jr. (Biology), 11/2010; Sungkyu Jung (Statistics), 4/2011; Brian J. Lopes (Statistics), 5/2011;

Hao Tang (Pharmacy), 6/2011; Chaeryon Kang (Biostatistics), 6/2011; Kwangbom Choi (Computer Science), 8/2011; Hanwen Huang (Statistics), 8/2011; Chris Cabanski (Statistics), 3/2012; Alicia Midland (Bioinformatics), 8/2012; Jeremy Sabourin (Statistics), 5/2013; Ruoqing Zhu (Biostatistics), 8/2013; Susan Wei (Statistics), 2/2014; Zhuzhu Zhang (BCB), 4/2014; Wei Zhao (Bioinformatics), 5/2014; Chong Zhang (Statistics), 5/2014; Sunyoung Shin (Statistics), 5/2014; Qiang Sun (Biostatistics), 5/2014; Michelle Miranda (Statistics), 5/2014; Guanhua Chen (Biostatistics), 6/2014; Di Miao (Statistics), 4/2015; Patrick Kimes (Statistics), 5/2015; Yuying Xie (Statistics), 5/2015; Liang Yin (Operations Research), 6/2015; Thomas Stewart (Biostatistics), 6/2015; Eunjee Lee (Statistics), 10/2015; Guan Yu, 3/2016; Qing Feng, 3/2016.

- Ph.D oral exam committee member for Jeongyoun Ahn (Statistics), 2/2005; Yichao Wu (Statistics), 10/2005; Victor J. Weigman Jr. (Biology), 1/2006, 7/2006; Lingsong Zhang (Statistics), 5/2006; Myung Hee Lee (Statistics), 8/2006; Xuxin Liu (Statistics), 10/2006; Brian J. Lopes (Statistics), 1/2007; Suman Kumar Sen (Statistics), 8/2007; Xuanyao He (Statistics), 5/2008; Hao Tang (Pharmacy), 3/2008, 6/2008; Yufan Zhao (Biostatistics), 8/2008; Hongyuan Cao (Statistics), 10/2008; Andrey Shabalin (Statistics), 12/2008; Daniel Samarov (Statistics), 1/2009; Sungkyu Jung (Statistics), 3/2009; Seo Young Park (Statistics), 3/2009; Xingye Qiao (Statistics), 4/2009; Seungen Lee (Biostatistics), 9/2009; Kwangbom Choi (Computer Science), 11/2009; Chaeryon Kang (Biostatistics), 12/2009; Chris Cabanski (Statistics), 11/2010; Wei Zhao (Bioinformatics), 3/2011, 7/2012, 5/2013, 3/2014; Ruoqing Zhu (Biostatistics), 5/2011; Petro Borysov (Statistics), 6/2011; Zhuzhu Zhang (Biology), 8/2011; Jeremy Sabourin (Statistics), 11/2011; Wonyul Lee (Statistics), 12/2011; Alicia Midland (Bioinformatics), 5/2012; Michelle Miranda (Statistics), 12/2012; Guanhua Chen (Biostatistics), 1/2013; Chong Zhang (Statistics), 4/2013; Sunyoung Shin (Statistics), 4/2013; Jenny Shi (Statistics), 4/2013; Susan Wei (Statistics), 4/2013; Patrick Kimes (Statistics), 11/2013; Qiang Sun (Biostatistics), 12/2013; Di Miao (Statistics), 2/2014; Yuying Xie (Statistics), 6/2014; Thomas Stewart (Biostatistics), 10/2014; Liang Yin (Operations Research), 11/2014; Guan Yu (Statistics), 11/2014; Xin Zhou (Biostatistics), 4/2015; 8/2016 Jingxiang Chen (Biostatistics); 8/2016 Erika Helgeson (Biostatistics).
- Ph.D written exam committee member for Victor J. Weigman Jr. (Biology), 1/2005.
- Master oral exam committee members for Xingye Qiao, 5/2007 (Statistics); Yaxiao Song, 10/2009 (Statistics); Yunyun Wu, 3/2010 (Statistics); Su Zhang, 6/2011 (Statistics); Dongqing Yu, 5/2012 (Statistics); Lu Huang, 2/2013 (Statistics); Ding Lan, 4/2014 (Statistics); Zhuzhu Zhang, 4/2014 (Statistics); Jean Ahn, 12/2014 (Statistics); Qing Duan 5/2015 (Statistics); Guosheng Zhang 12/2015 (Statistics); Mengqi Chen 12/2015 (Statistics).

- Statistics Ph.D comprehensive written exam (CWE) committee, 2009 – present.
- Southern Regional Council on Statistics (SRCOS) UNC representative, 2012 – 2014.
- Honor System Liaison for STOR, 2013 – 2014.
- Mathematical Decision Sciences (MDS) undergraduate advisor, 2008 – 2009.
- Course transfer oversight, Department of Statistics and OR, 2005 – 2012.
- Computer committee, Department of Statistics and OR, 2005 – 2009.
- Library liaison, 2004 – 2007.