Thomas C. M. Lee

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Department of Statistics
University of California at Davis
4118 Mathematical Sciences Building
One Shields Avenue
Davis, CA 95616

tcmlee@ucdavis.edu
Phone: +(530) 554 1357
FAX: +(530) 752 7099

Education

Bachelor of Applied Science (Mathematics) with Distinction, 1989 – 1991, University of Technology, Sydney (majors in Computing and Statistics).

Bachelor of Science (Honours) (Mathematics) with First Class Honours and University Medal, 1992, University of Technology, Sydney (major in Statistics).

Doctor of Philosophy, 1993 – 1997, Department of Statistics, Macquarie University. Thesis: *Some Models and Methods for Image Segmentation*

Professional Experience

Visiting Assistant Professor, Department of Statistics, University of Chicago, 09/1997 – 06/1999.

Assistant/Associate/Full Professor, Department of Statistics, Colorado State University, 07/1999 – 01/2010.

Visiting Associate Professor, Department of Statistics, Harvard University, 08/2005 – 12/2005.

Professor, Department of Statistics, Chinese University of Hong Kong, 01/2007 – 01/2010.

Professor, Department of Statistics, University of California at Davis, 01/2010 – present.

Chair, Department of Statistics, University of California at Davis, 07/2015 – 06/2018.

Honors and Awards

Outstanding First-Year Full-Time Student in B.App.Sc. (Mathematics), University of Technology, Sydney, 1989.

Best Graduating Student in B.App.Sc. (Mathematics), University of Technology, Sydney, 1991.

Best Student for Statistics Major in B.App.Sc. (Mathematics), University of Technology, Sydney, 1991.

Best Graduating Student in B.Sc. (Honours) (Mathematics), University of Technology, Sydney, 1992.

Best Contributed Student Paper, Statistics' 93, University of Wollongong, 1993.

Australian Postgraduate Research Award with Priority, 1993 – 1997.

CSIRO Division of Mathematics and Statistics Ph.D. top–up Scholarship, 1993 – 1997.

Elected Senior Member of the IEEE (Institute of Electrical and Electronics Engineers), 2005.

Elected Fellow of the American Statistical Association, 2009.

Elected Fellow of the Institute of Mathematical Statistics, 2014.

Awarded Grants: Completed

Colorado State University Career Enhancement Award. Total US$1,950, 01/2000 – 12/2001 (PI).

"Statistical Research in Weather Prediction and Climate Change", National Center for Atmospheric Research. Total US$84,475, 09/2001 – 05/2005 (PI).

"Collaborative Research: Self–Consistency and Wavelet Regressions with Irregular Designs", National Science Foundation, DMS – 0203901. Total US$99,000, 07/2002 – 06/2005 (PI).

"Self-Consistency for Nonparametric Incomplete Data Problems", The Chinese University of Hong Kong Direct Grant. Total HK$100,000 (∼US$12,820), 01/2007 – 12/2009 (PI).

"Generalized Fiducial Inferences for Parametric and Nonparametric Problems", National Science Foundation, DMS – 0707037. Total US$348,241, 08/2007 – 07/2010 (Co-PI, joint with Jan Hanng and Hari Iyer of Colorado State University).

"Data Sharpening for Nonparametric Statistical Inverse Problems", Hong Kong Research Grants Council, Competitive Earmarked Research Grant 401507. Total HK$267,000 (∼US$35,600), 09/2007 – 08/2010 (PI).

"Automatic Detection, Classification and Tracking of Sunspots from Magentograms", The Chinese University of Hong Kong Direct Grant. Total HK$50,000 (∼US$6,410), 03/2008 – 03/2010 (PI).

"Improved Confidence Intervals for Wavelet Shrinkage and Other Smoothing Problems", The Chinese University of Hong Kong Direct Grant. Total HK$80,000 (∼US$10,256), 01/2009 – 12/2010 (PI).

"Self-Consistency: A Unified Approach for Handling Missing Data in Nonparametric and Model Selection Problems", Hong Kong Research Grants Council, Competitive Earmarked Research Grant 401409. Total HK$358,800 (∼US$46,000), 09/2009 – 08/2011 (PI, withdrawn due to change of job).

"Collaborative Research: Generalized Fiducial Inference - An Emerging View", National Science Foundation, DMS – 1007520. Total US$125,000, 07/2010 – 06/2014 (PI).

"Advanced Statistical Methods and Computation for Emerging Challenges in Astrophysics and Astronomy", Subcontract to National Science Foundation, DMS – 1208791 and 1209232. Total US$46,274, 07/2012 – 06/2015 (PI).

"Functional Linear Models and Functional Time Series", National Science Foundation, DMS – 1209226. Total US$200,000, 09/2012 – 08/2015 (Co-PI, joint with Alexander Aue).

"Assimilative Mapping of Interhemispheric Polar Ionospheric Electodynamics", Subcontract from a National Science Foundation awarded to the University of Colorado, Boulder. Total US$59,589, 02/2016 – 02/2019 (PI).

Awarded Grants: Current

"RTG: Statistics in the 21st Century - Objects, Geometry and Computing", National Science Foundation, DMS – 1148643. Total US$1,999,855, 07/2012 – 06/2019 (Co-PI, joint with Prabir Burman, Hans-Georg Mueller, Jie Peng and Wolfgang Polonik).

"Collaborative Research: Principled Science-Driven Methods for Massive, Intricate, and Multifaceted Data in Astronomy and Astrophysics", National Science Foundation, DMS – 1513484. Total US$87,500, 07/2015 – 06/2019 (PI).

"Collaborative Research: Generalized Fiducial Inference for Massive Data and High Dimensional Problems", National Science Foundation, DMS – 1512945. Total US$150,000, 09/2015 – 08/2019 (PI).

"Collaborative Research: Highly Principled Data Science for Multi-Domain Astronomical Measurements and Analysis", National Science Foundation, DMS – 1811661. Total US$100,000, 08/2018 – 07/2021 (PI).

"Collaborative Research: Multi-scale Modeling of Non-Gaussian Random Fields", National Science Foundation, DMS – 1811405. Total US$150,000, 09/2018 – 08/2021 (Co-PI, joint with Debashis Paul).

Editorial Service

Associate Editor, *Journal of the Korean Statistical Society*, 01/2017 – present.

Editor-in-Chief, *Journal of Computational and Graphical Statistics*, 01/2013 – 12/2015 (Editor-Elect, 2012; Past-Editor 2016).

Associate Editor, *Bernoulli*, 01/2010 – 12/2012.

Associate Editor, *Journal of Computational and Graphical Statistics*, 10/2006 – 06/2012; 01/2017 – present.

Associate Editor, *Statistica Sinica*, 08/2005 – 07/2011.

Co-Editor, Special Issue "Multiscale Methods and Statistics: A Productive Marriage", *Statistica Sinica*, 08/2007 – 02/2008.

National Science Foundation Panelist

Reviewed over a hundred manuscripts or proposals for

The Australian Research Council Discovery Projects, *The National Science Foundation*, *The Research Grant Council of Hong Kong*,

and the following 40 journals:

The American Statistician, *The Annals of Applied Statistics*, *The Annals of Statistics*, *The Australian and New Zealand Journal of Statistics*, *Biometrics*, *Biometrika*, *Chinese Science Bulletin*, *Communications in Statistics – Simulation and Computation*, *Communications in Statistics – Theory and Methods*, *Computational Statistics and Data Analysis*, *Environmetrics*, *ESAIM: Probability and Statistics*, *IEE Proceedings of Vision, Image and Signal Processing*, *IEEE Signal Processing Letters*, *IEEE Transactions on Image Processing*, *IEEE Transactions on Pattern Analysis and Machine Intelligence*, *IEEE Transactions on Signal Processing*, *The Journal of Applied Statistics*, *The Journal of the American Statistical Association*, *The Journal of Computational and Graphical Statistics*, *The Journal of Multivariate Analysis*, *The Journal of Nonparametric Statistics*, *The Journal of the Optical Society of America*, *The Journal of the Royal Statistical Society Series B*, *The Journal of Statistical Computation and Simulation*, *The Journal of Statistical Planning and Inference*, *The Journal of Time Series Analysis*, *Machine Learning*, *Metrika*, *Pakistan Journal of Statistics*, *Pattern Recognition Letters*, *Sankhya*, *The Scandinavian Journal of Statistics*, *Signal Processing*, *Signal, Image and Video Processing*, *Statistical Science*, *Statistica Sinica*, *Statistics and Probability Letters*, *Statistics in Medicine* and *Technometrics*.

Promotion and Tenure Reviews

Outside reviewer for thirteen tenure cases and four cases of promotion to full professor

Offices in Scholarly Organizations

Chair, Committee on Publications, the Institute of Mathematical Statistics, 2019.

Member, Search Committee for Review Editor for the *Journal of American Statistical Association*, the American Statistical Association, 2019.

Program Chair, Astrostatistics Interest Group, the American Statistical Association, 2017.

Co-founders, Astrostatistics Interest Group, the American Statistical Association, 2016.

Chair, Search Committee for Review Editor for the *Journal of American Statistical Association*, the American Statistical Association, 2016.

Program Chair, Section on Nonparametrics, the American Statistical Association, 2012 (Program Chair–Elect, 2011).

Council of Sections Representative, Section on Nonparametrics, the American Statistical Association, 2007 – 2009.

Thesis Advising

Ph.D. Advisees at Colorado State University:

Eric Gilleland (Ph.D., 2005; co-supervision with Douglas Nychka). *Statistical Models for Quantifying the Spatial Distribution of Seasonally derived Ozone Standards.* Now a Project Scientist at National Center for Atmospheric Research (NCAR).

Curtis Storlie (Ph.D., 2005; co-supervision with Jan Hannig). *Tracking of Multiple Merging and Splitting Targets with Application to Convective Systems.* Now an Associate Professor of Biostatistics at Mayo Clinic.

Kelly McConville (Ph.D., 2011; co-supervision with Jay Breidt). *Improved Estimation for Complex Surveys Using Modern Regression Techniques.* Now an Assistant Professor of Statistics at Reed College.

Ph.D. Advisees at University of California at Davis:

Ming Zhong (Ph.D., 2012; co-supervision with Alexander Aue). *Break Point Estimation and Variable Selection in Quantile Regressions.* Now a Data Scientist at Microsoft.

Raymond K. W. Wong (Ph.D., 2014). *On Some Complex and Massive Data Problems.* Now an Assistant Professor of Statistics at Texas A&M University.

Randy C. S. Lai (Ph.D., 2015). *Generalized Fiducial Inference and its Applications to High Dimensional and Massive Data Problems.* Now an Assistant Professor of Statistics at the University of Maine.

Rex Cheung (Ph.D., 2017; co-supervision with Alexander Aue). *Statistical Machine Learning Applications in Time Series, Network, and Partition-wise Models.* Now an Assistant Professor of Decision Sciences at San Francisco State University.

Minjie Fan (Ph.D., 2017; co-supervision with Debashis Paul). *Modeling Vectorial and Non-Gaussian Random Fields on a Sphere.* Now a Quantitative Analyst at Google Research.

Qi (Estella) Gao (Ph.D., 2017). *Some Contributions to Statistical Signal Processing and Machine Learning.* Now a Data Scientist at Stitch Fix.

Justin Wang (Ph.D., 2018). *Statistical Machine Learning Approaches in Photographic and Social Science Applications.* Now a Research Scientist at Amazon.

Chunzhe Zhang (Ph.D., 2018). *Uncertainty Quantification and Sensitivity Analysis in Statistical Machine Learning.* Now a Data Scientist at LinkedIn.

Seung Yong Hwang (Ph.D., expected 2020).

Amy Taeyen Kim (Ph.D., expected 2020; co-supervision with Debashis Paul).

Yao Li (Ph.D., expected 2020; co-supervision with Cho-Jui Hsieh).

Franco Liang (Ph.D., expected 2020; co-supervision with Cho-Jui Hsieh).

Yi Su (Ph.D., expected 2020).

Tongyi Tang (Ph.D., expected 2021; co-supervision with Debashis Paul).

Zhenyu Wei (Ph.D., expected 2021).

Suofei (Sophia) Wu (Ph.D., expected 2019).

Cong Xu (Ph.D., expected 2021).

Refereed Publications in Scholarly Journals

1. Lee, Thomas C. M. (1997), "A Simple Span Selector for Periodogram Smoothing", *Biometrika* **84**, 965–969.
2. Lee, Thomas C. M. and Berman, Mark (1997), "Nonparametric Estimation and Simulation of Two–Dimensional Gaussian Image Textures", *Graphical Models and Image Processing* **59**, 434–445.
3. Hudson, H. Malcolm and Lee, Thomas C. M. (1998), "Maximum Likelihood Restoration and Choice of Smoothing Parameter in Deconvolution of Image Data subject to Poisson Noise", *Computational Statistics and Data Analysis* **26**, 393–410.
4. Lee, Thomas C. M. (1998), "Segmenting Images Corrupted by Correlated Noise", *IEEE Transactions on Pattern Analysis and Machine Intelligence* **20**, 481–492.
5. Lee, Thomas C. M. (1999), "A Stochastic Tessellation for Modelling and Simulating Colour Aluminium Grain Images", *Journal of Microscopy* **193**, 109-126.
6. Lee, Thomas C. M. and Solo, Victor (1999), "Bandwidth Selection for Local Linear Regression: A Simulation Study", *Computational Statistics* **14**, 515–532.
7. Lee, Thomas C. M. (2000), "A Minimum Description Length Based Image Segmentation Procedure, and Its Comparison with a Cross–Validation Based Segmentation Procedure", *Journal of the American Statistical Association* **95**, 259-270.
8. Lee, Thomas C. M. (2000), "Regression Spline Smoothing using the Minimum Description Length Principle", *Statistics & Probability Letters* **48**, 71-82.
9. Talbot, Hugues; Lee, Thomas C. M.; Jeulin, Dominique; Hanton, Daniel and Hobbs, Linn W. (2000), "Image Analysis of Insulation Mineral Fibres", *Journal of Microscopy* **200**, 250-267.
10. Lee, Thomas C. M. (2001), "A Stabilized Bandwidth Selection Method for Kernel Smoothing of the Periodogram", *Signal Processing* **81**, 419-430.
11. Lee, Thomas C. M. (2001), "An Introduction to Coding Theory and the Two-Part Minimum Description Length Principle", *International Statistical Review* **69**, 169-183.
12. Lee, Thomas C. M. (2002), "Automatic Smoothing for Discontinuous Regression Functions", *Statistica Sinica* **12**, 823-842.

13. Lee, Thomas C. M. (2002), "On Algorithms for Ordinary Least Squares Regression Spline Fitting: A Comparative Study", *Journal of Statistical Computation and Simulation* **72**, 647-663.

14. Lee, Thomas C. M. (2002), "Tree–Based Wavelet Regression for Correlated Data using the Minimum Description Length Principle", *Australian and New Zealand Journal of Statistics* **44**, 23-39.

15. Lee, Thomas C. M. (2003), "Smoothing Parameter Selection for Smoothing Splines: A Simulation Study", *Computational Statistics and Data Analysis* **42**, 139-148.

16. Lee, Thomas C. M. and Wong, Tan F. (2003), "Nonparametric Log–Spectrum Estimation using Disconnected Regression Splines and Genetic Algorithms", *Signal Processing* **83**, 79-90.

17. Lee, Thomas C. M. (2004), "Improved Smoothing Spline Regression by Combining Estimates of Different Smoothness", *Statistics & Probability Letters* **67**, 133-140.

18. Hannig, Jan and Lee, Thomas C. M. (2004), "Kernel Smoothing of Periodograms under Kullback–Leibler Discrepancy", *Signal Processing* **84**, 1255-1266.

19. Lee, Thomas C. M. and Oh, Hee-Seok (2004), "Automatic Polynomial Wavelet Regression", *Statistics and Computing* **14**, 337-341.

20. Craiu, Radu V. and Lee, Thomas C. M. (2005), "Model Selection for the Competing Risks Model With and Without Masking", *Technometrics* **47**, 457-467.

21. Oh, Hee-Seok and Lee, Thomas C. M. (2005), "Hybrid Local Polynomial Wavelet Shrinkage: Wavelet Regression with Automatic Boundary Adjustment", *Computational Statistics and Data Analysis* **48**, 809-819.

22. Craiu, Radu V. and Lee, Thomas C. M. (2006), "Pattern Generation using Likelihood Inference for Cellular Automata", *IEEE Transactions on Image Processing* **15**, 1718-1727.

23. Davis, Richard A.; Lee, Thomas C. M. and Rodriguez-Yam, Gabriel A. (2006), "Structural Break Estimation for Non-stationary Time Series Models", *Journal of the American Statistical Association* **101**, 223-239.

24. Hannig, Jan and Lee, Thomas C. M. (2006), "On Poisson Signal Estimation under Kullback–Leibler Discrepancy and Squared Risk", *Journal of Statistical Planning and Inference* **136**, 882-908.

25. Hannig, Jan and Lee, Thomas C. M. (2006), "Robust SiZer for Exploration of Regression Structures and Outlier Detection", *Journal of Computational and Graphical Statistics* **15**, 101-117.

26. Huang, Hsin-Cheng and Lee, Thomas C. M. (2006), "Data Adaptive Median Filters for Signal and Image Denoising using a Generalized SURE Criterion", *IEEE Signal Processing Letters* **13**, 561-564.

27. Wang, Haonan and Lee, Thomas C. M. (2006), "Automatic Parameter Selection for a k-Segments Algorithm for Computing Principal Curves", *Pattern Recognition Letters* **27**, 1142-1150.

28. Yao, Fang and Lee, Thomas C. M. (2006), "Penalized Spline Models for Functional Principal Component Analysis", *Journal of the Royal Statistical Society Series B* **68**, 3-25.

29. Lee, Thomas C. M. and Oh, Hee-Seok (2007), "Robust Penalized Regression Spline Fitting with Application to Additive Mixed Modeling", *Computational Statistics* **22**, 159-171.

30. Oh, Hee-Seok; Nychka, Douglas W. and Lee, Thomas C. M. (2007), "The Role of Pseudo Data for Robust Smoothing with Application to Wavelet Regression", *Biometrika* **94**, 893-904.

31. Shen, Haipeng; Zhu, Zhengyuan and Lee, Thomas C. M. (2007), "Robust Estimation of Self-similarity Parameter in Network Traffic using Wavelet Transform", *Signal Processing* **87**, 2111-2124.

32. Whitaker, Stephan and Lee, Thomas C. M. (2007), "An Effective Method for Selecting the Number of Components in Density Mixtures", *Journal of Statistical Computation and Simulation* **77**, 907-914.

33. Yao, Fang and Lee, Thomas C. M. (2007), "Spectral Density Estimation Using Sharpened Periodograms", *IEEE Transactions on Signal Processing* **55**, 4711-4716.

34. Davis, Richard A.; Lee, Thomas C. M. and Rodriguez-Yam, Gabriel A. (2008), "Break Detection for a Class of Nonlinear Time Series Models", *Journal of Time Series Analysis* **29**, 834-867.

35. Gilleland, Eric; Lee, Thomas C. M.; Halley-Gotway, John; Bullock, Randy G. and Brown, Barb (2008), "Computationally Efficient Spatial Forecast Verification Using Baddeley's Delta Image Metric", *Monthly Weather Forecast* **136**, 1747-1757.

36. Wang, Haonan and Lee, Thomas C. M. (2008), "Extraction of Curvilinear Features from Noisy Point Patterns using Principal Curves", *Pattern Recognition Letters* **29**, 2078-2084

37. Whitcher, Brandon; Lee, Thomas C. M.; Weiss, Jeffrey B.; Nychka, Douglas W. and Hoar, Timothy J. (2008), "A Multiresolution Census Algorithm for Calculating Vortex Statistics in Turbulent Flows", *Journal of the Royal Statistical Society Series C (Applied Statistics)* **57**, 293-312.

38. Yao, Fang and Lee, Thomas C. M. (2008), "On Placement of Knots for Penalized Spline Regression", *Journal of the Korean Statistical Society* **37**, 259-267.

39. Hannig, Jan and Lee, Thomas C. M. (2009), "Generalized Fiducial Inference for Wavelet Regression", *Biometrika* **96**, 847-860.

40. Storlie, Curtis B.; Lee, Thomas C. M.; Hannig, Jan and Nychka, Douglas W. (2009), "Tracking of Multiple Merging and Splitting Targets: A Statistical Perspective (with Commentaries)", Editor Invited Thesis Paper, *Statistica Sinica* **19**, 1-52.

41. Yao, Fang and Lee, Thomas C. M. (2009), "Automatic and Asymptotically Optimal Data Sharpening for Nonparametric Regression", *Journal of Statistical Planning and Inference* **139**, 4017-4030.

42. Chan, Ngai-Hang; Lee, Thomas C. M. and Peng, Liang (2010), "On Nonparametric Local Inference for Density Estimation", *Computational Statistics and Data Analysis* **54**, 509-515.

43. Lai, Randy C. S.; Lee, Thomas C. M.; Wong, Raymond K. W. and Yao, Fang (2010), "Nonparametric Cepstrum Estimation via Optimal Risk Smoothing", *IEEE Transactions on Signal Processing* **58**, 1507-1514.

44. Wong, Raymond K. W.; Lai, Randy C. S. and Lee, Thomas C. M. (2010), "Structural Break Estimation of Noisy Sinusoidal Signals", *Signal Processing* **90**, 303-312.

45. Lu, QiQi; Lund, Robert and Lee, Thomas C. M. (2010), "An MDL Approach to the Climate Segmentation Problem", *Annals of Applied Statistics* **4**, 299-319.

46. Park, Cheolwoo; Lee, Thomas C. M. and Hannig, Jan (2010), "Multiscale Exploratory Analysis of Regression Quantiles using Quantile SiZer", *Journal of Computational and Graphical Statistics* **19**, 497-513.

47. Oh, Hee-Seok; Lee, Thomas C. M. and Nychka, Douglas W. (2011), "Fast Nonparametric Quantile Regression with Arbitrary Smoothing Methods", *Journal of Computational and Graphical Statistics* **20**, 510-526.

48. Yao, Fang; Fu, Yuejiao and Lee, Thomas C. M. (2011), "Functional Mixture Regression", *Biostatistics* **12**, 341-353.

49. Storlie, Curtis B.; Hannig, Jan and Lee, Thomas C. M. (2011), "Statistical Consistency of the Data Association Problem in Multiple Target Tracking", *Electronic Journal of Statistics* **5**, 1227-1275.

50. Aue, Alexander and Lee, Thomas C. M. (2011), "On Image Segmentation using Information Theoretic Criteria", *Annals of Statistics* **39**, 2912-2935.

51. Aue, Alexander; Lee, Thomas C. M. and Wang, Haonan (2012), "Local Bandwidth Selection via Second Derivative Segmentation", *Electronic Journal of Statistics* **6**, 478-500.

52. Lai, Randy C. S.; Huang, Hsin-Cheng and Lee, Thomas C. M. (2012), "Fixed and Random Effects Selection in Nonparametric Additive Mixed Models", *Electronic Journal of Statistics* **6**, 810-842.

53. Nosedal-Sancheza, Alvaro; Storlie, Curtis B.; Lee, Thomas C. M. and Christensen, Ronald (2012), "Reproducing Kernel Hilbert Spaces for Penalized Regression: A Tutorial", *The American Statistician* **66**, 50-60.

54. Hannig, Jan; Lee, Thomas C. M. and Park, Cheolwoo (2013), "Metrics for SiZer Map Comparison", *Stat* **2**, 49-60.

55. Stenning, David C.; Lee, Thomas C. M.; van Dyk, David A.; Kashyap, Vinay; Sandell, Julia and Young, C. Alex (2013), "Morphological Feature Extraction for Statistical Learning with Applications to Solar Image Data", *Statistical Analysis and Data Mining* **6**, Special Issue on Statistical Learning, 329-345. (Invited by the editor.)

56. Aue, Alexander; Cheung, Rex C. Y.; Lee, Thomas C. M. and Zhong, Ming (2014), "Segmented Model Selection in Quantile Regression using the Minimum Description Length Principle", *Journal of the American Statistical Association* **109**, 1241-1256.

57. Han, Shengtong; Wong, Raymond K. W.; Lee, Thomas C. M.; Shen, Linghao; Li, Shuo-Yen R. and Fan, Xiaodan (2014), "A Full Bayesian Approach for Boolean Genetic Network Inference", *PLoS ONE* 9(12): e115806.

58. Hannig, Jan; Lai, Randy C. S. and Lee, Thomas C. M. (2014), "Computational Issues of Generalized Fiducial Inference", *Computational Statistics and Data Analysis* **71**, Special Issue on Imprecision in Statistical Data Analysis, 849-858. (Invited by guest editors.)

59. Wong, Raymond K. W.; Baines, Paul; Aue, Alexander; Lee, Thomas C. M. and Kashyap, Vinay L. (2014), "Automatic Estimation of Flux Distributions of Astrophysical Source Populations", *Annals of Applied Statistics* **8**, 1690-1712.

60. Wong, Raymond K. W.; Yao, Fang and Lee, Thomas C. M. (2014), "Robust Estimation for Generalized Additive Models", *Journal of Computational and Graphical Statistics* **23**, 270-289.

61. Fan, Minjie and Lee, Thomas C. M. (2015), "On Variants of Seeded Region Growing", *IET Image Processing* **9**, 478-485.

62. Lai, Randy C. S.; Hannig, Jan and Lee, Thomas C. M. (2015), "Generalized Fiducial Inference for Ultrahigh Dimensional Regression", *Journal of the American Statistical Association* **110**, 760-772.

63. Yau, Chun Yip; Tang, Chong Man and Lee, Thomas C. M. (2015), "Estimation of Multiple-Regime Threshold Autoregressive Models with Structural Breaks", *Journal of the American Statistical Association* **110**, 1175-1186.

64. Gao, Qi and Lee, Thomas C. M. (2016), "High Dimensional Variable Selection in Regression and Classification with Missing Data", *Signal Processing* **131**, 1-7.

65. Hannig, Jan; Iyer, Hari; Lai, Randy C. S. and Lee, Thomas C. M. (2016), "Generalized Fiducial Inference: A Review and New Results", *Journal of the American Statistical Association* **111**, 1346-1361.

66. Huang, Hsin-Cheng and Lee, Thomas C. M. (2016), "High-Dimensional Covariance Estimation under the Presence of Outliers", *Statistics and Its Interface* **9**, Special Issue on Statistical and Computational Theory and Methodology for Big Data, 461-468. (Invited by guest editors.)

67. Wong, Raymond K. W.; Kashyap, Vinay L.; Lee, Thomas C. M. and van Dyk, David A. (2016), "Detecting Abrupt Changes in the Spectra of High-Energy Astrophysical Sources", *Annals of Applied Statistics* **10**, 1107-1134.

68. Wong, Raymond K. W.; Lee, Thomas C. M.; Paul, Debashis and Peng, Jie (2016), "Fiber Direction Estimation, Smoothing and Tracking in Diffusion MRI (with Discussions)", *Annals of Applied Statistics* **10**, 1137-1169.

69. Aue, Alexander; Cheung, Rex C. Y.; Lee, Thomas C. M. and Zhong, Ming (2017), "Piecewise Quantile Autoregressive Modeling For Non-stationary Time Series", *Bernoulli* **23**, 1-22.

70. Cheung, Rex C. Y.; Aue, Alexander and Lee, Thomas C. M. (2017), "Consistent Estimation for Partition-wise Regression and Classification Models", *IEEE Transactions on Signal Processing* **65**, 3662-3674.

71. Gao, Qi; Lee, Thomas C. M.; Yau, Chun Yip (2017), "Nonparametric Modeling and Break Point Detection for Time Series Signal of Counts", *Signal Processing* **138**, 307-312.

72. McConville, Kelly S.; Breidt, F. Jay; Lee, Thomas C. M. and Moisen, Gretchen G. (2017), "Model-Assisted Survey Regression Estimation with the Lasso", *Journal of Survey Statistics and Methodology* **5**, 131-158.

73. Wong, Raymond K. W. and Lee, Thomas C. M. (2017), "Matrix Completion with Noisy Entries and Outliers", *Journal of Machine Learning Research* **18**, 1-25.

74. Wong, Raymond K. W.; Storlie, Curtis B. and Lee, Thomas C. M. (2017), "A Frequentist Approach to Computer Model Calibration", *Journal of the Royal Statistical Society Series B* **79**, 635-648.

75. Fan, Minjie; Paul, Debashis; Lee, Thomas C. M. and Matsuo, Tomoko (2018), "A Multi-Resolution Model for Non-Gaussian Random Fields on a Sphere with Application to Ionospheric Electrostatic Potentials", *Annals of Applied Statistics* **12**, 459-489.

76. Fan, Minjie; Paul, Debashis; Lee, Thomas C. M. and Matsuo, Tomoko (2018), "Modeling Tangential Vector Fields on a Sphere", *Journal of the American Statistical Association* **113**, 1625-1636.

77. Wang, Justin; Wong, Raymond K. W. and Lee, Thomas C. M. (2019+), "Locally Linear Embedding with Additive Noise", *Pattern Recognition Letters*, to appear.

Submitted for Publication

78. Gao, Qi; Lai, Randy C. S. and Lee, Thomas C. M. (2018), "Uncertainty Quantification for High Dimensional Sparse Nonparametric Additive Models", submitted to *Technometrics*, revision invited.

79. Shi, W. Jenny; Hannig, J.; Lai, Randy C. S. and Lee, Thomas C. M. (2018), "Covariance Estimation via Fiducial Inference", submitted to the *Electronic Journal of Statistics*, revision invited.

80. Wang, Justin; Lee, Marie A. and Lee, Thomas C. M. (2018), "When to Break the Rules? A Statistical Analysis of Aesthetics in Photographs", submitted to the *Annals of Applied Statistics*.

81. Liang, Yuefeng; Hsieh, Cho-Jui and Lee, Thomas C. M. (2019), "Block-wise Partitioning for Extreme Multi-label Classification", submitted to the 36th International Conference on Machine Learning (ICML).

82. Su, Yi; Wong, Raymond K. W. and Lee, Thomas C. M. (2019), "Network Estimation via Graphon with Node Features", submitted to the *IEEE Transactions on Network Science and Engineering*.

Refereed Conference Publications

83. Lee, Thomas C. M. and Cowan, Richard (1994), "A Stochastic Tessellation of Digital Space". In J. Serra and P. Soille, editors, *Mathematical Morphology and Its Applications to Image Processing*, 217–224, Kluwer Academic Publishers.

84. Lee, Thomas C. M. and Talbot, Hugues (1995), "A Fast Method for Detecting and Matching Linear Features in Images", *Proceedings of DICTA–95, Digital Image Computing: Techniques and Applications*, Brisbane, 649–654.

85. Lee, Thomas C. M. (1997), "Segmenting Images Corrupted by Correlated Noise", *Proceedings of the IEEE 1997 International Conference on Image Processing*, Volume 1, 247–250.

86. Lee, Thomas C. M. and Talbot, Hugues (1997), "Automatic Reconnection of Linear Segments by the Minimum Description Length Principle", *Proceedings of DICTA–97, Digital Image Computing: Techniques and Applications*, 555–560.

87. Lee, Thomas C. M. and Meng, Xiao-Li (2005), "A Self-Consistent Wavelet Method for Denoising Images with Missing Pixels", *Proceedings of the 30th IEEE International Conference on Acoustics, Speech, and Signal Processing*, Volume II, 41–44.

88. Davis, Richard A.; Lee, Thomas C. M. and Rodriguez-Yam, Gabriel A. (2005), "Structural Breaks Estimation for Non-stationary Time Series Signals", *Proceedings of the 2005 IEEE Workshop on Statistical Signal Processing* (in CD-ROM).

89. Lee, Thomas C. M. and Wang, Haonan (2006), "On a k-Segments Algorithm for Computing Principal Curves", *Proceedings of the 2006 IEEE Southwest Symposium on Image Analysis and Interpretation*, 183-187.

90. Wong, Tan F. and Lee, Thomas C. M. (2006), "Multipath Model Selection for UWB Channels", *Proceedings of the 2006 IEEE International Conference on Ultra-Wideband* (in CD-ROM).

91. Wang, Haonan and Lee, Thomas C. M. (2007), "Curvilinear Feature Extraction for Noisy Point Pattern Images", *Proceedings of the 2007 IEEE International Conference on Multimedia & Expo* (in CD-ROM).

92. Lee, Thomas C. M. and Zhu, Zhengyuan (2009), "Nonparametric Spectral Density Estimation with Missing Observations", *Proceedings of the 34th IEEE International Conference on Acoustics, Speech, and Signal Processing* (in CD-ROM).

93. Aue, Alexander and Lee, Thomas C. M. (2010), "Statistically Consistent Image Segmentation", *Proceedings of the IEEE 2010 International Conference on Image Processing*.

94. Huang, Hsin-Cheng and Lee, Thomas C. M. (2010), "Stabilized Thresholding with Generalized SURE for Image Denoising", *Proceedings of the IEEE 2010 International Conference on Image Processing*.

Refereed Book Chapters

95. Aue, Alexander and Lee, Thomas C. M. (2011), "Fast Scatterplot Smoothing Using Blockwise Least Squares Fitting", in *Nonparametric Statistical Methods and Related Topics*, A Festschrift in Honor of Professor P K Bhattacharya on the Occasion of His 80th Birthday, edited by J. Jiang, G. G. Roussas and F. J. Samaniego, 299-314, World Scientific Press.

96. Hannig, Jan; Iyer, Hari and Lee, Thomas C. M. (2011), "Fiducial Inference", in *International Encyclopedia of Statistical Science*, edited by Miodrag Lovric, 515-519, Springer.

97. Stenning, David; Kashyap, Vinay; Lee, Thomas C. M.; van Dyk, David A. and Young, C. Alexander (2012), "Morphological Image Analysis and Sunspot Classification", in *Statistical Challenges in Modern Astronomy V*, edited by G. Jogesh Babu and Eric D. Feigelson, 329-342, Springer.

Invited Conference Publications

98. Lee, Thomas C. M. (1999), "Curve Estimation using Wavelets and MDL", *Proceedings of the 52nd Session of the ISI*.

99. Storlie, Curtis; Davis, Chris; Hoar, Timothy; Lee, Thomas C. M.; Nychka, Douglas; Weiss, Jeffrey and Whitcher, Brandon (2004), "Identifying and Tracking Turbulence Structures", *Proceedings of the 38th Asilomar Conference on Signals, Systems, and Computers*, 1700–1704.

100. Wong, Tan F. and Lee, Thomas C. M. (2006), "Multipath Model Selection for UWB Channels", *Proceedings of the 2006 IEEE International Conference on Ultra Wideband*, 85–89 (in CD-ROM).

Discussions, Non–refereed Conference Publications or Book Reviews

101. Hudson, H. Malcolm and Lee, Thomas C. M. (1995), Invited discussion on "The Fast Monte–Carlo Cross–Validation and C_L Procedures: Comments, New Results and Application to Image Recovery Problems" by D. A. Girard, *Computational Statistics* **10**, 239–241.

102. Lee, Thomas C. M. and Berman, Mark (1996), "Nonparametric Estimation and Simulation of Two–Dimensional Gaussian Image Textures", *Proceedings of the Interface 28*, 115–120.

103. Lee, Thomas C. M. (1999), "Robust Fitting of Discontinuous Regression Functions", *Proceedings of the Interface 31*, 476–481.

104. Lee, Thomas C. M. (2009), Invited discussion on "Forecasting functional time series" by R. J. Hyndman & H. L. Shang, *Journal of the Korean Statistical Society* **38**, 217.

105. Lee, Thomas C. M. (2012), Invited discussion on "Time-Threshold Maps: using information from wavelet reconstructions with all threshold values simultaneously" by P. Fryzlewicz, *Journal of the Korean Statistical Society* **41**, 169-170.

Invited Presentations and Colloquia

1. "An Introduction to Wavelet Analysis and Its Applications", 02/1994. Department of Statistics, Macquarie University, Sydney, Australia.
2. "An Introduction to the Minimum Description Length Principle", 04/1997. Department of Statistics, University of New South Wales, Sydney, Australia.
3. "The Modelling of Aluminium Grain Images", 05/1997. Department of Mathematics, Hong Kong University of Science and Technology, Hong Kong.
4. "The Modelling of Aluminium Grain Images", 08/1997. School of Mathematical Sciences, University of Technology, Sydney, Australia.
5. "The Minimum Description Length Principle, and Its Applications to Two Imaging Problems", 01/1998. Department of Statistics, University of Chicago, Chicago, IL.
6. "Statistical Solutions to Three Practical Imaging Problems", 02/1998. Department of Statistics, Stanford University, Stanford, CA.
7. "Curve Estimation using Wavelets and MDL", 06/1999. The 52nd Session of the ISI, Helsinki, Finland.
8. "The Minimum Description Length Principle, and Its Applications to Two Imaging Problems", 02/1999. Department of Mathematics and Statistics, University of Maryland, Baltimore County, MD.
9. "The Minimum Description Length Principle, and Its Applications to Two Imaging Problems", 02/1999. Department of Statistics, Colorado State University, Fort Collins, CO.
10. "The Minimum Description Length Principle, and Its Applications to Two Imaging Problems", 11/1999. Geostatistical Project, National Center for Atmospheric Research, Boulder, CO.
11. "Statistical Solutions to Three Practical Imaging Problems", 03/2000. Department of Statistics, University of Wyoming, Laramie, WY.
12. "Robust Automatic Smoothing of Discontinuous Regression Functions", 04/2000. Colorado-Wyoming ASA Chapter Meeting, Boulder, CO.
13. "Robust Automatic Smoothing of Discontinuous Regression Functions", 07/2000. Department of Statistics, University of Hong Kong, Hong Kong.
14. "Modelling Aluminium Grain Images", 10/2000. Department of Statistics, Colorado State University, Fort Collins, CO.

15. "Statistical Solutions to Three Practical Imaging Problems", 10/2001. Department of Statistics, Harvard University, Boston, MA.
16. "Statistical Solutions to Three Practical Imaging Problems", 11/2001. Department of Applied Statistics, University of Colorado, Boulder, CO.
17. "Identifying and Tracking Turbulence Structure", 09/2003. Department of Mathematical and Statistical Sciences, University of Alberta, Edmonton, Canada.
18. "Some Contributions to Robust Nonparametric Smoothing", 10/2003. Department of Statistics, University of Toronto, Toronto, Canada.
19. "Identifying and Tracking Turbulence Structures", 06/2004. The 6th ICSA International Conference, National University of Singapore, Singapore.
20. "Identifying and Tracking Turbulence Structures", 11/2004. The 38th Asilomar Conference on Signals, Systems, and Computers, Asilomar, CA.
21. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 03/2005. Department of Statistics, University of California, Irvine, CA.
22. "Pattern Generation using Likelihood Inference for Cellular Automata", 06/2005. The Fourth Graybill Conference: *Statistics in Information Technology*, Fort Collins, CO.
23. "Identifying and Tracking Turbulence Structures", 07/2005. Joint meeting of CSPS and IMS, Beijing, China.
24. "Some Contributions to Robust Nonparametric Smoothing", 07/2005. Institute of Statistical Science, Academia Sinica, Taiwan.
25. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 07/2005. Institute of Statistics, National Tsing Hua University, Taiwan.
26. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 10/2005. Department of Statistics and Operations Research, University of North Carolina at Chapel Hill, Chapel Hill, NC.
27. "Self-Consistency and Irregularly Spaced Data", 10/2005. Radcliffe Workshop on *Estimations Are Approximations: Multiresolution Modeling & Statistical Inference*, Boston, MA.
28. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 10/2005. Department of Statistics, Harvard University, Boston, MA.
29. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 11/2005. Department of Statistics, Chinese University of Hong Kong, Hong Kong.
30. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 11/2005. Department of Statistics, Seoul National University, Korea.
31. "Some Contributions to Robust Nonparametric Smoothing", 02/2006. Department of Statistics, University of California, Irvine, CA.
32. "Identifying and Tracking Turbulence Structures", 03/2006. Department of Statistics, Chinese University of Hong Kong, Hong Kong.

33. "Pattern Generation using Likelihood Inference for Cellular Automata", 04/2006. Colorado-Wyoming ASA Chapter Meeting, Boulder, CO.
34. "Identifying and Tracking Turbulence Structures", 05/2006. Department of Statistics, University of California, Los Angeles, CA.
35. "Fiducial Confidence Intervals for Wavelet Regression", 06/2006. The Fifth Graybill Conference: *Multiscale Methods and Statistics: A Productive Marriage*, Fort Collins, CO.
36. "Fiducial Confidence Intervals for Wavelet Regression", 10/2006. Department of Statistics, Columbia University, New York, NY.
37. "Structural Break Estimation for Non-Stationary Time Series Models", 10/2006. INFORMS Annual Meeting 2006, Pittsburgh, PA.
38. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 10/2006. Department of Mathematical Sciences, Clemson University, Clemson, SC.
39. "Fiducial Confidence Intervals for Wavelet Regression", 11/2006. Department of Statistics, Texas A&M University, College Station, TX.
40. "Non-Stationary Signal Segmentation and Cellular Automata Pattern Generation using Minimum Description Length", 03/2007. Department of Mathematics, Chinese University of Hong Kong, Hong Kong.
41. "Generalized Fiducial Inference for Sparse High Dimensional Systems with Application to Wavelet Regression", 06/2007. The 2007 Taipei International Statistical Symposium and ICSA International Conference, Taipei, Taiwan.
42. "Functional Mixture Regression", 02/2008. Workshop on High-dimensional Data Analysis, Institute of Mathematical Sciences, National University of Singapore, Singapore.
43. "Curve and Surface Fitting: From the Viewpoint of Manifold Recovery", 08/2008. Joint Statistical Meetings, Denver, CO.
44. "Self-Consistency: A General Recipe for Wavelet Estimation with Irregularly-spaced and/or Incomplete Data", 12/2008. IASC 2008, Yokohama, Japan.
45. "Tracking of Multiple Merging and Splitting Targets with Application to Convective Storms and Turbulence Structures", 01/2009. Department of Statistics, University of California, Davis, CA.
46. "What Can One Do When EM Fails – Handling Missing Data with Non-parametric and Semi-parametric Models", 04/2009. Institute of Statistical Science, Academia Sinica, Taiwan.
47. "Nonparametric Spectral Density Estimation with Missing Data", 06/2009. IMS-APRM (IMS Asia Pacific Rim Meetings), Seoul, Korea.
48. "Generalized Fiducial Inference and Its Application to Wavelet Regression", 10/2010. Department of Statistics, University of California, Davis, CA.
49. "Generalized Fiducial Inference and Its Application to Wavelet Regression", 01/2011. School of Mathematics, Georgia Institute of Technology, Atlanta, GA.
50. "Automatic Detection and Classification of Sunspot Images", 06/2011. Statistical Challenges in Modern Astronomy V, State College, PA.

51. "Generalized Fiducial Inference for High Dimensional Data Analysis", 05/2012. Workshop on Analysis of High-Dimensional and Functional Data in Honor of Peter Hall, Davis, CA.
52. "Fiducial Made Sexy", 04/2013. Department of Statistics, University of California, Riverside, CA.
53. "Estimating the Number and Location of Structural Breaks in Astrophysical Source Populations", 08/2013. The 59th ISI World Statistics Congress, Hong Kong, China.
54. "What can we do next?" Invited Discussion on the session "Distributional Inferences in Statistics", 08/2013. The 59th ISI World Statistics Congress, Hong Kong, China.
55. "Generalized Fiducial Inference and Its Applications", 10/2013. Department of Statistics, Iowa State University, IA.
56. "Fiber Direction Estimation in Diffusion MRI", 02/2014. Divisions of Biostatistics and Bioinformatics, University of California, San Francisco, CA.
57. "Uncertainty Quantification for Massive Data Problems using Generalized Fiducial Inference", 06/2014. The 2014 Joint Applied Statistics Symposium of ICSA & KISS, Portland, OR.
58. "Piecewise Quantile Autoregressive Modeling for Non-Stationary Time Series", 07/2014. The 2014 IISA Conference, Riverside, CA.
59. "Fiber Direction Estimation in Diffusion MRI", 09/2014. Department of Statistics, Columbia University, NY.
60. "Fiber Direction Estimation in Diffusion MRI", 09/2014. Department of Statistics, Princeton University, NJ.
61. "Fiber Direction Estimation in Diffusion MRI", 09/2014. Department of Statistics, Rutgers University, NJ.
62. "A Nonparametric Spectral-Temporal Model for High-energy Astrophysical Sources", 06/2015. The Joint 24th ICSA Applied Statistics Symposium and 13th Graybill Conference, Fort Collins, CO.
63. "Generalized Fiducial Inference for High-Dimensional Sparse Additive Models", 08/2016. Joint Statistical Meetings, Chicago, IL.
64. "Fiber Direction Estimation, Smoothing and Tracking in Diffusion MRI", 01/2017. Department of Statistics, North Carolina State University, NC.
65. "Fiducial Made Sexy", 05/2018. Fifth Bayesian, Fiducial and Frequentist (BFF5) Conference: Foundations of Data Science, Ann Arbor, MI.
66. "Fiducial Made Sexy: Statistical Inference for Machine Learning Problems", 05/2019. Symposium on Data Science and Statistics, Bellevue, WA.
67. "Fiducial Selector: Scalable Statistical Inference for High Dimensional Regression Problems", 08/2019. Joint Statistical Meetings, Denver, CO.

Refereed and Contributed Conference Presentations

68. "Deblurring Images subject to Poisson Noise", 09/1993. Statistics'93 (winner of student paper competition), University of Wollongong, Wollongong, Australia.
69. "A Stochastic Tessellation of Digital Space", 08/1994. The 12th Australian Statistical Conference, Melbourne, Australia.
70. "A Fast Method for Detecting and Matching Linear Features in Images", 12/1995. Digital Image Computing: Techniques and Applications, Brisbane, Australia.
71. "Nonparametric Estimation and Simulation of Two-Dimensional Gaussian Image Textures", 07/1996. Sydney International Statistical Congress, Sydney, Australia.
72. "Segmenting Images Corrupted by Correlated Noise", 10/1997. IEEE International Conference on Image Processing, Santa Barbara, CA.
73. "Robust Fitting of Discontinuous Regression Functions", 06/1999. Interface Foundation of North America, Schaumburg, IL.
74. "Self-Consistency and Wavelet Regressions with Irregular Designs", 08/2001. Joint Statistical Meetings, Atlanta, GA.
75. "Automatic Detection and Classification of Sunspot Images", 08/2007. Joint Statistical Meetings, Salt Lake City, UT.
76. "Nonparametric Spectral Density Estimation with Missing Observations", 04/2009. The 34th IEEE International Conference on Acoustics, Speech, and Signal Processing, Taipei, Taiwan.
77. "A Self-Consistency Approach to Wavelet Regression with Irregularly-Spaced Data", 08/2009. Joint Statistical Meetings, Washington, DC.
78. "Multiscale Nonparametric Spectrum Estimation with Missing Observations", 08/2010. Joint Statistical Meetings, Vancouver, Canada.
79. "Statistically Consistent Image Segmentation", 09/2010. IEEE 2010 International Conference on Image Processing, Hong Kong, China.
80. "Stabilized Thresholding with Generalized SURE for Image Denoising", 09/2010. IEEE 2010 International Conference on Image Processing, Hong Kong, China.
81. "Joint Spectral–Temporal Analysis of High–Energy Astronomical Sources", 08/2012. Joint Statistical Meetings, San Diego, CA.
82. "Uncertainty Quantification for Massive Data Problems using Generalized Fiducial Inference", 08/2014. Joint Statistical Meetings, Boston, MA.

Other Poster Presentations

83. "Automatic Classification and Tracking of Solar Features", 02/2012. Workshop on Solar Statistics: Feature Recognition, Thermal Structure, Numerical Computation, Massive Data Streams, Cambridge, MA. Authors: Stenning, David; Kashyap, Vinay; Lee, Thomas C. M.; van Dyk, David A. and Young, C. Alexander.
84. "TANAGRA: Timing Analysis of Grating Data", 08/2014. High Energy Astrophysics Division 14th Meeting, Chicago, IL. Authors: Kashyap, V. L.; Connors, A.; Drake, J.; Lee, Thomas C. M.; Posson-Brown, J.; Saar, S; Scargle, J.; van Dyk, D.; Wong, R. K. W.

Conference Organization

Session Organizer (topic contributed), "Wavelet Techniques for Equally and Non-Equally Spaced Data", Joint Statistical Meetings, Indianapolis, IN, 2000.

Session Organizer (topic contributed), "Statistical Imaging and Related Topics", Joint Statistical Meetings, Toronto, ON, 2004.

Invited Session Organizer, "Statistics in Science", the 6th ICSA International Conference, National University of Singapore, Singapore, 2004.

Program Co-Chair, *Graybill Conference: Statistics in Information Technology*, Colorado State University, CO, 2005.

IMS Program Chair, Joint IMS and WNAR meeting, Fairbanks, AK, 2005.

IMS Invited Session Organizer, "High-Level Imaging", Joint Statistical Meetings, Minneapolis, MN, 2005.

Program Co-Chair, *Graybill Conference: Multiscale Methods and Statistics - a Productive Marriage*, Colorado State University, CO, 2006.

Session Co-Organizer (topic contributed), "Astro-Statistics and Solar Imaging", Joint Statistical Meetings, Salt Lake City, UT, 2007.

Invited Session Organizer, "Recent Advances in Temporal-Spatial Statistics", IMS-APRM (IMS Asia Pacific Rim Meetings), Seoul, Korea, 2009.

Session Organizer (topic contributed), "Multiscale Methods in Statistics", Joint Statistical Meetings, Washington, DC, 2009.

Program Committee, *Graybill Conference: Modern Nonparametric Methods*, Colorado State University, CO, 2011.

Session Co-Organizer (topic contributed), "Astrostatistics", Joint Statistical Meetings, San Diego, CA, 2012.

Program Committee, *UC Davis Statistical Sciences Symposium 2013: Analysis of Complex and Massive Data*, University of California at Davis, CA, 2013.

Program Committee, The Ninth ICSA International Conference, Hong Kong, China, 2013.

Program Committee, *UC Davis Statistical Sciences Symposium 2014: Spatial-Temporal Statistics: Methods and Applications*, University of California at Davis, CA, 2014.

Invited Session Organizer, "Graph and Network Modeling", IMS-APRM (IMS Asia Pacific Rim Meetings), Taipei, Taiwan, 2014.

Invited Session Organizer, "Recent Advances in Astro-Statistics", 2014 Joint Applied Statistics Symposium of International Chinese Statistical Association & Korean International Statistical Society, Portland, OR, 2014.

Invited Session Organizer (two sessions), "Big Data in Astro-Statistics" and "JCGS Highlights: Computational Innovations for Analyzing Big Data", Joint Statistical Meetings, Boston, MA, 2014.

Program Committee, *Workshop on Solar Astronomy Big Data, IEEE International Conference on Big Data*, Washington, DC, 2014.

Invited Session Organizer, "Confidence Distributions and their Uses in Statistics", The 60th ISI World Statistics Congress, Rio de Janeiro, Brazil, 2015.

Program Committee, *Workshop on Solar Astronomy Big Data, IEEE International Conference on Data Mining*, Atlantic City, NJ, 2015.

Invited Session Organizer (two sessions), "New Approaches for Analyzing Time Series Data" and "Statistical Methods for Large Computer Experiments", Joint Applied Statistics Symposium of International Chinese Statistical Association & Graybill Conference, Fort Collins, CO, 2015.

Program Committee, *UC Davis Statistical Sciences Symposium 2016: Statistical Machine Learning*, University of California at Davis, CA, 2016.

Invited Session Organizer (two sessions), "Bridging BFF (Bayesian/frequentist/fiducial) inferences in the era of data science" and "JCGS Highlights: Recent Advances in MCMC", Joint Statistical Meetings, Chicago, IL, 2016.

Session Organizer (topic contributed), "Statistical and Imaging Methods in Astronomy and Astrophysics", Joint Statistical Meetings, Baltimore, MD, 2017.

Program Co-Chair, *Peter G. Hall Conference 2018: Brain and Data Science*, University of California at Davis, CA, 2018.

Program Co-Chair of Computational Statistics Track and IMS Representative, Symposium on Data Science and Statistics, Bellevue, WA, 2019.