

# HUAIQING WU

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Department of Statistics  
Iowa State University  
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## EDUCATION

- PhD in Statistics, University of Michigan, Ann Arbor, Michigan, August 1997
- MS in Statistics, Peking University, Beijing, China, July 1991
- BS in Mathematics, Peking University, Beijing, China, July 1988

## POSITIONS HELD

- Associate Professor, Department of Statistics, Iowa State University, August 2003 to Present
- Assistant Professor, Department of Statistics, Iowa State University, August 1997 to August 2003
- Rackham Predoctoral Fellow, Rackham Graduate School, University of Michigan, Ann Arbor, September 1996 to August 1997
- Graduate Teaching Assistant and Graduate Research Assistant, Department of Statistics, University of Michigan, Ann Arbor, September 1993 to August 1996

## TEACHING

- **Courses taught**
  - Statistics 231: Probability and Statistical Inference for Engineers (fall 1997; spring 1998; fall 1999)
  - Statistics 305: Engineering Statistics (spring 2000; fall 2000; spring 2001; fall 2001; spring 2002; fall 2003, 2004, 2006, and 2007; spring 2008, two sections; fall 2008, 2009, and 2012)
  - Statistics 322: Probabilistic Methods for Electrical Engineers (spring 2006; fall 2011; fall 2015)
  - Statistics 342: Introduction to the Theory of Probability and Statistics II (fall 2013)
  - Statistics 402 (for Engineering, Mathematics, Physical Sciences, and Undergraduate Statistics): Statistical Design and the Analysis of Experiments (spring 1999, 2017, 2018, 2019, and 2020)
  - Statistics 402 (for Agriculture and Life Sciences): Statistical Design and the Analysis of Experiments (spring 2010; fall 2010; fall 2011; spring 2014, 2015, and 2016; fall 2019)
  - Statistics 402 (for Social Sciences): Statistical Design and the Analysis of Experiments (spring 2019 and 2020)

- Statistics 502X: Applied Modern Multivariate Statistical Learning (10% responsibility; joint with Dr. Steve Vardeman, the main instructor, and Dr. Max Morris) (spring 2014)
- Statistics 531: Quality Control and Engineering Statistics (spring 2003, 2005, 2007, 2009, 2011, and 2013)
- Statistics 611 (old): Advanced Linear Model Theory (fall 1998)
- Statistics 611: Theory and Applications of Linear Models (fall 1999 to 2004, 2006, 2008 to 2010, 2013 to 2018, and 2020) (reconstructed in fall 1999 to serve as a core course for PhD students in statistics)
- Statistics 643: Advanced Theory of Statistical Inference (spring 2012; spring 2013; fall 2014)

- **Distance education**

- Statistics 402 (for Agriculture and Life Sciences): live and online sections (spring 2014; spring 2016)
- Statistics 531: live and online sections (spring 2013)
- Statistics 531: on-campus and distance sections (spring 2003)

## **GRADUATE ADVISING**

- **Major professor for 16 MS students (all completed)**

1. Bernd Fuhrmann (2020). Applications of Two Novel Partial Least Squares-Based Regression Methods to the Analysis of Spectral Datasets.
2. Sen Zhou (2018). Recovery of the Risk-Neutral Density Function by Multiple Kernel Support Vector Regression.
3. Benjamin Peaden (2018). A Study on Repairable Systems Reliability.
4. Bailey Pinney (2012). Integrating Outside Information to Improve Linear Models for Sales and Stock Price Prediction.
5. Zhen Li (2012). The Covered Call Strategy for American Call Options.
6. Yaqing Si (2009). The Benefits of Portfolio Rebalancing and How They Can Be Achieved.
7. Ru He (2009). Interval Estimation of Unbounded Until Properties in Probabilistic Model Checking.
8. Weiguo Cai (2008). Longitudinal Analysis of Body Weight and Feed Intake in Selection Lines for Residual Feed Intake in Pigs.
9. Zhan Zhang (2007). The Autocorrelation Function Analysis and Modeling of S&P 500 Returns with Different Start Points of Data.
10. Jian Jiao (2007). Simulating the Application Conditions of the Sheppard Corrections.
11. Kim Mueller (2005). Impact of Left-Turn Phasing on Older and Younger Drivers at High-Speed Signalized Intersections.
12. Emile White (2005). Process Monitoring of Right-Censored and Rounded Data Using Conditional Expected Values.

13. Qi Jiang (2002). Statistical Modeling and Analysis of Soil Temperatures in Iowa.
14. Biyong (Andy) Xu (2001). Construction of Orthogonal Latin Hypercubes.
15. Yanchen Xu (2001). A Comparison of Sampling Methods for Surface Measurements and Prediction.
16. Craig Solid (1999). Analysis of a Rolled Good Process: An Application of Linear Models.

- **Major professor or co-major professor for 12 PhD students (1 in progress; 11 completed)**

1. Reid-Vincent Paris (joint with Dr. Max Morris).
2. Yingzhou Du (2018) (joint with Dr. Chong Wang). Choosing Cutoff Values for Correlated Continuous Diagnostic Data to Estimate Sensitivity and Specificity.
3. Junzhao Hu (2017) (Co-major in Mathematics and Statistics) (joint with Dr. Steve Hou). Numerical Solutions for the Deterministic and Stochastic Allen-Cahn Equations and the Mean Curvature Flow.
4. Yong Mei (2017) (Co-major in Chemical Engineering and Statistics) (joint with Dr. Derrick Rollins). Modeling and Control to Improve Blood Glucose Concentration for People with Diabetes.
5. Qi Li (2017) (Co-major in Industrial and Manufacturing Systems Engineering and Statistics) (joint with Dr. Guiping Hu). Decision Making under Uncertainties for Renewable Energy and Precision Agriculture.
6. Yun Zheng (2014) (Co-major in Mathematics and Statistics) (joint with Dr. Steve Hou). Asset Pricing Based on Stochastic Delay Differential Equations.
7. Wen Zhou (2014) (joint with Dr. Steve Vardeman). Some Bayesian and Multivariate Analysis Methods in Statistical Machine Learning and Applications.
8. Ru He (2014) (Co-major in Computer Science and Statistics) (joint with Dr. Jin Tian and Dr. Samik Basu in the Department of Computer Science). Structure Learning in Bayesian Networks and Session Analysis of People Search within a Professional Social Network.
9. Adam Pintar (2010). Model Selection for Good Estimation or Prediction over a User-Specified Covariate Distribution.
10. Jianying Zuo (2010) (joint with Dr. William Q. Meeker). Analysis of Window-Observation Recurrence Data.
11. Ling Huang (2010). Probabilistic Studies of Different Investment Strategies.
12. Dongmei Zhai (2005) (Co-major in Chemical Engineering and Statistics) (joint with Dr. Derrick Rollins). Continuous-Time Block-Oriented Nonlinear Modeling with Complex Input Noise Structure.

- **Member of 182 MS and PhD program of study (POS) committees**

- 1 MS committee and 14 PhD committees in progress
- 67 MS committees and 100 PhD committees completed

## RESEARCH INTERESTS

Experimental Design, Reliability, Engineering Statistics, and Statistical Consulting

## REFEREED JOURNAL ARTICLES (\* indicates Wu student coauthor)

1. Robert Malone, Jurgen Garbrecht, Philip Busted, Jerry Hatfield, Dennis Todey, Jade Gerlitz, Quanxiao Fang, Matthew Sima, Anna Radke, Liwang Ma, Zhiming Qi, Huaiqing Wu, Dan Jaynes, and Thomas Kaspar. (2020). Drainage N Loads Under Climate Change with Winter Rye Cover Crop in a Northern Mississippi River Basin Corn-Soybean Rotation. *Sustainability*, **12**, 7630, <https://doi.org/10.3390/su12187630>.
2. Timothy A. Bigelow, Clayton L. Thomas, and Huaiqing Wu (2020). Scan Parameter Optimization for Histotripsy Treatment of *S. Aureus* Biofilms on Surgical Mesh. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **67**, 341—349.
3. Timothy A. Bigelow, Clayton L. Thomas, Huaiqing Wu, and Kamal M. F. Itani (2019). Impact of High-Intensity Ultrasound on Strength of Surgical Mesh when Treating Biofilm Infections. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **66**, 38—44.
4. Jofran L. Oliveria, Hongwei Xin, and Huaiqing Wu (2019). Impact of Feeder Space on Laying Hen Feeding Behavior and Production Performance in Enriched Colony Housing. *Animal: An International Journal of Animal Bioscience*, **13**, 374—383.
5. Timothy A. Bigelow, Clayton L. Thomas, Huaiqing Wu, and Kamal M. F. Itani (2018). Histotripsy Treatment of *S. Aureus* Biofilms on Surgical Mesh Samples under Varying Scan Parameters. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **65**, 1017—1024.
6. Timothy A. Bigelow, Clayton L. Thomas, Huaiqing Wu, and Kamal M. F. Itani (2017). Histotripsy Treatment of *S. Aureus* Biofilms on Surgical Mesh Samples under Varying Pulse Durations. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **64**, 1420—1428.
7. Nahed Msayleb, Ramesh Kanwar, Huaiqing Wu, and J (Hans) van Leeuwen (2017). Soil Ozonation for Nematode Disinfestation as an Alternative to Methyl Bromide and Nematicides. *The Scientific Pages of Environmental Studies*, **1**, 11—19.
8. Nahed Msayleb, Ramesh Kanwar, Huaiqing Wu, and J (Hans) van Leeuwen (2017). Ozonation Efficacy in the Treatment of Soil-Borne *Phytophthora sojae* in Cultivating Soybeans. *The Scientific Pages of Environmental Studies*, **1**, 1—10.
9. \*Ru He, Jin Tian, and Huaiqing Wu (2016). Structure Learning in Bayesian Networks of a Moderate Size by Efficient Sampling. *Journal of Machine Learning Research*, **17** (101), 1—54 (with supplemental material, 1—18).
10. Shiyao Liu, Huaiqing Wu, and William Q. Meeker (2015). Understanding and Addressing the Unbounded “Likelihood” Problem. *The American Statistician*, **69**, 191—200.
11. Stephen Vardeman, Michael S. Hamada, Tom Burr, Max Morris, Joanne Wendelberger, J. Marcus Jobe, Leslie Moore, and Huaiqing Wu (2014). An Introduction to Statistical Issues and Methods in Metrology for Physical Science and Engineering. *Journal of Quality Technology*, **46**, 33—62.

12. \*Adam Pintar, Christine M. Anderson-Cook, and Huaqing Wu (2013). Prediction-Based Model Selection for Bayesian Multiple Regression Models. *Advances and Applications in Statistics*, **32**, 83—117.
13. \*Jianying Zuo, William Q. Meeker, and Huaqing Wu (2013). A Simulation Study on the Confidence Interval Procedures of Some Mean Cumulative Function Estimators. *Journal of Statistical Computation and Simulation*, **83**, 1868—1889.
14. \*Jianying Zuo, Huaqing Wu, and William Q. Meeker (2012). Asymptotic Properties of Mean Cumulative Function Estimators from Window-Observation Recurrence Data. *Journal of Statistical Planning and Inference*, **142**, 2943—2952.
15. Huaqing Wu, Robert Mee, and Boxin Tang (2012). Fractional Factorial Designs with Admissible Sets of Clear Two-Factor Interactions. *Technometrics*, **54**, 191—197.
16. Derrick K. Rollins Sr., \*Dongmei Zhai, Nidhi Bhandari, Amy Roggendorf, Rubal Dua, and Huaqing Wu (2012). Dynamic Predictive Modeling under Measured and Unmeasured Continuous-Time Stochastic Input Behavior. *Industrial & Engineering Chemistry Research*, **51**, 5469—5479.
17. \*Adam Pintar, Christine M. Anderson-Cook, and Huaqing Wu (2012). Model Selection for Good Estimation and Prediction over a User-Specified Covariate Distribution for Linear Models under the Frequentist Paradigm. *Quality and Reliability Engineering International*, **28**, 767—782.
18. \*Weiguo Cai, Huaqing Wu, and Jack C. M. Dekkers (2011). Longitudinal Analysis of Body Weight and Feed Intake in Selection Lines for Residual Feed Intake in Pigs. *Asian-Australasian Journal of Animal Sciences*, **24**, 17—27.
19. Stephen B. Vardeman, Joanne Wendelberger, Tom Burr, Michael S. Hamada, Leslie M. Moore, J. Marcus Jobe, Max D. Morris, and Huaqing Wu (2010). Elementary Statistical Methods and Measurement Error. *The American Statistician*, **64**, 46—51.
20. Peter Zhiguang Qian, Huaqing Wu, and C. F. Jeff Wu (2008). Gaussian Process Models for Computer Experiments with Qualitative and Quantitative Factors. *Technometrics*, **50**, 383—396.
21. \*Jianying Zuo, William Q. Meeker, and Huaqing Wu (2008). Analysis of Window-Observation Recurrence Data. *Technometrics*, **50**, 128—143.
22. \*Kim Mueller, Shauna L. Hallmark, Huaqing Wu, and Michael Pawlovich (2007). Impact of Left-Turn Phasing on Older and Younger Drivers at High-Speed Signalized Intersections. *Journal of Transportation Engineering*, **133**, 556—563.
23. \*Dongmei Zhai, Derrick K. Rollins Sr., Nidhi Bhandari, and Huaqing Wu (2006). Continuous-Time Hammerstein and Wiener Modeling under Second-Order Static Nonlinearity for Periodic Process Signals. *Computers & Chemical Engineering*, **31**, 1—12.
24. Weiming Ke, Boxin Tang, and Huaqing Wu (2005). Compromise Plans with Clear Two-Factor Interactions. *Statistica Sinica*, **15**, 709—715.
25. Huaqing Wu (2003). D-Optimal Designs for Combined Linear and Trigonometric Regression. *Journal of Statistical Planning and Inference*, **116**, 177—184.
26. Shaowei Cheng, C. F. Jeff Wu, and Huaqing Wu (2003). Finding Defining Generators with Extreme Lengths. *Journal of Statistical Planning and Inference*, **113**, 315—321.
27. Huaqing Wu and C. F. Jeff Wu (2002). Clear Two-Factor Interactions and Minimum Aberration. *The Annals of Statistics*, **30**, 1496—1511.

28. Huaiqing Wu (2002). Optimal Designs for First-Order Trigonometric Regression on a Partial Cycle. *Statistica Sinica*, **12**, 917—930.
29. Wei Jiang, Huaiqing Wu, Fugee Tsung, Vijayan N. Nair, and Kwok-Leung Tsui (2002). Proportional Integral Derivative Charts for Process Monitoring. *Technometrics*, **44**, 205—214.
30. Huaiqing Wu and William Q. Meeker (2002). Early Detection of Reliability Problems Using Information from Warranty Databases. *Technometrics*, **44**, 120—133. (Winner of the 2003 Jack Youden Prize for Best Expository Paper in the 2002 Volume of *Technometrics*.)
31. Fugee Tsung, Huaiqing Wu, and Vijayan N. Nair (1998). On the Efficiency and Robustness of Discrete Proportional-Integral Control Schemes. *Technometrics*, **40**, 214—222.
32. Huaiqing Wu (1997). Optimal Exact Designs on a Circle or a Circular Arc. *The Annals of Statistics*, **25**, 2027—2043.

## **REFEREED ARTICLES IN MAJOR-CONFERENCE PROCEEDINGS**

- \*Ru He, Paul Jennings, Samik Basu, Arka P. Ghosh, and Huaiqing Wu (2010). A Bounded Statistical Approach for Model Checking of Unbounded Until Properties. *ASE'10 Proceedings of the IEEE/ACM International Conference on Automated Software Engineering*, 225—234.

## **FUNDING**

- Timothy A. Bigelow, Bianca Zaffarano, and Huaiqing Wu. College of Engineering Exploratory Research Program, Iowa State University, \$12,000, August 16, 2017 to May 15, 2018.
- Timothy A. Bigelow, Paul S. Attar, Kamal Itani, and Huaiqing Wu. Feasibility of Histotripsy to Treat Infections on Surgical Mesh. National Institutes of Health, National Institute of Biomedical Imaging and Bioengineering, \$397,805, May 11, 2016 to February 28, 2019.
- Huaiqing Wu. Statistical Analysis of Customer Spending Data for Country Maid, Inc. Center for Industrial Research and Service at Iowa State University and Country Maid, Inc., Iowa, \$3,945, May 18 to June 15, 2015.
- Alicia L. Carriquiry, William Q. Meeker, Max D. Morris, Stephen B. Vardeman, and Huaiqing Wu. Statistics for Physical and Engineering Sciences: A Plan for the Establishment of a Research Training Group. National Science Foundation, \$1,101,547, August 15, 2005 to August 15, 2009.
- Huaiqing Wu, Max D. Morris, and Stephen B. Vardeman. Statistical Analysis of Vehicle Communication System Design and EMC Integration Rules. Electrical Center, General Motors, \$55,881, March 9 to December 31, 2001.
- Huaiqing Wu. Iowa State University Research Grant, \$16,780, July 1, 2000 to December 31, 2001.

## **INVITED PRESENTATIONS AT MAJOR CONFERENCES OR INSTITUTIONS**



1. Fractional Factorial Designs with Clear Two-Factor Interactions. International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, North Carolina, October 5—7, 2018.
2. Fractional Factorial Designs with Clear Two-Factor Interactions. Department of Statistics, Iowa State University, October 26, 2015.
3. A Prediction-Based Model Selection Approach. Department of Statistics, Texas A&M University, October 14, 2010.
4. Analysis of Window-Observation Recurrence Data. The First International Conference on the Interface between Statistics and Engineering, Beijing, China, July 13—15, 2009.
5. Analysis of Window-Observation Recurrence Data. The First International Workshop on Reliability Technology and Quality Science, Beijing, China, July 10—12, 2009.
6. Gaussian Process Models for Computer Experiments with Qualitative and Quantitative Factors. Spring Research Conference on Statistics in Industry and Technology, Vancouver, Canada, May 27—29, 2009.
7. Analysis of Window-Observation Recurrence Data. Quality and Productivity Research Conference, Madison, Wisconsin, June 4—6, 2008.
8. Analysis of Window-Observation Recurrence Data. Spring Research Conference on Statistics in Industry and Technology, Atlanta, Georgia, May 19—21, 2008.
9. Analysis of Window-Observation Recurrence Data. Department of Statistics, University of Wisconsin–Madison, February 27, 2008.
10. Fractional Factorial Designs with Admissible Sets of Clear Two-Factor Interactions. International Conference on Advances in Interdisciplinary Statistics and Combinatorics, Greensboro, North Carolina, October 12—14, 2007.
11. Gaussian Process Models for Computer Experiments with Qualitative and Quantitative Factors. Spring Research Conference on Statistics in Industry and Technology, Ames, Iowa, May 21—23, 2007.
12. Analysis of Window-Observation Recurrence Data. Statistical Sciences Group, Los Alamos National Laboratory, July 19, 2006.
13. Fractional Factorial Designs with Admissible Sets of Clear Two-Factor Interactions. International Conference on Design of Experiments and Its Applications, Tianjin, China, July 9—13, 2006.
14. Analysis of Window-Observation Recurrence Data. Department of Statistics, University of Georgia, December 8, 2005.
15. Fractional Factorial Designs with Admissible Sets of Clear Two-Factor Interactions. International Conference on Statistics, Combinatorics, Mathematics and Applications, Auburn, Alabama, December 2—4, 2005.
16. Analysis of Window-Observation Recurrence Data. School of Industrial and Systems Engineering, Georgia Institute of Technology, December 1, 2005.
17. Compromise Plans with Clear Two-Factor Interactions. International Conference on Design of Experiments: Theory and Applications, Memphis, Tennessee, May 13—15, 2005.

18. Compromise Plans with Clear Two-Factor Interactions. Department of Statistics and Actuarial Science, Simon Fraser University, March 31, 2005.
19. An Algorithm for Computing the Mean Cumulative Function and Its Standard Error. Spring Research Conference on Statistics in Industry and Technology, Gaithersburg, Maryland, May 19—21, 2004.
20. Early Detection of Reliability Problems Using Information from Warranty Databases. Spring Research Conference on Statistics in Industry and Technology, Dayton, Ohio, June 4—6, 2003.
21. PID Charts for Process Monitoring. INFORMS Annual Meeting, San Jose, California, November 17—20, 2002.
22. PID Charts for Process Monitoring (joint with Wei Jiang). *Technometrics* Session, Fall Technical Conference, Valley Forge, Pennsylvania, October 17—18, 2002.
23. Early Detection of Reliability Problems Using Information from Warranty Databases. Department of Statistics, Iowa State University, September 2002.
24. Clear Two-Factor Interactions and Minimum Aberration. Design and Analysis of Experiments 1, Vancouver, Canada, July 14—18, 2002.
25. Clear Two-Factor Interactions and Minimum Aberration. International Statistical Symposium and Bernoulli Society EAPR Conference, Taipei, Taiwan, July 7—10, 2002.
26. Early Detection of Reliability Problems Using Information from Warranty Databases. Mathematical Methods in Reliability, Trondheim, Norway, June 17—20, 2002.
27. Estimation in Circular Measurement Error Models. International Conference on Statistics, Probability and Related Areas, DeKalb, Illinois, June 14—16, 2002.
28. Early Detection of Reliability Problems Using Information from Warranty Databases. Quality and Productivity Research Conference, Tempe, Arizona, June 5—7, 2002.
29. Early Detection of Reliability Problems Using Information from Warranty Databases. Spring Research Conference on Statistics in Industry and Technology, Ann Arbor, Michigan, May 20—22, 2002.
30. Clear Two-Factor Interactions and Minimum Aberration. Department of Mathematics, Ruhr University Bochum, November 2001.
31. Statistical Analysis of Vehicle Communication System Design and EMC Integration Rules. General Motors Electrical System Design Process Consortium Kickoff Meeting, Milford, Michigan, July 18—19, 2001.
32. Clear Two-Factor Interactions and Minimum Aberration. Department of Mathematical Sciences, University of Memphis, October 2000.
33. Integrated Statistical Methods for Geometric Feature Inspection Using Coordinate Measuring Machines. Advanced Sessions, Dimensional Metrology Forum, Quebec City, Canada, November 23—25, 1998.
34. Measurement Strategies for Coordinate Measuring Machines: Data Sampling, Modeling, and Evaluation. Technical Sessions, Dimensional Metrology Forum, Quebec City, Canada, November 23—25, 1998.
35. Optimal Exact Designs on Circular and Elliptical Arcs. Experimental Design: Theory and Applications, Oberwolfach, Germany, November 1—7, 1998.



36. On the Efficiency and Robustness of Discrete Proportional-Integral Control Schemes. Department of Statistics, Iowa State University, November 1997.
37. Design and Estimation in Circular Measurement Error Models. School of Statistics, University of Minnesota–Twin Cities, March 1997.
38. Design and Estimation in Circular Measurement Error Models. Department of Statistics, Iowa State University, March 1997.
39. Design and Estimation in Circular Measurement Error Models. Department of Statistics, University of California, Los Angeles, March 1997.
40. Design and Estimation in Circular Measurement Error Models. Department of Statistics and Probability, Michigan State University, February 1997.
41. Design and Estimation in Circular Measurement Error Models. Department of Statistics, North Carolina State University, February 1997.
42. Design and Estimation in Circular Measurement Error Models. Department of Statistics, University of Florida, February 1997.
43. Design and Estimation in Circular Measurement Error Models. Department of Statistics, Rutgers University–New Brunswick, February 1997.
44. Design and Estimation in Circular Measurement Error Models. Department of Statistics, University of Pennsylvania, February 1997.

## CONTRIBUTED TALKS

1. A Simulation Study on Confidence Interval Procedures of Some Mean Cumulative Function Estimators. Joint Statistical Meetings, San Diego, California, July 28 to August 2, 2012.
2. A Prediction-Based Model Selection Approach. Spring Research Conference on Statistics in Industry and Technology, Evanston, Illinois, June 21—24, 2011.
3. A Prediction-Based Model Selection Approach. Joint Research Conference on Statistics in Quality, Industry and Technology, Gaithersburg, Maryland, May 25—27, 2010.
4. Algorithmic Modeling: An Introduction. Engineering Statistics VIGRE Seminar, Department of Statistics, Iowa State University, March 2004.
5. Optimal Designs for First-Order Trigonometric Regression on a Partial Cycle. Topics in Linear Algebra, Ames, Iowa, September 13—14, 2002.
6. PID Charts for Process Monitoring. Engineering Statistics VIGRE Seminar, Department of Statistics, Iowa State University, March 2002.
7. Early Detection of Reliability Problems Using Information from Warranty Databases. Engineering Statistics VIGRE Seminar, Department of Statistics, Iowa State University, November 2001.
8. Clear Two-Factor Interactions and Minimum Aberration. Joint Statistical Meetings, Atlanta, Georgia, August 5—9, 2001.
9. Finding Defining Generators with Extreme Lengths. Joint Statistical Meetings, Indianapolis, Indiana, August 13—17, 2000.

10. Optimal Designs for First-Order Trigonometric Regression on a Partial Cycle. Joint Research Conference on Statistics in Quality, Industry and Technology, Seattle, Washington, June 26—28, 2000.
11. Optimal Designs for First-Order Trigonometric Regression on a Partial Cycle. Poster Session, Midwest Conference for New Directions in Experimental Design, Columbus, Ohio, May 18—20, 2000.
12. Asymptotic Theory of General Estimating Equations. Joint Statistical Meetings, Baltimore, Maryland, August 8—12, 1999.
13. Asymptotic Theory of General Estimating Equations. North American New Researchers Conference, Baltimore, Maryland, August 4—7, 1999.
14. Consistent Estimation in Circular Measurement Error Models. International Chinese Statistical Association Applied Statistics Symposium, Washington D.C., June 18—20, 1999.
15. Consistent Estimation in Circular Measurement Error Models. Spring Research Conference on Statistics in Industry and Technology, Minneapolis, Minnesota, June 2—4, 1999.
16. Exact Optimal Designs on a Circle or a Circular Arc. Joint Research Conference on Statistics in Quality, Industry and Technology, Gaithersburg, Maryland, May 29—31, 1996.

## **EDITORIAL AND REFEREEING SERVICE**

- Associate Editor of *Statistical Analysis and Data Mining: The ASA Data Science Journal*, February 2018 to Present
- Associate Editor of the *Journal of the American Statistical Association*, 2004—2006
- Referee for 88 papers for the following 25 statistical and engineering journals:
  - *Annals of the Institute of Statistical Mathematics* (1)
  - *Applied Stochastic Models in Business and Industry* (1)
  - *Biometrika* (1)
  - *Bulletin of the Malaysian Mathematical Sciences Society* (1)
  - *Communications in Statistics* (3)
  - *IEEE Transactions on Reliability* (1)
  - *IIE Transactions* (1)
  - *Journal of Automobile Engineering* (1)
  - *Journal of Complexity* (1)
  - *Journal of Risk and Reliability* (1)
  - *Journal of Statistical Computation and Simulation* (1)
  - *Journal of Statistical Education* (1)
  - *Journal of Statistical Planning and Inference* (14)
  - *Journal of the American Statistical Association* (1)
  - *Lifetime Data Analysis* (1)
  - *Metrika* (2)
  - *Naval Research Logistics* (3)

- *Operations Research* (1)
- *Quality and Reliability Engineering International* (2)
- *Statistical Papers* (1)
- *Statistica Sinica* (23)
- *Statistics & Probability Letters* (8)
- *Technometrics* (9)
- *The American Statistician* (1)
- *The Annals of Statistics* (8)
- Reviewer for a statistics book proposal
- Reviewer for three research grant proposals for the National Science Foundation

## **PROFESSIONAL PRACTICE**

- Elected Member, International Statistical Institute, 2017 to Present
- Treasurer, Iowa Chapter of the American Statistical Association, April 2018 to Present
- Member, American Statistical Association, Institute of Mathematical Statistics, and International Chinese Statistical Association
- Invited Session co-organizer, Spring Research Conference on Statistics in Industry and Technology, Chicago, Illinois, May 25—27, 2016
- Plenary Session chair and Invited Session chair, Spring Research Conference on Statistics in Industry and Technology, Ames, Iowa, May 21—23, 2007
- Youden Award Judge and Issue Nominator for the 2000 and 2005 *Technometrics* Prizes
- Invited Session organizer and Session chair, Spring Research Conference on Statistics in Industry and Technology, Gaithersburg, Maryland, May 19—21, 2004
- Contributed Papers Program Chair and Invited Session organizer, Spring Research Conference on Statistics in Industry and Technology, Ann Arbor, Michigan, May 20—22, 2002
- Organizing Committee member, Topics in Linear Algebra, Ames, Iowa, September 13—14, 2002

## **INSTITUTIONAL SERVICE**

- Member of the Faculty Senate, May 2018 to Present
- Member of the Graduate College PACE Award Committee (2004)
- Chair of the following departmental committees:
  - Graduate Committee (2006—2007)
  - MS Exam Committee (2003—2004)
  - PhD and MS Exam Committee (2020—2021)
  - PhD Preliminary Exam Committee (2007—2008)
  - Seminar Committee (spring 2005)

- Member of the following departmental committees:
  - Admissions Committee (2002—2003; 2004—2007; 2018—2020)
  - Chair Search Committee (2012—2014)
  - Computation Advisory Committee (2015—2018)
  - Curriculum Committee (2008—2009; 2013—2015)
  - Faculty Search Committee (2011—2012)
  - Graduate Committee (1997—2006; 2007—2020)
  - Graduate Subcommittee for Core Curriculum Development (2010—2012)
  - Honors and Awards Committee (2007—2009; 2010—2015)
  - Library Committee (2004—2005; 2009—2010; 2014—2015)
  - Library Coordinator (2018—2021)
  - MS Exam Committee (1997—1999; 2001—2003)
  - PhD and MS Exam Committee (2009—2010; 2012—2013; 2014—2018)
  - PhD Preliminary Exam Committee (1999—2001; 2003—2004)
  - Strategic Planning Committee (1999—2000)

## **AWARDS AND HONORS**

- Elected Member, International Statistical Institute, 2017
- Award for Outstanding Teaching, College of Liberal Arts and Sciences, Iowa State University, 2016
- Master Teacher Award, College of Liberal Arts and Sciences, Iowa State University, 2010
- The 2003 Jack Youden Prize for Best Expository Paper in the 2002 Volume of *Technometrics*
- Rackham Predoctoral Fellowship, Rackham Graduate School, University of Michigan, 1996—1997
- Outstanding Teaching Award, Department of Statistics, University of Michigan, 1996
- Department Fellowship, Department of Statistics, University of Michigan, 1994, 1995, 1996