Whitney Huang

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Contact Information

School of Mathematical and Statistical Sciences
O-221 Martin Hall, Clemson University
Clemson, SC 29634

☎: (864) 656-3070
✉: wkhuang@clemson.edu
: https://whitneyhuang83.github.io/

Research Interests

Statistics of extremes; spatio-temporal statistics; surrogate modeling of computer experiments; Climate and environmental applications; High-frequency physiological data analysis.

Employment

Clemson University, Clemson, SC

- **Associate Professor**, School of Mathematical and Statistical Sciences
  Aug. 2025 - Present
- **Assistant Professor**, School of Mathematical and Statistical Sciences
  Aug. 2019 - Aug. 2025

Statistical and Applied Mathematical Sciences Institute (SAMSI) and **Canadian Statistical Sciences Institute (CANSSI)** Aug. 2017 - July 2019

- **CANSSI Postdoctoral Fellow**, Pacific Climate Impacts Consortium and School of Earth and Ocean Sciences, University of Victoria, Victoria, BC, Canada
  Mentored by Dr. Francis Zwiers and Dr. Adam H. Monahan Aug. 2018 - July 2019
- **SAMSI Postdoctoral Fellow**, Program on Mathematical and Statistical Methods for Climate and the Earth System, University of North Carolina at Chapel Hill, Chapel Hill, NC. Mentored by Dr. Richard L. Smith Aug. 2017 - July 2018

Education

Ph.D. in Statistics, **Purdue University**, West Lafayette, IN Aug. 2017

- Advisor: Dr. Hao Zhang, (Now Professor and Chair, Department of Statistics & Probability, Michigan State University)
- Dissertation Title: Statistics of Extremes with Applications in Climate
- Dissertation Committee: Dr. Bruce Craig, Dr. Alexander Gluhovsky, Dr. Tonglin Zhang, and Dr. Arman Sabbaghi

M.S. in Statistics, **The University of Akron**, Akron, OH Dec. 2009

- Advisor: Dr. Desale Habtzghi, (Now Associate Professor, Department of Mathematical Sciences, DePaul University)

B.S. in Mechanical Engineering, **National Cheng Kung University**, Tainan, Taiwan
June 2006

Refereed Publications

Citations (from Google Scholar)

- Total number of citations = 467
- h-index = 10
- i10–index = 11 (# publications with at least 10 citations)

1. Murphy, E., **Huang, W.K.**, Bessac, J., Wang, J. and Kotamarthi, R. (2025) Joint Modeling of Wind Speed and Wind Direction Through a Conditional Approach. *Environmetrics*, 36:e70011.

2. Russell, B.T., Ding, Y., **Huang, W.K.** and Dyer, J.L. (2024) Characterizing Asymptotic Dependence between a Satellite Precipitation Product and Station Data in the Northern US Rocky Mountains via the Tail Dependence Regression Framework With a Gibbs Posterior Inference Approach. *Environmetrics*, 35:e2890.

3. Li, J., Russell, B. T., **Huang, W. K.**, and Porter, W. C. (2024) Modeling nonstationary surface-level ozone extremes through the lens of US air quality standards: A Bayesian hierarchical approach. *Environmetrics*, 35:e2882.

4. Chung, YM, **Huang, W. K.**, Wu, HT. (2024) Topological Data Analysis Assisted Automated Sleep Stage Scoring Using Airflow Signals. *Biomedical Signal Processing & Control* 89:105760.

5. Parris, S., **Huang, W. K.**, Jones, D., Bridges, W., Olvey, J., Olvey, M., Saski, C. (2023) Geostatistical techniques to account for the heterogeneity of Fusarium wilt inoculum distribution in upland cotton field screening studies. *Crop Science* 63(3), 1316-1329.

6. Wu, Q., Bessac, J., **Huang, W. K.**, Wang, J., Kotamarthi, R. (2022) A conditional approach for joint estimation of wind speed and direction under future climates. *Advances in Statistical Climatology, Meteorology and Oceanography*, 8(2), 205-224.

7. Wu, H, Tan, X., Zhang, Q., **Huang, W. K.**, Lu, X., Nishimura, Y., Zhang, Y. (2022) Multiresolution data assimilation for auroral energy flux and mean energy using DMSP SSUSI, THEMIS ASI, and an empirical model. *Space Weather* 20(9):e2022SW003146.

8. Yaddanapudi, R., Mishra, A., **Huang W. K.**, , Chowdhary, H. (2022) Compound Wind and Precipitation Extremes in Global Coastal Regions under Climate Change. *Geophysical Research Letters* 49(15): e2022GL098974

9. **Huang, W. K.**, Chung, YM, Wang, YB, Mandel J. E., Wu, HT. (2022) Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression. *Computational Statistics & Data Analysis* (174): 107384.

10. **Huang, W. K.**, Monahan , A. H., Zwiers, F. W. (2021) Estimating Concurrent Climate Extremes: A Conditional Approach. *Weather and Climate Extremes* (33): 100332.

11. Russell, B. T., and **Huang, W. K.**. (2021) Modeling short-ranged dependence in block extrema with application to polar temperature data *Environmetrics*, 32(3):e2661.

12. **Huang, W. K.**, Cooley, D. S., Ebert-Uphoff, I., Chen, C., Chatterjee, S.B. (2019) New Exploratory Tools for Extremal Dependence: χ Networks and Annual Extremal Networks. *Journal of Agricultural, Biological, and Environmental Statistics*, 20(3), 484–501.

13. **Huang, W. K.**, Nychka, D. W., Zhang, H. (2019) Estimating Precipitation Extremes using Log-Histospline. *Environmetrics*, 30(4):e2543, 1–15.

14. **Huang, W. K.**, Stein, M. L., McInerney, D. J., Sun., S., Moyer, E. J. (2016) Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions. *Advances in Statistical Climatology, Meteorology and Oceanography*, 2, 79–103.

15. Wang, J., Han, Y., Stein, M. L., Kotamarthi, R., **Huang W. K.** (2016) Evaluation of dynamically downscaled extreme temperature using a spatially-aggregated generalized extreme value (GEV) model. *Climate Dynamics*, 47(9), 2833–2849.

16. Dixon Hamil, K., Iannone III, B. V., **Huang, W. K.**, Fei, S., Zhang, H. (2016) Cross-scale contradictions in ecological relationships. *Landscape Ecology*, 31(1), 7–18.

17. Iannone III, B. V., Potter, K. M., Dixon Hamil, K., **Huang, W. K.**, Zhang, H., Guo, Q., Oswalt, C. M., Woodall, C. W., Fei, S. (2016) Evidence of biotic resistance to invasions in forests of the Eastern USA. *Landscape Ecology*, 31(1), 85–99.

Refereed White Papers and Conference Proceedings

1. Feng, Y., Maulik, R., Wnag, J., Balaprakash, P., **Huang, W. K.**, Rao, Vishwas, Xue, P., Pringle, W., Bessac, J., and Sullivan, R. "Characterization of extremes and compound impacts: Applications of machine learning and interpretable neural networks," *Artificial Intelligence for Earth System Predictability (AI4ESP) Collaboration*, (United States), 2021.

2. Ebert-Uphoff, I., **Huang, W. K.**, Mitra, A, Cooley, D.S., Chatterjee, S.B., Chen, C., and Wang, Z. (2018) Studying extremal dependence in climate using complex networks. *Proceedings of the 8th International Workshop on Climate Informatics (CI 2018)*, Boulder, CO, 2018.

3. Malik, A., Maciejewski, R., Elmqvist, N., Jang, Y., Ebert, D. S., and **Huang, W.** (2012) A correlative analysis process in a visual analytics environment. *Visual Analytics Science and Technology (VAST), 2012 IEEE Conference on*, 33–42.

Mentoring

- Doctoral Advisor or Co-advisor

  1. Eva Murphy, School of Mathematical and Statistical Sciences, Clemson University Apr. 2021 - Aug. 2023
     First Position After Graduation: Postdoctoral Fellow, Department of Statistical Sciences, Wake Forest University
     Awards:
     - Outstanding Graduate in Research Award, School of Mathematical and Statistical Sciences, Clemson University April 2023
     - ASA Section on Statistics and the Environment (ENVR) Student Paper Award Jan. 2023
     - The Institute for Mathematical and Statistical Innovation (IMSI) travel awards for attending the long program on "Confronting Global Climate Change" Sep., Oct., Nov. 2022
     - ASA Section on Statistics and the Environment (ENVR) travel award for attending ENVR 2022 Workshop: Environmental and Ecological Statistical Research and Applications with Societal Impacts, Provo, UT Oct. 2022
     - Clemson Graduate Travel Grant Oct. 2022
     - Dr. Kenyon Fairey Graduate Fellowship Sep. 2022 - May 2023
     - Call Me Doctor Dissertation Completion Grant Aug. 2022 - Aug. 2023
     - Student Presentation Award at the SC-ASA Palmetto Symposium April 2022
  2. Kanon Kamronnaher, School of Mathematical and Statistical Sciences, (Co-advised with Colin Gallagher), Clemson University June. 2021 - Dec. 2023
  3. Jiyun Huang, School of Mathematical and Statistical Sciences, (Co-advised with Brook Russell), Clemson University Feb. 2022 - present
     Awards:
     - Clemson Graduate Travel Grant Apr. 2023
     - ASA ENVR travel award for attending ENVR 2022 Workshop: Environmental and Ecological Statistical Research and Applications with Societal Impacts, Provo, UT Oct. 2022
  4. Katherine Kreuser, School of Mathematical and Statistical Sciences, Clemson University Jan. 2023 - present
     Awards:
     - IMS/ASA Spring Research Conference (SRC) travel award, New York, NY June 2025
     - The Institute for Mathematical and Statistical Innovation (IMSI) travel awards for attending the long program on "Uncertainty Quantification and AI for Complex Systems" Mar.-May 2025

  - ASA ENVR travel award for attending ENVR 2024 Workshop: Spatial Data Science for the Environment, Boulder, CO Oct. 2024

5. N'golo Saliou Ouattara, School of Mathematical and Statistical Sciences (Co-advised with Brook Russell), Clemson University June 2025 - present

- Doctoral Advisory Committee Member

1. Dulshan Malshika, School of Mathematical and Statistical Sciences, Clemson University Sep. 2024 - present
2. Sanduni Caldera, School of Mathematical and Statistical Sciences, Clemson University Sep. 2024 - present
3. Kelie Marline Momo Nizegha, School of Mathematical and Statistical Sciences, Clemson University Aug. 2024 - present
4. Saika Islam Meim, Department of Environmental Engineering and Earth Sciences, Clemson University Jan. 2024 - July 2024
5. Kristen Joyce, School of Mathematical and Statistical Sciences, Clemson University Nov. 2023 - Aug. 2025
6. Yezhuo Li, School of Mathematical and Statistical Sciences, Clemson University July 2023 - Aug. 2025
7. Rajan Ratnakumar, Department of Electrical and Electronic Engineering, Clemson University March. 2023 - present
8. Stephen Parris, Plant and Environmental Sciences Department, Clemson University Sep. 2022 - Dec. 2023
9. Kenneth Blake Greene, Food, Nutrition, and Packaging Sciences, Clemson University Feb. 2022 - Dec. 2024
10. Srinivasan Nagarajan, Glenn Department of Civil Engineering, Clemson University Jan. 2022 - July 2022
11. Camilius Amevorku, Glenn Department of Civil Engineering, Clemson University Aug. 2021 - Nov. 2022
12. Zhen Liu, School of Mathematical and Statistical Sciences, Clemson University Jan. 2020 - Aug. 2021

- Argonne National Laboratory (ANL) Graduate Internship mentor (joint with Jiali Wang, Atmospheric Scientist, ANL and Julie Bessac, Assistant Computational Statistician)

1. Qiuyi Wu, Ph.D. student, Department of Biostatistics & Computational Biology, University of Rochester 2019 & 2020 Summer

- MS Committee Chair/Co-Chair

1. Peiying Li, School of Mathematical and Statistical Sciences, Clemson University Aug. 2023 - May 2024
2. Katherine Kreuser, School of Mathematical and Statistical Sciences, Clemson University. Current position: Ph.D. student at SMSS, Clemson Univ. Jan. 2022 - Apr. 2022
3. Adam Diaz, School of Mathematical and Statistical Sciences, Clemson University. Current position: Principal Research Statistician at Northern California Institute for Research and Education May. 2021 - Apr. 2022
4. Emily Tidwell, School of Mathematical and Statistical Sciences, Clemson University. Current position: Dynetics, Huntsville, Alabama Aug. 2020 to Apr. 2021
5. Andrew Bellucco, M.S., Mathematical and Statistical Sciences, Clemson University (Co-advised with Colin Gallagher). Current position: Recommendation Analytics at Credit Karma, Charlotte, NC Sep. 2019 to Dec. 2019

- MS Committee Member

1. Yi-Chun Chen, School of Mathematical and Statistical Sciences, Clemson University
   Apr. 2025 - present
2. Naomi Edegbe, School of Mathematical and Statistical Sciences, Clemson University
   May 2024 - Apr. 2025
3. Philip Smith, School of Mathematical and Statistical Sciences, Clemson University
   Nov. 2023 to Apr. 2024
4. Shuhei Morita, School of Mathematical and Statistical Sciences, Clemson University
   Nov. 2022 to Apr. 2023
5. Elliott Degbe, School of Mathematical and Statistical Sciences, Clemson University
   Dec. 2021 to Apr. 2022
6. Jax Li, School of Mathematical and Statistical Sciences, Clemson University
   Nov. 2021 - Apr. 2022
7. Sydney Newman, School of Mathematical and Statistical Sciences, Clemson University
   Oct. 2021 - Apr. 2022
8. Andrew Otte, School of Mathematical and Statistical Sciences, Clemson University
   Oct. 2021 - Apr. 2022
9. Jushawn Macon, School of Mathematical and Statistical Sciences, Clemson University
   Sep. 2021 - Apr. 2023
10. Heidi-Jo Shuttleworth, School of Mathematical and Statistical Sciences, Clemson University
    Apr. 2021 - Nov. 2021
11. Jack Huang, Food, Nutrition, and Packaging Sciences, Clemson University
    Jan. 2020 - Nov. 2021
12. Abdul Mahama, School of Mathematical and Statistical Sciences, Clemson University
    Jan. 2021 - Apr. 2021
13. Michael Foss, School of Mathematical and Statistical Sciences, Clemson University
    Ocu. 2020 - Apr. 2021.
14. Tianqi Zhang, School of Mathematical and Statistical Sciences, Clemson University
    Aug. 2020 - Oct. 2020
15. Tyler Sullivan, School of Mathematical and Statistical Sciences, Clemson University
    Jan. 2020 - Apr. 2020

- Undergraduate Advisor

1. Megan, Mccabe, School of Mathematical and Statistical Sciences
   Oct. 2023 - May 2025
2. Kayla Lillo, School of Mathematical and Statistical Sciences
   Sep. 2023 - present
3. Isabella Guerriero, School of Mathematical and Statistical Sciences
   Feb. 2023 - May 2023
4. Kylie Prinzo, School of Mathematical and Statistical Sciences
   Feb. 2023 - May 2024
5. Katie Murrell, School of Mathematical and Statistical Sciences
   Aug. 2021 - May 2022
6. Michael Grieb, School of Mathematical and Statistical Sciences
   Aug. 2021 - May 2022
7. Marissa Lewandowski, School of Mathematical and Statistical Sciences
   Nov. 2020 - May 2023
8. Jason Turenchalk, School of Mathematical and Statistical Sciences
   Feb. 2020 - Dec. 2020

- COURAGE: Clemson Online Undergraduate Research on Algebra and Graphs Expanded
  June 2020 - Aug. 2020

1. Alexander Harriman: "Analyzing Worst-Case Scenarios for Transportation Security Administration (TSA) Claim Data"
2. Sylvia Wu: "Extreme value analysis with the temperature in Mobile, AL"
3. Emily Graham: "Extreme value analysis applied to Tornadoes"

- SAMSI Undergraduate Modelling Workshop: Extreme value analysis of Gulf coast rainfall, group leader May 2018

1. Seth Temple, Senior in Mathematics at University of Oregon. Currently a Ph.D. student of Statistics at University of Washington
2. Jessica Robinson, Senior in Mathematics at Portland State University. Currently a Master's student of Statistics at Oregon State University
3. Adam Wu, Senior in Economics/Mathematics at Indiana University Bloomington. Currently Quantitative Trader/Researcher in New York
4. Erin Song, Junior in Statistics at Rice University. Currently Data Scientist at IBM
5. Lin Ge, Junior in Statistics at North Carolina State University (NCSU). Currently a Ph.D. student of Statistics at NCSU
6. Jianan Jiang, Freshman in Computer Science Rice University.

External Grants

- NSF DMS ($22,000) 2024 ENVR Workshop "Spatial Data Science for the Environment", PI July 2024 - June 2025
- DOE subcontact from Argonne National Lab ($24,981) "Bias Correction of Downscaled Climate Model", Senior Personnel May 2024 - Sept. 2024
- US Army Contracting Command-Detroit ($872,143.16): Online Surrogate Optimization of the Tradespace, Co-PI Dec. 2023 - Dec. 2025
- NSF DMS ($33,147): Interdisciplinary Workshop on Weather and Climate Extremes, PI Sep. 2022-Aug. 2023

Professional Visits

Research Member, The Institute for Mathematical and Statistical Innovation (IMSI) Confronting Global Climate Change Program, Chicago, IL Sep. 2022- Dec. 2022

Research Visitor, Department of Statistics, University of British Columbia

- Host: Prof. William J. Welch Nov. 2018

Research Visitor, Department of Statistics & Actuarial Science, Simon Fraser University

- Host: Prof. Derek Bingham Nov. 2018, June 2019

Research Visitor, The Institute for Mathematics Applied to Geosciences (IMAGe), National Center for Atmospheric Research (NCAR)

- Mentor: Dr. Douglas W. Nychka Apr. 2015, Sep 2016, Apr. 2017

Research Visitor, Mathematics and Computer Science Division (MCS), Argonne National Laboratory

- Mentor: Dr. Emil Constantinescu Mar. 2017

Research Visitor, Environmental Science Division (EVS), Argonne National Laboratory

- Mentor: Dr. V. Rao Kotamarthi Mar 2015, July 2016, May 2019

Visiting Student, Department of Statistics, University of Chicago

- Mentor: Prof. Michael L. Stein May 2013 - June 2013, May 2014 - June 2014

Visitor, NOAA's National Climatic Data Center

- Mentor: Dr. Dongsoo Kim Nov. 2012, Dec. 2014

Awards

Teaching Award

- **Faculty Teaching Award**, Clemson University April 2022
  "For Excellent in Teaching to the School of Mathematical and Statistical Sciences."

Presentation/Poster Competition

- **Best Posters Competition**, Institute for Mathematics and its Applications (IMA) workshop on Forecasting from Complexity, Minneapolis, MN Apr. 2018
- **1st place in the Student Presenter Competition**, Conference on Probability and Statistics in the Atmospheric Sciences, Baltimore, MD July 2017
- **Runner-up in the Student Poster Competition**, Graybill/ENVR conference, Fort Collins, CO Sept. 2014

Travel Awards

- IMSI Workshop on Uncertainty Quantification and AI for Complex Systems, Chicago, IL May 2025
- IMSI Workshop on Uncertainty Quantification for Material Science and Engineering, Chicago, IL Apr. 2025
- IMSI Workshop on UQ and Trustworthy AI Algorithms for Complex Systems and Social Good, Chicago, IL Mar. 2025
- NSF Workshop on Data-driven Modeling and Prediction of Rare and Extreme Events, Chicago, IL Nov. 2024
- NSF workshop on Collaborative Strategies for Predicting and Measuring Uncertainty in Rare Occurrences in Civil and Environmental Systems, Golden, CO Nov. 2024
- American Statistical Association (ASA) Climate and Extremes Roundtable, Boulder CO Oct. 2024
- NCAR 2023 ForceSMIP Stat/ML/Climate hackathon, Boulder, CO Aug. 2023
- ENVR 2022 Workshop: Environmental and Ecological Statistical Research Oct. 2022
- IMSI Workshop on Expressing and Exploiting Structure in Modeling, Theory, and Computation with Gaussian Processes, Chicago, IL Aug. 2022
- 2022 Mathematical and Physical Sciences Workshop for Young Investigators June 2022
- SAMSI MUMS Transition Workshop and SPUQ May 2019
- Coupling Uncertain Geophysical Hazards Workshop Mar. 2019
- SAMSI Opening Workshop on MUMS Sept. 2018
- 20th IMS New Researchers Meeting July 2018
- IMA workshop on Forecasting from Complexity Apr. 2018
- STATMOS/SAMSI Workshop on Climate Statistics July 2017
- Statistical Perspectives of Uncertainty Quantification May 2017
- Conference on Applied Statistics in Agriculture Apr. 2017
- STATMOS Workshop on Climate and Weather Extremes Oct. 2016
- Rossbypalooza Workshop: Climate meets Statistics at the UChicago July 2016
- STATMOS Workshop on High Performance Computing for Spatial Statistics Sept. 2015
- Workshop on Spatial Statistics Jan. 2015
- 2014 Graybill/ENVR Conference: Modern Statistical Methods for Ecology Sept. 2014
- Pan-American Advanced Study Institute on Spatio-Temporal Statistics June 2014
- SAMSI/NCAR Workshop on Massive Datasets in Environment and Climate Feb. 2013
- NSF-CBMS Regional Conference on Statistical Climatology Aug. 2012

Student Awards – Purdue University

- Purdue Research Foundation (PRF) Fellowship Aug. 2016 – May 2017
- Graduate School Summer Research Grants 2015
- Homeland Security - Science, Technology, Engineering and Mathematics (HS-STEM) Career Development Program: This program is designed to support undergraduate and graduate students in developing the skills to become preeminent scientists in the homeland security scientific and technical community. Jan. 2011 – Dec. 2013

Presentations

Invited Short Course

1. *Statistical Methods for Analyzing Climate Extremes*, NSF workshop on Collaborative Strategies for Predicting and Measuring Uncertainty in Rare Occurrences in Civil and Environmental Systems, Golden, CO Nov. 2024
2. *Statistical Methods for Analyzing Extremes*, Pacific Institute for the Mathematical Sciences (PIMS)-Banff International Research Station (BIRS)-University of British Columbia-Okanagan (UBCO) Summer School on Forecasting and Mathematical Modeling for Renewable Energy, Kelowna, BC, Canada July 2024
3. *Statistical Methods for Analyzing Climate Extremes*, Minitutorial, Society for Industrial and Applied Mathematics (SIAM) Conference on Mathematics of Planet Earth (MPE22), Pittsburgh, PA July 2022

Invited Discussions in Sessions, Panels, and Roundtables

1. *Next-Gen Weather Generators for Extremes: From Stochastic Models to Huge Fourier Neural Ensembles*, Workshop on Contemporary Advances in Statistics of Extremes, Columbia, MO July 2025
2. American Statistical Association (ASA) Climate and Extremes Roundtable, Boulder CO Oct. 2024
3. *Statistics of Climate Extremes*, Section on Statistics and the Environment, JSM, Toronto, ON, Canada Aug. 2023
4. *Postdoctoral Panel*, National Institute of Statistical Sciences (NISS) Graduate Student Network, (virtual) Jan. 2022

Seminars

1. *A Physics-Statistics Approach for Geophysical Extreme Event Hazard Assessment*, Colloquium, Department of Statistics, Virginia Tech, Blacksburg, VA March 2025
2. *Conditional Decomposition Approach for Modeling Multivariate Extreme Events*, Department Colloquium, Department of Statistics, University of South Carolina, Columbia SC Oct. 2024
3. *Conditional Decomposition Approach for Modeling Multivariate Extreme Events*, Department Colloquium, University of Iowa, Department of Statistics and Actuarial Science, (virtual) Oct. 2024
4. *Conditional Decomposition Approach for Modeling Multivariate Extreme Events*, Department Colloquium, Department of Statistics, University of Missouri, Columbia MO March 2024
5. *Modeling of High-Frequency Oscillatory Data via Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Department Seminar, Department of Mathematics & Statistics, South Dakota State University, (virtual) Nov. 2023

6. *Modeling of High-Frequency Oscillatory Data via Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Computational Mathematics and Statistics Seminar, Illinois Institute of Technology, (virtual) Nov. 2022

7. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, AADS AI/ML Community of Practice, Eli Lilly and Company, (virtual) Oct. 2022

8. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Atmosphere and climate Seminar, Environmental Science Division (EVS), Argonne National Laboratory, Lemont, IL Sep. 2022

9. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Statistics colloquium, Department of Statistics and Probability, Michigan State University, (virtual) Jan. 2022

10. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Statistics Seminar, Department of Statistics, University of Nebraska–Lincoln, (virtual) Oct. 2021

11. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Statistics Colloquium, Department of Statistics, University of Missouri, (virtual) Feb. 2021

12. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Biostatistics Seminar, Department of Biostatistics, Virginia Commonwealth University, (virtual) Jan. 2021

13. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Statistics Seminar, Department of Applied and Computational Mathematics and Statistics, University of Notre Dame, (virtual) Nov. 2020

14. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Statistics and Data Science Seminar, Department of Mathematics and Statistics, Auburn University, (virtual) Oct. 2020

15. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression*, Taiwan National Center for Theoretical Sciences Seminar on Data Science, (virtual) Sep. 2020

16. *Estimating Precipitation Extremes using Log-Histospline*, Statistics Colloquium, Department of Statistics, University of Georgia, Athens, GA Aug. 2019

17. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Environmental Science Division (EVS), Argonne National Laboratory, Lemont, IL May 2019

18. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Statistics Seminar, Department of Mathematical Sciences, University of Cincinnati, Cincinnati, OH Apr. 2019

19. *Estimating Precipitation Extremes using Log-Histospline*, Statistics Seminar, Department of Mathematics and Statistics, University of Victoria, Victoria, BC, Canada Nov. 2018

20. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Pacific Climate Seminar Series, University of Victoria, Victoria, BC, Canada Sept. 2018

21. *Estimating Precipitation Extremes using Log-Histospline*, Math Colloquium, Department of Mathematics and Statistics, University of North Carolina at Greensboro, Greensboro, NC Nov. 2017

22. *Estimating Precipitation Extremes using Log-Histospline*, Environmental seminar, Department of Statistics, North Carolina State University, Raleigh, NC Sep. 2017

23. *Estimating Precipitation Extremes using Log-Histospline*, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, Milwaukee, WI Mar. 2017

24. *Estimating Precipitation Extremes using Log-Histospline*, Mathematics and Computer Science Division (MCS), Argonne National Laboratory, Lemont, IL Mar. 2017

25. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Atmospheric sciences colloquia, Department of Atmospheric Sciences, University of Illinois at Urbana–Champaign, Champaign, IL Oct. 2016

26. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Data Science Seminar, Mathematics Department, College of William and Mary, Williamsburg, VA Mar. 2016

27. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, IMAGe Brown Bag Seminar, National Center for Atmospheric Research (NCAR), Boulder, CO Apr. 2015

28. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Environmental Science Division (EVS), Argonne National Laboratory, Lemont, IL Mar. 2015

29. *Spatial Extremes – Current Approaches and Future Outlook*, National Climatic Data Center (NCDC), Asheville, NC Nov. 2012

Invited Conference and Workshop Presentations

1. *A Physics-Statistics Approach for Geophysical Extreme Event Hazard Assessment*, The 14th International Conference on Extreme Value Analysis, Chapel Hill, NC June 2025

2. *Dynamic Surrogate Modeling for Online Optimization*, ASA/IMS Spring Research Conference 2025, New York, NY June 2025

3. *A Physics-Statistics Approach for Geophysical Extreme Event Hazard Assessment*, NSF Workshop on Data-driven Modeling and Prediction of Rare and Extreme Events, Chicago, IL Nov. 2024

4. *Conditional Decomposition Approach for Modeling Multivariate Extreme Events*, Seventh Celebration of Statistics and Data Science conference, Department of Statistics and Data Science, Cornell University, Ithaca, NY Sep. 2024

5. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Session on "New developments in spatial extremes modeling", 2023 ICSA Applied Statistics Symposium, Ann Arbor, MI June 2023

6. *A formal invitation to Purdue Statistics Alumni Association: My personal reflection on graduate school*, Session on "Purdue Statistics Alumni", 10th International Purdue Symposium on Statistics, West Lafayette, IN June 2023

7. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Quantifying Uncertainty in Natural Hazards, ENVR 2022 Workshop: Environmental and Ecological Research with Societal Impacts, Provo, UT Oct. 2022

8. *Estimating Concurrent Climate Extremes: A Conditional Approach*, IMSI workshop on Detection and Attribution of Climate Change, Chicago IL Oct. 2022

9. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Banff International Research Station (BIRS) UBCO Workshop on Climate Change Scenarios and Financial Risk, Kelowa, BC Canada July 2022

10. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Session on Spatio-Temporal Models for Environmental and Health Applications. The 5th International Conference on Econometrics and Statistics, (virtual) June 2022

11. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Minisymposium on the Science of Hazards-Part I of II, Society for Industrial and Applied Mathematics (SIAM) Conference on Uncertainty Quantification (UQ22), Atlanta, GA Apr. 2022

12. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Session on Spatial and Spatio-Temporal Statistics and Its Applications, The 34th New England Statistics Symposium, (virtual) Oct. 2021

13. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Session on Modern Topics on Mining Massive Spatial-temporal Data,
2021 INFORMS Annual Meeting, (virtual) Oct 2021

14. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Session on Advances in Spatial and Spatio-temporal Modeling and its Applications, 2021 ICSA Applied Statistics Symposium, (virtual) Sep. 2021

15. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Section on Frontiers of Spatial and Temporal data modeling, The 4th International Conference on Econometrics and Statistics, (virtual) June 2021

16. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Minisymposium on Advances and Challenges in Wind Modeling and its Applications, Society for Industrial and Applied Mathematics (SIAM) Conference on Mathematics of Planet Earth (MPE20), (virtual) Aug. 2020

17. *Network Analysis of Gulf Coast Extreme Precipitation*, Session on Climate Networks and Extremes, Section on Risk Analysis, Joint Statistical Meetings (JSM), Denver, CO (presented by Snigdhansu Chatterjee) July 2019

18. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Session on Multivariate extremes, Workshop on Risk Analysis for Extremes in the Earth System, Berkeley, CA July 2019

19. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Session on CANSSI Postdoctoral Showcase, 2019 Statistical Society of Canada (SSC) Annual Meeting, Calgary, AB, Canada May 2019

20. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, SAMSI MUMS Transition Workshop, Chapel Hill, NC May 2019

21. *Estimating Concurrent Climate Extremes: A Conditional Approach*, A Workshop Celebrating Michael L. Stein's 60th Birthday, Chicago, IL Apr. 2019

22. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Minisymposia on Statistics of Extreme Weather and Climate Events, SIAM MPE18, Philadelphia, PA Sept. 2018

23. *Estimating Precipitation Extremes using Log-Histospline*, 28th International Environmetrics Society (TIES) Conference, Guanajuato, Mexico July 2018

24. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, SAMSI CLIM Transition Workshop, Durham, NC May 2018

25. *Network Analysis of Gulf Coast Extreme Precipitation*, SAMSI Climate Extremes Workshop, Durham, NC May 2018

26. *Estimating Precipitation Extremes using Log-Histospline*, International Chinese Statistical Association Applied (ICSA) Statistics Symposium, Chicago, IL June 2017

27. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, STATMOS Workshop on Climate and Weather Extremes, State College, PA Oct. 2016

28. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Workshop on Uncertainty and Causality Assessment in Modeling Extreme and Rare Events, National Center for Atmospheric Research, Boulder, CO Apr. 2016

Topic Contributed Conference Presentations

1. *A Physics-Statistics Approach for Geophysical Extreme Event Hazard Assessment*, Session on Collaborative Strategies for Predicting and Measuring Uncertainty associated with Weather and Climate Extremes, ASA Advisory Committee on Climate Change Policy, JSM, Nashville, TN Aug. 2025

2. *Evaluating Value at Risk and Expected Shortfall Estimation via Point Process Approaches*, Session on Recent Advances in Time Series Methodology, Business and Economic Statistics Section, JSM, Portland, OR Aug. 2024

3. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Session Statistical models for climate change adaptation, Section on Statistics and the Environment, JSM, Toronto, ON, Canada Aug. 2023

4. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Session On Surrogate Modeling of Emerging Issues in Physical and Engineering Simulators, Section on Physical and Engineering Sciences, JSM, DC Aug. 2022

5. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN) Conferences, Orlando, FL May 2022

6. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Session on Volume, Velocity, and Variety in Environmental Statistics: New Perspectives and Methods, Section on Statistics and the Environment, JSM, (virtual) Aug. 2021

7. *Estimating Concurrent Climate Extremes: A Conditional Approach*, Oral session on Correlated Climate Extremes: Drivers, Mechanisms, and Projections I, American Geophysical Union (AGU) Fall Meeting, (virtual) Dec. 2020

8. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Session on Uncertainty Quantification for Environmental Applications, Section on Statistics and the Environment, JSM, (virtual) Aug. 2020

9. *Estimating Precipitation Extremes using Log-Histospline*, 14th International Meeting on Statistical Climatology (IMSC), Toulouse, France June 2019

10. *Estimating Extreme Storm Surge Levels: A Statistical Perspective*, Session on The Climate Extremes Program at SAMSI, Section on Statistics and the Environment, JSM, Vancouver, BC, Canada Aug. 2018

11. *Estimating Precipitation Extremes using Log-Histospline*, Oral session on Utilizing Long-Term Precipitation Data Records for Understanding Climate Extremes I, American Geophysical Union (AGU) Fall Meeting, New Orleans, LA Dec. 2017

12. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Oral session on Characterizing and Interpreting Changes in Temperature and Precipitation Extremes, AGU Fall meeting, San Francisco, CA Dec. 2015

Contributed Talks

1. *A Combined Physical-Statistical Approach for Estimating Storm Surge Risk*, Session on The Climate Program at SAMSI, Section on Statistics and the Environment, JSM, Denver, CO (cancelled) Aug. 2019

2. *Estimating Precipitation Extremes using Log-Histospline*, Session on Environmental Extremes, Section on Statistics and the Environment, JSM, Baltimore, MD Aug. 2017

3. *Estimating Precipitation Extremes using Log-Histospline*, Session on Extreme Value Analysis and Prediction, Section on Statistics and the Environment, Conference on Probability and Statistics in the Atmospheric Sciences, Baltimore, MD July 2017

4. *Spatial Basis Function Approach to Accommodate Teleconnection Patterns in Climate Data*, Conference on Applied Statistics in Agriculture, Manhattan, KS Apr. 2017

5. *Spatial Basis Function Approach to Accommodate Teleconnection Patterns in Climate Data*, Session on Nonstationary Models for Spatial Data, Section on Statistics and the Environment, JSM, Chicago, IL Aug. 2016

6. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, 13th International Meeting on Statistical Climatology meeting, Canmore, Alberta, Canada June 2016

7. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Session on Analysis of Extreme Values, Section on Statistics and the Environment, JSM, Seattle, WA Aug. 2015

8. *Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions*, Session on Modeling extreme events: precipitation and floods, The 9th international conference on Extreme Value Analysis (EVA), Ann Arbor, MI June 2015

9. *Dependence modeling of spatio-temporal weather extreme events*, Session on Spatial-temporal Data, The Ninth International Chinese Statistical Association International Conference: Challenges of Statistical Methods for Interdisciplinary Research and Big Data, Hong Kong Dec. 2013

10. *Dependence modeling of spatio-temporal weather extreme events*, Session on Statistical Methods and Inference for Extreme Environmental Events, Section on Statistics and the Environment, JSM, Montreal, QC Aug. 2013

Clemson University Talks

1. *Modeling high frequency oscillating biomedical signals using synchrosqueezing transform and locally stationary Gaussian processe*, AI Symposium Apr. 2023

2. *Some Research Topics in Environmental Statistics and Biomedical Signal Analysis.* First-Year Graduate Student seminar, School of Mathematical and Statistical Sciences Feb. 2023

3. *Some (Useful) Statistical Tools for Environmental Research*, EEES Seminar Jan. 2023

4. *Extreme value statistics and the study of climate change*, 2022 Research Symposium May 2022

5. *Estimating Concurrent Climate Extremes: A Conditional Approach*, 2021 Research Symposium, May 2021

6. *Some Research Topics in Environmental Statistics and Biomedical Signal Analysis.* First-Year Graduate Student seminar, School of Mathematical and Statistical Sciences Feb. 2021

7. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression.*
Clemson Statistics Seminar Nov. 2020

8. *Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression.*
Clemson College of Science Rising Star Symposium Sept. 2020

9. *Some Research Topics in Environmental Statistics.* First-Year Graduate Student seminar, School of Mathematical and Statistical Sciences Jan. 2020

10. *Extreme Value Analysis for Climate Research.* Math Club Seminar, School of Mathematical and Statistical Sciences Jan. 2020

11. *Panel Discussion on Preparing for a CAREER in Math & Stat.* Graduate Student Seminar (GSS), School of Mathematical and Statistical Sciences Oct. 2019

Purdue University Talks

1. *Job/Summer Internship Panel.* Graduate Student Organization seminar, Department of Statistics Apr. 2017

2. *An Overview of Spatial Extremes.* Mathematical Statistics Seminar, Department of Statistics Oct. 2015

3. *An Introduction to Extreme Value Analysis.* Graduate Student Organization seminar, Department of Statistics Mar. 2014

Contributed Posters

Airflow recovery from thoracic and abdominal movements using Synchrosqueezing Transform and Locally Stationary Gaussian Process Regression

- IMSI Workshop on Expressing and Exploiting Structure in Modeling, Theory, and Computation with Gaussian Processes, Chicago, IL Aug. 2022

Modeling Compound Wind and Precipitation Extremes using a Large Climate Model Ensemble

- Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN) Conferences, Orlando, FL May 2022
- Session on Extreme value analysis for climate applications, 14th International Meeting on Statistical Climatology (IMSC), Toulouse, France June 2019

Estimating Extreme Storm Surge Levels: A Statistical Perspective

- Coupling Uncertain Geophysical Hazards Workshop, Raleigh, NC March 2019
- SAMSI MUMS Opening Workshop, Durham, NC Aug. 2018

Estimating Precipitation Extremes using Log-Histospline

- IMS New Researchers Meeting, Burnaby, BC, Canada July 2018
- IMA workshop on Forecasting from Complexity, Minneapolis, MN Apr. 2018
- Triangle Machine Learning Day (TMLD 2018), Durham, NC Apr. 2018
- SAMSI CLIM Program Opening Workshop, Durham, NC Aug. 2017
- Statistical Perspectives of Uncertainty Quantification, Atlanta, GA May 2017

Estimating changes in temperature extremes from millennial scale climate simulations using generalized extreme value (GEV) distributions

- Workshop on Spatial Statistics, College Station, TX Jan. 2015
- 2014 Graybill/ENVR Conference: Modern Statistical Methods for Ecology, Fort Collins, CO Sept. 2014
- STATMOS Annual Meeting, Chicago, IL Sept. 2014

Dependence modeling of spatio-temporal weather extreme events

- Environmental and Longitudinal Data Analysis, Eastern North American Region (ENAR) spring meeting, Baltimore, MD Mar. 2014
- Frontiers of Statistics and Forecasting in Celebration of the 80th Birthday of George C. Tiao, Taipei, Taiwan Dec. 2013
- SAMSI LDHD Opening Workshop, Research Triangle Park, NC Sept. 2013

University Service

College Committees

– Global Engagement Committee 2026-2027

Department Committees

– Data Science and Analytic Online Program Curriculum Committee Feb. 2025 -present
– Statistics Tenure-Track Search Chair Aug. 2024 - Oct. 2024
– Statistics Tenure-Track Search Chair Oct. 2023 - Mar. 2024
– Data Science Lecturer Search Member Oct. 2023 - Mar. 2024
– Research Committee Member Aug. 2023 - present
– Clemson University Graduate School Graduate Academic Program Self Review (GAPS) Member June 2023 - present
– School Teaching Award Member 2023 and 2024
– Interim School Director Search Member Summer 2023
– School of Mathematical and Statistical Sciences Council Member Aug. 2022 - May. 2023
– School Postdoc Search Member 2022 and 2023
– Data Science Undergraduate Curriculum Member Sep. 2022 - present
– School Director Two-Year Review Member Dec. 2021

Professional Service

Editorial Board

– **Associate Editor**: Weather and Climate Extremes Aug. 2024 - present
– **Associate Editor**: Data Science in Science Jan. 2023 - present
– **Review Editor**: Climate Detection and Attribution, Frontiers in Climate Dec. 2023 - present

American Statistical Association (ASA) Program Officer

– ASA Advisory Committee on Climate Change Policy: Member (2023) Vice Chair (2024) Chair (2025)
– ASA Section on Statistics and the Environment (ENVR): Publications Chair 2023-2024
– ASA South Carolina Chapter: Secretary 2025 - 2026

Proposal Panel:

- 2025: NSF's Division of Mathematical Sciences
- 2025: NSF's Division of Earth Sciences
- 2024: NSF's Division of Earth Sciences
- 2024: NSF's Division of Mathematical Sciences

Proposal Referee:

- 2024: NSF's Climate and Large-scale Dynamics
- 2024: NSF's Hydrologic Sciences Program
- 2023: NSF's Climate and Large-scale Dynamics Program
- 2021: NSF's Climate and Large-scale Dynamics Program
- 2019: NSF's Climate and Large-scale Dynamics Program

Journal Referee:

2017: *Journal of Geophysical Research: Atmosphere*, *Advances in Statistical Climatology, Meteorology and Oceanography*, *Stat*, *Journal of the Korean Statistical Society*, *Computational Statistics & Data Analysis*, *Environmetrics*

2018: *Annals of Applied Statistics (2)*, *Environmetrics*, *Computational Statistics*, *Journal of Agricultural, Biological, and Environmental Statistics*, *Journal of Hydrologic Engineering*

2019: *Environmetrics (2)*, *Technometrics (2)*, *Journal of Statistical Distributions and Applications*, *Science*, *Environmental and Ecological Statistics*

2020: *Climatic Change*, *Statistica Sinica*, *Biometrics*, *Brazilian Journal of Probability and Statistics*, *Technometrics (2)*, *Advances in Statistical Climatology, Meteorology and Oceanography*, *Computational Statistics & Data Analysis (2)*, *Scientific Reports*, *Atmosphere*

- 2021: *Journal of Climate (3)*,*Technometrics*, *Nature*, *Environmental Modelling and Software*, *Environmental and Ecological Statistics*,*Geoscientific Model Development*, *Journal of Agronomy and Crop Science*, *Extremes*, *Annals of Applied Statistics*, *Environmetrics*, *Journal of Agricultural, Biological, and Environmental Statistics*, *Journal of Computational and Graphical Statistics*, Environmetrics (2)
- 2022: *IISE Transactions*, *Environmental and Ecological Statistics*, *Environmetrics*, *Journal of Climate*, *AOAS*, *Technometrics*, *Atmosphere-Ocean*
- 2023: *Ocean Dynamics*, *Statistics and Computing*, *Technometrics (2)*, *Monthly Weather Review*, *Remote Sensing*, *Statistics in Medicine*, *Journal of Agricultural, Biological, and Environmental Statistics*, *Journal of Computational and Graphical Statistics*
- 2024: *Environmental Data Science*, *Journal of Computational and Graphical Statistics*, *Stochastic Environmental Research and Risk Assessment*, *Statistical Analysis and Data Mining*, *Environmetrics (2)*, *Weather and Climate Extremes (3)*, *Annals of Applied Statistics*
- 2025: *Annals of Applied Statistics (3)*, *Journal of the American Statistical Association (3)*, *Journal of Climate (3)*, *Journal of Computational and Graphical Statistics*, *Advances in Statistical Climatology, Meteorology and Oceanography*

Conference Organizing Committee:

- IMS/ASA Spring Research Conference, Clemson, SC May 2026
- 2024 ENVR Workshop: Spatial Data Science for the Environment, Boulder, CO Oct. 2024

- PIMS-BIRS-UBCO Summer School on Forecasting and Mathematical Modeling for Renewable Energy, Kelowna, BC, Canada July 2024
- 2024 Summer Research Conference, Southern Regional Council on Statistics Clemson, SC June 2024
- 2023 Interdisciplinary Workshop on Weather and Climate Extremes May 2023

Conference and Workshop Program Committee:

- IMS/ASA Spring Research Conference, Clemson, SC May 2026
- Workshop on Contemporary Advances in Statistics of Extremes, Columbia, MO June 2025
- 15th International Meeting on Statistical Climatology, Toulouse, France June 2024
- 2024 Summer Research Conference, Southern Regional Council on Statistics Clemson, SC June 2024
- 2023 Interdisciplinary Workshop on Weather and Climate Extremes Clemson, SC May 2023
- The 10th International Workshop on Climate Informatics Sept. 2020
- The 9th International Workshop on Climate Informatics Oct. 2019

Session Organizer:

- Collaborative Strategies for Predicting and Measuring Uncertainty Associated with Weather and Climate Extremes, Joint Statistical Meetings, Nashville, TN Aug. 2025
- Panel on Communication in Statistics and Data Science, Joint Statistical Meetings, Nashville, TN Aug. 2025
- Panel on From Data to Climate Actions, Joint Statistical Meetings, Portland, OR Aug. 2024
- Modern Developments in Space-Time Modeling, 7th International Conference on Econometrics and Statistics, Beijing, China July 2024
- Statistical Deep Learning for Environmental Research, Joint Statistical Meetings, Toronto, Canada Aug. 2023
- The IMSI Confronting Global Climate Change Program, Joint Statistical Meetings, Toronto, Canada Aug. 2023
- Topic Contributed Panel on Future Directions of Climate Statistics, Section on Statistics and the Environment, Joint Statistical Meetings, DC Aug. 2022
- Modern statistical methods for environmental data analysis, The 5th International Conference on Econometrics and Statistics, (virtual) June 2022
- Minisymposium on The Science of Hazards - Part II of II, 2022 SIAM Conference on Uncertainty Quantification, Atlanta, GA Apr. 2022
- Minisymposium on The Science of Hazards - Part I of II, 2022 SIAM Conference on Uncertainty Quantification, Atlanta, GA Apr. 2022
- Modern Topics on Mining Massive Spatial-temporal Data, 2021 INFORMS Annual Meeting Oct 2021
- Advances in Statistical Climatology, Joint Statistical Meetings, Section on Statistics and the Environment, Seattle, WA Aug. 2021
- Minisymposium on Advances and Challenges in Wind Modeling and its Applications, SIAM MPE20, (virtual) Aug. 2020
- Uncertainty Quantification for Environmental Applications, Section on Statistics and the Environment, Joint Statistical Meetings, (virtual) Aug. 2020

- Recent developments in climate/environmental statistics, The 4th International Conference on Econometrics and Statistics, Seoul, South Korea (Postponed)
- Minisymposium on the Science of Hazards: Tsunami and Storm Surges, SIAM Conference on Uncertainty Quantification, München, Germany (Postponed)
- The Climate Program at SAMSI, Section on Statistics and the Environment, Joint Statistical Meetings, Denver, CO July 2019
- Minisymposium on Statistics of Extreme Weather and Climate Events, SIAM Conference on Mathematics of Planet Earth, Philadelphia, PA Sept. 2018
- The Climate Extremes Program at SAMSI, Section on Statistics and the Environment, Joint Statistical Meetings, Vancouver, BC, Canada Aug. 2018

Session Chair:

- Quantifying Risk of Cascading and Compound Extremes in Critical Systems, Workshop on Contemporary Advances in Statistics of Extremes, Columbia, MO July 2025
- Modern Methods for Multivariate Extreme Value Modeling (I), Workshop on Contemporary Advances in Statistics of Extremes, Columbia, MO June 2025
- Day 3 and Day 4 Invited Talks, IMSI Workshop on UQ for Material Science and Engineering, Chicago, IL Apr. 2025
- Day 2 Invited Talk, IMSI Workshop on UQ and Trustworthy AI Algorithms for Complex Systems and Social Good, Chicago, IL Mar 2025
- Panel session on "UQ for a Sustainable Future," IMSI Workshop on UQ and Trustworthy AI Algorithms for Complex Systems and Social Good, Chicago, IL Mar. 2025
- NSF workshop on Collaborative Strategies for Predicting and Measuring Uncertainty in Rare Occurrences in Civil and Environmental Systems, Golden, CO Nov. 2024
- 2024 ENVR Workshop: Spatial Data Science for the Environment, Boulder, CO Oct. 2024
- Statistical Innovations in Climate Research: Bridging Disciplines for Earth System Understanding, Joint Statistical Meetings, Portland, OR Aug. 2024
- Extreme value analysis methods and theory for climate applications - Part II, 15th International Meeting on Statistical Climatology, Toulouse, France June 2024
- Environmental and Climate Statistics, The Southern Regional Council on Statistics 59th Summer Research Conference, Clemson SC June 2024
- Georgia Statistics Day 2023, Atlanta, GA Oct. 2023
- The IMSI Confronting Global Climate Change Program, Joint Statistical Meetings, Toronto, Canada Aug. 2023
- Topic Contributed Panel on Future Directions of Climate Statistics, Section on Statistics and the Environment, Joint Statistical Meetings, DC Aug. 2022
- Spatial Statistics and UQ: Foundations for Innovation in Environmental Science, Invited Session, Section on Statistics and the Environment, Joint Statistical Meetings, DC Aug. 2022
- Modern statistical methods for environmental data analysis, The 5th International Conference on Econometrics and Statistics, (virtual) June 2022
- Minisymposium on The Science of Hazards - Part I of II, 2022 SIAM Conference on Uncertainty Quantification, Atlanta, GA Apr. 2022
- Modern Topics on Mining Massive Spatial-temporal Data, 2021 INFORMS Annual Meeting (virtual) Oct 2021
- Uncertainty Quantification Across the Boundaries, Topic Contributed Session, JSM, Uncertainty Quantification in Complex Systems Interest Group Aug. 2021

- Recent developments in climate/environmental statistics, The 4th International Conference on Econometrics and Statistics, (virtual) June 2021
- Minisymposium on Advances and Challenges in Wind Modeling and its Applications, SIAM MPE20, Aug. 2020
- Invited Session II, Georgia Statistics Day 2019, Atlanta, GA Oct. 2019
- Methods for High-Dimensional and Large Data I, 2019 Statistical Society of Canada (SSC) Annual Meeting, Calgary, AB, Canada May 2019
- Statistical Methods of Air Quality and Exposure, Section on Statistics and the Environment, Joint Statistical Meetings, Vancouver, BC, Canada Aug. 2018
- Environmental Applications of Bayesian Methods, Section on Bayesian Statistical Science, Joint Statistical Meetings, Baltimore, MD July. 2017
- Environmental Extremes, Section on Statistics and the Environment, Joint Statistical Meetings, Chicago, IL Aug. 2016

Seminar Organizer:

- Statistics Seminars, School of Mathematical and Statistical Sciences, Clemson University Aug. 2021-present
- Community Climate Science Seminars (CCSS), University of Victoria Oct. 2018 to Apr. 2019
- Spatial statistics and Statistical Climatology Seminars, Department of Statistics, Purdue University Aug. 2013 to May 2017
- Graduate Student Organization (GSO) Seminar: Department of Statistics, Purdue University Jan. 2014 to May 2015

SAMSI Administrative Service:

- Storm Surge Risk Working Group, Statistical and Applied Mathematical Sciences MUMS program Aug. 2018 - Present
- Extremes and Risk and Coastal Hazards Working Groups administrator, CLIM program, Aug. 2017–Jun. 2018

Student Presentation Competition Judger:

- 2024 Georgia Statistics Day, Atlanta, GA Oct. 2024
- 2023 Georgia Statistics Day, Atlanta, GA Oct. 2023
- 35th New England Statistics Symposium May 2022
- 2021 SC-ASA Palmetto Symposium Apr. 2021

Teaching Experience

School of Mathematical and Statistical Sciences, Clemson University

- DSA 9100: Special Topics in Time Series Analysis Spring 2025
- MATH 4070/6070 Regression and Time-Series Analysis Fall 2024
- STAT 8110 Special Problems in Experimental Statistics Fall 2021, Spring 2024
- MATH 8090: Time Series Analysis, Forecasting and Control 21 Fall, 23 Fall
- DSA 8070: Multivariate Analysis 21 Fall, 22 Fall, 23 Fall, 24 Fall
- MATH 9700: Some Useful Tools for Environmental Data Analysis 21 Spring, 23 Spring
- DSA 8020: Statistical Method II 21 Spring, 22 Spring, 23 Spring, 24 Spring, 25 Spring
- STAT 8010: Statistical Method I 19 Fall, 20 Spring, 20 Fall, 23 Summer

- STAT 8020 Statistical Method II 19 Fall, 20 Spring
- STAT 8050: Design and Analysis of Experiments 20 Spring
- **Guest Lecturer**: MATH 4500: Introduction to Mathematical Models Feb. 28, 2023
- **Guest Lecturer**: MATH 9810: Computer Experiments and Uncertainty Quantification Dec. 4, 2019

Department of Mathematics and Statistics, University of Victoria

Guest Lecturer: STAT 457/554 Time Series Analysis Nov. 7, 2018

– Gave an introductory lecture on extreme value analysis

SAMSI Education and Outreach Programs and Workshops

Undergraduate Modelling Workshop May 2018

– Designed and led a week-long project on "Estimating extreme US southeast rainfall"
– Mentored a team of 6 undergrad students with Statistics, Mathematics, and Computer Sciences background.

Undergraduate workshop on climate extremes Oct. 2017

– Gave a tutorial on extreme value analysis for climate research
– Presented a demos of extreme value analysis using `R`

Department of Statistics, Purdue University

Instructor: STAT 225 Introduction to Probability Models Aug. 2013 – May 2014

– Conducted lectures and prepared course slides

Teaching Assistant May 2012 – May 2016

– STAT 598 G Introduction to Computational Statistics, Fall 2012.
– STAT 598 HZ Modern Applied Statistics, Spring 2015.
– STAT 526 Advanced Statistical Methodology, Fall 2012.
– STAT 525 Intermediate Statistical Methodology, Fall 2015.
– STAT 529 K Bayesian Applied Decision Theory, Summer 2012, Spring 2013, Spring 2015, Spring 2016.
– STAT 511 Statistical Methods, Spring 2013.

School of Industrial Engineering, Purdue University

Teaching Assistant: IE 535 Linear Programming Aug. 2010 – Dec. 2010

Department of Statistics, University of Akron

Teaching Assistant: STAT 250 Statistics for Everyday Life Aug. 2008 – Dec. 2009

Professional Membership

American Statistical Association (ASA)	Since Dec. 2010
Institute of Mathematical Statistics (IMS)	Since June 2012
International Chinese Statistical Association (ICSA)	Since Mar. 2013
American Geophysical Union (AGU)	July 2015 - Dec. 2021
The International Environmetrics Society (TIES)	Dec. 2016 - present
American Meteorological Society (AMS)	Feb. 2017 - Jan. 2018
Society for Industrial and Applied Mathematics (SIAM)	Feb. 2017 - Apr. 2022
Statistical Society of Canada (SSC)	Oct. 2018 - Sep. 2019