CURRICULUM VITAE
Emily L. Kang, Ph.D.

Division of Statistics and Data Science
Department of Mathematical Sciences
University of Cincinnati
Cincinnati, Ohio 45221-0025

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RESEARCH INTERESTS

- Statistical methodologies and computational statistics for large data with complex dependence structures, in particular spatial, spatio-temporal and network data
- Uncertainty quantification, parameter calibration and statistical emulation for computer experiments
- Bayesian methodologies and modeling with applications in environmental, climate, biological sciences and engineering
- Statistical learning methods and algorithms for high-dimensional data and variable selection

EDUCATION

- 2009 PhD — Statistics, The Ohio State University, Columbus, OH
- 2006 MS — Statistics, The Ohio State University, Columbus, OH
- 2004 BS — Applied Mathematics, Tianjin University, Tianjin, China
- 2004 BA — Finance, Nankai University, Tianjin, China

PROFESSIONAL EXPERIENCE

- 2021-pres. — Professor, Department of Mathematical Sciences, University of Cincinnati
- 2016-2021 — Associate Professor, Department of Mathematical Sciences, University of Cincinnati

- 2017 Fall — Visiting Research Fellow, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC
- 2011-2016 — Assistant Professor, Department of Mathematical Sciences, University of Cincinnati
- 2009-2011 — Postdoctoral Fellow, Department of Mathematics, North Carolina State University
- 2009-2011 — Postdoctoral Fellow, Statistical and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC

HONORS AND AWARDS

- Faculty Release Fellowship, Taft Research Center, University of Cincinnati, 2024-2025
- Early Investigator Award, American Statistical Association (ASA)'s Section on Statistics and the Environment (ENVR), 2019
- Nominated for the George Barbour Award for Good Faculty-Student Relations, University of Cincinnati, 2017 and 2018
- Taft Summer Research Fellowship, University of Cincinnati, 2013
- Travel Award by the Association of Women in Mathematics (AWM)-National Science Foundation (NSF), 2013
- Faculty Research Fellowship, University Research Council (URC) at University of Cincinnati, 2012
- Whitney Research Award, Department of Statistics at The Ohio State University, 2009
- Selected Graduate Student Advisee Special Honors:
  - Dissertation advisor for 2026 ASA SPES + Q&P Student Paper Award Winner, Ying Zhang
  - Dissertation advisor for 2026 ASA Risk Analysis Section Student Paper Award Winner, Shixuan Wang
  - Dissertation advisor for 2020 URC Graduate Student Stipend & Research Cost Award Winner, Ayesha Kumari Ekanayaka Katugoga Gedara
  - Dissertation advisor for 2020-2021 Taft Dissertation Fellowship Winner, Gang Yang
  - Dissertation advisor for 2019 ASA Business & Economic Statistics Section Student Paper Award Winner, Miaoqi Li
  - Dissertation co-advisor for 2018 ASA Section on Statistics and the Environment Student Paper Award Winner, Pulong Ma
  - Dissertation co-advisor for 2017 ICSA Applied Statistics Symposium Student Paper Award Winner, Pulong Ma

EXTERNAL FUNDING

(Total Funding Awarded to Date to University of Cincinnati: $2,186,681)

- NASA (Co-I, with P. Kamus, Jet Propulsion Laboratory, as PI): Neighborhood-scale extreme humid heat health impacts, 2022-2025. UC Subcontract: $99,486
- NASA (Co-I, with S. Lee, Jet Propulsion Laboratory, as PI): Ecological Projection Analytic Collaborative Framework (EcoPro), 2022-2025. UC Subcontract: $235,682
- NSF (PI, with G. Lin, Purdue University and B. A. Konomi, University of Cincinnati, as Co-PIs): Collaborative Research: Inference and Uncertainty Quantification for High Dimensional Systems in Remote Sensing: Methods, Computation, and Applications, 2021-2025. UC Subcontract: $159,947
- Simons Foundation (PI): Collaboration Grant for Mathematicians, 2020 - 2023. Original Total Award: $80,400; modified to $16,080 after Kang receiving other external funding
- NASA (Co-I, with P. Kalmus, Jet Propulsion Laboratory, as PI): Likely refugia from projections of coral reef health from observationally weighted climate model ensembles, 2019-2022. UC Subcontract: $239,141
- Jet Propulsion Laboratory (PI, with B. A. Konomi, University of Cincinnati, as Co-I): Large-scale multivariate spatial modeling for uncertainty quantification for AIRS mission, 05/2020 - 12/2020. Total Award: $48,124
- Jet Propulsion Laboratory (PI): Statistical simulation, 01/2019 - 08/2019. Total Award: $45,566
- Jet Propulsion Laboratory (PI): Statistical simulation of geophysical variables for uncertainty quantification in evapotranspiration, 06/2018 - 08/2018. Total Award: $53,861
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for C. Zhou and J. Zhang, 05/2018 - 05/2019. Total Award: $73,286
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for M. Li, 01/2018 - 01/2019. Total Award: $36,658
- Simons Foundation (PI): Collaboration Grant for Mathematicians, 2014 - 2019. Total Award: $35,000
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for Y. Yuan, J. Zhang, and C. Zhou, 05/2017 - 05/2018. Total Award: $105,477
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for T. Wu, 08/2016 - 08/2017. Total Award: $34,200
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for Z. Fu and M. Li, 06/2016 - 06/2017. Total Award: $68,440
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for H. Shi, 05/2016 - 05/2017. Total Award: $33,681
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for P. Ma, S. Bennett, and E. Young, 01/2016 - 12/2016. Total Award: $101,035

- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for J. Ma, 07/2015 - 06/2016. Total Award: $31,490
- Jet Propulsion Laboratory (PI): Statistical Modeling for Physical Oceanography Distributed Active Archive Center, 07/2015 - 09/2015. Total Award: $57,087
- Procter & Gamble Company (PI): Statistical analysis and industrial traineeship for P. Ma, W. Hinkle, and S. Bennett, 01/2015 - 12/2015. Total Award: $92,886
- NSF (Co-PI, with B. Burton, University of Cincinnati, as PI): UCScienceNet: A High Bandwidth Science DMZ to Enable STEM Discovery, 2014 - 2016. Total Award: $499,741
- NASA (Co-I, with A. Braverman, Jet Propulsion Laboratory, as PI): Multivariate Data Fusion and Uncertainty Quantification for Remote Sensing, 2013 - 2015. UC Subcontract: $102,813
- Jet Propulsion Laboratory (PI): Conditional Simulation for CO2, 2013. Total Award: $17,000

PEER-REVIEWED PUBLICATIONS

*: denote students supervised/co-supervised

45. Gyamfi, E. H.*, Konomi, B. A., Lin, G., and **Kang, E. L.** (2026) Enhancing Gaussian Processes for Surrogate Modeling: A Review of Dimension Reduction Techniques for Input Variables. In *Handbook of Statistical Methods for Computer Models: Uncertainty Quantification*, in press.
44. Ekanayaka, A*, **Kang, E. L.**, Braverman, A., Kalmus, P. (2025) A multivariate spatial statistical model for statistical downscaling of sea surface temperature in the Great Barrier Reef region. *Journal of the Royal Statistical Society Series C: Applied Statistics*, 74(4), 1183–1213, https://doi.org/10.1093/jrsssc/qlaf019.
43. Ren, S.*, Wang, P. and **Kang, E. L.** (2025), A Practical Tool for Visualizing and Measuring Model Selection Uncertainty. *Stat*, 14: e70056, https://doi.org/10.1002/sta4.70056.
42. Lee, S., Kalmus, P., Ferraz, A., Goodman, A., Pearson, K., Doran, G, Platt, Fl. Hu, B., Ekanayaka, A. *, Chakraborty, S., **Kang, E. L.**, Zhang, J., Dahiyat, S., Cavanaugh, K. (2024) Ecopro: Ecological Projection Digital Twin, IGARSS 2024 - 2024 IEEE International Geoscience and Remote Sensing Symposium, Athens, Greece, 2024, pp. 2311-2314, doi:10.1109/IGARSS53475.2024.10640554.
41. Cheng, S., Konomi, B. A., Karagiannis, G., and **Kang, E. L.** (2024) Recursive nearest neighbor co-kriging models for big multi-fidelity spatial data sets. *Environmetrics*, https://doi.org/10.1002/env.2844.

40. Ekanayaka, A.*, **Kang, E. L.**, Kalmus, P., Braverman, A. (2022) Statistical Downscaling of Sea Surface Temperature Projections with a Multivariate Gaussian Process Model. *NeurIPS Workshop on Gaussian Processes, Spatiotemporal Modeling, and Decision-making Systems*. (peer-refereed workshop publication at `https://gp-seminar-series.github.io/neurips-2022/`)
39. Kalmus, P., Ekanayaka, A.*, **Kang, E. L.**, Baird, M., and Gierach, M. (2022) Past the precipice? Projected coral habitability under global heating. *Earth's Future*, 10, e2021EF002608, `https://doi.org/10.1029/2021EF002608`. *[Impact Factor: 8.2]*
38. Konomi, B. A., **Kang, E. L.**, Almomani, A.*, and Hobbs, J. (2022) Bayesian Latent Variable Co- kriging Model in Remote Sensing for Quality Flagged Observations. *Journal of Agricultural, Biological and Environmental Statistics volume* , 28, 423-441, `https://doi.org/10.1007/s13253-023-00530-9`.
37. Yang, B., Liu, H.,**Kang, E. L.**, Hawthorne, T. L., Tong, S.T.Y., Song, S., and Xu, M. (2022) Traffic restrictions during the 2008 Olympic Games reduced urban heat intensity and extent in Beijing. *Communications Earth & Environment*, 3, 105, `https://doi.org/10.1038/s43247-022-00427-4`. *[Impact Factor: 7.9]*
36. Cheng, S., Konomi, B. A., Matthews, J. L., Karagiannis, G., and **Kang, E. L.** (2021) Hierarchical Bayesian nearest neighbor co-kriging Gaussian process models; an application to intersatellite calibration. *Spatial Statistics*, 44, `https://doi.org/10.1016/j.spasta.2021.100516`.
35. **Kang, E. L.**, Li, M.*, Cawse-Nicholson, K., and Braverman, A. (2021) Modeling large multivariate spatial data with a multivariate fused Gaussian process. *Journal of the Indian Statistical Association*, 59 (2), 1-38, `https://www.indstatassoc.org/journal-jisa/previous-volumes/dec-2021-volume-592`.
34. Ma, P., Mondal, A., Konomi, B. A., Hobbs, J., Song, J. J. and **Kang, E. L.** (2021) Computer model emulation with high-dimensional functional output in large-scale observing system uncertainty experiments. *Technometrics*, 64, 65–79, `https://doi.org/10.1080/00401706.2021.1895890`.
33. Song, S., Liu, H., Frappart, F., **Kang, E. L.**, Yang, B., Xu, M., Huang, Y., Wu, B., Yu, B., Wang, S., Beck, R., and Hinkel, K. (2021) Improving satellite waveform altimetry measurements with a probabilistic relaxation algorithm. *IEEE Transactions on Geoscience and Remote Sensing*, 59, 4733–4748, `https://doi.org/10.1109/TGRS.2020.3010184`.
32. Yang, B., Liu, H., **Kang, E. L.**, Shu, S., Xu, M., Wu, B., Beck, R., Hinkel, K., and Yu, B. (2021) Spatio-temporal Cokriging method for assimilating and downscaling multiscale remote sensing data. *Remote Sensing of Environment*, 255, `https://doi.org/10.1016/j.rse.2020.112190`.
31. Cawse-Nicholson, K., Braverman, A., **Kang, E. L.**, Li, M.*, Johnson, M., Halverson, G., Anderson, M., Hain, C., Gunson, M., and Hook, S. (2020) Sensitivity and uncertainty quantification for the ECOSTRESS evapotranspiration algorithm - DisALEXI. *International Journal of Applied Earth Observation and Geoinformation*, 89, 102088, `https://doi.org/10.1016/j.jag.2020.102088`. *[Impact Factor: 4.846]*

30. Liu, L., Lan, M., Eck, J. E., and **Kang, E. L.** (2020) Assessing the effects of bus stop relocation on street robbery. *Computers, Environment and Urban Systems*, 808, 101455. https://doi.org/10.1016/j.compenvurbsys.2019.101455 *[Impact Factor: 3.393]*

29. Stough, T., Cressie, N., **Kang, E. L.**, Michalak, A. M., and Sahr, H. (2020) Spatial analysis and visualization of global data on multi-resolutional hexagonal grids. *Japanese Journal of Statistics and Data Science*, 3, 107-128, https://doi.org/10.1007/s42081-020-00077-w.

28. Ma, P.* and **Kang, E. L.** (2020) A fused Gaussian process for very large spatial data. *Journal of Computational and Graphical Statistics*,29, 479-489, https://doi.org/10.1080/10618600.2019.1704293. *[Early version won the Student Paper Competition in 2017 ICSA Applied Statistics Symposium]*

27. Ma, P.* and **Kang, E. L.** (2020) Spatio-temporal data fusion for massive sea surface temperature data from MODIS and AMSR-E instruments. *Environmetrics*, 31:e2594, https://doi.org/10.1002/env.2594.

26. Ren, S.*, **Kang, E. L.**, and Lu, J. L. (2020) MCEN: a method of simultaneous variable selection and clustering for high dimensional multinomial regression. *Statistics and Computing*, 30, 291-304, https://doi.org/10.1007/s11222-019-09880-2.

25. Konomi, B. A., Hanandel, A. A.*, Ma, P. *, and **Kang, E. L.** (2019) Computationally efficient nonstationary nearest neighbors Gaussian processes using data-driven techniques. *Environmetrics*, 30:e2571, https://doi.org/10.1002/env.2571.

24. Li, M.*, and **Kang, E. L.** (2019) Randomized algorithms of maximum likelihood estimation with spatial autoregressive models for large-scale networks. *Statistics and Computing*, 29, 1165-1179, https://doi.org/10.1007/s11222-019-09862-4. *[Winner of 2019 Student Paper Competition of ASA Business & Economic Statistics Section]*

23. Ma, P.*, Konomi, B. A., and **Kang, E. L.** (2019) An additive approximate Gaussian process for large spatio-temporal data. *Environmetrics*, 30:e2569, https://doi.org/10.1002/env.2569.

22. Ma, P.*, **Kang, E. L.**, Braverman, A., and Nguyen, H. (2019) Spatial statistical downscaling for constructing high-resolution nature runs in global observing system simulation experiments. *Technometrics*, 61, 322-340, https://doi.org/10.1080/00401706.2018.1524791. *[Winner of 2018 Student Paper Competition of ASA Section on Statistics and the Environment]*

21. Zhu, Y., **Kang, E. L.**, Bo, Y., Zhang, J., Wang Y., and Tang, Q. (2019) Hierarchical Bayesian model based on robust fixed rank filter for fusing MODIS SST and AMSR-E SST. *Photogrammetric Engineering & Remote Sensing*, 85, 119-131. https://doi.org/10.14358/PERS.85.2.119 *[Impact Factor: 1.851]*

20. Cawse-Nicholson,K., Fisher,J. B., Famiglietti, C.A., Braverman, A., Schwandner, F. M., Lewicki, J. L., Townsend, P. A., Schimel, D. S., Pavlick, R., Bormann, K., Ferraz, A., Ye, Z., **Kang, E. L.**, Ma, P.*, Bogue, R., Youmans, T., and Pieri, D. C. (2018) Ecosystem responses to elevated CO_2 using airborne remote sensing at Mammoth

Mountain, California. *Biogeosciences*, 15, 7403-7418. https://doi.org/10.5194/bg-15-7403-2018 *[Impact Factor: 3.951]*

19. Huang, Y., Liu, H., Yu, B., Wu, J., **Kang, E. L.**, Xu, M., Wang, S., Klein, A., Chen, Y. (2018) Improving MODIS snow products with a HMRF-based spatio-temporal modeling technique in the Upper Rio Grande Basin. *Remote Sensing of Environment*, 204, 568-582. https://doi.org/10.1016/j.rse.2017.10.001 *[Impact Factor: 8.218]*
18. Xu, M., Liu, H., Beck, R., Lekki, J., Yang, B., Shu, S., **Kang, E. L.**, Anderson, R., Johansen, R., Emery, E., Reif, M., and Benko, T. (2018) A spectral space partition guided ensemble method for retrieving chlorophyll-a concentration in inland waters from Sentinel-2A satellite imagery. *Journal of Great Lakes Research*, 45, 454-465. https://doi.org/10.1016/j.jglr.2018.09.002 *[Impact Factor: 2.175]*
17. Shi, H.* and **Kang, E. L.** (2017) Spatial data fusion for large non-Gaussian remote-sensing datasets. *Stat*, 6, 390-404, https://doi.org/10.1002/sta4.165
16. Shi, H.*, **Kang, E. L.**, Konomi, B. A., Vemaganti, K., and Madireddy, S. (2017) Uncertainty quantification using the nearest neighbor Gaussian process. In *New Advances in Statistics and Data Science*, eds D.G. Chen, Z. Jin, G. Li, Y. Li, A. Liu, and Y. Zhao. ICSA Book Series in Statistics. Springer, 89-107, https://doi.org/10.1007/978-3-319-69416-0_6.
15. Cressie, N., and **Kang, E. L.** (2016) Hot enough for you? A spatial exploratory and inferential analysis of North American climate-change projections. *Mathematical Geosciences*, 48, 107-121, https://doi.org/10.1007/s11004-015-9607-9.
14. Ren, S.*, Hinzman, A. A., **Kang, E. L.**, Szczesniak, R. D., and Lu, L. J. (2015) Computational and statistical analysis of metabolomics data. *Metabolomics*, 11, 1492-1513. https://doi.org/10.1007/s11306-015-0823-6 *[Impact Factor: 3.167]*
13. Zhu, Y., **Kang, E. L.**, Bo, Y., Tang, Q., Cheng, J., and He, Y. (2015) A robust Fixed Rank Kriging method for Improving the spatial completeness and accuracy of satellite SST products. *IEEE Transactions on Geoscience and Remote Sensing*, 53, 5021-5035, https://doi.org/10.1109/TGRS.2015.2416351.
12. **Kang, E. L.** and Cressie, N. (2013) Bayesian hierarchical ANOVA of regional climate change projections from NARCCAP Phase II. *International Journal of Applied Earth Observation and Geoinformation*, 22, 3-15, https://doi.org/10.1016/j.jag.2011.12.007.
11. **Kang, E. L.**, Harlim, J., and Majda, A. J. (2013) Regression models with memory for the linear response of turbulent dynamical systems. *Communications in Mathematical Sciences*, 11, 481-498, https://dx.doi.org/10.4310/CMS.2013.v11.n2.a8.
10. Ojiambo, P. S. and **Kang, E. L.** (2013) Modeling spatial frailties in survival analysis of cucurbit downy mildew epidemics. *Phytopathology*, 103, 216-227. https://doi.org/10.1094/PHYTO-07-12-0152-R *[Impact Factor: 3.264]*
9. **Kang, E. L.**, Cressie, N., and Sain, S. R. (2012). Combining outputs from the North American Regional Climate Change Assessment Program by using a Bayesian hierar-

chical model. *Journal of the Royal Statistical Society, Series C (Applied Statistics)*, 61, 292-313, https://doi.org/10.1111/j.1467-9876.2011.01010.x.

8. **Kang, E. L.** and Harlim, J. (2012). Filtering nonlinear spatio-temporal chaos with autoregressive linear stochastic model. *Physica D*, 241, 1099-1113, https://doi.org/10.1016/j.physd.2012.03.003.
7. **Kang, E. L.** and Harlim, J. (2012). Filtering partially observed multiscale systems with Heterogeneous Multiscale Methods based reduced climate models. *Monthly Weather Review*, 140, 860-873, https://doi.org/10.1175/MWR-D-10-05067.1.
6. **Kang, E. L.** and Cressie, N. (2011). Bayesian inference for the spatial random effects model. *Journal of the American Statistical Association - Theory and Methods*, 106, 975-983, https://doi.org/10.1198/jasa.2011.tm09680.
5. Cressie, N. and **Kang, E. L.** (2010) High-resolution digital soil mapping: Kriging for very large datasets. In *Proximal Soil Sensing*, eds R. Viscarra-Rossel, A. B. McBratney, and B. Minasny. Springer, Dordrecht, 49-63, https://doi.org/10.1007/978-90-481-8859-8_4.
4. Cressie, N., Shi, T., and **Kang, E. L.** (2010) Fixed rank filtering for spatio-temporal data. *Journal of Computational and Graphical Statistics*, 19, 724-745, https://doi.org/10.1198/jcgs.2010.09051.
3. **Kang, E. L.**, Cressie, N., and Shi, T. (2010). Using temporal variability to improve spatial mapping with application to satellite data. *Canadian Journal of Statistics*, 38, 271-289, https://doi.org/10.1002/cjs.10063.
2. **Kang, E. L.**, Liu, D., and Cressie, N. (2009). Statistical analysis of small-area data based on independence, spatial, non-hierarchical, and hierarchical models. *Computational Statistics and Data Analysis*, 53, 3016-3032, https://doi.org/10.1016/j.csda.2008.07.033.
1. Morton, R., **Kang, E. L.**, and Henderson, B. (2009). Smoothing splines for trend estimation and prediction in time series. *Environmetrics*, 20, 249-259, https://doi.org/10.1002/env.925.

COURSES TAUGHT IN UNIVERSITY OF CINCINNATI

*: denote new courses introduced at University of Cincinnati

- Spring 2026 STAT 7024: Linear Models II (3-credit; graduate)
- Spring 2026 STAT 5132 & 6032: Design & Analysis of Experiments (3-credit; under/graduate)
- Fall 2025 STAT 5145 & 6045: Statistical Computing (3-credit; under/graduate)
- Fall 2025 STAT 4131: Regression Analysis & Statistical Learning (3-credit; undergraduate)

- Spring 2024 STAT 5132 & 6032: Design & Analysis of Experiments (3-credit; under/graduate)
- Spring 2024 STAT 4131: Regression Analysis & Statistical Learning (3-credit; undergraduate)
- Fall 2023 STAT 5145 & 6045: Statistical Computing (3-credit; under/graduate)
- Fall 2023 STAT 6031: Applied Regression Analysis (3-credit; graduate)
- Spring 2023 STAT 5132 & 6032: Design & Analysis of Experiments (3-credit; under/graduate)
- Spring 2023 STAT 8025: Spatial Statistics (3-credit; graduate)
- Fall 2022 STAT 6031: Applied Regression Analysis (3-credit; graduate)
- Spring 2022 STAT 5132 & 6032: Applied Statistics II (3-credit; under/graduate)
- Spring 2022 STAT 7024: Linear Models II (3-credit; graduate)
- Fall 2021 STAT 7020: Applied Spatial Statistics (3-credit; graduate)
- Fall 2021 STAT 6031: Applied Regression Analysis (3-credit; graduate)
- Spring 2021 STAT 7024: Linear Models II (3-credit; graduate)
- Spring 2021 STAT 8025: Spatial Statistics (3-credit; graduate)
- Spring 2020 STAT 7024: Linear Models II (3-credit; graduate)
- Spring 2020 STAT 5132 & 6032: Applied Statistics II (3-credit; under/graduate)
- Fall 2019 STAT 6031: Applied Statistics I (3-credit; graduate)
- Spring 2019 STAT 7024: Linear Models II (3-credit; graduate)
- Spring 2019 STAT 5132 & 6032: Applied Statistics II (3-credit; under/graduate)
- Fall 2018 STAT 7020*: Applied Longitudinal Data Analysis (3-credit; graduate)
- Fall 2018 STAT 6031: Applied Statistics I (3-credit; graduate)
- Spring 2018 STAT 7024: Linear Models II (4-credit; graduate)
- Spring 2018 STAT 8024: Advanced Statistical Modeling (3-credit; graduate)
- Spring 2017 STAT 7024: Linear Models II (4-credit; graduate)
- Spring 2017 STAT 5132 & 6032: Applied Statistics II (3-credit; under/graduate)
- Fall 2016 STAT 2037: Probability & Statistics I (3-credit; undergraduate)
- Fall 2016 STAT 5131 & 6031: Applied Statistics I (3-credit; under/graduate)
- Spring 2016 STAT 7024: Linear Models II (4-credit; graduate)
- Spring 2016 STAT 6032: Applied Statistics II (3-credit; graduate)
- Fall 2015 STAT 2037: Probability & Statistics I (3-credit; undergraduate)
- Fall 2015 STAT 6031: Applied Statistics I (3-credit; graduate)
- Spring 2015 STAT 8025*: Spatial Statistics (3-credit; graduate)
- Spring 2015 STAT 7024: Linear Models II (4-credit; graduate)
- Fall 2014 STAT 9081: Seminar in Statistics (1-credit; two sessions; graduate)

- Spring 2014 STAT 3038: Probability & Statistics II (3-credit; undergraduate)
- Spring 2014 STAT 7022: Linear Models II (4-credit; graduate)
- Fall 2013 STAT 7021: Linear Models I (4-credit; graduate)
- Fall 2012 STAT 7020*: Applied Spatial Statistics (3-credit; graduate)
- Fall 2012 STAT 2037: Probability & Statistics I (3-credit; undergraduate)
- Winter 2012 STAT 532: Applied Regression Analysis (3-credit; graduate)
- Winter 2012 STAT 362: Probability & Statistics II (3-credit; undergraduate)
- Autumn 2011 STAT 361: Probability & Statistics I (3-credit; undergraduate)

ADVISING/MENTORING

Doctoral Students

1. Hongxiang Shi, Graduated in 2017 Spring. *First Job: Fifth Third Bank*
2. Ahmad Ali Hanandeh (Joint with B. A. Konomi), Graduated in 2017 Summer. *First Job: Assistant Professor, Yarmouk University, Jordan*
3. Sheng Ren, Graduated in 2017 Fall. *First Job: UnitedHealth Group*
4. Pulong Ma (Joint with B. A. Konomi), Graduated in 2018 Summer. *First Job: Postdoctoral Fellow, Duke University & Statistical and Applied Mathematical Sciences Institute*. Current: TTAP, Iowa State University.
5. Miaoqi Li, Graduated in 2020 Spring. *First Job: Wells Fargo*
6. Tzu-Chun Wu, Graduated in 2022. *First Job: Data Scientist at UC College of Medicine*
7. Jieyan Zhang, Graduated in 2022. *First Job: BASF*
8. Gang Yang, Graduated in 2022. *First Job: Bristol Myers Squibb*
9. Ayesha Kumari Ekanayaka Katugoda Gedara, Graduated in 2024 Summer,*First Job: Postdoctoral Fellow, UNC Chapel Hill*
10. Rick Lucas, 2021-pres., in-candidacy
11. Eric Herrison Gyamfi, 2022-pres., in-candidacy
12. Hancheng Li (Joint with B. A. Konomi), 2022-pres., in-candidacy
13. Ying Zhang, 2024-pres., in-candidacy
14. Lloyd Goldstein, 2025-pres., before candidacy

Member of Doctoral Student Dissertation Committee

- Wei Guo (Mathematical Sciences-Statistics, 2013)
- Yixuan Guo (Mathematical Sciences-Statistics, 2014)

- Woosuk Kim (Mathematical Sciences-Statistics, 2014)
- Dandan Li (Mathematical Sciences-Statistics, 2014)
- Zongjun Zhang (Mathematical Sciences-Statistics, 2014)
- Li Duan (Mathematical Sciences-Statistics, 2015)
- Qiusheng Wu (Geography, 2015)
- Yue Zhang (Mathematical Sciences-Statistics, 2016)
- Sandeep Reddy Madireddy (Mechanical and Materials Engineering, 2016)
- Negar Jaberansari (Mathematical Sciences-Statistics, 2016)
- Song Shu (Geography, 2018)
- Bo Yang (Geography, 2018)
- Yuankun Zhang (Mathematical Sciences-Statistics, 2018)
- Wei Zhou (Mathematical Sciences-Statistics, 2018)
- Saumya Bhatnagar (Mathematical Sciences-Statistics, 2019-pres.)
- Min Xu (Geography, University of Alabama, 2020)
- Yuanfang Liu (Educational Statistics and Research Methods, 2020-pres.)
- Ayat Almomani (Mathematical Sciences-Statistics, 2021)
- Mohammed Alamari (Mathematical Sciences-Statistics, 2022)
- Saibal Ghosh (Computer Science, 2022)
- Yuanfang Liu (Educational Studies, 2022)
- Rui Huang (Mathematical Sciences-Statistics, 2024)
- Yizi Cheng (Mathematical Sciences-Statistics, 2024)

Mentor or Member of M.S. Oral Examination or Thesis Committee

- Flori Ngoyi Mudimbi (Statistics, 2013)
- Yuchen Song (Statistics, 2013)
- Bo Yang (Geography, 2013)
- Zijiao Jiang (Statistics, 2013)
- Xintao Liu (Statistics, 2013)
- Si Cheng (Statistics, 2014)
- Chang Deng (Statistics, 2014)
- Weiji Weiji (Statistics, 2014)
- Weizhe Su (Statistics, 2014)
- Jing Ma (Statistics, 2014)
- Brandon Williams (Statistics, 2015)

- Min Xu (Geography, 2015)
- Ranxi Chen (Statistics, 2016)
- Evan Young (Statistics, 2017)
- Bekah Lee (Statistics, 2017)
- Jinhee Lee (Statistics, 2017)
- Yiran Yao (Statistics, 2017)
- Amal Agharkar (Environmental Engineering, 2017)
- Xueting Liu (Statistics, 2018)
- Yiyan Hu (Statistics, 2018)
- Yunguo Gong (Statistics, 2018)
- Sammy Green (Statistics, 2019)
- Ke Qin (Statistics, 2019)
- Amani Fahad Almarri (Statistics, 2019)

Mentor for Undergraduate Capstone

- Ketherine Short (2013 Fall)
- Data Mayouf (2017 Spring)
- Ruoqi Song (2020 Spring)
- Lihn Tran (2025 Fall)

Other Mentoring

- Faculty Mentor in the annual Industrial Mathematical and Statistical Modeling (IMSM) Workshop for Graduate Students, organized by the Statistical and Applied Mathematical Sciences Institute (SAMSI) and the Center for Research in Scientific Computation (CRSC), 2010-2013, 2015-2016, 2018

PROFESSIONAL PRESENTATIONS

Invited Presentations/Panel

1. INFORMS Annual Meeting, Atlanta, GA, October, 2025
2. 2025 Women in Statistics and Data Science Conference, virtual, November, 2025
3. IMSI Workshop: Uncertainty Quantification and Machine Learning for Complex Physical Systems Chicago, IL, May, 2025

4. SIAM UQ 2024 Satellite Event Power of Diversity in Uncertainty Quantification (POD-UQ), Trieste, Italy, February 2024
5. Climate Change and Health in Cincinnati Symposium, UC, September 2023
6. Joint Statistical Meetings, Toronto, Canada, August 2023
7. ISI World Statistics Congress, Ottawa, Canada, July 2023
8. ICSA 2023 Applied Statistics Symposium, Ann Arbor, Michigan, June 2023
9. IMSI Workshop on Expressing and Exploiting Structure in Modeling, Theory, and Computation with Gaussian Processes, August, 2022
10. WNAR 2022 Conference, June 2022
11. Department of Statistics, Virginia Tech, April 2022
12. Department of Statistics, University of Missouri, April 2021
13. Department of Statistics, Iowa State University, February 2021
14. Uncertainty Quantification for Remote Sensing Inverse Problems Virtual Meeting, JPL, October 12-14, 2020
15. International Statistical Institute (ISI) World Statistics Congress 2019, Kuala Lumpur, August 2019
16. The Program on Model Uncertainty: Mathematical and Statistical (MUMS) Transition Workshop, SAMSI, Research Triangle Par, NC, May 2019
17. Institute for Interdisciplinary Data Science (IIDS), University of Cincinnati, April 2019
18. ASA ENVR Workshop, Asheville, NC, October 2018
19. The Program on Mathematical and Statistical Methods for Climate and the Earth System (CLIM) Transition Workshop, SAMSI, Research Triangle Par, NC, May 2018
20. Remote Sensing, Uncertainty Quantification and a Theory of Data Systems Workshop, Caltech, Pasadena, CA, February 2018
21. School of Mathematics, Sun Yat-Sen University, Guangzhou, China, January 2018
22. Workshop on Complex Time Series Modelling and Forecasting, Sanya, China, January 2018
23. Department of Statistics, North Carolina State University, November 2017
24. The Jet Propulsion Laboratory, Pasadena, September 2017
25. The ICSA Applied Statistics Symposium, Chicago, June 2017
26. The First International Conference on Econometrics and Statistics, HKUST, Hong Kong, June 2017
27. A Symposium on Complex Data Analysis, National Tsing Hua University, May 2017
28. School of Mathematics and Statistics, Central South University, Changsha, Hunan, China, May 2017
29. The 10th ICSA International Conference, December 2016
30. Department of Biostatistics, University of Louisville, KY, November 2015

31. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, December 2013
32. School of Geography, State Key Laboratory of Remote Sensing Science, Beijing Normal University, Beijing, China, August 2013
33. The Jet Propulsion Laboratory, Pasadena, CA, June 2013
34. Department of Statistics, University of Connecticut, March 2013
35. SAMSI/NCAR Workshop on Massive Datasets in Environment and Climate, Boulder, Colorado, February 2013
36. The International Society for Bayesian Analysis (ISBA) International Workshop/Conference on Bayesian Theory and Applications (IWCBTA), Varanasi, India, January 2013
37. Financial Statistics Seminar in the Financial Engineering Research Center at Suzhou University, Suzhou, Jiangsu, China, December 2012
38. Department of Statistics, North Carolina State University, March 2012
39. Department of Statistics, Purdue University, February 2012
40. The Third North American Regional Meeting of The International Environmetrics Society (TIES), La Crosse, Wisconsin, July 2011
41. Department of Statistics, University of Wyoming, February 2011
42. Department of Statistics, University of Florida, February 2011
43. Department of Statistics, Oklahoma State University, February 2011
44. Department of Mathematical Sciences, University of Cincinnati, January 2011

Contributed/Poster/Minisymposium Presentations

1. Minisymposium presentation: SIAM UQ24, Trieste, Italy, February 2024
2. Minisymposium presentation: SIAM UQ22, virtual, April 2022
3. Topic-Contributed presentation: Joint Statistical Meetings, virtual, August 2021
4. Contributed presentation: Joint Statistical Meetings, Denver, CO, August 2019
5. Poster presentation: UC Collaboration Showcase at Procter & Gamble Decision' 19 Symposium, Cincinnati, OH, October, 2019
6. Minisymposium presentation: SIAM Conference on Mathematics of Planet Earth (MPE18), Philadelphia, PA, September 2018
7. Topic-Contributed presentation: Joint Statistical Meetings, Vancouver, Canada, August 2018
8. Topic-contributed presentation: Joint Statistics Meetings, Chicago, IL, August 2016
9. Contributed presentation: Joint Statistical Meetings, Seattle, WA, August 2015
10. Minisymposium presentation: SIAM Annual Meeting, San Diego, CA, July 2013
11. Contributed presentation: Joint Statistical Meetings, San Diego, CA, August 2012

12. Minisymposium presentation: SIAM Conference on Uncertainty Quantification, Raleigh, NC, April 2012
13. Poster presentation: SIAM Conference on Uncertainty Quantification, Raleigh, NC, April 2012
14. Presentation: Center for Geospatial Information & Environmental Sensor Networks (GIESN), University of Cincinnati, February 2012
15. Poster presentation: The Observations Workshop, Cooperative Institute for Climate and Satellites (CICS-NC) and Statistical and Applied Mathematical Sciences Institute (SAMSI), January 2012
16. Contributed presentation: Joint Statistical Meetings, Miami Beach, FL, August 2011
17. Topic-contributed presentation: Joint Statistical Meetings, Washington, DC, August 2009
18. Topic-contributed presentation: Joint Statistical Meetings, Salt Lake City, UT, August 2007

Selected Other Presentations as Non-Presenting Co-Author

*: denote students supervised/co-supervised

1. Ekanayaka, A.*, Kang, E. L.: Poster presentation at ENVR workshop, October 2022 October 2022
2. Ekanayaka, A.*, Kang, E. L.: Contributed presentation at the Joint Statistical Meetings, virtual, August 2021
3. Ekanayaka, A.∗, Kang, E. L.: Invited talk at the UC Day at JPL, virtual, September 2020
4. Yang, G.*, Kang, E. L.: Contributed presentation at the Joint Statistical Meetings, virtual, August 2020
5. Ma, P.*, Kang, E. L.: *Invited* presentation at 2019 ICSA Applied Statistical Symposium, Raleigh, NC, June 2019
6. Li, M.*, Kang, E. L.: Contributed presentation at the Joint Statistical Meetings, Denver, CO, August 2019
7. Li, M. *, Kang, E. L.: Contributed poster at the Conference on Statistical Learning and Data Science/Nonparametric Statistics, Columbia University, June 2018
8. Wu, T. *, Kang, E. L.: Contributed presentation at the ICSA Symposium of Applied Statistics, New Brunswick, NJ, June 2018
9. Ma, P.*, Kang, E. L., Braverman, A., and Nguyen, H.: Contributed presentation at the 2018 SIAM Conference on Uncertainty Quantification, Garden Grove, CA, April 2018 *(Winner of Student Travel Award from SIAM)*
10. Ma, P.*, Konomi, B. S., and Kang, E. L.: Topic Contributed poster at the Joint Statistical Meetings, Baltimore,, MD, August 2017

11. Ma, P, *, Kang, E. L.: Poster presentation at the ICSA Applied Statistics Symposium, Chicago, IL, June 2017 *(Winner of the Student Paper Competition at this conference)*
12. Shi, H.* and Kang, E. L.: Contributed presentation at the Joint Statistical Meetings, Chicago, IL, August 2016
13. Ren, S.*, Kang, E. L., Lu, L. J.: Contributed presentation at the Joint Statistical Meetings, Chicago, IL, August 2016
14. Shi, H.* and Kang, E. L.: Contributed presentation at the ICSA Applied Statistics Symposium, Atlanta, GA, June 2016
15. Shi, H.* and Kang, E. L.: Poster presentation at Workshop on Bayesian Environmetrics, Columbus, OH, March 2016
16. Ren, S* and Kang, E. L.: Poster presentation at the Conference on Challenges and Advances on Big Data in Neuroimaging, Cleveland Clinic, August 2016
17. Xu, M., Liu, H., Yu, B., and Kang, E. L.: Contributed presentation at the Annual Meeting of the Association of American Geographers (AAG), Chicago, IL, April 2015
18. Yang, B., Liu, H., Kang, E. L., Beck, R., Hinkel, K. M.,, and Wang, L.: Contributed presentation at the Annual Meeting of the Association of American Geographers (AAG), Chicago, IL, April 2015
19. Liu, H., Yang, B., and Kang, E. L.: Poster presentation at the International Geoscience and Remote Sensing Symposium 2015 (IGARSS 2015), Milan, Italy, July 2015
20. Cressie, N. and Kang, E. L.: *Invited* presentation at the Joint Statistical Meetings, Denver, CO, August 2008

PROFESSIONAL ORGANIZATIONS, SOCIETIES AND SERVICE

Invited or Elected Positions

- Chair for Committee for 2026 ISBA EnviBayes Student Paper Competition, 2025-2026.
- Chair, ISBA EnviBayes, 2025.
- Chair-Elect, ISBA EnviBayes, 2024.
- Chair for Committee for 2025 ASA ENVR Student Paper Competition, 2024-2025.
- Committee member, American Statistical Association Committee on Climate Change Policy, 2021-2024.
- Program Committee member and North America Representative, Caucus for Women in Statistics, 2022-2023
- Program Chair, ASA Section on Statistics and the Environment, 2022
- Program Chair-Elect, ASA Section on Statistics and the Environment, 2021

- Core Team Member, US Climate Variability and Predictability (CLIVAR) Data Science Working Group, 2019-2022.
  `https://usclivar.org/working-groups/data-science-working-group`
- Secretary, ASA Section on Statistics and the Environment, 2016
- Treasurer, ASA Section on Statistics and the Environment, 2015

Editorial Board

2024-pres. *Statistics and Data Science in Imaging*, Associate Editor

2024-pres. *SIAM/ASA Journal on Uncertainty Quantification (JUQ)*, Associate Editor

2021-pres. *Spatial Statistics*, Editor Board Member

2013-pres. *Journal of Statistical Computation and Simulation*, Associate Editor

2022-2023 *Technometrics*, Associate Editor

2022-2023 *Remote Sensing*, Guest Editor

2019-2023 *Computers & Geosciences*, Associate Editor

Grant/External Promotion/Book Proposal Review Activities

- NIH panel review, 2022, 2023, 2024 (x2), 2025 (x2)
- NSF panel review, 2022, 2023
- NIH, Information Technology in Cancer Research, 2021
- NIH, Cancer Informatics Technology, 2020
- NASA, Advanced Information Systems Technology (AIST) Program, 2019
- NIH, Center for Scientific Review Special Emphasis Panel, 2018
- NIH, Biostatistical Methods and Research Design Study Section, 2018
- External Evaluator for a Promotion and Tenure Case, 2018
- NSF, Earth System Models, 2014
- Book Proposal Reviewer, Chapman Hall/CRC Press, 2013
- NSF, Earth System Models, 2012
- University of Rochester, Novel Biostatistical and Epidemiologic Methodology (NBEM) grants, 2011

Conferences Activities

- Program Committee Member, 2025 ISBA EnviBayes Workshop at TAMU 2025.
- Program Committee Member, SIAM UQ 2024
- Invited session organizer, ISI World Statistics Congress, July 2023
- Invited session organizer, ICSA Applied Statistics Symposium, June 2023
- Minisymposium organizer, SIAM UQ 2022
- Local Organizing Committee Member, 2021 AMS Central Sectional Meeting, 2020
- Session Chair, Joint Statistical Meetings, Denver, CO, August 2019
- Chair of an invited session at the First International Conference on Econometrics and Statistics, HKUST, Hong Kong, June 2017
- Invited Session Organizer, ICSA Applied Statistics Symposium, Chicago, IL, June 2017
- Chair of an invited session at the Conference on Challenges and Advances on Big Data in Neuroimaging, Cleveland Clinic, August 2016
- Invited Session Organizer, ICSA Applied Statistics Symposium, Atlanta, GA, June 2016
- Session Chair, Joint Statistical Meetings, Seattle, WA, August 2015
- Organizer and Chair for an invited session on Statistical Computing, the IMS/ASA Spring Research Conference 2015, Cincinnati, 2015
- Program Committee Member for the IMS/ASA Spring Research Conference of the Section on Physical and Engineering Science (SPES), 2014-2015
- Session Chair, Joint Statistical Meetings, San Diego, CA, August 2012

Journal Referee

Annals of Applied Statistics

Biometrics

Biometrika

Biostatistics

Canadian Journal of Statistics

Climatic Change Letters

Computational Statistics and Data Analysis

Computers & Geosciences

Ecological Applications

Environmental Monitoring and Assessment

Environmetrics

Geoscientific Model Development

IEEE Journal of Oceanic Engineering

IEEE Transactions on Geoscience & Remote Sensing

International Journal of Biostatistics

ISPRS International Journal of Geo-Information

Journal of Agricultural, Biological and Environmental Statistics

Journal of Climate

Journal of Computational and Graphical Statistics

Journal of Geophysical Research-Oceans

Journal of Selected Topics in Applied Earth Observations and Remote Sensing

Journal of Statistical Computation and Simulation

Journal of the American Statistical Association

Journal of the Royal Statistical Society Series B

Journal of the Royal Statistical Society Series C

Journal of Time Series Analysis

Mathematical Geosciences

Nature

PLOS ONE

Sankhya A

Sankhya B

SIAM/ASA Journal of Uncertainty Quantification

Scandinavian Journal of Statistics

Spatial Statistics

Stat

Statistica Sinica

Statistics and Computing

Statistics and Its Interface

Technometrics

Urban Forestry & Urban Greening

Service

- Department of Mathematical Sciences, UC
  - Chair of Committee for Qualifier Exams in Statistics,
  - RPT Committee: 2022-2023, 2023-2024 (Chair), 2025-2026
  - STAT TTAP Hiring Committee, 2013-2014, 2015-2016, 2022-2023, 2025-2026
  - Graduate Committee for STAT Division, 2019-2020 (Chair), 2020-2021, 2021-2022, 2022-2023, 2023-2024, 2025-2026
  - Executive Committee, 2020-2021
  - Head Search Committee, 2019
  - Organizer and Host of the Taft Lecture, 2019
  - Coordinator for the industrial traineeship collaboration with UC Simulation Center and Procter & Gamble, 2011-2021
  - Graduate Advisor Committee, 2012-2013, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2018-2019, 2019-2020
  - Graduate Affairs Committee, 2018-2019, 2019-2020, 2021-2022, 2022-2023, 2023-2024
  - Committee for Prelim Exam in Linear Models, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019 (Chair), 2019-2020 (Chair), 2020-2021(Chair), 2021-2022 (Chair), 2022-2023, 2025-2026
  - Committee for Qualifier Exams in Statistics, 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2018-2019, 2019-2020 (Chair), 2020-2021 (Chair), 2021-2022 (Chair), 2022-2023 (Chair), 2023-2024 (Chair), 2025-2026

  - Graduate Student Evaluation Committee (GSEC), 2012-2013, 2013-2014 2015-2016, 2016-2017, 2025-2026
  - Coordinating the Statistics track of the 4+1 program, 2014-2017
  - Search Committee for Visiting Assistant Professors, 2012-2013, 2013- 2014, 2014-2015
  - Committee for Undergraduate Scholarship, 2011-2012, 2012-2013, 2013-2014
  - Committee for Teaching Evaluation, Autumn 2011
- College and University, UC
  - Working on a Data Science Workshop with the Associate Provost Office for Experience-Based Learning and Career Education for undergraduate students at University of Cincinnati, 2019-2020
  - Faculty Advisory Committee for the Advanced Research Computing (ARC) Initiative, 2019-2022
  - IT@UC Research & Development Committee, 2018-2022
  - Executive Committee of Center for Geospatial Information and Environmental Sensor Networks (GIESN), 2013-2017
  - Reviewer for the University Research Council (URC), 2013-2014, 2014-2015, 2015-2016, 2020-2021, 2021-2022, 2022-2023

Updated: 01/2026