Sudipto Banerjee, PhD

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Education

1994 **BS Honours**, *Statistics*, Presidency College, Kolkata, India.
1996 **M.STAT**, *Statistics*, Indian Statistical Institute, Kolkata, India.
1998 **MS**, *Statistics*, University of Connecticut, Storrs, USA.
2000 **PhD**, *Statistics*, University of Connecticut, Storrs, USA.

PhD Thesis

Thesis Title *Multivariate Spatial Modelling in a Bayesian Setting*
Thesis Advisor Prof. Alan E. Gelfand

Appointments

2021–Present Affiliate Professor,
Institute of the Environment & Sustainability, University of California, Los Angeles

2019–Present Professor,
Department of Statistics, University of California, Los Angeles

2014–Present Professor and Chair,
Department of Biostatistics, University of California, Los Angeles

2011–2014 Professor,
Division of Biostatistics, School of Public Health, University of Minnesota, Twin Cities

2007–2011 Associate Professor,
Division of Biostatistics, School of Public Health, University of Minnesota, Twin Cities

2000–2007 Assistant Professor
Division of Biostatistics, School of Public Health, University of Minnesota, Twin Cities

Selected Honors and Awards

2000 ENAR Distinguished Paper Award, International Biometric Society
2009 Abdel El Sharaawi Award from The International Environmetrics Society (TIES)
2010 Elected member of the International Statistical Institute (ISI)
2011 Mortimer Spiegelman Award from the American Public Health Association (APHA)
2012 Elected Fellow of the American Statistical Association (ASA)
2012 International Indian Statistical Association's Young Researcher Award
2015 Distinguished Achievement Medal from the ASA's Section on Statistics and the Environment
2015 Elected Fellow of the Institute of Mathematical Statistics (IMS)
2015 Presidential Invited Address, IMS/WNAR Annual Meeting

2016 Keynote Address, International Society for Bayesian Analysis (ISBA) World Meeting

2017 American Statistical Association's Outstanding Application Award

2018 Elected Fellow of the International Society for Bayesian Analysis (ISBA)

2019 George W. Snedecor Award from the Committee of Presidents of Statistical Societies (COPSS)

2020 Elected Fellow of the American Association for the Advancement of Science (AAAS)

2021-2023 Elected President (3-year rotating) of the International Society for Bayesian Analysis (ISBA)

Scholarly Research Activities by the Numbers (as of June 30th, 2023)

Funded Research Projects	
Competitively funded original research projects	**27**
Major funded projects (NIH: R01s; NSF: DMS,IIS) as single or lead **Principal Investigator** (PI)	**14**
Currently **active** funded projects	**6**
Academic/Scholarly Publications	
Peer-reviewed articles:	**180**
Books and Monographs:	**3**
National Academies Reports:	**2**
Peer-reviewed articles as **first** (or **sole**) author:	**37**
Peer-reviewed articles as **senior author** or **PI** of project:	**85**
Citation Numbers from Google Scholar Page	
Google Scholar Citations:	**15,152**
Google Scholar h-index:	**52**
Publications as a leading or senior author with over 100 citations (Google Scholar):	**25**
Most cited publication: Banerjee et al. (Monograph, 2014)	**4,349** citations
Most cited journal article: Banerjee et al. (JRSS-B, 2008)	**1,176** citations.

Research Grants – active (*) and/or completed:

1. * **Principal Investigator**. NIH/NIGMS R01GM148761. Bayesian modeling and inference for high-dimensional disease mapping and boundary detection. Project amount: USD 1,683,627. February 2023 – January 2027.
2. * **Principal Investigator (UCLA subcontract)**. NIH/NCI/Memorial Sloan Kettering Cancer Center R01CA271186. Probabilistic multi-scale modeling of the tumor micro-environment. Project amount: USD 559,793. February 2023 – January 2028.
3. * **Co-Investigator**. South Coast Air Quality Management District (SCAQMD). Aliso Canyon disaster health research study. Project amount: USD 20,993,333. December 2022 – October 2027.
4. * **Co-Investigator**. NIH/NIDDK R01DK092232 Multilevel time-dynamic modeling of hospitalization and survival in patients on dialysis. Project amount: USD 2,987,891. March 2021 – February 2026.
5. * **Principal Investigator**. NSF DMS-2113778. Collaborative Research: Statistical inference for high-dimensional spatial-temporal process models. Project Amount: USD 260,000. July 2021 – June 2024.
6. * **Principal Investigator**. NIH/NIEHS R01ES030210. Flexible Bayesian hierarchical models for estimating inhalation exposures. Project amount: USD 1,640,251. January 2019 – December 2023.
7. **Principal Investigator**. NSF DMS-1916349. Collaborative Research: High-dimensional spatial-temporal modeling and inference for large multi-source environmental monitoring systems. Project amount: USD 199,993. September 2019 – August 2022.
8. **Principal Investigator**. NIH/NIEHS 1R01ES027027-01. Hierarchical modeling and analysis for large spatially and temporally misaligned data in environmental health applications. Project amount: USD 1,517,462. May 2017 – March 2022.
9. **Co-Investigator**. NIH/Fogarty International Center R01TW005964-09. Building Geographic Information Systems into the tobacco control policy of South East Asia. Project amount: USD 65,401. September 2017 – August 2022.
10. **Principal Investigator**. NSF IIS-1562303. III: Medium: Collaborative Research: Bayesian modeling and inference for quantifying terrestrial ecosystem functions. Project amount: USD 361,987. September 2016 – August 2020.

11. **Principal Investigator**. NSF DMS-1513654. Collaborative Research: Hierarchical sparsity-inducing Gaussian process models for Bayesian inference on large spatiotemporal datasets. Project amount: USD 416,195. September 2015 – June 2018.

12. **Co-Investigator**. NIH/NCI 1R03CA179555-01A1. Copula models for spatial epidemiology of cancer. Project amount: USD 12,362. April, 2014 – March, 2016.

13. **Principal Investigator**. NIOSH/CDC 1R01OH010093-01. Bayesian melding for numerical models in occupational and environmental hygiene. Project amount: USD 961,244. September 2013 – August 2016.

14. **Principal Investigator**. NSF DMS-1106609. Hierarchical models for large geostatistical data sets with applications. Project amount: USD 484,549. July 2011 – June 2014.

15. **Principal Investigator**. NIH/NIGMS 1-RC1-GM092400-01. Challenge Grant: Hierarchical spatial models relating climate change to health outcomes. Project amount: USD 610,295. September, 2009 – August, 2012.

16. **Principal Investigator**. OVPR MN-Futures: Automated assessment of forest cover change. 4% salary support, July 2009 – July 2011.

17. **Co-Investigator**. NIH/NCI 1-R01-CA95955-03 Statistical methods in cancer control and epidemiology. 20% salary support, September 2008–July 2011.

18. **Principal Investigator**. NSF DMS-0706870. Hierarchical models for large geostatistical data sets with applications to forestry and ecology. Project amount: USD 331,096. June 2007 – August 2010.

19. **Principal Investigator**. NIH/NCI 1-R01-CA112444-01A1: Hierarchical modeling approaches for geographical boundary analysis in cancer studies. Project amount: USD 704,594. December 2004 – November 2008.

20. **Co-Investigator**. NIH 1R01OH008513: Expert decision-making in exposure assessment. Project amount: USD 553,150. September 2005 – July 2009.

21. **Co-Investigator**. NIH/NIA R01AG025079: Preventive health care in elderly cancer survivors. Project amount: USD 411,070. September 2004 – August 2008.

22. **Co-Investigator**. NIH/NCI R01CA098974: Health service use in the elderly with cancer. Project amount: USD 815,510. September 2004 – August 2007.

23. **Principal Investigator**. University of Minnesota Grant-in-Aid of Research, Artistry, and Scholarship: Statistical validation and estimation of computer experiments. July 2004 – January 2006.

24. **Principal Investigator**. Minnesota Medical Research Foundation: Modeling multivariate survival data with spatial associations and competing risks. March 2003 – October 2004.

25. **Co-Investigator**. NSF/EPA: Statistical methods for environmental social science. December 2001 – November 2003.

26. **Consultant**. NIH/NHLBI 5U24HL061778. Food and nutrient systems for research. Project amount: USD 736,360. December 2000 – November 2003.

27. **Principal Investigator**. University of Minnesota Grant-in-Aid of Research, Artistry, and Scholarship: Non-stationary modeling of spatial data. July 2001 – January 2003.

Books and Monographs

1. **Banerjee, S.**, Carlin, B.P. and Gelfand, A.E. *Hierarchical Modeling and Analysis for Spatial Data* Second Edition. Boca Raton, FL: Chapman and Hall/CRC Press. Published: September 12, 2014; 584 pages. ISBN 9781439819173.

2. **Banerjee S.** and Roy, A. *Linear Algebra and Matrix Analysis for Statistics*. Boca Raton, FL: Chapman and Hall/CRC Press. Published: June 6, 2014; 580 pages. ISBN 9781420095388.

3. Lawson, A., **Banerjee, S.**, Haining, R.P. and Ugarte, L. (Editors). *Handbook of Spatial Epidemiology*. Boca Raton, FL: Chapman and Hall/CRC Press. Published: May 5, 2016; 680 pages. ISBN 9781482253016.

National Academies Committee Reports

1. National Research Council. 2015. *Affordability of National Flood Insurance Program Premiums: Report 1*. Washington, DC: The National Academies Press. Published 2015; 166 pages. ISBN 978-0-309-37125-4. DOI: https://doi.org/10.17226/

21709.

2. National Academies of Sciences, Engineering, and Medicine 2016. *Affordability of National Flood Insurance Program Premiums: Report 2.* Washington, DC: The National Academies Press. DOI: https://doi.org/10.17226/21848.

Notable Peer-Reviewed Journals Carrying Publications

A selection of notable journals that have carried Professor Banerjee's articles either as leading or senior author, the Principal Investigator (PI) funding the project or as the senior (or sole) statistician in a substantive collaboration. The journal names are active links to their websites containing information on their aims and scope, and citation metrics.

Statistical Theory & Methods (Leading/Senior Author or PI)	Substantive Scientific Collaborations (Senior/sole Statistician or PI)
Annals of Applied Statistics	*Agronomy Journal*
Bayesian Analysis	*Annals of Work Exposures and Health*
Biometrics	*Annual Review of Public Health*
Biometrika	*Ecology Letters*
Biostatistics	*Electronic Commerce Research and Applications*
Environmetrics	*Environmental Health Perspectives*
Journal of Agricultural, Biological and Environmental Statistics	*Environment International*
Journal of the American Statistical Association	*Environmental Research*
Journal of Business and Economic Statistics	*Frontiers in Ecology and the Environment*
Journal of Computational and Graphical Statistics	*Global Change Biology*
Journal of Machine Learning Research	*Health Services Research*
Journal of Multivariate Analysis	*International Journal of Applied Earth Observation and Geoinformation*
Journal of the Royal Statistical Society: Series B (Methodology)	*JAMA Network Open*
Journal of the Royal Statistical Society: Series C (Appl. Stat.)	*Journal of Exposure Science and Environmental Epidemiology*
Journal of Statistical Software	Journal of Occupational and Environmental Hygiene
Statistica Sinica	*Methods in Ecology and Evolution*
Statistics in Medicine	*Remote Sensing of Environment*
Technometrics	*Science of the Total Environment*

Scholarly Research Manuscripts (DOIs are active links)

181. **Banerjee, S.** (in press). Discussion on "Optimal test procedures for multiple hypotheses controlling the familywise expected loss". *Biometrics*. DOI: In process.

180. Dey, D., Datta, A. and **Banerjee, S.** (in press). Modeling multivariate spatial dependencies using graphical models. *The New England Journal of Statistics in Data Science*. DOI: In process.

179. Qian, Q., Nguyen, D., Telesca, D., Kurum, E., Rhee, C., Banerjee, S., Li, Y. and Senturk, D. (in press). Multivariate spatiotemporal functional principal component analysis for modeling hospitalization and mortality rates in the dialysis population. *Biostatistics*. DOI: https://doi.org/10.1093/biostatistics/kxad013.

178. Li, D., Tang, W. and **Banerjee, S.** (in press). Inference for Gaussian Processes with Matérn covariogram on compact Riemannian manifolds. *Journal of Machine Learning Research*. DOI: http://jmlr.org/papers/v24/22-0503.html.

177. Doser, J., Finley, A.O. and **Banerjee, S.** (in press). Joint species distribution models with imperfect detection for high-dimensional spatial data. *Ecology*. DOI: https://doi.org/10.1002/ecy.4137.

176. Alaimo Di Loro, P., Mingione, M., Lipsitt, J., Batteate, C.M., Jerrett, M.B. and **Banerjee, S.** (in press). Bayesian hierarchical modeling and analysis for physical activity trajectories using wearable devices data. *Annals of Applied Statistics*. DOI: https://doi.org/10.1214/23-AOAS1742

175. Halder, A., **Banerjee, S.** and Dey, D.K. (in press). Bayesian modeling with spatial curvature processes. *Journal of the American Statistical Association*. DOI: https://doi.org/10.1080/01621459.2023.2177166.

174. Gao, L., **Banerjee, S.** and Ritz, B. (in press). Spatial difference boundary detection for multiple outcomes using Bayesian disease mapping. *Biostatistics*. DOI: https://doi.org/10.1093/biostatistics/kxac013.

173. Zhang, L., Tang, W. and **Banerjee, S.** (2023). Fixed-domain asymptotics under Vecchia's approximation of spatial process likelihoods. *Statistica Sinica*. DOI: https://doi.org/10.5705/ss.202021.0428.

172. Frankenburg, I. and **Banerjee, S.** (2023). A compartmental model of human mobility and early COVID-19 dynamics in New York City. *New England Journal of Statistics in Data Science*, **1** 110–121. DOI: https://doi.org/10.51387/21-NEJSDS2

171. **Banerjee, S.** (2023). Discussion on "Saving storage in climate ensembles: A model-based stochastic approach". *Journal of Agricultural, Biological and Environmental Statistics*, **28**, 365–369. DOI: https://doi.org/10.1007/s13253-023-00541-6

170. Chen, D., Werder, E.J., Stewart, P.A., Stenzel, M.R., Gerr, F.E., Lawrence, K.G., Groth, C.P., Huynh, T.B., Ramachandran, G., **Banerjee, S.**, Jackson, W.B., Christenbury, K., Kwok, R.K., Sandler, D.P. and Engel, L.S. (2023) Exposure to volatile hydrocarbons and neurologic function among oil spill workers up to 6 years after the Deepwater Horizon disaster. *Environmental Research*, **231**, 116069. DOI: https://doi.org/10.1016/j.envres.2023.116069

169. Shirota, S., Finley, A.O., Cook, B.D. and **Banerjee, S.** (2023). Conjugate sparse plus low rank models for efficient Bayesian interpolation of large spatial data. *Environmetrics*, e2478. DOI: https://doi.org/10.1002/env.2748.

168. Chen, D., Sandler, D.P., Keil, A.P., Heiss, G., Whitsel, E.A., Pratt, G.C., Stewart, P.A., Stenzel, M.R., Groth, C.P., **Banerjee, S.**, Huynh, T.B., Edwards, J.K., Jackson II, W.B., Engeda, J., Blair, A.,Kwok, R.K., Lawrence, K.G. and Engel, L.S. (2023). Fine particulate matter and incident coronary heart disease events up to 10 years of follow-up among Deepwater Horizon oil spill workers. *Environmental Research*, **217**, 114841. DOI: https://doi.org/10.1016/j.envres.2022.114841.

167. Dey, D., Datta, A. and **Banerjee, S.** (2022). Graphical Gaussian process models for highly multivariate spatial data. *Biometrika*, **109**, 993–1014. DOI: https://doi.org/10.1093/biomet/asab061.

166. Saha, A., Datta, A. and **Banerjee, S.** (2022). Scalable predictions for spatial probit linear mixed models using nearest neighbor Gaussian processes. *Journal of Data Science*, **20**, 533–544. DOI: https://doi.org/10.6339/22-JDS1073.

165. Liu, J., **Banerjee, S.**, Oroumiyeh, F., Shen, J., del Rosario, I., Lipsit, J., Paulson, S., Ritz, B., Su, J., Weichenthal, S., Lakey, P., Shiraiwa, M., Zhu, Y. and Jerrett, M.J. (2022). Co-kriging with a low-cost sensor network to estimate spatial variation of brake and tire-wear metals and oxidative stress potential in Southern California. *Environment International*, 107481. DOI: https://doi.org/10.1016/j.envint.2022.107481.

164. Kurum, E., Nguyen, D., **Banerjee, S.**, Li, Y., Rhee, C. and Senturk, D. (2022). A Bayesian multilevel time-varying framework for joint modeling of hospitalization and survival in patients on dialysis. *Statistics in Medicine*, **41**, 5597–5611. DOI: https://doi.org/10.1002/sim.9582.

163. **Banerjee, S.** (2022). Discussion of "Measuring housing vitality from multi-source big data and machine learning". *Journal of the American Statistical Association*, **117**, 1063–1065. DOI: https://doi.org/10.1080/01621459.2022.2098135.

162. Chan-Golston, A., **Banerjee, S.**, Belin, T.R., Roth, S.E. and Prelip, M. (2022). Bayesian finite-population inference with spatially correlated measurements. *Japanese Journal of Statistics and Data Science*, **5**, pages 407–430. DOI: https://doi.org/10.1007/s42081-022-00178-8

161. Davies, T., **Banerjee, S.**, Martin, A. and Turnbull, R. (2022). A nearest-neighbour Gaussian process spatial factor model for censored, multi-depth geochemical data. *Journal of the Royal Statistical Society: Series C*, **71**, 1014–1043. DOI: https://doi.org/10.1111/rssc.12565

160. Gao, L., Datta, A. and **Banerjee, S.** (2022). Hierarchical multivariate directed acyclic graph autoregressive models for spatial diseases mapping. *Statistics in Medicine*, **41**, 3057–3075. DOI: https://doi.org/10.1002/sim.9404.

159. Zhang, L. and **Banerjee, S.** (2022). Spatial factor modeling: A Bayesian Matrix-Normal approach for misaligned data. *Biometrics*, **78**, 560–573. DOI: https://doi.org/10.1111/biom.13452.

158. Finley, A.O., Datta, A. and **Banerjee, S.** (2022). **spNNGP**: R Package for nearest neighbor Gaussian process models. *Journal of Statistical Software*, **103**, 1–40. DOI: https://doi.org/10.18637/jss.v103.i05.

157. **Banerjee, S.** and Peruzzi, M. (2022). Discussion on "Bayesian nonstationary and nonparametric covariance estimation for large spatial data". *Bayesian Analysis*, **17**, 318–323. DOI: https://doi.org/10.1214/21-BA1273

156. Peruzzi, M., **Banerjee, S.** and Finley, A.O. (2022). Highly scalable Bayesian geostatistical modeling via meshed Gaussian processes on partitioned domains. *Journal of the American Statistical Association*, **117**, 969–982. DOI: https://doi.org/10.1080/01621459.2020.1833889

155. Chen, D., Lawrence, K.G., Pratt, G.C., Stenzel, M.R., Stewart, P.A., Groth, C.P., **Banerjee, S.**, Christenbury, K., Curry, M.D., Braxton Jackson II, W., Kwok, R.K., Blair, A., Engel, L.S., and Sandler, D.P. (2022). Fine particulate matter and lung function among burning-exposed Deepwater Horizon oil spill workers. *Environmental Health Perspectives*, **130**, 027001-1–027001-13. https://doi.org/10.1289/EHP8930

154. Kwok, R.K., Jackson, W.B., Curry, M.D., et al. (2022). Association of Deepwater Horizon oil spill response and cleanup work with risk of developing hypertension. *JAMA Network Open*,5(2):e220108. https://doi.org/doi:10.1001/jamanetworkopen.2022.0108

153. Stewart, P.A., Groth, C.P., Huynh, T.B, Gorman, M., Pratt, G.C., Arnold, S.F., Ramachandran, G., **Banerjee, S.**, Cherrie, J., Christenbury, K., Kwok, R.K., Blair, A., Engel, L.S., Sandler, D.P., and Stenzel, M.R. (2022). Assessing exposures from the *Deepwater Horizon* oil spill response and clean-up. *Annals of Work Exposures and Health*, **66**, i3–i22. DOI: https://doi.org/10.1093/annweh/wxab107

152. Groth, C.P., **Banerjee, S.**, Ramachandran, G., Stewart, P.A., Stenzel, M.R. and Virji, M.A. (2022). Quantifying Worker Exposures Using Bayesian Statistical Methods in Industrial Hygiene. In Wiley StatsRef: Statistics Reference Online (eds N. Balakrishnan, T. Colton, B. Everitt, W. Piegorsch, F. Ruggeri and J.L. Teugels). https://doi.org/10.1002/9781118445112.stat08376.

151. Li, Y., Nguyen, D.V., Kurum, E., Rhee, C.M., **Banerjee, S.** and Senturk, D. (2022). Multilevel varying coefficient spatiotemporal model. *Stat*, **11**, e438. DOI: https://doi.org/10.1002/STA4.438

150. Stenzel, M.R., Groth, C.P., Huynh, T.B., Ramachandran, G., **Banerjee, S.**, Kwok, R.K., Engel, L.S., Blair, A., Sandler, D.P., and Stewart, P.A. (2022). Exposure group development in support of the NIEHS GuLF STUDY. *Annals of Work Exposures and Health*, **66**, i23–i55. DOI: https://doi.org/10.1093/annweh/wxab093

149. Ramachandran, G., Groth, C.P., Huynh, T.B., **Banerjee, S.**, Stewart, P.A., Engel, L.S.,Kwok, R.K., Sandler, D.P., and Stenzel, M.R. (2022). Using real-time area VOC measurements to estimate total hydrocarbon exposures to workers involved in the *Deepwater Horizon* oil spill. *Annals of Work Exposures and Health*, **66**, i156–i171. DOI: https://doi.org/10.1093/annweh/wxab066.

148. Stenzel, M.R., Groth, C.P., **Banerjee, S.**, Ramachandran, G., Kwok, R.K., Engel, L.S., Sandler, D.P., and Stewart, P.A. (2022). Exposure assessment techniques applied to the highly censored *Deepwater Horizon* Gulf oil spill personal measurements. *Annals of Work Exposures and Health*, **66**, 56–i70. DOI: https://doi.org/10.1093/annweh/wxab060

147. Groth, C.P., Huynh, T.B, **Banerjee, S.**, Ramachandran, G., Stewart, P.A., Quick, H., Sandler, D.P., Blair, A., Engel, L.S., Kwok, R.K., and Stenzel, M.R. (2022). Linear relationships between total hydrocarbons and benzene, ethylbenzene, toluene, xylene, and hexane during the *Deepwater Horizon* response and clean-up. *Annals of Work Exposures and Health*, **66**, DOI: https://doi.org/10.1093/annweh/wxab064

146. Groth, C.P., **Banerjee, S.**, Ramachandran, G., Kwok, R.K., Blair, A., Sandler, D.P., Engel, L.S., Stewart, P.A., and Stenzel, M.R. (2022). Methods for the analysis of 26 million VOC area observations during the Deepwater Horizon oil spill response and clean-up. *Annals of Work Exposures and Health*, **66**, i140–i155. DOI: https://doi.org/10.1093/annweh/wxab038.

145. Huynh, T., Groth, C.P., Ramachandran, G., **Banerjee, S.**, Stenzel, M.R., Blair, A., Sandler, D.P., Engel, L.S., Kwok R.K., and Stewart P.A. (2022). Estimates of inhalation exposures among land workers during the *Deepwater Horizon* oil spill clean-up operations. *Annals of Work Exposures and Health*, **66**, i124–i139. DOI: https://doi.org/10.1093/annweh/wxab028

144. Pratt, G.C., Stenzel, M.R., Kwok, R.K., Groth C.P., **Banerjee, S.**, Arnold, S.F., Engel, L.S., Sandler, D.P., and Stewart, P.A. (2022). Modeled air pollution from in situ burning and flaring of oil and gas released following the Deepwater Horizon disaster. *Annals of Work Exposures and Health*, **66**, i172–i187. DOI: https://doi.org/10.1093/annweh/wxaa084

143. Huynh, T., Groth, C.P., Ramachandran, G., **Banerjee, S.**, Stenzel, M.R., Blair, A., Sandler, D.P., Engel, L.S., Kwok R.K., and Stewart P.A. (2022). Estimates of inhalation exposures to oil-related components on the supporting vessels during the Deepwater Horizon oil spill. *Annals of Work Exposures and Health*, **66**, i111–i123. DOI: https://doi.org/10.1093/annweh/wxaa113.

142. Huynh, T.B., Groth, C.P., Ramachandran, G., **Banerjee, S.**, Stenzel, M., Quick, H., Blair, A., Engel L.S., Kwok, R.K., Sandler, D.P. and Stewart, P.A. (2022). Estimates of occupational inhalation exposures to six oil-related compounds on the four rig vessels responding to the Deepwater Horizon oil spill. *Annals of Work Exposure and Health*, **66**, i89–i110. DOI: https://doi.org/10.1093/annweh/wxaa072.

141. Li, Y., Nguyen, D.V., **Banerjee, S.**, Rhee, C.M., Kalantar-Zadeh, K., Kurum, E. and Senturk, D. (2021). Multilevel modeling of spatially nested functional data: Spatiotemporal patterns of hospitalization rates in the US dialysis population. *Statistics in Medicine*, **40**, 3937–3952. DOI: https://doi.org/10.1002/sim.9007.

140. Tang, W., Zhang, L. and **Banerjee, S.** (2021). On identifiability and consistency of the nugget in Gaussian spatial process models. *Journal of the Royal Statistical Society: Series B (Methodology)*, **83**, 1044-1070. DOI: https://doi.org/10.1111/rssb.12472.

139. Zhang, L., **Banerjee, S.** and Finley, A.O. (2021). High-dimensional multivariate geostatistics: A Bayesian Matrix-Normal approach. *Environmetrics*, **32**, e2675. DOI: http://doi.org/10.1002/env.2675

138. Rollinson, C.R., Finley, A.O., Alexander, M.R., **Banerjee, S.**, Hamil, K-A.D., Koenig, L.E., Locke, H.D., Peterson, M., Tingley, M.W., Wheeler, K., Youngflesh, C. and Zipkin, E.F. (2021). Working across space and time: nonstationarity in ecological research and application. *Frontiers in Ecology and the Environment*, **19**, 66-72. DOI: https://doi.org/10.1002/fee.2298.

137. **Banerjee, S.** (2020). Conjugate Bayesian regression models for massive geostatistical datasets. In *Computational and Methodological Statistics and Biostatistics - Contemporary Essays in Advancement*, eds. Andriette Bekker, Johan Ferreira and Din Chen. Basel, Switzerland: Springer Nature. DOI: https://doi.org/10.1007/978-3-030-42196-0_10

136. Gao, L., **Banerjee**, S. and Datta, A. (2020). Spatial modeling for correlated cancers using bivariate directed graphs. *Annals of Cancer Epidemiology*, 4:8. DOI: https://doi.org/10.21037/ace-19-41

135. **Banerjee, S.** (2020). Modeling massive spatial datasets using a conjugate Bayesian linear modeling framework. *Spatial Statistics*, **37**, 100417. DOI: https://doi.org/10.1016/j.spasta.2020.100417.

134. Tran, L.D., Rice, T.H., Ong, P.M., **Banerjee, S.**, Liou, J. and Ponce, N.A. (2020). Impact of gentrification on adult mental health. *Health Services Research*, **55**, 432–444. DOI: https://doi.org/10.1111/1475-6773.13264

133. Finley, A.O. and **Banerjee, S.** (2020). Bayesian spatially varying coefficient models in the spBayes R package. *Environmental Modelling and Software*, **125**, 104608. DOI: https://doi.org/10.1016/j.envsoft.2019.104608.

132. Wang, B., **Banerjee, S.** and Gupta, R. (2020). Bayesian spatial modeling for housing data in South Africa. *Sankhya*. DOI: https://doi.org/10.1007/s13571-020-00233-y.

131. Chan-Golston, A., **Banerjee, S.** and Handcock, M. (2020). Bayesian finite population modeling under spatial process settings. *Environmetrics*, **31**, e2606. DOI: https://doi.org/10.1002/env.2606.

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37. Finley, A.O. and **Banerjee, S.** (2008). Bayesian spatial regression for multi-source predictive mapping. In *Encyclopedia of Geographical Information Systems*, Part 5: 45–52, eds. S. Shekhar and H. Xiong, New York: Springer. DOI: http://dx.doi.org/10.1007/978-0-387-35973-1_97

36. Liang, S., **Banerjee, S.**, Bushhouse, S., Finley, A.O. and Carlin, B.P. (2008) Hierarchical multi-resolution approaches for dense point-level breast cancer treatment data. *Computational Statistics and Data Analysis* **52**, 2650–2668. DOI: http://dx.doi.org/10.1016/j.csda.2007.09.011

35. Jin, X., **Banerjee, S.** and Carlin, B.P. (2007) Order-free coregionalized areal models with application to multiple disease mapping. *Journal of the Royal Statistical Society Series B*, **69**, 817–838. DOI: http://dx.doi.org/10.1111/j.1467-9868.2007.00612.x

34. Finley, A.O., **Banerjee, S.** and Carlin, B.P. (2007). **spBayes**: an R package for univariate and multivariate hierarchical point-referenced spatial models. *Journal of Statistical Software*, **19**, 4. DOI: http://dx.doi.org/10.18637/jss.v019.i04

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29. Gelfand, A.E., **Banerjee, S.**, Sirmans, C.F., Tu, Y. and Ong, S.E. (2007). Multilevel modelling using spatial processes: application to the Singapore housing market. *Computational Statistics and Data Analysis*, **52**, 2650–2668. DOI: http://dx.doi.org/10.1016/j.csda.2006.11.019

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26. **Banerjee, S.** and Gelfand, A.E. (2006). Bayesian Wombling: Curvilinear gradient assessment under spatial process models. *Journal of the American Statistical Association*, **101**, 1487–1501. DOI: http://dx.doi.org/10.1198/016214506000000041

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23. Cooner, F., **Banerjee, S.** and McBean, A.M. (2006). Modelling geographically referenced survival data with a cure fraction. *Statistical Methods in Medical Research*, **15**, 307–324. DOI: http://dx.doi.org/10.1191/0962280206sm453oa

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19. **Banerjee, S.** and Dey, D.K. (2005). Semiparametric proportional odds models for spatially correlated survival data. *Lifetime Data Analysis*, **11**, 175–191. DOI: http://dx.doi.org/10.1007/s10985-004-0382-z

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16. Jin, X., Carlin B.P., and **Banerjee, S.** (2005). Generalized hierarchical multivariate CAR models for areal data. *Biometrics*, **61**, 950–961. DOI: http://dx.doi.org/10.1111/j.1541-0420.2005.00359.x

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12. Gelfand, A.E., Schmidt, A., **Banerjee, S.** and Sirmans C.F. (2004). Nonstationary multivariate process modelling through spatially varying coregionalization (with discussion). *Test*, **13**, 263–312. DOI: http://dx.doi.org/10.1007/BF02595775

11. **Banerjee, S.** (2004). Revisiting spherical trigonometry with orthogonal projectors. *The Mathematical Association of America's College Mathematics Journal*, **35**, 375–381. DOI: http://dx.doi.org/10.2307/4146847

10. **Banerjee, S.**, Gelfand, A.E. and Sirmans, C.F. (2003). Directional rates of change under spatial process models. *Journal of the American Statistical Association* **98**, 946–954. DOI: http://dx.doi.org/10.1198/C16214503000000909

9. Ramachandran G., **Banerjee, S** and Vincent, J.H. (2003). Expert judgment and occupational hygiene: Application to aerosol speciation in the nickel primary production industry. *Annals of Occupational Hygiene*, **47**, 461–475. DOI: http://dx.doi.org/10.1093/annhyg/meg066

8. Gelfand, A.E., Kim, H.K, Sirmans, C.F. and **Banerjee, S**. (2003). Spatial modelling with spatially varying coefficient processes. *Journal of the American Statistical Association*, **98**, 387–396. DOI: http://dx.doi.org/10.1198/016214503000170

7. Carlin, B.P. and **Banerjee, S**. (2003). Hierarchical multivariate CAR models for spatio-temporally correlated survival data. In *Bayesian Statistics 7*, eds. J.M. Bernardo, M.J. Bayarri, A.P. Dawid, J.O. Berger, D. Heckerman, A.F.M. Smith, and M. West, pp 45–64. Oxford, UK: Oxford University Press. ISBN: 9780198526155

6. **Banerjee, S.** and Carlin, B.P. (2003). Semiparametric spatiotemporal frailty modeling. *Environmetrics*, **14**, 523–535. DOI: http://dx.doi.org/10.1002/env.613

5. **Banerjee, S**. and Gelfand, A.E. (2003). On smoothness properties of spatial processes. *Journal of Multivariate Analysis*, **84**, 85–100. DOI: http://dx.doi.org/10.1016/S0047-259X(02)00016-7

4. **Banerjee, S**., Wall, M. and Carlin, B.P. (2003). Frailty modeling for spatially correlated survival data with application to infant mortality in Minnesota. *Biostatistics*, **4**, 123–142. DOI: http://dx.doi.org/10.1093/biostatistics/4.1.123

3. **Banerjee, S**. and Carlin, B.P. (2002). Spatial semi-parametric proportional hazards models for analyzing infant mortality rates in Minnesota counties. In *Case Studies in Bayesian Statistics, Vol. VI*, eds. C. Gatsonis, R.E. Kass, A. Carriquiry, A. Gelman, D. Higdon, D.K. Pauler and I. Verdinelli, pp 137–151. New York: Springer. DOI: https://doi.org/10.1007/978-1-4612-2078-7

2. **Banerjee, S**. and Gelfand A.E. (2002). Prediction, interpolation and regression for spatially misaligned datasets. *Sankhya*, **64**, 227–245. JSTOR: http://www.jstor.org/stable/25051392

1. **Banerjee, S**, Gelfand, A.E., Polasek, W. (2000). Geostatistical modelling of spatial interaction data with application to postal service performance. *Journal of Statistical Planning and Inference*. **90**, 87–105. DOI: http://dx.doi.org/10.1016/S0378-3758(00)00111-7

Supervision of Doctoral Dissertations

1. Freda W. Cooner (2006). Latent-activation cure-rate modeling for time-to-event data.
2. Andrew O. Finley (2006). Application of Bayesian spatial models in multisource forest inventory.
3. Pei Li (2011). Nonparametric hierarchical modeling for detecting boundaries in areally referenced spatial datasets.
4. Qian Ren (2012). On some computational, modeling and design issues in Bayesian analysis of spatial data.
5. Rajarshi Guhaniyogi (2012). On Bayesian hierarchical modeling of large spatial data.
6. Joao Monteiro (2012). Process-based Bayesian melding of occupational exposure models and industrial workplace data.
7. Harrison Quick (2013). Spatiotemporal gradient modeling with applications.
8. Abhirup Datta (2016). Statistical methods for large complex datasets.

9. Caroline Groth (2017). Bayesian models for analyzing worker exposure to airborne chemicals during the Deepwater Horizon Oil Spill cleanup and response.
10. Nada A. Abdalla (2018). Parametric and nonparametric Bayesian modeling of spatiotemporal exposure data in industrial hygiene.
11. Alec Chan-Golston (2020). Bayesian estimation of finite population quantities from spatially correlated data under ignorable and non-ignorable survey designs.
12. Lu Zhang (2020). On simplified Bayesian modeling for massive geostatistical datasets: Conjugacy and beyond.
13. Bingling Wang (2020). Structure learning of DAGs from observational data with multivariate spatial processes and with non-invertible functional relationships.
14. Leiwen Gao (2021). On Bayesian directed acyclic graphical models for multidimensional disease mapping.
15. Ian Frankenburg (2022). Bayesian learning and calibration of mechanistic models and spatiotemporal computer simulations.
16. Jane Pan (2022). Bayesian assurance and sample size determination for experimental studies.
17. Soumyakanti Pan (2024, expected). Probabilistic machine learning for high-dimensional space-time mechanistic processes with applications to environmental public health.
18. Daniel Zhou (2024, expected). Bayesian modeling and analysis for high-resolution spatially and temporally oriented health outcome data from wearable devices.
19. Valentina Aruputhusamy (2024, expected). Exposure assessment and epidemiological investigations using massive space-time data from the Aliso Canyon gas leak disaster.
20. Xiang Chen (2025, expected). Predictive stacking for massive spatially-temporally oriented health outcomes data.
21. Joaquim Texeira (2025, expected). Bayesian networks and graphical models for learning from large-scale spatial transcriptomics data.

Postdoctoral and Visiting Scholar Supervision

1. Shinichiro Shirota (2017–2019). PhD, Duke University.
2. Wenpin Tang (2018-2019). PhD, University of California, Berkeley.
3. Michele Peruzzi (2018-2020). PhD, University of Bocconi, Italy.
4. Marco Mignone (2019-2020). PhD, Sapienza University of Rome, Italy.
5. Pierfrancesco Alaimo di Loro (2019-2020). PhD, Sapienza University of Rome, Italy.
6. Didong Li (2020-2022). PhD, Duke University, Durham, NC.

Software Development

Available from CRAN (http://cran.r-project.org)

1. spBayes (with A.O. Finley): R package for hierarchial spatial modeling.
2. MBA: (with A.O. Finley): R package for fast surface interpolation with B-splines.
3. B2Z: (with J.V. Monteiro): R package for Bayesian modeling of physical models in occupational hygiene.
4. spNNGP (with A.O. Finley and A. Datta): R package for Bayesian nearest-neighbor Gaussian process models.
5. bayesassurance (with J. Pan): R package for Bayesian assurance and sample size determination in clinical trials and designed experiments.

Available from GitHub (http://github.com/sudiptobanerjee)

5. JaLAJni (with L. Zhang and L. Nie): JAVA native interface for LAPACK and BLAS libraries

6. JAMAJni (with L. Zhang, X. Chen, D. Wu and Z. Zhao): JAMA (JAVA Matrix) package interface with LAPACK and BLAS.
7. JAMAJniGsl (with Y. Dun and L. Zhang): JAMA (JAVA Matrix) package interface with GNU Scientific Library (GSL).
8. BayesMNIWConjugate (with Y. Dun): Java/C package for implementing conjugate Bayesian multivariate liinear models.
9. Multivariate_DAGAR (with L. Gao): R programs for directed acyclic graphical models for disease mapping.
10. Areal-Data-Analysis (with L. Gao): R programs for spatial disease mapping.
11. Multivariate_differenceboundary (with L. Gao): R programs for mapping multiple diseases and detecting significant disease boundaries over maps.

Keynote, Plenary and Special Invited Lectures

1. Spatial Statistics 2013: Revealing intricacies in spatial and spatial-temporal data with statistics. Columbus, OH, June, 2013. **Plenary**.
2. The 2014 IISA (International Indian Statistical Association) Meeting, Riverside, CA, July 2014. **Special Invited**.
3. The International Environmetrics Society TIES-GRASPA Annual Conference. Bergamo, Italy, July, 2017. **Keynote**.
4. International Society for Bayesian Analysis (ISBA) World Meeting. Sardinia, Italy, June, 2016. **Keynote**.
5. Annual IMS/WNAR Meeting, Boise, Idaho, June 2015. **Presidential Invited Keynote Address**.
6. Fifteenth Annual Red Raider Mini Symposium: Spatial Inference on Manifolds Spatial Statistics, Statistics on Manifolds, Differential Geometry, and Computational Science. Texas Tech University, Lubbock, TX, November, 2015. **Keynote**.
7. Climate Informatics Annual Workshop, National Center for Atmospheric Research, September 2016. **Keynote**.
8. EcoSta 2017: International Conference on Econometrics and Statistics. Hong Kong, June, 2017. **Special Invited**.
9. CMStatistics 2017: International Conference on Computational and Methological Statistics. London, UK, December 2017. **Special Invited**.
10. Bayesian Statistics in the Big Data Era. Centre International de Rencontres Mathématiques (CIRM), Marseilles, France, November, 2018. **Keynote**.
11. Data Science of the Natural Environment (DSNE) Conference. Lancaster University, Lancaster UK, July, 2019. **Keynote**.
12. Bayes on the Beach. Gold Coast, Australia, November, 2019. **Keynote**.
13. Advancing knowledge about spatial modeling, infectious diseases, environment and health. The Fields Institute for Research in Mathematical Sciences, Toronto, Canada, June, 2020. **Keynote**.
14. Interdisciplinary Research in Technology and Management. Kolkata, India, February, 2021. **Keynote**.
15. Joint Statistical Meetings. Seattle, WA, August, 2021. **ASA President's Invited Introductory Overview Lecture**.
16. Japanese Joint Statistical Meetings. Kanagawa, Japan, September, 2021. **Plenary**.
17. GEOMED 2022. Irvine, CA, October, 2022. **Plenary**.

Selected Print and Digital Media Clippings

1. Study to Track Gulf Cleanup Workers' Health. February 02, 2011. *The Wall Street Journal*
2. "The GuLF Study" News and Media Links: https://gulfstudy.nih.gov/en/links.html
3. "Useful." November 24, 2014. UCLA Fielding School of Public Health Video Production
4. The Places "Knotted" Together. July, 21, 2018. *SynTalk*
5. Modeling the Past, Present and Future to Explain and Predict Health Outcomes. October 30th, 2019. *NIEHS Stories of Success*
6. US elections 2020: A tale of 512 paths and two candidates. September 24, 2020. *The Economic Times*
7. US elections 2020: The trends are stabilising towards a big splash of blue. October 16, 2020. *The Economic Times*
8. Of octopuses and elections: How shocking will a Donald Trump victory be? November 03, 2020. *The Economic Times*
9. Spatial Statistics with Sudipto Banerjee. December 17, 2021. *Podcast: Two Nearest Neighbors*

Scientific Conference Presentations

1. Eastern North American Region (ENAR) Meeting of the International Biometric Society. Chicago IL, March, 2000.
2. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Charlotte NC, March, 2001.

Invited.

3. Joint Statistical Meetings. Atlanta GA, August, 2001.
4. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Arlington VA, March, 2002.
5. Joint Statistical Meeting. New York City, August, 2002. **Invited**.
6. International Society for Bayesian Analysis: Bayesian Workshop/Conference. Indian Statistical Institute, Calcutta, India, January, 2003. **Invited**.
7. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Tampa FL, March, 2003. **Invited**.
8. Third Workshop on Bayesian Inference in Stochastic Processes (BISP). La Manga, Spain, May, 2003. **Invited**.
9. New Researcher's Conference. University of California, Davis CA, July, 2003. **Invited**.
10. Joint Statistical Meeting. San Francisco, CA, August, 2003.
11. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Pittsburgh, PA, March, 2004. **Invited**.
12. Joint Statistical Meetings. Toronto, Canada, August, 2004.
13. International Society for Bayesian Analysis: International Workshop/Conference on Bayesian Statistics and its Applications. Varanasi, India, January, 2005. **Invited**.
14. Second International IMS/ISBA Joint Meeting "MCMSki". Bormio, Italy, January, 2005. **Invited**.
15. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Austin, TA, March, 2005. **Invited**.
16. The New England Statistics Symposium. University of Connecticut, Storrs, CT, April, 2005.
17. Joint Statistical Meeting. Minneapolis, MN, August, 2005. **Invited**.
18. GEOMED conference. Cambridge University, UK. September, 2005. **Invited**.
19. Joint Meetings of the Statistical Society of Italy. Messina, Italy. September, 2005. **Invited**.
20. Symposium organized by the Carlson School of Management, University of Minnesota, Minneapolis, May, 2006. **Invited**.
21. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Atlanta, GA, March, 2007. **Invited**.
22. Joint Statistical Meetings. Salt Lake City, UT, August, 2007. **Invited**.
23. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Arlington, VA, March, 2008. **Invited**.
24. The 19th Annual TIES (The International Environmetrics Society) Conference. Kelowna, British Columbia, Canada, July, 2008. **Invited**.
25. Joint Statistical Meetings. Denver, CO, August, 2008. **Invited**.
26. Workshop on Environmetrics. National Center for Atmospheric Research (NCAR), Boulder, CO, October, 2008. **Invited**.
27. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. San Antonio, TX, March, 2009. **Invited**.
28. The 20th Annual TIES (The International Environmetrics Society) Conference. Bologna, Italy, July, 2009. **Invited**.
29. Program on Space-time Analysis for Environmental Mapping, Epidemiology and Climate Change. Statistical and Applied Mathematical Sciences Institute (SAMSI), RTP, NC, September, 2009. **Invited**.
30. NIH Workshop: Priorities for NIH Research in Climate Change and Health. National Institute of Health, Bethesda, MD,

December, 2009. **Invited**.

31. The 21st Annual TIES (The International Environmetrics Society) Conference. Margarita Island, Venezuela, June, 2010. **Invited**.
32. Joint Statistical Meetings. Vancouver, British Columbia, Canada, August, 2010. **Invited**.
33. Annual Meeting of the Institute of Mathematical Statistics (IMS). Gotenburg, Sweden, August, 2010. **Invited**.
34. Fourth International IMS/ISBA Joint Meeting "MCMSki 3". Park City, UT, January 2011.
35. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Miami, FL, March, 2011. **Invited**.
36. Joint Statistical Meetings. Miami, FL, August, 2011. **Invited**.
37. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Washington, DC, March, 2012. **Invited**.
38. International Society for Bayesian Analysis (ISBA) World Meeting. Kyoto, Japan, June, 2012. **Invited**.
39. International Biometric Society (IBS) World Meeting. Kobe, Japan, August, 2012. **Invited**.
40. Joint Statistical Meetings. San Diego, CA, August, 2012. **Invited**.
41. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Orlando, FL, March, 2013. **Invited**.
42. Conference on "High-Dimensional Statistics" to Celebrate International Year of Statistics. Center for Statistical Analysis, Temple University. Philadelphia, PA, April, 2013. **Invited**.
43. International Workshop on the Perspectives on High-dimensional Data Analysis. Vancouver, BC, Canada, May 2013. **Invited.**
44. The 23rd Annual TIES (The International Environmetrics Society) Conference. Anchorage, Alaska, June, 2013. **Invited**.
45. International Society for Bayesian Analysis (ISBA) chapter meeting. Grahamstown, South Africa, June, 2013. **Invited**.
46. Joint Statistical Meetings. Montreal, Canada, August, 2013. **Invited**.
47. Joint Statistical Meetings. Boston, MA, August, 2014. **Invited**.
48. The International Environmetrics Society (TIES) World Meeting. Guangzhou, China, December, 2014. **Invited**.
49. Workshop on Spatial Statistics, Texas A& M University, College Station, TX, January, 2015. **Invited**.
50. G70: A Celebration of Alan Gelfand's 70th Birthday, Duke University, Durham, NC, April, 2015. **Co-organizer and invited speaker**.
51. Joint Statistical Meetings. Seattle , WA, August, 2015. **Invited**.
52. The 2015 IISA (International Indian Statistical Association) Meeting, Poona, India, December 2015. **Invited**.
53. Sixth International IMS/ISBA Joint Meeting "MCMSki 5". Lenzerheide, Switzerland, January 2016.
54. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Austin, TX, March, 2016. **Invited**.
55. SIAM Conference on Uncertainty Quantification (UQ16). Lausanne, Switzerland, April, 2016. **Invited**.
56. Joint Statistical Meetings. Chicago, IL, August, 2016. **Invited**.
57. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Washington DC, March, 2017. **Invited**.
58. International Statistical Institute World Congress. Marrakech, Morocco, July, 2017. **Invited**.
59. Joint Statistical Meetings. Baltimore, MD, August, 2017. **Invited**.

60. Conférence Universitaire de Suisse Occidentale: Programme Doctoral en Statistique et Probabilités Appliquées. Villars, Switzerland, September, 2017. **Invited**.
61. Bayesian Nonparametric Inference Workshop. Oaxaca, Mexico, December, 2017. **Invited**.
62. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. Atlanta, GA, March, 2018. **Invited**.
63. International Workshop on Applied Probability (IWAP). Budapest, Hungary, June 2018. **Invited**.
64. International Society for Bayesian Analysis (ISBA) World Meeting. Edinburgh, UK, June, 2018.
65. Joint Statistical Meetings. Vancouver, BC, Canada August, 2018. **Invited**.
66. Joint Statistical Meetings. Denver, Colorado, July, 2019.
67. International Statistical Institute World Congress. Kuala Lumpur, Malaysia, August, 2019. **Invited**.
68. The 11th ICSA (International Chinese Statistical Association) International Conference, Hangzhou, China, December, 2019.
69. The 2019 IISA (International Indian Statistical Association) Meeting, Mumbai, India, December, 2019. **Invited**.
70. International Society for Bayesian Analysis (ISBA) World Meeting. Kunming, China, June, 2020 (postponed to virtual event in June, 2021). **Invited**.
71. Joint Statistical Meetings. Philadelphia, Pennsylvania, August, 2020. **Invited**.
72. Royal Statistical Society Conference. Manchester, UK, September, 2021. **Invited**.
73. Joint Statistical Meetings. Washington DC, August, 2022. **Invited**.
74. Society for Industrial and Applied Mathematics (SIAM) Conference on Parallel Processing for Scientific Computing. VIRTUAL, February, 2022. **Invited**.
75. Society for Industrial and Applied Mathematics (SIAM) Conference on Uncertainty Quantification. Hybrid Conference, Atlanta, Georgia, April, 2022. **Invited**.
76. Annual Deming Conference on Applied Statistics. Philadelphia, PA, December 2022. **Invited**.

Short Courses, Tutorials and Workshops

1. (With B.P. Carlin and A.E. Gelfand) Hierarchical modeling and analysis for spatial data. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society, Pittsburgh, PA, March, 2004.
2. Advanced methods for spatial data analysis. International Society for Bayesian Analysis World Meeting. Vina Del Mar, Chile, May, 2004.
3. Hierarchical models and Bayesian inference for spatial data. Department of Statistics, University of Florence. Florence, Italy, September, 2004.
4. (With B.P. Carlin and A.E. Gelfand). Hierarchical modeling and analysis for spatial data. Joint Statistical Meeting. Minneapolis, MN, August, 2005.
5. (With J. Mulhausen, P. Logan, and P. Hewitt) Bayesian Workshop. Professional Conference on Industrial Hygiene. Denver, Colorado, October, 2005.
6. (With A.E. Gelfand). Hierarchical modeling and analysis for spatial data. University of Tokyo, Japan, December, 2005.
7. (With A.E. Gelfand and James Clark). Spatial modeling and data analysis. Duke University Summer School, June, 2008.
8. Hierarchical modelling and analysis for spatial data. International Society for Bayesian Analysis (ISBA) World Meeting. Hamiltion Island, Australia, July, 2008.
9. Space-time modelling and data analysis. Macquarie University, Sydney, New South Wales, Australia, July 2008.
10. (With Finley, A.O.). Hierarchical modeling and analysis of spatial-temporal data: Emphasis in forestry, ecology, and environmental sciences. Eastern North American Region (ENAR) Spring Meeting of the International Biometric Society. San

Antonio, TX, March, 2009.

11. Hierarchical modeling for spatially-referenced data with applications to environmental sciences and public health. New England Statistics Symposium. University of Connecticut, Storrs, April, 2009.
12. (With Reinhard Furrer, Steve Sain and Douglas Nychka). Summer School on Spatial Statistics. Statistical and Applied Mathematical Sciences Institute (SAMSI). RTP, NC, September, 2009.
13. (With Finley, A.O.). Hierarchical modeling and analysis of spatial-temporal data: Emphasis in forestry, ecology, and environmental sciences. Joint Statistical Meetings. Washington, DC, 2009.
14. (With Finley, A.O.). Bayesian modeling for spatial and spatio-temporal data with applications to environmental sciences and public health. Frontiers of Statistical Decision Making and Bayesian Analysis. San Antonio, TX, March, 2010.
15. (With A.E. Gelfand). Spatial statistics. University of Tel Aviv, Israel, June, 2010.
16. A practical introduction to hierarchical modelling for spatially referenced data. Biostatistics Section Workshop of the Statistical Society for Canada. Wolfville, Nova Scotia, Canada, June, 2011.
17. (With B.P. Carlin and A.E. Gelfand). Hierarchical modeling and analysis for spatial data. Joint Statistical Meeting. Boston, MA, August, 2014.
18. Bayesian space-time modeling. The Machine Learning Summer School, University of Texas. Austin, TX, January 2015.
19. Hierarchical modeling and analysis for spatial data. 40th Annual Summer Institute of Applied Statistics, Brigham Young University, Provo, UT, June 2015.
20. (With A. Datta and A.O. Finley). Bayesian modeling and inference for high-dimensional spatial-temporal data. Joint Statistical Meeting. Baltimore, MD, July, 2017.
21. (With Casey Youngflesh). Hierarchical Bayesian modeling with applications for spatial environmental data science. Institute of Digital Research and Education, University of California, Los Angeles. May, 2022.

Invited Department Seminars

1. Division of Biostatistics, University of Minnesota, February 2000.
2. Department of Statistics, University of Northern Illinois, October 2001.
3. Division of Biostatistics, University of Minnesota, April 2002.
4. Department of Statistics, University of Minnesota, September 2003.
5. Department of Statistics, University of Florida, Gainesville, November 2003.
6. Indian Statistical Institute, Bangalore, July, 2004.
7. Department of Statistics, University of Florence, Italy, September, 2004.
8. Department of Statistics, North Carolina State University, Raleigh, October, 2004.
9. Institute of Statistics and Decision Sciences, Duke University, Durham, October, 2004.
10. Department of Statistics, University of Connecticut, Storrs, November, 2004.
11. Division of Biostatistics, University of Wisconsin, Madison, February, 2005.
12. Department of Statistics, University of Muenchen, Munich, Germany, July, 2005.
13. Department of Computer Science, University of Minnesota, Minneapolis, October, 2005.
14. Department of Statistics and Econometrics, University of Kyoto, Japan, December, 2005.
15. Center for Statistical Sciences, Brown University, Providence, September, 2009.
16. Department of Biostatistics, University of Michigan, Ann Arbor, February, 2007.
17. Applied Statistics Unit, Indian Statistical Institute, Calcutta, India, January, 2008.

18. Department of Biostatistics, M.D. Anderson Cancer Center, Houston, February, 2008.
19. Department of Statistics, Colorado State University, Fort Collins, February, 2009.
20. Department of Geography, University of Iowa, Iowa City, March, 2009.
21. Department of Statistical Sciences, Duke University, October, 2009.
22. Department of Statistics, North Carolina State University, November, 2009.
23. Bayesian and Interdisciplinary Research Unit (BIRU), Indian Statistical Institute, Kolkata, India, January 2010.
24. Department of Mathematical Sciences. Indian Institute of Science, Bangalore, India, April 2010.
25. Department of Statistics, University of Arkansas, Fayetteville, February, 2010.
26. Department of Statistics, University of Colorado, Boulder, February, 2011.
27. Department of Statistics, Bringham Young University, Utah, April, 2011.
28. Department of Biostatistics, University of North Carolina, Chapel Hill, November, 2011.
29. Department of Biostatistics, Yale University, CT, November, 2013.
30. Department of Biostatistics, Emory University, GA, February, 2014.
31. Department of Biostatistics, University of California, Los Angeles, CA, April, 2014.
32. Department of Statistics, University of California, Irvine, CA, October, 2014.
33. Department of Statistics, Harvard University, Cambridge, MA, October, 2014.
34. Department of Applied Mathematics and Statistics, University of California, Santa Cruz, CA, April, 2015.
35. Department of Statistical Sciences, Duke University, Durham, NC, April, 2015.
36. Department of Statistical and Actuarial Sciences, Western University, London, Ontario, November, 2015.
37. Booth School of Business, University of Chicago, Chicago, IL, December, 2015.
38. Department of Statistics and Applied Probability. University of California, Santa Barbara. April, 2016.
39. Department of Preventive Medicine, University of Southern California, Los Angeles, April, 2016.
40. Université de Montpellier. Montpellier, France, July, 2016.
41. Department of Biostatistics, University of North Carolina, Chapel Hill, September, 2016.
42. Centre for Mathematical Sciences, University of Cambridge, UK, January, 2017.
43. College of Engineering, Mathematics and Physical Sciences, University of Exeter, UK, January, 2017.
44. Department of Statistics, University of Missouri, February, 2017.
45. Department of Statistics, University of Georgia, August, 2017.
46. Department of Biostatistics, Johns Hopkins University, November, 2017.
47. Department of Applied and Computational Mathematics and Statistics, October, 2018.
48. School of Mathematical and Statistical Sciences, Clemson University, March, 2019.
49. Department of Biostatistics, Nanjing Medical University, Nanjing, China, September, 2019.
50. School of Public Health, Fudan University, Shanghai, China, December, 2019.
51. Department of Statistical Sciences, University of Toronto, Canada, October, 2020.
52. Department of Statistics, University of Connecticut, Storrs, February, 2021.

53. Department of Biostatistics, Brown University, Providence, Rhode Island, March, 2021.
54. Department of Biostatistics, University of Texas Health Sciences Center, Houston, Texas, November, 2021.
55. Department of Biostatistics, University of Florida, Gainesville, April, 2022.
56. Department of Statistics, La Sapienza University, Rome, Italy, May, 2022.
57. Department of Statistics, Purdue University, West Lafayette, Indiana, August, 2022.
58. Department of Biostatistics, Brown University, Providence, Rhode Island, March, 2023.

Service to Professional Organizations:

- Session Chairs on numerous occasions in national and international meetings.
- Organizer of special invited sessions in annual national meetings including the Eastern North American Region (ENAR) meeting of the International Biometric Society and the Joint Statistical Meetings.
- Instructor for short courses based upon his research methods at several national and international venues. See list provided earlier.
- Member of ENAR Regional Advisory Board (2005–2008).
- Geostatistics working group leader Program on Space-time Analysis for Environmental Mapping, Epidemiology and Climate Change at the Statistical and Applied Mathematical Sciences Institute (SAMSI) in Research Triangle Park, North Carolina (2009-2010).
- ASA Reresentative for the COPSS Awards Committee (2014–2017).
- Member of ENAR RECOM (2012–2015).
- Member, ASA Fellows Selection Committee (2012–2015).
- Program-Chair Elect for the ASA's Section of Bayesian Statistical Science (2013).
- Program-Chair for the ASA's Section of Bayesian Statistical Science (2014).
- Nominated member of the National Academy of Science's National Research Council (NRC) for cost-effectiveness study of national flood insurance programs (2014).
- Board of Directors, International Society for Bayesian Analysis (ISBA) (2015–2017).
- Chair-Elect, ASA's Section of Bayesian Statistical Science (2016).
- Chair, ASA's Section of Bayesian Statistical Science (2017).
- Member, Scientific committee for International Society for Bayesian Analysis (ISBA) World Meeting (2018).
- Chair, De Groot Prize Committee for International Society for Bayesian Analysis (ISBA) (2018).
- Member, Committee on Named Lectures for International Society for Bayesian Analysis (ISBA) (2018).
- Member, International Society for Bayesian Analysis (ISBA) Fellows Selection Committee, 2019–2023.
- President-Elect, International Society for Bayesian Analysis (ISBA), 2021.
- President, International Society for Bayesian Analysis (ISBA), 2022.
- Past-President International Society for Bayesian Analysis (ISBA), 2023.

Associate Editor:

- *Statistics in Medicine*, 2006–2009.
- *Applied Statistics: Journal of the Royal Statistical Society Series-C*, 2007–2010.
- *Bayesian Analysis*, 2008–2011.
- *Environmetrics*, 2008–2013.

- *Journal of the American Statistical Association*, 2010–2018.
- *Biometrics*, 2011–2019.
- *Journal of Agricultural, Biological and Environmental Statistics*, 2011–2015.
- *Journal of the Royal Statistical Society Series B*, 2019–2022.

Guest Editor for special issues:

- *Computational Statistics and Data Analysis*.
- *Statistical Methodology*.

Referee:

- Refereed articles regularly for the following selection of journals: *Annals of Applied Statistics*, *Annals of Occupational Hygiene*, *Annals of Statistics*, *Bayesian Analysis*, *Biometrics*, *Biometrika*, *Biostatistics*, *Environmetrics*, *Environmental Health Perspectives*, *Journal of the American Statistical Association*, *Journal of Computational and Graphical Statistics*, *Journal of Occupational and Environmental Hygiene*, *Journal of the Royal Statistical Society: Series B*, *Journal of the Royal Statistical Society: Series C*, *Nature*, *Science*, *Scientific Reports*, *Statistics in Medicine*, *Technometrics*.
- Reviewed grants for *National Institute of Health*, *National Science Foundation*, the *National Security Agency*.
- International grant review for the *National Research Councils* of Finland and Portugal.
- International dissertation review for Queensland University of Technology, Brisbane, Australia.
- International dissertation review for University of Helsinki, Finland.

Grant review panels and study sections

- NIH: Special Emphasis Panel/Scientific Review Group, Kidney, Nutrition, Obesity and Diabetes Epidemiology (KNOD) Study Section. Ad hoc member, May, 2008.
- NSF: Review Panel, Collaborations in Mathematical Geosciences (CMG) program. June, 2009.
- NIH: Special Emphasis Panel/Scientific Review Group, Challenge Grants Panel 1. July, 2009.
- NSF: Review Panel, Collaborations in Mathematical Geosciences (CMG) program. April, 2010.
- NIH: Infectious, Reproductive, Asthma and Pulmonary Conditions Study Section. Ad hoc member, October, 2010.
- NIH: Biostatistical Methods Research and Design (BMRD) Study Section. Permanent member, 2011–2017.
- NSF: Review Panel, Division of Mathematical Sciences (DMS) program. January, 2012.
- NIH/NIEHS: Environmental Health Sciences Research Center (EHSRC) Study Section. Permanent member, 2013–2016.
- NIH/NIEHS: Environmental Health Sciences Research Center (EHSRC) Study Section. Ad hoc member, August 2017.
- NIH: Infectious, Reproductive, Asthma and Pulmonary Conditions Study Section. Ad hoc member, October, 2017.
- NSF: Review Panel, Division of Mathematical Sciences (DMS) CAREER Awards program. October, 2017.
- NSF: Review Panel, Harnessing the Data Revolution (HDR): Data Science Corps (DSC). May, 2019.
- NSF: Review Panel, Harnessing the Data Revolution (HDR): Transdisciplinary Research in Principles of Data Science (TRIPODS) Phase I. June, 2019.
- NIH: Infectious, Reproductive, Asthma and Pulmonary Conditions Study Section. Ad hoc member, March, 2021.
- NIH/NIEHS: P30 Core Center Applications. Special Emphasis Panel, October, 2021.
- NIH/NIEHS: Environmental Health Sciences Core Centers (EHSCC) Review Meeting. Special Emphasis Panel, October, 2022.

External Review of Academic Departments:

- Department of Biostatistics, University of Texas MD Anderson Cancer Center, Houston, Texas, 2016.
- Biostatistics Branch (BB) of the National Cancer Institute, Bethesda, Maryland, 2018.
- Department of Statistical Science, Duke University, Durham, North Carolina, 2019.
- Department of Statistics, Florida State University, Tallahasse, Florida, 2019.

Professional memberships:

- American Statistical Association (ASA).
- American Association for the Advancement of Science (AAAS).
- Institute of Mathematical Sciences (IMS).
- International Biometric Society, Western North American Region (WNAR).
- International Indian Statistical Association (IISA).
- International Society for Bayesian Analysis (ISBA).

- International Statistical Institute (ISI).
- The International Environmetrics Society (TIES) .

References

To be provided upon request.