

Suman Majumder

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Education

Aug 2016– Jun 2020 Ph.D., Statistics, North Carolina State University
Thesis Title: Spatiotemporal inference and applications for large datasets
Advisor: Brian J. Reich
Jul 2014–May 2016 M.Stat., Indian Statistical Institute
Jul 2011–May 2014 B.Stat., Indian Statistical Institute

Experience

Aug 2023– Assistant Professor, Department of Statistics, University of Missouri
Jul 2020–Jun 2023 Postdoctoral Fellow, Department of Nutrition, Harvard T. H. Chan School of Public Health
Jan 2020–Jun 2020 Research Assistant, Department of Entomology and Plant Pathology, North Carolina State University
Aug 2018–Dec 2019 Teaching Assistant, Department of Statistics, North Carolina State University
Aug 2017–Jun 2018 Research Assistant, The Statistical and Applied Mathematical Sciences Institute (SAMSI)
Aug 2016–May 2017 Teaching Assistant, Department of Statistics, North Carolina State University

Teaching

2021	BST 228, Applied Bayesian Analysis (Guest Lecture)	Harvard School of Public Health
2019	ST 422, Introduction to Mathematical Statistics (Guest Lectures)	North Carolina State University
2018	ST 740, Introduction to Bayesian Inference (Guest Lecture)	North Carolina State University

Teaching Assistant

2019 Fall	ST 555, Statistical Programming I, NCSU
2019 Summer	ST 555, Statistical Programming I, NCSU
2019 Spring	ST 422, Introduction to Mathematical Statistics II, NCSU
2018 Fall	ST 503, Fundamentals of Linear Models and Regression, NCSU
2018 Fall	ST 740, Introduction to Bayesian Inference, NCSU
2017 Summer	ST 555, Statistical Programming I, NCSU
2017 Spring	Tech TA, NCSU
2016 Fall	Tech TA, NCSU

Honors and Awards

2021	Richard L. Anderson Award at SRCOS Summer Research Conference
2021	Boyd Hashbarger Travel Award for SRCOS Summer Research Conference
2020	ASA ENVR Student Paper Award Winner
2019	Travel Award for IMS/ASA Spring Research Conference
2018 - current	Member of NC Alpha chapter of Statistics, <i>Mu Sigma Rho</i>
2011 - 2016	KVPY Scholarship, Dept. of Science & Technology, Govt. of India

Publications

Peer-Reviewed Journals

- Giffin, A., Gong, W., **Majumder, S.**, Rappold, A. G., Reich, B. J., Yang, S. (2022); [Estimating intervention effects on infectious disease control: the effect of community mobility reduction on Coronavirus spread](#). Spatial Statistics.
- Majumder, S.**, Guan, Y., Reich, B. J., Saibaba, A. K. (2022); [Kryging: Geostatistical analysis of large-scale datasets using Krylov subspace methods](#). Statistics and Computing.

- Dorman, S. J., Hopperstad, K. A., Reich, B. J., **Majumder, S.**, Kennedy, G., Reisig, D. D., Greene, J. K., Reay-Jones, F. P. F., Collins, G., Bacheler, J. S., and Huset, A. S. (2021); [Landscape-level variation in *Bt* crops predict *Helicoverpa zea* \(Lepidoptera: Noctuidae\) resistance in cotton agroecosystems](#). Pest Management Science.
- **Majumder, S.**, Guan, Y., Reich, B. J., O'Neill, S. and Rappold, A. G. (2020); [Statistical Downscaling with Spatial Misalignment: Application to wildland Fire PM_{2.5} Concentration Forecasting](#). Journal of Agricultural, Biological and Environmental Statistics.
- **Majumder, S.**, Biswas, A., Roy, T., Bhandari, S., and Basu, A. (2020); [Statistical Inference Based on a New Weighted Likelihood Approach](#). Metrika.
- Haskett, M. E., **Majumder, S.**, Kotter-Grühn, D. and Gutierrez, I. (2020); [The role of university students' wellness in links between homelessness, food security, and academic success](#). Journal of Social Distress and the Homelessness.
- Biswas, A., **Majumder, S.**, Niyogi, P. G. and Basu, A. (2020); [A Weighted Likelihood Approach to Problems in Survival Data](#). Sankhyā.
- Haskett, M. E., Kotter-Grühn, D. and **Majumder, S.** (2020); [Prevalence and correlates of homelessness and food insecurity among university students](#) Journal of College Student Development.
- Biswas, A., Roy, T., **Majumder, S.**, and Basu, A. (2015). [A new weighted likelihood approach](#). Stat.

Under Review/ Submitted

- **Majumder, S.**, Coull, B. A., Mark Welch, J. L., La Riviere, P. J., Dewhurst, F. E., Starr, J. R., Lee, K. H.; Multivariate Cluster Point Process Model: Parent Location Improves Inference for Complex Biofilm Image Data; *Submitted, Annals of Applied Statistics*; [ArXiv](#)

In Preparation

- **Majumder, S.**, Coull, B. A., Mark Welch, J. L., Starr, J. R., Lee, K. H.; A Bayesian approximate multivariate log-Gaussian Cox process model to approximate multiple 2D z-slices of a 3D image.
- **Majumder, S.**, Gopi, K., Morgan, G., Cope, M., Reich, B. J.; A real-time spatiotemporal warp model for accurate wildland fire PM_{2.5} forecast.
- **Majumder, S.**, Sahoo, I., Hazra, A.; An Approximation Approach for Censored Spatial Data
- Lee, K. H., Coull, B. A., **Majumder, S.**, La Riviere, P. J., Borisy, G., Dewhurst, F. E., Mark Welch, J. L., Starr, J. R.; Multivariate spatial point process models for multi-species biofilm image data.
- Bajer, J., **Majumder, S.**, Dewhurst, F. E., Lee, K. H., Starr, J. R.; Association between oral microbiome and highly active antiretroviral therapy.

- Bader, J., **Majumder, S.**, Chen, J., Lee, K. H., Starr, J. R.; Dental plaque and throatwash microbiomes of youth perinatally exposed to HIV: Results from Bayesian variable selection.

Technical reports

- Biswas, A., Niyogi, P. G., **Majumder, S.**, Bhandari, S. K., Ghosh, A., and Basu, A. (2018). [Theoretical Properties of a New Weighted Likelihood Estimator for Right Censored Data.](#)

Presentations

Invited Talks

- Department of Epidemiology and Biostatistics, Arnold School of Public Health, University of South Carolina, Columbia, SC, 2023.
- International Chinese Statistical Association Applied Statistics Symposium, Gainesville, FL, 2022.
- Department of Mathematics and Statistics, University of Massachusetts-Amherst, Amherst, MA, 2022.
- Center for Air pollution, energy and health Research, Webinar series, 2020.

Contributed Talks

- Joint Statistical Meetings, 2022.
- ENAR 2021 Spring Meeting, 2021.
- ENVR Student Paper Awards Section, Joint Statistical Meetings, 2020.
- International Conference on Robust Statistics, 2015.

Posters

- Boyd Hashbarger Student Poster Competition, SRCOS Summer Research Conference, 2021.
- Statistical Significance poster competition, Joint Statistical Meetings, 2019.
- IMS/ASA Spring Research Conference, 2019.
- SAMSI Graduate Poster Session, 2018.
- IISA International Conference on Statistics, 2018.

Professional Activities

- Served as a reviewer for JABES, CSDA, Ecological Applications, Econometrics and Statistics, and SN Applied Sciences.

Social Activities

- Volunteer, Service Raleigh, 2019.
- Head, Sponsorship Committee, Integration: the annual techno-cultural fest of Indian Statistical Institute, Kolkata, 2015, 2014.
- Member, Literary Activities Committee, Boys' Hostel of Indian Statistical Institute, 2014, 2013, 2012.
- Head, Advertising Committee, Reunion Celebration Committee of Rahara Ramakrishna Mission Boys' Home, 2013.

References

Kyu Ha Lee

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Jacqueline R. Starr

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Brian J. Reich

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