

# Shariq Mohammed

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Department of Biostatistics  
School of Public Health  
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[Google Scholar](#)

## ACADEMIC APPOINTMENTS

<b>Assistant Professor</b> Department of Biostatistics <i>Boston University</i> (BU), Boston, MA	<i>August 2021+</i>
<b>Rafik B. Hariri Junior Faculty Fellow</b> Rafik B. Hariri Institute for Computing and Computational Science & Engineering <i>Boston University</i> , Boston, MA	<i>August 2022 - July 2025</i>

## EDUCATION & TRAINING

<i>University of Michigan</i> (U-M), Ann Arbor, MI	
<b>Precision Health Scholar</b>	<i>2019 - 2021</i>
<b>Postdoctoral Research Fellow</b> Mentors: Veerabhadran Baladandayuthapani & Arvind Rao	<i>2018 - 2021</i>
<i>University of Connecticut</i> (UConn), Storrs, CT	
<b>Ph.D. in Statistics</b> Dissertation: Bayesian variable selection with applications to neuroimaging data Advisors: Dipak K. Dey & Yuping Zhang	<i>August 2018</i>
<b>M.S. in Statistics</b>	<i>September 2017</i>
<i>Chennai Mathematical Institute</i> (CMI), Chennai, India	
<b>M.Sc. Applications of Mathematics</b>	<i>May 2014</i>
<i>Indian Statistical Institute</i> (ISI), Bangalore, India	
<b>B.Math.(Hons.)</b>	<i>June 2012</i>

## RESEARCH INTERESTS

### Methodology:

Bayesian modeling, geometric/functional data analysis, spatial statistics, and variable selection

### Applications:

Dementia and Alzheimer's disease, digital data, neuropsychology, spatial omics/biology, biomedical imaging analysis, geospatial public health

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## RESEARCH POSITIONS

Research Assistant, <i>The Travelers Companies</i> , Hartford, Connecticut	2016 - 2018
Graduate/Research Assistant, <i>UConn</i>	2016 - 2017
Summer Student Worker, <i>Pfizer Inc.</i> , Boston, Massachusetts	Summer 2016
Research Intern, <i>Tata Consultancy Services Innovation Labs</i> , Hyderabad, India	Summer 2013

## RESEARCH FUNDING

### NIH Extramural

1R01HG014487-01	PI: Ruben Dries	2025–2029
<i>Role:</i> Co-Investigator / BU Site PI		
<i>Scalable software engineering and methods for large-scale subcellular spatial omics</i>		
Total award: \$3,371,645		
Co-I Mohammed share: \$523,243		
<i>*Scored 1<sup>st</sup> percentile on initial submission</i>		
1R03AG098551-01	PI: Shariq Mohammed	2026–2027
<i>Role:</i> Principal Investigator		
<i>Network biomarkers for early detection of cognitive impairment using digital clock drawings</i>		
Total award: \$323,825		
<i>*Scored 2<sup>nd</sup> percentile on initial submission</i>		
5R01GM127430-08	PI: William E. Johnson	2023–2027
<i>Role:</i> Co-Investigator		
<i>Removing batch effects in high-throughput biomedical studies</i>		
Total award: \$1,650,000		
1R21NS135268-01	PI: Jose R. Romero	2023–2026
<i>Role:</i> Co-Investigator		
<i>Longitudinal Risk Factor Changes and Early Recognition of Cerebral Small Vessel Disease</i>		
Total award: \$453,750		

### Institutional & Seed Funding

Population Health Data Science Seed Award	PI: Charlene J. Ong	2025–2026
<i>Role:</i> Co-Investigator		
<i>Predictive Utility of Pupillometry in Life-threatening Mass Effect: Management and Outcome Evaluation</i>		
Total award: \$5,000		
Population Health Data Science Seed Award	PI: Shariq Mohammed	2024–2025
<i>Role:</i> Principal Investigator		
<i>Novel methods to detect spatially varying genes in spatial transcriptomics datasets</i>		
Total award: \$5,000		

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FHS-Brain Aging Program Pilot Award	PI: Shariq Mohammed	2022–2023
<i>Role:</i> Principal Investigator		
<i>Developing novel digital neuropsychological test-based markers to quantify heterogeneity in participants' performance</i>		
Total award: \$25,000		
BU SPH Early Career Catalyst Award	PI: Shariq Mohammed	2022–2023
<i>Role:</i> Principal Investigator		
<i>Statistical modeling for topographic analysis of spatially resolved transcriptomics data</i>		
Total award: \$19,782		
U-M Precision Health Scholars Award	PI: Shariq Mohammed	2019–2021
<i>Role:</i> Principal Investigator		
<i>Integrative decision models combining radiological-imaging and genotypic data in gliomas</i>		
Total award: \$80,000		

## AWARDS

- *Rafik B. Hariri Junior Faculty Fellow*, Rafik B. Hariri Institute for Computing and Computational Science & Engineering, BU August 2022 - July 2025
  - *Precision Health Scholars Award*, U-M 2019 - 2021
  - *Doctoral Dissertation Fellowship*, Graduate School, UConn Spring 2018
  - *Doctoral Student Travel Award*, Graduate School, UConn 2017
  - *Multiple conference travel grants*, Department of Statistics, UConn 2017
  - *Pre-doctoral Dissertation Fellowship*, Department of Statistics, UConn Summer 2016
  - *Matthew M. Goldstein Graduate Fellowship*, Department of Statistics, UConn Summer 2015
  - *CMI Medal of Excellence* recognizing outstanding performance in National Graduate Program in Applications of Mathematics, CMI 2014
  - *Post-graduate Fellowship*, CMI 2012–2014
  - *INSPIRE Scholarship for Higher Education*, Ministry of Science & Technology, Government of India 2009–2014
  - *Undergraduate Fellowship*, ISI 2009–2012

## PUBLICATIONS

<sup>†</sup> equal contribution; \* co-corresponding; trainee author

- J27. Dukes, K., Ni, P., Alperen, J., Cesare, N., LaValley, M., Tripp, T., Lane, K., **Mohammed, S.**, Patil, P., Emig, D., Winter, M., Davis, B., Wang, B., Jain, A., Acker, M., and Rickles, M. (2025). A national growth mixture modeling analysis of county-level COVID-19 incidence rate trajectories and health inequities during three successive pandemic waves in 2020. *Scientific Reports*, 15(1), p.41272. [10.1038/s41598-025-25074-5](https://doi.org/10.1038/s41598-025-25074-5)

J26. Song, J.J., Stafford, R.A., Pohlmann, J.E., Kim, I.S.Y., Cheekati, M., Dennison, S., Brush, B., Chatzidakis, S., Huang, Q., Smirnakis, S.M., Gilmore, E.J., **Mohammed, S.**, Abdalkader,

- M., Benjamin, E.J., Dupuis, J., Greer. D.M. and Ong, C.J. (2025). Later midline shift is associated with better post-hospitalization discharge status after large middle cerebral artery stroke. *Scientific Reports*, 15(1), p.11738. [10.1038/s41598-025-95954-3](https://doi.org/10.1038/s41598-025-95954-3)
- J25. Veerapaneni, D., Sakthiyendran, N.A., Du, Y., Mallinger, L.A., Reinert, A., Kim, S.Y., Nguyen, C., Daneshmand, A., Abdalkader, M., **Mohammed, S.** and Dupuis, J., Sheth, K., Gilmore, E.J., Greer, D. and Ong, C.J. (2025). Early Pupil Abnormality Frequency Predicts Poor Outcomes and Enhances International Mission for Prognosis and Analysis of Clinical Trials in Traumatic Brain Injury (IMPACT) Model Prognostication in Traumatic Brain Injury. *Critical Care Explorations*, 7(5), p.e1257. [10.1097/CCE.0000000000001257](https://doi.org/10.1097/CCE.0000000000001257)
- J24. Du, Y., Pohlmann, J., Chatzidakis, S., Brush, B., Mallinger, L., Stafford, R., Cervantes-Arslanian, A., Benjamin, E., Gilmore, E., Dupuis, J., Greer, D., Smirnakis, S., **Mohammed, S.**, and Ong, C. (2025): Quantitative Pupillometry predicts neurologic deterioration in patients with large middle cerebral artery stroke. *Annals of Neurology*, 97(5), pp.930–941. [10.1002/ana.27178](https://doi.org/10.1002/ana.27178)
- J23. Gibbs, B., Sniderman, J., **Mohammed, S.**, Kain, M., Freccero, D. and Abdeen, A., on behalf of The PEPPER Investigators. (2025): Association Between Tourniquet Use and Patient-Reported Outcomes Following Total Knee Arthroplasty: A Multicenter Comparison. *The Journal of Bone and Joint Surgery*, 107(9):p 976-984. [10.2106/JBJS.24.00266](https://doi.org/10.2106/JBJS.24.00266)
- J22. Jain, A., LaValley, M., Dukes, K., Lane, K., Winter, M., Spangler, K.R., Cesare, N., Wang, B., Rickles, M., and **Mohammed, S.**\* (2024): Modeling health and well-being measures using ZIP Code spatial neighborhood patterns. *Scientific Reports*, 14(1), p.9180. [10.1038/s41598-024-58157-w](https://doi.org/10.1038/s41598-024-58157-w)
- J21. **Mohammed, S.**, Masotti, M., Osher, N., Acharyya, S., and Baladandayuthapani, V. (2024): Statistical Analysis of Quantitative Cancer Imaging Data. *Statistics and Data Science in Imaging*, 1(1), 2405348. [10.1080/29979676.2024.2405348](https://doi.org/10.1080/29979676.2024.2405348)
- J20. **Mohammed, S.**, Kurtek, S., Bharath, K., Rao, A. and Baladandayuthapani, V. (2023): Tumor radiogenomics with Bayesian layered variable selection. *Medical Image Analysis*, 102964. [10.1016/j.media.2023.102964](https://doi.org/10.1016/j.media.2023.102964)
- J19. Romano, M.F., Zhou, X., Balachandra, A.R., Jadick, M.F., Qiu, S., Nijhawan, D.A., Joshi, P.S., **Mohammad, S.**, et al. (2023): Deep learning for risk-based stratification of cognitively impaired individuals. *iScience*, 26(9). [10.1016/j.isci.2023.107522](https://doi.org/10.1016/j.isci.2023.107522)
- J18. Halder, A.<sup>†</sup>, **Mohammed, S.**<sup>†</sup>, Dey, D.K. (2023): Bayesian variable selection in double generalized linear Tweedie spatial process models, *New England Journal of Statistics and Data Science*, 1(2), pp. 187-199, [10.51387/23-NEJSDS37](https://doi.org/10.51387/23-NEJSDS37)
- J17. Chekouo, T., Stingo, F.C., **Mohammed, S.**, Rao, A., Baladandayuthapani, V. (2023): A Bayesian group selection with compositional responses for analysis of radiologic tumor proportions and their genomic determinants. *Annals of Applied Statistics*, 17(4), pp.3013-3034. [10.1214/23-AOAS1749](https://doi.org/10.1214/23-AOAS1749)
- J16. Panigrahi, S., **Mohammed, S.**, Rao, A. and Baladandayuthapani, V. (2023): Integrative Bayesian models using post-selective inference: A case study in radiogenomics. *Biometrics*, 79(3), pp.1801-1813. [10.1111/biom.13740](https://doi.org/10.1111/biom.13740)

- J15. Turk, S., Wang, N.C., Kitis, O., **Mohammed, S.** et al. (2022). Comparative study of radiologists vs machine learning in differentiating biopsy-proven pseudoprogression and true progression in diffuse gliomas. *Neuroscience Informatics*, 2(3), p.100088. [10.1016/j.neuri.2022.100088](https://doi.org/10.1016/j.neuri.2022.100088)
- J14. Qin, A., Lima, F., Bell, S., ..., **Mohammed, S.** et al. (2022). Cellular engagement and interaction in the tumor microenvironment predict non-response to PD-1/PD-L1 inhibitors in metastatic non-small cell lung cancer. *Scientific Reports*, 12(1), p.9054. [10.1038/s41598-022-13236-8](https://doi.org/10.1038/s41598-022-13236-8)
- J13. Bhattachayya, R., Banerjee, S., **Mohammed, S.** and Baladandayuthapani, V. (2022): Spatial network-based modeling of COVID-19 dynamics: Early pandemic spread in India. To appear in *Journal of the Indian Statistical Association*. [medRxiv](#)
- J12. Krishnan, S.N.<sup>†</sup>, **Mohammed, S.**<sup>†</sup>, Frankel, T.L. and Rao, A. (2022): GaWRDenMap: A quantitative framework to study the local variation in cell-cell interactions in pancreatic disease subtypes. *Scientific Reports*, 12(1), p.3708.
- J11. **Mohammed, S.**, Ravikumar, V., Warner, E., Patel, S.H. et al. (2021): Quantifying T2-FLAIR mismatch using geographically weighted regression and predicting molecular status in lower-grade gliomas. *American Journal of Neuroradiology*, 43(1), pp.33–39. [10.3174/ajnr.A7341](https://doi.org/10.3174/ajnr.A7341) (Nominated for 2021 Lucien Levy Best Research Article; [AJNR blog announcement](#).)
- J10. Halder, A., **Mohammed, S.**, Chen, K. and Dey D.K. (2021): Spatial Tweedie exponential dispersion models: An application to insurance rate-making. *Scandinavian Actuarial Journal*, 10, pp.1017–1036. [10.1080/03461238.2021.1921017](https://doi.org/10.1080/03461238.2021.1921017)
- J9. **Mohammed, S.**, Bharath, K., Kurtek, S., Rao, A. and Baladandayuthapani, V. (2021): RADIOHEAD: Radiogenomic analysis incorporating tumor heterogeneity in imaging through densities. *Annals of Applied Statistics*, 15(4), pp.1808–1830. [10.1214/21-AOAS1458](https://doi.org/10.1214/21-AOAS1458)
- J8. **Mohammed, S.** and Dey D.K. (2021): Scalable spatio-temporal Bayesian analysis of high-dimensional electroencephalography data. *Canadian Journal of Statistics*, 49, pp.107–128. [10.1002/cjs.11592](https://doi.org/10.1002/cjs.11592)
- J7. Lee, J., Wang, N., Turk, S., **Mohammed, S.** et al., (2020): Discriminating pseudoprogression and true progression in diffuse infiltrating glioma using multi-parametric MRI data through deep learning. *Scientific Reports*, 10, 2033. [10.1038/s41598-020-77389-0](https://doi.org/10.1038/s41598-020-77389-0)
- J6. **Mohammed, S.**, Li, T., Chen, X.D., Warner, E. et al., (2020). Density-based classification in diabetic retinopathy through thickness of retinal layers from optical coherence tomography. *Scientific Reports*, 10(1), pp.1–13. [10.1038/s41598-020-72813-x](https://doi.org/10.1038/s41598-020-72813-x)
- J5. Chekouo, T.\* , **Mohammed, S\*** and Rao, A\*. (2020): A Bayesian 2D functional linear model for gray-level co-occurrence matrices in texture analysis of lower grade gliomas. *NeuroImage: Clinical*, 28, p.102437. [10.1016/j.nicl.2020.102437](https://doi.org/10.1016/j.nicl.2020.102437)
- J4. **Mohammed, S.**, Dey D.K. and Zhang, Y. (2020): Classification of high-dimensional electroencephalography data with location selection using structured spike-and-slab prior. *Statistical Analysis and Data Mining: The ASA Data Science Journal*, 13(5), pp.465–481. [10.1002/sam.11477](https://doi.org/10.1002/sam.11477) (Invited for SADM Best Paper Session at JSM 2022; [JSM 2022 Program](#).)
- J3. Ray, D., Salvatore, M., Bhattacharyya, R., Wang, L., Du, J., **Mohammed, S.** et al., (2020). Predictions, role of interventions and effects of a historic national lockdown in India's response to the COVID-19 pandemic: Data science call to arms. *Harvard Data Science Review*(Suppl

- 1). [10.1162/99608f92.60e08ed5](https://doi.org/10.1162/99608f92.60e08ed5)
- J2. **Mohammed, S.**, Dey D.K. and Zhang, Y. (2019): Bayesian variable selection using spike-and-slab priors with application to high dimensional electroencephalography data by local modelling. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 68(5), pp.1305–1326. [10.1111/rssc.12369](https://doi.org/10.1111/rssc.12369)
- J1. **Mohammed, S.** and Dey D.K. (2019): Assessing malaria using neutral-zone classifiers with mixture discriminant analysis on 2D images of red blood cells. *Journal of Biostatistics and Epidemiology*, 5(1), pp.1–11. [10.18502/jbe.v5i1.1901](https://doi.org/10.18502/jbe.v5i1.1901)

Book Chapter:

- B1. Matuk, J., **Mohammed, S.**, Kurtek, S. and Bharath, K. (2020): Biomedical applications of geometric functional data analysis. In *Handbook of Variational Methods for Nonlinear Geometric Data*, pp.675–701. Springer, Cham. [10.1007/978-3-030-31351-7\\_24](https://doi.org/10.1007/978-3-030-31351-7_24)

Conference Proceedings/Abstracts:

- C6. Pinheiro, A., Karjadi, C., Tripodis, Y., Kolachalam, V.B., Lunetta, K.L., Demissie, S., Liu, C., Au, R., **Mohammed, S.** (2025). Predicting cognitive impairment using novel functional features of spatial proximity and circularity in the digital clock drawing test. *Alzheimer's & Dementia*, 21, e098476. [10.1002/alz.70860\\_098476](https://doi.org/10.1002/alz.70860_098476)
- C5. Pinheiro, A., **Mohammed, S.**, Ekenze, O., Aparicio, H., Charidimou, A., Lioutas, V., Beiser, A., DeCarli, C., Seshadri, S., Demissie, S., and Romero, J.R. (2025): Lifelong trends in vascular risk factors and cerebral small vessel disease. In *American Heart Association's Annual International Stroke Conference 2025*. [10.1161/str.56.suppl\\_1.WP285](https://doi.org/10.1161/str.56.suppl_1.WP285)
- C4. Mallinger, L.A., Behm, C.F., Du, Y., Pohlmann, J.E., Gilmore, E.J., Greer, D.M., **Mohammed, S.**, and Ong, C.J. (2024): Quantitative Pupilometry Post-Surgical Decompression Predicts Severe Neurologic Disability in Patients with Acute Brain Injury. In *22nd annual Neurocritical Care Society Meeting 2024*, San Diego, California.
- C3. Warner, E., Lee, J., Krishnan, S., Wang, N., **Mohammad, S.**, et al. (2023): Low-parameter supervised learning models can discriminate pseudoprogression and true progression in non-perfusion-based MRI. In *45th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'23)*, [Download](#)
- C2. Halder, A., **Mohammed, S.**, Chen, K. and Dey D.K. (2022): Spatial risk estimation in Tweedie double generalized linear models. In *2022 Proceedings of International E-Conference on Mathematical and Statistical Sciences: A Selçuk Meeting*, pp.62–91. [Online version](#)
- C1. Bhat, S.P., Murali, U.K. and **Mohammed, S.** (2016): A dynamical systems approach to systemic risk in a financial network. In *2016 Indian Control Conference (ICC)*, pp.377–384. IEEE. [10.1109/INDIANCC.2016.7441162](https://doi.org/10.1109/INDIANCC.2016.7441162)

## SOFTWARE

Open-Source R Packages (hosted on GitHub)

- *marbles* – <https://github.com/shariq-mohammed/marbles>
- *RADIOHEAD* – [github.com/shariq-mohammed/RADIOHEAD](https://github.com/shariq-mohammed/RADIOHEAD)

- *ScalableBayesEEG* – [github.com/shariq-mohammed/ScalableBayesEEG](https://github.com/shariq-mohammed/ScalableBayesEEG)
- *stSpikeSlabEEG* – [github.com/shariq-mohammed/stSpikeSlabEEG](https://github.com/shariq-mohammed/stSpikeSlabEEG)
- *SpikeSlabEEG* – [github.com/shariq-mohammed/SpikeSlabEEG](https://github.com/shariq-mohammed/SpikeSlabEEG)

## TEACHING

### Instructor

- *SPH BS 755* — Theory of Linear Models in Biostatistics *Fall 2025*
- *SPH BS 704* — Introduction to Biostatistics *Fall 2025*
- *SPH BS 901* — Directed Studies in Biostatistics *Fall 2025*
- *CAS MA 575 / SPH BS 755* — Linear Models *Fall 2024, Fall 2023*
- *SPH BS 800* — Accelerated Statistical Training *Summer 2024*
- *SPH BS 730* — Introduction to R: Software for Statistical Computing *Spring 2022*
- *Computational Biostatistics and Survival Analysis* — Workshop at *Tata Memorial Center, Navi Mumbai, India* (joint with Bhramar Mukherjee; [Course Materials](#)) *December 2019*
- *Statistical Methods (Calculus I level)* — UConn *Summer & Fall 2017*

### Teaching Assistant

- *Introduction to Statistics I & II; Introduction to Mathematical Statistics I & II* — Department of Statistics, UConn *Fall 2014 – Spring 2016*
- *Numerical Linear Algebra and Probability Theory* — CMI *Spring & Fall 2013*

## TALKS

### Invited

- IP43. ASA Biopharmaceutical Section Regulatory–Industry Statistics Workshop, Rockville, Maryland. *Digital neuropsychology, complex data, and the future of clinical trials* *September 2025*
- IP42. BU Biostatistics Student Association Seminar, BU. *GitHub for R projects* *April 2025*
- IP41. International Indian Statistical Association Annual Conference, Kochi, India. *Modeling well-being indices using ZIP code spatial neighborhoods under a Bayesian beta regression framework* *December 2024*
- IP40. International Joint Conference on Computational and Financial Econometrics and Computational and Methodological Statistics (CFE–CMStatistics), London, United Kingdom. *Quantifying imaging heterogeneity via density functions with applications in brain and pancreatic cancer imaging* *December 2024*
- IP39. Joint Statistical Meetings, Portland, Oregon (Topic-contributed). *GaWRDenMap: analyzing cell–cell interactions using spatial analysis and density functions to predict pancreatic disease subtypes* *August 2024*
- IP38. Virginia Commonwealth University Biostatistics Seminar, Richmond, Virginia. *Quantifying imaging heterogeneity via density functions with applications in brain and pancreatic cancer imaging* *April 2024*
- IP37. Connecticut College Research Seminar, New London, Connecticut (Virtual). *Quantifying imaging heterogeneity via density functions with applications in brain and pancreatic cancer*

- IP36. McGill University Biostatistics Seminar, Montreal, Canada (Virtual). *Quantifying imaging heterogeneity using density functions with applications in brain and pancreatic cancer imaging* March 2024
- IP35. BU Biostatistics Student Association Seminar, BU. *GitHub for R projects* February 2024
- IP34. Research on Tap on Health Data Science, Office of Research, BU. *Statistical methods for complex health data* November 2023
- IP33. American Public Health Association Annual Meeting & Expo, Atlanta, Georgia (Roundtable session). *Modeling health and well-being measures by incorporating ZIP code spatial neighborhood patterns* November 2023
- IP32. Federal University of Minas Gerais Mathematics and Statistics Seminar, Belo Horizonte, Brazil. *GaWRDenMap: analyzing cell-cell interactions using spatial analysis and density functions to predict pancreatic disease subtypes* August 2023
- IP31. A New Era of Statistical Science: A Special Conference in Honor of Prof. Dipak Dey's 70th Anniversary, Belo Horizonte, Brazil. *Layered variable selection for multivariate Bayesian regression with density function-based features: a case study in imaging genomics* Aug 2023
- IP30. Pushing the Boundary of Data Science through Statistical Modeling and Inference, Blacksburg, Virginia. *Layered variable selection for multivariate Bayesian regression with density function-based features: a case study in imaging genomics* July 2023
- IP29. BU URBAN Research Methods Seminar, BU. *Modeling health and well-being measures by incorporating ZIP code spatial neighborhood patterns* April 2023
- IP28. Framingham Heart Study–Brain Aging Program Seminar, BU. *Constructing novel features from digital trail making and clock drawing tests for cognitive assessment* April 2023
- IP27. BU Probability and Statistics Seminar, BU. *Layered variable selection for multivariate Bayesian regression using density functions: a case study in imaging genomics* Feb 2023
- IP26. International Indian Statistical Association Annual Conference, Bengaluru, India (Virtual). *Quantifying T2–FLAIR mismatch in gliomas using geographically weighted regression and density functions* December 2022
- IP25. BU SPH Think. Teach. Do. Spotlight Talk, BU. *Statistical methods for complex health data* November 2022
- IP24. International Conference on Statistical Distributions and Applications, Huntington, West Virginia (Virtual). *Layered variable selection for multivariate Bayesian regression with density function-based features: a case study in imaging genomics* October 2022
- IP23. BU Bioinformatics Seminar, BU. *Layered variable selection for multivariate Bayesian regression with density function-based features: a case study in imaging genomics* Oct 2022
- IP22. Royal Statistical Society International Conference 2022, Aberdeen, Scotland (Virtual). *Layered variable selection for multivariate Bayesian regression with density function-based features: a case study in imaging genomics* September 2022
- IP21. Joint Statistical Meetings, Washington, DC. *Density-based classification in diabetic retinopathy through thickness of retinal layers from optical coherence tomography* August 2022
- IP20. Joint Statistical Meetings, Washington, DC (Poster). *Classification of high-dimensional*

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- EEG data with location selection using a structured spike-and-slab prior August 2022
- IP19. 22nd Meeting of New Researchers in Statistics and Probability, George Mason University, Fairfax, Virginia. *Quantifying T2–FLAIR mismatch in gliomas using geographically weighted regression and density functions* August 2022
- IP18. 35th New England Statistics Symposium, UConn. *Quantifying T2–FLAIR mismatch in gliomas using geographically weighted regression and density functions* May 2022
- IP17. BU Epidemiology Seminar, BU. *Layered variable selection for multivariate Bayesian regression: a case study in imaging genomics* March 2022
- IP16. Tech Talks 1.0, Student's Association of Artificial Intelligence and Data Science, G H Raisoni College of Engineering and Management, Pune, India (Virtual). *Computational biostatistics and biomedical imaging data analysis* February 2022
- IP15. The Fifth Eastern Asia Chapter—International Society for Bayesian Analysis Conference: Satellite Meeting of the 2020 ISBA World Meeting to Celebrate James O. Berger's 70th Birthday (Virtual). *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* November 2021
- IP14. BU Biostatistics Student Association Seminar, BU. *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* November 2021
- IP13. Department of Biostatistics, BU (Panel). *Biostatistics career development panel: “Academic career path”* October 2021
- IP12. Joint Statistical Meetings 2021 (Virtual). *Layered variable selection for multivariate Bayesian regression: a case study in imaging genomics* August 2021
- IP11. Center for Computational Mathematics Seminar, Flatiron Institute, Simons Foundation, New York (Virtual). *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* June 2021
- IP10. Statistical Methods in Imaging Conference (Virtual). *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* May 2021
- IP9. ENAR Spring Meeting (Virtual). *Layered variable selection for multivariate Bayesian regression: a case study in imaging genomics* March 2021
- IP8. NMIMS Sunandan Divatia School of Science (Virtual). *StatChat 2020: panel discussions with undergraduate and master's students on career and academic perspectives in statistics and data science* August and September 2020
- IP7. U-M Precision Health Symposium (Virtual) (Poster). *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* August 2020
- IP6. Joint Statistical Meetings 2020 (Virtual). *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* August 2020
- IP5. MIDAS COVID-19 Special Seminar Series, U-M (Group presentation). *Understanding COVID-19 dynamics via individual-level temporal and network modeling: lessons from India and China* June 2020
- IP4. Precision Health Seminar (Pharmacy 217), U-M. *Integrative statistical modeling approaches for imaging genomics data* March 2020

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- IP3. Tools and Technology Seminar, U-M. *Integrative statistical modeling approaches for imaging genomics data* March 2020
  - IP2. ENAR Spring Meeting, Nashville, Tennessee (Virtual). *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* March 2020
  - IP1. International Indian Statistical Association Annual Conference, Mumbai, India. *RADIOHEAD: radiogenomic analysis incorporating tumor heterogeneity in imaging through densities* December 2019

Contributed

- CP11. 65th ISI World Statistics Congress, The Hague, Netherlands. *Bayesian Double Generalized Beta Regression for ZIP Code-Level Well-Being Assessment* October 2025
- CP10. Symposium on Data Science and Statistics, Salt Lake City, Utah. *Modeling well-being using ZIP code spatial neighborhoods under a Bayesian beta regression framework* Apr 2025
- CP9. BU Department of Biostatistics Research Blitz, BU. *Statistical and machine learning methods for complex data applications* March 2023
- CP8. BU Department of Biostatistics Research Blitz, BU. *Statistical methods for biomedical imaging and digital data analysis* March 2022
- CP7. ENAR Spring Meeting, Philadelphia, Pennsylvania. *Bayesian variable selection using spike-and-slab prior with application to high-dimensional EEG data* March 2019
- CP6. Joint Statistical Meetings, Vancouver, Canada. *Bayesian variable selection using spike-and-slab prior with application to high-dimensional EEG data* July 2018
- CP5. Symposium on Data Science and Statistics, Reston, Virginia. *Bayesian variable selection using spike-and-slab prior with application to high-dimensional EEG data* May 2018
- CP4. Bayes Comp 2018, Barcelona, Spain. *Bayesian variable selection using spike-and-slab prior with application to high-dimensional EEG data (Poster)* March 2018
- CP3. International Indian Statistical Association Annual Conference, Hyderabad, India. *Bayesian variable selection using spike-and-slab prior with application to EEG data* December 2017
- CP2. 34th Quality and Productivity Research Conference, University of Connecticut, Storrs, Connecticut. *Bayesian variable selection using spike-and-slab prior with application to high-dimensional EEG data* June 2017
- CP1. 31st New England Statistics Symposium, UConn. *Modeling of large insurance claims and occurrence data (joint with Aritra Halder)* April 2017

## STUDENTS

Doctoral Advisees

- Abhi Jain, PhD Biostatistics — Dissertation (co-advisor: Sara Lodi); Research Assistantship (joint with Kimberly Dukes) 2022+
  - \* *ENAR Distinguished Student Paper Award* 2026
- Adlin Pinheiro, PhD Biostatistics 2022+
  - \* *BU SPH Pre-doctoral Research Ignition Award* 2022-2023
  - \* *ENAR Regional Advisory Board (RAB) Poster Award* 2025

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★ <i>BU SPH Academic Travel Award</i>	<i>2025</i>
★ <i>Alzheimer's Association International Conference Fellowship</i>	<i>2025</i>

#### Doctoral Dissertation Committees

<ul style="list-style-type: none"> <li>• Nimish Adhikari, PhD Biostatistics</li> <li>• Genevieve Dupuis, PhD Biostatistics</li> <li>• Daniel Kojis, PhD Biostatistics</li> <li>• Evelyn Lauren, PhD Biostatistics</li> <li>• Anne Shapiro, PhD Biostatistics</li> <li>• Garrett Frady, PhD Statistics, UConn</li> <li>• Jianing Wang, PhD Biostatistics</li> </ul>	<i>2024+</i> <i>2024+</i> <i>2024+</i> <i>2023+</i> <i>2023+</i> <i>Graduated 2024</i> <i>Graduated 2023</i>
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#### Master's Advisees

<ul style="list-style-type: none"> <li>• Jude Sleiman, MPH</li> <li>• Xiaohang Zhang, MS Biostatistics</li> <li>• John Cannon, MS Biostatistics</li> <li>• Yinzhu Piao, MA Statistics</li> <li>• Aaron Morris, MS Applied Biostatistics</li> <li>• Kim-Judy You, MS Applied Biostatistics</li> <li>• Tianxiang Sheng, MS Applied Biostatistics</li> </ul>	<i>2024-2025</i> <i>2024-2025</i> <i>2022-2025</i> <i>2022-2024</i> <i>Spring 2023</i> <i>Spring 2022</i> <i>Spring 2022</i>
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#### Research Assistants

<ul style="list-style-type: none"> <li>• Daniel Cho</li> </ul>	<i>Fall 2025+</i>
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#### MPH Integrated Learning Experience Advisees

<ul style="list-style-type: none"> <li>• Claudia Cheng, Anna Flynn, Lea Hur, Peijie Qiu</li> <li>• Rishi Chigurupati, Cameron Pettinato, Morgan Powell, Katharine Reisdorf</li> <li>• Alyssa Santoso, Olivia Seestadt</li> <li>• Xinyi Du, Ian Hussain, Ziran Li, Shannon Mahowald, Alyson Speshock</li> </ul>	<i>Fall 2025</i> <i>Fall 2024</i> <i>Fall 2023</i> <i>Fall 2022</i>
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## SERVICE & LEADERSHIP

#### Academic & Professional

<ul style="list-style-type: none"> <li>• <i>Associate Editor, Sankhyā B: The Indian Journal of Statistics</i> (Official Journal of Indian Statistical Institute)</li> <li>• <i>Vice-President, Conferences Committee, New England Statistics Society (NESS)</i></li> <li>• <i>Member, Conference Advisory Committee, New England Statistics Symposium</i></li> <li>• <i>Reviewer, BU Biostatistics Student Paper Competition</i></li> <li>• <i>Reviewer, American Public Health Association Annual Meeting</i></li> <li>• <i>Reviewer, Student Paper Competition, American Statistical Association Section on Bayesian Statistical Science (SBSS)</i></li> <li>• <i>Member, Scientific Organizing Committee, Red Rock Data Science Student Conference 2024</i></li> <li>• <i>Member, Program Committee, New England Statistics Symposium</i></li> <li>• <i>Reviewer, Grant Review and Mock Study Section, Advanced Research Institute 2022, 2024</i></li> </ul>	<i>2023+</i> <i>2024+</i> <i>2025</i> <i>2025+</i> <i>2024+</i> <i>2024+</i> <i>2024</i> <i>2022, 2024</i>
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- *Reviewer*, Framingham Heart Study Brain Aging Program Pilot Awards 2024
- *Co-Chair, Organizing Committee*, New England Statistics Symposium (host: Boston University) 2022-2023
- *Co-Vice President for Scientific Program*, New England Statistics Symposium 2022-2023
- *Member, Organizing Committee, Pushing the Boundary of Data Science through Statistical Modeling and Inference* (Conference in honor of Dipak K. Dey) 2022-2023
- *Member*, Graduate Student Fellow Awards Committee, Rafik B. Hariri Institute for Computing and Computational Science and Engineering 2023
- *Founding Co-Organizer*, IISA Statistics and Data Science Innovations Webinar Series 2022
- *Member*, Student Research Awards Committee, New England Statistics Symposium 2022
- *Member*, Membership & Outreach Committee, IISA 2020-2022
- *Organizer (Invited Sessions)*: JSM 2020; ENAR Spring Meeting 2021; JSM 2021; NESS 2022; JSM 2022; IISA Annual Conference 2022; JSM 2023; NESS 2024; IBC 2026
- *Ad-hoc Reviewer*: *Advances in Biomarker Sciences and Technology*; *Annals of Applied Statistics*; *Bayesian Analysis*; *Biometrics*; *Biostatistics*; *Clinical Cancer Informatics*; *Epidemiology*; *Harvard Data Science Review*; *Journal of the American Heart Association*; *Journal of the American Medical Informatics Association*; *Journal of Applied Statistics*; *The New England Journal of Statistics in Data Science*; *Sankhyā B*; *Scandinavian Actuarial Journal*; *Spatial Statistics*; *STAT*; *Statistics and Data Science in Imaging*

Department / School

- *Co-Organizer*, Biostatistics Department Seminar, BU 2021+
- *Member*, Biostatistics Qualifying Exam Committee, BU 2024+
- *Member*, Environmental Health Faculty Search Committee, BU 2022 - 2023
- *Vice-President*, Statistics Graduate Student Committee, UConn 2016 - 2017
- *Vice-Chair* of Student Committee, New England Statistics Symposium 2017
- *Co-President*, Statistics Graduate Student Committee, UConn 2015 - 2016
- *Senator*, UConn Graduate Student Senate 2015 - 2016

External / Community

- *Advisor / President / Treasurer*, Tarang (South Asian cultural organisation), UConn 2015-18
- *Student Representative*, Senate Faculty Standards Committee, UConn 2015 - 2016