SUPRATEEK KUNDU, PhD

Associate Professor
Department of Biostatistics
The University of Texas MD Anderson Cancer Center
Houston, TX 77230-1402, USA.
PHONE: 713-563-4268
EMAIL: skundu2@mdanderson.org

Research Interests

- Bayesian feature selection; Bayesian non- and semi-parametric methodology; Factor models; Functional data analysis; Graphical modeling; High-dimensional feature selection; Integrative analysis for multi-data and multimodal data; Integrative methods for imaging genomics data; Latent variable models; Neuroimaging statistics; Precision medicine; Statistical methods for cancer imaging; Statistical methods in genetics; Tensor methods for imaging data, Multivariate time-series modeling.

Professional Experience

- Associate Professor, Department of Biostatistics, The University of Texas at MD Anderson Cancer Center, June 2021 - *present*.

- Adjunct Associate Professor, Department of Statistics, Rice University, Aug 2022- *Present*

- Adjunct Instructor, Department of Microbiology, Biochemistry and Immunology, Sept 2024-*present*.

- Adjunct Associate Professor, Department of Biostatistics and Bioinformatics, Emory University, June 2021 - 2024.

- Director, Data Analytics and Biostatistics Core for Department of Medicine, Emory University, June 2019 - May 2021.

- Assistant Professor, Department of Biostatistics and Bioinformatics, Emory University, Fall 2014- 2021.

- Postdoctoral research associate at Department of Statistics, Texas A&M University, and Department of Biostatistics, MD Anderson. Sep 2012 - Aug 2014.

- Research assistant at Translational and Clinical Sciences Institute, UNC Chapel Hill. 2008-2012.

Additional Appointments

- Associate Editor for *Statistics and Data Science in Imaging*, May 2024- present

- Appointed Ex-Officio member on the Institutional Animal Care and Use Committee (IACUC) at The University of Texas MD Anderson Cancer Center, Jan 2023-*present*

- Associate Editor for *Biometrics*, July 2019- present

- Core Faculty member at The Center for Biomedical Imaging Statistics, Department of Biostatistics, Emory University, Aug 2015-Aug 2020.

Education

- PhD in Biostatistics at University of North Carolina at Chapel Hill (2008 - 2012), under guidance of Prof. David B. Dunson (Duke University).
  Thesis title - *"Bayesian Non-parametric Methods for Conditional Distributions"*.

- Postgraduation: MStat, Indian Statistical Institute, Kolkata, India, 2006-2008. *Passed with First division with Distinction.*

- Undergraduation: BSc. Honors in Statistics, Presidency College, Kolkata, India, under Calcutta University, 2003-2006. *Passed with First Class.*

Teaching Experience

- Course Director and Lead Instructor for '*GSBS Introduction to Bioinformatics*', UT MD Anderson, Spring 2025. Course is 3 credits.

- Lead Instructor for '*Introduction to Data Science in Biomedical Research*', Morehouse School of Medicine, Fall 2024. Course is 3 credits.

- Guest Lecturer for '*Introduction to Graphical Models*', Department of Statistics, Rice University, Fall 2024.

- Co-Lead Instructor for Invited Workshop on Imaging Data Analysis in Clinical Trials, Image Guided Cancer Therapy (IGCT) Research Program, UT MD Anderson Cancer Center, Fall 2024.

- Co-Lead Instructor for '*Scientific Writing Course*, GSBS, UT MD Anderson Cancer Center, Spring 2023. Course is 2 credits.

- Lead Instructor for '*Time Series and Functional Data Analysis*', Department of Biostatistics, Emory University, Spring 2021. Course is 3 credits.

- Co-Lead Instructor for '*Advanced Topics in the Analysis of Neuroimaging Data*', Department of Biostatistics, Emory University, Spring 2020. Course is 3 credits.

- Instructor for *Special Topics in Dissertation Course*, Summer 2020. Course is 1 credit.

- Lead Instructor for Webinar Tutorial titled *Graphical Models with Applications to Brain Networks* for the GA Chapter of The American Statistical Association, 2018.

- Lead Instructor for '*Advanced Linear Models*', Department of Biostatistics, Emory University, Fall, 2015-2019. Course is 4 credits and a core curriculum course for Bios doctoral students

- Guest Lecturer for '*Introduction to Large Scale Biomedical Data Analysis*', Department of Biostatistics, Emory University, Fall 2016-2019.

- Co-Instructor and Moderator for the *Bayesian Journal Club* from 2015-2017.

- Guest Instructor for '*Advanced Bayesian Modeling and Computation*', Department of Statistics, Texas A&M, Spring 2013.

- Teaching assistant for '*Principles Of Experimental Analysis*', Department of Biostatistics, UNC Chapel Hill, spring 2011.

Current Extramural Funding Support

- R01 AG071174 "Statistical Modeling of Alzheimer's Disease Progression Integrating Brain Imaging and -Omics Data", **Role: Principal Investigator, MPI: Qi Long**, *National Institute of Aging.* 03/2021-02/2026.

- R01MH120299 "Integrative Brain Network-Based Analysis for Heterogeneous and Multimodal Neuroimaging Data", **Role: Principal Investigator**, *National Institute of Mental Health*, 09/2019-08/25.

- U01CA214263-06 "Circulating Biomarkers and Imaging for Early Detection of Pancreatic Cancer", **Role: Co-Investigator**, MPI: Sen/Killary/Koay, 09/2024-08/2029.

- The University of Texas MD Anderson Cancer Center Moon Shots Program - Glioblastoma Project #4, Title: Integrated Liquid Biopsy and Advanced MRI-based Monitoring of Diffuse Gliomas, **Role: Co-Investigator**, MPI: Patel, Ballester, Wintermark, 09-2023-08-2024.

- 5-R01 CA244845 "Bayesian Network-Based Integrative Genomics Methods for Precision Medicine", **Role: Co-Investigator**, MPI: Morris/Baladandayuthapani, FY 09/2020-09/2025.

- The University of Texas MD Anderson Cancer Center, Cancer Neuroscience Program. Title: "Characterization and Prediction of Second-Generation Anti-Androgen Associated Neurotoxicity in Patients with Prostate Cancer, **Role: Co-Investigator**, PI: Nead. 09/01/2024-08/01/2025.

- 5R37CA251629-02 "Mechanisms and Vulnerabilities of SWI/SNF chromatin remodeling complex mutant lung cancer", **Role: Co-Investigator**, PI: Lissanu Deribe, *National Cancer Institute*, 7/1/2020-6/30/2025.

Completed Funding Support

- W81XWH2110710 "Integrating Radiomics and Genomics to Improve the Clinical Assessment of Pancreatic Cysts and Early Detection of Pancreatic Cancer", **Role: Co-Investigator**, MPI: Koay/Brand, 08/01/2021 - 07/31/2024.

- Georgia Tech/GSU CABI seed grant "Neural Mechanisms of SKY Breath Meditation: Applications for Mechanistic PTSD Interventions", **Role: Principal Investigator**, MPI: Fani/Ahluwalia, FY 2022-2023.

- RP200532 "Targeted Proteolysis of Glucocorticoid Receptor (GR) as a Therapeutic Strategy to Enhance Anti-Tumor Immunity", **Role: Co-Investigator**, PI: Lissanu Deribe, *Cancer Prevention and Research Institute of Texas (CPRIT)*, 8/31/2020-8/30/2022.

- 508D75011 'VA IPA Research and Development Program', **Role: Principal Investigator**, *US Department of Veterans Affairs*, 10/1/17-9/30/21.
  This assignment includes the following funded awards from VA (Role: Co-I).

  IK2RX002934-01A1 " Multimodal Neuroimaging: Advanced Tracking of Longitudinal Aphasia Recovery", **Role: Co-Investigator**, (PI: Krishnamurthy), VA RRand D Career Development Award (CDA-2), 01/01/2019- 01/01/2024.

  I01 RX002825-01A2, "Graded Intensity Aerobic Exercise to Improve Cerebrovascular Function and Performance in Aged Veterans", **Role: Co-Investigator**, PI: Noecera, Merit Review Award Veterans Health Administration, 02/2019 - 02/2023.

  I01 RX003093-01A2 "Intention Treatment for Anomia: Investigating Dose Frequency Effects and Predictors of Treatment Response to Improve Efficacy and Clinical Translation", **Role: Co-Investigator**, PI: Rodriguez, *Merit Review Award Veterans Health Administration*, 04/01/2020- 03/31/2024.

- OPP1126780 "Child Health and Mortality Prevention Surveillance (CHAMPS) Network", **Role: Co-Investigator**, PI: Koplan, *Bill and Melinda Gates Foundation*.

- P50 AG02568815S1 "Emory Alzheimer's Disease Center", **Role: Co-Investigator**, PI: Levey, *National Institute on Aging*, **Role: Co-I**, 6/15/19-4/30/20.

- 1U01CA187013-01 "Resources for development and validation of Radiomic analyses and Adaptive Therapy", **Role: Co-Investigator**, MPI: Sharma and Prior, *National Cancer Institute*, 07/01/14 06/30/19.

- ULITR002378 "Integrative Bayesian Modeling of PTSD severity using brain networks and trauma exposure", **Role: Principal Investigator**, *GA CTSA BERD*. 07/2017 - 06/2018.

Published Manuscripts

$^+$ = *advisee*, * = *corresponding author*

Peer-Reviewed Publications: Theory, Methods and Applications

1. Dey, A., and **Kundu***, S. (2024). A network analysis approach to evaluating COVID-19 vaccine acceptance in the US. *Accepted in Statistics in Medicine.*

2. **Kundu***, S., and Lukemire, J. (2024). Bayesian Non-parametric Modeling of Population of Vector Autoregressions. *The Journal of Machine Learning Research,* 25(146), pp 1–52, `http://jmlr.org/papers/v25/22-0717.html`

3. Lyu*, R., Vannucci, M., and **Kundu**, S. (2024). Bayesian Tensor Models for Image-based Classification of Alzheimer's Disease. *Neuroinformatics,* `doi:10.1007/s12021-024-09669-3`

4. Wilson*, M., Needham, T., Park, C., **Kundu**, S., and Srivastava, A. (2024). A Wasserstein-type Distance for Wrapped Gaussian Mixtures on Riemannian Manifolds. *SIAM Journal on Imaging Sciences*, 17(3):1433 - 1466. `doi:10.1137/23M1620363`

5. Li, W., Chang, C., **Kundu,** S., Long, Q. (2024). Accounting for Network Noise in Graph-guided Bayesian Modeling of Structured High-dimensional Data. *Biometrics*, 80(1). `doi:10.1093/biomtc/ujae012`

6. Liu, Y., Chakraborty, N., Qin, Z.S., and **Kundu***, S. (2023). Integrative Bayesian Tensor Regression for Imaging Genetics Applications. *Frontiers in Neuroscience*, 17:1212218. `doi:10.3389/fnins.2023.1212218`

7. **Kundu**, S., Reinhardt*, A., Song, S., Krishnamurthy, V. (2023). Bayesian Longitudinal Tensor Response Regression for Modeling Neuroplasticity. *Human Brain Mapping*, 44(18), 63266348. `doi.org/10.1002/hbm.26509`

8. Yang, L., Ma*, X., Sunderaman, R., Ji, S., and **Kundu**, S. (2023). Accounting for Temporal Variability in Functional Magnetic Resonance Imaging Improves Prediction of Intelligence. *Human Brain Mapping*, 44(13):4772-4791. `doi:10.1002/hbm.26415`

9. Wu*, Y., **Kundu**, S., Stevens, J.S., Srivastava, A. (2022). Elastic Shape Analysis of Sub-cortical Structures in Posttraumatic Stress Disorder. *Frontiers in Neuroscience*, 16:954055. `doi:10.3389/fnins.2022.954055`

10. Ma+, X., **Kundu***, S. (2022). Multi-task Learning with High-Dimensional Noisy Images. *The Journal of the American Statistical Association, Theory and Methods*, 119(545), 650663. `doi:10.1080/01621459.2022.2140052.`

11. Xin+, M., **Kundu***, S., and Stevens, J. (2022). Semi-parametric Bayes Regression with Network Valued Covariates. *Machine Learning Journal.* 111:37333767. `doi:10.1007/s10994-022-06174-z.`

12. **Kundu***, S., Min+, J., McGregor, K.M., Noecera, J. (2021). Integrative Analysis for Population of Dynamic Networks with Covariates. *NeuroImage*, 236:118181. `doi:10.1016/j.neuroimage.2021.118181`

13. **Kundu***, S., Ming+, J., and Stevens, J. (2021). Dynamic Brain Functional Networks Guided By Anatomical Knowledge. *Brain Connectivity*, 11(7):529-542. `doi:10.1089/brain.2020.0900`

14. **Kundu***, S., and Risk, B.B. (2021). Bayesian Matrix Normal Graphical Models for Brain Network Estimation. *Biometrics*, 77(2):439-450. `doi:10.1111/biom.13319`

15. Lukemire, J.D.+, **Kundu**, S*., Pagnoni, G., and Guo, Y. (2021). Bayesian Joint Modeling of Multiple Brain Functional Networks, *Journal of the American Statistical Association*, 116(534):518-530. `doi:10.1080/01621459`

16. **Kundu***, S., Lukemire+ J., Wang, Y., and Guo, Y. (2019). A Novel Joint Brain Network Analysis for Longitudinal Alzheimer's Disease Data, *Scientific Reports*, 9(1), 19589. `doi:10.1038/s41598-019-55818-z`

17. Higgins, I.+, **Kundu**, S., Choi, K.S., and Mayberg, H., and Guo, Y.* (2019). A Differential Degree Test for Comparing Brain Networks. *Human Brain Mapping*, 40(15), 4518-4536. `doi:10.1002/hbm.24718`

18. **Kundu***, S., and Suthaharan, S., (2019). Privacy-Preserving Predictive Model Using Factor Analysis for Neuroscience Applications, *IEEE 5th Intl Conference on Big Data Security on Cloud (BigDataSecurity), IEEE Intl Conference on High Performance and Smart Computing, (HPSC) and IEEE Intl Conference on Intelligent Data and Security (IDS), Washington, DC, USA, 2019, pp. 67-73.* `doi:10.1109/BigDataSecurity-HPSC-IDS.2019.00023`

19. Solis-Lemus, C. S., Ma, X.+, Hotstetter II, M., **Kundu***, Peng, Q., Pimental, D., (2020). A Deep Learning Framework for Predicting Functional Markers in Flow Cytometry Data. *Statistical Modeling in Biomedical Research - Contemporary Topics and Voices in the Field by Springer Nature. Edited by Yichuan Zhao and Ding-Geng Chen.* Springer, Cham. `doi:10.1007/978-3-030-33416-1_5`

20. Li, Z.,Chang, C., **Kundu**, S., and Long, Q. (2018). Bayesian Generalized Biclustering Analysis via Adaptive Structured Shrinkage. *Biostatistics*, 21(3):610-624. `doi:10.1093/biostatistics/kxy081`

21. Chang, C., **Kundu**, S.*, and Long, Q. (2018). Scalable Bayesian Variable Selection for Structured High Dimensional Data. *Biometrics*, 74(4):1372-1382. `doi:10.1111/biom.12882`.

22. Higgins, I[+]., **Kundu**, S*. and Guo, Y. (2018). Integrative Bayesian analysis of brain functional networks incorporating anatomical knowledge. *NeuroImage*, 181:263-278. `doi:10.1016/j.neuroimage.2018.07.015`

23. **Kundu**, S.*, Ming[+], J., Pierce, J., McDowell, J., and Guo, Y. (2018). Estimating Dynamic Brain Functional Networks Using Multi-subject fMRI Data. *NeuroImage*, Volume 183, Pages 635-649. `doi:10.1016/j.neuroimage.2018.07.045`

24. **Kundu**, S.*, Cheng, Y., Shin, M., Manyam, G., Mallick, B.K., Baladandayuthapani, V. (2018). Bayesian Variable Selection with Structure Learning: Applications to Integrative Genomics. *PLOS ONE*, 13(7): e0195070 `doi:10.1371/journal.pone.0195070`.

25. **Kundu**, S.*, Mallick, B.K., and Baladandayuthapani, V. (2018). Efficient Bayesian Regularization for Graphical Model Selection. *Bayesian Analysis*, 14(2):449-476. `doi:10.1214/17-ba1086doi:10.1214/17-BA1086`

26. **Kundu**, S.* and Kang, J. (2016). Semi-parametric Bayes Graphical Models Incorporating Covariates for Imaging Genetics Applications. *STAT*, 6(1), 322-337. `doi:10.1002/sta4.119`

27. **Kundu**, S.*, and Dunson, D. (2014). Bayesian Variable Selection in Semi-parametric Linear Models. *Journal of the American Statistical Association, Theory and Methods*, 109, 437-447. `doi:10.1080/01621459.2014.881153`

28. **Kundu**, S.*, and Dunson, D. (2014). Latent Factor Models for Density Estimation. *Biometrika*, 101, 641-654. `doi:10.1093/biomet/asu019`

29. Gouskova, N.A., **Kundu**, S., Imrey, P.B., Fine, J.P. (2013). Number Needed to Treat for Time to Event Data with Competing Risks, *Statistics in Medicine*, 33, 181-192. `doi:10.1002/sim.5922`

Peer-Reviewed Publications: Collaborative

30. Woodland, M., Castelo, A., Al Taie, M., Albuquerque, J., Silva, M., Eltaher, M., Mohn, F., Shieh, A., **Kundu**, S., Yung, J.P., Patel, A.B., and Brock, K.K. (2024). Feature Extraction for Generative Medical Imaging Evaluation: New Evidence Against an Evolving Trend. In: Linguraru, M.G., et al. Medical Image Computing and Computer Assisted Intervention MICCAI 2024. MICCAI 2024. Lecture Notes in Computer Science, vol 15012. Springer, Cham. `https://doi.org/10.1007/978-3-031-72390-2_9`

31. Kiani, S., Eggebeen, J., Al-Gibbawi, M., Smith, P., Preiser, T., **Kundu**, S., Zheng, Z., Bhatia, N.K., Shah, A.D., Westerman, S.B., De Lurgio, D.B., Tompkins, C.M., Patel, A.M., El-Chami, M.F., Merchant, F.M., Lloyd, M.S. (2024). Costs, efficiency, and patient-reported outcomes associated with suture-mediated percutaneous closure for atrial fibrillation ablation: Secondary analysis of a randomized clinical trial. *Journal of Cardiovascular Electrophysiology*. `doi:10.1111/jce.16440`

32. Barcena, A.J.R., Ravi, P., **Kundu**, S., Tappa, K. (2024). Emerging Biomedical and Clinical Applications of 3D-Printed Polylactic Acid-Based Devices and Delivery Systems. Bioengineering (Basel). 11(7):705. `doi:10.3390/bioengineering11070705`

33. Gottiparthy, A., Tummala, S., Yang, Z., and **Kundu**, S. (2024). Neurofilament light chain as a novel biomarker for diagnosis, prognostication, and recovery in cancer patients: case series. *CNS Oncology*, 13(1):2386233. `doi:10.1080/20450907.2024`

34. Biermann, M., Godiers, M., **Kundu**, S., Jain, A.S. (2024). The Functional Lumen Imaging Probe Contractile Response Pattern is the Best Predictor of Botulinum Toxin Response in Esophagogastric Junction Outflow Obstruction. *Neurogastroenterology and Motility*, 36(9):e14859. `doi:10.1111/nmo.14859`

35. Dal Lago, E.A., Guimaraes de Sousa, L., Yang, Z., Bonini, F., Sawyer, M., Wang, K., Lewis, W., **Kundu**, S., Godoy, M., Ferrarotto, R. (2024). Prognostic value of tumor volume doubling time in lung-metastatic adenoid cystic carcinoma. *Oral Oncology*, 151. `10.1016/j.oraloncology.2024.106759`

36. Wahid, K., Sahin, O., **Kundu**, S., Lin, D., Tehami, S., Fuentes, D., Gillespie, E., Fuller, C. (2024). Associations Between Radiation Oncologist Demographic Factors and Segmentation Similarity Benchmarks: Insights From a Crowd-Sourced Challenge Using Bayesian Estimation. *JCO Clinical Cancer Informatics*, 8:e2300174. `doi:10.1200/CCI.23.00174`

37. Barcena, A.J., Dhal, K., Patel, P., Ravi, P., **Kundu**, S. and Tappa, K. (2023). Current Biomedical Applications of 3D-printed Hydrogels. *Gels*, 10(1):8. `doi:10.3390/gels10010008`

38. Nieto, Y., Yang, Z., Valdez, B., Bassett, R., **Kundu**, S., . . . , and Qazilbash, M. (2023). Safety and efficacy of a new high-dose chemotherapy regimen of panobinostat, gemcitabine, busulfan and melphalan for 1st or 2nd salvage autologous stem cell transplant for patients with refractory/relapsed or high-risk myeloma: Matched pair comparisons with concurrent control cohorts. *American Journal of Hematology*, 99(2):245-253. `doi:10.1002/ajh.27168`

39. Biermann, M., Hersh, M., Kline, M., Fowler, H. Calderon, L., Godiers, M., **Kundu**, S., Jain, A. (2024). Functional Lumen Imaging Probe Topography Identifies Patients with Normal Acid Exposure and Esophageal Hypervigilance Amongst Proton-Pump Inhibitor Non-Responders. *Surgical Endoscopy*, 38(1):291-299. `doi:10.1007/s00464-023-10556-2`

40. Alkhaldi, H., Reinhardt, A., barnett, M., **Kundu**, S., Hosing, C., Ramdial, J., Saini, N., Srour, S., Alousi, A., Kebriaei, P., Popat, U., Qzailbash, M., Champlin, R., Shpall, E.J., Pinnix, C., Ahmed, S., Steiner, R., Andersson, B.S., and Nieto, Y. (2023). High-Dose Chemotherapy and Autologous Stem-Cell Transplant with Consolidative Radiation Therapy for Relapsed or Refractory Primary Mediastinal B-Cell Lymphoma, *Transplantation and Cellular Therapy*, 29(11):690-694. `doi:10.1016/j.jtct.2023.08.019` .

41. Young, A.L., **Kundu**, S., Tappa, K.K., Liu, H.A., and Kumar, V. (2023). Incidence of resting-state functional connectivity to secondary language areas and contralateral language areas in patients with brain tumors. *Neuroradiology Journal*. `doi:10.1177/19714009231196471`

42. Liang, T., Katz, M., Prakash, L., Chatterjee, D., Wang, H, Kim, M, Tzeng, C, Ikoma, N., Wolff, R., Zhao, D., Koay, E., Maitra, A., **Kundu**, S., Wang, H. (2023). Comparative Analyses of the Clinicopathologic Features of Short and Long Survivors of Patients With Pancreatic Ductal Adenocarcinoma Who Received Neoadjuvant therapy and Pancreaticoduodenectomy. *Cancers*, 15, 3231. `doi:10.3390/cancers15123231`

43. Lauck, K., Ahmad, A.S., Nguyen, Q.D., Yang, Z., **Kundu**, S., Huen, A.O. (2023). Management Strategies and Survival in Cutaneous B Cell Lymphoma: A Population Based Study. *JAAD International*, 13:28-29. `doi:10.1016/j.jdin.2023.06.015`

44. Yacout, H., Smith, B.L., Foster, S., Lora, M., Niles-Carnes, L.V., Zheng, Z., **Kundu**, S., Cantos, V.D. (2023). PrEP Adherence and Discontinuation at a Patient-Centered PrEP Program in Atlanta, GA. *Journal of the American College of Clinical Pharmacy*, 6(6): 576-580. `doi:10.1002/jac5.1792`

45. Tappa, K., and **Kundu**, S. (2023). Applications of Additive Manufacturing Technologies in healthcare sectors during Covid-19 Pandemic. *American Journal of Biomedical Science and Research*, 18(3). `doi: 10.34297/AJBSR.2023.18.002480`

46. Drwiega, E., Rab, S., Schechter, M., Andruski, R., **Kundu**, S., Zheng, Z., and Patel, M. (2023). Impact of a Dedicated Outpatient Parenteral Antimicrobial Therapy Program on Peripherally Inserted Central Catheter Removal at a Large Academic Medical Center. *Infectious Diseases in Clinical Practice*, 31(2):e1174. `DOI:10.1097/IPC.0000000000001174`

47. Mitchell, D., Buszek, S.M., Tran, B., Farhat, M., Goldman, J., Erickson, L., Curl, B., Liu, H., Suki, D., Ferguson, S., **Kundu**, S., and Chung, C. (2022). Comparison of Radiomic Feature Variability between Different MR Pulse Sequences in Brain Metastases. *F1000Research*, 11:892. `doi:10.12688/f1000research.122871.1`

48. Woodland, M. K., Wood, J., Anderson, B. M., **Kundu**, S., Lin, E., Koay, E., Odisio, B., Chung, C., Kang, H. C., Venkatesan, A. M., Yedururi, S., De, B., Lin, Y. M., Patel, A. B., and Brock, K. K. (2022). Evaluating the Performance of StyleGAN2-ADA on Medical Images. In: Zhao, C., Svoboda, D., Wolterink, J.M., Escobar, M. (eds) Simulation and Synthesis in Medical Imaging. SASHIMI 2022. Lecture Notes in Computer Science, vol 13570, Springer, Cham. `doi:10.1007/978-3-031-16980-9_14`

49. Singh S, Roszik J, Saini N, Singh VK, Bavisi K, Wang Z, Vien LT, Yang Z, **Kundu** S, Davis RE, Bover L, Diab A, Neelapu SS, Overwijk WW, Rai K, Singh M. (2022). B Cells Are Required to Generate Optimal Anti-Melanoma Immunity in Response to Checkpoint Blockade. *Frontiers of Immunology,* May 26;13:794684. `doi:10.3389/fimmu.2022.794684`

50. Godwin, L., Zheng, Z., **Kundu**, S., Cousins, R., Mullinax, B.J., Ko, Y., Little, K., Smith, A., Quyyumi, A., Goyal, A., Pearson, T., Moncayo, V., Mitchell, A.J. (2022). Serial Myocardial Perfusion Imaging in Kidney Transplant Candidates: Risk Factors Associated with New-Onset Perfusion Abnormalities. *The American Journal of Cardiology*, 174:84-88. `doi:10.1016/j.amjcard.2022.03.030`

51. Jarrett, S.A., Lo, K.B., Body, C.B.B, Kim, J.J, Zheng, Z., **Kundu**, S., Huang, E., Basu, A., Flynn, M., Dietz-Lindo, K.A., Shahnavaz, N., Christie, J. (2022). Nausea, Vomiting and Dyspepsia Following Solid Organ Abdominal Transplant. *Cureus*, 14(4): e24274. `doi:10.7759/cureus.24274`

52. Calderon, L.F., Kline, M., Hersh, M., Shah, K.P., **Kundu**, S., Tkaczuk, A., McColloch, N., Jain, A. (2022). The Upper Esophageal Sphincter Distensibility Index Measured Using Functional Lumen Imaging Probe Identifies Defective Barrier Function of the Upper Esophageal Sphincter. *Journal of Neurogastroenterology and Motility*, 28(3):463-473. `doi:10.5056/jnm21197`

53. Krishnamurthy, L.C., Krishnamurthy, V., Rodriguez, A.D., McGregor, K.M., Champion, G.N., Hortman, K., Roberts, S.R., Harnish, S.M., Belagaje, S.R., Benjamin, M.L., Gopinath, K., Rosenbek, J.C., Mc-Couch1, N., **Kundu**, S., and Crosson, B.A. (2021). Not all lesioned tissue is equal: A new look at chronic stroke with Tissue Integrity Gradation via T2w T1w Ratio (TIGR). *Frontiers in Neuroscience*, Vol. 15, `doi:10.3389/fnins.2021.665707`

54. Aldredge, A., Roth, G. Vaidya, A., Duarte, A.P. **Kundu**, S., Zheng, Z., Smith, B., Lora, M., Gruen, J., Sheth, A., Sales, J., Cantos, V.D. (2021). Preexposure prophylaxis care continuum among transgender women at a patient-centered preexposure prophylaxis program in Atlanta, Georgia. *AIDS*; 35(3):524-526. `doi:10.1097/QAD.0000000000002788`

55. Anderson, A.M., **Kundu**, S., Tang, B., Vaida, F., Okwuegbuna, O., McClernon, D., Cherner, M., Cookson, D., Crescini, M., Grant, I., Ellis, R.J., Letendre, S.L., (2021). Cerebrospinal fluid CXCL10 is associated with the presence of low level CSF HIV during suppressive antiretroviral therapy. *Journal of Neuroimmunology,* Volume 353, 577493, `doi:10.1016/j.jneuroim.2021.577493.`

56. Beret, A., Lai, L., Xu, Y., Zheng, Z., **Kundu**, S., Lennox, J., Waldrop-Valverde, D., Franklin, D., Letendre, S., Anderson, A. (2020). Distinct cellular immune properties in cerebrospinal fluid are associated with cognition in HIV-infected individuals initiating antiretroviral therapy. *Journal of Neuroimmunology*, 344:577246. `doi:10.1016/j.jneuroim.2020.577246`

57. Lyles, R. H., Cunningham, S. A., **Kundu**, S., Bassat, Q., Mandomando, I., Sacoor, C., Akelo, V., Onyango, D., Zielinski-Gutierrez, E., and Taylor, A. W. (2020). Extrapolating sparse gold standard cause of death designations to characterize broader catchment areas. *Epidemiologic Methods*, 9(1), `doi:10.1515/em-2019-0031.`

58. Krishnamurthy, V., Krishnamurthy, L.C., Drucker, J.H., **Kundu**, S., Ji, B., Hortman, K., Roberts, S.R., Mammino, K., Tran, S.M., Gopinath, K., McGregor, K.M., Rodriguez, A.D., Qiu, D., Crosson, B.,

Nocera, J.R.. (2020) Correcting Task fMRI Signals for Variability in Baseline CBF Improves BOLD-Behavior Relationships: A Feasibility Study in an Aging Model. *Frontiers in Neuroscience*, 14 (336), `DOI=10.3389/fnins.2020.00336`

59. Sule, P., Tilvawala, R., Mustapha, T., Hassounah, H., Noormohamed, A., **Kundu**, S., Graviss, E., Walkup, G., Kong, Y., and Cirillo, J., (2019). Rapid Tuberculosis Diagnosis Using Reporter Enzyme Fluorescence (REF). *Journal of Clinical Microbiology*, 57(12):e01462-19. `doi:10.1128/JCM.01462-19`

60. Hsu, D., Chokshi, F. H., Hudgins, P. A., **Kundu**, S., Beitler, J. J., Patel, M. R., and Aiken, A. H. (2020). Predictive Value of First Posttreatment Imaging Using Standardized Reporting in Head and Neck Cancer. *Otolaryngology - Head and Neck Surgery*, 41(6):1070-1075. `doi:10.3174/ajnr.A6589`

61. Hanna TN, **Kundu** S, Singh K, Horny M, Wood D, Prater A, Duszak R Jr. (2018). Emergency department imaging superusers. *Emergency Radiology*, 26(2):161-168, `DOI:10.1007/s10140-018-1659-y`

62. Chokshi, F.H., Kang, J., **Kundu**, S., Castillo, M. (2016). Bibliometric Analysis of Manuscript Title Characteristics Associated With Higher Citation Numbers: A Comparison of Three Major Radiology Journals, AJNR, AJR, and Radiology. *Current Problems in Diagnostic Radiology*, 45(6):356-360, `doi: 10.1067/j.cpradiol.2016.03.002`

Manuscript with Invited Revision

1. Ma*, X., and **Kundu**, S. (2024+). A Unified Sparse Learning Framework for Lipschitz Loss Functions with Measurement Errors.

2. Ming, J., and **Kundu***, S. (2024+). Flexible Bayesian Support Vector Machines for Brain Network-based Classification.

3. Lange, S., Idel, D., Reinhardt, A., Labbate, C., Adibi, M., **Kundu**, S., Matin, S. (2024+). Expert consensus of variables that impact endoscopic management of upper tract urothelial carcinoma: Development of the Endometry Score. Revision Invited.

4. Chakraborty, N., Long, Q., and **Kundu***, S. (2024+). Scalar-on-Image Regression with Spatial Interactions.

Submitted Manuscripts

1. Yao, T., and **Kundu***, S. (2024). Flexible Bayesian Nonparametric Product Mixtures for Multi-scale Functional Clustering.

2. Lyu, R., Vannucci, M., **Kundu***, S. (2024). Bayesian Scalar-on-Tensor Quantile Regression for Longitudinal Neuroimaging Data in Alzheimer's Disease.

3. Reinhardt, A., Nikzad, N., Park, P.C., Hollis, R.J., Jacobson, G., Roach, M.A., Beretta, L., Jalal, P.K., Fuentes, D., Koay, E., and **Kundu**, S. (2024). Heterogeneous Image-based Risk Prediction Using Distributional Data Analysis.

4. Amer, A., Khose, S., Pokhylevych, H., Alhasan, H., Calle, S., Liu, H., **Kundu**, S., Johnson, J.M. (2024+). Dynamic Contrast Enhancement Processing Comparison for Determining True Progression from Pseudo-progression in High Grade Glioma.

5. Zhang, Q., Li, W., **Kundu**, S., and Long, Q. (2024). Knowledge-guided Bayesian Biclustering Model with Denoised Networks.

6. Corrigan, K., Holliday, E., Nyugen, S., **Kundu**, S., Reinhardt, A., Smith, L., Das, P., You, Y. (2024). Prospective evaluation of pelvic radiation among patients with young-onset rectal cancer: Impact on patient-reported outcomes.

7. Holliday, E., Yao, T.H., **Kundu**, S. (2024). Post-Radiation Vaginal Estrogen Prescriptions for Women with Early Onset Rectal Cancer.

8. Zaveri, S., Chen, J.H., Meas, S., Yang, Z., **Kundu**, S., Lucci, A. (2024). Primary Tumor Surgery in Patients with de novo Stage IV Breast Cancer: Is there an Optimal Subgroup for Locoregional Therapy?

9. Lin, T., Mori, L., Batra, A., Chakraborty, N., **Kundu**, S. (2024). Utilization of Breathwork Meditation in Improving Wellness in Trainees of Speech-Language Pathology A Prospective Cohort Study.

10. Lam K., Ozkizilkaya, H.I., Milton, D.R., Dono, A., Liu, Y., **Kundu**, S., Kumar, V.A., Johnson, J., Esquenazi, Y., Patel, C.B., Ballester, L.Y. (2024). Molecular alterations in IDH-mutant astrocytoma: A multi-institutional retrospective study.

Manuscripts Under Preparation

- Drexler, M., **Kundu**, S., Risk, B., Lah, J., and Qiu, D. (2024). Deep Learning based Joint and individual variance explained (DeepJIVE) for multimodal data analysis.

- Reinhardt, A.E. and **Kundu**, S. (2024). Voxel-level Neuroimaging Data Harmonization via Tensors.

- Li, W., Long, Q., and **Kundu**, S. (2024). Scalar-on-Function Prediction Using Noisy fMRI Data.

- Chakraborty, M., Ha, M.J., Ma, X., **Kundu**, S. (2024). Longitudinal Bayesian Tensor Response Regression for Mapping Genetic Signatures Associated with Brain Structural Changes.

- Fu, J., **Kundu**, S., and Vannucci, M. (2024). A Bayesian Latent-Scale Approach for High-dimensional Network Mediation Models.

Awards and Honors

- Nominated for Dean's Distinguished Dissertation Award by Department of Biostatistics, UNC Chapel Hill.

- Distinguished Student Paper Award at Eastern North American Region (ENAR) Conference, 2012, for the manuscript "Bayes Variable Selection in Semi-parametric Linear Models".

- Student Paper Competition winner for the Section on Bayesian Statistical Science (SBSS), Joint Statistical Meetings, 2011, for the manuscript "Single Factor Transformation Priors for Density Regression".

- Reynolds Fellowship offered by UNC for "... highest academic potential and the most impressive record of achievement in undergraduate education and work and life experiences".

- 2009 Hardison scholarship offered by the Department of Biostatistics, UNC to "...outstanding applicant in the Department of Biostatistics to encourage studies in health informatics in the department".

- Satia Scholarship offered by School of Public Health 2010, UNC for innovative Public health work in underdeveloped areas.

- Biostatistics International Travel Fund awarded by the Department of Biostatistics, UNC Chapel Hill, 2010.

- Stat Bowl champion, awarded by American Statistical Association at Joint Statistical Meetings, Miami, USA, 2011.

- Winning team member of Stat Bowl team champion, awarded by American Statistical Association at Joint Statistical Meetings, Miami, USA, 2011.

- Winning team member for 2011 American Statistical Association "Promoting the Practice and Profession of Statistics" Video Competition.

- Nominated for best teaching award in the Department of Biostatistics, Emory University, 2016-2017.

- *Featured Speaker* at the Georgia Statistics Day 2016.

- Awarded Fund for Innovative Teaching (FIT) grant ($3000.00) by Center for Faculty Development and Excellence, Emory University, April 2017.

- Recipient of Young Investigator Travel Award at 11th Conference on Bayesian Nonparametrics, Paris, June 2017.

- Emory PI for research fellowship to study data privacy in fMRI data which was awarded to Dr. Shan Suthaharan at UNC-Greensboro, and funded by the Institute for Quantitative Methods and Theory at Emory University, 2018.

- *Featured Speaker* at Advanced Biomedical Engineering and Instrumentation Summit (ABEIS-2019), San Francisco, June 2019.

- Received travel funding to attend SAMSI Deep Learning Opening Workshop, SAMSI, Raleigh, NC, Aug 2019.

- Received 10th percentile score in first submission for the R01 proposal to NIMH (role: PI) titled *Integrative Brain Network-Based Analysis for Heterogeneous and Multimodal Neuroimaging Data,* Feb 2019.

- Recipient of the 2019 Young Statistical Scientist Award in the Applications category by International Indian Statistical Association. Award presented for . . . *outstanding contributions to the development of statistical methods and algorithms for network modeling tools with important applications in neuroscience and cancer studies, and for sustained contributions to research and training of students.*

- Elected Member of International Statistical Institute, June 2023- *present*

Graduate Student Advisee Awards:

- Dissertation co-advisor for RSPH 2018 Livingston Fellow, Ixavier Higgins (jointly advised with Dr. Y Guo)

- Dissertation co-advisor and co-author for 2017 Statistical Methods in Imaging Conference Student Paper Award Winner, Ixavier Higgins (Jointly advised with Dr. Y. Guo)

- Dissertation advisor for First place winner, Senior Student Presentations 2019, Emory University, Joshua Lukemire (Jointly advised with Dr. Y. Guo)

- Dissertation advisor and co-author for Honorable Mention for Poster at Georgia Statistics Day 2019 for the paper titled *Semi-parametric Bayes Regression With Network-Valued Covariates* by Xin Ma, Suprateek Kundu and Jennifer Stevens.

- Dissertation advisor and co-author for paper titled *Semi-parametric Bayes Regression With Network-Valued Covariates* selected as Winner of International Biometric Society Eastern North American Regions (ENAR) Distinguished Student Paper Awards 2020.

- Dissertation advisor and co-author for paper titled *Multi-task Learning with High-Dimensional Noisy Images* selected as Winner of Student Paper Awards at the ASA Statistical Methods in Imaging Conference, 2022.

Grant Reviewer Experience

- Ad-hoc reviewer for NIH CSR Special Emphasis Panel/Scientific Review Group 2025/01 ZAG1 ZIJ-L (J3), Oct 2024.

- Ad-hoc reviewer for NIH CSR Special Emphasis Panel Enhancing Use of Data from the Harmonized Cognitive Assessment Protocol (HCAP) Network, June 2024.

- Ad-hoc reviewer for NIH CSR Review Panel for ASPA -A Study Section, March 2023.

- Ad-hoc reviewer for NIH CSR Special Emphasis Panel IMST-Q (02) M related to Emerging Imaging Technologies in Neuroscience (EITN), March 2022.

- Ad-hoc reviewer for NIH Special Emphasis Panel (SEP) focused on Alzheimer's Disease and Alzheimers-related dementia (ZRG1 HDM-K 90), Dec 2021.

- Invited Reviewer for grant proposals in the Methodology, Measurement, and Statistics Program in NSF, Oct 2019.

- Ad-hoc reviewer for the NSF grant funding mechanism titled "Neural and Cognitive System (NCS) Panel D - P161646", April 2016.

Journal Reviewer Experience

- Associate Editor for *Biometrics*, June 1, 2019-present

- Associate Editor for *The Journal of Statistics and Data Science in Imaging*, Aug 1, 2024-present

- Served as journal referee for

   Journal of American Statistical Association

   Journal of the Royal Statistical Society

   Annals of Applied Statistics

   Journal of Machine Learning Research

   Journal of Computational and Graphical Statistics

   Biometrics

   Bayesian Analysis

   Plos One

   Biostatistics

   NeuroImage

   Bioinformatics

   Australian and New Zealand Journal of Statistics

   Scandanavian Journal of Statistics

   Technometrics

   Computational Statistics and Data Analysis

   BMJ Open

   Current Medical Imaging

   Book review *New Advances in Statistics and Data Science*, ICSA Book Series in Statistics by **Springer**

Professional Service Activities

- Appointed to the Committee for Student Paper Awards for Section on Bayesian Statistical Sciences (SBSS), Joint Statistical Meetings, 2016.

- Local organizing committee for Georgia Statistics Day in 2015-2017.

- Organized Student Poster Competition and obtain external sponsor for student prizes in Georgia Statistics Day 2017 at Emory.

- Chair and Organizer of ENAR Invited Session 2017 titled "Integrative Analysis for Brain Imaging Studies".

- Chair for Invited Session titled "Bayesian Methods for Inverse Problems" at the Meeting for International Indian Statistical Association, University of Florida, 2018.

- Chair for contributed session titled "Computationally Intensive Bayesian Methodology" in Joint Statistical Meetings 2019.

- Served in the Scientific Organizing Committee and Committee for Student paper competition for Meeting of International Indian Statistical Association, Mumbai, Nov 2019.

- Appointed to the Committee for Student Paper Awards for the Meeting of International Indian Statistical Association, Mumbai, Nov 2019.

- Appointed to the Committee for Student Paper Awards for the Mental Health Section, Joint Statistical Meetings, 2019

- Appointed to the Committee for Student Paper Awards for Statistics in Imaging Section, Joint Statistical Meetings, 2019.

- Appointed to the Committee for Student Paper Awards for Statistics in Imaging Section, Joint Statistical Meetings, 2021.

- Appointed to the Conference Planning Committee and Local Organizing Committee for Statistical Methods in Imaging Conference, Emory University, May 2021.

- Organizer of Student Poster Competition for Statistical Methods in Imaging Conference, Emory University, May 2021.

- Organizer for the Invited Session titled "Bayesian Methods for Complex High-Dimensional Imaging Data" at ENAR, 2022.

- External Organizing Committee for Statistical Methods in Imaging Conference, Vanderbilt University, May 2022.

- Organizer for the Student Paper Awards for Statistical Methods in Imaging Conference by American Statistical Association, Vanderbilt University, May 2022.

- Advisory Committee for Statistical Methods in Imaging Conference by American Statistical Association, University of Minnesota, May 2023.

- Ad-hoc reviewer for Statistical Methods in Imaging Student Paper Competition, 2024.

- Served as Treasurer for Statistical Methods in Imaging Section of The American Statistical Association, Aug 2024-July 2025

- Elected as Co-Principal Organizer for The ASA Statistical Methods in Imaging Conference, Rice University, Houston, May 2025.

Institutional Service at Emory

- Served as Biostatistics Liason for Emory STEM symposium in 2015-2016.

- Served in the Committee for Shepard Awards for Best MS thesis in Rollins School of Public Health, 2017-present.

- Seminar chair for Department of Biostatistics for Fall, 2015.

- Served in PhD admissions committee for Department of Biostatistics, in 2015-present.

- Served as a question setter and grader for the doctoral Qualifying Exam Committee, 2015-present.

- Co-Chair of the Working group to revise PhD methods curriculum (Chair: Dr. Hu) 2017-*present*

- Served as Wellness Champion, Rollins School of Public Health 2015-2017.

- Member of Rollins School of Public Health Education Committee, Emory University.

- Served in the Website Committee for Department of Biostatistics.

- Committee for Organizing Department of Biostatistics faculty retreat 2019.

- Served in the tenure-track faculty search committee, Spring 2020.

- Conducted Yoga and Meditation Sessions for Students, Faculty and Staff at Emory.

Institutional Service at UT MD Anderson

- Ex-Officio member on the Institutional Animal Care and Use Committee (IACUC) at The University of Texas MD Anderson Cancer Center, Jan 2023-*present*

- Mid-career Faculty Committee, UT MD Anderson Cancer Center, Jun 2022-*present*

- Instructor for SKY Meditation Retreat, hosted quarterly by The Office of Faculty and Academic Wellness and HR Workforce Wellness at UT MD Anderson Cancer Center. Jun 2022-*present*

- Elected to serve on the Steering Committee for the Quantitative Sciences program, GSBS, University of Texas at MD Anderson Cancer Center. Aug 2024 - *present*

Mentorship

Assistant Professors and Postdocs

- Faculty mentor to Dr. Sahil Bajaj, Assistant Professor, Department of Epidemiology, The University of Texas at MD Anderson Cancer Center

- Mentor to Dr. Qiyiwen Zhang, postdoctoral research associate at University of Pennsylvania (Primary Mentor: Dr. Qi Long)

- Primary mentor to Dr. Tsung-Hung Yao (postdoctoral research associate) at The University of Texas at MD Anderson Cancer Center

- Primary mentor to Dr. Moumita Chakraborty (postdoctoral research associate) at The University of Texas at MD Anderson Cancer Center

- Primary mentor to Dr. Xin Ma, postdoctoral research associate at Florida State University (joint supervision with Dr. Anuj Srivastava)

- Primary mentor to Dr. Nilanjana Chatterjee, postdoctoral research associate at University of Pennsylvania (joint supervision with Dr. Qi Long)

- Mentor to Dr. Changgee Chang, postdoctoral research associate at Emory University (Primary mentor: Dr. Qi Long).

  Currently research faculty at University of Pennsylvania.

  Recipient of Young Researchers Travel Award, International Society for Bayesian Analysis World Meeting, 2016.

- Mentor for VA Career Development award to Dr. Lisa Crystal Krishnamurthy titled *"Beyond lesion-language mapping in aphasia: A novel imaging-based prediction model"*.

  Funding received. Award period 07/2018-2020

- Mentor for K23-award submitted by Dr. Jessica Keller titled *"Neurobiology of treatment response in an intensive outpatient exposure therapy for PTSD"*

- Mentor for K23-award submitted by Dr. Sara Turbow, MD, MPH (Assistant Professor of Medicine Division of General Medicine and Geriatrics) titled *"iCAREFOR: Inter-hospital Care Fragmentation in Older Adults with Dementia"*

Doctoral Students

- Dissertation Advisor for Dr. Ixavier Higgins (2014-2019); co-advisor Dr. Ying Guo

     Dissertation: Analysis of Functional Brain Networks. Graduated, currently at Eli Lilly

     - Recipient of the Student Paper Award at Annual Conference on Statistical Methods in Imaging sponsored by ASA Imaging Section, 2017

       - Recipient of RSPH Livingston Fellow, 2018

- Dissertation Advisor for Mr. Joshua Lukemire (2015-2021, co-advisor Dr. Ying Guo)

     -Recipient of First Prize in Senior Student Presentations 2019, Department of Biostatistics, Emory.

- Dissertation advisor for Mr. Jin Ming at Emory University (2016-2022)

- Dissertation advisor for Ms. Xin Ma at Emory University (2016-2022)

- Faculty Mentor to first year doctoral students Ms. Ye Yue and Mr. Sohail Nizam at Emory University

- Dissertation Committee of Dr. Shi Ran at Emory University (2016-2018)

- Academic Supervisor for Ms. Zixi Yang at UT MD Anderson Cancer Center (2021-2023)

- Dissertation advisor for Ms. Yajie Liu at UT MD Anderson (2022-present)

- Dissertation co-advisor for Ms. Rongke Lyu at Rice University (2023-present)

- Dissertation co-advisor for Ms. Janet Fu at Rice University (2023-present)

- Dissertation advisor for Ms. Zihan Yang at UT MD Anderson (2024-present)

- Served in the Dissertation committee for Yeseul Kim, GSBS program, UT MD Anderson Cancer Center, Sept 2024-present

- Served in the Dissertation committee for David Martinus, GSBS program at UT MD Anderson Cancer Center, Jan 2024- present

Masters and Undergraduate Students

- Summer Research Supervisor for Ms. Ye Yue (Summer 2018)

     -Completed MS in Statistics from Columbia University

     - Currently first year doctoral student in the Department of Biostatistics, Emory University

- Masters thesis advisor for Ms. Junhan Fang (MS, 2014-2016). Joint with Dr. Ying Guo.

     - Thesis title "Between-group comparisons of structural and functional brain connectivity"

     - Currently doctoral student in Biostatistics at the University of Waterloo)

- Masters thesis advisor for Mr. Jin Ming (MS, 2014-2016)

     - Thesis title "A Bayesian approach for dynamic brain networks"

     - Currently doctoral student in Biostatistics and Bioinformatics at Emory University

- Masters thesis advisor for Mr. Praveen Suthaharan (MS, 2017-2019)

     - Thesis title "Latent Class Analysis for PTSD Subtype Discovery".

     - Currently an intern in Computational Psychiatry Research at Harvard University, McLean Hospital under the supervision of Dr. Diego A. Pizzagalli

- Masters thesis committee for Mr. Yuchen Yan (2019)

     - Thesis title "Cell-type specific alternation of DNA methylation in Alzheimer's Disease."

- Masters Thesis committee for Mr. Zhifang Sang (2016)

   - Thesis title "Extending and Evaluating Scalable Markov chain Monte Carlo Algorithms for Big Data Problems "

- Practicum Training and Thesis Advisor for Mr. Alec Reinhardt at Emory (2021-2022)

   - Thesis title "Bayesian Tensor Modeling Approaches for Data Harmonization "

Presentations and Workshops

- Presented *"Number Needed to Treat for Time to Event Data with Competing Risks"* at Eastern North American Region Conference, New Orleans, 2010.

- Presented *"Latent Factor Models for Density Estimation"* at 3rd International Conference of the ERCIM working group on Computing and Statistics, London, U.K., 2010.

- Presented *"Latent Factor Models for Density Estimation"* at Eastern North American Region Conference, Miami, 2011.

- Invited to attend Workshop on Sensing and Analysis of High-Dimensional Data, Duke University, Durham, USA, 2011.

- Invited presentation *"Bayes Variable Selection in Semi-parametric Linear Models"* at Joint Statistical Meetings, Miami, 2011.

- Presented *"Bayes Variable Selection in Semi-parametric Linear Models"* at Eastern North American Region Conference, Orlando, 2013.

- Invited to the LDHD workshop, SAMSI, Raleigh, NC, 2013.

- Invited presentation *"Bayes Regularized Graphical Model Estimation in High Dimensions"* at Department of Biostatistics, MD Anderson, Houston, TX, Nov 2013.

- Invited presentation *"Flexible Bayesian Approaches for Regression and Variable Selection"* at Department of Biostatistics, University of Florida, FL, Jan 2014.

- Invited presentation *"Bayesian Regularized Approaches for High-Dimensional Graphical Models"* at the Department of Statistics, University of California at Santa Cruz, Jan 2014.

- Contributed presentation *"Bayesian Variable Selection with Structure Learning: Applications to Integrative Genomics"* at the Joint Statistical Meetings, Seattle, 2015.

- Poster Presentation at the Organization of Human Brain Mapping (OHBM) in June 2016, Switzerland.

- Contributed Presentation *"Scalable Bayesian Variable Selection for Structured Data"* at Joint Statistical Meetings, Chicago, IL, 2016.

- Invited presentation *"Estimating Dynamic Brain Functional Networks Using Multi-subject fMRI Data"* at the ICSA 2016 conference, Georgia State University, Atlanta, GA 2016.

- Invited presentation at the Department of Biomedical Engineering, Emory University (Dr. Keilholz Lab) titled *"Estimating Dynamic Brain Functional Networks Using Multi-subject fMRI Data"*, 2016.

- *Featured Speaker* at the Georgia Statistics Day 2016.

- Invited presentation at the Joint Statistical Meetings 2017 titled *"Scalable Bayes Variable Selection for Structured High Dimensional Data"*

- Invited presentation at the ICSA 2018 conference titled *"Scalable Bayes Variable Selection for Structured High Dimensional Data"*

- Invited presentation at IISA 2018 titled *"Scalable Bayes Variable Selection for Structured High Dimensional Data"*, May, 2018.

- Invited for presenting *"Integrative Analysis of Brain Networks Incorporating Anatomical Knowledge"*, Joint Statistical Meetings, 2018.

- Invited talk scheduled at Department of Biostatistics, Virginia Central University, Jan 2019 titled *"Bayesian Matrix Normal Graphical Models for Brain Networks"*.

- Invited talk at Department of Biostatistics, U of Pennsylvania, Jan 2019 titled *Bayesian Matrix Normal Graphical Models for Brain Networks*

- Invited talk at Statistics in Medical Imaging conference, June 2019, UCI, CA tilted *A Semi-parametric Bayesian approach for Regression with Network-valued Covariates*

- Invited talk at IEEE Big Data and Cybersecurity Conference, Washington D.C., titled *Privacy-preserving Factor Analysis Models for High-dimensional Neuroimaging Data*, May 2019.

- *Featured Speaker* at Advanced Biomedical Engineering and Instrumentation Summit (ABEIS-2019), San Francisco, June 2019.

- Invited talk at School of Business, Indian Institute of Technology, Delhi, India, June 2019, titled *Privacy-preserving Factor Analysis Models for High-dimensional Neuroimaging Data*

- Invited to Deep Learning Workshop, SAMSI, Raleigh, NC, Aug 12-16, 2019.

- Invited talk at Department of Biostatistics, UNC Chapel Hill, Sept 2019 titled *Integrative statistical methods for brain network analysis*

- Invited talk at Department of Statistics, Texas A & M University, Sept 2019 titled *Integrative statistical methods for brain network analysis*

- Invited to present the activities of the Data Analytics and Biostatistics Core program based in the Department of Medicine at the Emory Division of Digestive Diseases retreat at Callaway Resort and Gardens in Pine Mountain, Georgia, Oct 2019.

- Invited talk at iBRIGHT conference, Nov 2019, MD Anderson Cancer Research Center, Nov 2019 titled *Estimating Dynamic Brain Networks Using Changepoint Analysis*

- Invited talk on *Prediction based on High-dimensional Networks* at the International Indian Statistical Association conference, May 20-23, 2021.

- Invited talk at Quality and Productivity Research Conference by The American Statistical Association, June 2020 titled *Reliability in Big Data Integration*, Department of Statistics, Florida State University.

- Invited talk on *Prediction based on High-dimensional Networks* at the Joint Statistical Meetings, Aug 2021.

- Invited talk on *Non-parametric Bayesian Vector Autoregressive Models for Multi-subject Data* at Rice University, Oct 2021

- Invited talk on *Statistical Methods for Integrative Analysis of Multiple Neuroimaging Datasets* at The University of California at Los Angeles, Oct 2021

- Invited talk on *Non-parametric Bayesian Vector Autoregressive Models for Multi-subject Data* at The University of Florida, Oct 2021

- Invited talk on *Statistical Methods for Integrative Analysis of Multiple Neuroimaging Datasets* at The Data Science Forum at The University of Texas at MD Anderson, Oct 2021

- Invited talk on *Statistical Methods in Genetic/Genomic Studies* conference organized by The National University of Singapore

- Invited Talk on *Bayesian Methods for Complex High-Dimensional Imaging Data* at ENAR 2022, Houston, TX.

- Invited Talk on *Classification Using High-Dimensional Noisy Images* at Statistical Methods in Imaging Conference, Vanderbilt University, May 2022.

- Invited Talk at The Data Science Forum - UT MD Anderson Cancer Center, Aug 2022

- Invited Talk at The Department of Neuro-Oncology, UT MD Anderson, November 2022

- Invited Talk on *Statistical Methods to Address Noise and Heterogeneity in Medical Imaging Analysis* at The Department of Imaging Physics, UT MD Anderson Cancer Center, Feb 2023

- Invited Talk on *Bayesian Tensor Approaches for Integrative Imaging Analysis* at Statistical Methods in Imaging Conference, University of Minnesota, May 2023.

- Invited Talk on *Bayesian Longitudinal Tensor Models for High-dimensional Imaging Genetics Analysis* at UT Health School of Public Health, Oct 2023

- Invited talk on *Bayesian Longitudinal Tensor Models for High-dimensional Imaging Genetics Analysis* at ASA Statistics in Imaging Virtual Meeting, Oct 2023

- Invited Talk at The 37th New England Symposium, University of Connecticut, Storss, CT, May 2024

- Invited Talk at The Western North American Region (WNAR) Conference, Colorado State University, June 2024

- Invited talk at The Fifth International Workshop on Statistical Analyses of Multi-Outcome Data, also known as SAM 2024, Salzburg, Austria, July 2024.

- Invited talk on *Flexible Bayesian Product Mixture Models for Vector Autoregressions* at The Joint Statistical Meetings, August 2024.

- Invited talk on *Bayesian Tensor Models for NeuroImage Data Harmonization*, Indiana University, October 2024.

- Invited talk on *Bayesian Tensor Models for NeuroImage Data Harmonization*, Vanderbilt University, November 2024.

Other presentations/poster/abstracts as non-presenting co-author

- Hsu, D, Chokshi, FH, Hudgins PA, **Kundu**, S, Beitler, JJ, Patel, MR, and Aiken, AH. " NI-RADS Performance on First Post-Treatment FDG-PET/Contrast-Enhanced CT in Head and Neck Squamous Cell Carcinoma to Detect Residual Disease: ROC Analysis of Surgical and Non-Surgical Treatment Groups". *Oral Presentation presented at: RSNA 2017; November, 2017; Chicago, IL, USA.*

- Hanna, TN, Singh, K, **Kundu**, S, Theriot, DM, Wood, D, Duszak, R. " Characterizing the Most Frequent Users of Emergency Department Imaging". *Scientific Poster: American Society of Emergency Radiology, Toronto, Canada, September 2017*

- Hanna, TN, Singh, K, **Kundu**, S, Theriot, D, Wood, D, Duszak, R. "Emergency Department Imaging Super-users: Utilization Characteristics of the Most Resource Intense Patients". *Scientific Presentation: Radiological Society of North America, Chicago, IL Nov 30, 2017.*

- Chang, C., **Kundu**, S., and Long, Q. "Bayesian Variable Selection Incorporating Biological Pathway Information Using Dependent Shrinkage Priors," *Eastern North American Region Spring Meeting, Austin, TX, March 2016.*

- Chang, C., **Kundu**, S., and Long, Q. "Bayesian Variable Selection with Dependent Priors for Regularization Parameters," *Joint Statistical Meeting, Seattle, WA, August 2015*

- Chang, C., **Kundu**, S., and Long, Q. "Scalable Bayesian Variable Selection for Structured High-Dimensional Data," *International Society for Bayesian Analysis World Meeting, Sardinia, Italy, June 2016.* **Recipient of the Young Researchers Travel Award, International Society for Bayesian Analysis World Meeting, 2016.**

- Higgins, I., **Kundu**, S., and Guo, Y. "Anatomically Informed Estimation of Functional Brain Networks", *Joint Statistical Meeting, Baltimore, MD, August 2017*

- Li, Z., Chang, C., **Kundu**, S., and Long, Q. "Bayesian Biclustering Analysis via Adaptive Structured Shrinkage", *The 6th workshop on Biostatistics and Bioinformatics, Atlanta, GA. 2018*

- Li, Z., Chang, C., **Kundu**, S., and Long, Q. "Bayesian Biclustering Analysis via Adaptive Structured Shrinkage", *ENAR 2018 Spring meeting, Atlanta, GA. March, 2018*

- Lukemire, J., **Kundu**, S., Pagnoni, G., and Guo, Y. Bayesian Joint Modeling of Multiple Brain Networks. *Eastern North American Region Meeting*, 2018.

- Lukemire, J., **Kundu**, S., Pagnoni, G., and Guo, Y. Bayesian Joint Modeling of Multiple Brain Networks. *Poster at Georgia Statistics Day 2018 Presentations*

- Lukemire, J., **Kundu**, S., Pagnoni, G., and Guo, Y. "Bayesian Joint Modeling of Multiple Brain Functional Networks", *Joint Statistical Meetings 2019.*

- Lukemire, J., **Kundu**, S., Pagnoni, G., and Guo, Y. "Statistical Methods for Brain Network Estimation". *Senior Student Presentations 2019, Department of Biostatistics, Emory University.*

- Guo, Y., **Kundu**, S., Higgins, I. "Statistical methods for exploring brain networks using multimodality neuroimaging". *Joint Statistical Meetings (JSM), Vancouver, CA, Aug., 2018.*

- Higgins, I., **Kundu**, S., and Guo, Y. "Comparison of Functional Brain Networks via Correlation Preserving Random Networks ". *Contributed Session "Brain Structural and Functional Connectivity Analysis". Joint Statistical Meetings (JSM), Vancouver, Canada, 2018.*

- Ma, X., **Kundu**, S., Stevens, J. "Latent scale prediction model for network valued covariates. *Poster at Georgia Statistics Day 2018.*

- Ma, X., **Kundu**, S., Stevens, J. "Latent Scale Prediction Model for Network Valued Covariates. *Poster at ENAR spring meeting 2019.*

- Ma, X., **Kundu**, S., Stevens, J. "Bayesian Network Manifold Regression. *Presentation at the EPICORE meeting at the Epidemiology Department, 2019.*

- Suthaharan, S., and **Kundu**, S. Illuminating privacy weaknesses in predictive models of fMRI data using compressed sensing and compressed learning. *Poster presented at Stanford Compression Workshop 2019 .*

- Guo, Y., **Kundu**, S., Lukemire, J., and Higgins, I. Statistical methods for reliable and reproducible brain network analysis. *Invited Session Advancing the statistical analysis of neuroimaging data. Joint Statistical Meetings (JSM), Denver, CO, Aug., 2019.*

- Anderson A.M., Tang, B., Vaida, F., Okwuegbuna, O., McClernon, D., Deutsch, R., **Kundu**, S., Cherner, M., Cookson, D., Crescini, M., Grant, I., Ellis, R.J., Letendre, S.L. "CSF CXCL-10 is associated with the presence of low-level CNS HIV during suppressive ART". *Abstract Accepted to Conference on Retroviruses and Opportunistic Infections (CROI), Chicago, IL, 2021.*

Memberships

- American Statistical Association (since 2010)

- International Biometric Society (since 2010)

- International Society for Bayesian Analysis (since 2011)

- International Indian Statistical Association (Lifetime Membership).

Software

- EMSHS: R package for for *Scalable Bayesian Variable Selection for Structured High Dimensional Data*

  `https://cran.r-project.org/web/packages/EMSHS/index.html`

- siGGM: R package for *Integrative Bayesian analysis of brain functional networks incorporating anatomical knowledge*

  `https://github.com/Emory-CBIS/siGGM`

- CCPD: Matlab toolbox for *Estimating Dynamic Brain Functional Networks Using Multi-subject fMRI Data*

  `https://github.com/Emory-CBIS/CCPD`

- Matlab toolbox for *Bayesian Joint Learning of Multiple Brain Functional Networks*

  `https://github.com/JoshuaLukemire/BJNL`

- DDT: A Matlab toolbox for *A Differential Degree Test for Comparing Brain Networks.*

  `https://github.com/Emory-CBIS/DDT`