Samiran Sinha

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Research interests

Bayesian computation, Measurement error and misclassification, Missing data, Statistical computation

Education

University of Florida Gainesville, FL, USA
PhD in Statistics 2004
Calcutta University Kolkata, West-Bengal, India
MSc in Statistics 1999
Kalyani University Kalyani, West-Bengal, India
BSc in Statistics 1997

Professional Appointment

Professor (August 2017-), Department of Statistics, Texas A&M University, College Station, Texas

Associate Head for Operations (August 2019- March 2020), Department of Statistics, Texas A&M University, College Station, Texas

Associate Professor (August 2010- August 2017), Department of Statistics, Texas A&M University, College Station, Texas

Assistant Professor (August 2004- August 2010), Department of Statistics, Texas A&M University, College Station, Texas

Other employment

Visiting Associate Professor (May 2011–June 2011), Department of Probability and Statistics, Michigan State University, East Lansing, Michigan

Visiting Assistant Professor (May 2010–June 2010, July 2009–August 2009), Department of Probability and Statistics, Michigan State University, East Lansing, Michigan

Cancer Research Fellow (Summer 2003), Division of Cancer Epidemiology and Genetics, The National Cancer Institute, (NCI/NIH), Bethesda, MD

August 2002 – May 2004: Research Assistant, Department of Statistics, University of Florida

Editorial responsibility

Associate Editor of *Sankhya, Series B* (January 2016–present)
Associate Editor of *Statistics in Medicine* (April 2017–present)

Publications

48. Yi, Z., Strigari, L. E., Jin, L. and **Sinha, S.** Prospects for measuring the time variation of astrophysical neutrino sources at dark matter detectors. Physical Review D.

47. Chattopadhyay, A., Hoh, D., Kramer, D. M., Maiti, T. and **Sinha, S.** CMPLE: Correlation modelling to decode photosynthesis using the minorize-maximize algorithm. *Journal of Agricultural, Biological and Environmental Statistics.* https://link.springer.com/article/10.1007/s13253-024-00627-9

46. Zhuang, Y., Strigari, L. E., Jin, L. and **Sinha, S.** Detection of astrophysical neutrinos at prospective locations of dark matter detectors. *Phys. Rev. D*, 109, 043055.

45. Huang, W., Page, R. L., Morris, T., Ayres, S., Ferdinand, A. O. and **Sinha, S.** Maternal exposure to SSRIs or SNRIs and the risk of congenital abnormalities in offspring: A systematic review and meta-analysis. *PLoS ONE*. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0294996

44. Nault, R., Saha, S., Bhattacharya, S., **Sinha, S.**, Maiti, T., and Zacharewski, T. (2022). Single cell transcriptomics shows dose-dependent disruption of hepatic zonation by TCDD in mice. To appear in *Toxicological Sciences*. https://www.biorxiv.org/content/10.1101/2022.06.15.496321v1.full

43. Rivera-Velez, A., Huber, L., **Sinha, S.** and Cohen, N. D. (2022). Fitness cost conferred by the novel erm(51) and rpoB mutation on environmental multidrug resistant-Rhodococcus equi. *Veterinary Microbiology*. https://www.sciencedirect.com/science/article/pii/S0378113522002012

42. Wang, T.[*], He, K., Ma, W., Bandyopadhyay, D. and **Sinha, S**. (2022). Minorize-maximize algorithm for the generalized odds rate model for clustered current status data. *The Canadian Journal of Statistics*. https://www.sciencedirect.com/science/article/pii/S0378113522002012

41. Nault, R., Saha, S., Bhattacharya, S., Dodson, J., **Sinha, S.**, Maiti, T. and Zacharewski, T. (2022). Benchmarking of a Bayesian single cell RNAseq differential gene expression test for dose-response study designs. *Nucleic Acids Research*. Published 21 January 2022. https://doi.org/10.1093/nar/gkac019

40. Manuel, C.[*], **Sinha, S.** and Wang, S. (2022). Reduction of bias due to misclassified exposures using instrumental variables. *The Canadian Journal of Statistics*. https://onlinelibrary.wiley.com/doi/10.1002/cjs.11705

39. Hu, L.,[†] Mandal, S.[*] and **Sinha, S**. A comparative study of two-sample tests for interval-censored data. *Journal of Statistical Computation and Simulation*, 2021. https://www.tandfonline.com/doi/full/10.1080/00949655.2021.1955884

38. Karmakar, M., Lai, P-C., **Sinha, S.**, Glaser, S. and Chakraborty, S. Identification of miR-203a, mir-10a, and miR-194 as predictors for risk of lymphovascular invasion in head and neck cancers. *Oncotarget*, 2021; **12**:1499–1519. https://doi.org/10.18632/oncotarget.28022

37. Dutta, B., Lang, R.F., Liao, S., **Sinha, S.**, Strigari, L. and Thompson, A. A global analysis strategy to resolve neutrino NSI degeneracies with scattering and oscillation data. *J. High Energ. Phys.* 2020, 106 (2020). https://doi.org/10.1007/JHEP09(2020)106

[*]Dr. Sinha's graduate student

[†]Dr. Sinha's undergraduate student

36. Singh, S., Venkatasamy, L., White, T., **Sinha, S.**, Glaser, S., Safe, SS., and Chakraborty, S. CXCL11/CXCR3 mediates tumor lymphatic crosstalk and inflammation induced tumor promoting mechanisms in head and neck cancers. *American Journal of Pathology*. 2020 Apr;190(4):900-915.

35. Lee, D.*, Lahiri, S. N. and **Sinha, S.** A test of homogeneity of distributions when observations are subject to measurement errors. *Biometrics*. 2020 Sep;76(3):821–833. doi: 10.1111/biom.13207. Epub 2020 Jan 6.

34. Dutta, B., Liao, S., **Sinha, S.** and Strigari, L. E. Searching for Beyond the Standard Model Physics with COHERENT energy and timing data. *Physical Review Letters*, **123**, 061801 (2019).

33. Mandal, S.*, Wang, S., and **Sinha, S.** Analysis of linear transformation models with covariate measurement errors and interval censoring. *Statistics in Medicine*. https://doi.org/10.1002/sim.8323

32. Lee, D.* and **Sinha, S.** Identifiability and bias reduction in the skew-probit model for a binary response. *Journal of Statistical Computation and Simulation*, **89**, 1621–1648.

31. Manuel, C. M.*, **Sinha, S.**, and Wang, S. Matched case-control data with a misclassified exposure: What can be done with instrumental variables? *Biostatistics*. https://doi.org/10.1093/biostatistics/kxz012

30. Wei, Y., Ma, Y., Garcia, T. P., and **Sinha, S.** (2018). Consistent estimator for logistic random effect model. *The Canadian Journal of Statistics*, **47**, 140–156.

29. Lee, D.*, Carroll, R. J., and **Sinha, S**. (2017). Frequentist standard errors of Bayes estimators. *Computational Statistics*, **32**, 867–888.

28. Cook, S., Betsabe, B., Carroll, R. J., and **Sinha, S.**. (2017). Two wrongs make a right: Addressing underreporting in binary data from multiple sources. *Political Analysis*, **25**, 223–240.

27. Zhang, Z., **Sinha, S.**, Maiti, T., and Ship, E. (2018). Bayesian variable selection in the AFT model with an application to the SEER breast cancer data. *Statistical Methods in Medical Research*, **27**, 971–990.

26. Maiti, T., **Sinha, S.**, and Zhong, P-S. (2016). Functional mixed models for small area estimation. *Scandinavian Journal of Statistics*, **43**, 886–903.

25. **Sinha, S.** and Ma, Y. (2016). Analysis of proportional odds models with censoring and errors-in-covariates. *Journal of the American Statistical Association*, **111**, 1302–1312.

24. **Sinha, S**. and Wang, S. (2015). Semiparametric Bayesian analysis of censored linear regression with errors-in-covariates. *Statistical Methods in Medical Research*, April 15, 2015 0962280215580668.

23. Miao, J.*, **Sinha, S**., Wang, S., Diver, R. W., and Gapstur, S. M. (2014). Analysis of multivariate disease classification data in the presence of partially missing disease traits. *Journal of Biometrics & Biostatistics*, 5. pii: 1000197, 2014;5. pii: 1000197, PMID: 25530913 [PubMed] PMCID: PMC4270282.

22. **Sinha, S.**, Saha, K. K., and Wang, S. (2014). Semiparametric approach for non-monotone missing covariates in a parametric regression model. *Biometrics*, **70**, 299–311.

21. **Sinha, S.** and Ma, Y. (2014). Semiparametric analysis of linear transformation models with covariate measurement errors. *Biometrics*, **70**, 21–32.

20. Maiti, T., Ren, H. and **Sinha, S**. (2014). Prediction error of small area predictors with shrinking both mean and variances. *Scandinavian Journal of Statistics*, **41**, 775–790.

19. **Sinha, S**. and Yoo, S.* (2013). Score tests in the presence of errors in covariate in matched case-control studies. *Journal of Multivariate Analysis*, **115**, 157–171.

18. **Sinha, S.** (2012). A functional method for conditional logistic regression with errors-in-covariates. *Journal of Nonparametric Statistics*, **24**, 577–595.

17. Dass, S. C., Maiti, T., Ren, H. and **Sinha, S**. (2012). Confidence interval estimation of small area parameters shrinking both mean and variances. *Survey Methodology*, **38**, No. 2, 173–187.

16. Kuskie, K. R., Smith, J. L., **Sinha, S.**, Carter, C. N., Chaffin, M. K., Slovis, N. M., Brown, S. E., Stepusin, R. S., Takai, S., Cohen, N. D. (2011). Associations between the exposure to airborne virulent rhodococcus equi and the incidence of R equi pneumonia among individual foals. *Journal of Equine Veterinary Science*, **31**, 463–469.

15. Ahn, J., Mukherjee, B., Gruber, S. B., and **Sinha, S.** (2011). Missing exposure data in stereotype regression model: application to matched case-control study with disease subclassification, *Biometrics*, **67**, 546–558.

14. **Sinha, S.** (2010). An estimated-score approach for dealing with missing covariate data in matched case-control studies, *The Canadian Journal of Statistics*, **38**, 680–697.

13. Sun, J. X.*, **Sinha, S.**, Wang, S., and Maiti, T. (2010). Bias reduction in conditional logistic regression. *Statistics in Medicine*, **30**, 348–355.

12. Osterstock, J. B., **Sinha, S.**, Seabury, C. M., Cohen, N. D. (2010). Classifying disease states in genetic association studies for paratuberculosis. *Preventive Veterinary Medicine*.

11. Chatterjee, N., **Sinha, S.**, Diver, W. R., and Feigelson, H. S. (2010). Analysis of cohort studies with multivariate, partially observed, disease classification data, *Biometrika*, **97**, 683–698.

10. **Sinha, S.**, Mallick, B. K., Kipnis, V., and Carroll, R. J. (2010). Semiparametric Bayesian analysis of nutritional epidemiology data in the presence of measurement error, *Biometrics*, **66**, 444–454.

9. **Sinha, S.** and Wang, S. (2009). A new semiparametric procedure for matched case-control studies with missing covariates, *Journal of Nonparametric Statistics*, **21**, 889–905 .

8. **Sinha, S.**, Gruber, S. B., Mukherjee, B., and Rennert, G. (2008), Inference of haplotype effect in matched case-control study using unphased genotype data, *International Journal of Biostatistics*, **4**, Issue 1, Article 6.

7. **Sinha, S.** and Maiti, T. (2008), Analysis of matched case-control data in presence of nonignorable missing data, *Biometrics*, **64**, 106–114.

6. **Sinha, S.**, Mukherjee, B., and Ghosh, M. (2007), Modelling association among multivariate exposures in case-control studies, *Sankhya*, **69**, 379–404.

5. Mukherjee, B., Liu, I., and **Sinha, S.** (2007), Analyzing matched case-control data with multiple ordered disease states, possible choices, and comparisons, *Statistics in Medicine*, **26**, 3240–3257.

4. Mukherjee, B., Zhang, L., Ghosh, M., and **Sinha, S.** (2007), Semiparameteric Bayesian analysis of case-control data under gene-environment independence and population stratification, *Biometrics*, **63**, 834–844.

3. **Sinha, S.**, and Mukherjee, B. (2006), A score test for determining sample size in matched case-control studies with categorical exposure, *Biometrical Journal*, **48**, 35–53.

2. **Sinha, S.**, Mukherjee, B., Ghosh, M., Mallick, B. K., Carroll, R. J. (2005), Semiparametric Bayesian Analysis of Matched case-control studies with missing exposure, *Journal of the American Statistical Association*, **100**, 591–601.

1. **Sinha, S.**, Mukherjee, B., and Ghosh, M. (2004), Bayesian semiparametric modeling for matched case-control studies with multiple disease states, *Biometrics*, **60**, 41–49.

Book chapters and other publications

5. Wang, T.*, Bandyopadhyay, D. and **Sinha, S**. Efficient estimation of the additive risks model for interval-censored data. To appear in 2023 as a book chapter in an edited volume on interval-censored data (editors Jianguo Sun amd Ding-Geng Chen).

4. **Sinha, S.** (2021). Bayesian approaches for handling covariate measurement error. Handbook of Measurement Error Models Edited by Grace Yi, Aurore Delaigle and Paul Gustafson (Chapman & Hall/CRC Press), eBook ISBN 9781315101279.

3. **Sinha, S.** (2008). Book review of "Introduction to Bayesian Statistics" by William M. Bolstad. *The American Statistician*, **62**, 268–268.

2. **Sinha, S.** (2007). Bayesian methods for case-control studies. *Bulletin of the International Society for Bayesian Analysis*, **14**, 5–8.

1. Mukherjee, B., **Sinha, S.**, and Ghosh, M. (2005), Bayesian analysis for case-control studies: A review article, *Handbook of Statistics*, Edited by D. K. Dey and C. R. Rao., **25**, 793–819.

Grants and awards

International Conference Travel Grant from the College of Arts & Sciences, Texas A&M University, in the amount of $1,500. This grant will support travel to Cochin University of Science and Technology, India for the IISA 2024 Conference from December 27-31, 2024.

Role: PI, STRP program, College of Arts & Sciences, Texas A&M University, Topic: Development of statistical tools to investigate the role of the mTOR signaling pathway on rhythmic gene expression, 03/01/2024-12/01/2024

Role: Co-PI (PI: Mahua Choudhury), Texas A&M University Race & Ethnic Studies Institute (RESI) Faculty Interdisciplinary Seed Grants, Topic: Saving Hispanic mothers and newborns through miRNA-Epigenetic biomarkers, 01/01/24-08/31/25

Role: Co-PI (PI: Scott Cook), Texas A&M University Seed Grant Program for Promoting Research Collaborations, Topic: Some problems of underreporting and sample selection bias, 06/01/22-05/31/23

Role: Co-PI (PI: Theresa Morris), Texas A&M University X-Grant Program, Title: Saving Babies Born with Birth Defects: Crafting epigenetic risk scores to reduce racial disparity in mortality, 09/01/21-08/31/23

Role: Co-PI (PI: Bhaskar Dutta), TAMU College of Science FY18 Strategic Transformative Research Program, Title: Searching for New Physics with Coherent Neutrino-Nucleus Scattering, 06/01/18-05/31/19

Role: PI, NIH, R03CA176760, Title: Innovative approaches for analyzing SEER breast cancer data, 04/01/2013-31/03/2016

Role: PI, NSF, SES-0961618, Title: Collaborative research: Statistical methods based on parametric and semiparametric hierarchical models to solve problems related to socio-economic-demographic deprivation measures, 05/01/10-04/30/13

Role: PI, NSF, DMS-1007612, Title: North American Meeting of New Researchers in Statistics and Probability, 03/15/10-02/28/11

Role: PI, NIH, R13 CA153712, Title: North American Meeting of New Researchers in Statistics and Probability, 05/01/10-04/30/11

Role: PI, NSA, Title: The 13th North American Meeting of New Researchers in Statistics and Probability, 05/01/10-04/31/11

Doctoral students

Tong Wang, graduated in August 2021, dissertation title: Novel Computational Techniques for Semiparametric Analysis with Interval-Censored Data.

Christopher Manuel, graduated in August 2020, jointly advised with Suojin Wang, dissertation title: Novel Methods For Addressing Bias From Misclassified Exposure Variables.

DongHyuk Lee, graduated in August 2018, dissertation title: Testing Statistical Hypotheses for Latent Variable Models and Some Computational Issues.

Soutrik Mandal, graduated in August 2018, jointly advised with Suojin Wang, dissertation title: Analysis and Goodness-of-Fit Tests for Time-to-Event Models.

Jiangang Miao, graduated in August 2014, jointly advised with Suojin Wang, dissertation title: New Advances in Logistic Regression for Handling Missing and Mismeasured Data with Applications in Biostatistics.

Jenny X. Sun, graduated in August 2010, jointly advised with Suojin Wang, dissertation title: Bias Reduction and Goodness-of-Fit Tests in Conditional Logistic Regression Models.

MS students

Beth Harlos (Spring 2023), Clarady Nathaniel (Spring 2023), Kenneth Porter (Spring 2023), Aaron Ross (Spring 2023), Matt Chesney (Summer 2022), Casey Moroney (Summer 2022), Eric Holdaway (Fall 2021), Amrendra Kumar (Summer 2021), Robert Leonard (Summer 2021), Delaine Mansfield (Spring 2021), Christopher Severs (Summer 2021), Carolina Nyaiburi (Fall 2020), Gordon Olwell (2019), Nancy Suralik (2019), April Thatcher (2019), Shelby Cumming (2016), Allen Haas (2016), Kate Mulan (2016), Abigail Green (2013), Craig Kreisler (2013), Stacie Blaskowski (2012), Charles Gordon (2012), Jenn Hanley-Burkhart (2012), Minkyung Oh (2011),Seungyoon Yoo (2010)

Undergraduate students

Zane Ali (Summer 2024), Wesley Fletcher (Summer 2024), Arjun Ankad (Spring 2024), Kyle Schichl (Fall 2021-Spring 2022), Jiahong Zhou (Fall 2019- Summer 2020), Linhan Hu (2018-2019)

Students' awards/honors

Wesley Fletcher secured the third place in the the poster session at the 7th Annual Symposium Cancer Research: Basic Science to Bioinformatics for his work, *Benchmarking of variable selection techniques in the Cox regression survival model using synthetic data.*

Kyle Schichl secured the second place among undergraduates in the 2022 SETCASA poster session for his work, *Attributable risk estimation for censored data: An application to HIV.*

DongHyuk Lee won the Bronze prize in the 2018 SETCASA poster session for his work, *A test of homogeneity of distributions when observations are subject to measurement errors.*

Teaching experience

STAT 211: Principles of Statistics I, STAT 302: Statistical Methods, STAT 415: Mathematical Statistics II, STAT 605: Advanced Statistical Computations, STAT 611: Statistical Inference Part II, STAT 638: Applied Bayesian Analysis, STAT 641: The Methods of Statistics I, STAT 645/445: Applied Biostatistics & Data Analysis, STAT 652: Statistics in Research II, STAT 659: Applied Categorical Data Analysis

Department committees and services

Elected member to the Faculty Senate of Texas A&M University (Fall 2022–2025), member of the senate bylaws committee 2022–2024, co-chair of the senate bylaws committee (2023-2024), member of the senate research committee 2024–2025

Chair of the Departmental Award Committee (August 2023–)

Chair of the internal advisory committee of the statistical consulting unit (August 2019–)

Chair of the P&T committee (Fall 2020– Spring 2022)

Associate Head for Operations (August 2019- March 2020)

Chair of the Faculty Advisory Committee (August 2019- March 2020)

Chair of the Director Search Committee for the Statistical Consulting Unit (2019)

Chair of the Ph.D. qualifying examination for 2019

Member of the Ph.D. qualifying examination committee (2009– 2015, 2018), graduate curriculum committee (2014), committee of statistical computing (2017-2018), promotion and tenure committee (2012, 2018, 2020-2023), the faculty advisory committee (2018- March 2020)

Associate Graduate Adviser (Fall 2018)

Director of the Statistical Consulting Center (Fall 2018- Summer 2019)

Short course

Offered a short course jointly with Malay Ghosh and Bhramar Mukherjee on "Bayesian Analysis of Case-Control Data" at the joint statistical meeting, 2006, Seattle.

Role as a referee

Served in the NSF panel, Spring 2024

Reviewed proposals for NSA and NSF (Spring 2010)

Reviewed NIH proposals for RO3 & R21 application (review cycle in October 2015 and March 2016), R13 applications (review cycle in March 2011 and June 2015), "Clinical trial units for NIAID networks (UMI)" (July 2013)

Served as an external reviewer of a dissertation from the University of British Columbia (2016)

Reviewed articles for Annals of the Institute of Statistical Mathematics, Biological Psychiatry, Biometrical Journal, Biometrics, Biostatistics, Communication of Statistics, Computational Statistics and Data Analysis, Electronic Journal of Statistics, Journal of Applied Statistics, Journal of the American Statistical Association, Journal of Multivariate Analysis, Journal of the Nonparametric Statistics, Journal of the Royal Statical Society, Series B, Journal of the Statistical Planning and Inference, Scandinavian Journal of Statistics, SCIENCE CHINA Mathematics, Stat, Statistical Methods in Medical Research, Statistics and its Interface, Statistics in Medicine, Statistical Modelling, Statistica Sinica, Statistics in Transition new series, The Canadian Journal of Statistics

Judging

Served as a judge to Student Research Week (SRW) 2022 at Texas A&M University Campus, March 23-24, 2022.

Served as a judge to the 17th Texas A&M University System Pathways Student Research Symposium, College Station, March 3-4, 2022.

Chairing and organizing sessions and symposiums

Organizing the invited session entitled, *Innovative statistical and machine learning methods for survey data* in the JSM 2024. Speakers: Taps Maiti, Qixuan Chen, Chien-Min Huang, and Samiran Sinha.

Co-organized the invited session entitled, *Innovative statistical and computational methods for causal discovery, image analysis, regression, and social conflicts* in the CMStatistics Conference, Dec 16-18, 2023, Berlin, Germany. Speakers: Snigdhansu Chatterjee, Debashis Ghosh, Karl Gregory, and Yang Ni.

Co-organized the invited session entitled, *Network Analysis in Biostatistics* in the 36th New England Statistics Symposium 2023, June 03-06, Boston. Speakers: Sarmistha Guha, Sayar Karmakar, Giovanni Motta, and Yorghos Tripods.

Chaired one of the keynote presentations at the Conference on Advances in Data Science– Theory, Methods, and Computation, October 21-22, 2022, Hilton College Station & Conference Center.

Organized the invited session entitled, *Big data analytics with applications to astronomy* in the International Indian Statistical Association (IISA) 2021 Conference, May 20–23, 2021. Speakers: Giovanni Motta, Vinay Kashyap, and David Jones.

Co-organized the topic contributed session, *Addressing Complications in Causal Inference* in the Section on Statistics in Epidemiology, Biometrics Section, ENAR, in the JSM 2020. Speakers: Yifan Cui, Lan Wen, Isabel Fulcher, James O'Malley, and Samiran Sinha.

Co-organized the invited session, *New methods for complex data and Big Data analysis* in the 2020 ICSA Applied Statistics Symposium. Speakers: Yang Ni, Peter Mueller, and Jeffrey Moris.

Chaired and co-organized a mini-symposium on *Statistical Significance*, Nov 22, 2019, on the Texas A&M campus. Speakers: Heath Blackmon, Sanjuka Chakraborty, Dennis Gorman, Ivan Ivanov, Valen E. Johnson, Stephen Walker. Discussants: Jeffrey Hart, Darren Homrighausen, and Stephen Walker.

Organized the invited session entitled, *Recent developments on the issue of measurement errors* in the International Indian Statistical Association (IISA) 2017 Conference on Statistics, held in Hyderabad, India, December 28–30, 2017. Speakers: Yi-Hua Chen, Malka Gorfine, Suojin Wang.

Organized the topic-contributed session entitled, *Innovative Bayesian methods in Biostatistics* in the Joint Statistical Meeting, 2016. The section on Bayesian Statistical Science sponsored this session. Speakers: Nilabja Guha, Jeffrey Hart, Huiyan Sang, and Xia Wang.

Organized the invited session *Inverse problems with application in statistics* at the IISA 2014 Conference. Speakers: Xiaofeng Wang, Jean-Pierre Florens, and Samiran Sinha.

Chaired the session *Bayes estimation in Modern Cancer Epidemiological Studies* at the IISA 2014 Conference, Riverside, CA.

Organized the invited session, *Disease mapping and spatial regression as emerging tools for surveillance epidemiology* at the ENAR meeting 2011. Speakers: Peter Congdon, Lance Waller, Tapabrata Maiti, and Andrew Lawson.

Chaired the session *Disease mapping and spatial regression as emerging tools for surveillance epidemiology* at the ENAR 2011 meeting.

Chaired and organized the IMS new researchers conference 2010. This conference was held in Vancouver, Canada; details of the conference can be found at `http://www.stat.tamu.edu/sinha/nrc2010-ims.html`.

Organized the invited session *Shrinkage estimation in Microarray data analysis* at the ENAR 2010 meeting. Speakers: James Booth, Marina Vannucci, Dan Nettleton, and Tapabrata Maiti.

Organized the invited session *The issue of high dimensionality and missing data in complex epidemiological studies* in the Biometrics Section at the 2009 Joint Statistical Meeting (JSM). Speakers: Rebecca Betensky, Nicholas P. Jewell, Bin Nan, and John Neuhaus. Discussant: Samiran Sinha.

Served as a member of the IMS new researchers conference organizing committee (2008–2010).

Co-organized the invited session, *Current Issues in Molecular Epidemiology-Heterogeneity and High-Dimensionality* in the Epidemiology Section at the 2008 JSM. Speakers: James Gauderman, Mitchell Gail, Hongzhe Lee, and Yi-Hai Chen. Discussant: Colin Begg.

Chaired the session entitled *Environmental Models and Assessing Gene-Environment Interactions* sponsored by the Biometrics Section, WNAR, ENAR at the JSM 2006, Seattle.

Organized the invited session, *Bayesian methods in cancer research* in the biopharmaceutical section at the 2005 JSM, Minneapolis, Minnesota. Speakers: Malay Ghosh, Bhramar Mukherjee, Peter Müller, and Sholom Wacholder.

Chaired the session, *Bayesian methods in cancer research* at the JSM 2005, Minneapolis, Minnesota.

Other service

Served as the 2007-2008 chapter representative for the South East Chapter of the American Statistical Association.

Invited and contributed presentations

57. Invited presentation at the Zorich Reliability workshop, College Station, Texas, on September 27, 2024; title: Revisiting the two-sample problem for convoluted data.

56. Invited presentation at St. Xavier University, Kolkata, India, on September 3, 2024; title: Revisiting the two-sample problem for convoluted data.

55. Invited presentation at the the JSM 2024 conference, Portland, Oregon, Aug 02-08, 2024; title: Revisiting the two-sample problem with measurement errors.

54. Invited presentation at the WNAR 2023 conference, Anchorage, Alaska, June 18-21, 2023; title: Benchmarking of a Bayesian single cell RNAseq differential gene expression test for dose-response study designs.

53. Invited presentation at the conference on Advances in Statistical and Computational Methods for Analysis of Biomedical, Genetic, and Omics Data, March 17-19, 2023, at The University of Texas at Dallas, Richardson, Texas, United States; title: Efficient estimation of the additive risks model for interval-censored data.

52. Invited presentation at the 2022 IISA Conference in Bengalore, India, date: Dec 27, 2022; title: Efficient estimation of the additive risks model for interval-censored data.

51. Invited presentation in the topic-contributed session, *Statistical Methods for Single Cell Genomics and Spatial Transcriptomics* at the JSM 2022, date: August 10, 2022, title: Bayesian Analysis of Single-Nuclei Dose Response Data.

50. Invited presentation at the College of Veterinary Medicine and Biomedical Sciences-PostDoc Association (CVMBS-PDA)'s lunch meeting, date: Nov 18, 2021, title: Case-control studies in epidemiological research.

49. Colloquium talk at the Federal University of Pernambuco (UFPE), Brazil, date: May 5, 2021, title: How to use instrumental variables to reduce misclassification bias.

48. Invited presentation at JSM 2020, session title: Time-to-event models for complex observational studies, date: August 6, 2020, title: Addressing Misclassification Bias of an Exposure Variable with Multiple Categories.

47. Invited presentation at the 2020 ICSA Conference in Houston, date: May 17–20, 2020; title: Novel semiparametric Bayesian methods for the competing risks data with length-biased sampling.

46. Invited presentation at the 2019 IISA Conference in Mumbai, date: Dec 28, 2019; title: Efficient estimation of cure rate frailty models for clustered current status data.

45. Invited presentation at JSM 2019, Session title: Time-to-event models for complex observational studies, date: July 30, 2019, title: Cure rate frailty models for clustered current status data with informative cluster size.

44. Contributed talk at the JSM 2018, Vancouver, date: July30, 2018, title: Analysis of Matched Case-Control Study with a Misclassified Exposure.

43. Invited presentation at the IISA 2018 Conference at the University of Florida, date: May 17–20, 2018, title: Analysis of Matched Case-Control Study with a Misclassified Exposure.

42. Department of Biostatistics, Virginia Commonwealth University, date: Feb 17, 2017, title: Analysis of proportional odds models with censoring and errors-in-covariates.

41. Invited presentation at the Platinum Jubilee International Conference on Applications of Statistics, in Kolkata, India, date: December 21–23, 2016, title: Semiparametric Bayesian analysis of censored linear regression with errors-in-covariate.

40. Invited presentation at the 2016 IISA Conference at Oregon State University, Corvallis, OR, date: August 18–21, 2016, title: Analysis of proportional odds models with censoring and errors-in-covariates.

39. Invited presentation at the workshop on *Newest Developments and Urgent Issues in Measurement Error and Latent Variable Problems* at Banff, Alberta, Canada, date: August 14–19, 2016, title: Analysis of proportional odds models with censoring and errors-in-covariates.

38. Invited presentation at the SRCOS Summer Research Conference, Bentonville, AR, date: June 5–8, 2016, title: Semiparametric analysis of linear transformation models with covariate measurement errors.

37. Department of Statistics and Probability, Michigan State University, date: March 15, 2016, title: Analysis of proportional odds models with censoring and errors-in-covariates.

36. Department of Management Science and Statistics, UTSA, date: February 13, 2015, title: Semiparametric Bayesian analysis of censored linear regression with errors-in-covariates.

35. Contributed talk at the JSM 2014, Boston, title: Semiparametric Bayesian estimation of survival probabilities based on the SEER breast cancer data.

34. Invited presentation at the Conference on *Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys and Big Data*, Maryland, date: May 29–31, 2014, title: Semiparametric analysis of linear transformation models with covariate measurement errors.

33. Invited presentation at the 2014 IISA Conference, Riverside, California, date: July 11–13, 2014, title: Semiparametric analysis of linear transformation models with covariate measurement errors.

32. Department of Biostatistics, Columbia University, date: Sept 05, 2013, title: Semiparametric analysis of linear transformation models with covariate measurement errors.

31. Invited presentation at the ICSA conference, Bethesda, MD, date: June 9–12, 2013, title: Semiparametric analysis of linear transformation models with covariate measurement errors.

30. Department of Mathematical Sciences, Boise State University, date: March 14, 2013, title: Conditional logistic regression analysis when a covariate is measured with error.

29. Invited presentation at the International Conference on Robust Statistics (ICORS), Burlington, Vermont, date: August 5–10, 2012, title: Semiparametric approach for non-monotone missing covariates in a parametric regression model.

28. Invited presentation at the ICSA 2012 Applied Statistics Symposium, Westin Waterfront, Boston, MA, date: June 23–26, 2012, title: A functional method for conditional logistic regression with errors-in-covariates.

27. Invited presentation at the 2012 New England Statistics Symposium, Boston University, April 21, 2012, title: A functional method for conditional logistic regression with errors-in-covariates.

26. Invited presentation at the 22nd Annual Conference of *The International Environmetrics Society*, Hyderabad, India, date: January 3–6, 2012, title: Handling missing values in spatial data.

25. Invited presentation at the Statistics 2011, Canada/IMST 2011-FIM XX, Concordia University, Montreal, July 1-4, 2011, title: Error corrected score tests in the presence of measurement error in the conditional logistic regression.

24. Contributed talk at the ENAR 2011 Spring Meeting, Miami, date: March 20–23, 2011, title: A Semiparametric correction to score tests in the presence of errors-in-covariate in the Generalized Linear Model.

23. Invited presentation at the Conference of Texas Statisticians 2009, Huntsville, Texas, date: March 28, 2009, title: Analysis of Cohort Studies with Multivariate, Partially Observed, Disease Classification Data.

22. Department of Mathematics and Statistics, University of Maryland, date: February 27, 2009, title: Semiparametric inference for matched case-control studies with missing covariate data.

21. Department of Statistics, University of Connecticut, Storrs, date: October 1, 2008, title: Semiparametric inference for matched case-control studies with missing covariate data.

20. Invited presentation at the Southern Regional Council on Statistics, Summer Research Conference on Modern Semiparametric Methods in Action, date: June 8–11, 2008, title: Semiparametric Bayesian analysis of nutritional epidemiology data in presence of measurement error.

19. Invited presentation at the International Indian Statistical Association (IISA) Conference, Connecticut, USA, date: May 22–25, 2008, title: Semiparametric Bayesian Analysis of Nutritional Epidemiological Data in the Presence of Measurement Error.

18. Department of Mathematical Sciences, Central Connecticut State University, date: November 9, 2007, title: Some Bayesian approaches for analyzing case-control data.

17. Contributed talk at ENAR 2007, Atlanta, title: Analysis of matched case-control data in presence of nonignorable missing exposure.

16. Invited presentation at the International Indian Statistical Association (IISA) Conference, Cochin, India, date: January 2–5, 2007. title: Semiparametric Bayesian analysis of matched case-control data with missing exposure.

15. Invited presentation at the Sixth International Triennial Calcutta Symposium, Calcutta, India, date: December 29–31, 2006, title: Analysis of matched case-control data in presence of nonignorable missing exposure.

14. Invited presentation at the Division of Epidemiology and Biostatistics, Memorial Sloan Kettering Cancer Center, date: October 4, 2006, title: Analysis of matched case-control data in presence of nonignorable missing exposure.

13. Department of Biostatistics, MD Anderson Cancer Center, date: April 2006, title: Analysis of matched case-control data in presence of nonignorable missing exposure.

12. Invited presentation at the Austin Chapter of American Statistical Association, date: April 1, 2006, title: Analysis of matched case-control data in presence of nonignorable missing exposure.

11. Department of Statistics, Iowa State University, date: February 2006, Title: Semiparametric Bayesian analysis of case-control data under gene-environment independence and population stratification.

10. Invited presentation at the Houston Chapter of American Statistical Association, date: December 2005, title: Semiparametric Bayesian analysis of case-control data under gene-environment independence and population stratification.

9. Poster presentation at 8th New Researcher Conference, Minneapolis, Minnesota, 2005, title: Bayesian regression splines for measurement error in matched case-control studies.

8. Department of Statistics, University of Georgia, date: October 2004, title: Bayesian semiparametric analysis of matched case-control studies.

7. Contributed talk at the ENAR Spring Meeting, date: March 2004, title: Bayesian semiparametric analysis of matched case-control studies.

6. Department of Epidemiology and Biostatistics, University of South Florida, date: March 2004, title: Bayesian semiparametric analysis of matched case-control studies.

5. Department of Statistics, Texas A&M University, date: March 2004, title: Bayesian semiparametric analysis of matched case-control studies.

4. Rollings School of Public Health, Emory University, date: February 2004, title: Bayesian semiparametric analysis of matched case-control studies.

3. Contributed talk at Bayesian Conference at Indian Statistical Institute, 2003, title: Semiparametric Bayesian analysis of matched case-control data.

2. Contributed talk at Joint Statistical Meeting 2003, San Francisco, California, title: Errors in exposure variable in matched case-control study.

1. Poster presentation at Division of Cancer Epidemiology and Genetics (NCI) in 2003, title: Estimating joint effect of two exposures in the presence of model uncertainty: Bayesian, frequentist, and model-selection approaches.

Professional membership

American Statistical Association