Tapabrata Maiti

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Michigan State University
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Professional Positions

- *Professor*: From August 2008 to present, Dept. of Statistics & Probability, Michigan State University.
- *Graduate Director*: From May 2010 to present, Dept. of Statistics & Probability, Michigan State University.
- *Special Government Employee*: From October 2007 to present, U.S. Environmental Protection Agency.
- *Assistant & Associate Professor*: From Jan 2002 to July 2008, Dept. of Statistics, Iowa State University.
- *Assistant Professor:* From August, 1997 to Dec. 2001, Dept. of Mathematics & Statistics, University of Nebraska-Lincoln.
- *ASA/NSF/Census Bureau Senior Research Fellow*, U.S. Census Bureau, 2001.
- *Research Fellow & Research Associate:* From September, 1991 to August, 1996, Council of Scientific & Industrial Research of India - working at Indian Statistical Institute, Kolkata.

Professional Interests

High-dimensional Data Analysis, Semi-parametric Methods, Small Area Estimation, Biostatistics, Spatial Statistics, Linear and Generalized Linear Mixed Models, Bayes and Empirical Bayes Methods, Statistical Methods for Large Genetic Data.

Awards and Honors

- **Fellow**, Institute of Mathematical Statistics, 2012.
- **Fellow**, the American Statistical Association, 2010.
- **Bose-Nandi** award for the best applied paper in Calcutta Statistical Association Bulletin, 2005, 2010.
- **ASA/NSF/Census Bureau** Senior Research Fellowship Award, 2001.
- **Layman Award**, University of Nebraska-Lincoln, 2000-2001.

- **Faculty Fellowship Award**, University of Nebraska-Lincoln, 2000-2001.
- **Gallup Research Professorship** for the year 1999-2000.
- Selected for **the RAJA RAO MEMORIAL PRIZE** for the best published research work in Survey Sampling done in India, 1995-1996.
- Awarded for outstanding performance in the joint CSIR-UGC eligibility test for Junior Research Fellowship & Lectureship, India, 1990.
- Recipient of National Scholarship, Government of India, 1988-1990.

Education

- Ph.D. Statistics, Kalyani University, India, 1996.
  Advisor: *Arijit Chaudhuri*, Indian Statistical Institute, Kolkata.
- Post Doctoral Fellow: From June, 1998 to August, 1999, Harvard Medical School, Boston.

Grants & Contracts

1. **National Science Foundation**, 2011-2014.*Modeling, Computational and Inferential Issues in Fingerprint and Health Monitoring Applications.* Co-Principal Investigator.
2. **National Science Foundation**, 2010-2013. *Statistical Methods Based on Parametric and Semiparametric Hierarchical Models to Solve Problems Related to Socio-Economic-Demographic Deprivation Measures.* Principal Investigator.
3. **National Institutes of Health**, 2010-2014. *Implementing Sustainable Diabetes Prevention and Self-Management in Primary Care*, Co-Investigator.
4. **Agency for Health Care Research and Quality**, 2010-2013. *A comparison of Provider versus Health Plan Delivered Care Management in Michigan*, Co-Investigator.
5. **Harvard School of Public Health**, 2007. Contract for *Statistical Methods for Time Course Gene Expression Data.*
6. **National Science Foundation**, 2006-2009. *Empirical and Hierarchical Bayesian Methods with Applications to Small Area Estimation.* Principal Investigator.
7. **USDA Natural Resources Conservation Service**, 2002 - 2008. *Statistical and survey methods support for the National Resources Inventory.* Co-Principal Investigator.
8. **U.S. Census Bureau**, 2006 summer. Contract for *Small Area Estimation.*
9. **National Center for Health Statistics**, 2005-2006. Contract for *A Unified System for Small Domain Estimation.*

10. **Building a Survey Framework to Close the Rural Data Gap**, 2005-2006. *Institute of Science & Society, Iowa State University.* Co-Principal Investigator.
11. **National Science Foundation**, 2004-2005. *Computing Equipment to Support Research in Statistics.* Co-investigator.
12. **American Statistical Association**, 2003, *Travel Fund: International Statistical Institute Meetings*, Berlin.
13. **National Science Foundation**, 2003-2006. *Topics in Small Area Estimation.* Principal Investigator.
14. **National Institute of Health**, 2001-2004. *Bayesian Neural Networks for a Prostrate Cancer Study.* Principal Investigator (sub-contract from the University of Florida).
15. **National Science Foundation**, 2000-2003 .*Bayesian and Likelihood Based Multilevel Models for Small Area Estimation.* Principal Investigator.
16. **ASA/NSF/Census Bureau Research Fellow Program**, 2001. *Bayesian and Likelihood Based Multilevel Small Area Models: Application to Income and Poverty Estimation.* Principal Investigator.
17. **National Science Foundation**, 1999-2000. *Robust Models for Small Area Estimation.* Principal Investigator.

Refereed Journal Publications

1. Hall, P., and **Maiti**, T. (2012). "Choosing Trajectory and Data Type when Classifying Functional Data". Accepted in *Biometrika.*
2. Mukhopadhyay, P., **Maiti**, T., and Fuller, W. (2012). "County level Estimation using Data from the U.S. National Resources Inventory", (Invited). Accepted in *Journal of the Indian Society of Agricultural Statistics.*
3. Dass, S.C., **Maiti**, T., Ren, H., and Sinha, S. (2012). "Small Area Estimation Shrinking both Means and Variance". Accepted in *Survey Methodology.*
4. Slud, E.V., and **Maiti**, T. (2011). Small area estimation based on survey data from a left-censored Fay-Herriot Model. *Journal of Statistical Planning and Inference*, **141**, 3520-3535.
5. Hu, P., and **Maiti**, T. (2011). " A Nonparametric Mean-Variance Smoothing Method to Assess Arabidopsis Cold Stress Transcriptional Regulator CBF2 Overexpression Microarray Data", *PLoS ONE*, **6**, e19640. doi:10.1371/journal.pone.0019640.
6. Dass, S.C. Lim, C and **Maiti**, T. (2011). "Default Bayesian Analysis for Hierarchical Spatial Multivariate Generalized Linear Mixed Models". *Statistica Sinica*, **22**, 231-248.

7. Xu, Y., Choi, J., Dass, S. and **Maiti**, T. (2011). "Sequential Bayesian Prediction and Adaptive Sampling Algorithms for Mobile Sensor Networks". *IEEE Transactions on Automatic Control*, **99**, pp.1, 0 doi: 10.1109/TAC.2011.2179430.
8. Sun, J., Sinha, S., Wang, S. and **Maiti**, T. (2011). "Bias corrected inference for the conditional logistic regression". *Statistics in Medicine*, **30**, 348-355.
9. Das, U., **Maiti**, T., and Pradhan, V. (2010). "Bias corrected logistic regression with missing categorical co-variates". *Journal of Statistical Planning and Inference.*, **140**, 2478-2485.
10. Khan, M.G.M., **Maiti**, T., and Ahsan, M.J. (2010). "An Optimal Multivariate Stratified Sampling Design Using Auxiliary Information: An Interger Solution Using Goal Programming Approach", *Journal of Official Statistics*, **26**, 695-708.
11. Demirkale, C.Y., Nettleton, D., and **Maiti**, T. (2010). "Linear mixed model selection for false disvovery rate in microarray data analysis". *Biometrics*, **66**, 621-629. Selected in Biometrics "showcase" session *"Breakthroughs in Bioinformatics and Statistical Genetics"* for the 2010 Joint Statistical Meetings.
12. Martin, A.M., Gutierrez-Pabello, J., Igor, K., **Maiti**, T. and Quanckenbush, J. (2009). "An improved empirical Bayes approach to estimating differential gene expression in microarray time-course data: BETR (Bayesian Estimation of Temporal Regulation). *BMC Bioinformatics*, 10:409.
13. **Maiti**, T., and Pradhan, V. (2009). "Bias reduction and a solution of separation for logistic regression with missing covariates". *Biometrics*, **65**, 1262-1269.
14. Hall, P., and **Maiti, T.** (2009). "Deconvolution methods for nonparametric inference in two-level mixed models". *Journal of Royal Statistical Society*, Series B, **71**, 703-718.
15. Ghosh, M., Kim, D-H., Sinha, K., **Maiti**, T., Katzoff, M., and Parsons, V.L. (2009). "Hierarchical and Empirical Bayes small domain estimation of persons without health insurance for minority sub-populations". Accepted in *Survey Methodology.*
16. **Maiti**, T., and Pradhan, V. (2008). "A comparative study of the bias corrected estimates in logistic regression". *Statistical Methods in Medical Research*, **17**, 621-634.
17. Ghosh, M., **Maiti**, T., and Roy, Ananya (2008). "Influence functions and robust Bayes and empirical Bayes small area estimation". *Biometrika*, **95**, 573-585.
18. Hall, P., and **Maiti, T.** (2008). "Nonparametric inference for clustered binary and count data when only summary information is available". *Journal of Royal Statistical Society, Series B*, **70**, 725-739.

19. Ghosh, M., **Maiti**, T. (2008). "Empirical Bayes Confidence Intervals for Means of Natural Exponential Family Quadratic Variance Function Distributions." *Scandinavian Journal of Statistics*, **35**, 484-495.

20. Sinha, D., **Maiti**, T., and Ibrahim, J.G. (2008). "Models for recurrent events data with dependent termination: A Bayesian perspective". *Journal of the American Statistical Association*, **103**, 866-878.

21. **Maiti**, T., Mukhopadhyay, P. and Miller, C. (2008) "Neural network imputation: an experience with the natural resources inventory surveys". *Journal of Agricultural, Biological, and Environmental Statistics*, **13**, 255-269.

22. Sinha, S., and **Maiti**, T. (2008). "Analysis of matched case-control data in presence of non-ignorable missing exposure". *Biometrics*, **64**, 106-114.

23. W-C Chen, and **Maiti**, T. (2007). "Analysis of cDNA microarray experiments with external controls: A mixed model approach. Accepted in *Calcutta Statistical Association Bulletin* (By Invitation, received Bose-Nandi award for the best application paper).

24. Lahiri, S.N., **Maiti**, T., Katzoff, M., and Parsons, V. (2007) "Resampling based empirical prediction: An application to small area estimation". *Biometrika*, **94**, 469-485.

25. Hall, P. and **Maiti**, T. (2006). "Nonparametric estimation of mean squared prediction error in nested-error regression models". *Annals of Statistics*, **34**, 1733-1750.

26. Banerjee, T., **Maiti**, T., Mukhopadhyay, P. (2006). "Classification of pathological stage of prostate cancer patients using penalized splines". *Computational Statistics and Data Analysis*, **51**, 1147-1155.

27. **Maiti**, T., and Mukhopadhyay, P. (2006) "Comparison of statistical classification methods based on a prostate cancer study". Accepted in *Calcutta Statistical Association Bulletin.* (By Invitation, received Bose-Nandi award for the best application paper).

28. Lahiri, S.N., Chatterjee, A., and **Maiti**, T. (2006). "A sub-Gaussian Berry-Esseen theorem for the hypergeometric distribution". Accepted in *Journal of Statistical Planning and Inference.*

29. Hall, P. and **Maiti**, T. (2006). "On bootstrap methods for small area prediction". *Journal of Royal Statistical Society, Series B*, **68**, 221-238.

30. Slud, E.V. and **Maiti**, T. (2006). "MSE estimation in transformed Fay-Herriot models". *Journal of Royal Statistical Society, Series B*, **68**, 239-257.

31. Chakraborty, S., Ghosh, M., **Maiti**, T., and Tewari, A. (2005)."Bayesian neural networks for bivariate binary data: An application to prostate cancer study". *Statistics in Medicine*, **24**, 3645-3662.

32. Crescenzi, M., Ghosh, M., and **Maiti**, T. (2005). Empirical Bayes estimatiors with uncertainty measures for NEF-QVF population. *Journal of the Iranian Statistical Society*, **4**, 1-19 (By Invitation).

33. Roy, S., Banerjee, T., and **Maiti**, T. (2005). "Measurement error model for binary responses when responses are subject to classification errors". *Statistics in Medicine*, **24**, 269-283.

34. Ghosh, M., **Maiti**, T., Kim, D., Chakraborty, S. and Tewari, A. (2004). "Bayesian neural network modeling in prostate cancer detection". *Journal of the American Statistical Association*, **99**, 601-608.

35. Ghosh, M. and **Maiti**, T. (2004). "Small area estimation based on natural exponetial family-quadratic variance function models and survey weights", *Biometrika*, **91**, 95-112.

36. Sinha, D., and **Maiti**, T. (2004). "A Bayesian approach for the analysis of panel-count data with dependent termination", *Biometrics*, **60**, 34-40.

37. Ghosh, M., Zidek, J.V., **Maiti**, T., and White, R. (2004). "Weighted likelihoods for the NEF-QVF family". *Canadian Journal of Statistics*, **32**, 139-157.

38. **Maiti**, T. (2004). "Applying jackknife method of mean squared prediction error estimation in SAIPE", *Statistics in Transition*, **6**, 685-695 (Special Issue on small area estimation).

39. **Maiti**, T. (2003). "Modeling small area effects using mixture of Gaussians", *Sankhyă*, **65**, 612-625.

40. Datta, G.S., Lahiri, P. and **Maiti**, T. (2002). "Empirical Bayes estimation of median income of four-person families by state using time series and cross-sectional data", *Journal of Statistical Planning and Inference*, **102**, 83-97. Special issue on Sampling.

41. Lahiri, P., and **Maiti**, T. (2002). "Empirical Bayes estimation of relative risks in disease mapping" *Calcutta Statistical Association Bulletin*, **53**, 213-223.

42. **Maiti**, T. (2001). "Robust generalized linear mixed models for small area estimation" *Journal of Statistical Planning and Inference*, **98**, 225-238.

43. Ghosh, M. and **Maiti**, T. (2001). "Transition modeling of longitudinal binary data: A Bayesian approach" *Calcutta Statistical Association Bulletin*, **51**, 203-204.

44. Datta, G.S., Lahiri, P., **Maiti**, T. and Lu, K.L. (1999). "Hierarchical Bayes estimation of unemployment rates for the U.S. states" *Journal of the American Statistical Association*, **94**, 1074-1081.

45. Ghosh, M. and **Maiti**, T. (1999). "Adjusted Bayes estimators with application to small area estimation", *Sankhyă*,B, **61**, 71-90. Special issue on Sampling.

46. Datta, G.S., Day, B. and **Maiti**, T. (1998). "A nested error regression model for multivariate hierarchical Bayes estimation of small area means", *Sankhyă*, A, **60**, 344-362.
47. **Maiti**, T. (1998). "Hierarchical Bayes estimation of mortality rates for disease mapping", *Journal of Statistical Planning and Inference.*, **69**, 339-348.
48. Ghosh, M. and **Maiti**, T. (1998). "Discussion of the paper by D. Pfeffermann, C.J. Skinner, H. Goldstein, D.J. Holmes and J. Rasbash", *Journal of the Royal Statistical Society, Series B.* **60**, 48.
49. Ghosh, M., Kim D. and **Maiti**, T. (1998). "Hierarchical Bayesian analysis of longitudinal data" with *Sankhyă*,B, **60**, 332-333.
50. Natarajan, K., Ghosh, M., and **Maiti**, T. (1998). "Hierarchical Bayes quality measurement plan", *Communications in Statistics: Simulation and Computation*, **27**, 199-214.
51. Chaudhuri, A., Adhikary, A., and **Maiti**, T. (1997). "A note on non-negative mean square error estimation of regression estimators in randomized response surveys", *Statistical Papers*, **39**, 409-415.
52. Chaudhuri, A. and **Maiti**, T. (1997). "Small domain estimation by borrowing strength across time and domain - a case study", *Communications in Statistics: Simulation and Computation*, **26**, 1547-1557.
53. Chaudhuri, A. and **Maiti**, T. (1996). "Interval estimation of correlation coefficients in survey sampling" *Pakistan Journal of Statistics*, **12**, 231-242.
54. Chaudhuri, A. and **Maiti**, T. (1996). "Estimating small domain mean on borrowing strength across time and similar domains", (Golden Jubilee issue, 1996-97), *Journal of Indian Society of Agricultural Statistics*, **49**, 131-138.
55. Chaudhuri, A., **Maiti**, T. and Roy, D. (1996). "A note on the competing variance estimators of randomized response surveys", *Australian Journal of Statistics*, **38**, 35-42.
56. Chaudhuri, A. and **Maiti**, T. (1996). "Estimating regression coefficients from survey data by asymptotic design-cum-model based approach", *Metrika*, **43**, 123-133.
57. Chaudhuri, A. and **Maiti**, T. (1996). "Asymptotic design-cum-model based estimation of variances of linear regression coefficients in survey sampling with unequal probabilities" *Statistical Papers*, **37**, 79-84.
58. Chaudhuri, A. and **Maiti**, T. (1995). "On the efficiency of regression adjustment to Rao-Hartley-Cochran strategy in survey sampling", *Journal of Statistical Research*, **29**, 71-78.
59. Chaudhuri, A. and **Maiti**, T. (1995). " Asymptotic design-cum-model based approach for convex weighting of direct and indirect components of small domain prediction", *Communications in Statistics: Theory and Methods*, **24**, 2803-2813.

60. Chaudhuri, A. and **Maiti**, T. (1994). " Borrowing strength from past data in small domain prediction by Kalman filtering - a case study", *Communications in Statistics: Theory and Methods*, **23**, 3507-3514.

61. Chaudhuri, A. and **Maiti**, T. (1994). "Variance estimation in model assisted survey sampling", *Communications in Statistics: Theory and Methods*, **23**, 1203-1214.

Book Reviews in Journals

1. **Maiti**, T. (2010). **Statistical Methods in e-Commerce Research**. *The American Statistician.*
2. **Maiti**, T. (2009). **Analysis of Multivariate Social Science Data**. *Journal of the American Statistical Association.*
3. **Maiti**, T. (2008). **Statistical Methods for the Social Sciences**. *The American Statistician.*
4. **Maiti**, T. (2008). **Systems Bioinformatics: An Engineering Case-Based Approach**. *Journal of the American Statistical Association.*
5. **Maiti**, T. (2008). **Bayesian Inference for Gene Expression and Proteomics**. *Journal of the American Statistical Association.*
6. **Maiti**, T. (2008). **knowledge Discovery in Bioinformatics**. *Journal of the American Statistical Association.*
7. **Maiti**, T. (2008). **Disease Surveillance**. *Journal of the American Statistical Association.*
8. **Maiti**, T. (2008). **Statistical Methods for Engineers**. *Journal of the American Statistical Association.*
9. **Maiti**, T. (2007). **A First Course in Structural Equation Modeling** (2nd Ed.). *Journal of the American Statistical Association.*
10. **Maiti**, T. (2007). **Response Surface Methodology and Related Topics**. *Journal of the American Statistical Association.*
11. **Maiti**, T. (2007). **Applied Mixed Models in Medicine** (2nd Ed.). *Journal of the American Statistical Association.*
12. **Maiti**, T. (2006). **Elementary Survey Sampling**. *Journal of the American Statistical Association.*
13. **Maiti**, T. (2006). Book review "**Reengineering the 2010 Census: Risks and Challenges**", *Journal of the American Statistical Association.*
14. **Maiti**, T. (2006). Book review "**Practical methods for Design and Analysis of Complex Surveys**", *Journal of the American Statistical Association.*
15. **Maiti**, T. (2006). Book review "**Consumer Price Index Manual: Theory and Practice** " *Journal of the American Statistical Association.*

16. **Maiti**, T. (2006). Book review "**Principles and Practice of Structural Equation Modeling**", *Journal of the American Statistical Association.*
17. **Maiti**, T. (2006). Book review "**Applied Optimal Designs**", *Journal of the American Statistical Association.*
18. **Maiti**, T. (2006). Book review "**Survey Sampling: Theory And Methods (2nd ed.)**", *Journal of the American Statistical Association.*
19. **Maiti**, T. (2005). **Analysis for the Social and Behavioral Sciences**. *Journal of the American Statistical Association.*
20. **Maiti**, T. (2005). **Methods for Testing and Evaluating Survey Questionnaires**. *Journal of the American Statistical Association.*
21. **Maiti**, T. (2005). Book review "**Tutorial in Biostatistics, Vol I & II**", *Journal of the American Statistical Association.*
22. **Maiti**, T. (2005). **Statistical Modeling of Complex Medical Data**, *Journal of the American Statistical Association.*
23. **Maiti**, T. (2005). Book review "**New Developments in Categorical Data Analysis for the Social and Behavioral Sciences**", *Journal of the American Statistical Association.*
24. **Maiti**, T. (2005). **Recent Advances and Trends in Nonparametric Statistics**. *Journal of the American Statistical Association.*
25. **Maiti**, T. (2004). Book review "**Telephone Survey Methodology**", *Journal of the American Statistical Association*, **99**, 570.
26. **Maiti**, T. (2004). Book review "**Survey Nonresponse**", *Journal of the American Statistical Association*, **99**, 570.
27. **Maiti**, T. (2004). Book review "**Bayesian Data Analysis**", *Journal of the American Statistical Association*, **99**, 905.
28. **Maiti**, T. (2004). Book review "**Analysis of Longitudinal Data**", *Journal of the American Statistical Association*, **99**, 906.
29. **Maiti**, T. (2004). Book review "**Mathematical Statistics**", *Journal of the American Statistical Association*, **99**, 907.

Book Chapters

1. **Maiti**, T. (2010). *Horvitz-Thompson Estimator* in the "International Lexicon of Statistical Science". Ed. L. Miodrag.
2. **Maiti**, T. (2004). *Bayesian aspects of small area estimation.* "Handbook of Statistics - Vol. 25, Bayesian Thinking, Modeling and Computation". (Eds. C.R. Rao, and Dipak, K. Dey), Elsevier.
3. Dey, D. and **Maiti**, T. (2002). *Dirichlet distribution.* In "Encyclopedia of Environmetrics", (Eds. Abdel El-Shaarawi and Walter W. Picgorsch), John Wiley and Sons, UK, pp 520-522.

4. Dey, D. and **Maiti**, T. (2002). *Dirichlet Multinomial distribution.* In Encyclopedia of Environmetrics, (Eds. Abdel El-Shaarawi and Walter W. Picgorsch), John Wiley and Sons, UK, 522-523.
5. Ghosh, M. and **Maiti**, T. (2000). *Asymptotically design consistent model based estimators: A Bayesian look.* In Perspective in Statistical Science, (Eds. A.K. Basu, J.K. Ghosh, P.K. Sen, and B.K. Sinha). Oxford Press, pp 168-178.

Proceedings and Non-refereed Publications (Not updated)

1. **Maiti**, T., Mukhopadhyay, P. and Miller, C. (2006) "Neural network imputation: an experiance with the natural resources inventory surveys". Proceedings of 2006 Joint Statistical Meetings, CD-ROM.
2. Banerjee, T., and **Maiti,** T. (2006). "Small-Area Estimation Using Nonparametric Regression" Proceedings of 2006 Joint Statistical Meetings, CD-ROM.
3. Mukhopadhyay, P. and **Maiti**, T. (2006) "Local Polynomial Regression for Small-Area Estimation", Proceedings of 2006 Joint Statistical Meetings, CD-ROM.
4. Slud, E.V., and **Maiti**, T. (2006). Small area estimation based on survey data from a left-censored Fay-Herriot Model. Tech. Rep. U.S. Census Bureau.
5. Hall, P. and **Maiti**, T. (2005). "A general approach to small-area prediction". Tech. Rep. Australian National University.
6. Mukhopadhyay, P. **Maiti, T.** and Fuller, W. (2005) "County level estimates of cover and corp management factor for the National Resources Inventory". Proceedings of 2005 Joint Statistical Meetings, CD-ROM.
7. **Maiti,T.** , Bandopadhyay, T., and Mukhopadhyay, P. (2004) "Generalized non-linear mixed effect model with smooth random effects; A Bayesian analysis". Proceedings of 2004 Joint Statistical Meetings, CD-ROM.
8. Mukhopadhyay, P. and **Maiti, T.** (2004). "Two stage non-parametric approach for small area estimation". Proceedings of 2004 Joint Statistical Meetings, CD-ROM.
9. Slud, E.V. and **Maiti**, T. (2004). "MSE estimation in transformed Fay-Herriot models, with application to SAIPE". Tech Rep. U.S. Census Bureau.
10. Ghosh, M. and **Maiti**, T. (2004). "Predictive influence funstions and robust Bayesian estimation in finite population sampling". *Proceedings of the American Statistical Association.*
11. **Maiti**, T., and Slud, E.V. (2003). "Comparison of small area models in SAIPE". Tech Rep. U.S. Census Bureau.

12. Sinha, D. and **Maiti, T.** (2003). "Models and Bayesian analysis of recurrent events data with dependent termination". Tech. Rep. Medical University of South Carolina.
13. Ghosh, M., **Maiti**, T., Kim, D. and Tewari, A. (2003). "Bayesian neural network modeling in prostate cancer detection". Tech Rep. Univ. of Florida.
14. Crescenzi, M., Ghosh, M., and **Maiti**, T. (2002). "Empirical Bayes estimators with uncertainty measures for NEF-QVF populations". Tech Rep. Univ. of Florida.
15. Arumugam, M, Scott, S., and **Maiti**, T. (2002). "A general piecewise regression model". Tech Rep. Univ. of Nebraska-Lincoln.
16. Dey, D. and **Maiti**, T. (2002). "Model assessment: a Bayesian perspective". Tech. Rep. Univ. of Connecticut.
17. Ghosh, M., Zidek, J.V., and **Maiti**, T. (2001). "Weighted likelihoods for the NEF-QVF family with application to small area estimation", Tech Rep. Univ. of Florida.
18. **Maiti**, T., and Zaslavsky, A. (1999). "Inference for correlation coefficients in a health plan survey with hierarchical structure and missing data". Tech. Rep. Harvard Medical School.
19. Dey, D., **Maiti**, T., and Zaslavsky, A. (1999). "A skewed random effects distribution for multilevel modeling". Tech Rep. Univ. of Connecticut.
20. Ghosh, M., **Maiti**, T., and Kannan, N. (1998). "Bayesian small area estimation with binary data". *Proceedings of the American Statistical Association, Survey Research Section.*
21. Adhikary, A., Chaudhuri, A., and **Maiti**, T. (1996). *Small domain statistics - an adaptation of techniques of borrowing strength across time and domain to apply to Indian live data*, Project report, Indian Statistical Institute, Calcutta.

Submitted Papers

1. **Maiti**, T., Sinha, S., and Zhong, P-S. (2012). "Functional Mixed Models for Small Area Estimation".
2. Dass, S.C. Lim, C and **Maiti**, T. (2012). "Change Point Analysis of Cancer Mortality Rates for U.S. States using Functional Dirichlet Processes".
3. **Maiti**, T., Ren, H. and Sinha, S. (2012). "Prediction Error of Small Area Predictors Shrinking both Mean and Variances". (Under revision)
4. Dass, S.C. Lim, C and **Maiti**, T. (2012). "A Generalized Mixed Model Framework for Assessing Fingerprint Individuality in presence of Varying Image Quality".(Under revision)

5. Xu, Y., Choi, J., Dass, S., and **Maiti**, T. (2012). "Efficient Bayesian Spatial Prediction with Mobile Sensor Networks Using Gaussian Markov Random Fields". (Under Revision).
6. Sinha, S., Hu, P., and **Maiti**, T. .(2010). "An Empirical Bayes Approach for Analyzing Microarray Data". (Under revision).

Teaching Experience

- Instructor for Statistical Methods II, Spring 2009, 2010, 2012, Michigan State University.
- Instructor for Statistical Methods I, Fall 2009-2011, Michigan State University.
- Instructor for Design and Analysis of Experiments, Fall 2008, 2009, 2010, Michigan State University.
- Instructor for Survey Sampling Techniques, Spring 2008, Iowa State University.
- Instructor for Mixed models, Stat 615X, Spring 2006, Iowa State University.
- Instructor for Advanced topics in survey sampling, Stat 690, Fall 2003, Iowa State University.
- Instructor for Statistics for Researchers, Stat 401, 2002 – 2007, Iowa State University.
- Instructor of Sampling Theory and Practice, Stat 521, Spring, 2002, 2003, Iowa State University.
- Guest Instructor for Bayesian statistics, Stat 544, Spring 2003, Iowa State University.
- Guest Instructor for Advanced applied survey sampling, Stat 522, Spring 2006, Iowa State University.
- Instructor for Statistics and Application, undergraduate Probability and Statistics course, Fall 1997, Spring and Fall 1998, Fall 1999, Spring 2000, University of Nebraska-Lincoln.
- Instructor of Applied Statistics I: Regression and Analysis of Variance, Fall 1998, 1999, University of Nebraska-Lincoln.
- Instructor of Mathematical Statistics and Distribution Theory I, Fall 1997, Fall 2000, University of Nebraska-Lincoln.
- Instructor of Mathematical Statistics and Distribution Theory II, Spring, 1998, University of Nebraska-Lincoln.
- Instructor for Sample Survey course at the International Statistical Education Center of the Indian Statistical Institute, Calcutta, Fall 1995.

Professional Activities

Editorial Works

- **Guest Associate Editor**, *Statistica Sinica*, 2012-
- **Associate Editor**, *Journal of the Indian Statistical Association*, 2010-
- **Associate Editor**, *Journal of the American Statistical Association - Application & Case Studies section*, 2009-.
- **Associate Editor**, *Test, Spanish Journal of Statistics*, 2009-
- **Associate Editor**, *Journal of the American Statistical Association - Theory and Methods section*, 2008-2011.
- **Associate Editor**, *Journal of the American Statistical Association - Review section*, 2003-2010.
- **Associate Editor**, *The American Statistician - Review section*, 2003-2010.
- **Associate Editor**, *Journal of Agricultural, Biological and Environmental Statistics*, 2008 - 2011.
- **Associate Editor**, *Sankhya, Series B*, 2008 - 2011.

Departmental Service

1. Chair, Tenure and Promotion Committee, Dept. of Statistics & Probability, 2012-13.
2. Chair, Graduate Support Committee, Dept. of Statistics & Probability, 2010-13.
3. Chair, Graduate Admission Committee, Dept. of Statistics & Probability, 2010-13.
4. Member, Internal Review Committee, Dept. of Statistics & Probability, 2010-11.
5. Chair, Major Curriculum Committee, Dept. of Statistics & Probability, Michigan State University, 2009-2010; 2010-2011.
6. Member, Colloquium Committee, Dept. of Statistics & Probability, Michigan State University, 2009-2010.
7. Member, Graduate Support Committee, Dept. of Statistics & Probability, Michigan State University, 2009-2010.
8. Member of Major Curriculum Committee, Dept. of Statistics & Probability, Michigan State University, 2008-2009.

9. Secretary, Faculty Advisory Committee, Dept. of Statistics & Probability, Michigan State University.
10. Member of Journal committee, Dept. of Statistics, Iowa State University, 2007-08.
11. Member of faculty search committee, Iowa State University, 2007-08.
12. Seminar Chair, Dept. of Statistics, Iowa State University, Fall 2004, 2005, Spring 2008.
13. Survey VIGRE seminar co-ordinator, Dept. of Statistics, Iowa State University, Spring 2004, 2006, Fall 2007.
14. Member of Library Committee, Dept. of Statistics, Iowa State University, 2003-2006.
15. Member of MS Exam committee, Dept. of Statistics, Iowa State University, 2003-2004.
16. Member of a Faculty Search Committee, Dept. of Statistics, Iowa State University, 2002-2003.
17. Member of Honors and Awards committee, Dept. of Statistics, Iowa State University, Fall 2002-2003.
18. Member of the IRISS workshop organizing committee.
19. Member of Technology Advisory Committee, University of Nebraska-Lincoln, 2000-2001.

Professional Service

1. **Chair**, ASA Edward C. Bryant Award Committee member, 2012-2015.
2. ASA Edward C. Bryant Award Committee member, 2010-2015.
3. Organized sessions in ISBA regional Meetings, 2012.
4. Organized session in IISA meeting, 2012.
5. Organized invited sessions in ISBA regional meetings.
6. Chair, a contributed session, JSM, 2010, 2011.
7. Member of the International Programme Committee of 1st and 2nd International Conference on Advanced Data Analysis, Business Analytics and Intelligence, at Ahmedabad, India.
8. Organizer and chair for a topic-contributed session in the joint statistical meetings, 2010.
9. Organized a mini-workshop on missing value in Michigan State University, 2009.
10. Chapter representative, Mid-Michigan ASA Chapter, 2008-11.

11. Gave a half-day short course on "Small Area Estimation", Dept. of Transportation Statistics, Washington DC, 2001.
12. Organized a statistics sessions, regional workshop in mathematical sciences, University of Nebraska-Lincoln, 2000
13. Co-organized an invited session in the Joint Statistical meetings, 2000.

Review Panel and Proposals

- Expert Input Regarding Sampling in Pesticide Handler Exposure Studies, EPA.
- Review panel report of USDA Census of Agriculture.
- Review NSF proposals, Canadian NSERC proposal.

Refereeing

Refereed articles for publication in *Annals of Statistics, Journal of the American Statistical Association, The American Statistician, Biometrika, Journal of Computation and Graphical Statistics, Journal of Official Statistics, Journal of Royal Statistical Society, Series B, Journal of Royal Statistical Society, Series C, Sankhyă, Journal of the Italian Statistical Society, Calcutta Statistical Association Bulletin, Survey Methodology, Life Time Data Analysis, Journal of Agricultural, Biological and Environmental Statistics, Journal of Statistical Modeling, Statistics & Probability Letters, Canadian Journal of Statistics, Communication in Statistics, Statistics, Statistics in Medicine, Computational Statistics, Test, Computational Statistics & Data Analysis.*

Invited Presentations

1. "Variable Selection for Spatial Logistic Regression Models", Eighth International Triennial Calcutta Symposium, India, 2012.
2. "Statistical Methods for Public Health Research", Aligarh Muslim University, India, 2012.
3. "Small Area Estimation by Shrinking both Means and Variances", International Conference on Statistics and Informatics in Agricultural Research, India, 2012.
4. "Confidence Interval Estimation for Small Area Parameters", Joint Statistical Meetings, San Diego, 2012.
5. "Spatial Statistics", (Plenary talk), Joint meetings of y-BIS and jSPE, Lisbon, Portugal, 2012.
6. "Statistical Methods for Analyzing Health Data", University of Dundee, UK, 2012.

7. "Estimation and Computational Issues in Disease Mapping Models", University of Northern Illinois, Dekalb, IL, 2011.
8. "Clustering Based Small Area Estimation: An Application to MEAP Data", Joint Statistical meetings, Miami, 2011.
9. "Computational and Inferential Issues in Disease Mapping Models", Soochow University, China, 2011.
10. " Invited Discussant", Objective Bayes Conference, China, 2011.
11. "Spatial Ordinal Analysis of SEER Breast Cancer Data", ENAR, Miami, 2011.
12. "Default Bayesian Analysis for Hierarchical Spatial Multivariate Generalized Linear Mixed Models", International Chinese Statistical Association Conference, China, 2010
13. "Poisson CAR Models: Computation and Inference", University of Neveda, Las Vegas, 2010
14. "Small Area Estimation by Shrinking Means and Variances", International Chinese Statistical Association Symposium, Indianapolis, 2010.
15. "Using a Nonparametric Mean-Variance Smoothing Method to Assess Arabidopsis Cold Stress Transcription Regulator CBF2 Overexpression Microarray Data", ENAR meeting, 2010.
16. "Estimation of Mean Squared Error for Mixed Models", University of Michigan, 2009.
17. "Design Based Model Consistent Estimator for the Nested Error Regression Models", Joint Statistical Meetings, 2009.
18. "Inference on Mixed Models", Tokyo University, Japan, 2009.
19. "On the prediction error estimation for mixed models", University of Windsor, 2009.
20. "On the small area estimation", Universidad Miguel Hernndez de Elche, Spain, 2008.
21. "On the small area estimation", National Statistical Office of Thailand, 2008.
22. "Small area estimation using NEF-QVF family", Temple University, 2008
23. "Small area estimation: A powerful Business Tool", University of Illinois, 2008.
24. "Mean squared prediction error estimation in mixed models", Medical University of South Carolina, 2008.
25. "Mean squared prediction error estimation in mixed models", Michigan State University, 2008.
26. "Mean squared prediction error estimation in mixed models", University of Minnesota, 2007.

27. "Prediction error estimation in mixed models", Temple University, 2007.
28. "On the small area estimation", Harvard University, 2006.
29. Discussant for "Rapid Production of Small-Area Estimates Using the Behavioral Risk Factor Surveillance System" Joint Statistical Meetings, 2006.
30. "Neural Network Imputation: an Experience with the National Resources Inventory Survey" Joint Statistical Meetings, 2006.
31. "Mean squared error estimation for small area estimation", U.S. Census Bureau, Washington D.C., 2006.
32. "Prediction error estimation under mixed models", Boston University, 2006.
33. "Non-negative mean squared error estimation for small area estimation" , University of Missouri, 2006.
34. "Resampling based empirical prediction: An application to small area estimation" (part II), National Center for Heath Statistics, Washington DC, 2006.
35. "Prediction error estimation under mixed models: Application to small area estimation", Texas A & M University, 2005.
36. "Estimating prediction error under mixed models", Vanderbilt University, 2005.
37. "Resampling based empirical prediction: An application to small area estimation", National Center for Heath Statistics, Washington DC, 2005.
38. "County level wind erosion estimation from National Resources Inventory Surveys", Symposium on Monitoring Science and Technology, Denver, 2004.
39. Topic Contributed "Generalized mixed nonlinear modeling", Joint Statistical Institute meeting, Toronto, 2004.
40. "Nonnegative mean squared prediction error estimation in small area estimation"., University of Southampton, UK, 2004.
41. "Nonnegative mean squared prediction error estimation in small area estimation"., University of British Columbia, 2004.
42. "Nonnegative mean squared prediction error estimation in small area estimation"., University of Iowa, 2004.
43. Invited Discussant " Small area estimation and design". International Statistical Institute meeting, Berlin, 2003.
44. "Small area estimation on NEF-QVF models and survey weights", Joint Statistical Meeting, San-Francisco, 2003.
45. "Small area estimation", University of Pune, India, 2003.
46. "Small area estimation", IRISS workshop, Iowa State University, 2003.

47. "Small area estimation on NEF-QVF models and survey weights", Case Western Reserve University, 2003.
48. "Small area estimation on NEF-QVF models and survey weights", Iowa State University, 2002.
49. "Small area estimation using time series and cross-sectional data", Iowa State University, 2001.
50. "Small area estimation using time series and cross-sectional data", Southern Methodist University, 2001.
51. "Small area estimation using time series and cross-sectional data", North Dakota State University, 2000.
52. "On the modeling of small area estimation", University of Nebraska-Lincoln, 2000.
53. "On the modeling of small area estimation", International Conference in Statistics, Maine, 2000.
54. "Robust generalized linear model for small area estimation", Boston University, 1999.
55. "Robust generalized linear model for small area estimation", University of Connecticut, 1999.
56. "Hierarchical Bayesian analysis of longitudinal data", Harvard Medical School, 1999.
57. "Transition modeling of binary longitudinal data", ENAR, Atlanta, 1999.
58. "Small area estimation using time series and cross-sectional data", Statistics Canada, 1999.
59. "Modeling health care data", University of Nebraska-Lincoln, 1998.
60. "Hierarchical Bayesian analysis of longitudinal data", University of Nebraska-Lincoln, 1998.
61. "Hierarchical Bayesian analysis of longitudinal data", University of Georgia, 1998.
62. "Hierarchical Bayesian analysis of longitudinal data", University of Missouri, Columbia, 1998.
63. "Hierarchical Bayesian analysis of longitudinal data", Worcester Polytechnic Institute, 1998.
64. "Empirical Bayes estimation of median income of four-person families by state using time series and cross-sectional data", North Carolina State University, 1998.
65. "Hierarchical Bayesian analysis of longitudinal data", University of Alberta, Edmonton, 1998.
66. "Empirical Bayes estimation of median income of four-person families by state using time series and cross-sectional data", U.S. Census Bureau, 1998.

67. "Empirical Bayes estimation of median income of four-person families by state using time series and cross-sectional data", Mississippi State University, 1998.
68. "Empirical Bayes estimation of median income of four-person families by state using time series and cross-sectional data", University of Missouri, Kansas City, 1998.
69. "Variance estimation in model assisted survey sampling", University of Nebraska-Lincoln, 1996.
70. "Estimating regression coefficients from survey data by asymptotic design-cum-model based approach", University of Nebraska-Lincoln, 1996.
71. "Variance estimation in model assisted survey sampling", Indian Institute of Management, Calcutta, 1996.
72. "Inference from complex survey sampling", Kalyani University, India, 1996.
73. "Asymptotic design-cum-model based approach for convex weighting of direct and indirect components of small domain prediction", Indian Statistical Institute, Calcutta, 1996.
74. "Small domain estimation by borrowing strength across time and domain - a case study", Indian Agricultural Statistical Research Institute, India, 1996.

Contributed Talks

1. "Measurement error model for binary responses when responses are subject to classification errors", International Statistical Institute meeting, Berlin, 2003.
2. "Transition model for binary data", New England Symposium of Statistics, May 1999.
3. "Empirical Bayes estimation of median income of four-person families by state using time series and cross-sectional data", International Conference on Current Topics in Sample Survey, Nebraska-Lincoln, 1997.
4. "Asymptotic design-cum-model based estimation of variances of estimated linear regression coefficients in survey sampling with unequal probabilities", XV annual conference of Indian Society for Probability and Statistics, 1994.
5. "Interval estimation in randomized response surveys", Indian Science Congress, 1993.
6. "Variance estimation in model assisted survey sampling", Mahalanobis centenary conference on survey sampling, Indian Statistical Institute, Calcutta, 1992.
7. "Model assisted variance estimation for non-linear statistics in survey sampling", Indian Science Congress, 1992.

Professional visits (not updated)

1. U.S. Census Bureau, Dec 2008.
2. University of Maryland, College Park, Dec 2008.
3. Harvard University, Boston, March 07-June 07.
4. Visited Institute of Mathematics and its Application, Australian National University, Australia, Sept-Oct, 2006.
5. Harvard University, Boston, Dec, 2006.
6. George Mason University, Varginia, Nov, 2006
7. George Washington University, Washington D.C. Nov, 2006.
8. University of Maryland, College Park, Nov, 2006.
9. U.S. Census Bureau, Washington D.C. July, 2006.
10. Attended International Biometric Society Meeting 2000, Chicago, funded by the University of Nebraska-Lincoln.
11. Professional presence at the Agency of Health Care Administration, Florida, Summer 2000, funded by the University of Florida.
12. Attended a round table luncheon on ASA meeting, Baltimore 1999, funded by the Harvard Medical School.
13. Attended the conference on "Bayesian methods in clinical trials", Boston, Spring 1999, funded by the Harvard Medical School.
14. Professional visit to the U.S. Bureau of the Census, Bureau of the Labor Statistics and National Center for Health Statistics, Fall 1999, funded by UNL's research council.
15. Professional visit to Carleton University and Statistics Canada, Summer 1999, funded by Carleton University, Canada.
16. Attended the joint statistical meetings, Dallas, 1998, funded by the Harvard Medical School and the University of Nebraska-Lincoln.

Research visits

1. University of Aviero, Portugal, July, 2012.
2. University of Dundee, UK, March, 2012.
3. University of Melbourne, Australia, March 2009.
4. Visited Institute of Mathematics and its Application, Australian National University, Australia, Sept-Oct, 2006. Partially funded by the Australian National University.
5. Visited Calcutta University, India. August 2006.

6. Visited Institute of Mathematics and its Application, Australian National University, Australia, Jan-Feb, 2005. Partially funded by the Australian National University.
7. Visited Calcutta University, India. Dec 2004- Jan 2005.
8. Visited Institute of Social and Statistical Sciences, Southampton, UK, April-May 2004. Partially funded by the University of Southampton.
9. Visited, Dept. of Statistics, University of British Columbia, Canada, March, 2004. Partially funded by the University of British Columbia.
10. Visited University of California, Berkeley, summer 2002, funded by a NIH grant.
11. Visited the University of Calcutta, India, Summer 2001, funded by a grant from the University of Nebraska-Lincoln.
12. Visited the University of Calcutta, and the Indian Institute of Technology, Kharagpur, India, Dec, 00- Jan 01, funded by a grant from the University of Nebraska-Lincoln.
13. Visited Duke University and Medical University of South Carolina, Summer 2001, funded by a grant from the U.S. Census Bureau.

Student Advising

1. **Major Professor for Post-doctoral Fellow**.
   1. Sabyasachi Bhatyacharya 2004-2005, Iowa State University.
2. **Major Professor for Ph.D. students**
   (a) Akshita Chawla, Michigan State University (Current).
   (b) Sidharta Nandy, Michigan State University (Current).
   (c) Wenning Feng, Michigan State University (Current).
   (d) Zhen Zhang, Michigan State University (Current, Co-Chair: S. Dass).
   (e) Hao Ren, Michigan State University (2011), California Teaching Bureau.
   (f) Lixia Diao, Iowa State University (2008, Co-Chair: J.Opsomer), M.D. Anderson.
   (g) Cumhur Yusuf Demirkale, Iowa State University (2009,Co-Chair: D. Nettleton), National Cancer Institute.
   (h) Arindam Chaterjee, Iowa State University (2007,Co-chair:S.N. Lahiri), Indian Statistical Institute, Delhi.
   (i) Pushpal Mukhopadhyay, Iowa State University (2006), SAS Corp.
3. **Major Professor for M.S. students**
   (a) Pinghsa Hu, Iowa State University (2009)
   (b) Ujjwal Das, Iowa State University (2009)
   (c) Ivan Ramler, Iowa State University, Statistics (2004)

(d) Bengamin Skalland, Iowa State University, Statistics (2004)
(e) Pushpal Mukhopadhyay, Iowa State University, Statistics (2003).
(f) Chin Khian Yong, University of Nebraska-Lincoln, Statistics (2000).
(g) Laura Scheppers, University of Nebraska-Lincoln, Statistics (2000).
(h) Jun-Ha Kim, University of Nebraska-Lincoln, Statistics (2000).

4. **Committee Member for Ph.D. students**
   (a) Ifeoma Bemesii, School of Education, MSU (surrent)
   (b) Prakash Mandyam, Computer Science, MSU (current)
   (c) Yunfei Xu, Mechanical Engineering, MSU (2012)
   (d) Alda Pires, Food Safety, MSU (2012).
   (e) Do Won Kwak, Economics, MSU (2011)
   (f) Iraj Rahmani, Economics, MSU (2011).
   (g) Lefang Yu, Statistics, ISU.
   (h) Min Hui Paik, Statistics, ISU.
   (i) Lu Lu, Statistics, ISU (2009)
   (j) Yu, Wu, Statistics, ISU (2006).
   (k) Carsten Botts, Statistics, ISU (2005).
   (l) Scott Granberg-Rademacker, University of Nebraska-Lincoln, Pol. Sc. (2000).

5. **Committee Member for M.S. students**
   1. Satish Satyamurty, ISU, Comp Sc, & Elec. Engr. (2005).
   2. Sandeep Yaramakal, ISU, Comp. Sc. (2005).
   3. Yu Wu, ISU, Statistics (2004).
   4. Chung Jin-Wook, ISU, Engr (2004).
   5. Jarpreet Chattwal, ISU, Engr (2004).
   6. Ynan Zhanh, ISU, Statistics (2003).
   7. Jill Van Wettering, ISU, Statistics (2003).
   8. T. Yu, University of Nebraska-Lincoln, Comp. Sc. (2000).
   9. M. Arumugam, University of Nebraska-Lincoln, Comp. Sc. (2000).

6. **Mentor for VIGRE summer trainee.**
   Dan Prignitz, ISU (2004).

7. **Major Professor for undergraduate honors thesis**
   Hao Pham, University of Nebraska-Lincoln (2000).