

# Bhramar Mukherjee

## • Contact Information

Office : Department of Biostatistics  
University of Michigan  
1420 Washington Heights  
Ann Arbor, MI 48109-2029.  
Ph: (734)-764-6544  
Fax:(734)-763-2215  
bhramar@umich.edu

Home: 2353 Alder Ct  
Ann Arbor  
MI 48103  
Phone:(734)-332-8976

<http://www-personal.umich.edu/~bhramar>

## • Employment

John D. Kalbfleisch Collegiate Professor of Biostatistics (2015-), University of Michigan.  
Professor (2013-), Department of Biostatistics, University of Michigan.  
Professor (2014-), Department of Epidemiology, University of Michigan.  
Associate Chair (2014-), Department of Biostatistics, University of Michigan.  
Associate Director of Cancer Control and Population Sciences (2016-), The University of Michigan Comprehensive Cancer Center.

Co-director (2015-), Statistics Core for Global Health Research (GLOBAL-STATCORE),  
Office of Global Public Health, University of Michigan.

Member, University of Michigan Comprehensive Cancer Center (2009-).

Participating Faculty: Occupational and Environmental Epidemiology Concentration,  
Department of Environmental Health Sciences, University of Michigan (2009-).

Associate Director, Cancer Biostatistics T32 Training Grant (2013-2015).

Associate Professor (2009-2013), Department of Biostatistics, University of Michigan.

Assistant Professor (2006-2009), John G. Searle Assistant Professor (2008-2009),  
Department of Biostatistics, University of Michigan.

Assistant Professor (Spring 2002-2006),  
Department of Statistics, University of Florida.

## • Other Employment

Summer Intern, (Summer, 2000),  
Statistics Division,  
Eli Lilly and Company, Indianapolis.

Teaching assistant, Statistical Consultant, Research Assistant (1996-2001),  
Department of Statistics, Purdue University.

Visiting Scholar (Summer 2002),  
Department of Statistics,  
Stanford University.

Visiting Scholar (Summer 2004),  
Applied Statistics Unit,  
Indian Statistical Institute, Kolkata, India.

Visiting Assistant Professor (Fall 2001 and academic year 2004-2005),  
Department of Statistics, Purdue University.

Visitor (Summer 2006),  
Division of Cancer Epidemiology and Genetics,  
The National Cancer Institute,(NCI/NIH), Bethesda, MD.

Visiting Scholar (Summer 2006, 2009),  
Department of Mathematics, Statistics and Computer Science  
Victoria University, Wellington, New Zealand.

Visiting Scholar (Summer, 2010)  
Institut d'Investigaci Biomdica de Bellvitge  
Institut Catal d'Oncologia, Unitat de Bioestadistica Bioinformtica  
(Recipient of a visiting scholar grant awarded by the Agency for Administration of University  
and Research Grants (AGAUR), Catalonia, Spain).

Short Term Visiting Researcher (Fall, 2015)  
Department of Biostatistics,  
Harvard T. H. Chan School of Public Health.

#### • **Education**

Ph.D. in Statistics (Received 2001)  
Advisor : William J. Studden  
Optimal designs for estimating the path of a stochastic process  
Purdue University  
M.S. in Mathematical Statistics, 1999  
Purdue University  
M. Stat. in Applied Statistics and Data Analysis, 1994-96  
Indian Statistical Institute, Calcutta, India  
B. Sc. in Statistics, 1991 -94, Presidency College, Calcutta, India.

#### • **Honors and Awards**

National scholarship, 1989, 1991, India.

Best student among Statistics majors award, 1993-1994, Presidency College, Calcutta.

Outstanding academic performance prizes, 1994-1996, Indian Statistical Institute, Calcutta.

Debesh-Kamal scholarship for studying abroad, 1996, The Ramakrishna Mission, India.

Teaching award for outstanding classroom performance, 1998, Purdue University.

Purdue Research Foundation grant, 1998-2000.

I.W.Burr award for an outstanding doctoral student, 2001, Purdue University.

New Researcher's summer fellowship, 2002, Stanford University.

Travel award, SAMSI 2003.

Travel award to attend conference on new directions in experimental design, 2003.

Travel award to attend New Researchers' Conference, 2003.

Travel award to attend Pathways to Future Workshop for Women, 2003.

Travel award to attend Fifth International Workshop on Objective Bayes Methodology, 2005.

Poster award in Fifth International Workshop on Objective Bayes Methodology, 2005.

NSA Young Investigator Grant, 2005-07.

Center for Research on Learning and Teaching faculty development award for integrating public health applications in BIOSTAT 503, University of Michigan, 2008.

John G. Searle Assistant Professorship, 2008-2009: Awarded to an Assistant Professor with significant contribution: Department of Biostatistics, University of Michigan.

Elizabeth C. Crosby research award for women investigators in science, 2008: NSF ADVANCE program, The University of Michigan.

Elected Member of the International Statistical Institute, 2011.

Excellence in Teaching award, 2012: School of Public Health, University of Michigan. (Awarded annually to one School of Public Health faculty member for outstanding teaching achievements.

Fellow of the American Statistical Association, 2012.

Outstanding Alumna Award, Department of Statistics, Purdue University, 2012.

Gilbert Whitaker Stage I grant for Improvement of Teaching. Center for Research, Learning and Teaching, University of Michigan, 2013.

Outstanding young researcher award (applications category) from the International Indian Statistical Association (IISA), 2014.

Eighth annual invited lecture in Biostatistics, Department of Biostatistics, Bioinformatics and Epidemiology, University of California San Francisco, 2014.

Selected for Michigan Road Scholars Program for State Outreach, 2015.

Faculty Recognition Award for outstanding contribution by a mid-career faculty at the University of Michigan, 2015. University-wide award presented by the Rackham Graduate School and Office of the Provost at the University of Michigan.

John D. Kalbfleisch Collegiate Professorship, University of Michigan, 2015.

Gilbert Whitaker grant for Improvement of Teaching. Center for Research, Learning and Teaching, University of Michigan, 2015.

Gertrude Cox Award from the Washington Statistical Society, 2016.

Elected Senior Fellow, Michigan Society of Fellows, 2016. <http://societyoffellows.umich.edu/>

## • Professional Activity

### Editorial Service:

**Associate Editor**, *Statistics in Medicine*; 2015-

**Associate Editor**, *Biometrics*; 2008-

**Associate Editor**, *The American Statistician*; 2008-2011.

**Associate Editor**, *Journal of Statistical Planning and Inference*; 2012-2014.

**Editorial Board Member**, *Sankhya, Ser B*; 2008-2012.

**Editorial Board Member**, *International Statistical Review*; 2011-.

**Editorial Board Member**, *Genetic Epidemiology*; 2011-.

**Editorial Board Member**, *Epidemiologic Methods*; 2011-.

**Statistics Editor**, *The American Journal of Preventive Medicine*, 2013-2014.

**Reviewer:** The Annals of Statistics, Biometrika, Statistical Methodology, Journal of Statistical Planning and Inference, Journal of American Statistical Association, Biometrics, Statistica Sinica, The Scandinavian Journal of Statistics, Geoderma, Human Heredity, Statistics in Medicine, Computational Statistics and Data Analysis, BMC Medical Research Methodology, Epidemiologic Perspective and Innovations, Lifetime Data Analysis, Communications in Statistics, Journal of the National Cancer Institute, Genetic Epidemiology, Journal of Biopharmaceutical Statistics, Annals of Human Genetics, Epidemiology, European Journal for Human Genetics, The Annals of Applied Statistics, Epidemiologic Methods, Bioinformatics, Biostatistics, Genome Medicine, The American Journal of Epidemiology, IEEE Transactions on Computational Biology and Bioinformatics, PLoS One, PLoS Genetics, Journal of Medical Genetics, Journal of Clinical Oncology, Statistics in the Biosciences, Journal of Agricultural Biological and Environmental Statistics, Environmental Research, Indian Journal of Medical Research, The American Journal of Human Genetics.

### Study Section and Grant Review Panel:

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, June 16-17, 2009.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, March 1-3, 2010.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, January 24-26, 2011.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, February 2-3, 2012.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, October 3-4, 2012.

Grant Review Panel, National Science Foundation, Division of Mathematical Sciences, 2012.

Special Emphasis Review Panel, NIH Infectious Disease, Reproductive Health, and Asthma/Pulmonary Conditions (IRAP) Study Section, June 24-26, 2013.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, December 10-11, 2013.

Invited Reviewer: Health Effects Institute Project Report, 2014, 2015.

Review panel for U54: Big Data to Knowledge Centers of Excellence, NIH, April 10-11, 2014.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, May 22-23, 2014.

Reviewer, Strategic Skills Fellowship Panel, Medical Research Council, UK, 2014

Grant Review Panel, National Science Foundation, Division of Mathematical Sciences, 2014.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, Jan 27-29, 2015.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, October 15-16, 2015.

Special Emphasis Review Panel, Cancer Prevention, Control and Population Sciences, NCI, June 8, 2016.

**Federal Advisory Committee**

National Institute of Environmental Health Sciences, Environmental Health Sciences Review Committee, 2015-2018.

National Academies of Sciences, Engineering and Medicine: Committee on Inorganic Ar-

senic, 2015.

**Advisory Committee, Steering Committee, Executive Committee, Mentoring Committee, and Consultant:**

Executive committee, NIEHS P30 center on “Lifestage exposure and adult diseases”, University of Michigan, Department of Environment health Sciences, 2011-15.

Steering committee member, Robert Wood Johnson Health and Society Scholars Program, 2011-13.

Scientific Advisory for Analysis Committee, Colorectal Cancer GWAS Consortium (GECCO), PI Ulrike Peters, The Fred Hutchinson Cancer Research Center, 2010.

American Chemistry Council Working Group on Biomarker Discovery, organized by NIH/NICHD. Lead Co-ordinators: Paul S. Albert and Enrique Schisterman, Division of Biostatistics and Epidemiology, NICHD, 2010-11.

External member, Junior faculty mentoring program, Division of Family Medicine and Public Health Sciences, Wayne State University, 2013-.

• **Professional Membership**

American Statistical Association, (ASA Section on Epidemiology, Bayesian Statistics, Environmental Statistics, Statistical Genetics, Biometrics, Teaching Statistics to Health Sciences and Nonparametric Statistics), Institute of Mathematical Statistics, International Indian Statistical Association, International Biometric Society (ENAR), International Statistical Institute, American Association for Advancement of Science (AAAS), American Society for Clinical Oncology (ASCO).

• **Publications (Peer Reviewed)**

\* The first author was a graduate student of Dr. Mukherjee at the time of this research.

\*\* Co first-author stated in the manuscript.

1. Bose M, **Mukherjee B**, Cross-over design in the presence of higher order carry-overs, *Australian and New Zealand Journal of Statistics*, **42**:235-44, 2000.
2. **Mukherjee B**, Exactly optimal sampling designs for processes with a product covariance structure, *The Canadian Journal of Statistics*, **31**:1-19, 2003.
3. Bose M, and **Mukherjee B**, Cross-over designs under a general model, *Statistics and Probability Letters*, **62**:413-18, 2003.
4. **Mukherjee B**, On sampling designs for estimating the integral of a stochastic process, *Communications in Statistics, Theory and Methods*, **32**:1647-63, 2003.

5. \*Sinha S, **Mukherjee B** and Ghosh M, Bayesian analysis of matched case-control studies with multiple disease states. *Biometrics*, **60**:41-49, 2004.
6. \*Sinha S, **Mukherjee B**, Ghosh M, Mallick BK, and Raymond JC, Bayesian semi-parametric analysis of matched case-control studies with missing exposure. *Journal of the American Statistical Association*, **100**:591-601, 2005. *This paper received one of the ENAR student paper awards.*
7. Ghosh M, and **Mukherjee B**, Non-parametric sequential Bayes estimation of the distribution function. *Sequential Analysis*, **24**:389-409, 2005.
8. **Mukherjee B**, Sinha S, and Ghosh M, Bayesian Analysis for case-control studies. In *Handbook of Statistics*, Vol 25, Bayesian Thinking: Modeling and Computation, Eds Dey, D. and Rao, C. R., 793-819, 2005.
9. Ghosh M, Zhang L, and **Mukherjee B**, Equivalence of posteriors in the Bayesian analysis of the multinomial-Poisson transform *Metron*, **64**:19-28, 2006.
10. Sinha S, and **Mukherjee B**, A score test for determining sample size for a matched case-control study with categorical exposure, *Biometrical Journal*, **48**:35-53, 2006.
11. **Mukherjee B**, A note on sampling designs for random processes with no quadratic mean derivative. *Australian and New Zealand Journal of Statistics*, **48**:305-19, 2006.
12. Ghosh YN, and **Mukherjee B**, On properties of conditional medians and quantiles. *Statistics and Probability Letters*, **76**:1775-80, 2006.
13. Ghosh M, and **Mukherjee B**, Data adaptive sequential design for case-control studies. *Statistica Sinica*, **16**:697-719, 2006.
14. \*Zhang L, **Mukherjee B**, Ghosh M, and Wu R, Accounting for population substructure in case-control studies of disease-gene association: A Bayesian approach, *Statistical Modeling*, **6**:352-72, 2006.
15. Khuri A, **Mukherjee B**, Sinha B, and Ghosh M, Design issues for generalized linear models. *Statistical Science*, **21**:376-99, 2006.
16. **Mukherjee B**, Zhang L, Ghosh M, and Sinha S, Bayesian semiparametric analysis of case-control data under conditional gene-environment independence *Biometrics*, **63**:834-44., 2007.

17. **Mukherjee B**, Liu I, and Sinha S, Analysis of Matched case-control data with ordinal disease states: possible choices and comparisons, *Statistics in Medicine*, **26**:3240-57, 2007.
18. \*Sinha S, **Mukherjee B**, and Ghosh M, Modeling association among multivariate exposures in a matched case-control study. *Sankhya*, **64**:379-404, 2007.
19. Dorazio RM, **Mukherjee B**, Zhang L, Ghosh M, Jelks H, and Jordan F, Modeling Unobserved Sources of Heterogeneity in Animal Abundance Using a Dirichlet Process Prior, *Biometrics*, **64**:635-44, 2008.
20. \* Zhang L, **Mukherjee B**, Ghosh M, Gruber S and Moreno V, Misclassification of exposures in case-control studies of gene-environment interaction *Statistics in Medicine*, **27**:2756-83, 2008.
21. **Mukherjee B** and Chatterjee N, Exploiting gene-environment independence for analysis of case-control studies: An empirical-Bayes type shrinkage estimator to trade off between bias and efficiency. *Biometrics*, **64**:685-94, 2008.  
*This paper appeared in a special Virtual Issue of 15 classic papers in Biometrics which was put together to celebrate the international year of statistics in 2013 by Wiley.*
22. Chatterjee N, and **Mukherjee B**, Statistical approaches to studies of gene-gene and gene-environment Interactions. *Molecular Epidemiology in Cancer*, 145-69 Editors Rebbeck, Ambrosone and Shields, Informa Healthcare, 2008.
23. Liu I, and **Mukherjee B**, The Proportional Odds Model, *Wiley Encyclopedia for clinical trials.*, 1-8, 2008.
24. **Mukherjee B**, Ahn J, Rennert G, Gruber SB, Moreno V, and Chatterjee N, Testing gene-environment interaction from case-control data: A novel study of Type-1 error, power and designs. *Genetic Epidemiology*, **32**:615-26, 2008.
25. Sinha S, Gruber SB, **Mukherjee B** and Rennert G, Inference on haplotype effects in matched case-control studies using unphased genotype data.  
*International Journal of Biostatistics*, **4**, article 1, 2008.
26. **Mukherjee B**, Ahn J, Liu I, Rathouz P, and Sanchez B, On elimination of nuisance parameters in a stratified proportional odds model by amalgamating conditional likelihoods. *Statistics in Medicine*, **27**:4950-71, 2008.

27. Aguado A, Guino E, **Mukherjee B**, Sicras A, Serrat J, Acedo M, Ferro JJ, and Moreno V, Variability in prescription drug expenditures explained by adjusted clinical groups (ACG) case-mix. A cross-sectional study of patient electronic records in primary care. *BMC Health Services Research*, 8:53, 2008.
28. Polydorides AD, **Mukherjee B**, Gruber SB, McKenna BJ, Appelman HD, and Green-son JK. Adenoma-Infiltrating Lymphocytes (AILs) Are a Potential Marker of Hereditary Non-Polyposis Colorectal Cancer. *American Journal of Surgical Pathology*, **32**:1661-66, 2008.
29. Lampe BJ, Park SK, Robins T, **Mukherjee B**, Litonjua AA, Amarasiriwardena C, Sparrow D, Hu H, Association between 24-Hour Urinary Cadmium and Pulmonary Function: The VA Normative Aging Study. *Environmental Health Perspective*, **116**:1226-30, 2008.
30. **Mukherjee B** and Liu I, A characterization of bias for fitting multivariate generalized linear models under choice-based sampling. *Journal of Multivariate Analysis*, **100**:459-72, 2009.
31. Liu I, **Mukherjee B**, Suesse T, Sparrow D and Park SK, Graphical model-checking methods for the proportional odds model. *Statistics in Medicine*, **28**:412-29, 2009.
32. Zhang L, **Mukherjee B\*\***, Hu B, Moreno V, and Cooney K, Semiparametric Bayesian modeling of random genetic effects in family based association studies. *Statistics in Medicine*, **28**:113-39, 2009.
33. Luo S, **Mukherjee B**, Chen J, and Chatterjee N, Shrinkage estimation for robust and efficient screening of HWE in genomewide association studies. *Genetic Epidemiology*, **33**:740-50, 2009.
34. Ghosh M, **Mukherjee B** and Santra U, Probability matching priors for ratio of variances of the bivariate normal distribution, *The International Journal of Statistical Sciences*, **9**:255-271, 2009.
35. Ahn J, \*, **Mukherjee B**, Banerjee M and Cooney K, Bayesian inference for the stereotype regression model: Application to a case-control study of prostate cancer, *Statistics in Medicine*, **28**:3139-3157, 2009.
36. Gruber SB, and **Mukherjee B**. Genetic anticipation in Lynch syndrome: Still awaiting for the answer. *Journal of Clinical Oncology*, **27**:326-27, 2009.

37. Vilar E, **Mukherjee B**, Kuick R, Raskin L, Misek D, Taylor JMG, Giordano TJ, Hanash SM, Fearon ER, Rennert G, and Gruber SB. Gene Expression Patterns in Mismatch Repair-Deficient Colorectal Cancers Highlight the Therapeutic Role of Inhibitors of the PI3K-AKT-mTOR pathway *Clinical Cancer Research.*, **15**:2829-39, 2009.
38. D'Souza J, Jia C, **Mukherjee B** and Batterman S, Determinants of VOC exposures: The Importance of Ethnicity, Housing and Personal Factors. *Atmospheric Environment*, **43**:2884-92, 2009.
39. Batterman S, Eisenberg J, Hardin R, Kruk M, Lemos MC, Michalak A, **Mukherjee B**, Renne E, Stein H, Watkins C, Wilson M. Sustainable Control of Water-Related Infectious Diseases: A Review and Proposal for Interdisciplinary Health-Based Systems Research. *Environmental Health Perspectives*, **117**:1023-32, 2009 .
40. Stoffel E, **Mukherjee B** \*\*, Raymond VM, Tayob N, Kastrinos F, Sparr J, Wang F, Bandipalliam P, Syngal S, Gruber SB, Risk of Colorectal and Endometrial Cancer in Lynch Syndrome. *Gastroenterology*, **137**:1621-27, 2009.
41. Park SK, **Mukherjee B**\*\*, Xia X, Sparrow D, Weisskopf M, Nie H, Hu H. Bone Lead Level Prediction Models and Their Application to Examine the Relationship of Lead Exposure and Hypertension in the Third National Health and Nutrition Examination Survey, *Journal of Occupational and Environmental Medicine*, **51**:1422-36, 2009.
42. Kastrinos F, **Mukherjee B**\*\*, Tayob N, Sparr J, Raymond VM, Wang F, Bandipalliam P, Stoffel EM, Gruber SB, Syngal S, The Risk of Pancreatic Cancer in Lynch Syndrome, *Journal of the American Medical Association*, **302**:1790-95, 2009.
43. Ghosh M, **Mukherjee B**, Santra U, and Kim D, Probability matching priors for correlation coefficient of a bivariate normal distribution. *The Journal of Statistical Planning and Inference*, **140**:1410-16, 2010.
44. Ghosh M and **Mukherjee B**, Bayesian analysis of matched pair data, In *Frontiers of Statistical Decision Making and Bayesian Analysis*, 430-45, Co-Editors: Ming-Hui Chen, Dipak K. Dey, Peter Mueller, Dongchu Sun, and Keying Ye, Springer-Verlag, 2010.
45. **Mukherjee B**, Ahn J, Gruber SB, Ghosh M, and Chatterjee N, Bayesian Sample Size Determination for Case-Control Studies of Gene-Environment Interaction, *Biometrics*, **66**: 934-48, 2010.
46. Boonstra PS\*, Gruber SB, Raymond V, Huang SC, Timshel S, Nilbert M, **Mukherjee B**, A review of statistical methods for testing genetic anticipation: looking for an answer

in Lynch syndrome. *Genetic Epidemiology*, **34**:756-68, 2010.

47. Zhang A, Park SK, Wright RO, Weisskopf MG, **Mukherjee B**, Nie H, Sparrow D, Hu H, The HFE H63D Polymorphism as a Modifier of the Impact of Cumulative Lead Exposure on Pulse Pressure: the Normative Aging Study. *Environmental Health Perspectives*, **118**:1261-66, 2010.
48. Borrs E, Pineda M, Blanco I, Jewett EM, Wang F, Teule A, Caldes T, Urioste M, Martnez-Bouzas C, Brunet J, Balmana J, Torres A, Cajal TR, Sanz J, Perez-Cabornero L, Castellvi-Bel S, Gonzalez S, Moreno V, Gruber SB, **Mukherjee B**, Rosenberg N, Lazaro C, Capella G, Identification of the first MLH1 founder mutations in Spanish Lynch syndrome families. *Cancer Research*, **70**: 7379-91, 2010.
49. Park SK, Elmarsafawy S, **Mukherjee B**, Spiro A, Vokonas PS, Nie H, Weisskopf M, Schwartz J, Hu H. Cumulative Lead Exposure and Age-related Hearing Loss: The VA Normative Aging Study, *Hearing Research*, **269**: 48-55, 2010.
50. Ahn J,\* , **Mukherjee B**, Gruber SB, and Sinha S, Missing Exposure Data in Stereotype Regression Model: Application to Matched Case-Control Study with Disease Subclassification. *Biometrics*, **67**:546-58, 2011.
51. Boonstra PS\*, **Mukherjee B**, Taylor JMG, Nilbert M, Moreno VM, and Gruber SB, Bayesian Modeling for Genetic Anticipation in Presence of Mutational Heterogeneity: A Case-Study in Hereditary Non-polyposis Colorectal Cancer. *Biometrics*, **67**:1627-37, 2011.
52. Samadder NJ, **Mukherjee B**, Huang SC, Ahn J, Rennert H, Greenson J, Rennert G, and Gruber SB, Risk of Colorectal Cancer in Self-Reported Inflammatory Bowel Disease and Modification of Risk by Statin and NSAID Use, *Cancer*, **117**:1640-48, 2011.
53. Roy A, Hu H, Bellinger DC, **Mukherjee B**, Modali R, Nasaruddin K, Schwartz J, Wright RO, Ettinger AS, Palaniapan K, and Balakrishnan K, Hemoglobin, Lead Exposure, and Intelligence Quotient: Effect Modification by the DRD2 Taq IA Polymorphism, *Environmental Health Perspective*, **119**:144-49, 2011.
54. **Mukherjee B**, Ou H, Wang F, and Erickson S, Development of a new co-morbidity index for health quality related measures. *The Journal of Clinical Epidemiology*, **64**:309-19, 2011.
55. Rohr AC, Kamal AS, Morishita M, **Mukherjee B**, Keeler GJ, Harkema JR, and Wagner JG, Altered Heart Rate Variability in Spontaneously Hypertensive Rats is Associated with Specific Particulate Matter Components in Detroit, Michigan, *Environmental*

*Health Perspectives*, **119**:474-80, 2011.

56. Vilar E, Bartnik CM, Raskin L, Ahn J, Moreno V, **Mukherjee B**, Rennert G, and Gruber SB, MRE11 deficiency increases sensitivity to poly(ADP-ribose) polymerase inhibition in microsatellite instable colorectal cancers. *Cancer Research*, **71**:2632-42, 2011.
57. **Mukherjee B**, Rennert G, Ahn J, Dishon S, Lejbkowitz F, Rennert H, Shirovitz S, Moreno V, Gruber SB, Risk of Colorectal and Endometrial Cancer in Ashkenazi families with the MSH2 A636P founder mutation. *Gastroenterology*, **140**:1919-26, 2011.
58. Kamal AS, Rohr A, **Mukherjee B**, Morishita M, Keeler GJ, Harkema JR and Wagner JG, PM2.5 induced changes in cardiac function of hypertensive rats depend on wind direction and specific sources in Steubenville, Ohio. *Inhalation Toxicology*, **23**:417-30, 2011.
59. Palaniappan K, Balakrishnan K, Krishnan L, **Mukherjee B**, Roy A, Hu H, Bellinger DC, Lead Exposure and Visual-Motor Abilities in Children from Chennai, India. *Neurotoxicology*, **32**:465-70, 2011.
60. Li S,\* , Batterman S, Wirth J, Wasilevich B, Wahl R, Su FC, **Mukherjee B**, Association of daily asthma emergency department visits and hospital admissions with ambient air pollutants among the pediatric Medicaid population in Detroit: Time series and time-stratified case-crossover analyses with threshold effects, *Environmental Research*, **111**: 1137-47, 2011.
61. Li S,\* , Elasaad H, Batterman S, Wahl R, Wasilevich E, **Mukherjee B**, Asthma exacerbation and proximity of residence to major roads: a population-based matched case-control study among the pediatric Medicaid population in Detroit, Michigan. *Environmental Health*, 10:34, 2011.
62. Choi YH, Hu H, Tak S, **Mukherjee B**, Park SK, Occupational Noise Exposure Assessment using O\*NET and Its Application to a Study of Hearing Loss in the US General Population, *Journal of Occupational and Environmental Medicine*, **69**: 176-83, 2011.
63. Su FC, **Mukherjee B**, Batterman S, Trends of VOC Exposures among a Nationally Representative Sample: Analysis of the NHANES 1988 through 2004 Data Sets, *Atmospheric Environment*, **45**, 4858-67, 2011.
64. Ou H, **Mukherjee B**, Erickson SR, Piette JD, Bagozzi RP, Balkrishnan R, Comparative Performance of Comorbidity Indices in Discriminating Health related Behaviours and Outcomes. *Health Outcomes Research in Medicine*, **2**:e91-e104, 2011.

65. **Mukherjee B**, Ahn J, Gruber SB, and Chatterjee N, Testing gene-environment interaction in large-scale association studies: possible choices and comparison. *American Journal of Epidemiology*, **175**:177-90, 2012, discussion paper with invited commentary.
66. **Mukherjee B**, Ahn J, Gruber SB, and Chatterjee N, Rejoinder to “GE-Whiz! Ratcheting Gene-Environment studies up to the Whole Genome and Whole Exposome by Thomas D.C. et al. *The American Journal of Epidemiology*, **175**: 190, 2012.
67. Bhadra D, Kim SD, Daniels MJ, Ghosh M, and **Mukherjee B**, Bayesian semiparametric analysis of case-control studies with time varying exposure. *Biometrics*, **68**:361-70, 2012. (*This paper received the SBSS student paper award* ).
68. Sanchez BN, Kang S, **Mukherjee B**, A latent variable approach to study gene-environment interactions in the presence of multiple correlated predictors. *Biometrics*, **68**:466-76, 2012.
69. VanderWeele TJ, **Mukherjee B**, and, Chen J, Sensitivity analysis for interactions under unmeasured confounding, *Statistics in Medicine*, **31**: 2552-64, 2012.
70. Zhang Z, Liu A, Lyles RH, **Mukherjee B**, Logistic regression analysis of biomarker data subject to pooling and dichotomization, *Statistics in Medicine*, **31**:2473-84, 2012.
71. Chen J, Kang G, VanderWeele TJ, Zhang C, **Mukherjee B**, Efficient Designs of Gene-Environment Interaction Studies: Implications of Hardy-Weinberg Equilibrium and Gene-Environment Independence. *Statistics in Medicine*, **31**:2516-31, 2012.
72. Lyles RH, Tang L, Lin J, Zhang Z, and **Mukherjee B**, Likelihood-based Methods for Regression Analysis with Binary Exposure Status Assessed by Pooling, *Statistics in Medicine*, **31**:2485-97, 2012.
73. **Mukherjee B**, Ko Y, VanderWeele TJ, Roy A, Park SK, Chen J, Principal interactions analysis for repeated measures data: Application to gene-gene, gene-environment interaction. *Statistics in Medicine*, **31**:2531-51, 2012.
74. Ghosh M, Song J, Forster J, Mitra R, and **Mukherjee B**, On the equivalence of posterior inference based on prospective and retrospective likelihoods. *Statistics in Medicine*, **31**:2196-208, 2012.
75. Li S\*, **Mukherjee B** and Batterman S, Point source modeling of matched case-control data with multiple disease sub-types. *Statistics in Medicine*, **31**: 3617-37, 2012.

76. **Mukherjee B**, DeLancey JO, Raskin L, *et al*, Risk of Non-Melanoma Cancers in CDKN2A Mutation Carriers, *The Journal of the National Cancer Institute*, **104**:953-56, 2012.
77. Markovitz AR, Goldstick JE, Levy K, Cevallo W, **Mukherjee B**, Trostle JA, Eisenberg JNS, : Where science meets policy: Comparing longitudinal and cross-sectional designs to address diarrheal disease burden in the developing world, *The International Journal of Epidemiology*, **41**: 504-13, 2012.
78. Ou H, **Mukherjee B**, Erickson SR, Piette JD, Bagozzi RP, Balkrishnan R, Comparative Performance of Comorbidity Indices in Predicting Healthcare related Behaviours and Outcomes among Medicaid Enrollees with Type-2 Diabetes, *Population Health Management*, **15**, 220-29, 2012.
79. Batterman S, Du L, Mentz G, **Mukherjee B**, Parker E, *et al.*, Particulate matter concentrations in residences with and without stand-alone filters and air conditioners, *Indoor Air*, **22**: 235-52, 2012.
80. Choi Y, Hu H, **Mukherjee B**, Miller J, Park SK, Environmental Cadmium and Lead Exposures and Hearing Loss in US Adults: the National Health and Nutrition Examination Survey, 1999 to 2004. *Environmental Health Perspective*, **120**: 1544-50, 2012.
81. Lewis TC, Henderson TA, Carpenter AR, Ramirez IA, McHenry CL, Goldsmith AM, Ren X, Mentz GB, **Mukherjee B**, Robins TG, Joiner TA, Mohammad LS, Nguyen ER, Burns MA, Burke DT, Hershenson MB, Nasal cytokine responses to natural colds in asthmatic children, *Clinical and Experimental Allergy*, **42**: 1734-44, 2012.
82. Mentz G, Schulz A, **Mukherjee B**, Rangunathan TE, White-Perkins D, and Israel B, Hypertension: Comparison of self-reported data on hypertension and measured blood pressure in a tri-ethnic community. *BMC Health Services Research*. **12**, 312, 2012.
83. Boonstra PS\*, Taylor JMG, and **Mukherjee B**, Incorporating auxiliary information for improved prediction in high dimensional datasets: An ensemble of shrinkage approaches, *Biostatistics*, **14**: 259-72, 2013.
84. Ahn J\*, **Mukherjee B**, Ghosh M, and Gruber SB, Bayesian semiparametric analysis of two-phase studies of gene-environment interaction. *The Annals of Applied Statistics*, **7**: 543-69, 2013.
85. VanderWeele TJ, Ko YA, and **Mukherjee B**, Effect of environmental confounding on joint tests of genetic association. *American Journal of Epidemiology*, **178**: 144-52, 2013.

86. Ko YA\*, Chaudhuri PS, Vokonas PS, Park SK, **Mukherjee B**, Likelihood ratio tests for detecting gene environment interaction in longitudinal studies. *Genetic Epidemiology*, **37**:581-91, 2013.
87. Boonstra PS\*, **Mukherjee B** and Taylor JMG, Bayesian shrinkage methods for partially observed high-dimensional data. *The Annals of Applied Statistics*, **7**:2272-92, 2013.
88. Li S\*, **Mukherjee B**, Batterman S, and Ghosh M, Bayesian analysis of time-series data under case-crossover designs: posterior equivalence and inference. *Biometrics*, **69**:925-36, 2013. (*This paper received one of the ENAR student paper awards in 2013*).
89. Raymond VM, **Mukherjee B\*\***, Wang F, Huang S, Stoffel EM, Kastrinos F, Syngal S, Cooney KA, Gruber SB, Risk of Prostate Cancer Among Men with Lynch Syndrome. *Journal of Clinical Oncology*, **31**:1713-8, 2013. *Discussion paper with editorial commentary*.
90. Lewis TC, Robins TG, Mentz GB, Zhang X, **Mukherjee B**, Lin X, Dvornch JT, Keeler GJ, Yip FY, O'Neill MS, Parker EA, Israel BA, Max PT, Reyes A, Community Action Against Asthma (CAAA) Steering Committee. Air pollution and respiratory symptoms among children with asthma: vulnerability by measures of asthma severity and residence area, *Science of the Total Environment*, **448**: 48-55, 2013.
91. Sun Z, **Mukherjee B**, Brook RD, Gatts GA, Yang F, Fan Z, Brook JR, Sun Q, Rajagopalan S, Air-Pollution and Cardiometabolic Diseases (AIRCMD): A Prospective Study Investigating the Impact of Air Pollution Exposure and Propensity for Type II Diabetes. *Science of the Total Environment*, **448**:72-78, 2013.
92. Johnson PI, Stapleton HM, **Mukherjee B**, Hauser R, Meeker JD, Associations between brominated flame retardants in house dust and hormone levels in men. *Science of the Total Environment*, **445-46**: 177-84, 2013.
93. Meeker JD, Cantonwine D, Rivera-Gonzalez L, Ferguson K, **Mukherjee B**, Calafat A, Ye X, Anzalota Del Toro LV, Crespo N, Jimenez-Veleza B, Alshawabkeh A, Cordero J, Distribution, variability and predictors of urinary concentrations of phenols and parabens among pregnant women in Puerto Rico. *Environmental Science and Technology*, **47**:3439-47, 2013.
94. Brook RD, Bard RL, Kaplan MJ, Yalavarthi S, Morishita M, Dvornch JT, Wang L, Yang HY, Spino C, **Mukherjee B**, Oral EA, Sun Q, Brook JR, Harkema J, and Rajagopalan S, The effect of acute exposure to coarse particulate matter air pollution in a rural location on circulating endothelial progenitor cells: results from a randomized controlled

- study. *Inhalation Toxicology*, **10**:587-92, 2013.
95. Raskin L, Johnson TM, Fullen DR, Giordano TJ, Vinco M, Sanders D, Ahn J, **Mukherjee B**, Gruber SB, Transcriptome profiling identifies HMGA2 as a novel gene in melanoma progression and prognosis, *The Journal of Investigative Dermatology* , **133**: 2585-92, 2013.
  96. Li S\*, Batterman S, Su FC and **Mukherjee B**, Addressing extrema and censoring in pollutant and exposure data using mixture of normal distributions. *Atmospheric Environment*, 77 doi: 10.1016/j.atmosenv.2013.05.004, 2013.
  97. Su FC, **Mukherjee B**, Batterman S, Determinants of personal, indoor and outdoor VOC concentrations: An analysis of the RIOPA data. *Environmental Research*, **126**:192-203, 2013.
  98. Porenta SR, Ko YA, Gruber SB, **Mukherjee B**, Baylin A, Ren J, and Djuric Z, Interaction of Fatty Acid Genotype and Diet on Changes in Colonic Fatty Acids in a Mediterranean Diet Intervention Study, *Cancer Prevention Research*, **6**:1212-21, 2013.
  99. Sun Z, Tao Y, Li S, Ferguson KK, Meeker JD, Park SK, Batterman SA, **Mukherjee B**. Statistical strategies for constructing health risk models with multiple pollutants and their interactions: possible choices and comparison. *Environmental Health*, **12**:85, 2013.
  100. Du L, Batterman S, Parker E, Robins T, Lewis T, **Mukherjee B**, Ramirez E, Rowe Z, Brakefield-Caldwell W, Use of Free-standing Filters in an Asthma Intervention Study, *Air Quality, Atmosphere and Health.*, **6**:759-767, 2013.
  101. Boonstra PS, Bondarenko I, Park SK, Vokonas PS and **Mukherjee B**, Propensity score based graphical model diagnostics for categorical response regression models. *Statistics in Medicine*, **33**:455-69, 2014.
  102. Ahn J\*, Johnson T, Bhavnani D, Eisenberg JE, and **Mukherjee B**, A spatio-temporal point process model for predicting diarrheal case-patterns in Northwest Ecuador, *Spatial and spatio-temporal epidemiology*, **9**:23-35, 2014.
  103. Li S\*, **Mukherjee B**, Taylor JMG, Rice KM, Wen X, Rice JD, Stringham H, Boehnke M, The role of covariate heterogeneity in meta-analysis of gene-environment interactions with quantitative traits. *Genetic Epidemiology*, **38**:416-29, 2014.
  104. Ko YA,\*, **Mukherjee B**, Smith J, Park SK, Kardia SLR, Allison MA, Vokonas PS, and Diez-Roux AV, Testing departure from additivity in Tukey's model using shrinkage:

Application to a longitudinal setting, *Statistics in Medicine*, **33**:5177-91, 2014.

105. Zhu Y, Ghosh D, Mitra N, and **Mukherjee B**, A data-adaptive strategy for inverse weighted estimation of causal effects, *Health Services and Outcomes Research Methodology*, **14**:69-91, 2014.
106. Cantonwine DE, Cordero JF, Rivera-Gonzalez LO, Anzalota Del Toro LV, Ferguson KK, **Mukherjee B**, Calafat AM, Crespo N, Jimnez-Vlez B, Padilla IY, Alshawabkeh AN, Meeker JD, Urinary phthalate metabolite concentrations among pregnant women in Northern Puerto Rico: Distribution, temporal variability, and predictors, *Environment International*, **62**:1-11, 2014.
107. Wagner JG, Katelyn Allen K, Yang HY, Nan B, Morishita M, **Mukherjee B**, Dvonch JT, Spino C, Fink GD, Rajagoplan S, Sun Q, Brook RD, and Harkema JR, Cardiovascular Depression Caused by Exposures to Inhaled Particulate Matter and Ozone is Augmented in Rats Fed a High Fructose Diet, *Environmental Health Perspective*, **122**:27-33, 2014.
108. Su FC, **Mukherjee B**, Batterman S, Modeling and analysis of personal exposures to VOC mixtures using copulas, *Environment International*, **63**:236-45, 2014.
109. Maiseyeu A, Yang HY, Ramanathan G, Yin F, Bard RL, Morishita M, Dvonch JT, Wang L, Spino C, **Mukherjee, B.**, Badgeley MA, Barajas-Espinosa A, Sun Q, Harkema J, Rajagopalan S, Araujo JA, Brook RD, No Effect of Acute Exposure to Coarse Particulate Matter Air Pollution in a Rural Location on High-density Lipoprotein Function. *Inhalation Toxicology*, **26**: 23-9, 2014.
110. Zhao X, Sun Z, Ruan Y, Yan J, **Mukherjee B**, Fang, Duan F, Sun L, Liang R, Lian H, Zhang S, Fang Q, Gu D, Brook JR, Sun Q, Brook RD, Rajagopalan S, Fan Z. Personal black carbon exposure influences blood pressure: the air pollution and cardio-metabolic disease (AIRCMD-China) study. *Hypertension*, **63**:871-77, 2014.
111. Bush KF, O'Neill MS, Li S, **Mukherjee B**, Hu H, Ghosh S, Balakrishnan K, Extreme precipitation and hospital admissions related to gastrointestinal illness in Chennai, India. *Environmental Health Perspective*, **122**:249-54, 2014.
112. Brook R, Bard R, Morishita M, Dvonch JT, Wang L, Yang H, Spino C, **Mukherjee, B.**, Kaplan M, Yalavarthi S, Oral E, Ajluni N, Sun Q, Brook J, Harkema J, and Rajagopalan S. The Hemodynamic and Vascular Effects of Acute Exposure to Coarse Particulate Matter Air Pollution in a Rural Location. *Environmental Health Perspectives*, **122**:624-30, 2014.

113. Bush KF, Fossani CL, Li S, **Mukherjee B**, Gronlund CJ and O'Neill MS, Extreme Precipitation and Beach Closures in the Great Lakes Region: Evaluating Risk among the Elderly, *International Journal of Environmental Research and Public Health*, **11**:2014-32, 2014.
114. Ferguson KK, McElrath TF, Chen YH, **Mukherjee B**, Meeker JD. Longitudinal profiling of inflammatory cytokines and C-reactive protein during uncomplicated and preterm pregnancy. *American Journal of Reproductive Immunology*, **72**:533-42, 2014.
115. Park SK, Tao Y, Meeker JD, Harlow S, **Mukherjee B**, Environmental Risk Score as a new tool to examine multi-pollutants in epidemiologic research: an example from the NHANES study using serum lipid levels. *PLoS ONE*, 9(6):e98632, 2014.
116. Ferguson KK, Cantonwine D, Rivera-Gonzalez LO, Loch-Carusio RK, **Mukherjee B**, Anzalota Del Toro LV, Jimenez-Velez B, Calafat AM, Ye X, Alshawabkeh AN, Cordero J, Meeker JD, Urinary phthalate metabolite associations with biomarkers of inflammation and oxidative stress across pregnancy in Puerto Rico. *Environment Science and Technology*, **48**:7018-25, 2014.
117. Ferguson KK, McElrath TF, Ko YA, **Mukherjee B**, Meeker JD. Variability in urinary phthalate metabolite levels across pregnancy and sensitive windows of exposure for the risk of preterm birth. *Environment International*, **70**, 118-24, 2014.
118. Zhang B. et al. Mukherjee's co-authorship is as a member of the Colorectal Transdisciplinary Study (CORECT). Large-scale genetic study in East Asians identifies six new loci associated with colorectal cancer risk. *Nature Genetics*, **46**:533-42, 2014.
119. Wang H. et al. Mukherjee's co-authorship is as a member of the Colorectal Transdisciplinary Study (CORECT). Trans-ethnic genome-wide association study of colorectal cancer identifies a new susceptibility locus in VTI1A, *Nature Communications*, **5**:4613, 2014.
120. Batterman S, Su FC, Li S, **Mukherjee B**, Jia C, HEI Health Review Committee. Personal exposure to mixtures of volatile organic compounds: modeling and further analysis of the RIOPA data. *Research Report of the Health Effects Institute* **181**:3-63, 2014.
121. Batterman S, Burke J, Isakov V, Lewis T, **Mukherjee B**, Robins T. A comparison of exposure metrics for traffic-related air pollutants: application to epidemiology studies in Detroit, Michigan. *International Journal of Environmental Research and Public Health*. **11**:9553-77, 2014.

122. Liu C, Fonken LK, Wang A, Maiseyeu A, Bai Y, Wang TY, Maurya S, Ko YA, Periasamy M, Dvonch T, Morishita M, Brook RD, Harkema J, Ying Z, **Mukherjee B**, Sun Q, Nelson RJ, Rajagopalan S. Central IKK inhibition prevents air pollution mediated peripheral inflammation and exaggeration of type II diabetes. *Part Fibre Toxicol*, **11**:53. doi: 10.1186/s12989-014-0053-5, 2014.
123. Boonstra PS, Taylor JMG, and **Mukherjee B**, Increasing efficiency for estimating treatment-biomarker interactions with historical data. *Statistical Methods in Medical Research*, pii: 0962280214535370, 2014.
124. Tao Y, Sanchez BN and **Mukherjee B**, Latent variable models for gene-environment interactions in longitudinal studies with multiple correlated exposures, *Statistics in Medicine*, **34**:1227-41, 2015.
125. Stenzel S, Ahn J, Boonstra PS, Gruber SB, **Mukherjee B**, The impact of exposure-biased sampling designs on detection of gene-environment interactions in case-control studies with potential exposure misclassification. *European Journal of Epidemiology*, **30**, 415-23, 2015.
126. Boonstra PS\*, **Mukherjee B** and Taylor JMG, Using hyperpenalties to select the tuning parameter in ridge regression. *Statistica Sinica*, **25**:1185-1206, 2015.
127. Ferguson KK, McElrath TF, Chen YH, Loch-Carusio R **Mukherjee B**, Meeker JD. Repeated measures of urinary oxidative stress biomarkers during pregnancy and preterm birth, *American Journal of Obstetrics and Gynecology*, **212(2)**:208.e1-8, 2015.
128. Morishita M, Bard RL, Wang L, Das R, Dvonch JT, Spino C, **Mukherjee B**, Sun Q, Harkema JR, Rajagopalan S, Brook RD. The characteristics of coarse particulate matter air pollution associated with alterations in blood pressure and heart rate during controlled exposures, *Journal of Exposure Science and Environmental Epidemiology*, **25**:153-59, 2015.
129. Ferguson KK, McElrath TF, Chen, Y-H, **Mukherjee B**, Meeker JD. Urinary phthalate metabolites are associated with increased oxidative stress biomarkers in pregnant women. *Environmental Health Perspectives*, **123**:210-16, 2015.
130. Chen Y-H, Ferguson KK, Meeker JD, McElrath TF and **Mukherjee B**. Statistical methods for modeling repeated measures of maternal environmental exposure biomarkers during pregnancy in association with preterm birth. *Environmental Health*, **14**:9, 2015.

131. Needham BL, Kim C, **Mukherjee, B**, Bagchi, P, Stanczyk, F, Kanaya, AM, Endogenous sex steroid hormones and glucose in non-diabetic South Asians: The Metabolic Syndrome and Atherosclerosis in South Asians Living in America pilot study. *Diabetic Medicine*, **32**:1193-200, 2015.
132. Cantonwine DE; Ferguson KK; **Mukherjee B**; McElrath TF; Meeker JD. Urinary Bisphenol A Levels during Pregnancy and Risk of Preterm Birth. *Environment Health Perspective*, **123**:895-901, 2015.
133. Ferguson KK, McElrath TF, Cantonwine DE, **Mukherjee B**, Meeker JD. Phthalate metabolites and bisphenol-A in association with circulating angiogenic biomarkers across pregnancy, *Placenta*, **36**:699-703, 2015.
134. He Z, Payne EK, **Mukherjee B**, Lee S, Smith JA, Ware EB, Sanchez BN, Seeman TE, Kardia SLR, Diez Roux AV. Association between stress response genes and features of diurnal cortisol curves in the Multi-Ethnic Study of Atherosclerosis: a new multi-phenotype approach for gene-based association tests, *PLoS ONE*, **10**(5):e0126637, 2015.
135. Schumacher et al., Genome-wide association study of colorectal cancer identifies six new susceptibility loci, *Nature Communications*, (**Mukherjee B** is among other authors), **6**:7138, 2015.
136. Ware EB, **Mukherjee B**, Sun YV, Diez-Roux AV, Kardia SLR, Smith JA, Comparative genome-wide association studies of a depressive symptom phenotype in a repeated measures setting by race/ethnicity in the Multi-Ethnic Study of Atherosclerosis. *BMC Genetics*, **16**:118, 2015.
137. **Mukherjee B**, Chen YH, Ko YA, He Z, Park SK, Lee, S and Zhang, M, Statistical approaches for studying gene-environment interaction in longitudinal studies. In *Statistical Approaches to Gene-Environment Interactions for Complex Phenotypes*. Windle, M. (Ed.), MIT Press, Cambridge, MA, 2015.
138. He Z\*, Zhang M, Lee S, Smith JA, Guo X, Palmas W, Kardia SLR, Diez-Roux AV, **Mukherjee B**, Multi-marker tests for joint association in longitudinal studies using the genetic random field model, *Biometrics*, **71**:606-15, 2015.
139. Ferguson KK, McElrath TF, **Mukherjee B**, Loch-Carusio, R, Meeker JD, Associations between maternal biomarkers of phthalate exposure and inflammation using repeated measurements across pregnancy, *PLoS One*, **10**(8):e0135601, 2015.

140. Needham BL, Smith JA, Zhao W, Wang X, **Mukherjee B**, Kardia SLR, Shively CA, Seeman TE, Liu Y, Diez Roux AV, Life Course Socioeconomic Status and DNA Methylation in Genes Related to Stress Reactivity and Inflammation: The Multi-Ethnic Study of Atherosclerosis. *Epigenetics*, **10**: 958-69, 2015.
141. Boonstra PS\*, Taylor JMG and **Mukherjee B**, Data-Adaptive Shrinkage via the Hyperpenalized EM Algorithm. *Statistics in Biosciences*, **7**:417-431, 2015.
142. Boonstra PS, **Mukherjee B**, Gruber SB, Ahn J, Schmit SL, Chatterjee N, Tests for Gene-Environment Interactions and Joint Effects with Exposure Misclassification, *The American Journal of Epidemiology*, **183**:237-47, 2016.
143. Ware EB, Smith JA, **Mukherjee B**, Lee S, Kardia, SLR and Diez-Roux, AV, Applying novel methods for assessing individual- and neighborhood-level social and psychosocial environment interactions with genetic factors in the prediction of depressive symptoms in the Multi-Ethnic Study of Atherosclerosis, *Behavioral Genetics*, **46**: 89-99, 2016.
144. Brook RD, Sun Z, Brook JR, Zhao X, Ruan Y, Yan J, **Mukherjee B**, Rao X, Duan F, Sun L, Liang R, Lian H, Zhang S, Fang Q, Gu D, Sun Q, Fan Z, Rajagopalan S. Extreme Air Pollution Conditions Adversely Affect Blood Pressure and Insulin Resistance: The Air Pollution and Cardiometabolic Disease Study. *Hypertension*, **67**:77-85, 2016.
145. Cantonwine DE, Ferguson KK, **Mukherjee B**, Chen YH, Smith NA, Robinson JN, Doubilet PM, Meeker JD, McElrath TF. Utilizing Longitudinal Measures of Fetal Growth to Create a Standard Method to Assess the Impacts of Maternal Disease and Environmental Exposure. *PLoS One*, 11(1):e0146532, 2016.
146. Koi M, Garcia M, Choi C, Kim HR, Koike J, Hemmi H, Nagasaka T, Okugawa Y, Toiyama Y, Kitajima T, Imaoka H, Kusunoki M, Chen YH, **Mukherjee B**, Boland CR, Carethers JM. Microsatellite Alterations with Allelic Loss at 9p24.2 Signify Less-aggressive Colorectal Cancer Metastasis. *Gastroenterology*, **150**:944-55, 2016.
147. Ko YA\*, **Mukherjee B**, Smith JA, Kardia SLR, Allison M, Diez Roux AV, Classification and clustering methods to handle multiple environmental factors for gene-environment interaction analysis - application to the Multi-Ethnic Study of Atherosclerosis, To appear in *Epidemiology*.
148. Su F-C, Goutman SA, Chernyak S, **Mukherjee B**, Callaghan, BC, Batterman, S, Feldman, EA, The Role of Environmental Toxins on ALS: A Case-Control Study of Occupational Risk Factors. To appear in *JAMA Neurology*.

149. Acculturation Strategies among South Asian Immigrants: The Mediators of Atherosclerosis in South Asians Living in America (MASALA) Study, Needham, BL, **Mukherjee B**, Bagchi P, Kim C, Mukherjea A, Kandula NR, Kanaya A. To appear in *Journal of Immigrant and Minority Health*.
150. Ferguson KK, Chen Y-H, VanderWeele TJ, McElrath TF, Meeker JD, **Mukherjee B**, Mediation of the relationship between maternal phthalate exposure and preterm birth by oxidative stress with repeated measurements across pregnancy, To appear in *Environmental Health Perspective*.
151. Chen Y-H, **Mukherjee B**, Meeker, JD, Ferguson, KK, VanderWeelee, TJ, Mediation Formula for Binary Outcome and Time-varying Exposure and Mediator Accounting for Possible Exposure-mediator Interaction, To appear in *American Journal of Epidemiology*.
152. Wagner AL, Zhang Y, **Mukherjee B**, Ding Y, Wells EV, Boulton ML. The impact of Supplementary Immunization Activities on the epidemiology of measles in Tianjin, China. *Int J Infect Dis.*, **45**:103-08, 2016.
153. Zeng C *et al.*, Identification of Susceptibility Loci and Genes for Colorectal Cancer Risk. *Gastroenterology*, **150**:1633-45, 2016. (**Mukherjee, B** among other authors as a member of CORECT consortium.)
154. Cantonwine DE, Meeker JD, Ferguson KK, **Mukherjee B**, Hauser R, McElrath TF, Urinary concentrations of bisphenol A and phthalate metabolites measured during pregnancy and risk of preeclampsia, *Environmental Health Perspective*, in press.
155. Johns LE, Ferguson KK, McElrath TF, **Mukherjee B**, Meeker JD, Associations between repeated measures of maternal urinary phthalate metabolites and thyroid hormone parameters during pregnancy , *Environmental Health Perspective*, E-Pub ahead of print.
156. Basa RC, Davies V, Li X, Murali B, Shah J, Yang B, Li S, Khan MW, Tian M, Tejada R, Hassan A, Washington A Jr, **Mukherjee B**, Carethers JM, McGuire KL, Decreased Anti-Tumor Cytotoxic Immunity among Microsatellite-Stable Colon Cancers from African Americans, *PLoS One*;11(6):e0156666, 2016.
157. Wagner AL, Sun X, Huang Z, Ren J, **Mukherjee B**, Wells EV, Boulton ML. *Pediatr Infect Dis J*. On-Time Measles and Pneumococcal Vaccination of Shanghai Children: The Impact of Individual- and Neighborhood-Level Factors., *Pediatr Infect Dis J.*, E-Pub ahead of Print.

## • Papers Submitted

1. He Z\*, Zhang M, Lee S, Smith JA, Kardina SLR, Diez Roux AVD, **Mukherjee B**, Set-Based Tests for Gene-Environment Interaction in Longitudinal Studies, Revision invited, *JASA Application and Case Studies*.
2. Chen Y-H\* and **Mukherjee, B**, Hypothesis Testing for Distributed Lag Functions in a Time Series Analysis, Submitted to *Statistics and Probability Letters*.
3. Chen Y-H\*, **Mukherjee B**, Adar S, Berrocal V, Coull BA, Robust Distributed Lag Models using Data Adaptive Shrinkage, Submitted to *Biostatistics*.
4. Sun Z\*, **Mukherjee B**, Estes JP and Park SK, Exposure enriched outcome-dependent sampling designs for longitudinal studies of gene-environment interaction. Submitted to *Statistics in Medicine*.
5. Liu G. **Mukherjee B**, Lee A, *Others*, Pearce CL, Robust tests for additive gene-environment interaction. Submitted to *American Journal of Epidemiology*.

## • Other articles

1. **Mukherjee, B**, Evolution of Bayesian Statistics in India, ISBA bulletin, Vol **15**, No. 3, pp 12-14. (2008).
2. **Mukherjee, B** and Li, Y, Leadership in large-scale collaborative studies: Does gender play a role?, In *Leadership and Women in Statistics*, Edited by Olkin, Golbeck and Gel, Taylor and Francis (2014).

## • Research Funding

CURRENT GRANTS: (Principal Investigator on the underlined grants)

1. NIH BD2K R25 Courses and Skills Development Grant Transforming Analytical Learning in the Era of Big Data: An Undergraduate Summer Institute in Biostatistics. 9/1/2015-8/31/2018, Role: PI.
2. M-Cubed Diamond Award: Developing an interactive tool for maternal and child health care monitoring and routine assessment to be used by iKure community health workers. Sponsored by the Trehan Foundation. 3/1/2015-9/1/2016. Role: PI.
3. NSF/DMS 14-06712: Set-based tests for genetic association and gene-environment interaction in longitudinal studies. 7/1/2014-6/31/2017. Role: PI (multiple PI grant with Min Zhang, University of Michigan).

4. NIH/NIEHS R21-ES020811: Efficient design and analytic strategies for enhancing the power of G x E studies. (this grant was awarded under a special program announcement for Statistical Methods for Gene-Environment Studies across multiple NIH institutes and is co-funded by NCI). 9/1/2012-8/31/2015. Role: PI.
5. Biostatistics Core of EPA Great Lakes Air Center For Integrative Environmental Research (GLACIER). 7/1/2011-6/30/2015. Role: PI and Core Director.
6. Environmental Statistics Core NIEHS P30 Center on Life stage exposures of chronic diseases, The University of Michigan NIEHS P30 Core Center, P30ES017885 (PI Loch-Caruso), 7/1/2011-6/30/2015. NIH/NIEHS. Role: Core Director.
7. P42 ES-017818 (PI Meeker): Phthalate Exposure and Mechanistic Pathway Markers in Pre-term Birth Among Women in Puerto Rico, 04/12/2010-0/12/2015. NIH/NIEHS Role: Co-I.
8. R01 ES-018872 (PI Meeker): Bisphenol A and Phthalate Exposure in Relation to Fetal Growth and Pre-term Birth. NIH/NIEHS, 04/12/2010-04/11/2015. Role: Co-I.
9. Comprehensive Cancer Center Core Grant Biostatistics Core (PI Taylor). NIH/NCI 11/01/08-10/30/2013. Role: Member, Biostatistics Core.
10. R01-ES019616: Environmental Triggers of Cardiometabolic Disease (PI Rajagopalan, Ohio State University), NIH/NIEHS, 7/1/2011-6/30/2015. Role: Co-I.
11. R01- CA129102: Statistical Methods for Cancer Biomarker Discovery and Cancer Risk Prediction (PI Taylor), NIH/NCI, 1/1/2012-12/31/2015, Role: Co-I.
12. Inflammatory Differentiation of Colorectal Cancer Among African Americans (PI Carethers), NIH/NCI, U01-CA-162147, 9/1/2012 to 8/31/2017, Role: Co-I.
13. Development of a US/Canadian Job Exposure Matrix for Noise (PI Neitzel), CDC, R21-OH-010482-01, 9/1/2013 to 8/31/2015, Role: Co-I.
14. Identification and Validation of ALS Environmental Risk Factors (PI Feldman). CDC, 9/1/2013 to 8/31/2017, Role: Biostatistician.
15. Development of a tailored HIV prevention intervention for young men (PI Baurmeister). NIH, R34-MH101997, 4/1/2015 to 3/31/2015, Role: Co Investigator.

PAST FUNDING:

1. H98230-06-1-0033 (Young Investigator Grant from NSA) \$29,983: Design and inference for case-control studies. Role: PI, 2006-08.
2. Faculty development fund awarded by University of Michigan, Center for Research on Learning and Teaching: Integrating Computer Applications and Contemporary Data Issues into Introductory Biostatistics: A Proposal to Restructure Biostatistics 503 (An Introductory Large Service Course In Biostatistics). Role: PI, \$6,000

3. R03 CA130045-01, 8/1/2007-12/31/2009: Synergism of Gene and Environment in Cancer Studies: A New Bayesian Approach: NIH/NCI \$143,680. Role: PI.
4. DMS 07-06935, 9/1/2007-5/31/2010 (NSF Statistical Methodology Grant): \$134,503: Bayesian Analysis for Studies of Gene-Environment Interaction.
5. Elizabeth C. Crosby research award for women faculty in science: Bayesian methods for Haplotype Based Interaction Analysis: Role: PI, NSF/ADVANCE program at the University of Michigan,\$15,000, 2009-2010.
6. NSF DMS-1007494 : Collaborative proposal: Case-Control Studies; New Directions and Applications. 6/1/2010-5/31/2012. Role: PI.
7. NIH/NCI R03-CA 156608 : Two-phase cancer studies of gene-environment interaction: 7/1/2011-6/31/2013. Role: PI
8. DMS 02-29028, 10/01/02-9/30/03: NSF conference in mathematical sciences on functional data analysis : PI George Casella, Co-PI Alexandre Trindade and **Bhramar Mukherjee**, award amount \$ 19,920. (funding for the fifth annual winter workshop at the Department of Statistics, University of Florida).
9. DMS 03-37163, 8/15/03-8/14/04: NSF conference in mathematical sciences on Data Mining and Bioinformatics: PI George Casella, Co-PI **Bhramar Mukherjee** and Michael Daniels, award amount \$ 24,120. (funding for the sixth annual winter workshop at the Department of Statistics, University of Florida).
10. M01 RR000042-46 (PI Kelch), NIH-NCRR, 03/01/06 - 02/28/11, \$160,146. Biostatistical support for General Clinical Research Center.
11. R01 CA081488 (PI Gruber) 12/01/04 - 11/30/09 (NIH/NCI) Molecular Epidemiology of Colorectal Cancer. Role: Co-I.
12. R03-HS017461-01A1 (PI Erickson) Developing a Co-morbidity Index for Health-related Quality of Life Studies. Sponsor NIH 9/1/2008-8/31/2009. \$88,206. Role: Co-I.
13. MICHR-CTSA Pilot project (PI Gruber): Discovering new drugs to target Microsatellite Instable Colorectal Cancer using connections between gene expression profiles. Role: Biostatistics consultant. 2009-2010.
14. EF 0811934 (PI Eisenberg): Collaborative Research: Agricultural Antibiotic and Human Health: A Multiscale Ecological Approach to the Development and Spread of Antibiotic Resistance. Role: Biostatistics Consultant, 2010.
15. UL1 RR024986-01 (PI Clauw) Michigan Institute for Clinical and Health Research (MICHR) Sponsor: NIH. 11/10-2007-10/10/2012. \$49,463,084. Role: Member of Biostatistics Core.

16. R01 ES014677-01A2 (PI Robins) Role of Diesel and Other Vehicular Exhaust in Exacerbation of Childhood Asthma, 07/01/07 - 06/30/12, NIH/NIEHS, Role: Co-I.
17. R01 ES014566-01A1 (PI Parker): A CBPR Intervention for Childhood Asthma Using Air Filters and Air Conditioners, 04/01/07-03/31/12 NIH/NIEHS Role: Biostatistician.
18. FY 07-3523(PI Batterman): Asthma Morbidity as EH Indicator of Air Pollution Levels 06/01/07- 05/31/10, EPA, Role: Co-I.
19. RD-83374001 (PI Batterman): Childhood Health Effects from Road Effects and Urban Pollution Burden Study, EPA, Role: Co-I, \$1,199,500, 03/01/2008-02/28/2011.
20. N01-CN-43302 (PI Gruber): Preclinical in Vitro and In Vivo Screening Assays for Cancer Preventive Agent Development 11/01/08 - 10/30/10. Role: Biostatistician.
21. Gilbert Whitaker Stage I grant for Improvement of Teaching. Center for Research, Learning and Teaching, University of Michigan. 5/1/2013-12/31/2014.
22. U19 NCI-895700 (PI Gruber): Trans-disciplinary Studies of Genetic Variation in Colorectal Cancer 6/1/10-5/31/2014. NIH/NCI Role: Co-I, Currently PI of the administrative core.
23. R01-ES-016769-01-A1 (PI Lewis): Interactions of Diesel Exhaust and Respiratory Viruses in Asthmatic Children: NIH/NIEHS. 1/13/2010 to 11/30/2014. Role: Co-I.
24. R01 HL101161-01A1 (PI Diez Roux): Stress, Gene-Environment Interaction and Cardiovascular Disease: NIH/NHLBI 7/1/2010 to 6/31/2014. Role: Co-I.

- **Software**

R-package, kin-cohort: Victor Moreno, Nilanjan Chatterjee and Bhramar Mukherjee, developed in 2007 (available at R-CRAN website).

R-package, LGWAS and LGEWIS for set-based analysis of genetic association and gene-environment interaction in longitudinal studies: Zihuai He, Shawn Lee, Min Zhang and Bhramar Mukherjee, developed in 2015 (available at R-CRAN website).

- **Plenary and Special Lectures**

Plenary Speaker, Methodological and Statistical issues in Gene-Environment Research, University of Georgia, Center for Contextual Genetics and Prevention Sciences, June, 2012.

Grand Rounds in the Sick Kids Program, University of Toronto, April, 2014.

Special Annual Invited Lecture, Department of Biostatistics and Epidemiology, University of California at San Francisco, May, 2014.

Special Invited Lecture, International Indian Statistical Association Conference, Pune, India, December, 2015.

### • Invited Talks

P.C. Mahalanobis memorial lecture by selected graduating students, Indian Statistical Institute, Calcutta, India, July 1996.

Seminar organized by diabetic care division, Eli Lilly and Company, July 2000.

Statistics Seminar, Eli Lilly and Company, August, 2000.

Graduate Student Seminar, Purdue University, October 2000.

Statistics Consulting Seminar, Purdue University, November 2000 and March 2001.

Statistics Seminar: University of Florida, January 2001.

Statistics Seminar: Virginia Tech, January 2001.

Statistics Seminar: Rand Corporation, January 2001.

Statistics Seminar: North Carolina State University, February 2001.

Statistics Seminar: Merck Research Labs, February 2001.

Statistics Seminar: Iowa State University, February 2001.

Statistics Seminar: Harvard University, February 2001.

Statistics Seminar: Eli Lilly and Company, February 2001.

Purdue University Technical Assistance Program Seminar, May 2001.

Seminar on optimal design theory, Department of Statistics, Purdue University, December 2001.

Statistics Seminar: Stanford University, July 2002.

New Directions in Experimental Design, Chicago, May 2002.

New Researchers' Conference, UC Davis, July 2003.

Pathways to Future Workshop, San Francisco, July 2003.

Joint Statistical Meetings, San Francisco, August 2003.

IISA conference on Statistics and Probability, May 2004.

Statistics Colloquium, Indian Statistical Institute, Kolkata, July 2004.

Statistics Colloquium, Department of Mathematics, IUPUI, September 2004.

Statistics Colloquium, Department of Health Studies, University of Chicago, October 2004.

Statistics Colloquium, Purdue University, October 2004.

Statistics Colloquium, Texas A and M University, February 2005.

Statistics Seminar, MD Anderson Cancer Research Center, February 2005.

Statistics Colloquium, University of Georgia, April 2005.

ASA Central Indiana local chapter meeting, May 2005.

Joint Statistical Meeting, Minneapolis, August 2005.

Statistics Colloquium, Michigan State University, September 2005.

Biostatistics Seminar, Michigan State University, September 2005.

Statistics Colloquium, University of Connecticut, November 2005.

Biostatistics Colloquium, University of Michigan, January 2006.

Mathematics and Statistics Seminar, Victoria University, Wellington, New Zealand, May, 2006.

Statistics Seminar, University of Auckland, New Zealand, May, 2006.

Weekly Seminar, Division of Cancer Epidemiology and Genetics, The National Cancer Institute, July, 2006.

Joint Statistical Meetings, Seattle, August, 2006.

University of Michigan, Undergraduate Math Club Seminar, November, 2006.

University of Michigan, Dept of Biostatistics, Cancer Research Seminar, November, 2006.

University of Michigan Cancer Center, Cancer Epidemiology Working Group Seminar, De-

cember, 2006.  
 Sixth International Triennial Calcutta Symposium on Probability and Statistics, December, 2006.  
 IISA conference on Statistics and Probability, January 2007.  
 Biostatistics Colloquium, University of Minnesota, April, 2007.  
 WNAR meetings, UC Irvine, June, 2007.  
 Bayesian Inference for Stochastic Processes (BISP 5), Valencia, June 2007.  
 Workshop on Nonparametric Bayesian Regression Models, Isaac Newton Institute for Mathematical Sciences, Cambridge, August, 2007.  
 Current and Future Trends in Non-Parametrics, Columbia, South Carolina, October, 2007.  
 Michigan Undergraduate Mathematics Conference, MSU, October, 2007.  
 Department of Biostatistics, UNC, Chapel Hill, February, 2008.  
 MECC Investigator's meeting: Haifa, Israel, 2008 (Presentation Via Web broadcasting).  
 ENAR, Crystal City, Virginia, 2008.  
 International Conference on Interdisciplinary Mathematical and Statistical Techniques, Memphis. Tennessee, May, 2008.  
 WNAR Invited Session, JSM, Denver, Colorado, August, 2008.  
 Statistics Seminar, University of Windsor, April, 2009.  
 Biostatistics Colloquium, Boston University, April, 2009.  
 Environmental Statistics Seminar, Department of Biostatistics, Harvard University, April, 2009.  
 Statistics Colloquium, Harvard University, April, 2009.  
 JSM, Washington DC, August, 2009.  
 Seventh International Triennial Calcutta Symposium on Probability and Statistics, December, 2009.  
 Statistics Seminar, Presidency College, Kolkata, January 2010.  
 IISA conference on Statistics and Probability, Vizag, January 2010.  
 Statistics Colloquium, Temple University, Philadelphia, April, 2010.  
 Biostatistics Colloquium, University of Washington, Seattle, June, 2010.  
 Statistics Seminar, The Fred Hutchinson Cancer Research Center, Seattle, June, 2010.  
 Special Biostatistics and Bioinformatics seminar, Institut Catalan d' Oncologica, Barcelona, Spain, July, 2010.  
 Roundtable luncheon on Bayesian Methods in Genomics, JSM, Vancouver, August 2010.  
 Statistics Colloquium, Ohio State University, October, 2010.  
 The Eighth ICSA International Conference: Frontiers of Interdisciplinary and Methodological Statistical Research, Guangzhou University, China, December 19-22, 2010.  
 The Eighth IISA International conference on Probability and Statistics, North Carolina State University, Raleigh, April 21-24, 2011.  
 Joint Statistical Meetings, Miami Beach, August, 2011.  
 Workshop on Design issues for Health Studies, Isaac Newton Institute of Mathematical Sciences, August, 2011.  
 Bioinformatics/Statistical Genetics Seminar, Purdue University, November, 2011.  
 Statistical Concepts and Methods for the Modern World, Colombo, Sri Lanka, December, 2011.  
 Contemporary Issues and Application of Statistics, Indian Statistical Institute, Kolkata, January, 2012.  
 Introductory Seminar on Biostatistics at Public Health Foundation of India, January, 2012

ENAR, Washington DC, March, 2012.  
 NIEHS, Weekly Seminar, Research Triangle Park, North Carolina, March, 2012.  
 Biostatistics Colloquium, University of Wisconsin-Madison, April, 2012.  
 Eighth Purdue international symposium on statistics, June, 2012.  
 ISBA Meeting, Kyoto, Japan, June, 2012.  
 Biostatistics Symposium, Beijing, July, 2012.  
 Joint Statistical Meetings, San Diego, July, 2012.  
 Roundtable luncheon on Bayesian methods in genetic and environmental epidemiology, JSM, San Diego, July, 2012.  
 Outstanding Statistics Alumna Seminar, Purdue University, September, 2012.  
 Biostatistics Colloquium, Department of Preventive Medicine, University of Southern California, November, 2012.  
 Young Statistician's Meeting, Burdwan University, India, December, 2012.  
 Eighth International Triennial Calcutta Symposium on Probability and Statistics, December, 2012.  
 IISA conference in statistics and probability, January, 2013.  
 ISBA satellite meeting in Varanasi, India, January, 2013.  
 Statistics Seminar, University of Florida, February, 2013.  
 Biostatistics Seminar, Emory University, February, 2013.  
 ENAR Meetings, Orlando, March, 2013.  
 Rice University, Summer Institute in Statistics, July, 2013.  
 Department of Biostatistics and Epidemiology, Memorial Sloan-Kettering Cancer Center, July, 2013.  
 Joint Statistical Meetings, Montreal, August, 2013.  
 Department of Statistics, Northwestern University, November, 2013.  
 Ordered Data Analysis, Models and Health Research Methods: An International Conference in Honor of H.N. Nagaraja for His 60th Birthday, Dallas, Texas, March 2014.  
 ENAR Spring Meetings, Baltimore, Maryland, March 2014.  
 Midwest Statistics Conference, University of Chicago, March, 2014.  
 Department of Biostatistics, University of Toronto, School of Public Health, April, 2014.  
 Invited Panel Member, Annual Health Effects Institute conference, May, 2014.  
 Invited Panelist, Celebrating women in statistics, North Carolina, May, 2014.  
 Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys and Big Data—Honoring Professor Malay Ghosh, May, 2014.  
 International Biometric Conference, Florence, Italy, July 2014.  
 Bayesian Biostatistics, Zurich, Switzerland, July 2014.  
 International Indian Statistical Association Conference on Statistics and Probability, Riverside, California, July, 2014.  
 Student Research Day, Department of Statistics, Biostatistics and Epidemiology, Michigan State University, October, 2014.  
 Gene-Environment Interaction Satellite Workshop, San Diego, October, 2014.  
 Biostatistics Seminar, Department of Epidemiology and Biostatistics, George Washington University, November, 2014.  
 Statistics Seminar, Public Health Foundation of India, New Delhi, December, 2014.  
 Statistics Seminar, Indian Statistical Institute, New Delhi, December, 2014.  
 International conference on statistics and its applications, Colombo, Sri Lanka, December, 2014.

Statistics Seminar, Department of Mathematics, University of Maryland College Park, February, 2015.  
 Round table luncheon speaker, invited poster presenter, invited discussant, ENAR Spring Meetings, March, 2015.  
 Biostatistics Colloquium, Department of Biostatistics and Epidemiology, University of Pennsylvania, April, 2015.  
 Workshop on Gene-Environment Interaction, Department of Biostatistics, University of Pennsylvania, April 2015.  
 Annual Meeting of the Society for Epidemiologic Research (SER), Denver, June, 2015.  
 NIEHS Workshop on Statistical Methods for exposure to environmental mixtures, Durham, July, 2015.  
 Statistics Colloquium, Division of Biostatistics, UCSF, July, 2015.  
 Joint Statistical Meetings, Seattle, August, 2015.  
 Biostatistics Seminar, Department of Biostatistics, Columbia University, August 2015.  
 Biostatistics Seminar, Department of Biostatistics and Bioinformatics, Georgetown University, October, 2015.  
 Weekly Colloquium, Department of Mathematics and Statistics, University of South Alabama, November, 2015.  
 IISA conference on statistics and probability, Pune, December, 2015.  
 The Second International Conference on Theory and Applications of Statistics, Dhaka, Bangladesh, December, 2015.  
 Ninth International Triennial Calcutta Symposium on Probability and Statistics, Kolkata, December, 2015.  
 New England Statistics Symposium, Yale University, April, 2016.  
 Cancer Control and Population Sciences Seminar Series, May, 2016.  
 International Biometrics Society, Brazilian Chapter Meeting, May, 2016.  
 Workshop on Statistical Methods and Analysis of Environmental Health Data, Mumbai, India, May, 2016.  
 Gertrude Cox Award Lecture, Washington Statistical Society, June, 2016.

• **Contributed Talks and Posters**

Poster Presentation in the Global Statistical Conference arranged by Eli Lilly and Company, October 2000.  
 Joint Statistical Meetings, New York, August 2002.  
 International Conference on Probability and Statistics, Northern Illinois University, June 2002.  
 Poster presentation in Fifth International Workshop on Objective Bayes Methodology, Branson, Missouri, June 2005.  
 Poster presentation in Conference in honor of Norman Breslow, August, 2006.  
 Poster presentation in Sixth International Workshop on Objective Bayes Methodology, Rome, Italy, June 2007.

• **Guest Lectures at the University of Michigan**

Epidemiology 818: Methodologic Issues in Cancer Epidemiology, Spring, 2007;  
 Epidemiology 631: Cancer Prevention Seminar Series, Spring, 2008;  
 Biostatistics Graduate Spring Open House: Winter, 2008, 2009, 2011; Fall 2013, 2014;  
 Two-part lecture series on Biostatistics: CTSA Health Services Professional Training Pro-

gram, University of Michigan, 2008, 2009;  
HMP 200: Introduction to Public Health, 2009, 2011, 2012, 2013, 2014;  
Biostatistics Students' Brown Bag Seminar, 2010;  
Faculty Research Luncheon, School of Public Health, 2010;  
Epid 813: Statistical Analysis of Longitudinal Data, 2010;  
Genome Sciences Training Program Retreat, 2008, 2011;  
Biostat 803: Cancer Seminar, Fall, 2013; Fall, 2015.

• **Short Courses**

Bayesian Analysis of Case-Control Data, ASA Continuing Education Short Course offered in JSM, 2006, Seattle. (joint with Malay Ghosh and Samiran Sinha).

Analysis of Ordinal Categorical Data, ASA Continuing Education Short Course offered in JSM, 2010, Vancouver. (joint with Alan Agresti).

Quantitative Methods in Genetic Epidemiology (Epid 719), University of Michigan graduate summer session in epidemiology, 2011, 2012. (joint with Sebastian Zoellner, this is a five day course with 20 hours of lecture and class work).

• **Service and Committee Work for the Profession**

Member, COPSS Presidents' Award Committee, 2014-2017.

Member, Scientific Program Committee, annual conference of RBRAS (the Brazilian section of the IBS), 2016.

Member, Scientific Committee, ISBA 2016, Sardinia, Italy.

Member, Educational Advisory Committee, 2015 ENAR Spring Meetings.

Poster judge, Conference on Women in Statistics, 2014.

Member, Scientific Program Committee, Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys and Big Data: A Conference Honoring Professor Malay Ghosh, 2013-2014.

Elected Member, ENAR Regional Committee (RECOM), 2012-2014.

Overall Program Chair, ASA, Joint Statistical Meetings, Montreal, 2013.

Member, ASA Committee on Meetings, 2012-2014.

Member, ENAR Distinguished Student Paper Award Committee, 2011-13.

Member, Organizing Committee, Midwest Statistics Research Conference, April, 2011.

Member, Scientific Program Committee, International Conference on Probability, Statistics and Data Analysis, IISA, 2011.

Chair, Poster Award Committee, IISA, 2011.

Appointed Member, Regional Advisory Board (RAB) of ENAR, 2010-12.

Secretary/Treasurer, The Committee of Presidents of Statistical Societies (COPSS), 2010-12.

Member, JSM Program Committee, 2011, ENAR Representative.

Member, SBSS Student Paper Award Committee, 2010.

Member, ENAR junior researchers' workshop planning committee, 2009-2012.

Member, ASA Section on Statistics in Epidemiology, Young Investigator and Graduate Student Travel Awards Committee, 2009.

Appointed Member, American Statistical Association Committee on Membership Retention and Recruitment, 2010-2012.

Treasurer/Secretary elect, ASA Section on nonparametric statistics, 2008-2010.  
 Member, JSM Program Committee, as Program Chair of International Indian Statistical Association, 2009.  
 Executive Board Member and Program Chair, International Indian Statistical Association, 2007-2009.  
 Member, Student Paper Award Committee, IISA conference, University of Connecticut, 2008.  
 David P. Byar award committee, ASA, Biometrics section, 2007.  
 Appointed Member, American Statistical Association Committee on Minorities in Statistics, 2004-2006.  
 Executive Board Member and Director of Young Professional Statisticians in International Indian Statistical Association, 2003-2004.

• **Sessions Organized at Professional Meetings**

Organizer, Invited session on “Recent Statistical Advances in Cancer Research”, JSM 2004.  
 Organizer and Chair, Session on “Survival Skills for Young Researchers”, IISA conference on Probability and Statistics, University of Georgia, 2004.  
 Organizer, Student Paper Competition (Theory and Methods category), IISA conference, University of Georgia, 2004.  
 Organizer and Chair, Invited Session on “Recent Advances in Statistical Methods for Genetic Epidemiology”, ENAR 2006.  
 Organizer, Invited Session on “Complex Sampling Designs and Related Inference Issues in Epidemiological Studies”, JSM 2006.  
 Organizer and Chair, Invited Session on “Statistical Challenges in Analyzing Highly Stratified Data”, JSM 2006.  
 Organizer and Chair, Invited Session on “Bayesian Methods in Epidemiology”, ENAR 2008  
 Organizer and Chair, Invited Session on “Statistical challenges in large-scale genetic and genomic studies”, JSM, 2008  
 Organizer, Invited Session on “Bayesian Nonparametrics: New Directions and Novel Applications” IISA, 2008.  
 Organizer, Invited Session on “Bayesian Nonparametrics”, IMS-Asian Pacific Rim Meeting, Seoul, 2009.  
 Organizer and Chair, Invited Session on “Emerging Statistical Challenges in Cancer Research”, JSM, 2009.  
 Organizer and Chair, Invited Session on “New frontiers of statistical genetics: Fresh perspectives”, IISA conference on probability and statistics, Vizag, 2010.  
 Organizer and Chair, Invited Session on “Analysis of high-dimensional data in genomic/epidemiologic studies.”, IISA conference on probability and statistics, North Carolina State University, 2011.  
 Organizer, Invited session on “Shrinkage and Empirical Bayes”, JSM 2012.  
 Organizer, Invited panel on “Career after graduation with a degree in statistics”, JSM 2012.  
 Organizer, Invited session on Bayesian Methods for Biomedical Research, ISBA conference, Banaras Hindu University, 2013.  
 Organizer, Invited session on Statistical Methods for Cancer Research, IISA conference on probability and statistics, Chennai, 2013.  
 Organizer, Introductory Overview Lecture on Next Generation Bioinformatics and Beyond: JSM 2013.  
 Organizer, Invited session on “Statistical Methods for High Dimensional Data: Presentation by Junior Researchers”, JSM, 2013.

Organizer, Invited session on “Inside the biostatistical collaborative process”, ENAR, 2014.  
Organizer, Invited session on “Meta-analysis of gene-environment interactions”, ENAR, 2014.  
Organizer, Invited session on “The Role of Big Data in Environmental and Spatial Statistics”, JSM, 2014.  
Organizer, Invited session on “Showcasing work by young researchers in high-dimensional statistics”, IASSL, Sri Lanka, 2014.  
Organizer, Invited session on “Statistical methods in modern epidemiology”, IASSL, Sri Lanka, 2014.  
Organizer, Invited session on “Doing Data Science: Straight talk from the front line”, ENAR, 2015.

• **Service and Committee Work at Home Institution**

University of Florida: 2002-2006

Member, Organizing Committee, Sixth annual winter workshop, 2004.  
Member, Organizing Committee, Fifth annual winter workshop, 2003.  
Member, CLAS New Faculty Search Committee, 2003.  
Member, IFAS New Faculty Search Committee, 2004.  
Member, Graduate Admissions Committee, 2003-06.  
Colloquium Co-ordinator, 2003-2004.  
Organizer, Challis Lectureship Award, 2005.

University of Michigan: 2006-

DEPARTMENT LEVEL:

Member, Student Affairs/Alumni Relations Committee, 2006.  
Member, Biostatistics New Faculty Search Committee, 2006-10.  
Member, Biostatistics Candidacy Examination Committee, 2008.  
Member, Biostatistics Curriculum Committee, 2008-10, 2013-2014.  
Chair, Biostatistics Curriculum Committee, 2010-11, 2014-2015.  
Member, Biostatistics chair search committee, 2010.  
Member, 50/60 Conference Organizing Committee, 2009.  
Member, New Faculty Search Committee, Department of Epidemiology, 2010.  
Member, Graduate Student Admissions Committee, 2011-12.  
Member, Search committee for a senior faculty in Cancer Epidemiology and Associate Director of Cancer Prevention and Control at the University of Michigan Comprehensive Cancer Center, 2012.  
Member, Organizing committee, A symposium in honor of Professor Jack Kalbfleisch, 2012.  
Member, Committee on Endowment, 2012-2013.  
Member, Cancer Epidemiology Faculty Search Committee, Department of Epidemiology, 2013.  
Member, Genomics Faculty Search Committee, Department of Biostatistics, 2014.  
Member, Ad Hoc Chair Search Committee, Department of Biostatistics, 2014.  
Member, Kidney Epidemiology and Cost Center (KECC) Faculty Search Committee, Department of Biostatistics, 2015.  
Chair, Junior Faculty Search Committee, Biostatistics, 2016.  
Member, Junior Faculty Search Committee, Epidemiology, 2016.  
Member, Open Rank Faculty Search Committee, Biostatistics, 2016.

#### SCHOOL LEVEL:

Member, Diversity Committee, School of Public Health, 2009-11.  
Co-Chair, Diversity Committee, School of Public Health, 2011-12.  
Member, Celebration Committee for Ken Warner's Term as a Dean, 2010.  
Member, School Committee on Global Public Health, 2011-12.  
Service on academic misconduct review panel, Office of academic affairs, School of Public Health, 2012.  
Member, Advisory Committee on Academic Programs (ACAP), 2013-2015.  
Member, Retained organization working group, 2013-2014.  
Member, Global Public Health Faculty Advisory Committee, 2014-2015.  
Co-Chair, SPH India Interest Group, 2014-2015.  
Member, Global Public Health Professorship Advisory Committee, 2014-2015.  
Member, SPH 75th Anniversary Celebration Committee, 2016.

#### INSTITUTIONAL LEVEL:

Center for Statistical Consulting and Research (CSCAR) Executive Committee, 2016-2018.

#### • **Dissertation Committee**

##### University of Florida: 2002-2006

Member, Master's thesis committee, Tyson G. Brown, Department of Sociology, 2003  
Member, Master's thesis committee, Zhaojie Wang, Department of Statistics, 2003.  
Member, Doctoral committee, Lynette Bardolf, Department of Audiology, 2004-06.  
Member, Doctoral committee, Jangyul Kim, Department of Journalism and Mass Communications, 2005-06.

##### University of Michigan: 2006-

Member, Ph.D Dissertation committee, Kristin Meyers, Epidemiology, 2007-2009.  
Member, Ph.D Dissertation committee, Ali Kamal, EHS, 2007-2009.  
Member, Ph.D Dissertation committee, David Cantonwine, EHS, 2007-2009.  
Member, Ph.D Dissertation committee, Laila Poisson, Biostatistics, 2008-2009.  
Member, Ph.D Dissertation committee, Ying Guo, Biostatistics, 2009-2010.  
Member, Ph.D Dissertation committee, Huang-Tz Ou, Pharmacy, 2009-2010.  
Member, Ph.D Dissertation committee, Yoon-Hyeong Choi, EHS, 2008-2011.  
Member, Ph.D Dissertation committee, Paula Johnson, EHS, 2009-2012.  
Member, Ph.D Dissertation committee, Kathleen Bush, EHS, 2009-2011.  
Member, Ph.D Dissertation committee, Jian Kang, Biostatistics, 2009-2011.  
Member, Ph.D Dissertation committee, Kelly M. Baklusk, EHS, 2009-2012.  
Member, Ph.D Dissertation committee, Feng-Ciao Su, EHS, 2009-2013.  
Member, Ph.D Dissertation committee, Darlene Bhavnani, Epidemiology, 2010-2012.  
Member, Ph.D Dissertation committee, Erin Bakshis, Epidemiology, 2010-2013.  
Member, Ph.D Dissertation committee, Robert William Kononowech, EHS, 2011-2012.  
Member, Ph.D Dissertation committee, Kari Sant, EHS, 2011-2012.  
Member, Ph.D Dissertation committee, Kelly Ferguson, EHS, 2011-2014  
Member, Ph.D Dissertation committee, Chun-Yi Wu, Epidemiology, 2011-2012.  
Member, Ph.D Dissertation committee, Stephanie Stenzel, Epidemiology, 2012-2013.  
Member, Ph.D Dissertation committee, Erin Payne, Epidemiology, 2012-2013.

Member, Ph.D Dissertation committee, Juan Shen, Statistics, 2012-2014.  
Member, Ph.D Dissertation committee, James Couch, EHS, 2013-  
Member, Ph.D Dissertation committee, Zhuqing Liu, Biostatistics, 2013-2014.  
Member, Ph.D Dissertation committee, Krystin Karlson, EHS, 2013-2014.  
Member, Ph.D Dissertation committee, Mark Reppell, Biostatistics, 2013-2014.  
Member, Ph.D Dissertation committee, Abram Wagner, Epidemiology, 2013-2015.  
Member, Ph.D Dissertation committee, Andre Oliviera Markon, Epidemiology, 2014.  
Member, Ph.D Dissertation committee, Nhat Ho, Statistics, 2014-  
Member, Ph.D Dissertation committee, Ritabrata Das, Biostatistics, 2014-2015.  
Member, Ph.D Dissertation committee, Lauren Johns, EHS, 2015-.  
Member, Ph.D Dissertation committee, Ben Roberts, EHS, 2015-.  
Member, Ph.D Dissertation committee, Paola Filigrana Villegas, Epidemiology, 2015-.  
Member, Ph.D Dissertation committee, Sayantan Das, Biostatistics, 2015-.  
Member, Ph.D Dissertation committee, Kristen Brown, Epidemiology, 2014-.  
Member, Ph.D Dissertation committee, Sonia Hegde, Epidemiology, 2016-.  
Member, Ph.D Dissertation committee, Amira Akeer, EHS, 2016-  
Member, Ph.D Dissertation committee, Naveen N Narisetty, Statistics, 2015-2016.

#### Invited Member of External Dissertation Committee

Member, Ph.D Dissertation committee, Yanyan Zhu, Department of Biostatistics, Boston University, 2009-2010.

#### • **Doctoral Students**

##### University of Florida: 2002-2006

1. Samiran Sinha, Associate Professor, Department of Statistics, Texas A and M University (Co-chair with Prof. Malay Ghosh, graduated in August 2004; winner of ENAR travel award, 2003; recipient of NCI cancer research training fellowship, 2003; thesis nominated for Savage award for best applied Bayesian dissertation work, 2005).

2. Li Zhang, Assistant Professor, Division of Hematology and Medical Oncology Department of Medicine UCSF Helen Diller Family Comprehensive Cancer Center Department of Epidemiology and Biostatistics University of California, San Francisco. (Co-chair with Prof. Malay Ghosh, graduated in 2006; recipient of NCI cancer research training fellowship, 2005).

3. Upasana Santra, Department of Statistics, University of Florida (Co-chair with Prof. Malay Ghosh, graduated in 2007, Lecturer, Valencia Community College, Florida.)

##### University of Michigan: 2006-

4. Jaeil Ahn, Department of Biostatistics, University of Michigan (Graduated in 2011, Co-chair with Timothy A. Johnson), Assistant Professor, Georgetown University, Division of Biostatistics and Bioinformatics.

5. Philip Simon Boonstra, Department of Biostatistics, University of Michigan (Graduated in 2012, Co-chair with Jeremy M. G. Taylor). Research Assistant Professor, Department of Biostatistics, University of Michigan.

6. Shi Li, Department of Biostatistics, University of Michigan

(Graduated in 2013, Statistician at Eli Lilly and Company, Indianapolis).

7. Yi-An Ko, Department of Biostatistics, University of Michigan  
(Graduated in 2014) Research Assistant Professor, Department of Biostatistics, Emory University.

8. Yin-Hsiu Chen, Department of Biostatistics, University of Michigan.

9. Zhichao Sun, Department of Biostatistics, University of Michigan, Co-chair with Thomas Braun.

10. Zihuai He, Department of Biostatistics, University of Michigan, Co-chair with Min Zhang.

11. Wenting Cheng, Department of Biostatistics, University of Michigan, Co-chair with Jeremy MG Taylor.

• **Graduate Student Research Assistants Supervised**

Jaeil Ahn (2007-), Xi Xia (2007-2008), Nabihah Tayob(2008-2009); Fei Wang (2008-2011); Shi Li (2008-); Ye Yang (2010-2011); Zhichao Sun (2011-); Jie Zhou (2011); Hui-yu Yang (2012); Matthew O'Connor (2012); Yebin Tao (2012-14); Zihuai He (2013-); Zhichao Sun (2011-); Yin-Hsiu Chen (2013-); Sarah Scarlett (2013-14), Greyson Liu (2015-). Department of Biostatistics, University of Michigan.

• **Masters Student Advisee (University of Michigan)**

William Quarshie, Jaeil Ahn, Matt Jones, Xijing Han, Ann Haas (2007-08); Zhi He, Matt Jones (2006-07), Lisa Henn (2008-2009); Rounak Dey (2013-14).

• **Teaching Experience**

- – 8/96 to 12/96 Purdue University, Dept. of Mathematics  
Course: Algebra and Trigonometry for freshmen.
- 1/97 to 5/97, 1/98 to 5/98 and 6/01 to 8/01 Purdue University, Dept. of Statistics  
Course: Probability for management students
- 8/97 to 12/97 Purdue University, Dept. of Statistics  
Course: Probability and Basic Statistics for math education majors
- 6/99 to 8/99 and 6/01-8/01 Purdue University, Dept. of Statistics  
Course: Regression Analysis and other Multivariate Methods for graduate students in other disciplines
- 8/01-12/01 Purdue University, Dept. of Statistics  
Course I: Introduction to Experimental Statistics (I) for graduate students in other disciplines.  
Course II: A Data-oriented Introduction to Basic Statistics for undergraduate math-

ematics and actuarial Sciences majors.

- 1/02-5/02, 1/04-5/04 University of Florida, Dept. of Statistics  
Course: Statistical Methods for Social Sciences II.
- 8/02-12/02, 8/03-12/03, 8/05-12/05 University of Florida, Dept. of Statistics  
Course: Statistical Methods for Social Sciences I
- 8/04-12/04 Purdue University, Dept. of Statistics  
Introduction to Experimental Statistics (I) for graduate students in other disciplines. (Distance Learning course, lectures broadcast via television network).
- 1/05-4/05 Purdue University, Dept. of Statistics  
Introduction to Experimental Statistics (II) for graduate students in other disciplines. (Distance Learning course, lectures broadcast via television network).
- 9/06-12/06, 9/07-12/07, 9/08-12/08, 9/11-12/11 University of Michigan, Dept. of Biostatistics  
Introduction to Biostatistics and Applied Biostatistics for graduate students in the school of public health (large service course for Master's level students in public health).
- 9/09-12/09 University of Michigan, Dept. of Biostatistics  
Categorical Data Analysis. (for Masters and Ph.D students in Biostatistics).
- 1/10-4/10, 1/11-4/11 University of Michigan, Dept. of Biostatistics  
Biostatistical Investigations (a course consisting of projects, presentations, journal article review in preparation for biostatistics collaboration for Masters and Ph.D students in Biostatistics).
- 1/14-4/14 University of Michigan, Dept. of Biostatistics  
Genetic associations and interactions (Special topics Ph.D level course for doctoral students in Biostatistics, Statistics and Bioinformatics)
- 9/14-12/14 University of Michigan, Dept. of Biostatistics and Epidemiology  
Modern Statistical Methods for Epidemiological Studies (An advanced methods course for doctoral students in Epidemiology and MS students in Biostatistics.)

### • Special Educational Initiative and Outreach

**Founding Director**, Undergraduate Summer Institute in Biostatistics: Transforming Analytical Learning in the Era of Big Data, A summer institute designed to train undergraduate students interested in data science. (<http://bigdatasummerinstitute.com>).