

# Bhramar Mukherjee

## • Contact Information

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## • Employment

Professor (2013-), Department of Biostatistics, University of Michigan  
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.  
Participating Faculty: Occupational and Environmental Epidemiology Concentration,  
Department of Environmental Health Sciences, University of Michigan (2009-).  
Member, University of Michigan Comprehensive Cancer Center (2009-).  
Associate Director, Cancer Biostatistics Training Grant (2013-).

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)

### • 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 BIOSSTAT 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. More information is available at <http://www.sph.umich.edu/about/awards.html>)

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.

### • Professional Activity

**Editorial Service:** Associate Editor, *Biometrics*; 2008-, Associate Editor, *The American Statistician*; 2008-2011, Associate Editor, *Journal of Statistical Planning and Inference*; 2012-, 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-.

**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 Behavioral and Environmental Statistics.

**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.

**Advisory Committee, Steering Committee, Executive 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 Reviewer for Tenure and Promotion Evaluation**

2010: University of Minnesota, Pennsylvania State University, University of Connecticut.

2011: University of Minnesota.

2012: Cleveland Clinic Foundation; Harvard School of Public Health.

2013: University of Wisconsin-Madison; University of Texas, Dallas.

• **Professional Membership**

American Statistical Association, (ASA Section on Epidemiology, Bayesian Statistics, Teaching Statistics to Health Sciences and Nonparametric Statistics), Institute of Mathematical Statistics, International Indian Statistical Association, International Biometric Society (ENAR), International Statistical Institute.

• **Publications (Peer Reviewed)**

1. Mausumi Bose and **Bhramar Mukherjee**, Cross-over design in the presence of higher order carry-overs, *Australian and New Zealand Journal of Statistics*, **42**:235-44, 2000.
2. **Bhramar Mukherjee**, Exactly optimal sampling designs for processes with a product covariance structure, *The Canadian Journal of Statistics*, **31**:1-19, 2003.
3. Mausumi Bose and **Bhramar Mukherjee**, Cross-over designs under a general model, *Statistics and Probability Letters*, **62**:413-18, 2003.
4. **Bhramar Mukherjee**, On sampling designs for estimating the integral of a stochastic process, *Communications in Statistics, Theory and Methods*, **32**:1647-63, 2003.
5. \*Samiran Sinha, **Bhramar Mukherjee** and Malay Ghosh, Bayesian analysis of matched case-control studies with multiple disease states. *Biometrics*, **60**:41-49, 2004.
6. \*Samiran Sinha, **Bhramar Mukherjee**, Malay Ghosh, Bani K. Mallick and Raymond J. Carroll, Bayesian semiparametric 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. Malay Ghosh and **Bhramar Mukherjee**, Non-parametric sequential Bayes estimation of the distribution function. *Sequential Analysis*, **24**:389-409, 2005.
8. **Bhramar Mukherjee**, Samiran Sinha and Malay Ghosh, 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. Malay Ghosh, Li Zhang and **Bhramar Mukherjee**, Equivalence of posteriors in the Bayesian analysis of the multinomial-Poisson transform *Metron*, **64**:19-28, 2006.
10. Samiran Sinha and **Bhramar Mukherjee**, A score test for determining sample size for a matched case-control study with categorical exposure, *Biometrical Journal*, **48**:35-53, 2006.

11. **Bhramar Mukherjee**, 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. Yashowanto N. Ghosh and **Bhramar Mukherjee**, On properties of conditional medians and quantiles. *Statistics and Probability Letters*, **76**:1775-80, 2006.
13. Malay Ghosh and **Bhramar Mukherjee**, Data adaptive sequential design for case-control studies. *Statistica Sinica*, **16**:697-719, 2006.
14. \*Li Zhang, **Bhramar Mukherjee**, Malay Ghosh and Rongling Wu, Accounting for population substructure in case-control studies of disease-gene association: A Bayesian approach, *Statistical Modeling*, **6**:352-72, 2006.
15. André Khuri, **Bhramar Mukherjee**, Bikas Sinha and Malay Ghosh, Design issues for generalized linear models. *Statistical Science*, **21**:376-99, 2006.
16. **Bhramar Mukherjee**, Li Zhang, Malay Ghosh and Samiran Sinha, Bayesian semi-parametric analysis of case-control data under conditional gene-environment independence *Biometrics*, **63**:834-44., 2007.
17. **Bhramar Mukherjee**, Ivy Liu and Samiran Sinha, Analysis of Matched case-control data with ordinal disease states: possible choices and comparisons, *Statistics in Medicine*, **26**:3240-57, 2007.
18. \*Samiran Sinha, **Bhramar Mukherjee** and Malay Ghosh, Modeling association among multivariate exposures in a matched case-control study. *Sankhya*, **64**:379-404, 2007.
19. Robert M. Dorazio, **Bhramar Mukherjee**, Li Zhang, Malay Ghosh, Howard Jelks and Frank Jordan, Modeling Unobserved Sources of Heterogeneity in Animal Abundance Using a Dirichlet Process Prior, *Biometrics*, **64**:635-44, 2008.
20. \* Li Zhang, **Bhramar Mukherjee**, Malay Ghosh, Stephen Gruber and Victor Moreno, Misclassification of exposures in case-control studies of gene-environment interaction *Statistics in Medicine*, **27**:2756-83, 2008.
21. **Bhramar Mukherjee** and Nilanjan Chatterjee, 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. Alba Aguado, Elisabet Guino, **Bhramar Mukherjee**, Antoni Sicras, Josep Serrat, Mateo Acedo, Juan J Ferro and Victor Moreno 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.

23. Nilanjan Chatterjee and **Bhramar Mukherjee**, 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.
24. Ivy Liu and **Bhramar Mukherjee**, The Proportional Odds Model, *Wiley Encyclopedia for clinical trials.*, 1-8, 2008.
25. **Bhramar Mukherjee**, Jaeil Ahn, Gad Rennert, Stephen B. Gruber, Victor Moreno and Nilanjan Chatterjee, Testing gene-environment interaction from case-control data: A novel study of Type-1 error, power and designs. *Genetic Epidemiology*, **32**:615-26, 2008.
26. Samiran Sinha, Stephen B. Gruber, **Bhramar Mukherjee** and Gad Rennert, Inference on haplotype effects in matched case-control studies using unphased genotype data. *International Journal of Biostatistics*, **4**, article 1, 2008.
27. **Bhramar Mukherjee**, Jaeil Ahn, Ivy Liu, Paul Rathouz and Brisa Sanchez, On elimination of nuisance parameters in a stratified proportional odds model by amalgamating conditional likelihoods. *Statistics in Medicine*, **27**:4950-71, 2008.
28. Alexandros D. Polydorides, **Bhramar Mukherjee**, Stephen B. Gruber, Barbara J. McKenna, Henry D. Appelman, and Joel K. Greenson. Adenoma-Infiltrating Lymphocytes (AILs) Are a Potential Marker of Hereditary Non-Polyposis Colorectal Cancer. *American Journal of Surgical Pathology*, **32**:1661-66, 2008.
29. Brad J. Lampe, Sung Kyun Park, Thomas Robins, **Bhramar Mukherjee**, Augusto A. Litonjua, C. Amarasiriwardena, David Sparrow, Howard Hu, Association between 24-Hour Urinary Cadmium and Pulmonary Function: The VA Normative Aging Study. *Environmental Health Perspective*, **116**:1226-30, 2008.
30. **Bhramar Mukherjee** and Ivy Liu, A characterization of bias for fitting multivariate generalized linear models under choice-based sampling. *Journal of Multivariate Analysis*, **100**:459-72, 2009.
31. Ivy Liu, **Bhramar Mukherjee**, Thomas Suesse, David Sparrow and Sung Kyun Park, Graphical model-checking methods for the proportional odds model. *Statistics in Medicine*, **28**:412-29, 2009.
32. Li Zhang, **Bhramar Mukherjee**<sup>\*\*</sup>, Bo Hu, Victor Moreno and Kathy Cooney, Semi-parametric Bayesian modeling of random genetic effects in family based association studies. *Statistics in Medicine*, **28**:113-39, 2009.
33. Stephen B. Gruber and **Bhramar Mukherjee**. Genetic anticipation in Lynch syndrome: Still awaiting for the answer. *Journal of Clinical Oncology*, **27**:326-27, 2009.
34. Eduardo Vilar, **Bhramar Mukherjee**, Rork Kuick, Leon Raskin, David Misek, Jeremy MG. Taylor, Thomas J. Giordano, Samir M. Hanash, Eric R. Fearon, Gad Rennert and Stephen B. Gruber. Gene Expression Patterns in Mismatch Repair-Deficient Colorectal Can-

cers Highlight the Therapeutic Role of Inhibitors of the PI3K-AKT-mTOR pathway *Clinical Cancer Research.*, **15**:2829-39, 2009.

35. Sheng Luo, **Bhramar Mukherjee**, Jinbo Chen and Nilanjan Chatterjee, Shrinkage estimation for robust and efficient screening of HWE in genomewide association studies. *Genetic Epidemiology*,**33**:740-50, 2009.

36. Jennifer D'Souza, Chunrong Jia, **Bhramar Mukherjee** and Stuart Batterman, Determinants of VOC exposures: The Importance of Ethnicity, Housing and Personal Factors. *Atmospheric Environment*, **43**:2884-92, 2009.

37. Malay Ghosh, **Bhramar Mukherjee** and Upasana Santra, Probability matching priors for ratio of variances of the bivariate normal distribution, *The International Journal of Statistical Sciences*, **9**:255-271, 2009.

38. Stuart Batterman, Joseph Eisenberg, Rebecca Hardin, Margaret Kruk, Maria Carmen Lemos, Anna Michalak, **Bhramar Mukherjee**, Elisha Renne , Howard Stein, Cristy Watkins, Mark Wilson. Sustainable Control of Water-Related Infectious Diseases: A Review and Proposal for Interdisciplinary Health-Based Systems Research. *Environmental Health Perspectives*, **117**:1023-32, 2009 .

39. Jaeil Ahn\*, **Bhramar Mukherjee**, Mousumi Banerjee and Kathy Cooney, Bayesian inference for the stereotype regression model: Application to a case-control study of prostate cancer, *Statistics in Medicine*, **28**:3139-3157, 2009.

40. Elena Stoffel, **Bhramar Mukherjee** \*\*, Victoria M. Raymond, Nabihah Tayob, Fay Kastrinos, Jennifer Sparr, Fei Wang, Prathap Bandipalliam, Sapna Syngal, Stephen B. Gruber, Risk of Colorectal and Endometrial Cancer in Lynch Syndrome. *Gastroenterology*, **137**:1621-27, 2009.

41. Sung Kyun Park, **Bhramar Mukherjee**\*\*, Xi Xia, David Sparrow, Mark Weisskopf, Huiling Nie, Howard Hu. 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. Fay Kastrinos, **Bhramar Mukherjee**\*\*, Nabihah Tayob, Jennifer Sparr, Victoria M. Raymond, Fei Wang, Prathap Bandipalliam, Elena M. Stoffel, Stephen B. Gruber, Sapna Syngal, The Risk of Pancreatic Cancer in Lynch Syndrome, *Journal of the American Medical Association*, **302**:1790-95, 2009.

43. Malay Ghosh, **Bhramar Mukherjee**, Upasana Santra, and Dalho Kim, Probability matching priors for correlation coefficient of a bivariate normal distribution. *The Journal of Statistical Planning and Inference*, **140**:1410-16, 2010.

44. Malay Ghosh and **Bhramar Mukherjee**, 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. **Bhramar Mukherjee**, Jaeil Ahn, Stephen B. Gruber, Malay Ghosh and Nilanjan Chatterjee, Bayesian Sample Size Determination for Case-Control Studies of Gene-Environment Interaction, *Biometrics*, **66**: 934-48, 2010.

46. Aimin Zhang, Sung Kyun Park, Robert O. Wright, Marc G. Weisskopf, **Bhramar Mukherjee**, Huiling Nie, David Sparrow, Howard Hu, 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.

47. Ester Borrs, Marta Pineda, Ignacio Blanco, Ethan M Jewett, Fei Wang, Alex Teule, Trinidad Caldes, Miguel Urioste, Carmen Martinez-Bouzas, Joan Brunet, Judith Balmana, Asuncion Torres, Teresa Ramon Cajal, Judit Sanz, Lucia Perez-Cabornero, Sergi Castellvi-Bel, Sara Gonzalez, Victor Moreno, Stephen B. Gruber, **Bhramar Mukherjee**, Noah A Rosenberg, Conxi Lazaro, Gabriel Capella, Identification of the first MLH1 founder mutations in Spanish Lynch syndrome families. *Cancer Research*, **70**: 7379-91, 2010.

48. Sung Kyun Park, Sahar Elmarsafawy, **Bhramar Mukherjee**, Avron Spiro, Pantel S. Vokonas, Huiling Nie, Marc Weisskopf, Joel Schwartz, Howard Hu. Cumulative Lead Exposure and Age-related Hearing Loss: The VA Normative Aging Study, *Hearing Research*, **269**: 48-55, 2010.

49. Philip S. Boonstra\*, Stephen B. Gruber, Victoria Raymond, Shu-chen Huang, Susanne Timshel, Mef Nilbert, **Bhramar Mukherjee**, A review of statistical methods for testing genetic anticipation: looking for an answer in Lynch syndrome. *Genetic Epidemiology*, **34**:756-68, 2010.

50. N. Jewel Samadder, **Bhramar Mukherjee**, Shu-Chen Huang, Jaeil Ahn, Hedy Rennert, Joel Greenson, Gad Rennert and Stephen B. Gruber, Risk of Colorectal Cancer in Self-Reported Inflammatory Bowel Disease and Modification of Risk by Statin and NSAID Use, *Cancer*, **117**:1640-48, 2011.

51. Ananya Roy, Howard Hu, David C. Bellinger, **Bhramar Mukherjee**, Rama Modali, Khaja Nasaruddin, Joel Schwartz, Robert O. Wright, Adrienne S. Ettinger, Kavitha Palaniapan, and Kalpana Balakrishnan, Hemoglobin, Lead Exposure, and Intelligence Quotient: Effect Modification by the DRD2 Taq IA Polymorphism, *Environmental Health Perspective*, **119**:144-49, 2011.

52. **Bhramar Mukherjee**, Huang-Tz Ou, Fei Wang and Steven Erickson, Development of a new co-morbidity index for health quality related measures. *The Journal of Clinical Epidemiology*, **64**:309-19, 2011.

53. Jaeil Ahn\*, **Bhramar Mukherjee**, Stephen B. Gruber and Samiran Sinha, Missing Exposure Data in Stereotype Regression Model: Application to Matched Case-Control Study with Disease Subclassification. *Biometrics*, **67**:546-58, 2011.

54. Annette C. Rohr, Ali S. Kamal, Masako Morishita, **Bhramar Mukherjee**, Gerald J. Keeler, Jack R. Harkema, and James G. Wagner, 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.
55. Eduardo Vilar, Catherine M. Bartnik, Leon Raskin, Jaeil Ahn, Victor Moreno, **Bhramar Mukherjee**, Gad Rennert and Stephen B. Gruber, MRE11 deficiency increases sensitivity to poly(ADP-ribose) polymerase inhibition in microsatellite instable colorectal cancers. *Cancer Research*, **71**:2632-42, 2011.
56. **Bhramar Mukherjee**, Gad Rennert, Jaeil Ahn, Sara Dishon, Flavio Lejbkowitz, Hedy Rennert, Stacey Shirovitz, Victor Moreno, Stephen B. Gruber, Risk of Colorectal and Endometrial Cancer in Ashkenazi families with the MSH2 A636P founder mutation. *Gastroenterology*, **140**:1919-26, 2011.
57. Ali S. Kamal, Annette Rohr, **Bhramar Mukherjee**, Masako Morishita, Gerald J Keeler, Jack R Harkema and James G, Wagner, 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.
58. Philip S. Boonstra\*, **Bhramar Mukherjee**, Jeremy M. G. Taylor, Mef Nilbert, Victor M. Moreno, and Stephen B. Gruber, Bayesian Modeling for Genetic Anticipation in Presence of Mutational Heterogeneity: A Case-Study in Hereditary Non-polyposis Colorectal Cancer. *Biometrics*, **67**:1627-37, 2011.
59. Kavitha Palaniappan, Kalpana Balakrishnan, Lakshmi Krishnan, **Bhramar Mukherjee**, Ananya Roy, Howard Hu, David C. Bellinger, Lead Exposure and Visual-Motor Abilities in Children from Chennai, India. *Neurotoxicology*, **32**:465-70, 2011.
60. Shi Li\*, Stuart Batterman, Julie Wirth, Betsey Wasilevich, Robert Wahl, Feng-Chiao Su, **Bhramar Mukherjee**, 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. Shi Li\*, Huda Elasaad, Stuart Batterman, Robert Wahl, Elizabeth Wasilevich, **Bhramar Mukherjee**, 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. Yoon-Hyeong Choi, Howard Hu, SangWoo Tak, **Bhramar Mukherjee**, Sung Kyun Park, 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. Feng-Ciao Su, **Bhramar Mukherjee**, Stuart Batterman, 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. Huang-Tz Ou, **Bhramar Mukherjee**, Steven R. Erickson, John D. Piette, Richard P. Bagozzi, Rajesh Balkrishnan, Comparative Performance of Comorbidity Indices in Discriminating Health related Behaviours and Outcomes. *Health Outcomes Research in Medicine*, **2**:e91-e104, 2011.

65. **Bhramar Mukherjee**, Jaeil Ahn, Stephen B. Gruber and Nilanjan Chatterjee, 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. **Bhramar Mukherjee**, Jaeil Ahn, Stephen B. Gruber and Nilanjan Chatterjee, 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. Dhiman Bhadra, Sung-Duk Kim, Michael J. Daniels, Malay Ghosh and **Bhramar Mukherjee**, 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. Brisa N. Sanchez, Shan Kang, **Bhramar Mukherjee**, A latent variable approach to study gene-environment interactions in the presence of multiple correlated predictors. *Biometrics*, **68**:466-76, 2012.

69. **Bhramar Mukherjee**, John O. DeLancey, Leon Raskin, *et al*, Risk of Non-Melanoma Cancers in CDKN2A Mutation Carriers, *The Journal of the National Cancer Institute*, **104**:953-56, 2012.

70. Amanda R. Markovitz, Jason E. Goldstick, Karen Levy, William Cevallo, **Bhramar Mukherjee**, James A. Trostle, Joseph N. S. Eisenberg: 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.

71. Tyler J. VanderWeele, **Bhramar Mukherjee**, and, Jinbo Chen, Sensitivity analysis for interactions under unmeasured confounding, *Statistics in Medicine*, **31**: 2552-64, 2012.

72. Zhiwei Zhang, Aiyi Liu, Robert H. Lyles, **Bhramar Mukherjee**, Logistic regression analysis of biomarker data subject to pooling and dichotomization, *Statistics in Medicine*, **31**:2473-84, 2012.

73. Huang-Tz Ou, **Bhramar Mukherjee**, Steven R. Erickson, John D. Piette, Richard P. Bagozzi, Rajesh Balkrishnan, 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.

74. Jinbo Chen, Guolian Kang, Tyler J. VanderWeele, Cuilin Zhang, **Bhramar Mukherjee**,

Efficient Designs of Gene-Environment Interaction Studies: Implications of Hardy-Weinberg Equilibrium and Gene-Environment Independence. *Statistics in Medicine*, **31**:2516-31, 2012.

75. Robert H. Lyles, Li Tang, Ji Lin, Zhiwei Zhang, and **Bhramar Mukherjee**, Likelihood-based Methods for Regression Analysis with Binary Exposure Status Assessed by Pooling, *Statistics in Medicine*, **31**:2485-97, 2012.

76. Stuart Batterman, Liuliu Du, Graciela Mentz, **Bhramar Mukherjee**, Edith Parker, *et al.*, Particulate matter concentrations in residences with and without stand-alone filters and air conditioners, *Indoor Air*, **22**: 235-52, 2012.

77. **Bhramar Mukherjee**, Yi-An Ko, Tyler J. VanderWeele, Anindya Roy, Sung Kyun Park, Jinbo Chen, Principal interactions analysis for repeated measures data: Application to gene-gene, gene-environment interaction. *Statistics in Medicine*, **31**:2531-51, 2012.

78. Malay Ghosh, Jihyun Song, John Forster, Robin Mitra, and **Bhramar Mukherjee**, On the equivalence of posterior inference based on prospective and retrospective likelihoods. *Statistics in Medicine*, **31**:2196-208, 2012.

79. Shi Li\*, **Bhramar Mukherjee** and Stuart Batterman, Point source modeling of matched case-control data with multiple disease sub-types. *Statistics in Medicine*, **31**: 3617-37, 2012.

80. Yoon-Hyeong Choi, Howard Hu, **Bhramar Mukherjee**, Josef Miller, Sung Kyun Park, 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. Toby C. Lewis, Tiffany A. Henderson, Ashley R. Carpenter, Ixsy A. Ramirez, Christina L. McHenry, Adam M. Goldsmith, Xiaodan Ren, Graciela B. Mentz, **Bhramar Mukherjee**, Thomas G. Robins, Terence A. Joiner, Layla S. Mohammad, Emily R. Nguyen, Mark A. Burns, David T. Burke, Marc B. Hershenson, Nasal cytokine responses to natural colds in asthmatic children, *Clinical and Experimental Allergy*, **42**: 1734-44, 2012.

82. Graciela Mentz, Amy Schulz, **Bhramar Mukherjee**, Trivellore E. Rangunathan, Denise White-Perkins and Barbara Israel, 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. Philip S. Boonstra\*, Jeremy M.G. Taylor and **Bhramar Mukherjee**, Incorporating auxiliary information for improved prediction in high dimensional datasets: An ensemble of shrinkage approaches, *Biostatistics*, **14**: 259-72, 2013.

84. Jaeil Ahn\*, **Bhramar Mukherjee**, Malay Ghosh and Stephen B. Gruber, Bayesian semiparametric analysis of two-phase studies of gene-environment interaction. *The Annals of Applied Statistics*, **7**: 543-69, 2013.

85. Tyler J. VanderWeele, Yi-An Ko and **Bhramar Mukherjee**, Effect of environmen-

tal confounding on joint tests of genetic association. *American Journal of Epidemiology*, **178**: 144-52, 2013.

86. Victoria M. Raymond, **Bhramar Mukherjee**<sup>\*\*</sup>, Fei Wang, Shu-Chen Huang, Elena M. Stoffel, Fay Kastrinos, Sapna Syngal, Kathleen A. Cooney, Stephen B. Gruber, Risk of Prostate Cancer Among Men with Lynch Syndrome. *Journal of Clinical Oncology*, **31**:1713-8, 2013. *Discussion paper with editorial commentary*.

87. Toby C Lewis, Thomas G Robins, Graciela B Mentz, Xiaohui Zhang, **Bhramar Mukherjee**, Xihong Lin, J Timothy Dvornch, Gerald J Keeler , Fuyuen Y Yip, Marie S O'Neill, Edith A Parker, Barbara A Israel, Paul T Max, Angela Reyes , 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.

88. Zhichao Sun, **Bhramar Mukherjee**, Robert D. Brook, Geoffrey A. Gatts, Fumo Yang, Zhongjie Fan, Jeffrey R. Brook, Qinghua Sun, Sanjay Rajagopalan, 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.

89. Paula I. Johnson, Heather M. Stapleton, **Bhramar Mukherjee**, Russ Hauser, John D. Meeker, Associations between brominated flame retardants in house dust and hormone levels in men. *Science of the Total Environment*, **445-46**: 177-84, 2013.

90. John D. Meeker, David Cantonwine, Luis Rivera-Gonzalez, Kelly Ferguson, **Bhramar Mukherjee**, Antonia Calafat, Xiaoyun Ye, Liza Anzalota Del Toro, Noe Crespo, Braulio Jimenez-Veleza, Akram Alshawabkeh, Jose Cordero, 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.

91. Robert D. Brook, Robert L. Bard, Mariana J. Kaplan, Srilakshmi Yalavarthi, Masako Morishita, J. Timothy Dvornch, Lu Wang, Hui-yu Yang, Catherine Spino, **Bhramar Mukherjee**, Elif A. Oral, Qinghua Sun, Jeffrey R. Brook, Jack Harkema, and Sanjay Rajagopalan, 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.

92. Leon Raskin, Timothy M. Johnson, Douglas R. Fullen, Thomas J. Giordano, Michelle Vinco, Donita Sanders, Jaeil Ahn, **Bhramar Mukherjee**, Stephen B. Gruber, Transcriptome profiling identifies HMGA2 as a novel gene in melanoma progression and prognosis, *The Journal of Investigative Dermatology* , 2013, E-pub ahead of print.

93. Shi Li, Stuart Batterman, Feng-Chiao Su and **Bhramar Mukherjee**, Addressing extrema and censoring in pollutant and exposure data using mixture of normal distributions. (to appear in *Atmospheric Environment*).

94. Yi-An Ko, Paramita Saha Chaudhuri, Pantel S. Vokonas, Sung Kyun Park, **Bhramar Mukherjee**, Likelihood ratio tests for detecting gene environment interaction in longitudinal studies. (to appear in *Genetic Epidemiology*).
95. Philip S. Boonstra\*, **Bhramar Mukherjee** and Jeremy MG Taylor, Bayesian shrinkage methods for partially observed high-dimensional data. (to appear in *The Annals of Applied Statistics*).
96. Philip S. Boonstra, Irina Bondarenko, Sung Kyun Park, Pantel S. Vokonas and **Bhramar Mukherjee**, Propensity score based graphical model diagnostics for categorical response regression models. (to appear in *Statistics in Medicine*).
97. Shi Li\*, **Bhramar Mukherjee**, Stuart Batterman and Malay Ghosh, Bayesian analysis of time-series data under case-crossover designs: posterior equivalence and inference. (to appear in *Biometrics*). (*This paper received one of the ENAR student paper awards in 2013*).
98. Feng-Chiao Su, **Bhramar Mukherjee**, Stuart Batterman, Determinants of personal, indoor and outdoor VOC concentrations: An analysis of the RIOPA data. (to appear in *Environmental Research*).
99. Shannon R. Poreta, Yi An Ko, Stephen B. Gruber, **Bhramar Mukherjee**, Ana Baylin, Jianwei Ren, and Zora Djuric, Interaction of Fatty Acid Genotype and Diet on Changes in Colonic Fatty Acids in a Mediterranean Diet Intervention Study, (to appear in *Cancer Prevention Research*).
100. David E. Cantonwine, Jos F. Cordero, Luis O. Rivera-Gonzalez, Liza V. Anzalota Del Toro, Kelly K. Ferguson, **Bhramar Mukherjee**, Antonia M. Calafat, Noe Crespo, Braulio Jimenez-Vlez, Ingrid Y. Padilla, Akram N. Alshawabkeh, John D. Meeker, Urinary phthalate metabolite concentrations among pregnant women in Northern Puerto Rico: Distribution, temporal variability, and predictors, (to appear in *Environment International*).
101. Zhichao Sun, Yebin Tao, Shi Li, Kelly K. Ferguson, John D. Meeker, Sung Kyun Park, Stuart A. Batterman, **Bhramar Mukherjee**. Statistical strategies for constructing health risk models with multiple pollutants and their interactions: possible choices and comparison. (to appear in *Environmental Health*).
102. Liuliu Du, Stuart Batterman, Edith Parker, Thomas Robins, Toby Lewis, **Bhramar Mukherjee**, Erminia Ramirez, Zachary Rowe, Wilma Brakefield-Caldwell, Use of Free-standing Filters in an Asthma Intervention Study, (to appear in *Air Quality, Atmosphere and Health*).
103. Xiaoyi Zhao, Zhichao Sun, Yanping Ruan, Jianhua Yan, **Bhramar Mukherjee**, Fumo Yang, Fengkui Duan, Lixian Sun, Ruijuan Liang, Hui Lian, Shuyang Zhang, Quan Fang, Dongfeng Gu, Jeffrey R. Brook, Qinghua Sun, Robert D. Brook, Sanjay Rajagopalan, Zhongjie Fan. Personal black carbon exposure influences blood pressure: the air pollution and cardio-metabolic disease (AIRCMD-China) study. (to appear in *Hypertension*).

104. James G. Wagner, Katryn Allen, Hui-Yu Yang, Bin Nan, Masako Morishita, **Bhramar Mukherjee**, J. Timothy Dvorch, Catherine Spino, Gregory D. Fink, Sanjay Rajagoplan, Qinghua Sun, Robert D. Brook, and Jack R. Harkema, Cardiovascular Depression Caused by Exposures to Inhaled Particulate Matter and Ozone is Augmented in Rats Fed a High Fructose Diet, (to appear in *Environmental Health Perspective*).

#### • Submitted Manuscripts

1. Yeying Zhu, Debashis Ghosh, Nandita Mitra and **Bhramar Mukherjee**, A data-adaptive approach for modeling propensity scores, (submitted to *Biometrics*)

2. Kathleen F. Bush, Cheryl L. Fossani, Shi Li, **Bhramar Mukherjee**, Carina J. Gronlund, Marie S. O'Neill Recreational water quality and gastrointestinal illness in the Great Lakes region. (submitted to *Water Research*).

3. Jaeil Ahn\*, Timothy Johnson, Darlene Bhavnani, Joseph E. Eisenberg and **Bhramar Mukherjee**, A spatio-temporal point process model for predicting diarrheal case-patterns in Northwest Ecuador. (revision invited in *Spatial and spatio-temporal epidemiology*).

4. Philip S. Boonstra\*, **Bhramar Mukherjee** and Jeremy MG Taylor, Using hyperpenalties to select the tuning parameter in ridge regression. (submitted to *Statistica Sinica*).

5. Stephanie L. Stenzel, Jaeil Ahn, Philip S. Boonstra, Stephen B. Gruber, **Bhramar Mukherjee**, The impact of exposure-biased sampling designs on detection of gene-environment interactions in case-control studies with potential exposure misclassification. (submitted to *European Journal of Epidemiology*).

6. Kathleen F. Bush, Marie S. O'Neill, Shi Li, **Bhramar Mukherjee**, Howard Hu, Santu Ghosh, Kalpana Balakrishnan, Extreme precipitation and hospital admissions related to gastrointestinal illness in Chennai, India. (revised and resubmitted to *Environmental Health Perspective*).

7. Robert Brook, Robert Bard, Masako Morishita, J. Timothy Dvorch, Lu Wang, Hui Yang, Catherine Spino, **Bhramar Mukherjee**, Mariana Kaplan, Srilakshmi Yalavarthi, Elif Oral, Nevin Ajluni, Qinghua Sun, Jeffrey Brook, Jack Harkema, and Sanjay Rajagopalan, The Hemodynamic and Vascular Effects of Acute Exposure to Coarse Particulate Matter Air Pollution in a Rural Location, (submitted to *Environmental Health Perspective*).

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

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

#### • Other articles (not peer-reviewed)

1. **Bhramar Mukherjee**, Evolution of Bayesian Statistics in India, ISBA bulletin, Vol 15, No. 3, pp 12-14. (2008).

#### • Research Funding

CURRENT GRANTS: (Principal Investigator on the underlined grants)

1. 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.
2. NSF DMS-1007494 : Collaborative proposal: Case-Control Studies; New Directions and Applications. 6/1/2010-5/31/2012. Role: PI.
3. NIH/NCI R03-CA 156608 : Two-phase cancer studies of gene-environment interaction: 7/1/2011-6/31/2013. Role: PI
4. Biostatistics Core of EPA Great Lakes Air Center For Integrative Environmental Research (GLACIER). 7/1/2011-6/30/2015. Role: PI and Core Director.
5. Gilbert Whitaker Stage I grant for Improvement of Teaching. Center for Research, Learning and Teaching, University of Michigan. 5/1/2013-12/31/2014.
6. 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.
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, 04/12/2010-0/12/2015. Role: Co-I.
9. 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.
10. 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.
11. FY 07-3523(PI Batterman): Asthma Morbidity as EH Indicator of Air Pollution Levels 06/01/07- 05/31/10, EPA, Role: Co-I.
12. 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.
13. 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.
14. 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.



15. 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.
16. Comprehensive Cancer Center Core Grant Biostatistics Core (PI Taylor). NIH/NCI 11/01/08-10/30/2013. Role: Member, Biostatistics Core.
17. R01-ES019616: Environmental Triggers of Cardiometabolic Disease (PI Rajagopalan, Ohio State University), NIH/NIEHS, 7/1/2011-6/30/2015. Role: Co-I.
18. NIEHS P30 Center on Life stage exposures of chronic diseases, The University of Michigan NIEHS P30 Core Center, P30ES017885 (PI Loch-Carus), 7/1/2011-6/30/2015. NIH/NIEHS. Role: Co-Director of Biostatistics Core.
19. Statistical Methods for Cancer Biomarker Discovery and Cancer Risk Prediction (PI Taylor), NIH/NCI, 1/1/2012-12/31/2015, Role, Co-I.
20. Inflammatory Differentiation of Colorectal Cancer Among African Americans (PI Carethers), NIH/NCI, U01-CA-162147, Role, Co-I.

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. 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).
7. 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).

8. M01 RR000042-46 (PI Kelch), NIH-NCCR, 03/01/06 - 02/28/11, \$160,146. Biostatistical support for General Clinical Research Center.
9. R01 CA081488 (PI Gruber) 12/01/04 - 11/30/09 (NIH/NCI) Molecular Epidemiology of Colorectal Cancer. Role: Co-I.
10. R01-HL091172-01 (PI Nilanjan Chatterjee, NCI) Integrated Analysis of genetic and environmental data in epidemiologic studies, NHLBI, 08/01/07-07/31/10, \$890,000 Role: External Consultant
11. 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.
12. 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.
13. 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.
14. 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.

- **Software**

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

- **Plenary Lectures**

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

- **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, December, 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.

Department of Biostatistics, University of Toronto, School of Public Health, December, 2013.

#### • **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;

Two-part lecture series on Biostatistics: CTSA Health Services Professional Training Program, University of Michigan, 2008, 2009;

HMP 200: Introduction to Public Health, 2009, 2011, 2012, 2013;

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;

#### • **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 and 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 F.N. David Award Committee, ENAR Representative.

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, 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 Strati-

fied 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.

### • 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.

#### 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), 2013-2014.

#### ● **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. Bakluski, EHS, 2009-2012.  
Member, Ph.D Dissertation committee, Feng-Ciao Su, EHS, 2009-  
Member, Ph.D Dissertation committee, Darlene Bhavnani, Epidemiology, 2010-2012.  
Member, Ph.D Dissertation committee, Erin Bakshis, Epidemiology, 2010-  
Member, Ph.D Dissertation committee, Robert William Kononowech, EHS, 2011-2012.  
Member, Ph.D Dissertation committee, Kari Sant, EHS, 2011-  
Member, Ph.D Dissertation committee, Kelly Ferguson, EHS, 2011-  
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-  
Member, Ph.D Dissertation committee, James Couch, EHS, 2013-  
Member, Ph.D Dissertation committee, Zhuqing Liu, Biostatistics, 2013-  
Member, Ph.D Dissertation committee, Krystin Karlson, EHS, 2013-  
Member, Ph.D Dissertation committee, Mark Reppell, Biostatistics, 2013-

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, Biostatistician, Division of Quantitative Health Sciences, The Cleveland Clinic Foundation. (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), Post-Doctoral fellow, MD Anderson Cancer Center, 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 (Expected Graduation: 2014).

8. Sebanti Sengupta, Department of Biostatistics, University of Michigan, Co-chair with Goncalo Abecasis.

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

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

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

• **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-); Zihuai He (2013-); Zhichao Sun (2011-); Yin-Hsiu Chen (2013-); Sarah Scarlett (2013-). 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-).

• **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 mathematics 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).