Catherine A. Calder

Department of Statistics
The Ohio State University
1958 Neil Avenue
Columbus, OH 43210

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Fax: 614-292-2096
Email: calder@stat.osu.edu

Education

DUKE UNIVERSITY — Durham, NC

Ph.D. in Statistics and Decision Sciences, May 2003

Certificate in Ecology, May 2003

M.S. in Statistics and Decision Sciences, May 2001

NORTHWESTERN UNIVERSITY — Evanston, IL

B.A. in Mathematics with honors, June 1999

Research Interests

METHODOLOGICAL
Spatial and Space-Time Statistics, Bayesian Modeling, Statistical Computing, Multivariate Analysis

APPLIED
Environmental Exposure and Health, Neighborhood Effects, Air Pollution, Crime, Infectious Disease Dynamics, Population Ecology

Experience

DEPARTMENT OF STATISTICS, THE OHIO STATE UNIVERSITY — Columbus, OH

Associate Professor (with tenure), October 2009 - present

Assistant Professor, October 2003 - September 2009

Lecturer, June 2003 - September 2003

STATISTICAL AND APPLIED MATHEMATICAL SCIENCES INSTITUTE — Research Triangle Park, NC

Visiting Research Fellow, September 2009 - December 2009

ISDS, DUKE UNIVERSITY — Durham, NC

Research Assistant, August 2000 - May 2003

Teaching Assistant, August 1999 - May 2000

Publications

Refereed Publications

1) **Calder, C.A.**, Holloman, C., and Higdon, D. (2002). Exploring Space-Time Structure in Ozone Concentration Using a Dynamic Process Convolution Model. In *Case Studies in Bayesian Statistics 6*, 165-176.

2) **Calder, C.A.**, Lavine, M., Müller, P., and Clark, J.S. (2003). Incorporating Multiple Sources of Stochasticity into Dynamic Population Models, *Ecology*, 84(6), 1395-1402.

3) Dunson, D.B., Holloman, C., **Calder, C.**, and Gunn, L. (2004). Bayesian Modeling of Multiple Lesion Onset and Growth from Interval Censored Data. *Biometrics*, 60(3), 676-683.

4) Holloman, C.H., Bortnick, S., Morara, M., Strauss, W., and **Calder, C.A.** (2004). A Bayesian Hierarchical Approach for Relating $PM_{2.5}$ Exposure to Cardiovascular Mortality in North Carolina. *Environmental Health Perspectives*, 112(3), 1282-1288.

5) Lee, H.K.H., Higdon, D.M., **Calder, C.A.**, and Holloman, C.H. (2004). Efficient Models for Correlated Data via Convolutions of Intrinsic Processes. *Statistical Modelling*, 5(1), 53-74.

6) Mosley-Thompson, E., Readinger, C.R., Craigmile, P., Thompson, L.G., and **Calder, C.A.** (2005). Regional Sensitivity of Greenland Precipitation to NAO Variability. *Geophysical Research Letters*, 32, L24707, DOI:10.1029/2005GL024776.

7) **Calder, C.A.** (2007). Dynamic Factor Process Convolution Models for Multivariate Space-Time Data with Application to Air Quality Assessment. *Environmental and Ecological Statistics*, 14, 229-247, DOI:10.1007/s10651-007-0019-y.

8) Cressie, N., Buxton, B.E., **Calder, C.A.**, Craigmile, P.F., Dong, C., McMillan, N.J., Morara, M., Santner, T.J., Wang, K., Young, G., and Zhang, J. (2007). From Sources to Biomarkers: A Hierarchical Bayesian Approach for Human Exposure Modeling. *Journal of Statistical Planning and Inference*, 137, 3361-3379.

9) Li, H., **Calder, C.A.**, and Cressie, N. (2007). Beyond Moran's I: Testing for Spatial Dependence Based on the SAR Model. *Geographical Analysis*, 39, 357-375.

10) Wheeler, D., and **Calder, C.A.** (2007). An Assessment of Coefficient Accuracy in Linear Regression Models with Spatially Varying Coefficients. *Journal of Geographical Systems*, 9, 145-166.

11) Xiao, N., **Calder, C.A.**, and Armstrong, M.C. (2007). Assessing the Effect of Uncertainty on Choropleth Map Classification. *International Journal of Geographic Information Science*, 21, 121-144.

12) **Calder, C.A.** (2008). A Bayesian Dynamic Process Convolution Approach to Modeling the Joint Distribution of $PM_{2.5}$ and PM_{10}. *Environmetrics*, 19, 39-48, DOI: 10.1002/env.852.

13) **Calder, C.A.**, Craigmile, P.F., Mosley-Thompson, E. (2008). Spatial Variation in the Influence of the North Atlantic Oscillation on Precipitation Across Greenland. *Journal of Geophysical Research - Atmospheres*, 113, D06112, DOI:10.1029/2007JD009227.

14) **Calder, C.A.**, Holloman, C.H., Bortnick, S., Strauss, W. and Morara, M. (2008). Relating Ambient Particulate Matter Concentration Levels to Mortality Using an Exposure Simulator. *Journal of the American Statistical Association*, 103(481), 137-148.

15) LaDeau, S.L., Marra, P.P, Kilpatrick, A.M., and **Calder, C.A.**. (2008). West Nile Virus Revisited:

Consequences for North American Ecology. *Bioscience*, 58, 937-946.

16) Munroe, D.K., Wolfinbarger, S.R., **Calder, C.A.**, Shi, T., Xiao, N., Lam, C.Q., and Li, D. (2008). The Relationships Between Biomass Burning, Land-Cover/Use Change, and the Distribution of Carbonaceous Aerosols in Mainland Southeast Asia: A Review and Synthesis. *Journal of Land Use Science*, 3, 161-183.

17) Santner, T.J., Craigmile, P.F., **Calder, C.A.**, and Paul, R. (2008). Demographic and Behavioral Modifiers of Arsenic Exposure Pathways: A Bayesian Hierarchical Analysis of NHEXAS Data. *Environmental Science & Technology*, 42(15), 5607-5614.

18) Xiao, N., Shi, T., **Calder, C.A.**, Munroe, D.K., Berrett, C., Wolfinbarger, S., and Li, D. (2008). Spatial Characteristics of the Difference between MISR and MODIS Aerosol Optical Depth Retrievals over Mainland Southeast Asia. *Remote Sensing of Environment*, DOI:10.1016/j.rse.2008.07.011.

19) **Calder, C.A.**, Craigmile, P.F., and Zhang, J. (2009). Regional Spatial Modeling of Topsoil Geochemistry. *Biometrics*, 65, 206-215, DOI:10.1111/j.1541-0420.2008.01041.x.

20) Craigmile, P.F., **Calder, C.A.**, Li, H., Paul, R., and Cressie, N. (2009). Hierarchical Model Building, Fitting, and Checking: A Behind-the-Scenes Look at a Bayesian Analysis of Arsenic Exposure Pathways (with discussion). *Bayesian Analysis*, 4 (1), 1-36, DOI:10.1214/09-BA401.

21) Cressie, N., **Calder, C.A.**, Clark, J.S., Ver Hoef, J.M., and Wikle, C.K. (2009). Accounting for Uncertainty in Ecological Analysis: The Strengths and Limitations of Hierarchical Statistical Modeling (with discussion). *Ecological Applications*, 19(3), 553-570.

22) **Calder, C.A.** and Cressie, N. Kriging and Variogram Models. Accepted for publication in the *International Encyclopedia of Human Geography.*

Non-refereed Publications

1) **Calder, C.A.** (2004). Efficient Posterior Inference and Prediction of Space-Time Processes Using Dynamic Process Convolutions. In the *Joint Proceedings of the Sixth International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Sciences and the Fifteenth Annual Conference of TIES, The International Environmetrics Society*. Portland, ME. June 28 - July 1, 2004.

2) **Calder, C.A.** (2006). Bayesian Modeling of Exposure Pathways. *International Society for Bayesian Analysis (ISBA) Bulletin*, 13(1), 10-12.

3) Wheeler, D. and **Calder, C.A.** (2006). Bayesian Spatially Varying Coefficient Models in the Presence of Collinearity. In the *Proceedings of the Joint Statistical Meetings.* Seattle, WA. August 6-10, 2006.

4) **Calder, C.A.** and Cressie, N. (2007). Some Topics in Convolution-Based Spatial Modeling. In the *Proceedings of the 56th Session of the International Statistics Institute.* Lisbon, Portugal. August 22-29, 2007.

5) Paul, R., Cressie, N., Buxton, B.E., **Calder, C.A.**, Craigmile, P.F., Li, H., McMillan, N.J., Morara, M., Sanford, J., Santner, T.J., Zhang, J. (2007). A Bayesian Hierarchical Model of Arsenic Exposure Based on NHEXAS Data: A Comparison of US EPA Region 5 and Arizona. In the *Proceedings of the Joint Statistical Meetings.* Salt Lake City, UT. July 29 - August 2, 2007.

6) Munroe, D.K., Xiao, N., **Calder, C.A.**, and Shi, T. (2008). Fire-Land-Atmosphere Modeling and Evaluation for Southeast Asia. In the *Newsletter of the Global Land Project*, 3, January, 2008.

7) Kwan, M.-P., Peterson, R.D., Browning, C.R., Burrington, L., **Calder, C.A.**, and Krivo, L.J. (2008). Reconceptualizing Sociogeographical Context for the Study of Drug Use, Abuse, and Addiction. In

Geography and Drug Addiction, edited by Y. Thomas, D. Richardson, and I. Cheung, 445-454. Berlin: Springer-Verlag.

Presentations

Invited Talks/Seminars

Mathematics Department, Kenyon College, Gambier, OH, October 2002
"Assessing Sources of Uncertainty in a Dynamic Forest Model"

Department of Statistics, The Ohio State University, Columbus, OH, February 2003
"Exploring Latent Structure in Multivariate Spatial Temporal Processes Using Dynamic Process Convolutions"

Joint Meetings of TIES and Spatial Accuracy, Portland, ME, June 2004
"Efficient Posterior Inference and Prediction of Space-Time Processes Using Dynamic Process Convolutions"

Computational Environmetrics Conference, Chicago, IL, October 2004
"Space-Time Modeling Using Dynamic Process Convolutions"

Division of Epidemiology and Biostatistics, School of Public Health, The Ohio State University, Columbus, OH, November 2004
"A Bayesian Analysis of the Relationship Between Exposure to Fine Particulate Matter and Cardiovascular Mortality"

WNAR-International Biometrics Society/IMS Meeting, Fairbanks, AK, June 2005
"A Bayesian Hierarchical Approach to Modeling Spatial Variation in Personal Exposure to Fine Particular Matter and Associated Cardiovascular Mortality"

National Consortium on Violence Research's (NCOVR) workshop on Space, Networks and Social Influence: Individual and Community Level Influences on Violence, University of California, Irvine, CA, February 2006
"Exposure to Violence in Urban Neighborhoods: A Bayesian Hierarchical Approach to Multilevel Spatial Modeling"
(with Christopher Browning, Department of Sociology, Ohio State)

Joint Statistical Meetings, Seattle, WA, August 2006
"Regional Spatial Modeling of Toxic Metals in Various Environmental Media"

Quantitative Studies in Consumer Behavior Seminar, The Ohio State University, Columbus, OH, November 2006
"Spatial Variation in Exposure to Violence Across Urban Neighborhoods: A Hierarchical Bayesian Analysis"

MISR Data Users Science Symposium, Caltech, Pasadena, CA, December 2006
"Spatio-temporal Statistical Modeling of Biomass Burning and Regional Black Carbon Aerosols in Southeast Asia"

Environmental Exposure and Health Data Seminar Series, The Ohio State University, February 2007
"Bayesian Modeling of Exposure Pathways"

Joint Statistical Meetings, Salt Lake City, UT, July 2007
"Space-Time Modeling of Biomass Burning and Regional Aerosols in Southeast Asia"

56th Session of the International Statistics Institute, Lisbon, Portugal, August 2007
"Some Topics in Convolution-Based Spatial Modeling"

International Society for Exposure Assessment Conference, Durham, NC, October 2007
"Demographic and Behavioral Modifiers of Arsenic Exposure Pathways: A Bayesian Hierarchical Analysis of NHEXAS Data"

Econometrics and Statistics Seminar, Graduate School of Business, University of Chicago, Chicago, IL, November 2007
"Convolution-Based Models for Spatial and Spatio-Temporal Data"

WNAR-International Biometrics Society/IMS Meeting, Washington DC, March 2008
"Regional Spatial Modeling of Arsenic in Environmental Media: Implications for Human Exposure Assessment"

First Midwest Statistics Research Colloquium, Chicago, IL, March 2008
"A Multiscale Approach to Regional Spatial Modeling of Topsoil Geochemistry"

The International Environmetrics Society Conference, Kelowna, BC, Canada, June 2008
"Spatial Data Assimilation for Regional Environmental Exposure Studies

Workshop on Complex Data in Economics and Finance: Spatial Models, Social Networks, and Factor Models, Stanford Institute for Theoretical Economics, Palo Alto, CA, July 2008
"Dynamic Factor Process Convolution Models for Multivariate Space-Time Data with Application to Air Quality Assessment

ENVR Workshop on Environmetrics, NCAR, Boulder, CO, October 2008
"Multiscale Spatial Modeling of Topsoil Geochemistry"

Department of Statistics Seminar, University of Washington, Seattle, WA, November 2008
"Spatial Data Assimilation for Regional Environmental Exposure Studies"

Department of Statistics Colloquium, Virginia Tech, Blacksburg, VA, March 2009
"Multiscale Spatial Modeling of Topsoil Geochemistry"

Department of Statistics Colloquium, Texas A&M University, College Station, TX, April 2009
"Kernel-Based Models for Space-Time Data"

Sixth Workshop on Bayesian Statistics in Stochastic Processes, Bressanone/Brixen, Italy, June 2008
"Kernel-Based Models for Space-Time Data"

57th Session of the International Statistics Institute, Durban, South Africa, August 2009
"Spatial Data Assimilation for Regional Environmental Exposure Studies"

Conference on the Dynamics of Space-Time Use: Measurement, Patterns and Consequences, The Ohio State University, Columbus, OH, October 2009
"Bayesian Estimation of Individual Activity Spaces from Incomplete Activity Pattern Data"

Invited Posters

NASA Land Cover Land Use Change Program Science Team Meeting, University of Maryland, College Park, MD, October 2006
"A Comprehensive Statistical Analysis System to Associate Local Land-Cover/Land-Use Change and Regional Aerosol Composition and Concentration"
(with Darla Munroe, Department of Geography, Ohio State)

ICCA/EPA Workshop on Public Health Applications of Biomonitoring, Durham, NC, September 2007
"Arsenic Exposure Pathways in Subpopulations: Bayesian Inference from NHEXAS Data"

Contributed Talks/Posters

Ecological Society of America's Annual Meeting, Madison, WI, August 2001
"Incorporating Observation Error in Density Dependence Population Models"

6th Workshop on Case Studies in Bayesian Statistics, Carnegie Mellon University, Pittsburgh, PA, September 2001
"A Space-Time Model for Ozone Concentration Using Process Convolutions"

Joint Statistical Meetings, New York, NY, August 2002
"Assessing Sources of Uncertainty in a Dynamic Forest Model"

ISBA Valencia Conference, Tenerife, Spain, June 2002
"Assessing Sources of Uncertainty in a Dynamic Forest Model"

SAMSI/GSP Workshop on Spatio-Temporal Modeling, Boulder, CO, June 2003
"Exploring Latent Structure in Multivariate Spatial Temporal Processes Using Dynamic Process Convolutions"

Joint Statistical Meetings, San Francisco, CA, August 2003
"Exploring Latent Structure in Multivariate Spatial Temporal Processes Using Dynamic Process Convolutions"

International Workshop on Bayesian Data Analysis, University of California at Santa Cruz, Santa Cruz, CA, August 2003
"Exploring Latent Structure in Multivariate Spatial Temporal Processes Using Dynamic Process Convolutions"

7th Workshop on Case Studies in Bayesian Statistics, Carnegie Mellon University, Pittsburgh, PA, September 2003
"A Bayesian Dynamic Process Convolution Approach to Modeling the Joint Distribution of $PM_{2.5}$ and PM_{10}"

ENAR-International Biometric Society Meeting, Pittsburgh, PA, March 2004
"Relating $PM_{2.5}$ Exposure to Mortality Using an Exposure Simulator"

Joint Statistical Meetings, Toronto, Canada, August 2004
"A Spatio-Temporal Framework for Modeling Ambient Particulate Matter Concentration Levels"

Joint Statistical Meetings, Minneapolis, MN, August 2005
"Bayesian Modeling of Multicategory Spatial Data"

Joint Statistical Meetings, Washington, DC, August 2009
"Kernel-Based Models for Space-Time Data"

Funding

External

EPA/ACC Award #2866 (Co-PI)
"Sources to Biomarkers: A Hierarchical Bayesian Approach for Human Exposure Modeling"

Award Period: 09/28/04 - 03/31/09, Total Award: $526,986

NSF SES-0528232 (Co-PI)
"Segregation and Local Crime: An Integrated Spatial Analysis"
Award Period: 09/15/05 - 08/31/08, Total Award: $280,000

NASA NNG06GD31G (Co-PI)
"A Comprehensive Statistical Analysis System to Associate Local-Land Cover/Land-Use Change and Regional Aerosol Composition and Concentration"
Award Period: 01/01/06 - 12/31/09, Total Award: $621,550

NSF BCS-0729466 (Co-PI)
"Dynamics of Space and Time Use: Patterns, Causes, and Consequences for Crime and Problem Behaviors"
Award Period: 01/01/08 - 12/31/10, Total Award: $700,000

NIH R01DA025415 (Co-PI)
"(ARRA) Spatial Patterns of Social Isolation, Youthful Marijuana Use, and Sexual/HIV Risk"
Award Period: 08/01/09 - 07/31/11, Total Award: $697,849

NIH R01HD057945 (Co-PI)
"Neighborhood Context and Adolescent Psychological and Behavioral Health"
Award Period: 08/15/09 - 06/30/12, Total Award: $986,144

NSF DMS-0934595* (PI, OSU subcontract)
"CMG: Multivariate Nonstationary Spatial Extremes in Climate and Atmospherics"
*recommended for funding

Internal

Grant from the College of Mathematical and Physical Sciences, The Ohio State University (PI)
"Hierarchical Bayesian Modeling of Regional Alpine Treeline Patterns"
Award Period: 06/01/04 - 09/30/05, Total Award: approximately $16,000

Grant from the Population and Health Targeted Investment in Excellence Initiative, The Ohio State University (Co-PI)
"The Neigborhood Context of Early Adolescent Mental and Physical Health" Award Period: 03/02/07 - 12/01/08, Award Total: $21,006

Grant from Climate, Water, and Carbon Targeted Investment in Excellence Initiative, The Ohio State University (Co-PI)
"Atmospheric Chemistry: The Ohio River Basin"
Award Period: 09/05/07 - 09/01/08, Total Award: $34,520

Grant from the Institute for Population Research, The Ohio State University (Co-PI)
"The Sociospatial Context of Health Disparities"
Award Period: 07/01/08 - 06/30/09, Award Period: $33,494

Teaching

Department of Statistics, The Ohio State University

Lecturer for Statistics 145: Introduction to the Practice of Statistics, Summer 2003

Instructor for Statistics 528: Data Analysis I, Autumn 2003, Winter 2004

Instructor for Statistics 625: Applied Bayesian Analysis, Winter 2008, Winter 2009

Instructor for Statistics 656: Applied Multivariate Analysis, Spring 2005, Spring 2007, Spring 2009

Instructor for Statistics 662: Environmental Statistics, Spring 2006, Spring 2008

Instructor for Statistics 694: Group Studies (Applied Bayesian Analysis), Winter 2006, Winter 2007

Co-Instructor (with Ningchuan Xiao, Geography) for Statistics 881/Geography 983:
Advanced Topics in Statistics/Special Topics in Quantitative Geography, Winter 2004
Topic: Visualization of Uncertainty in Spatial Information

ISDS, Duke University

Head Teaching Assistant, Fall 2002

Instructor for Statistics 101: Probability and Statistical Inference, Summer 2001

Teaching Assistant for Statistics 113: Statistics for Engineers, Fall 1999, Spring 2000

Advising

Former Students

David Wheeler (co-advisor with Morton O'Kelly, Geography)
Ph.D. in Geography, August 2006

Hongfei Li (co-advisor with Noel Cressie, Statistics)
Ph.D. in Statistics, December 2007

Current Students

Candace Berrett
Ph.D. Candidate in Statistics

Bethann Mangel Pflugeisen
M.S. Candidate in Statistics (Thesis Track)

Member, General Examination Committee

Xiaobai Li, Department of Statistics, April 2005
David Wheeler, Department of Geography, August 2005
Jue Wang, Department of Civil and Environmental Engineering and Geodetic Science, October 2005
Hongfei Li (co-advisor), Department of Statistics, March 2006
Yonggang Yao, Department of Statistics, June 2006
Hu Wei, Department of Geography, July 2006
Clint Roberts, Department of Statistics, February 2007
Joshua Ash, Department of Electrical Engineering, March 2007
Christopher Beekman, Environmental Science Graduate Program, May 2007
Li Zhang, Department of Civil and Environmental Engineering and Geodetic Science, June 2007
Shari Modur, Department of Statistics, November 2007
Nuo Xi, Department of Psychology, June 2009

Candace Berrett (advisor), Department of Statistics, July 2009

Member, Final Examination (Defense) Committee

Xiaobai Li, Department of Statistics, March 2006
David Wheeler (co-advisor), Department of Geography, August 2006
Hongfei Li (co-advisor), Department of Statistics, August 2007
Clint Roberts, Department of Statistics, May 2008
Lijia Wei, Department of Geography, September 2008

Mentoring

Claude Davila (with Noel Cressie, Department of Statistics), MBI Research Experience for Undergraduates (REU) Summer Program, Summer 2006

John Christensen, MBI Research Experience for Undergraduates (REU) Summer Program, Summer 2007

Erinne Kennedy, MBI Research Experience for Undergraduates (REU) Summer Program, Summer 2009

Service

Department of Statistics

Associate Director, Program in Spatial Statistics and Environmental Statistics, October 2004 - June 2009

Member, Master of Applied Statistics (MAS) Exam Committee, Spring 2004, Autumn 2004, and Autumn 2005, Spring 2009

Member, Ph.D. Qualifier Exam I Committee, Autumn 2006, Winter 2007, Autumn 2007, Winter 2008

Course Development, Statistics 625: Applied Bayesian Analysis (first taught during Winter 2006 as Statistics 694)

Member, Curriculum Committee (AY 2005-2006, AY 2006-2007, AY 2007-2008, AY 2008-2009)

Member, Graduate Admissions Committee (AY 2009-2010)

University

Member, Organizing Committee, Mathematical Biosciences Institute (MBI) Workshop on Uncertainty in Ecological Analysis, April 2006

Program Leader Mathematical Biosciences Institute (MBI), Summer Program in Mathematical Biology for Undergraduates, Summer 2006, Summer 2007, Summer 2009

Program Leader (with Yuan Lou, Department of Mathematics), Mathematical Biosciences Institute (MBI) 2006 Summer Educational Program

Member, Organizing Committee, Environmental Exposure and Health Data Seminar Series, Winter 2007

Judge, Denman Undergraduate Research Forum, May 2007, May 2008

Interdisciplinary Graduate Specialization Development (with Bryan Mark and Ningchuan Xiao, Department of Geography), Geospatial Data and Analysis, Approved March 2007

Faculty Coordinator (with Bryan Mark and Ningchuan Xiao), Graduate Interdisciplinary Specialization (GIS) in Geospatial Data and Analysis (GSDA), August 2007 - present

Graduate Studies Chair, Graduate Interdisciplinary Specialization (GIS) in Geospatial Data and Analysis (GSDA), August 2008 - present

Member, Panel on Collaborative Science, Office of Research's Responsible Conduct of Research Program, January 2009

Member, Organizing Committee, Conference on the Dynamics of Space-Time Use: Measurement, Patterns and Consequences, The Ohio State University, Columbus, OH, October 2009

Professional

Session Chair, Joint Statistical Meetings, New York, NY, August 2002

Session Chair, Joint Statistical Meetings, San Francisco, CA, August 2003

Roundtable Discussion Leader, Womens Caucus Breakfast, ENAR of the International Biometric Society Meeting, Pittsburgh, PA, March 2004

Applications Editor, International Society for Bayesian Analysis (ISBA) Bulletin, December 2004 - June 2007

Member, Student Paper Competition, Section on Statistics and the Environment (ENVR), American Statistical Association (ASA), January 2006-2008 (Committee Chair, 2008)

Invited Session Chair, Joint Statistical Meetings, Seattle, WA, August 2006

Invited Session Organizer, ENAR-International Biometric Society Meeting, Arlington, VA, March 2008

Member, Nominating Committee, International Society for Bayesian Analysis, 2008

Member, Presentation Award Committee, Section on Statistics and the Environment (ENVR), American Statistical Association (ASA), June 2009 - present

Refereeing

Associate Editor, *Environmetrics*, January 2009 - present

Associate Editor, *Bayesian Analysis*, August 2009 - present

Journals Article Reviewer: *The American Statistician*; *Annals of Applied Statistics*; *Annals of the Association of American Geographers*; *Atmospheric Environment*; *Bayesian Analysis*; *Biometrics*; *Ecological Applications*; *Ecology*; *Environmental and Ecological Statistics*; *Environmental Health Perspectives*; *Environmental Science and Technology*; *Geographical Analysis*; *Journal of Computational and Graphical Statistics*; *Journal of Multivariate Analysis*; *Journal of Statistical Planning and Inference*; *Journal of the American Statistical Association*; *Regional Science*; *Statistica Sinica*; *Statistical Science*; *Water Resources Research*

Proposal Reviewer (5x), National Science Foundation (NSF)

Reviewer, LA TEACH Study Final Report, Mickey Leland National Urban Air Toxics Research Center, February 2005

Member, National Science Foundation (NSF) Review Panel, April 2006, June 2008

Proposal Reviewer, Environmental and Human Health Programme, National Environmental Research Council (NERC) (UK), February 2007

Member, Development of Environmental Health Outcome Indicators Panel, Environmental Protection Agency (EPA), March 2007

Book Proposal Review, The Taylor and Francis Group, September 2007

Book Review, Springer, January 2008

Organizations

American Statistical Association
Eastern North American Region, International Biometrics Society
International Society for Bayesian Analysis
The International Environmetrics Society