

CURRICULUM VITAE

RANJAN MAITRA

Education:

Ph. D.	1996	University of Washington, Seattle; Statistics.
M. Stat.	1992	Indian Statistical Institute, Calcutta; Statistics.
B. Stat. (Hons.)	1990	Indian Statistical Institute, Calcutta; Statistics.

Research Interests:

Analysis of Massive Datasets, Clustering, Data Mining, Finite Mixture Models, Image Analysis, functional Magnetic Resonance Imaging, Tomography, Statistical Computing, Simulation Algorithms.

Work Experience:

2011 – present	Professor, Department of Statistics and Statistical Laboratory, Iowa State University.
2003 – 2011	Associate Professor, Department of Statistics and Statistical Laboratory, Iowa State University.
2003 – 2003	Associate Professor, Department of Mathematics and Statistics, University of Maryland, Baltimore County.
1997 – 2003	Assistant Professor, Department of Mathematics and Statistics, University of Maryland, Baltimore County.
1996 – 1998	Research Scientist, Statistics and Data Mining Research, Bell Communications Research (Bellcore), Morristown. (<i>On leave: 1997-98</i>)

Honors Received:

1. 2011: Elected Member, International Statistical Institute (ISI).
2. 2011: Elected Fellow, American Statistical Association (ASA).
3. 2010: Young Researcher award, Methodology and Application, International Indian Statistical Association (IISA).
4. 2003: CAREER award, National Science Foundation (NSF).
5. 1998: American Statistical Association (ASA) award for Best Contributed Paper in Statistical Computing at the 1998 Joint Statistical Meetings (JSM) in Dallas, Texas, USA. This paper (*Clustering Massive Datasets*) was judged the best out of over 80 entries submitted in this category.
6. 1997: Nominated for Francois Erbsman award (*only statistician*) for young scientists under 35 years of age, at the 1997 Information Processing in Medical Imaging (IPMI) meetings.
7. 1996: American Statistical Association (ASA) Student Paper Competition award for the paper “Estimating Precision in Functional Images”. This paper was one of four selected out of 22 submissions for presentation at the Statistical Computing Session of the 1996 Joint Statistical Meetings in Chicago.
8. 1996: Award for Best Poster “Estimating the Variability in Reconstructed PET Images” at the Student Poster Session of the Spring Pacific Northwest Statistics Meetings.
9. 1995: Award for Best presented paper “Estimating Variability in PET Reconstructions” at the Student Paper Competition of the Western North American Region (WNAR) of the International Biometric Society, at the Joint WNAR/IMS Meetings.
10. 1987-1992: Awards for excellent performance in degree programs at Indian Statistical Institute, Calcutta.

Research Support and Fellowships

Pending:

- 2013-14 \$250,000 (direct costs). Statistical Methods for Improved Activation Detection in fMRI Studies. Research Grant, National Institutes of Health. *Principal Investigator*.
- 2012-14 \$100,000 (direct costs). Statistical Methods for Accurate Crack Detection in Aircraft Engines Using Vibrothermography Imaging Data. Research Grant, Bailey Awards, Iowa State University. *Principal Investigator*.

External Support (Active and Past):

- 2005-10 \$2,312,455 (total costs). Research and Training of Graduate (RTG) Students, National Science Foundation. *Senior Personnel*. (*Principal Investigators: Alicia Carriquiry, William Q. Meeker, Stephen B. Vardeman, Huaiqing Wu*)
- 2004-09 \$ 302,764 (total costs, *Iowa State University portion*). Research Grant, National Institutes of Health. *Principal Investigator, Sub-contract from Johns Hopkins University*. (*Overall Principal Investigator: Brenda Rapp, Johns Hopkins University*)
- 2003-10 \$ 400,017 (total costs). CAREER Award, National Science Foundation. *Principal Investigator*.
- 2003-04 \$8,050 (direct costs, *UMBC portion*). Research Grant, National Institutes of Health. *Principal Investigator, Sub-contract from University of Maryland Medical School, Baltimore*.
- 2002-05 \$ 152,835. Inter-Personnel Agreement, United States Environmental Protection Agency (EPA), Washington DC. *Principal Investigator*.
- 2001-02 \$ 39,965.04. Inter-Personnel Agreement, United States Environmental Protection Agency (EPA), Washington DC. *Principal Investigator*.
- 2000-01 \$ 37,230.10. Research Grant, Telcordia Technologies, Morristown, NJ. *Principal Investigator*.
- 1999 \$ 13,867. Research Grant, Telcordia Technologies, Morristown, NJ. *Principal Investigator*.
- 1998 \$ 12,000 (direct costs, *UMBC portion*). Research Grant, National Science Foundation. *Principal Investigator, Sub-contract from Carnegie Mellon University*.

Intra-mural Support (Active and Past):

- 2008-09 \$24,451, Center for Integrated Animal Genomics, Iowa State University (*Joint with Karin Dorman*)
- 2001 \$ 600, Arts and Sciences Travel Fund, University of Maryland, Baltimore County.
- 1999 \$ 3,000. Summer Faculty Fellowship, University of Maryland, Baltimore County.
- 1998 \$ 5,000. Summer Faculty Fellowship, University of Maryland, Baltimore County.
- 1998 \$ 803. Arts and Sciences Travel Fund, University of Maryland, Baltimore County.

Other Research Collaborations and Professional Consulting Experience

1. "Cerebral Processing and Human Somesthetic Perception". *Agency: National Institutes of Health. Type: R01-NS39337. Principal Investigator: J. D. Greenspan. (2004-06)*
2. "Improved Sensitivity and Specificity for Detection of Prostate Cancer". *Agency: Department of Defense. Type: IDEA Grant; W81XWh-04-1-0249. Principal Investigator: R. P. Gullapalli. (2005-06)*
3. "Effect of Age on Cortical Responses to Nociception". *Agency: National Institute of Aging. Type: RO3 AG022223-01. Principal Investigator: R. P. Gullapalli. (2004-05)*

Publications (and Other Creative Efforts):

Papers Published – Peer-Reviewed:

1. Maitra, R., Melnykov, V. and Lahiri, S. N. (2012). Bootstrapping for Significance of Compact Clusters in Multi-dimensional Datasets. *Journal of the American Statistical Association*, to appear.

2. Bhattacharya, S. and Maitra, R. (2011). A Nonstationary Nonparametric Bayesian Approach to Dynamically Modeling Effective Connectivity in functional Magnetic Resonance Imaging Experiments. *Annals of Applied Statistics*, 5:2B:1183-1206. DOI information: <http://dx.doi.org/10.1214/11-AOAS470>.
3. Chen, W.-C. and Maitra, R. (2011). Model-Based Clustering of Regression Time Series Data via APECM – An AECM Algorithm Sung to An Even Faster Beat. *Statistical Analysis and Data Mining*, 4:567-78. DOI information: [10.1002/sam.10143](https://doi.org/10.1002/sam.10143).
(This paper won Wei-Chen Chen a 2011 Student Paper Competition award from the ASA Section on Statistical Learning and Data Mining.)
4. Melnykov, V. and Maitra, R. (2011). CARP: Software for Fishing Out Good Clustering Algorithms. *Journal of Machine Learning Research*, 12:31-35.
5. Melnykov, V., Maitra, R. and Nettleton, D. (2011). Accounting for Spot Matching Uncertainty in the Analysis of Proteomics Data from Two-dimensional Gel Electrophoresis. *Sankhyā, Series B*, 73:1:123-143. DOI information: [10.1007/s13571-011-0016-x](https://doi.org/10.1007/s13571-011-0016-x).
6. Maitra, R. (2010). A Re-defined and Generalized Percent-Overlap-of-Activation Measure for Studies of fMRI Reproducibility and its Use in Identifying Outlier Activation Maps. *Neuroimage*, 50:1:124–135. DOI information: [10.1016/j.neuroimage.2009.11.070](https://doi.org/10.1016/j.neuroimage.2009.11.070).
7. Maitra, R. and Melnykov, V. (2010). Simulating Data to Study Performance of Finite Mixture Modeling and Model-based Clustering Algorithms. *Journal of Computational and Graphical Statistics*, 19:2:354-376.
8. Maitra, R. and Ramler, I. P. (2010). A k -mean-directions algorithm for efficient clustering of data on a sphere. *Journal of Computational and Graphical Statistics*, 19:2:377-396.
9. Maitra, R. and Riddles, J. J. (2010). Synthetic Magnetic Resonance Imaging Revisited. *IEEE Transactions on Medical Imaging*, 29:3:895–902.
10. Melnykov, V. and Maitra, R. (2010). Finite Mixture Models and Model-based Clustering. *Statistics Surveys*, 4:80–116. DOI information: <http://dx.doi.org/10.1214/09-SS053>.
11. Maitra, R. (2009). Assessing Certainty of Activation or Inactivation in Test-Retest fMRI Studies. *Neuroimage*, 47:1:88–97. DOI information: [10.1016/j.neuroimage.2009.03.073](https://doi.org/10.1016/j.neuroimage.2009.03.073).
12. Maitra, R. (2009). Initializing Optimization Partitioning Algorithms. *ACM/IEEE Transactions on Computational Biology and Bioinformatics*, 6:1:144–157. DOI information: [10.1109/TCBB.2007.70244](https://doi.org/10.1109/TCBB.2007.70244).
13. Maitra, R. and Faden, D. (2009). Noise Estimation in Magnitude MR Datasets. *IEEE Transactions on Medical Imaging*, 28:10:1615-1622. DOI information: [10.1109/TMI.2009.2024415](https://doi.org/10.1109/TMI.2009.2024415).
14. Maitra, R. and Ramler, I. P. (2009). Clustering in the Presence of Scatter. *Biometrics*, 65:341–352.
15. Ellis, N. and Maitra, R. (2007). Multivariate Gaussian Simulation Outside Arbitrary Confidence Ellipsoids. *Journal of Computational and Graphical Statistics*, 16:3:692-708.
16. Moulton, E. A., Keaser, M. L., Gullapalli, R. P., Maitra, R. and Greenspan, J. D. (2006). Sex Differences in the Cerebral BOLD Signal Response to Painful Heat Stimuli. *American Journal of Physiology: Regulatory, Integrative and Comparative Physiology*, 291:257-67.
17. Gullapalli, R. P., Maitra, R., Roys, S. R., Greenspan, J. D., Smith, G. and Alon, G. (2005). Reliability Estimation of Grouped functional Imaging Data Using Penalized Maximum Likelihood. *Magnetic Resonance in Medicine*, 53:1126-1134.
18. Maitra, R. (2002). A Statistical Perspective on Data Mining. *Journal of the Indian Society for Probability and Statistics*, 6:28-77.

19. Maitra, R., Roys, S. R. and Gullapalli, R. P. (2002). Test-Retest Reliability Estimation of fMRI Data. *Magnetic Resonance in Medicine*, 48:62-70.
20. Maitra, R. (2001) Clustering Massive Datasets with Applications in Software Metrics and Tomography. *Technometrics*, 43:3:336-46.
21. Maitra, R. and Dalal, S. R. (2001), Pay-phones, Parking-meters, Vending Machines and Bayesian Prediction of Fill-Times, *Journal of the American Statistical Association*, 96:454:476-87.
22. Maitra, R. and Gullapalli, R. P. (2000). Comment on “A Bayesian Time-Course Model for Functional Magnetic Resonance Imaging Data” by Chris Genovese, *Journal of the American Statistical Association*, 95:451:707-8.
23. Maitra, R. (1998). An Approximate Bootstrap Technique for Variance Estimation in Parametric Images. *Medical Image Analysis*, 2:4:379-82.
24. Maitra, R. and O’Sullivan, F. (1998). Variability Assessment in Positron Emission Tomography and Related Generalized Deconvolution Models. *Journal of the American Statistical Association*, 93:444:1340-55.
25. SenGupta, A. and Maitra, R. (1998). On Best Equivariance and Admissibility of Simultaneous MLE for Mean Direction Vectors of Several Langevin Distributions. *Annals of the Institute of Statistical Mathematics*, 50:4:715-27.
26. Maitra, R. (1997). Estimating Precision in Functional Images. *Journal of Computational and Graphical Statistics*, 6:132-42.

Peer-Reviewed Book Chapter:

1. Nusser, S. M., Intille, S. S. and Maitra, R. (2005) The Future of Intensive Longitudinal Measurement and Analysis. In *Models for Intensive Longitudinal Data*, Walls, T. A. and Schafer, J. S. (Eds.), Oxford University Press, New York, 254-277.

Peer-Reviewed Conference Proceedings:

1. Maitra, R., Sinha, B. K., Ross, N. P., Lee, J., Herczeg, S. (2002). On Some Aspects of Data Integration Techniques with Applications. *East-West Journal of Mathematics: Computational Mathematics and Modeling, An International Conference, Bangkok*.
2. Roys, S. R., Maitra, R., Greenspan, J. D. and Gullapalli, R. P. (2002). Group Analysis of fMRI Data using Penalized Maximum Likelihood Method. *Proceedings of the 10th International Society of Magnetic Resonance in Medicine, Honolulu, May 2002*, pp. 1428.
3. Lefkowitz, D., Read, K., Maitra, R. and Gullapalli, R. P. (2002). Intra-subject and Inter-subject Variability of SVS vs CSI Spectra from Spatially Matched Voxels. *Proceedings of the 10th International Society of Magnetic Resonance in Medicine, Honolulu, May 2002*, pp. 2509.
4. Maitra, R., Roys, S. R., Greenspan, J. D. and Gullapalli, R. P. (2001). Resampling Methods to Test Reliability of Motion-Corrected fMRI Data. *Proceedings of the 9th International Society of Magnetic Resonance in Medicine, Glasgow, April 2001*, pp. 1202.
5. Roys, S. R., Maitra, R. and Gullapalli, R. P. (2001). A Comprehensive Approach to Estimating Test-Retest Reliability in fMRI. *Proceedings of the 9th International Society of Magnetic Resonance in Medicine, Glasgow, April 2001*, pp. 1718.
6. Maitra, R. and Besag, J. E. (1998). Bayesian Reconstruction in Synthetic Magnetic Resonance Imaging. *Bayesian Inference in Inverse Problems. Proceedings of the Society of Photo-Optical Instrumentation Engineers (SPIE 1998) Meetings, Vol. 3459: A Mohammad-Djafari Ed.*, pp. 39-47.

7. Maitra, R. (1997). Synthetic Resampling Methods for Variance Estimation in Parametric Images. *Springer-Verlag Lecture Notes in Computer Science Series: Information Processing in Medical Imaging*, 1230:271-84.
8. Maitra, R. and O'Sullivan, F. (1996). Estimating the Variability in Functional Images Using a Synthetic Resampling Approach. *1996 IEEE Nuclear Science Symposium and Medical Imaging Conference Record*, 3:1867-71.
9. Maitra, R. and O'Sullivan, F. (1995). Estimating the Variability of Reconstructed PET Data: A Technique based on Approximating the Reconstruction Filter by a Sum of Gaussian kernels. *1995 IEEE Nuclear Science Symposium and Medical Imaging Conference Record*, 3:1411-14.

Peer-Reviewed Abstracts/Extended Summaries:

1. Zhuo, J., Roys, S. R., Lefkowitz, D. M., Maitra, R., Bedekar, G., Greenspan, J. D. and Gullapalli, R. P. (2005). Test-Retest Study of Variability in Diffusion Parameters in Brain Regions. *Proceedings of the 11th annual Human Brain Mapping Meeting, Toronto, Canada 2005*.

Books and Monographs:

1. Maitra, R., Sinha, B. K., Ross, N. P., Lee, J. Herczeg, S. (2003). *Combining Environmental Indicators*. Monograph on Series in Statistical Methodology, Office of Environmental Information, United States Environmental Protection Agency, Washington DC. (*Refereed monograph.*)

Book Reviews:

1. Maitra, R. (2011). Review of "The Statistical Analysis of Functional MRI Data" by Nicole A. Lazar (Springer). *Technometrics*, 53:2:211-2.
2. Maitra, R. (2008). Review of "Directional Statistics" by Kanti V. Mardia and Peter E. Jupp (Academic Press). *Technometrics*, 50:4:546-7.
3. Maitra, R. (2007). Review of "Independent Component Analysis: A Tutorial Introduction" by James V. Stone (MIT Press). *Technometrics*, 49:3:358-9.
4. Maitra, R. (2005). Review of "Statistical Computing for the Social Scientist" by Micah Altman, Jeff Gill, Michael P. McDonald (John Wiley). *Technometrics*, 47:2:241-2.
5. Maitra, R. and Mathew, T. (2000). Review of "Analysis of Variance in Statistical Image Processing" by Ludwik Kurz and M. Hafed Bentetifa (Cambridge University Press). *Technometrics*, 42:2:212-3.

Manuscripts submitted or Under Revision:

(Note that this list only contains manuscripts submitted or under revision for journals not requiring double-blinded review.)

1. Rowe, D. B., Adrian, D. W. and Maitra, R. (2012). On the Use of Gaussian and Rice distributions for fitting magnitude fMRI time series data. *Submitted to IEEE Transactions on Medical Imaging*.
2. Maitra, R. (2011). On the Expectation-Maximization Algorithm for Rice-Rayleigh Mixtures with Application to Estimating the Noise Parameter in Magnitude MR Datasets. *Submitted to Sankhyā Series B*.
3. Maitra, R. and Melnykov, V. (2010). Assessing Significance in Finite Mixture Models. *Under invited revision for the Journal of the Royal Statistical Society Series B*.
4. Melnykov, V., Chen, W.-C., and Maitra, R. (2010). MIXSIM: An R Package for Simulating Data to Study Performance of Finite Mixture Modeling and Clustering Algorithms. *Invited revision submitted to the Journal of Statistical Software*.

5. Ramler, I. P. and Maitra, R. (2010). Accounting for noisy observations in clustering directional data with applications to gene expression time series experiments. *Under revision.*

Manuscripts in Preparation:

(Note that this list only contains manuscripts being submitted to journals not requiring double-blinded review.)

1. Adrian, D. W., Maitra, R. and Rowe, D. B. (2012). Improved activation detection in fMRI through modeling of complex-valued autoregressive time series.
2. Adrian, D. W., Maitra, R. and Rowe, D. B. (2012). Estimating parameters for Rice-distributed time series observations with application to fMRI.
3. Chen, W.-C., Carpenter, S., Dorman, K. S. and Maitra, R. (2012). Cousin Clustering: Clustering Genetic Data Using Phylogenetic Mixture Models.
4. Chen, W.-C., Maitra, R. and Melnykov, V. (2012). Model-based semi-supervised clustering.
5. Pazdernik, K. T., Maitra, R., Nychka, D. and Swain, S. R. (2012). Efficient Maximum Likelihood Estimation for Fixed Rank Kriging in Large Spatial Fields.
(*This manuscript won Karl Pazdernik a 2012 Student Paper Competition award from the ASA Section on Statistical Computing.*)
6. Pintar, A. L. and Maitra, R. (2012). Seriating Plato's works.

Creative Achievements:

1. CARP: The Clustering Algorithms' Referee Package (*Joint with Volodymyr Melnykov, available at www.mloss.org*).
2. MixSim: R package to Simulate from Finite Mixture Models (*Joint with Volodymyr Melnykov and Wei-Chen Chen*).
3. MixEM: R package for inference on Finite Mixture Models (*Joint with Wei-Chen Chen and Volodymyr Melnykov, public release awaited*).
4. *BootClust*: R package for bootstrapping for significance in clustering. (*Joint with Volodymyr Melnykov, public release awaited*).

Ph. D. Students:

Major Professor (Dissertation Advisor) of Dissertation Advisees:

1. Karl Pazdernik (2012, expected).
2. Dan Adrian (2011, currently Mathematical Statistician, National Agricultural Statistical Service).
3. Anna Peterson (2011, *Joint with Arka Ghosh*; currently Lecturer, Department of Statistics, Iowa State University).
4. Volodymyr Melnykov (2009, currently Assistant Professor, Department of Statistics, North Dakota State University).
5. Ivan Ramler (2008, currently Assistant Professor, Department of Mathematics, Statistics and Computer Science, St. Lawrence University).
6. Rafaela M. Guidi (2003, currently Senior Adviser, Bank of Brazil).

Other Committee Memberships:

1. Jia Liu (2013, expected).
2. Minsun Kim (2012, expected).
3. Wei Lu (2011, *Electrical and Computer Engineering*).
4. Wei-Chen Chen (2011).
5. Adam Pintar (2010).
6. Ming Li (2010).
7. Tim Bancroft (2009).
8. Haiming Ma (2009).
9. Chunwang Gao (2009).
10. Wuyan Zhang (2006).
11. Rhonda DeCook (2006).
12. Yurong Wang (2006).
13. Eric Moulton (2004, *University of Maryland Dental School*).
14. Xiaoming Li (2000, *University of Maryland Baltimore County*)
15. Xianong Gu (2000, *University of Maryland Baltimore County*)
16. Yi-Tzu Li (1999, *University of Maryland Baltimore County*)
17. Vladimir Mats (1997, *University of Maryland Baltimore County*)

External Dissertation Examiner:

Ms. Siow-Hoo Leong, University of Malaya. *Title:* Mixture model clustering for very large datasets.

M. S. Students:**Major Professor (Creative Component Advisor) of Advisees:**

1. Christopher Bruno (2011).
2. Anna Peterson (2008, *Joint with Arka Ghosh*).
3. Adam Pintar (2007).
4. William Baumann (2006).
5. Erin K. McMurtry (2005).
6. Nichole Gray (2005).
7. Peter Hoekstra (2004).

Other Committee Memberships:

1. Jian Gong (2005, *Electrical Engineering*)

Undergraduate Advising:

1. Participant, 2009 Freshman Honors Mentor Program. (*Joint with Karin Dorman*)
2. 2008 NSF Alliance (AGEP) Co-Mentor for Ms. Stephanie Wilkerson, Xaviers' University, New Orleans. (*Joint with Karin Dorman*)
3. Participant, 2006 Freshman Honors Mentor Program.
4. 2004 NSF VIGRE Undergraduate Summer Mentor for Ms. Ashley Bennett, Simpson College, Indianola.
5. Undergraduate Program Advisor, Statistics and Mathematics, University of Maryland Baltimore County.

Research Assistants Funded:

1. Wei-Chen Chen (2008-10)
2. John Riddles (2008-10)
3. Volodymyr Melnykov (2007-09)
4. David Faden (2007-08)
5. Karl Pazdernik (2007)
6. Ivan P. Ramler (2005-07)
7. William Baumann (2005-06)
8. Teresa McConville (2004-05)

Classes Taught:

Iowa State University *Note: An asterisk (*) denotes course conception and/or (re-)development.*

1. Hons 290 – Freshman Mentors Program (Spring '06, '09).
2. *Stat 330 – Probability and Statistics for Computer Scientists and Engineers (Fall '09, '10, Spring '12).
3. Stat 342 – Introduction to the Theory of Probability and Statistics – II. (Spring '11).
4. Stat 501 – Multivariate Statistical Methods (Spring '04, '11, '12).
5. Stat 515 – Theory and Applications of the Non-linear Model (Fall '03).
6. *Stat 579 – An Introduction to R (Fall '06, '07, '08, '11).
7. *Stat 580 – Statistical Computing (Spring '05, '06, '10).
8. *Stat 690E/680 – Advanced Statistical Computing (Fall '05, '06, '07, '08, '09, '11).

UMBC *Note: An asterisk (*) denotes course conception and/or (re-)development.*

1. Stat 121 – An Introduction to Statistics for the Social Sciences (Summer '01).
2. Stat 350 – Statistics with Applications in the Biological Sciences (Spring '98, '99, '00, Fall '99, '00, '01, '02).
3. Stat 355 – Probability and Statistics for Scientists and Engineers (Fall '97, '98, Spring '98).
4. Stat 432 – A Tutorial Introduction to SAS (Fall '00, Winter '01).
5. *Stat 433 – Introduction to Statistical Computing (Spring '03).

6. Stat 454 – Applied Statistics (Fall '01).
7. *Stat 490/CMSC 491C – An Introduction to Data Mining (Winter '01).
8. Stat 601 – Applied Statistics – I (Fall '97, '98).
9. *Stat 625/700 – Spatial Statistics and Image Analysis (Spring '98, Fall '00).
10. *Stat 633/700 – Statistical Computing (Fall '99, Spring '02).

Departmental Service:

2010 – 2012	Member, Graduate Admissions Committee, Department of Statistics, Iowa State University
2011 – 2012	Chair, Fall Seminars, Department of Statistics, Iowa State University
2009 – 2010	Chair, Fall Seminars, Department of Statistics, Iowa State University
2009 – 2010	Member, Honors and Awards Committee, Department of Statistics, Iowa State University
2008 – 2009	Chair, Computation Advisory Committee, Department of Statistics, Iowa State University
2008 – 2009	Chair, Fall Seminars, Department of Statistics, Iowa State University
2008 – 2009	Member, Graduate Admissions Committee, Department of Statistics, Iowa State University
2008 – 2009	Member, Memorial Lecture Series, Department of Statistics, Iowa State University
2007 – 2008	Co-chair, Computation Advisory Committee, Department of Statistics, Iowa State University
2007 – 2008	Chair, Journal Ratings Committee, Department of Statistics, Iowa State University
2006 – 2007	Faculty Search Committee, Department of Statistics, Iowa State University
2005 – present	Coordinator, NSF RTG/VIGRE Working Group in Statistical Computing, Department of Statistics, Iowa State University
2004 – 2006	Strategic Planning Committee, Department of Statistics, Iowa State University
2003 – 2011	Computation Advisory Committee, Department of Statistics, Iowa State University
2004	Coordinator to oversee and plan activities of Statistical Computing Group, Department of Statistics, Iowa State University
2003 – 2004	Chair, Spring Seminars, Department of Statistics, Iowa State University
2001 – 2003	Undergraduate Committee, Department of Mathematics and Statistics, University of Maryland, Baltimore County
1999 – 2001	Member, Department Computer Committee, Department of Mathematics and Statistics, University of Maryland, Baltimore County
1998	Acting Chair, Department Computer Committee, Department of Mathematics and Statistics, University of Maryland, Baltimore County

University and Community Service:

2010 – present	LAS Senate Caucus Representative, Faculty Appeals Committee, Iowa State University
2009 – present	Departmental Representative, Faculty Senate, Iowa State University
1999 – 2000	Faculty Classroom Instructional Technology Committee, UMBC
1997 – 2003	Participant, UMBC Graduate School Open Houses

Professional Activities:

- 2011 – 2012 International Indian Statistical Association (IISA) Representative, 2012 Joint Statistical Meetings (JSM) Program Committee.
- 2010 – present American Statistical Association (ASA) Executive Editor, *Statistics Surveys*.
- 2012 – 2014 Publications Officer, ASA Section on Statistics in Imaging.
- 2012 – present Executive Committee, ASA Section on Statistics in Imaging.
- 2010 – present Founding Member, ASA Section on Statistics in Imaging
- 2011 – 2012 Organizer, Invited Session on “Recent Advances and Unresolved Challenges in Statistical Genetics”, 2012 Joint Statistical Meetings
- 2010 – 2011 Organizer, Invited Session on “Recent Advances in Finite Mixture Models and Clustering”, 2011 Joint Statistical Meetings
- 2010 Organizer and Chair, Topic-Contributed Session on Finite Mixture Models and Model-based Clustering, 2010 Joint Statistical Meetings.
- 2010 Chair, Session on Methods for High-dimensional Datasets, Conference on Resampling Methods and High-dimensional Data, College Station, TX.
- 2009 – 2010 Associate Editor, *Statistics Surveys*.
- 2009 Organizer, Invited Session on “High-dimensional Methods”, in Conference to Celebrate the 75th Anniversary of the Statistical Laboratory, Department of Statistics, Iowa State University, Ames, IA.
- 2008 – present Co-Editor (Associate Editor), *Sankhyā Series A: Theoretical Statistics, Probability Theory and Stochastic Processes*.
- 2008 – present Reviewer for Discovery Grants of the Natural Sciences and Engineering Research Council of Canada.
- 2008 Reviewer for proposals submitted to the Scientific Computing Research Environments for the Mathematical Sciences (SCREMS) panel, National Science Foundation.
- 2004 Panelist for reviewing proposals submitted to the Mathematical and Computer Science Panel, National Science Foundation.
- 2003 Organizer and Chair: Session on MCMC computations for large-dimensional problems, *Joint Statistical Meetings 2003, San Francisco*.
- 2002 Chair: Invited Session on International Environmental Statistics, *TIES 2002*, The International Environmetrics Society Meetings, Genova, Italy.
- 2002 – 2005 Statistical Computing Editor, *Statistical Computing and Graphics Newsletter*, Section on Statistical Computing, American Statistical Association
- 2001 Chair: Session on Applications of Nonparametrics, *2001 Joint Statistical Meetings, Atlanta*.
- 2000 – 2002 President, Maryland Chapter, American Statistical Association
- 1999 Invited participant: National Research Council (NRC) Workshop on “Statistical Methods for Reducing Uncertainty in Ocean Science Models”, National Academy of Sciences.
- 1998 – 2000 Vice-President, Maryland Chapter, American Statistical Association
- 1997 – 2002 Continuing Education Co-Liason, Section on Statistical Computing, American Statistical Association
- 1997 – 2005 Member, Executive Committee, Section on Statistical Computing, American Statistical Association
- 1996 – present Reviewer for papers submitted to: *Biometrics*, *Computational Statistics and Data Analysis*, *Journal of the American Statistical Association*, *Journal of Computational and Graphical Statistics*, *Journal of Classification*, *Journal of Statistical Education*, *Journal for Statistical Planning and Inference*, *Naval Research Statistics*, *Statistics and Probability Letters*, *Technometrics*, *Mathematical Programming*, *Naval Research Logistics*, *Journal of Environmental Statistics*, *IEEE Transactions on Medical Imaging*, and *1996 IEEE Nuclear Science Symposium and Medical Imaging Conference*.
- 1994 – 1995 Organizer, 1994–95 Statistics Department Student Seminar Series, University of Washington