

## CURRICULUM VITÆ

(updated Jan 24, 2012)

**Ian W. McKeague**  
**Department of Biostatistics**  
**Columbia University**  
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**New York, NY 10032-2603**

### EDUCATION

University of North Carolina at Chapel Hill	1977–1980	Ph.D.	Statistics
University of Cambridge	1975–1976	M.Math.	Mathematics
University of Cambridge	1972–1975	B.A. (1st class hon.), M.A.	Mathematics

Ph.D. thesis: *Covariance Operators and their Applications in Probability and Information Theory.*

Advisor: C. R. Baker.

### PROFESSIONAL EXPERIENCE

2004–present	Professor of Biostatistics, Columbia University
2000–2004	Ralph A. Bradley Professor of Statistics, Florida State University
1996–1999	Chairman, Department of Statistics, Florida State University
1991–2000	Professor, Department of Statistics, Florida State University
1986–1991	Associate Professor, Dept. of Statistics, Florida State University
1980–1986	Assistant Professor, Dept. of Statistics, Florida State University
Nov–Dec 1991	Visiting MSRI, University of California, Berkeley
Feb–May 1992	Visiting Université Joseph Fourier, Grenoble, France
June–July 2001	Visiting Université Joseph Fourier, Grenoble, France
May–June 1985	Visiting University of Padua, Italy

### RESEARCH INTERESTS

Functional data analysis, empirical likelihood, non-standard asymptotics, statistical methods for life course epidemiology, survival analysis, Bayesian inverse problem methods in physical oceanography, Markov chain Monte Carlo, competing risks models for HIV/AIDS data, inference for stochastic processes, simultaneous inference, efficient estimation for semiparametric models, counting processes, spatial point processes.

### PROFESSIONAL HONORS AND ACTIVITIES

Fellow of the Institute of Mathematical Statistics  
Fellow of the American Statistical Association  
*Annals of Statistics*, Associate Editor, 1989–1995  
*Journal of the American Statistical Association*, Associate Editor, 1993–1996, 2011–  
*International Journal of Biostatistics*, Associate Editor, 2005–  
*Statistical Inference for Stochastic Processes*, Associate Editor, 1998–  
*ESAIM: Probability and Statistics*, Associate Editor, 2000–2005  
G. W. Snedecor Lecture, Iowa State University, 2007  
Florida State University Named Professorship Award, 2000  
Florida State University Graduate Teaching Award, 1998  
Florida State University Professorial Excellence Program Award, 1999  
Institute of Mathematical Statistics Fellows Committee, 2008–2010

ASA Section on Nonparametric Statistics, JNPS Awards Committee, 2010–2011  
 NSF *Statistics and Probability Program* Panel, 1997, 1999, 2000, 2002, 2003, 2007, 2009, 2010.  
 NSF *Special Meetings* Panel, 2005.  
 NSF *Biocomplexity in the Environment* Panel, 2004.  
 NSF *Knowledge and Distributed Intelligence Program* Panel, 1998.  
 Chair of Organizing Committee, IMS mini-meeting “Statistical Approaches to the Ocean Circulation Inverse Problem,” Florida State University, November 2001.  
 SAMSI program *Data Assimilation in Geophysical Systems*, Scientific Committee member, 2004–2005.  
 Chair of Organizing Committee, AMS-IMS-SIAM Summer Research Conference “Stochastic Inference, Monte Carlo and Empirical Methods,” Mt. Holyoke College, 1996.  
 Member of the American Statistical Association, and the Institute of Mathematical Statistics.  
 New Zealand University Scholarship, 1971.  
 Duke of Edinburgh Gold Award, 1972.  
 Postgraduate Fellowship (declined), Australian National University, 1976.  
 Selwyn College Scholarship, University of Cambridge, 1975.  
 First Class Honors (Wrangler), Mathematical Tripos, University of Cambridge, 1975.

## PEER-REVIEWED ARTICLES

*Publications as a senior or lead author are indicated with an asterisk.*

- [1] C. R. Baker and I. W. McKeague. Compact Covariance Operators. *Proceedings of the American Mathematical Society* **83** 590–593 (1981).\*
- [2] I. W. McKeague. On the Capacity of Channels with Gaussian and Non-Gaussian Noise. *Information and Control* **51** 153–173 (1981).\*
- [3] I. W. McKeague. On the Converse to the Coding Theorem for the Continuous Time White Gaussian Channel with Feedback. *IEEE Transactions on Information Theory* **IT-30** 383–385 (1984).\*
- [4] I. W. McKeague. Estimation for Diffusion Processes under Misspecified Models. *Journal of Applied Probability* **21** 511–520 (1984).\*
- [5] I. W. McKeague. On the Stability of Bayes Estimators for Gaussian Processes. *The Annals of Statistics* **12** 1310–1323 (1984).\*
- [6] I. W. McKeague and C. R. Baker. The Coding Capacity of Mismatched Gaussian Channels. *IEEE Transactions on Information Theory* **IT-32** 431–436 (1986).\*
- [7] I. W. McKeague. Estimation for a Semimartingale Regression Model using the Method of Sieves. *The Annals of Statistics* **14** 579–589 (1986).\*
- [8] I. W. McKeague. A Counting Process Approach to the Regression Analysis of Grouped Survival Data. *Stochastic Processes and their Applications* **28** 221–239 (1988).\*
- [9] I. W. McKeague. The Method of Sieves. In: *Encyclopedia of Statistical Sciences* **8** 458–461 (1988) (N. L. Johnson and S. Kotz, eds.), Wiley, New York.\*
- [10] I. W. McKeague. Asymptotic Theory for Weighted Least Squares Estimators in Aalen’s Additive Risk Model. *Contemporary Mathematics* **80** 139–152 (1988).\*
- [11] I. W. McKeague and K. Utikal. Inference for a Nonlinear Counting Process Regression Model. *The Annals of Statistics* **18** 1172–1187 (1990).\*
- [12] I. W. McKeague and K. Utikal. Stochastic Calculus as a Tool in Survival Analysis: a Review. *Applied Mathematics and Computation* **38** 23–49 (1990).\*

- [13] I. W. McKeague and K. Utikal. Identifying Nonlinear Covariate Effects in Semimartingale Regression Models. *Probability Theory and Related Fields* **87** 1–25 (1990).\*
- [14] I. W. McKeague and T. Tofoni. Nonparametric Estimation of Trends in Linear Stochastic Systems. In: *Statistical Inference in Stochastic Processes* (N. U. Prabhu and I. V. Basawa, eds.) 143–166 (1991), Marcel Dekker, New York.\*
- [15] F. Huffer and I. W. McKeague. Weighted Least Squares Estimation for Aalen’s Additive Risk Model. *Journal of the American Statistical Association* **86** 114–129 (1991).\*
- [16] I. W. McKeague and K. Utikal. Goodness-of-fit Tests for Additive Hazards and Proportional Hazards Models. *Scandinavian Journal of Statistics* **18** 177–195 (1991).\*
- [17] I. W. McKeague and M.-J. Zhang. Identification of Nonlinear Time Series from First Order Cumulative Characteristics. *The Annals of Statistics* **22** 495–514 (1994).\*
- [18] E.-E. Aly, S. C. Kochar and I. W. McKeague. Some Tests for Comparing Cumulative Incidence Functions and Cause-specific Hazard Rates. *Journal of the American Statistical Association* **89** 994–999 (1994).\*
- [19] I. W. McKeague and P. Sasieni. A Partly Parametric Additive Risk Model. *Biometrika* **81** 501–514 (1994).\*
- [20] A. Antoniadis, G. Gregoire and I. W. McKeague. Wavelet Methods for Curve Estimation. *Journal of the American Statistical Association* **89** 1340–1353 (1994).\*
- [21] I. W. McKeague, A. M. Nikabadze and Y. Sun. An Omnibus Test for Independence of a Survival Time from a Covariate. *The Annals of Statistics* **23** 450–475 (1995).\*
- [22] I. W. McKeague and M.-J. Zhang. Fitting Cox’s Proportional Hazard Model using Grouped Survival Data. *Lifetime Data: Models in Reliability and Survival Analysis*, 227–232 (1996).\*
- [23] I. W. McKeague and Y. Sun. Transformations of Gaussian Random Fields to Brownian Sheet and Nonparametric Change-point Tests. *Statist. & Probab. Letters* **28** 311–319 (1996).\*
- [24] I. W. McKeague and Y. Sun. Towards an Omnibus Distribution-free Goodness-of-fit Test for the Cox Model. *Statistica Sinica* **6** 579–588 (1996).\*
- [25] G. Li, M. Hollander, I. W. McKeague and J. Yang. Nonparametric Likelihood Ratio Confidence Bands for Quantile Functions from Incomplete Survival Data. *The Annals of Statistics* **24** 628–640 (1996).
- [26] P. E. Greenwood, I. W. McKeague and W. Wefelmeyer. Outperforming the Gibbs Sampler Empirical Estimator for Nearest Neighbor Random Fields. *The Annals of Statistics* **24** 1433–1456 (1996).\*
- [27] I. W. McKeague. Variance Reduction Techniques for Random Fields. In: *Mathematical Methods in Stochastic Simulation and Experimental Design* (S. M. Ermakov, V. B. Melas, eds.), 202–208 (1996), St. Petersburg University Press.\*
- [28] M. Hollander, I. W. McKeague and J. Yang. Likelihood Ratio Based Confidence Bands for Survival Functions. *Journal of the American Statistical Association*, **92** 215–226 (1997).\*
- [29] I. W. McKeague. Aalen’s Additive Risk Model. In: *Encyclopedia of Statistical Sciences, Update Volume 1* (S. Kotz and C. B. Read, eds.), 1–6 (1997), Wiley, New York. \*
- [30] M. van der Laan and I. W. McKeague. Efficient Estimation from Right-Censored Data when Failure Indicators are Missing at Random. *The Annals of Statistics*, **26** 164–182 (1998).\*
- [31] I. W. McKeague and S. Subramanian. Product-Limit Estimators and Cox Regression with Missing Censoring Information. *Scandinavian Journal of Statistics* **25** 589–601 (1998).\*
- [32] P. E. Greenwood, I. W. McKeague and W. Wefelmeyer. Information Bounds for Gibbs Samplers. *The Annals of Statistics* **26** 2128–2156 (1998).\*

- [33] P. E. Greenwood, I. W. McKeague and W. Wefelmeyer. Von Mises Type Statistics for Single Site Updated Local Interaction Random Fields. *Statistica Sinica* **9** 699–712 (1999).\*
- [34] J. Einmahl and I. W. McKeague. Confidence Tubes for Multiple Quantile Plots via Empirical Likelihood. *The Annals of Statistics* **27** 1348–1367 (1999).\*
- [35] I. W. McKeague and W. Wefelmeyer. Markov Chain Monte Carlo and Rao–Blackwellization. *Statistical Planning and Inference* **85** 171–182 (2000).\*
- [36] I. W. McKeague and M. Tighiouart. Bayesian Estimators for Conditional Hazard Functions. *Biometrics* **56** 213–221 (2000).\*
- [37] I. W. McKeague., P. Gilbert and P. Kanki. Omnibus Tests for Comparison of Competing Risks with Adjustment for Covariate Effects. *Biometrics* **57** 818–828 (2001).\*
- [38] M. A. Loizeaux and I. W. McKeague. Perfect Sampling for Posterior Landmark Distributions with an Application to the Detection of Disease Clusters. *IMS Lecture Notes – Monograph Series*, Volume 37, 321–331 (2001).\*
- [39] I. W. McKeague, S. Subramanian and Y. Sun. Median Regression and the Missing Information Principle. *Journal of Nonparametric Statistics* **13** 709–727 (2001).\*
- [40] I. W. McKeague and M. Tighiouart. Nonparametric Bayes Estimators for Hazard Functions based on Right-Censored Data. *Tamkang Journal of Mathematics* **33** 173–189 (2002).\*
- [41] I. W. McKeague and M. A. Loizeaux. Perfect Sampling for Point Process Cluster Modelling. Chapter 5 of *Spatial Cluster Modelling* (A. Lawson and D. Denison, eds.), Chapman & Hall (2002), 87–107.\*
- [42] I. W. McKeague and Y. Zhao. Simultaneous Confidence Bands for Ratios of Survival Functions via Empirical Likelihood. *Statist. & Probab. Letters* **60**, 405–415 (2002).\*
- [43] J. Einmahl and I. W. McKeague. Empirical Likelihood based Hypothesis Testing. *Bernoulli*, **9**, 267–290 (2003).\*
- [44] X.-F. Niu, I. W. McKeague and J. B. Elsner. Seasonal Space-Time Models for Climate Systems. *Statistical Inference for Stochastic Processes* **6**, 111–133 (2003).
- [45] P. Gilbert, I. W. McKeague, G. Eisen, C. Mullins, A. Gueye-NDiaye, S. Mboup and P. Kanki. Comparison of HIV-1 and HIV-2 Infectivity from a Prospective Cohort Study in Senegal. *Statistics in Medicine* **22** 573–593 (2003).\*
- [46] P. Gilbert, I. W. McKeague and Y. Sun. Tests for Comparing Mark-Specific Hazards and Cumulative Incidence Functions. *Lifetime Data Analysis* **10** 5–28 (2004).\*
- [47] A. Antoniadis, G. Gregoire and I. W. McKeague. Bayesian Estimation in Single-Index Models. *Statistica Sinica* **14** 1147–1164 (2004).\*
- [48] F. Bunea and I. W. McKeague. Covariate Selection for Semiparametric Hazard Function Regression Models. *Journal of Multivariate Analysis* **92** 186–204 (2005).\*
- [49] I. W. McKeague. A Statistical Model for Signature Verification. *Journal of the American Statistical Association* **100** 231–241 (2005).\*
- [50] I. W. McKeague, G. Nicholls, K. Speer and R. Herbei. Statistical Inversion of South Atlantic Circulation in an Abyssal Neutral Density Layer. *Journal of Marine Research* **63** 683–704 (2005).\*
- [51] I. W. McKeague and Y. Zhao. Comparing Distribution Functions via Empirical Likelihood. *International Journal of Biostatistics* **1**, Issue 1, Article 5, (2005).\*
- [52] I. W. McKeague and Y. Zhao. Width-Scaled Confidence Bands for Survival Functions. *Statist. & Probab. Letters* **76** 327–339 (2006).\*

- [53] D. Nof, I. W. McKeague and N. Paldor. Is there a Paleolimnological Explanation for ‘Walking on Water’ in the Sea of Galilee? *Journal of Paleolimnology* **35** 417–439 (2006).
- [54] L. F. O’Sullivan, H. F. L. Meyer-Bahlburg and I. W. McKeague. The Development of an Instrument Assessing Sexual Self Concept Among Ethnically Diverse Early Adolescent Girls. *Psychology of Women Quarterly* **30** 139–149 (2006).
- [55] M. O. Finkelstein, B. Levin, I. W. McKeague and W.-Y. Tsai. A Note on the Censoring Problem in Empirical Case-Outcome Studies. *Journal of Empirical Legal Studies* **3** 375–395 (2006).\*
- [56] M. Banerjee and I. W. McKeague. Estimating Optimal Step-function Approximations to Instantaneous Hazard Rates. *Bernoulli* **13** 279–299 (2007).\*
- [57] D. Nof, I. W. McKeague and N. Paldor. Was there ice along the shore of the Sea of Galilee during the last 12, 000 years? — Reply to a comment by Prange et al. (2007) and a comment by Friedman (2007). *Journal of Paleolimnology*, **38** 597–600 (2007).
- [58] Mattes, E., Huang, R. C., Jacoby, R., Kendall, G. E., Susser, E. S., McKeague, I. W. et al. The influence of mental health in early childhood on cardiovascular risk factors at age 8 in the Western Australian Pregnancy Cohort (Raine) Study. *Early Human Development* **83** S92–S92 (2007).
- [59] Mattes, E., Kendall, G. E., Susser, E. S., McKeague, I. W., Silburn, S. R., Stantey, F. J. et al. Sleep problems at age 2 as a predictor of mental health from mid childhood to adolescence: the Western Australian Pregnancy Cohort (Raine) Study. *Early Human Development* **83** S57–S57 (2007).
- [60] van Eekelen, J. A. M., Mattes, E., Foster, J. K., de Kloet, E. R., McKeague, I. W. The effects of HPA development on adolescent brain maturation. *Early Human Development* **83** S122–S123 (2007).
- [61] M. Banerjee and I. W. McKeague. Confidence Sets for Split Points in Decision Trees. *The Annals of Statistics* **35** 543–574 (2007).\*
- [62] H. S. Kahn, M. Graff, A. D. Stein, P. A. Zybert, I. W. McKeague and L. H. Lumey. A Fingerprint Characteristic Associated with the Early Prenatal Environment. *American Journal of Human Biology* **20** 59–65 (2008).
- [63] P. Gilbert, I. W. McKeague and Y. Sun. The 2-sample Problem for Failure Rates Depending on a Continuous Mark: an Application to Vaccine Efficacy. *Biostatistics*, **9** 263–276 (2008).\*
- [64] R. Herbei, I. W. McKeague and K. Speer. Gyres and Jets: Inversion of Tracer Data for Ocean Circulation Structure. *Journal of Physical Oceanography* **38** 1180–1202 (2008).\*
- [65] M. G. A. Opler and I. W. McKeague (+ 10 coauthors). Prenatal Lead and Schizophrenia,  $\delta$ -Aminolevulinic Acid, and Schizophrenia: Further Evidence. *Environmental Health Perspectives* **116** 1586–1590 (2008).
- [66] B. J. Insel, C. A. Schaefer, I. W. McKeague, E. S. Susser, A. S. Brown. Maternal Iron Deficiency and the Risk of Schizophrenia in Offspring. *Archives of General Psychiatry* **65** 1136–1144 (2008).
- [67] A. Gandy and I. W. McKeague. Aalen’s Additive Risk Model. Updated entry for *Encyclopedia of Statistical Sciences*, Second Edition (S. Kotz, N. L. Johnson, C. B. Read, N. Balakrishnan, B. Vidakovic, eds.), Volume 1, pp. 46–51(2008), Wiley, New York.\*
- [68] Y. Sun, P. Gilbert and I. W. McKeague. Proportional Hazards Models with Continuous Marks. *The Annals of Statistics* **37** 394–426 (2009).\*
- [69] N. Hjort, I. W. McKeague and I. Van Keilegom. Extending the Scope of Empirical Likelihood. *The Annals of Statistics* **37** 1079–1111 (2009).\*
- [70] A. S. Brown and I. W. McKeague (+ 8 coauthors). Prenatal Infection and Executive Dysfunction in Adult Schizophrenia. *The American Journal of Psychiatry* **166** 683–690 (2009).
- [71] R. Herbei and I. W. McKeague. Hybrid Samplers for Ill-posed Inverse Problems. *Scandinavian Journal of Statistics* **36** 839–853 (2009).\*

- [72] M. A. Lindquist and I. W. McKeague. Logistic Regression with Brownian-like Predictors. *Journal of the American Statistical Association* **104** 1575–1585 (2009).\*
- [73] I. W. McKeague and B. Sen. Fractals with Point Impact in Functional Linear Regression. *The Annals of Statistics* **38** 2559–2586 (2010).\*
- [74] A. El Gouch, I. Van Keilegom and I. W. McKeague. Empirical Likelihood Confidence Intervals for Dependent Duration Data. *Econometric Theory* **27** 178–198 (2010).\*
- [75] Z. Li and I. W. McKeague. Power under Local Alternatives for Generalized Estimating Equations. *Statistics and Information Forum* **26** 81–82 (2011).\*
- [76] I. W. McKeague and M. Qian. Sparse Functional Linear Regression with Applications to Personalized Medicine. In: *Recent Advances in Functional Data Analysis and Related Topics* (Contributions to Statistics, Physica-Verlag, F. Ferraty, ed.), 213–218 (2011).\*
- [77] C. Roth and I. W. McKeague (+ 7 coauthors). Folic Acid Supplements in Pregnancy and Severe Language Delay in Children. *Journal of the American Medical Association* **306** 1566–1573 (2011).
- [78] K. M. Lampi and I. W. McKeague (+ 16 coauthors). Finnish Prenatal Study of Autism and Autism Spectrum Disorders (FIPS-A): Overview and Design. *J. Autism Dev. Disord.* **41** 1090–1096 (2011).
- [79] A. S. Brown and I. W. McKeague (+ 5 coauthors). Association of Maternal Genital and Reproductive Infections with Verbal Memory and Motor Deficits in Adult Schizophrenia. *Psychiatry Research* **188** 179–186 (2011).
- [80] M. B. Terry, Y. Wei, D. Esserman, I. W. McKeague and E. Susser. Pre- and Postnatal Determinants of Childhood Body Size: Cohort and Sibling Analyses. *Journal of Developmental Origins of Health and Disease* **2** 99–111 (2011).
- [81] L. H. Lumey and I. W. McKeague (+ 6 coauthors). Adult Global DNA Methylation in Relation to Pre-natal Nutrition. *International Journal of Epidemiology* (2011).
- [82] I. W. McKeague, S. López-Pintado, M. Hallin and M. Šiman. Analyzing Growth Trajectories. *Journal of Developmental Origins of Health and Disease* **2** 322–329 (2011).\*
- [83] H. El Barmi and I. W. McKeague. Empirical Likelihood Based Tests for Stochastic Ordering. *Bernoulli*, to appear (2012).\*
- [84] Z. Li and I. W. McKeague. Power and Sample Size Calculations for Generalized Estimating Equations via Local Asymptotics. *Statistica Sinica*, to appear (2012).\*
- [85] I. W. McKeague and M. Qian. Evaluation of Treatment Policies via Sparse Functional Linear Regression. Submitted to *Journal of the American Statistical Association* (2011).\*
- [86] S. López-Pintado and I. W. McKeague (2011). Recovering Gradients from Sparsely Observed Functional Data. Submitted to *Biometrics*.\*
- [87] I. W. McKeague and M. Qian. An Adaptive Resampling Test for Detecting the Presence of Significant Predictors. Submitted to *Journal of the American Statistical Association* (2012).\*
- [88] M. A. A. Boon, J. H. J. Einmahl and I. W. McKeague. Visualizing Multiple Quantile Plots. *Journal of Computational and Graphical Statistics*, to appear (2012).\*

## PROCEEDINGS AND DISCUSSION ARTICLES

- [1] I. W. McKeague and M.-J. Zhang. Nonlinear Time Series Analysis via Cumulative Regressograms. *Proceedings of the Thirty-Seventh Conference on Design of Experiments in Army Research Development and Testing* 217–224 (1992).\*
- [2] I. W. McKeague. Discussion of papers of P. Sasieni and E. Slud. In: *Survival Analysis: State of the Art* (J. P. Klein and P. K. Goel, eds.), 263–265, 367–368, Kluwer, (1992).\*
- [3] I. W. McKeague and P. Sasieni. Discussion of T. Hastie and R. Tibshirani’s paper “Varying-coefficient models.” *J. R. Statist. Soc. B* **55** 786–787 (1993).\*
- [4] I. W. McKeague. Review of *Statistical Models Based on Counting Processes* by P. K. Andersen, Ø. Borgan, R. D. Gill and N. Keiding, Springer-Verlag, New York, 1993. *SIAM Review* **37** 475–476 (1995).\*
- [5] I. W. McKeague. Introduction to Aalen (1978) “Nonparametric Inference for a Family of Counting Processes.” In: *Breakthroughs in Statistics, Volume III*, (N. L. Johnson, S. Kotz, eds.), Springer, New York, (1997).\*
- [6] I. W. McKeague and M. Tighiouart. Nonparametric Bayesian Inference for Survival Data based on Gaussian Markov Random Fields. *Proceedings of the Section on Statistics and Epidemiology*, American Statistical Association, 52–57 (1999).\*
- [7] I. W. McKeague. Comments on “A Review on Empirical Likelihood Methods for Regression” by Ingrid Van Keilegom and Song Xi Chen. *TEST* **18** p. 461 (2009).\*
- [8] N. Hjort, I. W. McKeague and I. Van Keilegom. Members’ Discovery: Extending the Scope of Empirical Likelihood. *Institute of Mathematical Statistics Bulletin*, p. 5, Aug/Sept issue (2009).\*

## DOCTORAL STUDENTS

Dr. Klaus Utikal, Inst. for Economics and Social Sciences, University of Bonn, Germany. Inference for a Nonlinear Semimartingale Regression Model, 1987.

Dr. Mei-Jie Zhang, International Bone Marrow Transplant Registry, Medical College of Wisconsin, Milwaukee. Cumulative Regression Function Methods in Survival Analysis and Time Series, 1991.

Dr. Yanqing Sun, Department of Mathematics, University of North Carolina at Charlotte. Transformations of Gaussian Random Fields, with Applications in Survival Analysis, 1992.

Dr. Jie Yang. Likelihood Ratio Based Confidence Bands in Survival Analysis, 1995. (co-advised with Myles Hollander)

Dr. Sundarraman Subramanian, Department of Mathematics, New Jersey Inst. Technology. Estimation of Survival Functions with Missing Failure Indicators, 1995.

Dr. Cyrus Amir. Testing for a Time-Dependent Covariate Effect in the Linear Risk Model, 1995.

Dr. Mourad Tighiouart, Winship Cancer Institute and Department of Biostatistics, Emory University, Atlanta, Georgia. Nonparametric Bayesian Inference for Survival Data, 1998.

Dr. Blake Whitten, Department of Statistics and Actuarial Science, University of Iowa. Formulations of Missing-Data Models and Likelihood-Based Inference, 2001.

Dr. Marc Loizeaux, Department of Mathematics, University of Tennessee at Chattanooga. Bayesian Inference for a Spatial Cluster Model via Perfect Sampling, 2001.

Dr. Yichuan Zhao, Department of Mathematics and Statistics, Georgia State University. Empirical Likelihood Methods for Comparison of Survival Functions, 2002.

Dr. Gang Ye, Nemours Children’s Clinic, Orlando, Florida. Inference for Semiparametric Time-Varying Covariate Effect Relative-Risk Regression Models, 2005.

Dr. Radu Herbei, Department of Statistics, Ohio State University. Quasi-3D Statistical Inversion of Oceanographic Tracer Data, 2006.

Dr. Shean-Sheng Wang, Associate Director of Biostatistics, Johnson & Johnson, New Brunswick, New Jersey. Analysis of the MTCT-Plus Initiative: An Application of a Piecewise Multilevel Latent Variable Regression Model, 2010.

Dr. Zhigang Li, Section of Biostatistics and Epidemiology, Department of Community and Family Medicine, Dartmouth Medical School. Power under Local Alternatives for Generalized Estimating Equations with Applications to Sibling Studies, 2010.

Current: Yulei Zhang, Wei Xiong, Hsin-Wen Chang.

## **GRANTS**

NIH Grant R01 GM095722, “Point Impact and Sparsity in Functional Data Analysis,” Project Director and Principal Investigator, 2011–2015. Direct support awarded: \$114,000/year.

NSF Grant DMS-0806088, “Sparse Predictors in Functional Data Analysis,” Project Director and Principal Investigator, 2008–2012. Direct support awarded: \$119,000.

NSF Grant DMS-0505201, “Hybrid Likelihood Methods,” Project Director and Principal Investigator, 2005–2009. Direct support awarded: \$114,000.

NSF Grant ATM-0222244, Opportunities for Research Collaborations between the Mathematical Sciences and the Geosciences Program, “Ocean Circulation Climatology and Dynamics Using Bayesian Hierarchical Methods,” Project Director and Principal Investigator, 2002–2006. Direct support awarded: \$178,000.

NSF Grant DMS-0204688, “Bayesian, Empirical Likelihood and Counting Process Methods for Semiparametric Models,” Project Director and Principal Investigator, 2002–2005. Direct support awarded: \$60,000.

NSF Grant DMS-0207139, Interdisciplinary Grants in the Mathematical Sciences Program, “Statistical Modeling in Oceanography,” Project Director and Principal Investigator, 2002–2004. Direct support awarded: \$55,000.

NSF Grant DMS-9971784, “Efficient Condensation of Spatial/Temporal Information,” Project Director and Principal Investigator, 1999–2002. Direct support awarded: \$57,000.

NSA Grant DMS-19984075, “Bayesian Signature Recognition,” Project Director and Principal Investigator, 1999–2000. Direct support awarded: \$57,000.

NSF Grant ATM-9417528, “Empirically Determined Climate Predictability using Nonlinear Time Series,” Project Director and Principal Investigator, 1995–1998. Direct support awarded: \$64,000.

Army Research Office Grant DAA03–90–G, 1990–1993. Co-Principal Investigator.

Army Research Office Grant DAAL03–86–K–0094, 1986–1990. Co-Principal Investigator.

Army Research Office Grant DAAG29–82–0168, 1982–1986. Co-Principal Investigator.

Florida State University Committee on Faculty Research Grants, 1981, 1985, 1988, 1994, 2001. Project Director and Principal Investigator. Direct support awarded: partial summer salary.

## **DEPARTMENTAL AND UNIVERSITY COMMITTEE EXPERIENCE**

Member of the Columbia University Tenure Review Advisory Committee, 2011–present. Co-chair of the Columbia University Medical Center Committee on Appointments and Promotions (CUMC COAP), 2010–2011. Extensive experience at Departmental, College and University levels since 1980, including a three-year term as Chair of Department; Colloquium Chair, Ph.D. Qualifying Exam Committee Chair, Academic Affairs Chair, Student Affairs Chair, Faculty Recruiting Chair; service on numerous Promotion and Tenure Committees, Science Area Committee service within the College of Arts and Sciences at FSU; Ad Hoc Committee Chair at Columbia; University Faculty Teaching Awards Committee Chair; Committee on Appointments and Promotions in the Mailman School of Public Health.

## **TEACHING EXPERIENCE**

Selected course titles: Asymptotic Statistics, Introduction to Biostatistical Methods, Topics in Survival Analysis, Survey of Statistical Methods in Oceanography, Introduction to Applied Statistics, Probability and Measure, Distribution Theory and Inference, Probability Theory, Advanced Probability, Topics in Stochastic Processes, Counting Processes and Survival Analysis, Introduction to Mathematical Statistics, Empirical Likelihood, Markov Chain Monte Carlo, Information Theory.

## **PAPERS PRESENTED AT INTERNATIONAL MEETINGS**

Invited speaker, IMS-China International Conference on Statistics and Probability, XiAn, China, July 8–11, 2011.

Keynote speaker, Fourth Annual International Symposium on the Evaluation of Clinical Trials Methodologies and Applications, Beijing, China, July 2–3, 2011.

Invited speaker, Second International Workshop on Functional and Operatorial Statistics, Santander, Spain, June 16–18, 2011.

Invited speaker, First Joint Biostatistics Symposium, Beijing, China, July 17–18, 2010.

Invited speaker, International Conference on Statistics and Society, Beijing, China, July 10–12, 2010.

Invited speaker, International Conference on Statistical Analysis of Complex Data, Kunming, China, July 1–3, 2010.

Invited speaker, Workshop on Statistical Frontiers, Institute of Statistics, Academia Sinica, Taiwan, December 15–17, 2009.

Invited speaker, The 57th International Statistical Institute (ISI) Conference, Durban, South Africa, August 16–22, 2009.

Invited speaker, The 1st IMS ASIA Pacific Rim Meeting, Seoul, South Korea, June 28–July 1, 2009.

Invited speaker, Workshop on Long Term Consequences of Exposure to Famine, Lorentz Center, University of Leiden, The Netherlands, November 3–6, 2008.

Invited speaker, First Workshop of the ERCIM Working Group on Computing & Statistics, 19–21 June 2008, Neuchâtel, Switzerland. Talk: Principal components for gradients of sparse functional data.

Invited Lecturer, Advanced School and Conference on Statistics and Applied Probability in Life Sciences, International Center for Theoretical Physics, Trieste, Italy, September 24 – October 12, 2007.

Invited speaker, International Conference on Reliability and Survival Analysis, Indian Statistical Institute, New Delhi, India, December 20–22, 2005. Talk: Extending the Scope of Empirical Likelihood.

Invited speaker, The 5th IASC Asian Conference on Statistical Computing, Hong Kong University, December 15–17, 2005. Talk: Bayesian Computational Methods for Oceanographic Tracer Data.

Invited speaker and participant, Program on Semiparametric Methods for Survival and Longitudinal Data, Institute for Mathematical Sciences, National University of Singapore, March 2005.

Invited speaker (session on Functional Data Modeling), 6th World Congress of the Bernoulli Society, Barcelona, Spain, July 2004.

Invited speaker, XXXIVèmes Journées de Statistique, Brussels, Belgium, May 2002.

Invited speaker, Eighth Summer Workshop, New Zealand Mathematics Research Institute, Napier, New Zealand, January 2002.

Invited speaker, First European Conference on Spatial and Computational Statistics, Ambleside, England, September 2000.

Principal Lecturer, Workshop on Survival Analysis and MCMC, Tamkang University, Taiwan, December 1998.

Invited speaker, Second St. Petersburg Workshop on Simulation, St. Petersburg, Russia, June 1996.

Invited speaker, Meeting on Empirical Processes: Theory and Applications, Mathematical Institute, Oberwolfach, Germany, October 1995.

Invited speaker at the Conference to Celebrate the Tenth Anniversary of the Institute of Statistics, Academia Sinica, Taiwan, July 1992.

Contributed paper, 2nd World Congress of the Bernoulli Society and the 53rd Annual Meeting of the Institute of Mathematical Statistics, Uppsala, Sweden, August 1990.

Invited paper, Meeting on Martingale Methods in Statistics, Mathematical Institute, Oberwolfach, West Germany, December 1988.

Invited paper, Meeting on Mathematical Statistics and Probability for the 46th Session of the International Statistical Institute (ISI), Kyoto, Japan, September 1987.

## **PAPERS PRESENTED AT NATIONAL MEETINGS**

Invited speaker, session on “Recent Advances in Survival Analysis and Clinical Trials,” ICSA Applied Statistics Symposium, New York, June 26–29, 2011.

Invited speaker (talk: “Optimal treatment policies based on high-dimensional gene expression profiles”), NSF Workshop on High Dimensional Data, Nantucket, MA, May 12–14, 2011.

Invited speaker, ENAR Spring meeting, Miami, Florida, March 20–23, 2011.

Invited speaker and discussant, Joint Statistical Meetings, Washington, D.C., August, 2009.

Invited speaker, Time Series Analysis in Neuroscience Workshop, Columbia University, April 14, 2009.

Invited speaker, Princeton Day of Statistics, Princeton University, April 4, 2008.

Invited speaker, Joint Statistical Meetings, Salt Lake City, Utah, July, 2007. Talk: Trajectories as predictors of univariate responses.

Invited speaker, Conference on Frontiers in Applied and Computational Mathematics 2007, New Jersey Institute of Technology, May 2007.

Invited speaker, 15th annual ICSA Applied Statistics Symposium, University of Connecticut, Storrs, Connecticut, June 14–17, 2006.

Invited panelist and speaker, First Semi-Annual CDAS Statistics Conference, United States Military Academy, West Point, New York, October 27–28, 2005.

Invited speaker, Workshop on Data Assimilation for Geophysical Systems, Statistical and Applied Mathematical Sciences Institute, Research Triangle Park, North Carolina, January 2005.

Invited speaker (session on Dynamic Survival Modeling) and Discussant (session on Empirical Likelihood), Joint Statistical Meetings, Toronto, Canada, August, 2004.

Plenary speaker, Classification Society of North America, Annual Meeting (CSNA 2003), June 12–15, 2003, Tallahassee, FL.

Invited speaker and Session Organizer, International Conference in Reliability and Survival Analysis (ICRSA), May 21–24, 2003, Columbia, SC.

Invited speaker, AMS-ASA-MAA-SIAM Conference on NSF/DMS Funding Opportunities, May 9–10, 2003, Arlington, VA.

Invited speaker, Nonparametric Statistics Research Conference, January 17–18, 2003, Florida State University.

Invited speaker, University of Florida Fifth Annual Winter Workshop, An IMS Mini-Meeting on Functional Data Analysis, January 10–11, 2003, University of Florida.

Invited speaker, AMS Fall Southeastern Section Meeting, Orlando, FL, November 9–10, 2002.

Invited speaker, SAMSI Research Workshop “Challenges in Stochastic Computation,” Research Triangle, North Carolina, September 28 – October 1, 2002.

Invited speaker, WNAR/IMS Meeting, University of California, Los Angeles, June 2002.

Invited speaker, Symposium on Monte Carlo for the New Millenium, University of Florida, Gainesville, January 2001.

Contributed paper, Annual Meeting of the American Statistical Association, Indianapolis, August 2000.

Invited speaker, Symposium on Inference for Stochastic Processes, Athens, Georgia, May 10–12, 2000.

Contributed paper, Annual Meeting of the American Statistical Association, Baltimore, August 1999.

Contributed paper, Annual Meeting of the American Statistical Association, Dallas, August 1998.

Contributed paper, 13th International Workshop on Statistical Modeling, New Orleans, July 1998.

Invited speaker, Annual Meeting of the Institute of Mathematical Statistics, Park City, Utah, July 1997.

Invited speaker, special session on Spatial Stochastic Models, American Mathematical Society Meeting, College Park, Maryland, April 1997.

Invited speaker, AMS-IMS-SIAM Summer Research Conference “Stochastic Inference, Monte Carlo and Empirical Methods,” Mt. Holyoke College, July 1996.

Contributed paper, Annual Meeting of the American Statistical Association, Orlando, August 1995.

Invited speaker, Joint Biometric Society (ENAR) and Institute of Mathematical Statistics Spring Meeting, Cleveland, Ohio, April 1994.

Contributed paper, Joint Annual Meetings of the American Statistical Association (ASA) and IMS, San Francisco, August 1993.

Invited discussant, Nato Advanced Studies Workshop on Survival Analysis and Related Topics, Ohio State University, Columbus, June 23–28, 1991.

Invited speaker, The Thirty-Seventh Conference on Design of Experiments in Army Research, Development and Testing. U.S. Army Engineering Waterways Experiment Station, Vicksburg, Mississippi, October 1991.

Two contributed papers, Joint Annual Meetings of the American Statistical Association, the Biometric Society (ENAR/WNAR) and IMS, Atlanta, Georgia, August 1991.

Invited speaker, Joint Annual Meetings of the American Statistical Association and the Biometric Society (ENAR/WNAR), Anaheim, California, August 1990.

Invited speaker, AMS/IMS/SIAM Joint Summer Research Conference on Inference from Stochastic Processes, Cornell University, Ithaca, August 1987.

Invited speaker, 200th Meeting of the Institute of Mathematical Statistics, Blacksburg, Virginia, May 1987.

Invited speaker, 195th Meeting of the Institute of Mathematical Statistics, Atlanta, March 1986.

Invited participant at the NSF–CBMS Conference on Stochastic Processes in the Neurosciences (Principal Lecturer: Henry Tuckwell), North Carolina State University, Raleigh, June 1986. Contributed paper.

Invited participant at the Mathematical Sciences Lecture Series on Inference for Stochastic Processes of Semimartingale Type (Principal Lecturer: A. N. Shiryaev), Johns Hopkins University, July 1984. Contributed paper.

Contributed paper, 187th Meeting of the Institute of Mathematical Statistics, Orlando, March 1984.

Contributed paper, 45th Annual Meeting of the Institute of Mathematical Statistics, Toronto, August 1983.

## **CONSULTING**

Consultant to Amgen on the analysis of clinical trials data, 2008–2009.

Consultant to a Los Angeles law firm on statistical aspects of a case involving the relative effectiveness of two competing drugs, 2007–2008.

Consultant to a New York law firm on statistical aspects of cases involving infringement of drug patents, 2004–2006.

One-day seminar for Aon Consulting on the development of an additive risk model to be used in software for valuing stock options, April 2006.

Consultant to the New York State Attorney’s Office on statistical aspects of an investigation of out-of-network health insurance reimbursement, 2004–2008.

Consultant to the Florida Department of Environmental Protection on statistical aspects of the Everglades phosphorus criterion rule development process, 2002–2003. Provided expert testimony in depositions and court hearings.

Consultant to the Statistical Center for HIV/AIDS Research and Prevention, Fred Hutchinson Cancer Research Center, Seattle, 2003–2007. Developed statistical methods for HIV vaccine efficacy trials.

Reviewer of the statistical methods used by the Bureau of Medicaid Program Integrity, Florida Agency for Health Care Administration, 1999–2004. Three studies of the sampling methods used to assess overpayment of Medicaid claims. Provided expert testimony in depositions and court hearings.

Consultant to a Chicago law firm, 1999. Provided a statistical analysis of a problem raised by a major credit card company.

Consultant to a Miami law firm, 1990. Provided expert opinion on the statistical evidence in litigation involving an exam for the certification of foreign medical doctors.

Consultant to the Florida Department of Transportation, 1991. Designed an economic time series model to help in policy decisions concerning future road construction.

Consultant to publishers of various textbooks in Statistics, 1980–present.

## **OTHER PROFESSIONAL ACTIVITIES**

Invited seminar speaker, Department of Biostatistics, Yale University, October 25, 2011.

Invited participant and speaker, Finnish Prenatal Studies Meeting, University of Turku, Finland, October 3–6, 2011.

Invited seminar speaker, Department of Statistics, University of Connecticut, September 21, 2011.

Invited seminar speaker, Department of Statistics and Applied Probability, National University of Singapore, July 13, 2011.

Invited seminar speaker, Department of Statistics, Universidad Carlos III de Madrid, Spain, June 10, 2011.

Invited seminar speaker, Department of Biostatistics, University of Washington, Seattle, January 27, 2011.

Invited speaker, Finnish Prenatal Studies Meeting, University of Turku, Finland, September 13–17, 2010.

Invited seminar speaker, Department of Mathematical Sciences, University of Nevada Las Vegas, April 16, 2010.

Invited seminar speaker, Department of Biostatistics, University of North Carolina at Chapel Hill, March 17, 2010.

Invited seminar speaker, Biostatistics Core Facility, Sloan–Kettering Institute, New York, Feb 10, 2010.

Invited participant, Finnish Prenatal Study Workshop, University of Turku, Finland, September 14–16, 2009.

Invited participant in The 28th Leeds Annual Statistical Research Workshop — Statistical Tools for Challenges in Bioinformatics, Leeds, UK, July 7–9, 2009.

Invited visitor and seminar speaker, Department of Statistics, Shanghai University of Finance and Economics, Shanghai, China, July 2–5, 2009.

Invited visitor and seminar speaker, Institute of Applied Mathematics, Chinese Academy of Sciences, Beijing, China, June 26–28, 2009.

Invited visitor, Universidad Pablo de Olavide, Sevilla, Spain, May 19–26, 2009.

Invited seminar speaker, Department of Statistics, Yale University, April 6, 2009.

Invited visitor and seminar speaker, Universidad Pablo de Olavide, Sevilla, Spain, Feb 2–11, 2009.

Invited seminar speaker, Department of Statistical Sciences, Cornell University, 29 October, 2008.

Participant, Workshop on Future Directions in High-Dimensional Data Analysis, 23–27 June 2008, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.

Principal speaker, Growth Trajectories Workshop, Department of Epidemiology, Columbia University, 2 May 2008.

External reviewer for a proposed Masters Program in Biostatistics, Department of Mathematical Sciences, New Jersey Institute of Technology, December, 2007.

Invited seminar speaker, Department of Biostatistics, University of Pennsylvania, November 13, 2007.

Invited seminar speaker, Department of Statistics, Yale University, November 5, 2007.

Invited seminar speaker, Institute for Economics and Social Sciences, University of Bonn, Germany, September 2007.

External member, Ph.D. committee of Anouar El Ghouh, Institute of Statistics, Université Catholique de Louvain, Louvain-la-Neuve, Belgium, August 2007.

Invited speaker, Department of Biostatistics, University of Copenhagen, Denmark, May 2007.

Seminar speaker, Department of Biostatistics, Columbia University, April 2007.

G. W. Snedecor Lecture (“Analyzing trajectories: functional predictors of univariate responses”), Iowa State University, April 2007.

Invited colloquium speaker, Department of Mathematics and Statistics, Portland State University, Oregon, April 2007.

Invited colloquium speaker, Department of Mathematics and Statistics, University of North Carolina, Charlotte, April 2007.

Invited colloquium speaker, Department of Statistics and Computer Information Systems, Baruch College, City University of New York, October 25, 2006.

Invited visitor and seminar speaker, Department of Mathematics, University of Oslo, Norway, August 31, 2006.

Invited colloquium speaker, Department of Mathematics, University of Maine, May 1, 2006.

Invited colloquium speaker, Department of Mathematics and Statistics, Georgia State University, April 28, 2006.

Invited colloquium speaker, Department of Quantitative Health Sciences, Cleveland Clinic Foundation, April 7, 2006.

Invited colloquium speaker, Department of Statistics, University of Michigan, Ann Arbor, November 4, 2005.

Seminar talk (“Extending the Scope of Empirical Likelihood”), Department of Mathematics, University of Science and Technology, Hong Kong, December 14, 2005.

Seminar talk for the IGERT Joint Program in Applied Mathematics and Earth and Environmental Science, Columbia University, September 2005.

Invited visitor, Institute of Statistics, Université Catholique de Louvain, Louvain-la-Neuve, Belgium, August 2005.

Seminar talk on Bayesian Data Assimilation for Tracer Data, Program on Data Assimilation for Geophysical Systems, SAMSI, Research Triangle Park, North Carolina, February 2005.

Invited speaker, National Institutes of Health, Taiwan, March 2005.

Invited speaker, Rutgers University, Department of Statistics, February 2005.

Invited visitor, Fred Hutchinson Cancer Research Center, Seattle, December 2004.

Invited speaker, University of Central Florida, Department of Mathematics, January 2004.

Invited visitor, Fred Hutchinson Cancer Research Center, Seattle, December 2003.

Invited visitor, Department of Mathematics, University of Oslo, Norway, November 2003.

Invited speaker, University of North Carolina, Chapel Hill, Department of Mathematics, October 2003.

Invited speaker, Department of Biostatistics, Columbia University, October 2003.

Invited speaker, Department of Mathematics, Free University, Amsterdam, The Netherlands, June 2003.

Invited speaker, Joint Statistics and Biostatistics Colloquium, University of Wisconsin, Madison, April 2003.

Invited speaker, Department of Mathematics, University of Wisconsin, Milwaukee, April 2003.

Invited speaker, Department of Statistics and Applied Probability, University of California, Santa Barbara, February 2003.

Organized and chaired an IMS Invited Paper Session, “A Decade of Empirical Likelihood,” Joint Statistical Meetings, New York City, August 2002.

Invited lecturer for a 2 day workshop, “Empirical Likelihood Methods in Survival Analysis,” as part of 3 week visit to Institute of Statistics, Université Catholique de Louvain, Louvain-la-Neuve, Belgium, May 2002.

Invited speaker, Department of Biostatistics, Harvard University, December 2001.

Invited speaker, Institut Henri Poincaré, Paris, France, June 2001.

Visitor, Laboratoire de Statistique et Modélisation Stochastique, Université Joseph Fourier, Grenoble, France, June–July 2001.

Invited speaker, Department of Biostatistics, University of Copenhagen, September 2000.

Invited speaker, Department of Biostatistics, University of California, Berkeley, March 1999.

Invited speaker, Department of Biostatistics, UCLA, March 1999.

Invited speaker, Statistical Institute, Academia Sinica, Taiwan, December 1998.

Invited speaker, Department of Mathematics, National Central University, Taiwan, December, 1998.

Invited speaker, Department of Mathematics, University of Helsinki, Helsinki, Finland, June 1996.

Invited talk, Department of Statistics, Columbia University, April 1996.

Invited talk, Division of Biostatistics, Medical College of Wisconsin, Milwaukee. April 1996.

Invited talk, Department of Statistics, Rutgers University, March 1996.

Invited talk, Department of Mathematics, UNC-Charlotte, October 1994.

Invited talk, Department of Statistics, Columbia University, March 1994.

Invited talk, Department of Statistics, Rutgers University, March 1994.

Invited talk, Department of Statistics, Penn State, December 1993.

Invited talk, Department of Mathematics, UNC-Charlotte, December 1993.

Invited talk, Institute of Statistics and Operations Research, Victoria University, Wellington, New Zealand, August 1993.

Invited talk, Department of Statistics, University College Dublin, May 1992.

Invited talk, Department of Statistics, University College Cork, May 1992.

Invited talk, Department of Mathematics, Statistics and Epidemiology, Imperial Cancer Research Fund Laboratory, London, May 1992.

Invited talk, Department of Statistics, Birkbeck College, University of London, May 1992.

Invited talk, Mathematical Institute, University of Cologne, May 1992.

Invited talk, Department of Statistics, University of Padua, Italy, May 1992.

On sabbatical leave at Laboratoire de Statistique et Modélisation Stochastique, Université Joseph Fourier, Grenoble, France, February–May 1992. Seminar talks in February and April.

Invited visitor and participant, Program on Non- and Semi-parametric Models and Survival Analysis, December 1991–January 1992, Mathematical Sciences Research Institute, University of California, Berkeley.

Session Chairman, Statistics Days at FSU; A Meeting to Celebrate the 30th Anniversary of the Department of Statistics, FSU. Tallahassee, March 1990.

Invited speaker, Department of Statistics, University of Padua, Italy, December 1988.

Invited speaker, Statistical Laboratory, Dept. of Pure Mathematics and Mathematical Statistics, University of Cambridge, England, December 1988.

Session Chairman, Meeting of the Florida Chapter of the American Statistical Association, Tallahassee, February 1988.

Invited speaker, University of Kentucky, Lexington, Department of Statistics Colloquium Series, April 1987.

Invited speaker, University of North Carolina, Chapel Hill, Department of Statistics Colloquium Series, February 1987.

Invited speaker and visitor, Matematiska Institutionen, Åbo Akademi, Turku, Finland, October 1986.

External examiner, Ph.D. dissertation of Timo Koski, Matematiska Institutionen, Åbo Akademi, Turku, Finland, October 1986.

Invited speaker, University of Oulu, Oulu, Finland, Applied Mathematics and Statistics Department Colloquium Series, October 1986.

Invited speaker, University of Helsinki, Helsinki, Finland, Department of Mathematics and the Department of Statistics Colloquium Series, October 1986.

Invited speaker, University of North Carolina, Chapel Hill, Departments of Statistics and Biostatistics joint Colloquium Series, August 1985.

Invited Lecturer and Visitor, University of Padua and Istituto per Ricerche di Dinamica dei Sistemi e di Bioingegneria, Consiglio Nazionale delle Ricerche, Padua, Italy, May–June 1985.

Invited participant at the NSF–CBMS Conference on Stochastic Differential Equations in Infinite Dimensional Spaces and their Applications (Principal Lecturer: K. Itô), Louisiana State University, Baton Rouge, May 1983.