

Curriculum Vitae  
of  
**SOUMENDRA NATH LAHIRI**  
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**OFFICE ADDRESS:**

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**EDUCATION:**

**1986-1989:** Ph.D. in Statistics, Michigan State University, USA.

**1984-1986:** M.STAT., Indian Statistical Institute, Calcutta, India.

**1981-1984:** B.STAT., Indian Statistical Institute, Calcutta, India.

**EMPLOYMENT:**

**2014-present:** Distinguished Professor of Statistics, NC State University.

**2012-2014:** Professor, Dept. of Statistics, NC State University.

**2006-2012:** Professor, Dept. of Statistics, Texas A & M University.

**2006-2012:** Professor, Dept. of Mathematics, Texas A & M University. (Courtesy Appoint.)

**1998-2006:** Professor, Dept. of Statistics, Iowa State University.

**1994-1998:** Associate Professor, Dept. of Statistics, Iowa State University.

**1989-1994:** Assistant Professor, Dept. of Statistics, Iowa State University.

**EDITORIAL WORK:**

**2010-present:** Associate Editor, *Annals of Statistics*.

**2012-present:** Associate Editor, *Journal of Statistical Planning and Inference*.

**2014-present:** Associate Editor, *Statistica Sinica*.

**2016-2018:** Guest Co-Editor, *Journal of Time Series Analysis*.

**2014-2015:** Associate Editor, *Computational Statistics & Data Analysis*.

**2012- 2014:** Guest Editor, *Statistical Methodology*.

**2007-2011:** Editor, *Sankhya*, Series A.

**2003- 2012:** Associate Editor, *Statistical Methodology*.

**2004-2007:** Associate Editor, *Sankhya*.

**2002-2005:** Associate Editor, *Statistics and Probability Letters*.

## **HONORS AND DISTINCTIONS:**

- Honorary visiting professorship, London School of Economics, UK. (2013-2015)
- Distinguished Lecturer, IMS Asia -Pacific Rim meeting, Taipei, Taiwan. July 2014.
- Elected member, International Statistical Institute, 2005.
- ISU College of Liberal Arts and Sciences Award for Excellence in Research and Scholarship, 2003.
- Fellow, the American Statistical Association, 2002.
- Fellow, the Institute of Mathematical Statistics, 2001.
- ISU Foundation Award for Early Achievement in Research and Scholarship, 1994.
- First position in the Graduate Aptitude test in Engineering (1986) among all Mathematics/Statistics students **at all India level**.
- First position in M. STAT., Indian Statistical Institute, 1986.

## **RESEARCH INTERESTS:**

Resampling and Computer Intensive Methods, Financial Statistics and Econometrics, Spatial and Environmental Statistics, Asymptotic Expansions, Inference for High Dimensional and Massive Data Sets.

## **PROFESSIONAL EXPERIENCE:**

**2016** SAMSI Faculty fellow in Astrostatistics.

**2015:** President, International Indian Statistical Association (IISA).

**2010-2017:** Founding Executive committee member, International Society for Nonparametric Statistics.

**9999:** Served on NSA panels on Probability and Statistics.

**2010-2013:** Memorial Committee, Institute of Mathematical Statistics.

**2010-12:** Program Committee member, TIES, Hyderabad, India, January 2012.

**2010-11:** Program Chair, IISA conference, North Carolina State University, April 21-24, 2011.

**2010:** Program Chair, Conference on Resampling Methods and High Dimensional Data, Texas A & M Univ, March 25-26, 2010.

**2009:** Served on the NSF panel on 'Collaborative research in Mathematics and Geosciences'.

**2009:** Chair, Publication Committee, International Indian Statistical Association (IISA).

**2007:** Served on the NSF panel on 'Collaborative research in Mathematics and Geosciences'.

**2006-2007:** Program chair, Section on Nonparametric Statistics, American Statistical Association.

**2005-2007:** Program chair, International Indian Statistical Association.

**2004-2007:** Nomination Committee, International Indian Statistical Association (IISA); (Chair 2005).

**2001-2005:** Group Leader, NSF VIGRE Grant Work Group in ‘Theoretical Statistics and Probability Theory’, Dept. of Statistics, ISU.

**2000:** Served on the NSF panel on Environmental Statistics.

**1999-2000:** Secretary, Section on Nonparametric Statistics, American Statistical Association.

**1998-1999:** President, Iowa Chapter, American Statistical Association.

#### **VISITING POSITIONS:**

**2013-2015:** London School of Economics, London, UK.

**Summer, 2010:** University of Paris X, Paris, France.

**Spring, 2005:** Australian National University, Canberra, Australia.

**Fall, 1994:** Stanford University, Stanford, USA.

**Summer, 1994:** Oxford University, Oxford, UK.

**Spring, 1994:** Australian National University, Canberra, Australia.

**Winter, 1993:** Indian Statistical Institute, Calcutta, India.

#### **GRANTS:**

1. NSF research grant 2016-2019 (DMS-PI)
2. NSF research grant 2013-2016 (DMS-PI)
3. LAS research grants, NCSU. 2013-2016 (Co-PI/PI).
4. NSA research grant 2010-2014 (PI)
5. NSF research grant 2010-2013 (DMS-PI)
6. NSF research grant 2007-2010 (DMS-PI)
7. NSF research grant 2003-2007. (DMS-PI)
8. NSF research grant 2000-2004. (DMS-PI)
9. NSF-EPA research grant on Environmental Statistics, 1998-2001. (Co-investigator)
10. NSF research grant 1995-1998. (DMS-PI)
11. EPA research grant 1994-1997. (Co-investigator)
12. NSF research grant 1991-1994. (DMS-PI)

13. NSF/IMS grant for participating in the "writing workshop for young researchers," 1991.
14. NSF/CBMS grant for participating in the summer conference on 'Higher Order Asymptotics', 1991.

## RESEARCH WORK:

- **BOOKS:**

1. Lahiri, S.N. (2003). **Resampling Methods for Dependent Data**. Springer-Verlag Inc., New York. (374 pages).
2. Athreya, K.B. and Lahiri, S.N. (2006). **Measure Theory and Probability Theory**. Springer-Verlag Inc., New York. (618 pages)

- **EDITED VOLUMES:**

1. S.N. Lahiri, A. Schick, A.SenGupta, and T.N. Sriram (2014). **Advances in Robust and Nonparametric Statistics - A Festschrift in honor of Hira L. Koul**. Springer-Verlag Inc., New York.
2. M. Akritas, S.N. Lahiri, and D. Politis. (2015). **Proceedings of the first conference of the International Society of Nonparametric Statistics**. Springer-Verlag Inc., New York.

- **RESEARCH PAPERS:**

**(A) Publications in Refereed Journals**

1. Lahiri, S.N. (1991). Second order optimality of stationary bootstrap. **Statistics and Probability Letters** **11**, 335-341.
2. Lahiri, S.N. (1992). Edgeworth expansions for the distributions of M-estimators of a simple regression parameter. **Journal of Multivariate Analysis** **42**, 125-132.
3. Lahiri, S.N. (1992). On Bahadur-Ghosh-Kiefer representation of sample quantiles. **Statistics and Probability Letters** **15**, 163-168.
4. Lahiri, S.N. (1992). On bootstrapping M-estimators. **Sankhya, Ser. A** **54**, 157-170.
5. Lahiri, S.N. (1992). Edgeworth correction by 'moving block bootstrap' for stationary and nonstationary data. In **Exploring the limits of bootstrap**. - Eds. R. Lepage and L. Billard, Wiley, NY, 183-214.
6. Lahiri, S.N. (1992). Bootstrapping M-estimators of a multiple regression parameter. **Annals of Statistics** **20**, 1548-1570.
7. Lahiri, S.N. (1993). Refinements in the asymptotic expansions for sums of weakly dependent random vectors. **Annals of Probability** **21**, 791-799.
8. Lahiri, S.N. (1993). On bootstrapping the studentized sample mean of lattice data. **Journal of Multivariate Analysis** **45**, 247-256.
9. Lahiri, S.N. (1993). On the moving block bootstrap under long range dependence. **Statistics and Probability Letters**. **18**, 405-413.
10. Cressie, N. and Lahiri, S.N. (1993). Asymptotic distribution of REML estimators. **Journal of Multivariate Analysis** **45**, 217-233.
11. Lahiri, S.N. (1994). Rates of bootstrap approximation for the mean of lattice variables. **Sankhya, Ser. A**. **56**, 77-89.

12. Lahiri, S.N. (1994). Two term Edgeworth expansion and bootstrap approximation for multivariate studentized M-estimators. **Sankhya, Ser. A.** **56**, 201-226.
13. Lahiri, S.N. (1994). On second order correctness of Efron's bootstrap without Cramer-type conditions in linear regression models. **Mathematical Methods of Statistics** **3**, 130-148.
14. Koul, H.L. and Lahiri, S.N. (1994). On bootstrapping M-estimated residual processes in multiple linear regression models. **Journal of Multivariate Analysis** **49**, 255-265.
15. Lahiri, S.N. (1995). On the asymptotic behaviour of the moving block bootstrap for normalized sums of heavy-tail random variables. **Annals of Statistics** **23**, 1331-1349.
16. Hall, P., Lahiri, S.N., and J. Polzehl. (1995). On bandwidth choice in nonparametric regression with both short- and long-range dependent errors. **Annals of Statistics** **23**, 1921-1936.
17. Hall, P., Lahiri, S.N., and Y. Truong. (1995). On bandwidth choice for density estimation with dependent data. **Annals of Statistics** **23**, 2241-2263.
18. Lahiri, S.N. (1996). Asymptotic expansions for sums of random vectors under polynomial mixing rates. **Sankhya, Series A** **58**, 206 - 224.
19. Lahiri, S.N. (1996). On inconsistency of estimators under infill asymptotics for spatial data. **Sankhya, Series A** **58**, 403-417.
20. Lahiri, S.N. (1996). On Edgeworth expansions and the moving block bootstrap for studentized M-estimators in multiple linear regression models. **Journal of Multivariate Analysis** **56**, 42-59.
21. Cressie, N. and Lahiri, S.N. (1996). Asymptotics for REML estimation of spatial covariance parameters. **Journal of Statistical Planning and Inference** **50**, 327-341. (SOLICITED PAPER FOR A SPECIAL TOPIC ISSUE ON SPATIAL STATISTICS. I.V. BASAWA (ED.)).
22. Lahiri, S.N. (1997). Variance stabilizing transformations, studentization and the bootstrap. **Journal of Statistical Planning and Inference** **61**, 105-123.
23. Lahiri, S.N. (1997). On inconsistency of the Jackknife-After-Bootstrap bias estimator. **Journal of Multivariate Analysis** **63**, 15-34.
24. Karabulut, I.K. and Lahiri, S.N. (1997). Two-term Edgeworth expansion for M-estimators of a linear regression parameter without Cramer-type conditions and an application to the bootstrap. **Proceedings of the Australian Mathematical Society, Ser. A** **62**, 361-370.
25. Kaiser, M., Hsu, N.J., Cressie, N., and Lahiri, S.N. (1997). Inference for spatial processes using subsampling: A simulation study. **Environmetrics** **8**, 485-502.
26. Lahiri, S. N. (1998). On bootstrapping weighted empirical processes that do not converge weakly. **Statistics and Probability Letters** **37**, 295-302.
27. Athreya, K.B., Lahiri, S.N. and Wu, W. (1998). Inference for the parameters of heavy-tail data. **Journal of Statistical Planning and Inference** **66**, 61-75.
28. Hall, P., Jing, B-Y. and Lahiri, S.N. (1998). On the sampling window method under long range dependence. **Statistica Sinica** **8**, 1189-1204.
29. Lahiri, S.N. (1999). On second order properties of the Stationary Bootstrap method for studentized statistics. In **Asymptotics, Nonparametrics, and Time Series**, Ed. S. Ghosh. Marcel-Dekker. 683 - 712.

30. Lahiri, S.N. (1999). Theoretical comparison of block bootstrap methods. **Annals of Statistics** **27**, 386-404.
31. Lahiri, S.N. (1999). Asymptotic distribution of the empirical spatial cumulative distribution function predictor and prediction bands based on a subsampling Method. **Probability Theory and Related Fields** **114**, 55-84.
32. Lahiri, S.N., M.S. Kaiser, N. Cressie, and N-J. Hsu. (1999). Prediction of spatial cumulative distribution functions using subsampling (with discussion.) **Journal of the American Statistical Association** **94**, 86 -110.
33. Athreya, K.B. and Fukuchi, J-I. and Lahiri, S.N. (1999). On the Bootstrap and the Moving Block Bootstrap for the Maximum of a Stationary Process. **Journal of Statistical Planning and Inference** **76**, 1-17.
34. N. Cressie, M.S. Kaiser, M.J. Daniels, J. Aldworth, J. Lee, S.N. Lahiri, and L.H. Cox. (1999). Spatial analysis of particulate matter in an urban environment. In **geoENV II- Geostatistics for Environmental Applications**. Eds.- J. Gómez-Hernández, A. Soares, and R. Froidevaux. Kluwer Academic Publishers, Boston. Pages 41-52.
35. Lahiri, S.N. (2001). Effects of block lengths on the validity of block resampling methods. **Probability Theory and Related Fields** **121**, 73-97.
36. Zhu, J., Lahiri, S.N., and Cressie, N. (2001). Asymptotic Distribution of the empirical cumulative distribution function predictor under nonstationarity. In **Spatial Statistics: Methodological Aspects and Applications**, Editor - Marc Moore. Lecture Notes in Statistics, no. 159, Springer, New York. Pages 1-20.
37. Lahiri, S.N. (2002). On the Jackknife after Bootstrap method for dependent data and its consistency properties. **Econometric Theory** **18**, 79-98.
38. Lahiri, S.N. (2002). Discussion of the paper, "Sieve bootstrap for categorical time series." by P. Bühlmann. **Journal of the American Statistical Association** **97**, 460-462.
39. Lee, Y-D. and Lahiri, S.N. (2002). Least squares variogram fitting by spatial subsampling. **Journal of the Royal Statistical Society, Series B** **64**, 837-854.
40. Zhu, J., Lahiri, S.N., and Cressie, N. (2002). Asymptotic inference for spatial CDFs over time. **Statistica Sinica** **12**, 843-861.
41. Lahiri, S.N., Lee, Y-D. and Cressie, N.A.C. (2002). Asymptotic distribution and asymptotic efficiency of least squares estimators of variogram parameters. **Journal of Statistical Planning and Inference** **103**, 65-85. SOLICITED PAPER FOR A SPECIAL VOLUME HONORING PROF. C.R. RAO ON HIS 80TH BIRTHDAY.
42. Lahiri, S.N. (2003). A necessary and sufficient condition for asymptotic independence of discrete Fourier transforms under short- and long-range dependence. **Annals of Statistics** **31**, 613-641.
43. Lahiri, S.N. (2003). Central Limit Theorems for weighted sums under some stochastic and fixed spatial sampling designs. **Sankhya, Ser. A** **65**, 356-388.
44. Nordman, D. and Lahiri, S.N. (2003). On optimal variance estimation under different spatial subsampling schemes. In **Recent Advances and Trends in Nonparametric Statistics**, Elsevier, San Diego, CA. 421-436.
45. Lahiri, S.N. and Mukherjee, K. (2004). Asymptotic distributions of M-estimators in a spatial regression model under some fixed and stochastic spatial sampling designs. **Annals of the Institute of Statistical Mathematics** **56** 225-250.

46. Nordman, D. and Lahiri, S.N. (2004). On optimal spatial subsample size for variance estimation. **Annals of Statistics**. **32** 1981-2027.
47. Chan, V., Lahiri, S.N., and Meeker, W.Q. (2004). Block bootstrap estimation of the distribution of cumulative outdoor degradation. **Technometrics** **46** 215-224.
48. Lahiri, S.N. (2005). Consistency of the Jackknife after bootstrap variance estimator for bootstrap quantiles. **Annals of statistics** **33** 2475-2506.
49. Jeng, S-L, Lahiri, S.N. and Meeker, W.Q. (2005). Asymptotic properties of bootstrap likelihood ratio statistics for censored data. **Statistica Sinica** **15** 35-57.
50. Nordman, D. and Lahiri, S.N. (2005). Validity of the sampling window method for long-range dependent linear processes. **Econometric Theory** **21** 1087-1111.
51. Lahiri, S.N. (2006). Bootstrap for dependent data- a review. In **Frontiers in Statistics A Festschrift Honoring Prof. Peter Bickel on his 65th Birthday**. Eds. - J. Fan and H. L. Koul. 231- 255.
52. Lahiri, S.N., Chatterjee, A., and Maiti, T. (2006). Normal approximation to the Hypergeometric distribution in non-standard cases and a sub-Gaussian Berry-Esseen Theorem. **Journal of Statistical Planning and Inference**. SOLICITED PAPER FOR A SPECIAL VOLUME HONORING PROF. S.N. JOSHI.
53. Lahiri, S.N. and Zhu, J. (2006). Resampling methods for spatial regression models under a class of stochastic designs. **Annals of Statistics** **34** 1774-1813.
54. Nordman, D. and Lahiri, S.N. (2006). A frequency domain empirical likelihood for short- and long-range dependence. **Annals of Statistics** **34** 3019-3050.
55. Sun, S. and Lahiri, S.N. (2006). Bootstrapping the sample quantile of a weakly dependent sequence. **Sankhya** **68** 130-166.
56. Lahiri, S.N. (2007). Asymptotic expansions for sums of block-variables under weak dependence. **Annals of Statistics** **35** 1324-1350.
57. Lahiri, S.N. and Chatterjee, A. (2007). A Berry-Esseen theorem for Hypergeometric probabilities under minimal conditions. **Proceedings of the American Mathematical Society** **135** 1535-1545.
58. Lahiri, S.N., Furukawa, K., and Lee, Y-D. (2007). A nonparametric plug-in method for selecting the optimal block length. **Statistical Methodology** **4** 292-321.
59. Lahiri, S.N., Maiti, T., Katzoff, M. and Parsons, V. (2007). Resampling based empirical prediction: An application to small area estimation. **Biometrika** **94** 469-485.
60. Nordman, D., Lahiri, S.N. and Fridley, B.L. (2007). On the optimal block size for a spatial block bootstrap method. **Sankhya** **69** 468-493.
61. Nordman, D., Sibbertsen, P. and Lahiri, S.N. (2007). Empirical likelihood confidence intervals for the mean of a long range dependent process. **Journal of Time series Analysis** **28** 576-599.
62. Zhu, J. and Lahiri, S.N. (2007). Weak convergence of the spatial empirical process and its bootstrap version. **Statistical Inference from Stochastic Processes**. **10** 107-145.
63. Hall, P. and Lahiri, S.N. (2008). Estimation of distributions, moments and quantiles in deconvolution problems. **Annals of Statistics** **36** 2110-2134.

64. Lahiri, S.N. and Sun, S. (2009). A Berry-Esseen theorem for sample quantiles of weakly dependent random variables. **Annals of Applied Probability** **19** 108-126.
65. Bandopadhyay, S. and Lahiri, S.N. (2009). Asymptotic properties of the Discrete Fourier Transformations of spatial data. **Sankhya, Series A** **71** 221-259.
66. Lahiri, S.N. (2010). Edgeworth expansions for studentized statistics under weak dependence. **Annals of Statistics** **38** 388-434.
67. Bandopadhyay, S. and Lahiri, S.N. (2010). Resampling based bias-corrected time series prediction. **Journal of Statistical Planning and Inference**. SOLICITED PAPER FOR A SPECIAL VOLUME HONORING PROF. MANNY PARZEN **140** 3775-3788.
68. Chatterjee, A. and Lahiri, S.N. (2010). Asymptotic properties of the residual bootstrap for Lasso estimators. **Proceedings of the American Mathematical Society** **138** 4497-4509.
69. Patel, K., Lahiri, S.N. and C.J. Spanos. (2010). Robust estimation of line width roughness (LWR) parameters. **Journal of Vacuum Science and Technology B** **28** C6H18; doi:10.1116/1.3517718.
70. Lahiri, S.N. and Mukhopadhyay, D. (2011). Discussion of the paper, "Subsampling weakly dependent time series and application to extremes" by P. Doukhan, S. Prohl, and C. Y. Robert. **TEST** **20** 491-496.
71. Chatterjee, A. and Lahiri, S.N. (2011). On strong consistency of the Lasso estimators. **Sankhya, Series A** **73** 55-78.
72. Chatterjee, A. and Lahiri, S.N. (2011). Bootstrapping Lasso estimators. **Journal of the American Statistical Association** **106** 608-625.
73. Nordman, D. and Lahiri, S.N. (2011). On the approximation of differenced lattice point counts and statistical bias expansions. **Proceedings of the Indian Academy of Sciences**. **121** 229-244.
74. Lahiri, S.N. and Mukhopadhyay, S. (2012). A penalized empirical likelihood method in high dimensions. **Annals of Statistics** **40** 2511-2540
75. Lahiri, S.N. and Mukhopadhyay, S. (2012). On the Mahalanobis-distance based penalized empirical likelihood method in high dimensions. **Statistics and its Interface** **5** 331-338.
76. Lahiri, S.N., X-L. Nguyen, J. Yang, Z. Zhu, and P. Banerjee. (2012). Wireless Sensor networks : Statistical issues and challenges. **Journal of the Indian Statistical Association** **50** 151-191.
77. Lahiri, S.N., Spiegelman, C., Appiah, J. and Rilett, L. (2012). Gap bootstrap methods for massive data sets with an application to transportation engineering. **Annals of Applied Statistics** **6** 1552-1587.
78. DasGupta, A. and Lahiri, S.N. (2012). Density Estimation in High and Ultra High Dimensions, Regularization, and the  $L_1$  Asymptotics. **IMS Lecture Notes - Vol. 8** : (A FESCHRIFT FOR WILLIAM E. STRAWDERMAN) 1-23.
79. Kreiss, J-P. and Lahiri, S.N. (2012). Bootstrap methods for Time Series. In **Handbook of Statistics, Vol. 30** (Eds. T. Subba Rao, S. Subba Rao, and C.R. Rao). pp. 3-26.
80. Nordman, D. and Lahiri, S.N. (2012). Block bootstraps for time series with fixed regressors. **Journal of the American Statistical Association**. **107** 233-246.



81. Kaiser, M.S., Lahiri, S.N. and Nordman, D. (2012). A goodness of fit test for conditionally specified spatial models and its asymptotic properties. **Annals of Statistics** **40** 104-130.
82. 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** **107** 378-392
83. Chatterjee, A. and Lahiri, S.N. (2013). Rates of convergence of the adaptive Lasso estimators to the oracle distribution and higher order refinements by the bootstrap. **Annals of Statistics** **41** 1232-1259.
84. Rister, K. and Lahiri, S.N. (2013). Bootstrap Based Trans-Gaussian Kriging. **Statistical Modeling** (SPECIAL ISSUE ON THE PROCEEDINGS OF THE 4TH LEHMAN SYMPOSIUM). **13** 509-539
85. Kim, Y. M., Lahiri, S.N. and Nordman, D. (2013). A Progressive Block Empirical Likelihood Method for Time Series. **Journal of the American Statistical Association** **108** 1506-1516.
86. Nordman, D., Bunzel, H. and Lahiri, S. N. (2013). A nonstandard empirical likelihood for time series. **Annals of Statistics** **41** 3050-3073.
87. DasGupta, A., Lahiri, S.N. and Stoyanov, J. (2014). Sharp Fixed  $n$  Bounds and Asymptotic Expansions for the Mean and the Median of a Gaussian Sample Maximum, and Applications to Donoho-Jin Model. **Statistical Methodology** (KESAR SINGH MEMORIAL VOLUME). **20** 40-62.
88. Gupta, S. and Lahiri, S.N. (2014). Discussion of the paper, "Estimation and Accuracy after Model selection" by B. Efron. **Journal of the American Statistical Association** **109** 1013-1015.
89. Nordman, D. and Lahiri, S.N. (2014). Convergence rates of empirical block length selectors for block bootstrap. **Bernoulli** **20** 958-978.
90. Nordman, D. and Lahiri, S. N. (2014). A review of empirical likelihood methods for time series **Journal of Statistical Planning and Inference** **155** 1-18.
91. Chatterjee, A. and Lahiri, S.N. (2015). Discussion of the paper, "An adaptive resampling test for detecting the presence of significant predictors" by I. W. McKeague and M. Qian. **Journal of the American Statistical Association** **110** 1434-1438.
92. Bandopadhyay, S., Lahiri, S.N. and Nordman, D. (2015). A frequency domain empirical likelihood method for irregularly spaced spatial data. **Annals of Statistics** **43** 519-545.
93. Gregory, K., Lahiri, S.N. and Nordman, D. (2015). A Smooth Block Bootstrap for Statistical Functionals and Time Series. **Journal of Time Series Analysis**. **36** 442-461.
94. Staicu, A.M., Lahiri S.N, Carroll, R.J (2015) Significance tests for functional data with complex dependence structure. **Journal of Statistical Planning and Inference** **156** 1-13.
95. Chatterjee, A., Gupta, S. and Lahiri, S.N. (2015). On the residual empirical process based on the ALASSO in high dimensions and its functional oracle property. **J Econometrics** **186** 317-324.

96. Gregory, K., Carroll, R.J., Baladandayuthapani, V. and Lahiri, S.N. (2015). A Two-Sample Test for Equality of Means in High Dimension. **Journal of the American Statistical Association** **110** 837-849.
97. Lahiri, S.N. and Robinson, P.M. (2016). Central limit theorems for long range dependent spatial linear processes. **Bernoulli** **22** 345-375.
98. Nordman, D. J., Lahiri, S. N. (2016). A discussion of "Bootstrap prediction intervals for linear, nonlinear, and nonparametric autoregressions", by L. Pan and D.N. Politis. **J. Statist. Plann. Inference** **177** 35-40.
99. Van Hala, M., Bandopadhyay, S., Lahiri, S.N. and Nordman, D. J. (2017). On the non-standard distribution of empirical likelihood estimators with spatial data. **Journal of Statistical Planning and Inference**

**(B) Papers in Conf. Proceedings/Book Reviews:**

1. Majure, J., Cook, D., Cressie, N., Kaiser, M. S., Lahiri, S. N., and Symanzik, Jürgen (1995). Spatial CDF estimation and visualization with applications to forest health monitoring. **Proceedings of the 27th Symposium on the Interface**, 93-101.
2. Lahiri, S.N. (1999). Resampling methods for spatial prediction. In the **Proceedings of the 31st Symposium of the Interface**, 462-466.
3. Lahiri, S.N. (2000). Book review of "Bootstrap Methods: A practitioner's guide" by M.R. Chernick. **Journal of Statistical Planning and Inference** **91**, 171-172.
4. Lahiri, S.N. (2003). Selecting optimal block lengths for block bootstrap methods. **Proceedings of the 35th Symposium of the Interface**.
5. Banerjee, P., Jacobson, D. and Lahiri, S.N. (2007). Security and performance analysis of a secure clustering protocol for sensor networks. **Proceedings of the Sixth IEEE International Symposium on Network Computing and Applications (NCA 2007)** 145-152.
6. Appiah, J., Spiegelman, C., Lahiri, S.N., and Rilett, L. (2008). A Gapped bootstrap approach to modeling uncertainties in OD estimation. **Proceedings of the ACES**.
7. Discussion of Dimitris Politis/JSPI - prediction Intv
8. Cleghern, Z., Lahiri, S.N., Ozaltin, O. and Roberts, D. (2017). Predicting Future States in DotA 2 using Value-split Models of Time Series Attribute Data. FDG2017

**(C) Papers under review/submitted:**

1. Das, D. and Lahiri, S.N. (2017). Second Order Correctness of Perturbation Bootstrap M-Estimator of Multiple Linear Regression Parameter.
2. Chatterjee, A. and Lahiri, S.N. (2017). Edgeworth expansions for a class of spectral density estimators and their applications to interval estimation.
3. Kim, Y-M., Lahiri, S.N. and Nordman, D.J. (2017). Nonparametric Spectral Density Estimation under Long-Range Dependence.
4. Gregory, K.B., Lahiri, S.N. and Nordman, D. J. (2016). A smooth block bootstrap for quantile regression with time series.
5. Kaul, A., Koul, H.L., A. Chawla, and Lahiri, S.N. (2016). Two stage non-penalized corrected least squares for high dimensional linear models with noisy or missing covariates.

6. Van Hala, M., Bandopadhyay, S., Lahiri, S.N. and Nordman, D.J. (2016). A general frequency domain method for assessing spatial covariance structure.
7. Lahiri, S.N., Yang, P. and Gupta, S. (2015). On the Oracle Property and Moment Conditions in High Dimensional Penalized Regressions and a Maximal Inequality.
8. Lahiri, S.N. (2016). Necessary and Sufficient conditions for variable selection consistency of the LASSO in high dimensions.
9. Yang, P. and Lahiri, S.N. (2016). Partially penalized regression for high dimensional data.
10. Bugni, F. A., Caner, M., Kock, A.B., and Lahiri, S.N. (2016). Inference in partially identified models with many moment inequalities using Lasso.
11. Das, D. Gregory, K. and Lahiri, S.N. (2016). Perturbation Bootstrap for the Adaptive Lasso.
12. Giordano, F., Lahiri, S.N. and Parella, M-L. (2016). GRID: A variable selection and structure discovery method for high dimensional nonparametric regression.

## **TEACHING & ADVISING:**

### **(A) Students Advised:**

#### **Ph.D.**

1. Jiapeng Zhu  
(A current Ph.D. student; Co-Advisor - Prof. Min Kang)
2. Arnab Chakraborty  
(A current Ph.D. student)
3. Wei (Vivien) Zhao  
(A current Ph.D. student)
4. Debraj Das  
(A current Ph.D. student)
5. Peng Yang  
(Data Scientist, Facebook)
6. Saswata Sahoo  
(Chief Statistician, Samsung Research, India)
7. Karl Gregory ( Co-Major Professor : R.J. Carroll)  
(Post doctoral fellow, Univ. Mannheim, Germany)
8. Shubhdeep Mukhopadhyay, Summer, 2012 (Co-Major Professor : E. Parzen)  
(Assistant Professor, Temple University).
9. Krista Rister, Ph.D., Fall 2010  
(Mathematical Statistician, Capital One).
10. Soutir Bandopadhyay, Summer, 2010.  
(Assistant Professor, Dept of Math, Lehigh Univ.).

11. Arindam Chatterjee, Summer, 2007.  
(Assistant Professor, Stat-Math division, Indian Statistical Institute, Delhi)
12. Shuxia Sun, Ph.D. Summer, 2004.  
(Associate Professor, Wright State University, OH).
13. Dan Nordman, Ph.D. Summer, 2002.  
(Associate Professor, Iowa State University).
14. Jun Zhu, Ph.D., Summer, 2000. (Co-Major Professor: N. Cressie).  
(Professor, University of Wisconsin-Madison)
15. Y-D. Lee, Ph.D., Fall 1998.  
(Professor, Sogang University, Seoul, South Korea).
16. Jun-Ichiro Fukuchi, Ph.D., Fall 1994. (Co-major Professor: K.B. Athreya)  
(Professor, Gakushuin University, Japan).
17. Tiro, Arif Mohammad. Ph.D., Summer 1991.  
(Faculty member, Ujung Pandang University, Indonesia).

#### M.S.

1. Yunfeng Li, M.S. (nonthesis), Summer 2000.
2. Karabulut, Ishan. M.S. (thesis), Fall 1991.
3. Al-Shiha, Abdulla. M.S. (nonthesis), Summer 1991.

#### (B) Teaching:

- **At NC State Univ.**

ST 511: Experimental Statistics For Biological Sciences I; STAT 515: *Experimental Statistics for Engineers I*; STAT 590-495: *Applied Time Series Analysis*; STAT 730: *Applied Time Series Analysis*; STAT 779: *Advanced Probability*; STAT 790: *Advanced Time Series Analysis*.

Course	Semesters	Total No. of students	Ave. stud. evaluation*
ST511	F14	89	4.0
ST515	F12, F14	42,42	4.3, 4.1
STAT 590-495:	F15, F16	30, 36	4.1,4.1
ST730	F12, F13, F14	47, 37, 45	3.9,3.8,4.0
ST779	F13, F15	25, 38	3.6, 4.5
ST790	F15, F16	18, 7	4.2, 5.0

\*On a 1-5 scale.

- **At Texas A&M Univ.**

STAT 614: *Measure & Probability Theory*; STAT 620: *Large sample theory*; STAT 647: *Spatial Statistics*; STAT 689: *Inference for high dimensional data* (New course).

Course	Semesters	Total No. of students	Ave. stud. evaluation*
STAT 614	S07,F09	42	4.61
STAT 620	F06,F07,F08,S09	63	4.71
STAT 647	S07	6	5.00
STAT 689	S10	5	4.80

\*On a 1-5 scale.

• **At Iowa State**

Courses numbered 100-499 are undergraduate courses, 500-599 are M.S. level graduate courses for Statistics majors, and 600-699 are Ph. D. level courses, also for Statistics majors. (F= Fall, S= Spring.)

Course	Semesters	Total No. of students	Ave. stud. evaluation*
STAT 105	F91,F93,F95	138	3.61
STAT 231	S90	47	3.71
STAT 305	F96,F96,S01,S01	151	3.47
STAT 333	S91,S92,S93	136	3.42
STAT 542	F89,F99,F00,F00 <sup>†</sup>	343	4.14
STAT 543	F02,F02 <sup>†</sup> , F04,F04 <sup>†</sup> S91,S93,S97,S97 <sup>†</sup> S99,S99 <sup>†</sup>	222	4.01
STAT 642	S95,S96,S98,S00 S02	66	4.44
STAT 643	F90,F91,F93,F97 F03,S04	53	4.33
STAT 648	F92,F95,F00,F05	22	4.53

<sup>†</sup>Videotaped for the ISU Distant-Learning M.S. Program in Statistics.

\*On a 1-5 scale.

**PRESENTATIONS:**

**(A) Plenary/Keynote/ Special Invited lectures**

**2016** Peter Hall's contributions to higher order asymptotics and its impacts. **Peter Hall Memorial Session, IISA Conf.** Corvallis, OR, Aug 19-21.

**2016** Two lectures on Empirical Likelihood and Spatial Statistics. **The Graduate Colloquium Series**, Division of Statistics, Northern Illinois University, DeKalb, IL, May 6.

**2014** Resampling methods in high dimensions. **Distinguished lecturer - At the IMS Asia-Pacific Rim conf**, Taipei, Taiwan, June 30-July 3.

- 2014 Empirical Likelihood in high dimensions. **Keynote speaker, Statistics & Probability Conf.** University of Maryland, Baltimore, April 18-19.
- 2011 Four lectures on the Resampling Methods and Spatial Statistics. **Global-30 Lecture Series** - University of Tokyo, Japan. Nov 7-10.
- 2010 A frequency domain empirical likelihood method for irregularly spaced spatial data. At the **43rd Annual meeting of the French Statistical Society**, Marseilles, France, May 23-28.
- 2009 Asymptotic expansions for the sample sum of a class of weakly dependent spatial process. At the **Ames Symposium in Probability and Statistics**, Ames, Iowa. Sept 18-19.
- 2009 Higher order asymptotic expansions for studentized statistics under dependence. At the **New Directions in Asymptotic Statistics**, University of Georgia, Athens, GA. May 15-16.
- 2004 Bootstrap for irregularly spaced spatial data. At the **Fifth IISA Biennial International Conference on Statistics, Probability and Related Areas**, Athens, GA, May 14-16. (*special invited talk*)

**(B) Invited talks**

- 2016 Higher order asymptotic properties of the Bootstrap in post model selection inference. At the **Peter Hall Memorial Conference**, U Melbourne, Australia. Dec 9-11.
- 2016 Higher order asymptotic properties of the Bootstrap in post model selection inference. At the **First Conference on Post-Model Selection Inference & Higher Order Asymptotics**, Washington University, St. Louis, MO. Oct 1.
- 2016 A Frequency Domain Empirical Likelihood Method for Irregularly Spaced Spatial Data. **Department of Statistics, Boston U**, Sept 29.
- 2016 A Statistical Analysis of Crowd Sourced Mobile Data. At the **WRM seminar series of the LAS**, NCSU, Nov 30.
- 2016 Nonparametric methods for Irregularly Spaced Non-Gaussian Spatial Data Analysis. At the **Opening Workshop on AstroStatistics**, SAMSI, Durham, Aug 25.
- 2016 An Introduction to model based time series analysis. At the **Opening Workshop on AstroStatistics**, SAMSI, Durham, Aug 24.
- 2016 A Frequency Domain Empirical Likelihood Method for Irregularly Spaced Spatial Data. **Department of Economics & Statistics, U Salerno**, Italy, June 24.
- 2016 Higher Order Properties of Block Empirical Likelihood methods. June 15. At the **Workshop on Empirical Likelihood**, Institute of Mathematical Sciences, NUS, Singapore. June 15.
- 2016 Necessary and Sufficient conditions for variable selection consistency of the LASSO in high dimensions. At the **3rd Confrence of the ISNPS**, Avignon, France, June 14.
- 2016 A Frequency Domain Empirical Likelihood Method for Irregularly Spaced Spatial Data. **Department of Statistics, U Georgia, Athens**, April 28.

- 2015** On pooled block bootstrap estimation. At the **Workshop on recent developments in Statistics for complex data**, Loccum, Germany. Aug 26.
- 2015** Inference for massive and high dimensional data. At **Google Inc.**, Seattle. Aug 14.
- 2015** Spatial Statistics, Empirical Likelihood and Survey Data. At the **US Census Bureau**, Washington DC. July 21.
- 2015** Rates of convergence of the Adaptive LASSO estimators to the Oracle distribution and higher order refinements by the bootstrap. **Department of Statistics, Florida State University**, March 20.
- 2015** A Frequency Domain Empirical Likelihood Method for Irregularly Spaced Spatial Data. **Department of Statistics, U Missouri Columbia**, March 6.
- 2015** Rates of convergence of the Adaptive LASSO estimators to the Oracle distribution and higher order refinements by the bootstrap. **Department of Statistics, U South Carolina**, Feb 19.
- 2015** Robust variable selection and inference in High Dimensional Regression. At the **ICORS**, Kolkata, India. Jan 12.
- 2014** Discussion of Brad Efron's talk, "Estimation and Accuracy after Model selection" At the JASA Editors' special invited session, **Joint Statistical Meetings**, Boston, MA. Aug 3.
- 2014** Subsample based inference for massive spatial datasets. At the **IISA Conference**, Riverside, CA. July 12.
- 2014** Empirical likelihood in high dimensions and confidence sets for functional parameters. At the **Second Conference of the International Society of Nonparametric Statistics**, Cadiz, Spain. June 16.
- 2014** Resampling approximations to the distributions of scan statistics. At the **Conference on Statistical Learning and data Mining**, Durham, NC. June 10.
- 2014** Empirical Likelihood in high dimensions. At the **Workshop on Biostatistics and Bioinformatics**, Atlanta, GA. May 9.
- 2014** Rates of convergence of the Adaptive LASSO estimators to the Oracle distribution and higher order refinements by the bootstrap. At the **Statistics & Econometrics joint seminar, London School of Economics**, London, UK. March 7.
- 2013** Empirical likelihood confidence sets for functional parameters. At the **ERCIM conf**, London, UK. Dec 16-18, 2013.
- 2013** A Penalized Empirical Likelihood Method in High Dimensions. Dept of Statistics, **Purdue University**. Nov. 8, 2013.
- 2013** On the accuracy of percentile-t block bootstrap confidence intervals. At the **AMS Conference** University of California, Riverside. Nov.2-3, 2013.

- 2013** Block Bootstrap inference for sample quantiles. at the **Workshop on Bootstrap Methods for Time Series**, Copenhagen, Denmark, Sept 8-10, 2013.
- 2013** Approximate Likelihood for massive spatial datasets. At the **International Environmental Society Conference**, Anchorage, AK. June 10-14.
- 2013** Goodness of fit tests for Markov random field models. At the **Atlantic Causal Inference Conference**, Harvard U., Cambridge, MA. May 20-21.
- 2013** A nonparametric approach to combining data from different sources. At the **workshop on Analysis of Information from Diverse Sources**, Center for Discrete Mathematics and Theoretical Computer Science. Rutgers Univ., Piscataway, NJ. May 16-17.
- 2013** Rates of convergence of the Adaptive LASSO estimators to the Oracle distribution and higher order refinements by the bootstrap. **Department of Statistics, NC State U.**, Raleigh, NC. Apr 19.
- 2013** A Penalized Empirical Likelihood Method in High Dimensions. **Department of Statistics, Michigan State U.**, East Lansing, MI. March 19.
- 2013** A Frequency Domain Empirical Likelihood Method for Irregularly Spaced Spatial Data. **Division of Theoretical Statistics and Mathematics, Indian Statistical Institute** Kolkata, India. March 7.
- 2013** A Frequency Domain Empirical Likelihood Method for Irregularly Spaced Spatial Data. **Department of Economics, London School of Economics** London, UK. Feb. 22.
- 2012** Rates of convergence of the Adaptive LASSO estimators to the Oracle distribution and higher order refinements by the bootstrap. **Department of Statistics, Penn State U.**, University Park, PA.
- 2012** A penalized empirical likelihood method for high dimensional data. **First Conference of the International Society of Nonparametric Statistics** Halkidiki, Greece, June 15-19.
- 2011** A penalized empirical likelihood method for high dimensional data. **Department of Economics, Univ. of Tokyo**, Japan, Nov 11.
- 2011** Mixture models in high dimensions. At the **Joint Statistical Meetings**, Miami Beach, FL. July 31- Aug 4.
- 2011** A penalized empirical likelihood method for high dimensional data. **Statistics & Econometrics joint seminar, London School of Economics**, London, UK. June 16.
- 2011** A frequency domain empirical likelihood for irregularly spaced spatial data. **Department of Statistics, University College**, London, UK. June 14.
- 2011** A frequency domain empirical likelihood for irregularly spaced spatial data. **Department of Statistics, Ohio State University**, Columbus, OH. May 26.



- 2010** Block Bootstrap for irregularly spaced spatial data. At the **Workshop on Nonparametric Statistics**, University of Paris I, Paris, France, June 23.
- 2010** On pooled block bootstrap estimation. At the **IISA Joint Statistical Meetings**, Vizag, India, Jan 4-9.
- 2009** On higher order properties of the block empirical likelihood. At the **Seventh International Triennial Calcutta Symposium on Probability & Statistics**, Calcutta, India, December 28-31.
- 2009** On pooled block bootstrap estimation. At the **American Mathematical Society (AMS) regional meeting, Florida Atlantic university**, Boca Raton, Fl, Oct 30-Nov 1.
- 2009** Goodness of fit tests for Markov random fields. At the **Center for Research in Economics (CIREQ) - Econometrics of Interactions Conference** Montreal, Canada, Oct 23-25.
- 2009** On pooled block bootstrap estimation. At the **2009 Cowles Foundation Summer Conference, Yale University**, New Haven, CT, June 22-23.
- 2009** Asymptotic Expansions under Weak Dependence and Applications to Time Series. **Department of Statistics, University of Chicago**, Chicago, IL, June 1.
- 2008** Statistics for space-time data. **Department of Mathematics and Statistics, Sam Houston State University**, Huntsville, TX, Nov. 5.
- 2008** On higher order properties of the tapered block bootstrap for time series data. At the **Workshop on Bootstrap and Time Series**, University of Kaiserslautern, Germany, June 5-6.
- 2008** Analysis of micro-sensor networks from a statistical perspective. At the **40th Symposium of the Interface Foundation of North America**, Durham, NC, May 21-24.
- 2008** Higher order properties of the block empirical likelihood method. At the **SIAM South-Eastern Sectional meeting** Central Florida University, Orlando, FL. March 15-16.
- 2008** On optimal configuration of the LEACH protocol. At the **Opening workshop on Environmental Sensor Networks**, Statistics and Applied Mathematical Sciences Institute (SAMSI), Research Triangle Park, NC. Jan 13-16.
- 2007** Higher order properties of block bootstrap confidence intervals. At the **Joint statistical meetings of the ASA, ENAR/WNAR, IMS, SSC**, Salt Lake City, UT, July 29-Aug 2.
- 2007** Spatial and time series methods for national security applications. At the **Quantitative methods for defence and national security**, Fairfax, VA, Feb. 7-8.
- 2007** Choice of tapers in the tapered block bootstrap for higher order accurate distributional approximations. At the **IISA joint statistical societies meeting**, Kochi, India, Jan 2-5.
- 2006** A goodness of fit test for markov random fields. At the **international conference of multivariate statistical methods** celebrating the birth centenary of Professor S.N. Roy. Kolkata, India, Dec. 28-29.

- 2006** A nonparametric plug-in rule for smoothing parameter selection. At the **Joint statistical meetings of the ASA, ENAR/WNAR, IMS, SSC**, Seattle, WA, August 6-10.
- 2006** Resampling based empirical prediction: An application to small area estimation-II. **National Center for Health Statistics**, Hyattsville, MD, June 6.
- 2006** Block Bootstrap for spatial regression models based on irregularly spaced spatial data. **Department of of Statistics, Texas A & M University**, College Station, TX, Feb. 23.
- 2006** Asymptotic expansions for sums of block variables, with applications. **Department of of Mathematics, University of Southern California**, Los Angeles, Feb. 12.
- 2005** Edgeworth Expansions for Studentized statistics under dependence. **Statistics and Mathematics Unit, Indian Statistical Institute**, Kolkata, India, Dec. 29.
- 2005** Block Bootstrap for irregularly spaced spatial data. At the **third world congress of the International Association of Statistical Computing**, Limassol, Cyprus, October 28-31.
- 2005** Block Bootstrap for spatial regression models based on irregularly spaced spatial data. **Department of of Statistics, University of Auckland**, Auckland, New Zealand, June 2.
- 2005** Block Bootstrap for spatial regression models based on irregularly spaced spatial data. **School of Mathematics and Statistics, University of Sydney**, Sydney, Australia, May 29.
- 2005** Block Bootstrap for irregularly spaced spatial data. **Centre for Mathematics and its Applications, Australian National University**, Canberra, Australia, April 28.
- 2005** Resampling based empirical prediction: An application to small area estimation -I. **National Center for Health Statistics**, Hyattsville, MD, March 8.
- 2004** Discussant for an invited paper session on ‘Bootstrap Methods and Time Series Data’. At the **Joint Statistical meetings of the ASA, ENAR/WNAR, IMS, SSC**, Toronto, Canada, Aug. 8-12.
- 2004** Bootstrap methods for irregularly spaced spatial data. **Department of Statistics, University of Minnesota**, Minneapolis, MN, Feb 24.
- 2004** Bootstrap methods for irregularly spaced spatial data. **Department of Statistics, Cornell University**, Ithaca, NY, Feb 13.
- 2003** Block bootstrap for periodic time series. At the **Fifth International Triennial Calcutta Symposium on Probability and Statistics**. Calcutta, India, Dec. 28-31.
- 2003** Lattice point counts and its connections to optimal block lengths for spatial resampling methods. **Department of Statistics, Rutgers University**, New Brunswick, NJ, Oct. 15.
- 2003** On the choice of the optimal block size for variance estimation using a spatial subsampling method. **Department of Probability and Statistics, Michigan State University**, East Lansing, MI, March 25.

- 2003** On the choice of the optimal block size for variance estimation using a spatial subsampling method. **Department of Statistics, University of Michigan**, Ann Arbor, MI, March 24.
- 2003** A nonparametric plug-in rule for selecting the optimal block length for block bootstrap methods. At the **35th Symposium of the Interface**, Salt Lake City, Utah, March 12-15.
- 2002** Optimal block sizes for a spatial subsampling method. **Division of Theoretical Statistics, Indian Statistical Institute**, Calcutta, India, Aug. 11.
- 2002** On optimal choice of the subsampling block length for spatial processes. At the **Current Advances and Trends in Nonparametric Statistics**, Crete, Greece, July 15-19.
- 2002** On the effect of studentization on normal approximation under weak dependence. Presented at the **Fourth IISA Biennial International Conference on Statistics, Probability and Related Areas**, DeKalb, IL. June 14-16.
- 2002** On the choice of the optimal block size for variance estimation using a spatial subsampling method. **Department of Statistics, University of Wisconsin**, Madison, WI, April 15.
- 2002** Resampling methods for spatial data. **Department of Statistics, Iowa State University**. Feb. 11.
- 2001** Asymptotic expansions for studentized statistics under weak dependence. At the **IMS Western Regional Meeting (WNAR/SSC)**, Vancouver, BC, Canada, June 11-15.
- 2000** Resampling methods for spatial data. At the **International Conference on Statistics in the 21st Century**, Orono, Maine, June 29-July 1.
- 1999** Resampling methods for spatial prediction. At the **31st meeting of the Interface**, Illinois, June 9-12.
- 1999** Theoretical comparisons of block bootstrap methods. At the **1999 Annual meeting of the Statistical Society of Canada**, Regina, Canada, June 6-9.
- 1998** On empirical choice of the optimal block length for block bootstrap methods. **Division of Theoretical Statistics, Indian Statistical Institute**, Calcutta, India, Nov. 21.
- 1998** A comparison of Block Bootstrap Methods for dependent data. At the **NSF Bootstrap Conference**, Rutgers, NJ. May 14-16.
- 1998** Inference for continuous parameter spatial processes under mixed and pure increasing domain asymptotics. At the **1998 Workshop on Inference for spatial data, Center for Research in Mathematics**, Montreal, Canada, April 6-9.
- 1997-8** Prediction of Spatial Cumulative Distribution Functions With an Application to Forest Health Monitoring Data. At the **ISI-Bernoulli Society International Conference on Recent Advances in Statistics and Probability**. Calcutta, India, Dec. 29, 1997- Jan. 1, 1998.

- 1997 Prediction of spatial cumulative distribution functions and prediction bands based on a subsampling method. **Dep. of Statistics, University of Iowa**, Iowa City, IA, Oct. 9.
- 1997 On empirical choice of the optimal block size for block bootstrap methods. **Department of Statistics, McMaster University**, Hamilton, Canada, September 23.
- 1997 Prediction bands for Spatial Cumulative Distribution Functions based on a subsampling method. At the **1997 Workshop on Resampling methods, Center for Research in Mathematics**, Montreal, Canada, Sept. 14-20.
- 1997 On empirical choice of the optimal block size for block bootstrap methods. At the **1997 International Symposium on Contemporary Multivariate Analysis**, Hong Kong, May 19-22.
- 1997 On empirical choice of the optimal block size for block bootstrap methods. **Department of Statistics, Northern Illinois University**, De Kalb, IL, April 25.
- 1997 Prediction of spatial cumulative distribution functions and prediction bands based on a subsampling method. **Dept of Statistics, Iowa State University**, Ames, IA, Jan. 27.
- 1996 Prediction of spatial cumulative distribution functions and prediction bands based on a subsampling method. At the **Environmental Statistics and Earth Sciences Conference**, Brno, Czech Republic, Aug. 20- 24.
- 1996 On Jackknife-After-Bootstrap method for dependent data and its asymptotic properties. At the **Joint Meetings of IMS, ASA, WNAR, & ENAR**, Chicago, IL, Aug 4-8.
- 1996 On the moving block bootstrap and subsampling methods for long range dependent data. At the **NSF Symposium on the Bootstrap and Econometrics**, Berkeley, CA, July 30 - Aug. 6.
- 1996 Prediction of spatial CDFs and prediction bands based on a subsampling method. **Department of Statistics, Pennsylvania State University**, University Park, PA, April 19.
- 1995 On inconsistency of estimators based on spatial data under infill asymptotics. At the **Second International Triennial Calcutta Symposium on Probability and Statistics**. Calcutta, India, Dec. 30, 1994-Jan. 2, 1995.
- 1994 On the moving block bootstrap under short- and long-range dependence. **Department of Statistics, Stanford University**, Stanford, CA, Nov. 29.
- 1994 On inconsistency of estimators under infill asymptotics for spatial data. At the **1994 North American Regional Science meeting**. Niagra Falls, Canada, November 17-20.
- 1994 On the moving block bootstrap for studentized statistics in multiple linear regression models. **Center for Mathematics and Information**, Amsterdam, NL, July 20.
- 1994 On asymptotic properties of the block bootstrap under weak and strong dependence. **Department of Mathematics, Queensland University of Technology**, Brisbane, Australia, May 10.

- 1994 Asymptotic expansions for normalized sums of weakly dependent random vectors. **Centre for Mathematics and its Applications, Australian National University**, Canberra, Australia, January 27.
- 1993 On asymptotic expansion under dependence. At the **Second International IMS Symposium on Probability and its Applications**. Bloomington, Indiana, March 18-21.
- 1993 On second order correctness of Efron's bootstrap without Cramer-type conditions in regression models. **Stat-Math Division, Indian Statistical Institute**, Calcutta, India, Jan. 5.
- 1992 On asymptotic expansions for normalized sums under polynomial mixing rates. **Stat-Math Division, Indian Statistical Institute**, Calcutta, India, December 21 & 23.
- 1992 A second order correct bootstrap procedure for the studentized mean of lattice data. **Department of Statistics, Iowa State University**, Ames, Iowa, September 9.
- 1992 On the second order properties of the moving block bootstrap for studentized M-estimators in multiple linear regression models. At the **Fourth International Meeting of Statistics at Basque Country**. San Sebastian, Spain, August 3-8.
- 1992 On the asymptotic normality of REML estimators with applications to spatial regression. At the **222nd IMS Meeting**. Cincinnati, OH, March 22-25.
- 1991 Refinements in the asymptotic expansion for sums of weakly dependent random vectors. **Department of Mathematics, Iowa State University**, Ames, Iowa, October 23.
- 1991 Edgeworth expansion for sums of weakly dependent random vectors. At the **NSF-CBMS Conference on "Higher order asymptotics with applications to statistical inference."** University of North Carolina, Chapel Hill, NC, Aug. 6-10.
- 1990 On bootstrapping the studentized sample mean of lattice data. **Department of Statistics, University of Southwestern Louisiana**, Lafayette, Louisiana, November 9.
- 1990 Second order optimality of stationary bootstrap. At the **214th IMS Meeting**. E. Lansing, MI, May 15-19.
- 1989 Rate of bootstrap approximation for robust estimators of a simple linear regression parameter. **Department of Statistics, Iowa State University**, Ames, Iowa, February 13.
- 1989 Edgeworth expansion and bootstrap approximation for M-estimators of a linear regression parameter. **Department of Mathematics, Boston University**, Boston, MA, February 9.

**(C) Contributed Papers:**

- 2004 Block Bootstrap for periodic time series. At the **Joint Statistical meetings of the ASA, ENAR/WNAR, IMS, SSC**, Toronto, Canada, Aug. 8-12.

- 2000** A necessary and sufficient condition for asymptotic independence of discrete Fourier transforms. At the **2000 Joint Statistical meetings of the ASA,IMS,SSC, WNAR/ENAR**, Indianapolis, Aug. 13-17.
- 1995** On the optimal choice of block-size for the moving block bootstrap method. At the **58th IMS Annual Meeting with Statistical Society of Canada**, Montreal, Canada, July 9-13.
- 1994** On Edgeworth expansion and moving block bootstrap for studentized M-estimators in multiple linear regression models. At the **57th IMS/3rd Bernoulli Society Annual Meeting**. Chapel Hill, NJ, June 20-25.
- 1992** On bootstrapping M-estimators in multiple linear regression models. In a **Special Topic Session on Bootstrap, 52nd Annual Meeting of the IMS**. Boston, MA, Aug. 9-13.
- 1991** Rates of bootstrap approximation for the normalized mean of lattice variables. At the **51st Annual Meeting of the IMS**. Atlanta, GA, August 17-21.

#### **COMMITTEES SERVED ON:**

- Research Advisory Committee, College of Science, NCSU. (2015-17).
- Post-tenure Review Committee, Dept of Statistics, NCSU. (2015-17)
- Seminar Committee, Dept of Statistics, NCSU. (2015-17)
- Awards Committee, Dept of Statistics, NCSU. (2015-17)
- Admissions Committee, Dept of Statistics, NCSU. (2013-2014)
- Ph.D. Prelims Committee, Dept of Statistics, NCSU. (2013-2014)
- Awards Committee, Dept. of Statistics, TAMU (2009-2012).
- Search Committee, Dept. of Statistics and the Institute of Applied Mathematics, TAMU (2010-2012).
- Committee on Promotion and Tenure, Dept. of Statistics, TAMU (2010-present).
- Ph.D. Qualifying Exam Committee, Dept. of Statistics, TAMU (2009-2012).
- College of Science Committee on Promotion and Tenure, TAMU (2007-2010).
- Graduate Program Committee, Dept. of Statistics, TAMU (2007-present).
- Qualifying Exam Committee, Dept. of Statistics, TAMU (2007-2008).
- Committee on Promotion and Tenure, Dept. of Statistics, TAMU 2006-2008.
- Committee on Promotion and Tenure, Dept. of Statistics, ISU (2004-2006). (2005-06; chair)
- Advisory Committee on Long Range Planning (2003-2004)
- Graduate Committee (2003-2004; Chair)

- Graduate Exams Committee (2002-2003; Chair)
- Faculty Development Committee, The college of Liberal Arts and sciences, ISU (1995-1998).
- Committee on Promotion and Tenure, Dept. of Statistics (2000-2001; 2001-2002, Chair).
- Ph.D. Prelim Committee, Dept. of Statistics (2000-2001), (2002-2003; Chair), (2003-2004; Co-Chair).
- Seminar Committee (Co-chair), Dept. of Statistics (1992-93;1993-94; 1999-2000).
- Search committee/senior position, Dept. of Statistics (1998-2001).
- MS Nonthesis Exam Committee, Dept. of Statistics (1989-93, 1995-99). ( Chair 1991-92, 1997-99).
- Self Study Committee on Research, Dept. of Statistics, (1997-98).
- Graduate Theory-Courses Review Committee, Dept. of Statistics (1996-97) (Chair).
- Search Committees, Dept. of Statistics (1995-96; 1996-97).
- Co-chair, Program Committee, H.A. David Conference, Dept. of Statistics (1995).
- TA Evaluation Committee, Dept. of Statistics (1994-95).

## **OTHER PROFESSIONAL ACTIVITIES:**

### **1. Refereeing:**

**2002-present:** On the average, refereed about 15 papers/year for the journals listed below.

**1990-2002:** Refereed 148 papers (in 1990-2002) for the following journals:

Number of papers reviewed in 2000: 13.

Number of papers reviewed in 2001: 14.

Number of papers reviewed in 2002: 19

Since 2002, also handled several papers as an Associate Editor:

American Statistician (2); Annals of Probability (2); Annals of Statistics (23); Annals of the Institute of Statistical Mathematics (3); Bernoulli (2); Book Volumes (1); Canadian Journal of Statistics (1); Communications in Statistics (5); Econometric Theory (3); Econometrika (4); Environmetrics (1); Journal of American Statistical Association (14); Journal of Econometrics (1); Journal of Multivariate Analysis (9); Journal of Nonparametric Statistics (1); Journal of Statistical Planning and Inference (24); Journal of Theoretical Probability (1); Mathematical Methods of Statistics(1); Probability Theory and Related Fields (5); Publicationes Mathematicae Debrecen, Hungary (1); Sankhya, Ser. A (13); Scandanavian Journal of Statistics (2); Statistica Neerlandica (1); Statistica Sinica (4); Statistics and Probability Letters (18); Stochastic Processes and its Applications (3); Technometrics (1).

### **2. Review of Proposals:**

Reviewed 77 NSF and 4 NSA proposals in 1990-2011.

### 3. Review of Promotion and Tenure Cases:

Served as an external reviewer for 16 Promotion and Tenure cases in 1998-2011, and 2 P&T cases on the average, 2012-present.

### 4. Chairing & Organizing:

- Organized (i) the *Parzen Memorial Session* and (ii) an invited paper session on *Inference for High Dimensional Data* at the **2016 IISA Annual Conference**, Corvallis, OR. Aug 18-21.
- Executive Committee member, **The First, The Second, & The Third Conferences of the International Society of Non-Parametric Statistics**, Halkidiki, Greece, June, 2012; Cadiz, Spain, June, 2014; Avignon, France, June, 2016.
- Member, **The International Environmentrics Society Conference**, Hyderabad, India. January 3-6. 2012.
- Organizer, **Conference on Resampling Methods and High Dimensional data** at TAMU, College Station, TX, March 25-26, 2010.
- Member, program committee, **the 2010 joint statistical meetings of the IISA, ASA and SSC**, Vizag, India. Jan 3-6.
- Organized three invited paper sessions for the **75th Anniversary of the Statistical Laboratory, Iowa State University**, June 3-5, 2009. Session topics are (i) *Inference for High dimensional data*, (ii) *Exploring the frontiers of spatial statistics*, and (iii) *Advances in resampling methods*.
- Co-Chair for a **workshop celebrating 65th birthday of Professor Hira Koul**. East Lansing, MI, May 2008.
- Organized two invited paper sessions at the **Joint Statistical Meetings**, Salt Lake City, UT, July 29-Aug 2, 2007. The session titles are: "*Recent Advances in Nonparametric Methodology*" (sponsored by the **ASA- NPR Section**) and "*Nonlinear and Nonstationary Time Series analysis*" (sponsored by the **IISA**).
- Member, Scientific Program Committee, **Sixth biennial conference of the IISA**, Cochin, India, Jan 3-7, 2007.
- Organized two invited paper sessions at the **Joint Statistical Meetings**, Seattle, WA, Aug 6-10, 2006. The session titles are: "*Recent advances in resampling methodology for complex dependent data structures*" (sponsored by the **ASA- NPR Section**) and "*Statistical Methods for environmental applications*" (sponsored by the **IISA**).
- Organized an invited session on "*Computer-intensive statistical methods*" at the **35th Symposium of the Interface**, Salt Lake City, Utah. March 12-15, 2003.
- Organized an invited session on "*Asymptotic expansions and approximations*", at the **Fourth IISA Biennial International Conference on Statistics, Probability and Related Areas**. Northern Illinois University in DeKalb, IL. June 14-16, 2002.
- Chaired a plenary invited lecture session at the **International Conference on Statistics in the 21st Century**, Orono, Maine, June 29-July 1, 2000.
- Member, Program committee for the **1999 Spring meeting of the Iowa Chapter of the American Statistical Association at the University of Iowa**, Iowa City, IA, April 16 - 17, 1999.



- Organized an invited paper session on “*Resampling methods*” at the **annual meeting of the Statistical Society of Canada**, Regina, Canada, June 6-9, 1999.
- Organized the **1998 Spring meeting of the Iowa Chapter of the American Statistical Association** at the Luther College, Decorah, IA. April 17 - 18, 1998.
- Organized an invited paper session on “*Asymptotics and Inference*” at the **ISI/Bernoulli Society meeting**, Calcutta, India, Dec. 29, 1997 - Jan. 1, 1998.
- Organized an invited paper session on “*Empirical Likelihoods and Resampling Methods*” for the IMS at the **joint IMS/ASA/ENAR/WNAR annual meeting** in Chicago, IL, Aug. 4-8, 1996.
- Chaired a contributed paper session at the **52nd annual meeting of IMS**, Boston, MA, August 9-13, 1992.

#### 5. Workshops attended (no presentation):

- 2003 Workshop on “*Bioinformatics*”. **Institute of Mathematics and its Applications (IMA)**, Minneapolis, MN., September, 2003.
- 2004 Workshop on “*Machine Learning*”. **Statistical and Applied Mathematical Sciences Institute (SAMSI)**, Research Triangle Park, NC., May, 2004.
- 2005 New Direction Course on “*Quantum Computing*”. **Institute of Mathematics and its Applications (IMA)**, Minneapolis, MN., August, 2005.
- 2008 Workshop on “*Contemporary Frontiers in High-Dimensional Statistical Data Analysis*”, **Sir Isaac Newton Institute for Mathematical Sciences**, Cambridge, UK. January 7-11.
- 2010 *Follow-up workshop on Environmental Sensor Networks, Statistics and Applied Mathematical Sciences Institute (SAMSI)*, Research Triangle Park, NC. April 21-24, 2010.
- 2010 *Workshop on Complex Networks, Statistics and Applied Mathematical Sciences Institute (SAMSI)*, Research Triangle Park, NC. Aug 29-Sept 1, 2010.

#### 6. Mentoring:

- Joe Guinness, Assistant Professor, Department of Statistics, NCSU, 2013-2017. (Mentoring program for junior faculty members, NCSU).
- Suhashini Subba Rao, Assistant Professor, Department of Statistics, TAMU, 2006-2009. (Mentoring program for junior faculty members, TAMU).
- Tzee-Ming Huang, Assistant Professor, Department of Statistics, ISU. 2004-2005. (Mentoring program for junior faculty members, ISU).
- Song Chen, Associate Professor, Department of Statistics, ISU. 2003-2005. (Mentoring program for junior faculty members, ISU).
- Joseph Harriges, Associate Professor, Department of Economics, ISU. 1996-97. (Study in a second discipline program, ISU.)
- Yuhong Yang, Assistant Professor, Department of Statistics, ISU. 1996 - 2001. (Mentoring program for junior faculty members, ISU).