

Born April 01 1959, Kolkata, India. Citizen of India.

Education: Ph.D. (Stat.) 1987, M. Stat. 1980 and B. Stat. 1979 from Indian Statistical Institute.

Professional Appointments

Head-Stat-Math Unit Kolkata, Indian Statistical Institute (ISI) India. Sept. '02-July '05.

Professor-Stat-Math Unit Kolkata, ISI India since June 1995.

Associate Professor-Stat-Math Unit Kolkata, ISI India Jan. '91-May '95.

Assistant Professor-Dept. of Stat., Purdue University USA Jan. '87-Dec. '90.

Distinguished Visiting Professor-Dept. of Econ., Univ. of Cincinnati USA Oct.-Dec. '05.

Visiting Professor-Dept. of Math., Univ. of California San Diego USA March-June 2001;
Dept. of Stat., Purdue Univ. USA Jan. '00-May '00.

Visiting Associate Professor-Dept. of Stat., Purdue Univ. USA Aug. '95-May '96;
Dept. of Math., Indiana Univ.-Purdue Univ. at Indianapolis USA Aug. '92-May '93.

Editorial Activities

Editorial Board Member-Lecture Note Series of Ramanujan Mathematical Society '09-;
Indian Journal of Pure and Applied Mathematics '09 -

Associate Editor-*Statistical Methodology* June 2010-; *IMS Collection* Institute of Mathematical Statistics USA Jan. '08-; *Statistics and Probability Letters* Jan. '08-.

Editor-*Sankhyā* Jan. '02 - Dec. '07.

Managing Editor-*Sankhyā A* Jan. '97 - Dec. '01.

Co-editor-*Sankhyā A* May '93 - Dec. '01.

Referee-*NSF (USA)*, *DST* and *CSIR* proposals. Reviewer-*Mathematical Reviews* 1985-

Honours and Awards

- Invited speaker at the forthcoming *International Congress of Mathematicians* 2010.
- J. C. Bose Fellow, DST Govt. of India 2009-2013.
- Fellow of the National Academy of Sciences Allahabad 2009.
- Fellow of the Indian National Science Academy New Delhi 2007.
- Fellow of the Indian Academy of Sciences Bangalore 2006.
- S.S. Bhatnagar Award in the Mathematical Sciences, CSIR Govt. of India 2004.
- Young Researcher Award, International Indian Statistical Association USA 2004.
- National Award in Statistics, Min. of Stat. & Prog. Impl. Govt. of India 2002-2003.
- Fellow of the Institute of Mathematical Statistics USA 2002.

Statistics and Mathematics Unit, Indian Statistical Institute, 203 B. T. Road, Kolkata 700108, INDIA.
www.isical.ac.in/~abose bosearu@gmail.com abose@isical.ac.in.

Current Research Interests:

Economics and Econometrics: Moral hazard problems. Resampling in time series models.

Probability: Large dimensional random matrices. Extreme values. Record values.

Statistics: Kernel density estimates. M estimation. Resampling.

Publications

A1. Articles under preparation:

Competition between lenders (with Debashis Pal and David Sappington).

Cumulants and half independence (with Rajat Subhra Hazra and Koushik Saha).

Limiting spectral distribution of a class of patterned matrices (with Anirban Basak).

Limiting spectral distribution of r -diagonal random matrices (with Sanchayan Sen).

Robustness of the Wigner law (with Sayan Banerjee).

Limiting spectral distribution of sample autocovariance matrices (with Anirban Basak and Sanchayan Sen).

Noncrossing partitions, Catalan words and the semicircle law (with Sayan Banerjee).

A2. Articles unpublished:

1. Bose, Arup and Dutta, Santanu (2009b). Estimating bias and mean squared error of kernel density estimator. Technical Report R13/2009, www.isical.ac.in/~statmath. **Under revision** (21 pages).
2. Bose, Arup and Gupta, Barnali (2010). Welfare consequences of privatization in a bilateral monopoly. Technical report No. R6/2010, www.isical.ac.in/~statmath. **Being submitted for publication**.
3. Bose, Arup; Hazra, Rajat Subhra and Saha, Koushik (2010f). Product of exponentials and spectral radius of random k circulants. Technical Report R2/2010, www.isical.ac.in/~statmath. **Submitted for publication** (29 pages).
4. Bose, Arup; Mitra, Joydip and Sen, Arnab (2008/2009). Large dimensional random k circulants. Technical Report R10/2008, www.isical.ac.in/~statmath. **Submitted for publication** (21 pages).
5. Bose, Arup and Dutta, Santanu (2009a). MISE estimation and bandwidth selection by smooth bootstrap. Technical Report R1/2009, www.isical.ac.in/~statmath. **Submitted for publication** (24 pages).
6. Bose, Arup and Gupta, Barnali (2009). Optimal training, employee preferences and moral hazard. Technical Report R9/2009, www.isical.ac.in/~statmath. **Submitted for publication** (30 pages).

7. Bose, Arup; Hazra, Rajat Subhra and Saha, Koushik (2010e). Patterned matrices and various notions of independence. **Revised version submitted for publication**

A4. Articles Published/Accepted: (older versions are available at www.isical.ac.in/~statmath)

8. Bose, Arup; Gangopadhyay, Sreela and Sen, Arnab (2010). Limiting spectral distribution of XX' matrices. **Annales de l'Institut Henri Poincaré**. To appear. Available at <http://www.imstat.org/aihp/accepted.html>
9. ¹Bose, Arup; Hazra, Rajat Subhra and Saha, Koushik (2010d). Patterned random matrices and method of moments. **Proceedings of the International Congress of Mathematicians** Hyderabad, India, 2010. To appear.
10. Bose Arup; Hazra, Rajat Subhra and Saha, Koushik (2010c). Spectral norm of circulant type matrices. **Journal of Theoretical Probability**. To appear. DOI 10.1007/s10959-009-0257-z.
11. Bose, Arup; Hazra, Rajat Subhra and Saha, Koushik (2010b). Spectral norm of circulant type matrices with heavy tailed entries. **Electronic Communications in Probability**. To appear.
12. Bose, Arup; Hazra, Rajat Subhra and Saha, Koushik (2010a). Poisson convergence of eigenvalues of circulant type matrices. **Extremes**. To appear.
13. Basak, Anirban and Bose, Arup (2010b). Limiting spectral distribution of some band matrices. **Periodica Mathematica Hungarica**. To appear.
14. Basak, Anirban and Bose, Arup (2010a). Balanced random Toeplitz and Hankel matrices. **Electronic Communications in Probability**, 15, 134-148.
15. ²Bose, Arup and Dey, Alope (2010). The wonderful world of eigenvalues. In **Mathematics Unlimited, Keshava Hegde Memorial Volume, Mysore University**. To appear.
16. Bose, Arup; Pal, Debashis and Sappington, David (2010e). Asymmetric treatment of identical agents in teams. **European Economic Review**. To appear.
17. Bose, Arup; Pal, Debashis and Sappington, David (2010d). On the performance of linear contracts. **Journal of Economics & Management Strategy**. To appear.
18. Bose, Arup; Pal, Debashis and Sappington, David (2010c). Equal pay for unequal work: limiting sabotage in teams. **Journal of Economics & Management Strategy**. Volume 19, Number 1, 25-53.
19. Bose, Arup; Pal, Debashis and Sappington, David (2010b). Pareto-improving inefficiency. **Oxford Economics Papers**. To appear. doi:10.1093/oep/gpq009.

¹Conference Proceedings

²Not refereed

20. Bose, Arup; Pal, Debashis and Sappington, David (2010a). On the design of piece-rate contracts. **Economics Letters**, 107, 330–332.
21. ³Bose, Arup (2010). An interview with Professor B.L.S. Prakasa Rao. **Econometric Theory**. To appear.
22. Bose, Arup and Gangopadhyay, Sreela (2010b). Asymptotic properties of near Pfeifer records. **Extremes**. To appear. DOI: 10.1007/s10687-010-0108-4.
23. Bose, Arup and Gangopadhyay, Sreela (2010a). Convergence of linear functions of Pfeifer Records. **Extremes**, 13, 89-106.
24. Bandyopadhyay, Subhadip; Bose, Arup and Sengupta, Debasis (2010). Nonparametric estimation of multivariate density with direct and auxiliary data and application. **Special Platinum Jubilee Issue of Indian Journal of Pure and Applied Mathematics**, 40, 1, 248-274.
25. Bose Arup; Hazra, Rajat Subhra and Saha, Koushik (2009). Limiting spectral distribution of circulant type matrices with dependent inputs. **Electronic Journal of Probability**. Vol. 14, Paper no. 86, pages 2463–2491.
26. Bose, Arup; Dasgupta, Amites and Maulik, Krishanu (2009b). Multicolor urn models with reducible replacement matrices. **Bernoulli**, 51, 1, 279-295.
27. Bose, Arup; Dasgupta, Amites and Maulik, Krishanu (2009a). Strong laws for balanced triangular urns. **Journal of Applied Probability**, 46, 2, 571-584.
28. Roy, Anindya and Bose, Arup (2009). Coverage of generalized confidence intervals. **Journal of Multivariate Analysis**, 100, 7, 1384-1397.
29. Bose, Arup and Mukherjee, Kanchan (2009). Bootstrapping a weighted linear estimator of the ARCH parameters. **Journal of Time Series Analysis**, 30, 3, 315-331.
30. Bose, Arup (2009). L_1 regression estimate and its bootstrap. **Science in China Series A: Mathematics** Special issue in honour of Z.D.Bai, 52, 6, 1251-1261.
31. Bose, Arup and Sen, Arnab (2008). Another look at the moment method for large dimensional random matrices. **Electronic Journal of Probability**, 13, 588-628.
32. Bose, Arup; Dasgupta, Amites and Maulik, Krishanu (2008). Maxima of Dirichlet and triangular arrays of gamma variables. **Statistics and Probability Letters**, 78, 16, 2811-2820.
33. Bose, Arup and Sen Arnab (2007a). On asymptotic properties of the rank of a special random adjacency matrix. **Electronic Communications in Probability**, 12, 200-205.
34. Bose, Arup and Sen Arnab (2007b). Spectral norm of random large dimensional non-central Toeplitz and Hankel matrices. **Electronic Communications in Probability**, 12, 21-27.

³Interview

35. Bose, Arup; Dasgupta, Amites and Maulik, Krishanu (2007). Maxima of the cells of an equiprobable multinomial. **Electronic Communications in Probability**, 12, 93-105.
36. Bose, Arup; Gangopadhyay, Sreela and Goswami, Alok (2007). A note on random coin tossing. **Indagationes Mathematicae**, 18, 3, 405-416.
37. Bose, Arup; Gangopadhyay, Sreela; Maulik, Krishanu and Sarkar, Anish (2006). Convergence of tail sum for records. **Extremes**, 9, 151-168.
38. Chatterjee, Snigdhanu and Bose, Arup (2005). Generalised bootstrap for estimating equations. **Annals of Statistics**, 33, 1, 414-436.
39. Bose, Arup; Gangopadhyay, Sreela and Sarkar, Anish (2005). Partial sum process for records. **Extremes** 8, 43-56.
40. Chatterjee, Sourav and Bose, Arup (2004). A new method for bounding rates of convergence of empirical spectral distributions. **Journal of Theoretical Probability**, 17, 4, 1003-1019.
41. ⁴Basu, Srabashi and Bose, Arup (2004). A gentle introduction to resampling plans. Invited article in **Statistical Computing: Existing Methods and Recent Developments** (Ed. D. Kundu and A. Basu). IIT Kanpur Series of Advanced texts, 253-288. Published by Narosa.
42. Bose, Arup and Chatterjee, Snigdhanu (2003). Generalised bootstrap for estimators of minimisers of convex functionals. **Journal of Statistical Planning and Inference**, 11, 225-239.
43. Bose, Arup; Gangopadhyay, Sreela; Sarkar, Anish and Sengupta, Arindam (2003a). Asymptotic properties of sums of upper records. **Extremes**, 6, 2, 147-164.
44. Bose, Arup; Gangopadhyay, Sreela; Sarkar, Anish and Sengupta, Arindam (2003b). Convergence of lower records and infinite divisibility. **Journal of Applied Probability**, 40, 4, 1-16.
45. Bose, Arup and Mukherjee, Kanchan (2003). Estimation of the ARCH parameters by solving linear equations. **Journal of Time Series Analysis** 24, no. 2, 127-136.
46. Bose, Arup; Chatterjee, Sourav and Gangopadhyay, Sreela (2003). Limiting spectral distribution of large dimensional random matrices. Invited article. Special Volume of **Journal of Indian Statistical Association** in honour of S.R. Adke. 41,2, 221-259.
47. Bose, Arup and Sengupta, Debapriya (2003). Strong consistency of minimum contrast estimators. **Sankhyā**, 65, 2, 440-463.
48. Bose, Arup; Sarkar, Anish and Sengupta Arindam (2003). Infinite product of records. **Journal of Applied Statistical Sciences**, Volume 12, No. 1, 1-10.

⁴Book Chapter

49. Bose, Arup and Chatterjee, Snigdhanu (2002). Comparison of bootstrap and jackknife variance estimators in linear regression: second order results. **Statistica Sinica**, 12, 2, 575–598.
50. Bose, Arup; DasGupta, Anirban and Rubin, Herman (2002). A contemporary review and bibliography of infinite divisible distributions. **Sankhyā**, 64, Part 3, 763-819. Special Issue in memory of D. Basu.
51. Bose, Arup and Mitra, Joydip (2002). Limiting spectral distribution of a special circulant. **Statistics and Probability Letters**, 60, 1, 111-120.
52. Bose, Arup and Sen, Arusharka (2002). Asymptotic distribution of the Kaplan-Meier U -statistics. **Journal of Multivariate Analysis**, 83, 1, 84-123.
53. Chatterjee, Snigdhanu and Bose, Arup (2002). Dimension asymptotics for generalised bootstrap in linear regressions. **Annals of the Institute for Statistical Mathematics.**, Vol 54, 2, 367–381.
54. ⁵Bose, Arup (2002). U statistics and M_m estimates. Invited article in **Uncertainty and Optimality-Probability, Statistics and Operations Research**. (ed. J. C. Misra), 257–292. World Scientific Publishing, River Edge, New Jersey.
55. Bishwal, J. P. N. and Bose, Arup (2001). Rates of convergence of approximate maximum likelihood estimators in the Ornstein-Uhlenbeck process. **Computers and Mathematics with applications**, 42, 23-38.
56. Bose, Arup (2001). A boundary crossing problem with application to sequential estimation. **Sequential Analysis**, Vol 20, 1, 65-76.
57. Bose, Arup and Snigdhanu Chatterjee (2001a). Generalised bootstrap in non-regular M -estimation problems. **Statistics and Probability Letters**, 55, 3, 319–328.
58. Bose, Arup and Chatterjee, Snigdhanu (2001b). Last passage times of minimum contrast estimators. **Journal of Australian Mathematical Society**, 71, 1, 1-10.
59. Chatterjee, Snigdhanu and Bose, Arup (2000). Variance estimation in high dimensional regression models. **Statistica Sinica**, Vol 10, No 2, 497-515.
60. Bose, Arup and Sen, Arusharka (1999). The strong law of large numbers for Kaplan-Meier U statistics. **Journal of Theoretical Probability** 12, 1, 181-200.
61. Bose, Arup (1998a). Bahadur representation of M_m estimates. **Annals of Statistics** 26, 2, 771-777.
62. Bose, Arup (1998b). A Glivenko-Cantelli theorem and strong laws for L statistics. **Journal of Theoretical Probability** 11, 4, 921-933.

⁵Book Chapter

63. ⁶Bose, Arup and Nagaraj, N. K. (1998). Estimation of autoregressive parameters with systematic but incomplete sampling. **Frontiers in Probability and Statistics** (ed. S. P. Mukherjee, S. K. Basu and B. K. Sinha), 41–51. Narosa, London.
64. Bose, Arup (1997). A note on the Marcinkiewicz-Zygmund strong law of large numbers. **Calcutta Statistical Association Bulletin** 47, Nos 187-188, 233-238.
65. Bose, Arup and Boukai, Benzion (1997). Sequential estimation of the mean of the NEF-PVF distribution. **Journal of Statistical Planning and Inference** 63, 1, 55-70.
66. Bose, Arup and Boukai, Benzion (1996). Estimation with prescribed proportional accuracy for a two-parameter exponential family of distributions. **Annals of Statistics** 24, 4, 1792-1803.
67. ⁷Bose, Arup and Politis, Dimitris (1996). A review of the bootstrap for dependent samples. Invited article in **Stochastic Processes and Statistical Inference**, (Ed. B. R. Bhat and B. L. S. Prakasa Rao), 39–83, New Age International Limited, New Delhi.
68. Bishwal, J. P. N. and Bose, Arup (1995). Speed of convergence of the maximum likelihood estimate in the Ornstein-Uhlenbeck process. **Calcutta Statistical Association Bulletin** 45, Nos. 179-180, 245-251.
69. Bose, Arup (1995). Estimating the asymptotic dispersion of the L_1 median. **Annals of the Institute of Statistical Mathematics** 47, 2, 267-271.
70. Bose, Arup and Boukai, Benzion (1995). Bias corrected sequential estimation for the mean of NEF-PVF distribution. **Sequential Analysis** 14, 4, 307-320.
71. Bose, Arup and Mukhopadhyay, Nitis (1995a). Sequential interval estimation via replicated piecewise stopping times and accelerated stopping times in a class of two parameter exponential distributions. **Sequential Analysis** 14, 4, 287-306.
72. Bose, Arup and Mukhopadhyay, Nitis (1995b). A note on accelerated sequential estimation of the mean of NEF-PVF distributions. **Annals of the Institute of Statistical Mathematics** 47, 1, 99-104.
73. Bose, Arup and Mukhopadhyay, Nitis (1995c). Sequential estimation of the mean of an exponential distribution via replicated piecewise stopping number. **Statistics and Decisions** 13, 351-361.
74. Bose, Arup and Chandra, T. K. (1994). A note on the strong law of large numbers. **Calcutta Statistical Association Bulletin** 44, No. 173–174, 115–122.
75. Bose, Arup and Dasgupta, Ratan (1994a). On some asymptotic properties of U statistics and one sided estimates. **Annals of Probability** 22, 4, 1715-1724.

⁶Conference Proceedings

⁷Book Chapter

76. Bose, Arup and Dasgupta, R. (1994b). Speed of convergence of the least squares estimator in autoregressive models. **Journal of Statistical Planning and Inference** 38, 3, 371-380.
77. Bose, Arup and Mukhopadhyay, Nitis (1994a). Sequential estimation via replicated piecewise stopping number in a two-parameter exponential family of distributions. **Sequential Analysis** 13, 1, 1-10.
78. Bose, Arup and Mukhopadhyay, Nitis (1994b). Sequential estimation by accelerated stopping time in a two-parameter exponential family of distributions. **Statistics and Decisions** 12, 281-291 (1994).
79. Bose, Arup and Boukai, Benzion (1993). Sequential estimation results for a two-parameter exponential family of distributions. **Annals of Statistics** 21, 1, 484-502.
80. Bose, Arup and Chandra, T. K. (1993). Cesaro uniform integrability and L_p -convergence. **Sankhyā**, 55, A, 12-28.
81. Bose, Arup and Chaudhuri, P. (1993). On the dispersion of multivariate median. **Annals of the Institute of Statistical Mathematics** 45, 3, 541-550.
82. Bose, Arup and Babu, G. J. (1991). Accuracy of the bootstrap approximation. **Probability Theory and Related Fields** 90, 301-316.
83. ⁸Basu, A.; Bose Arup and Ghosh, J. K. (1991). Sequential design and allocation rules. Invited article in **Handbook of sequential analysis** (Ed. B. K. Ghosh and P. K. Sen), 475-501. Marcel-Dekker.
84. Bhandari, S. K. and Bose, Arup and (1990). Existence of unbiased estimates in sequential binomial experiments. **Sankhyā** 52, A, 1, 127-130. *MR:93g:62106* Corrigenda **Sankhyā** A, 55, 2, 327 (1993).
85. Bose, Arup (1990). Bootstrap in moving average models. **Annals of the Institute of Statistical Mathematics** 42, 4, 753-768.
86. Babu, G. J. and Bose, Arup (1989). Bootstrap confidence intervals. **Statistics and Probability Letters** 7, 151-160.
87. Bhandari, S. K. and Bose, Arup (1989). Selecting the t-best cells in a multinomial distribution. **Communications in Statistics, Theory Methods** 18, 9, 3313-3326.
88. Bose, Arup (1988a). Higher order approximations for auto-covariances from linear processes with applications. **Statistics** 9, 2, 259-269.
89. Bose, Arup (1988b). Edgeworth correction by bootstrap in autoregressions. **Annals of Statistics** 16, 4, 1709-1722.
90. Dasgupta, Anirban and Bose, Arup (1988). Γ -minimax and restricted-risk Bayes estimation of multiple Poisson means under ϵ contaminations of the subjective prior. **Statistics and Decisions** 6, 311-341.

⁸Book Chapter

91. Sriram, T. N. and Bose, Arup (1988). Sequential shrinkage estimation in the general linear model. **Sequential Analysis** 7, 2, 149–164.
92. ⁹Bose, Arup (1988). Bootstrap in time series models. **Proceedings of the Winter Simulation Conference** Ed. M. Abrams, P. Haigh and J. Comfort. Institute of Electric and Electronic Engineers, San Francisco, California, 486–490.
93. Bhandari, S. K. and Bose, Arup (1987). On selecting the most likely event. **Journal of Statistical Planning and Inference** 17, 227–240.
94. Bose, Arup (1987). Some remarks on the paper “Sums of independent squared Cauchy variables grow quadratically: Applications” by F. Eicker. **Sankhyā** 49, A, 1, 138–140.
95. Bose, Arup (1986a). Berry-Esseen bound for the maximum likelihood estimator in Ornstein-Uhlenbeck process. **Sankhyā** 48, A, 181–187.
96. Bose, Arup (1986b). Certain non-uniform rates of convergence to normality for a restricted class of martingales. **Stochastics** 16, 279–294.
97. Bose, Arup (1986c). Certain non-uniform rates of convergence to normality for martingale differences. **Journal of Statistical Planning and Inference** 14, 155–167.
98. Sinha, Bikas K and Bose, Arup (1985). Unbiased sequential estimation of $1/p$: settlement of a conjecture. **Annals of the Institute of Statistical Mathematics** 37, A, 455-460.
99. Bose, Arup and Sinha, Bikas K. (1984). Sequential Bernoulli sampling plans re-examined. **Calcutta Statistical Association Bulletin** 33, 109–120.
100. Bose, Arup (1983a). The Bernstein von Mises Theorem for a certain class of diffusion processes. **Sankhyā** 45, A, 2, 150–160.
101. Bose, Arup (1983b). Asymptotic theory of estimation in non-linear stochastic differential equations for the multiparameter case. **Sankhyā** 45, A, 1, 56–65.

B. Book Reviews: (28 in all, here are a few selected ones)

102. Bose, Arup (2005). *Statistical Inference for Ergodic Diffusion Processes* by Yuri A. Kutoyants. **Sankhyā** 67, 1, 137-139.
103. Bose, Arup (2003). *A distribution free theory of nonparametric regression* by Lázylo Györfi, Michael Kohler, Adam Krzyżak and Harro Walk. **Sankhyā**, 65, 2, 490-492.
104. Bose, Arup (2002). *Probability for statisticians* by Galen R. Shorack. **Sankhyā** Ser. A, 64, 1, 180-181.
105. Bose, Arup (2001). *Subsampling* by D. Politis, J.P. Romano and M. Wolf. **Mathematical Reviews**, 20001d:62047.

⁹Conference Proceedings

106. Bose, Arup and Rao, B. V. (2000). *Decoupling* by Victor de la Pena and E. Gine. **Sankhyā A**, Vol 62, 2, 282-283 (2000).
107. Bose, Arup (1999). *Elements of Large Sample Theory* by E.L.Lehmann. **Sankhyā A**, Vol. 61, Part 3, 453-455.
108. Bose, Arup (1997). *Visual Explanations*, by E. Tufte. **Sankhyā A**, 3, 453.
109. Bose, Arup (1995). *Computer intensive statistical methods*, by J.S.Urban Hjorth **Mathematical Reviews**, 95g:62093.
110. Bose, Arup (1993). *Envisioning Information*, by E. Tufte. **Sankhyā A**, 55, 2, 325.

Acted as Referee for the following journals (in alphabetic order): Annals of Probability, Annals of Statistics, Annals of Applied Probability, Annals of Institute of Statistical Mathematics, Bernoulli, Calcutta Statistical Association Bulletin, Communications in Statistics, Theory Methods, Journal of Business and Economic Statistics, Journal of Indian Statistical Association, Journal of Multivariate Analysis, Journal of Economics Management & Strategy, Journal of Nonparametric Statistics, Journal of Statistical Planning and Inference, Journal of Time Series Analysis, Latin American Journal of Probability and Mathematical Statistics ALEA, Metron, Sankhyā Series A, Sankhyā Series B, Sequential Analysis, Statistica Sinica, Statistics, Stochastic Processes and its Applications, Stochastics and Stochastic Reports

PhD Thesis supervision:

Koushik Saha on *Spectral properties of large dimensional random circulant type matrices*. To be submitted to Indian Statistical Institute by July 31, 2010. Currently Lecturer, Bidhanagar Govt. Colleges, Kolkata, India.

Santanu Dutta on *Smooth bootstrap estimate of some local and global measures of accuracy of kernel density estimators*. Co supervisor. Submitted to Tezpur University in April 2010. Waiting for reports. Currently, Lecturer, Tezpur University, Assam, India.

Snigdhasu Chatterjee on *Generalised Bootstrap Techniques*, Indian Statistical Institute, December 1999. Currently Associate Professor at University of Minnesota, USA.

J.P.N. Bishwal on *Asymptotic theory of estimation of the drift parameter in diffusion processes*, Sambalpur University, January 2000. Currently, Assistant Professor at University of North Carolina, Charlotte, USA.

Two semester project supervision:

Riddhi Pratim Basu, Random Matrices, M.Stat. project at Indian Statistical Institute, 2010-2011. Ongoing.

Shirshendu Gangopadhyay, Random Matrices, M.Stat. project at Indian Statistical Institute, 2010-2011. Ongoing.

Sayan Banerjee, Large Dimensional Random Matrices, M.Stat. project at Indian Statistical Institute, 2009-2010. Final report submitted July 12, 2010.

Sanchayan Sen, Limiting Spectral Distribution of Random Matrices, M.Stat. project at Indian Statistical Institute, 2009-2010. Final report submitted July 12, 2010.

Anirban Basak, Large Dimensional Random Matrices, M.Stat. project at Indian Statistical Institute, 2008-2009. Currently pursuing a Ph.D. at Stanford University, USA.

Arnab Sen, Large Dimensional Random Matrices, two semester M.Stat. project at Indian Statistical Institute, 2005-2006. Currently pursuing a Ph.D. at University of California, Berkeley, USA.

One semester project supervision:

Abhishek Bhattacharya, Resampling in time series models, M.Stat. project at Indian Statistical Institute, 2004. Currently, Postdoctoral Associate at Duke University, USA.

Sourav Chatterjee, Random Matrices, M.Stat. project at Indian Statistical Institute, 2002. Currently Associate Professor at Courant Institute, New York.

Soumik Pal, ARCH Models, M.Stat. project at Indian Statistical Institute, 2002. Currently Assistant Professor at Cornell University, USA.

Snigdhasu Chatterjee, Last Passage Time of M Estimates, M.Stat. project at Indian Statistical Institute, 1995. Currently Associate Professor at University of Minnesota, USA.

Teaching (partial list in alphabetic order):

Have taught more than 50 full courses, including the following topics at the graduate and postgraduate levels (more details available on request):

Abstract Inference, Advanced Probability, Applied Stochastic Process, Asymptotic Theory of Inference, Bayesian Statistical Methods, Design of Experiments, Inference, Infinitely Divisible Distributions, Large dimensional random matrices, Markov Processes and Stochastic Integrals, Markov Chains, Measure Theory, Nonparametric Inference, Sample Surveys, Sequential Estimation, Statistical Decision Theory, Statistical Methods, Time Series.

External Committees:

Award Committees: CSIR; NASI-SCOPUS; International Indian Statistical Association.

Fellows Committee: INSA.

Nominating Committees: Institute of Mathematical Statistics USA.

Grant Committee: FIST DST.

Curriculum development and/or syllabus committees: Central University Bihar; Central University Sikkim; Utkal University.

Faculty promotion/selection committees: IIT Mumbai; Central University Hyderabad; IISER Kolkata; IISER Mohali; Institute of Advanced Study in Science and Technology, Guwahati; Lucknow University.

Examination Committees: Confidential examination committees of Govt. organizations.

Internal committees at Indian Statistical Institute, 1991–2010:

Entrance Exam committees:

Junior Research Fellows (JRF) in Mathematics, 2010, 2008, 2007.

JRF in Statistics, 2003, 1999, 1992, 1991.

JRF in Theoretical Computer Science, 1992.

Master of Mathematics, 2008.

Master of Statistics, 2001, 1995, 1992.

Master of Technology in Computer Science, 1991.

Mathematics for Master of Statistics, Master of Technology in SQC and in Computer Science, 1995.

Bachelor of Statistics, 2002, 1997, 1996, 1993.

Other academic committees:

PhD. DSc Committee 2004–2006.

Sankhyā committee, 2006.

Mahalanobis Symposium Prize committee, 2002–2003.

Examinations Committee for professional examinations, 1996.

M Stat Review Committee.

Department Research Fellow Advisory Committee: 2003–, 1998–2002, 1994–1996.

Department Standing Search Committee 2000–2001.

Dean’s Research Associate Selection Committee 1994.

Introduction of Master’s programme in Economics, Syllabus committee 1991.

Nonacademic committees:

Campus Network Committee Vice-Chairman, 2004–2005; Administrative workers review 2003, 2001, 1999; Committee on Revision of Scientific Positions and selection criteria, 1999–2000.

Internal committees at Purdue University, USA. 1987–1990:

Ph.D. Qualifying Examinations Committee 1988–1990.

Ph.D. Examinations Committee of three students in 1989–1990; Masters Examination Committee of one student in 1989.

Conferences, workshops attended as an invited speaker:

1. Conference on Economic Theory, Markets and Institutions of Governance March 22-24, 2010, Jawaharlal Nehru University and National Institute of Public Finance and Policy. Invited speaker.
2. International Colloquium on “Perspectives in Fundamental Research”, March 03-06, 2010, Tata Institute of Fundamental research, in celebration of the birth centenary of Dr. Homi J. Bhaba. Invited speaker.
3. One day seminar in memory of Sir Clive Granger, Economics Research Unit, Indian Statistical Institute, January 12, 2010. Invited speaker.
4. Conference on Advances in Statistics in honor of Professor Bai Zhidong on his 65th birthday, July 20, 2008, National University of Singapore. Invited speaker.
5. Workshop on High-Dimensional Data Analysis, Feb. 27-29, 2008, Institute of Mathematical Sciences, National University of Singapore. Member, Organizing committee. Also gave an invited talk and chaired a session.

6. Hyderabad Symposium in Probability and Statistics, University of Hyderabad, December 17-19, 2007. Invited speaker.
7. Workshop on Large Dimensional Random Matrices, Institute of Mathematical Sciences, National University of Singapore, March 04-15, 2006. Invited speaker, two talks.
8. A.K.Basu Memorial Seminar on Statistical Modelling and Applications, University of Calcutta, India, March 02-03, 2006. Invited speaker.
9. National Conference on Statistical Inference, Pune University, Pune, India, January 8–10, 2006. Invited speaker. Also chaired a session.
10. ISI-Academia Sinica Conf. on Probability and Statistics, Kolkata, Indian Statistical Institute, Kolkata, India, Jan 4-6, 2006. Member, Organizing committee.
11. Asian Mathematical Conference, National University of Singapore, Singapore, July 18-23, 2005. Invited speaker.
12. National seminar on order statistics and concomitants. University of Mysore, November 26-28, 2004. Invited speaker. Also chaired a session.
13. Conference of the International Chinese Statistical Association, National University of Singapore, Singapore, July 20-24, 2004. Invited speaker. Also chaired a session.
14. Fifth Triennial Calcutta Symposium on Probability and Statistics, University of Calcutta, Kolkata, India, Dec. 28-31, 2003. Invited speaker.
15. Annual conference of the Indian Society for Probability and Statistics, Pune University, Pune, India, January, 2002. Invited speaker. Also chaired a session.
16. Statistics and Mathematics Conference in honour of Professor J K Ghosh and Professor K R Parthasarathy, Indian Statistical Institute, New Delhi, India, Jan 18–21, 2002.
17. International Conference in honour of eightieth birthday of Professor C R Rao, Indian Statistical Institute, Kolkata, India, Dec 29-30, 2000. Organised and chaired a session.
18. Workshop on Limit Theorems in Probability, Department of Statistics, University of Mysore, Mysore, India, Sept. 04-07, 2000. Invited speaker.
19. International Workshop on Statistics and Probability, Indian Statistical Institute, New Delhi, India, Dec 17-Dec 21, 1999. Invited speaker. Also chaired a session.
20. XVIII Annual Conference of Indian Society for Probability and Statistics, Sambalpur University, India, Jan. 27-30, 1998. Invited speaker. Also chaired a session.
21. Joint International Conference of the Bernoulli Society and Indian Statistical Institute, Calcutta, India, Dec 29, 1997-Jan 01, 1998. Organised a session.
22. Third Triennial Calcutta Symposium on Probability and Statistics, Calcutta, India, Dec. 26-28, 1997. Invited speaker.
23. International conference on stochastic and numerical modelling and applications, Utkal University, Bhubaneswar, India, January 6-8, 1997. Invited speaker.
24. Workshop on life testing and reliability, Calcutta University, Kolkata, India, June 23-24, 1995. Invited speaker.
25. Eightysecond Session of the Indian Science Congress, Jadavpur University, Kolkata, India, Jan. 3-8, 1995. Invited speaker.
26. Second Triennial International Symposium on Statistics, Calcutta University, Kolkata, India, Dec. 30, 1994-Jan. 2, 1995. Invited speaker.

27. XV Annual Conference of Indian Society for Prob. and Stat., Dec. 21-23, 1994, Manonmaniam Sundarnar University, Tirunelveli, India. Invited speaker. Also chaired a session.
28. Fifth Purdue symposium on Statistical Decision Theory and related Topics, Purdue University, USA, June 14 -19, 1992. Invited speaker. Also chaired a session.
29. Seventyninth session of Indian Science Congress Association at M. S. University, Baroda, India, January 3–8, 1992. Invited speaker.
30. Discussion meeting on Stochastic Differential Equations at Indian Institute of Sciences, Bangalore, India, June 10–12, 1991. Invited speaker.
31. Seventy Third Session of Indian Science Congress Association at Delhi University, India, January 3–8, 1986. Invited speaker.
32. National Seminar on Statistical Inference, Stochastic Processes and Sample Surveys at Sambalpur University, Sambalpur, India, Dec. 21–26, 1985. Invited speaker.
33. XIII International Conference on Stochastic Processes and their Applications at Banaras Hindu University, Varanasi, India, Dec. 17–21, 1983. Invited speaker.

Selected Short visits/lectures

Florida State University, Tallahassee, USA; March 1987.
George Washington University, Washington D.C., USA; March 1988.
Indian Institute of Science, Bangalore, India: October 21, 2009.
Indian Institute of Technology, Guwahati: March 21-25, 2005
Indiana University-Purdue University at Indianapolis, USA: Sept. 14, 2009; Oct. 2005; April 2000; Feb. 2000.
Institute of Mathematical Sciences, National University of Singapore: March 04-15, 2006.
Michigan State University, East Lansing, USA: March-April 2000.
National University of Singapore: Nov. 05-19, 2007; July 18-24, 2005; July 20-24, 2004; May-June 2000.
Northern Illinois University, DeKalb, USA: March 2000; Dec. 1989.
Mysore University, India.
Panjab University, Chandigarh, India.
Pune University, India.
Purdue University, West Lafayette, Indiana, USA; Jan. 1993.
Rutgers University, Camden, New Jersey, USA; March 1996.
Rutgers University, New Brunswick, New Jersey, USA: April 2000; March 1996.
Stanford University, Stanford, California, USA: May 2001.
University of California, Davis, USA: June 2001.
University of California, Riverside, USA: May 2001.
University of California, San Diego, USA: March 2000. Prestigious *Week Long Visitor*.
University of Cincinnati, Ohio, USA: May-June, 2010; May 14-July 14, 2009; August 14–September 27, 2009; April 28-July 01, 2008; June 13-July 13, 2006; October–December, 2005; May 2000.
University Connecticut, Storrs USA; October 1995; October 1992.
University of Georgia, Athens, USA: April 2000; April 1993.
University of Hyderabad, India.
University of Illinois, Urbana Champaign, USA; February 2000 (delivered the annual joint colloquium of the Dept. of Statistics, Purdue University and Urbana Champaign); April 1996; March 1990 (delivered the annual joint colloquium).
University of Maryland, Baltimore County, USA: June 17-19, 2008; April 1996; Nov. 1995; June-July 1992.
University of Mysore, India.
Yale University, Connecticut, USA: Sept. 8–9, 2009.

Research Collaborators:

Current collaboration with:

Sayan Banerjee, Indian Statistical Institute, Kolkata, India
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Satya Ranjan Chakraborty, Indian Statistical Institute, Kolkata, India
Aloke Dey, Indian Statistical Institute, New Delhi, India
Santanu Dutta, Tezpur University, Assam, India
Sreela Gangopadhyay, Indian Statistical Institute Kolkata, India
Barnali Gupta, Miami University, Ohio, USA
Rajat Subhra Hazra, Indian Statistical Institute, Kolkata, India
Joydip Mitra, Management Development Institute, Gurgaon, India
Debashis Pal, University of Cincinnati, Ohio, USA
Koushik Saha, Bidhannagar Government College, Kolkata, India
David Sappington, University of Florida, USA
Anish Sarkar, Indian Statistical Institute, New Delhi, India
Arnab Sen, University of California, Berkeley, USA.
Sanchayan Sen, Indian Statistical Institute, Kolkata, India

Past collaboration with:

G.J.Babu, Pennsylvania State University, USA
Subhadip Bandyopadhyay, Infosys, Bangalore, India.
Atasi Basu, Utica College, New York, USA
Srabashi Basu, Kolkata, India
S.K.Bhandari, Indian Statistical Institute, Kolkata, India
J.P.N.Bishwal, University of North Carolina, Charlotte, USA
Benzion Boukai, Indiana University-Purdue University at Indianapolis, USA
T.K.Chandra, Indian Statistical Institute, Kolkata, India
Snigdhasu Chatterjee, University of Minnesota, USA
Sourav Chatterjee, Stanford University, California, USA
Probal Chaudhuri, Indian Statistical Institute, Kolkata, India
Amites Dasgupta, Indian Statistical Institute, Kolkata, India
Anirban DasGupta, Purdue University, Indiana, USA
Ratan Dasgupta, Indian Statistical Institute, Kolkata, India
J.K.Ghosh, Purdue University, Indiana, USA
Alok Goswami, Indian Statistical Institute, Kolkata, India
Krishanu Maulik, Indian Statistical Institute, Kolkata, India
Kanchan Mukherjee, University of Liverpool, UK
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N.K.Nagaraj, University of Maryland, Baltimore, USA
Dimitris Politis, University of California, San Diego, USA
Anindya Roy, University of Maryland, Baltimore County, USA
Herman Rubin, Purdue University, Indiana, USA
Arusharka Sen, Concordia University, Canada
Arindam Sengupta, University of Calcutta, India
Debapriya Sengupta, Indian Statistical Institute, Kolkata, India
Debasis Sengupta, Indian Statistical Institute, Kolkata, India
Bikas K.Sinha, Indian Statistical Institute, Kolkata, India
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