INDIAN STATISTICAL INSTITUTE
STAT-MATH UNIT, KOLKATA
EIGHTY-SECOND ANNUAL REPORT
(APRIL 2013 - MARCH 2014)

1. TEACHING AND TRAINING

Sreela Gangopadhyay:

(i) Taught M-Stat II Year **SET THRORY AND TOPOLOGY** from July, 2013 to December, 2013.

(ii) Teaching M-Stat II Year **ERGODIC THEORY** from January, 2014 to June, 2014.

1.1 Degree and Training Courses

1.2 Ph.D/D.Sc. Degrees

The following is the list of PhD degree awardees from Stat-Math Unit-Kolkata, along with the titles of their thesis:

1.3 International Statistical Education Centre(ISEC)

1.4 Professional Examination in Statistics

1.5 CONVOCATION

2. RESEARCH AND OTHER SCIENTIFIC ACTIVITIES

MATHEMATICS and STATISTICS

Research in Non-Commutative Geometry

Research in Commutative Algebra

It has been established that the Zariski Cancellation Conjecture does not Hold for the affine n-space in positive characteristic, for any n>2.

Neena Gupta

Investigations on affine threefolds of the form x^my=F(x, z, t) have been made when m >1 and necessary and sufficient conditions have been discovered for such hypersurfaces to be isomorphic to the affine three space.The main theorem proves the equivalence of ten conditions which reveal precise connections between lines in the plane, affine fibrations, the epimorphism and the cancellation problems and certain invariants of G_a-actions. The result thus brings under a common general framework several apparently different-looking questions which had been of long interest to mathematicians.

One of the criteria for the triviality of threefolds belonging to the above family provides a simple explanation for the non-triviality of the Russell-Koras threefold

as also the non-triviality of an Asanuma threefold (established earlier by Makar-Limanov and Neena Gupta respectively). Another consequence of these results is a partial extension of the Sathaye-Russell theorem on linear planes in 3-space to linear hypersurfaces in 4-space, thereby confirming a special case of the Embedding Conjecture of Abhyankar-Sathaye in arbitrary characteristic.

Neena Gupta

It has been shown that the polynomial ring k[X,Y] is cancellative over any (not necessarily perfect) field k. Earlier, this result had been established over perfect fields.

S.M. Bhatwadekar and Neena Gupta

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The concept of residual variable W in an affine fibration A over a Noetherian domain R has been investigated. One of the results show that the R-algebra A is stably polynomial over R[W] if and only if the module of differentials of A over R is stably free.

Prosenjit Das and Amartya K. Dutta

Research in Algebraic Topology

Research in Statistics

Non-parametric statistics, Rates of convergence in Central Limit Theorem (CLT), Law of iterated logarithms (LIL) and Characterization theorems. Growth curve model, Applications of Statistics to Industrial quality control, Physics, Sociology, Agriculture, Education and other natural sciences.

R. Dasgupta

Research in Differential Topology

Research in Harmonic Analysis

Research in Probability Theory

Preparing a book on Measure Theory and Probability in collaboration with Prof. T.K.Chanda (BIRU, ISI, Kolkata).

Sreela Gangopadhyay

Information economics. Spectral inference. Spectral properties of large dimensional random matrices, free probability.

Arup Bose

Studies have been made on the Vaserstein symbol which describes an elementary symplectic Witt group structure on the orbit space of unimodular rows of length three modulo elementary action. An uncountably infinite family of non-isomorphic three-dimensional affine algebras over the field of real numbers have been constructed for which the Vaserstein symbol is not injective.

D. R. Rao and Neena Gupta

Described the structure of faithfully flat algebras over Noetherian normal domains whose generic and codimension one fibres are punctured lines. Obtained minimal sufficient conditions for such an algebra to be finitely generated.

Neena Gupta

A G_a-action of rank three has been constructed on the affine four-space over the field of complex numbers for which the Grothendieck group of the ring of invariants is infinitely generated, thereby providing an infinite family of non-isomorphic projective modules which are counterexamples to a question of Miyanishi. It has also been shown that the ring of invariants of any rank three G_a-action on the affine four-space over any field of characteristic zero is regular if and only if the ring of invariants is a polynomial ring.

S.M. Bhatwadekar, Neena Gupta and Swapnil Lokhande

The problem of embedding of quadratic planes in the affine three space is being investigated

S.M. Bhatwadekar and Neena Gupta

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Research in History of Mathematics

3. INTERNALLY/EXTERNALLY FUNDED PROJECTS

3.1 Internal Funded Projects (completed)

Sl. No.	Name of the Project	Principal Investigators	Unit involved
1	Winter School in Probability	Dr. Krishanu Maulik and Dr. Parthanil Roy	Stat-Math Unit
2	Subfactors and Planar algebras	Dr. Shamindra Kumar Ghosh and Dr. Paramita Das	Stat-Math Unit

3.2 Externally Funded Projects (ongoing)

Sl. No.	Name of the project	A/c. No.	Principal Investigators	Unit involved	Funded by
1	Non Commutative Geometry groups and non-Commutative probability	248	Dr. Debashish Goswami	Stat-Math Unit	DST
2	J.C.Bose Fellowship	264	Prof. Arup Bose	Stat-Math Unit	DST
3	Harmonic Analysis on Riemannian Symmetric spaces Damek-Ricci spaces Homogenous Tress	203A	Prof. Rudra P. Sarkar/	Stat-Math Unit	NBHM
4	Risk Analysis, Ruin and Extremes (RARE)	NIL	Dr. Krishanu Maulik and Dr. Parthanil Roy	Stat-Math Unit	Marie Curie Research Staff Exchange Fellowship from the 7th European Community Framework Programme

4. CONFERENCES, SYMPOSIA, WORKSHOPS, LECTURES & SEMINARS (organised by the institute)

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4.1 Symposia and Conferences

4.2 Workshops and Training Programmes

R. Dasgupta:

Lecture in training program: Two lectures were given to the NASA trainees under the MOSPI training on Research Methods during August 5 to 10, 2013, at ISI.

4.3 Lectures and Seminars

1. Srinivas, S., TIFR, Mumbai(03.04.2013): Algebraic versus topological entropy for surface over finite fields.

2. Kar, Aditi, University of Oxford(08.04.2013): Topological Superrigidity.

3. Basu, Samik, RKMVU(29.04.2013): Homotopy Groups and Periodic Geodesics of closed 4-manifolds.

4. Datta, Basudeb, Department of Mathematics, IISc., Bangalore(06.05.2013): tight triangulations of manifolds.

5. Keshari, Manoj, K., IIT, Bombay(14.05.2013): Cancellation of projective modules.

6. Sen, Subhabrata, M.Stat. IInd year (MSP)(15.05.2013): De-preferential Attachment Random Graph Models.

7. Banerjee, Agnid, Purdue University(07.06.2013): Gradient bounds and Monotonicity of energy for some non-linear singular diffusion equations.

8. Basu, Sumanta, Department of Statistics, University of Michigan(21.05.2013): Network Granger Causality with Inherent Grouping Structure.

9. Munshi, Ritabrata, School of Mathematics, TIFR, Mumbai(20.05.2013): Subconvexity problem for degree three L-functions.

10. Dhar, Subhra, Sankar, Presidency University, Kolkata(03.06.2013): The Trimmed Mean in the Isotonic Regression.

11. Dasgupta, Ratan, Stat-Math, Kolkata(30.05.2013): Plant Sensitivity and Growth Curve of Elephant Foot Yam.

12. Gupta, Neena, Stat-Math, Kolkata(01.07.2013): On the affine threefold "x^my=F(x,z,t)".

13. Chaudhuri, Sanjay, Department of Statistics and Applied probability, National University of Singapore(22.07.2013): An Conditional Empirical Likelihood Approach to Combine Sampling Design and Population Level Information.

14. Biswas, Anup, Technion, Isreal(01.08.2013): Control of a queuing system under the moderate deviation scaling.

15. Mandal, Satya, University of Kansas(29.07.2013): How Topology shaped, and is still shaping, the Obstruction Theory in Algebra.

16. Biswas, Munmun, Stat-Math, Kolkata(25.07.2013): A Distribution-Free Two-Sample Run Test Applicable to High Dimensional Data.

17. Mandal, Satya, University of Kansas(30.07.2013): Localization and witt Groups of Cohen Macaulay Rings.

18. Ray, Goubab, University of British Columbia, Vancouver(05.08.2013): Unicellular Maps in High Genus.

19. Bandyopadhyay, Antar, ISI, Delhi and Kolkata(08.08.2013): Polya-Eggenberger-Friedman Urn Models: A new Approach.

20. Banerjee, Arindam, University of Virginia(06.08.2013): Bounds on Castelnuovo-Mumford regularity of edge ideals of simple graphs.

21. Narisetty, Naveen, N., Department of Statistics, University of Michigan, Ann Arbor(19.08.2013): Max-min notion of depth for functional data.

22. Adhikari, Das, Sukumar, HRI, Allahabad(19.08.2013): Visibility of integer lattice points.

23. Raghunathan, M.S., FRS, National Centre for Mathematics, Mumbai(17.09.2013): Geometry's Centre to Arithmetic-Faltings' theorem.

24. Bal, Kaushik, National Institute for Science Education and Research Institute of Physics Campus, Bhubaneshwar(09.09.2013): Existence result to a Quasilinear Singular Elliptic.

25. Raghunathan, M.S., National Centre for Mathematics, Mumbai(16.09.2013): On Betti Numbers of Locally Symmetric Spaces.

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26. Thomas, Viji, IISER, Thiruvanantapuram(12.09.2013): A journey from Gauss' lemma to prufer domains to Gaussian rings.

27. Bhattacharjee, Monika, Stat-Math, Kolkata(30.09.2013): Estimation of autocovariance matrices for infinite dimensional vector linear processes.

28. Sarkar, Joydeb, ISI, Bangalore(15.10.2013): Submodules and quotient modules of Hilbert modules.

29. Chaudhuri, Probal, Stat-Math, Kolkata(28.10.2013): An unbiased story of the method of least squares.

30. Das, Soumya, IISc. Bangalore(07.11.2013): Characterization of Siegel cusp forms by the growth of their Fourier coefficients.

32. Bhatwadekar, S.M., Bhaskaracharya Pratishthana(11.11.2013): A note on Quasi Laurent Polynomial Algebras in n variables.

33. Bhatwadekar, S.M., Bhaskaracharya Pratishthana(12.11.2013): Projective modules over the kernel of a locally nilpotent derivation.

34. Bhattacharjee, Monika, Stat-Math, Kolkata(18.11.2013): Limiting Spectral Distribution of symmetrized autocovariance matrices for Infinite Dinensional Vector Linear Process.

35. Kalelkar, Tejas, Washington University in St Louis(21.11.2013): Taut foliations of punctured-surface bundles.

36. Si Si, Graduate School of Information Science and Technology, Aichi Prefectural University, Japan(25.11.2013): Notes on Hida Distributions.

37. Si Si, Graduate School of Information Science and Technology, Aichi Prefectural University, Japan(27.11.2013): Some aspect of noises depending on time and space parameters, respectively.

38. Ritabrata Munshi, School of Mathematics, TIFR, Mumbai(28.11.2013): What is subconvexity?

39. Ritabrata Munshi, School of Mathematics, TIFR, Mumbai(03.12.2013): Subconvexity in GL(3).

40. Rabi Bhattacharya, The University of Arizona(02.12.2013): Some problems of Ruin and Survival in Economics: Applications of Limit Theorems in Probability.

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41. Ritabrata Munshi, School of Mathematics, TIFR, Mumbai(03.12.2013): Subconvexity in GL(3)

42. Ritabrata Munshi, School of Mathematics, TIFR, Mumbai(06.12.2013): Subconvexity in GL(3) – Part II.

43. Basudeb Datta, Indian Institute of Science, Bangalore(13.12.2013): Minimal crystallizations of 3-manifolds.

44. Soumendu Sundar Mukherjee, M.Stat. Final Year(26.12.2013): Limiting Spectra of Random Matrices.

45. Basudeb Datta, IISc., Bangalore(13.12.2013): Minimal crystallizations of 3-manifolds.

46. Ved Prakash Gupta, JNU, Delhi(27.12.2013): Representations of subfactor planar algebras.

47. Rohit Parikh, City University of New York(02.01.2014): Epistemic Reasoning and its Applications: an Introduction.

48. Rajat Subhra Hazra, Institute for Mathematics, University of Zurich(13.01.2014): Thick points for the Gaussian Free Field in 4 dimensions.

49. Rajat Subhra Hazra, Institute for Mathematics, University of Zurich(15.01.2014): Continuity and chemical distances in scale-free percolation.

50. Subhrashekhar Ghosh, Princeton University(22.01.2014): Large Deviations for zeros of random polynomials with iid exponential coefficients.

51. J. Sengupta, School of Mathematics, TIFR(03.02.2014): Introduction to The Spectral Theory of Automorphic Forms.

52. J. Sengupta, School of Mathematics, TIFR(05.02.2014): Introduction to The Spectral Theory of Automorphic Forms.

53. J. Sengupta, School of Mathematics, TIFR(07.02.2014): Introduction to The Spectral Theory of Automorphic Forms.

54. Krishna B. Athreya, Iowa State University(20.02.2014): Statistical estimation of an integral with respect to an infinite measure.

55. Pampa Paul, ISI, Stat-Math, Kolkata(17.02.2014): Borel-de Siebenthal discrete series and its associated holomorphic discrete series III.

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56. Sushil Gorai, ISI, Bangalore(05.03.2014): Polynomial convexity of finite union of totally-real subspaces of C^n of maximal dimension.

57. Makoto Yamashita, Ochanomizu University, Japan(11.03.2014): Poisson boundaries, Yetter-Drinfeld algebras, and classification of non-Kac compact quantum groups of SU(n) type.

58. Shigeyoshi Ogawa, Ritsumeikan University, Department of Mathematics(10.02.2014): On a Stochastic Fourier Transformation.

59. Chii-Ruey Hwang, Institute of Mathematics, Academia Sinica, Taipei, Taiwan(11.02.2014): Comparison of Monte Carlo markov Processes.

60. Siddhartha Bhattacharya, School of Mathematics, TIFR(18.03.2014): Groups with polynomial growth.

61. Siddhartha Bhattacharya, School of Mathematics, TIFR(19.03.2014): Groups with polynomial growth.

62. Bodhisattva Sen, Columbia University(24.03.2014): Nonparametric Convex Regression.

5. PUBLICATIONS OF THE INSTITUTE

6. SCIENTIFIC PAPERS AND PUBLICATIONS

6.1 Books Published

Dasgupta, R.: Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, (R.Dasgupta Ed.) 46, Springer (USA), 2013.

6.2 Papers published in journals:

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Bhatwadekar, S.M., Dutta, Amartya K. and Onoda, N.: On algebras which are locally A^1 in codimension-one, Transactions of the American Mathematical Society, 4497—4537, 365 (9), 2013,

Gupta, Neena: On the cancellation problem for the affine space $\A^3$ in characteristic p, *Inventiones Mathamaticae, 195, 279—288, 2014.

Rao, D.R. and Gupta, Neena: On the non-injectivity of the Vaserstein symbol in dimension three, Journal of Algebra, 399, 378—388, 2014.

Bose, Arup, Gangopadhyay, Sreela and Saha, Koushik: Convergence of a Class of Toeplitz Type Matrices. *Random Matrices: Theory Appl.* **02**, 1350006, No. 3 [21 pages] DOI: 10.1142/S2010326313500068, July, 2013.

Dasgupta, R.: Moment bounds for Strong-Mixing processes with applications. Statistical Paradigms, ISI PJ vol 14, World Scientific, 2014.

Dasgupta, R.: Characterization Theorems for Weibull Distribution with Applications. Tentatively accepted for publication in Journal of Environmental Statistics, 2014.

Dasgupta, R.: Characterization theorems based on conditional quantiles with applications. Journal of Environmental Statistics; February 2013, Volume 4, Issue 6, pp1-25, 2013.

Dasgupta, R.: Discussion of 'Agricultural epidemiology and environmental toxicity: some statistical perspective'. Jour.of Indian Soc.of Agricultural Statistics. 67(2), pp175-177, 2013.

Dasgupta, R.: Yam Growth Experiment and Above-ground Biomass as Possible Predictor. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 1, pp1-33, 2013.

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Dasgupta, R.: Non uniform Rates of Convergence to Normality for Two sample U-statistics in Non IID Case with Applications. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 4, pp60-88, 2013.

Dasgupta, R.: Optimal-Time Harvest of Elephant Foot Yam and Related Theoretical Issues. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 6, pp101-130, 2013.

H. Maity, R.Dasgupta and B.S.Mazumder: Evolution of Scour and velocity fluctuation due to turbulence around cylinders. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 7, pp131-148, 2013.

Dasgupta, R.: South Pole Ozone Profile and Lower Tolerance Limit. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 8, pp149-170, 2013.

Dasgupta, R.: Tuber Crop Growth and Pareto Model. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 10, pp185-198, 2013.

Dasgupta, R.: Growth Curve Model in Relation to Extremal Processes based on Stationary Random Variables. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 12, pp215-226, 2013.

Ratan Dasgupta and Avinash Dharmadikari: Growth curve for cumulative defects. Advances in Growth Curve Models: Topics from the Indian Statistical Institute. Springer Proceedings in Mathematics & Statistics, 46, Chapter 14, pp241-257, 2013.

Bose, Arup and Mukherjee, Soumendu Sundar: Bulk behaviour of Schur-Hadamard product of symmetric patterned random matrices. Random Matrix Theory and Applications, to appear, 2014.

Bhattacharjee, Monika and Bose, Arup: Estimation of autocovariance matrices for infinite dimensional vector linear processes. Journal of Time Series Analysi}, published online, DOI: 10.1111/jtsa.12063. Print version to appear, 2014.

Bhattacharjee, Monika and Bose, Arup: Consistency of large dimensional sample covariance matrix under weak dependence. Statistical Methodology. Special issue in memory of Kesar Singh, 20, 11--26. DOI: 10.1016/j.stamet.2013.08.005, 2014.

Bose, Arup; Chakravarty, Satya R. and D'Ambrosio, Conchita: Richness orderings. Journal of Economic Inequality, 12, 5--22. DOI:10.1007/s10888-013-9249-4, 2014.

Banerjee, Sayan and Bose, Arup: Noncrossing partitions, Catalan words and the semicircle law. Journal of Theoretical Probability. 26, 2, 386--409. DOI: 10.1007/s10959-011-0365-4, 2013.

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Basak, Anirban, Bose, Arup and Sen, Sanchayan: Limiting spectral distribution of sample autocovariance matrices. To appear in Bernoulli Journal. Accepted version available on journal website, 2013.

Bose, Arup and Gupta, Barnali: Mixed markets in a bilateral monopoly. Journal of Economics}. 110, 141-164. DOI. 10.1007/s00712-012-0310-8, 2013.

Bose, Arup, Saha, Koushik and Gangopadhyay, Sreela: Convergence of a class of Toeplitz type matrices. Random Matrix Theory and Applications, Vol 02, No. 03, 1350006 [21 pages]. DOI: 10.1142/S2010326313500068, 2013.

Bose, Arup, Pal, Debashis and Sappington, David: The impact of public ownership in the lending sector. Canadian Journal of Economics, to appear, 2013.

Bose, Arup and Sen, Sanchayan: Finite diagonal random matrices. Journal of Theoretical Probability, 26, 3, 819-835. DOI:10.1007/s10959-011-0378-z, 2013.

Subhajit Dutta, Probal Chaudhuri and Anil Ghosh: Linear Discriminant Analysis of Character Sequences Using Occurrences of Words, Statistica Sinica, vol. 24, pp. 493-514, 2014.

Anirvan Chakraborty and Probal Chaudhuri: On Data Depth In Infinite Dimensional Spaces, Annals of the Institute of Statistical Mathematics, vol. 66, pp. 303-324. 2014.

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6.3 Papers published in Conference Proceedings :

Dutta , Amartya K.:On A^1-patch by a regular sequence, Proceedings of the Commutative Algebra and Algebraic Geometry (CAAG 2010) conference, H. Flenner and D.P. Patil, Ramanujan Mathematical Society Lecture Note Series 17, 69—76, 2013.

6.4 Papers published in books

7. VISITING SCIENTISTS AND HONOURS & AWARDS

7.1 VISITING SCIENTISTS

1. B. Subhash, School of Mathematical Sciences, NISER, Bhubaneswar, May 01, 2013 to June 30, 2013.

2. Ashis Mandal, Stat-Math Unit, ISI, Kolkata, April 01, 2013 to April 30, 2013.

3. Satya Mandal, Department of Mathematics, University of Kansas, USA, July 25, 2013 to August 02, 2013.

4. Swagata Sarkar, Stat-Math Unit, ISI, Kolkata, August 01, 2013 to March 31, 2013.

5. Pampa Paul, The Institute of Mathematical Sciences, Chennai, June 01, 2013 to March 31, 2014.

6. Sreela Gangopadhyay, Stat-Math Unit, ISI, Kolkata, July 01, 2013 to June 30, 2014

7. Pradipta Banerjee, Stat-Math Unit, ISI, Kolkata, August 01, 2013 to March 31, 2014.

8. Tathagata Basak, Department of Mathematics, Iowa State University, USA, July 08, 2013 to August 17, 2013.

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9. Nobuharu Onoda, Department of Mathematics, University of Fukui, Japan, December 25, 2013 to January 06, 2014.

10. Teruo Asanuma, Faculty of Science, University of Toyama, Japan, December 15, 2013 to January 06, 2014.

11. Kaushik Bal, National Institute of Science Education & Research, Bhubaneshwar, September 06, 2013 to September 09, 2013.

12. Viji Z. Thomas, IISER, TVM, Trivandrum, September 07, 2013 to September 14, 2013.

13. M.S. Raghunathan, IIT, Mumbai, September 15, 2013 to September 18, 2013.

14. Pratyusha Chattopadhyay, Stat-Math Unit, ISI, Kolkata, April 01, 2013 to October 31, 2013.

15. Amiya Mukherjee, Stat-Math Unit, ISI, Kolkata, December 01, 2013 to November 30, 2014.

16. Shilpa Suresh Gondhali, Stat-Math Unit, ISI, Kolkata, April 01, 2013 to September 30, 2013.

17. Pradip Kumar, Harish Chandra Research Institute, Allahabad, January 01, 2014 to June 30, 2014.

18. Si Si, Faculty of Information Science & Technology, Aichi :Prefectural University, Japan, November 24, 2013 to November 30, 2013.

19. S.M. Bhatwadekar, Bhaskaracharya Pratishthana, Pune, November 10, 2013 to November 20, 2013.

20. Sameer Chavan, Department of Mathematics, IIT Kanpur, July 11 -20, 2013.

21. Tereu Asanuma, University of Toyama, December 15, 2013 to January 01, 2014.

22. Partha Sarathi Chakraborty, IMSc., Chennai, December 16, 2013 to January 04, 2014.

23. Rohit Parikh, City University of New York, January 01- 04, 2014.

24. Jyotirmoy Sengupta, School of Mathematics, TIFR, February 01-11, 2014.

25. Saugata Basu, Department of Mathematics, Purdue University, February 07, 2014.

26. Krishna B. Athreya, Iowa State University, U.S.A. February 18-23, 2014.

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27. Partha Pratim Ghosh, ISINE, March 10, 2014 to April 202014.

7.2. HONOURS AND AWARDS

Gupta, Neena:

(INSPIRE Faculty at Stat-Math Unit, ISI, Kolkata). Chosen an associate of the Indian Academy of Science 2013--2018.

Gupta, Neena:

(INSPIRE Faculty at Stat-Math Unit, ISI, Kolkata). Awarded the inaugural Saraswathi Cowsik Medal *by * Tata Institute of Fundamental Research (TIFR) in 2013. The award is given for contribution to an outstanding paper in any field published in the three years prior to the award.

Gupta, Neena:

(INSPIRE Faculty at Stat-Math Unit, ISI, Kolkata). Awarded INSA Medal for Young Scientist in 2014.

8. SCIENTIFIC ASSIGNMENTS

8.1 Editorship

Bose, Arup:
Associate editor of Statistical Methodology.

Associate editor of Indian Journal of Pure and Applied Mathematics.

Associate editor of Statistics and Probability Letters.

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Editorial Board Member of Lecture Note Series of Ramanujan Mathematical Society.

Chaudhuri, Probal:

Continued as an Editor of International Statistical Review and STAT and as an Associate Editor of Statistical Methodology and Advances in Statistical Analysis.

8.2 Scientific Assignments/Academic Visits Abroad

Maulik, Krishanu:

Invited speaker, 2nd IMS-Asia Pacific Rim Meeting, Tokyo, Japan, July 2-4, 2013.

Srivastava, S.M.:

Visited University of Athens, September 03 to September 06, 2013.

Srivastava, S.M.:

Visited University of Munster, Germany, September 06 to October 06, 2013.

Bose, Arup:

Visited University of Cincinnati during March 25—31, 2013, Dept of Economics for collaboration with Dr. Debashis Pal. Delivered a talk titled Extreme Eigenvalues of Random Matrices in the Probability Seminar of Dept. of Mathematics.

Bose, Arup:

Visited Concordia University March 31--April 12 for collaboration with Dr. Arusharka Sen.

Bose, Arup:

Delivered the invited CRM Colloque in Probability. Montreal, April 04, 2013.

Bose, Arup:

Delivered the invited CRM Colloque in Statistics. Montreal, April 12, 2013.

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27. Partha Pratim Ghosh, ISINE, March 10, 2014 to April 202014.

7.2. HONOURS AND AWARDS

Gupta, Neena:

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8. SCIENTIFIC ASSIGNMENTS

8.1 Editorship

Bose, Arup:
Associate editor of Statistical Methodology.

Associate editor of Indian Journal of Pure and Applied Mathematics.

Associate editor of Statistics and Probability Letters.

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Bose, Arup:

Visited Dept. of Statistics, Michigan State University, May 27, 2013—May 29, 2013. Delivered a lecture titled ``Consistency of large dimensional sample covariance matrix under weak dependence".

Bose, Arup:

Visited Dept. of Biostatistics, University of Louisville, May 30, 2013—May 31, 2013. Delivered a lecture titled ``Consistency of large dimensional sample covariance matrix under weak dependence".

Bose, Arup:

Visited Dept. of Economics, University of Cincinnati, June 01, 2013—June 14, 2013, for collaboration with Professor Debashis Pal.

Bose, Arup:

Advanced School and Workshop on Random Matrices and Growth Models. ICTP, Trieste, Italy, Sept.~02--13, 2013. Invited speaker on Patterned Random Matrices.

Bose, Arup:

Workshop on Multivariate Analysis and Random Matrices: New Tendencies. CIMAT, Guanajuato, Mexico, Sep. 19-21, 2013. Invited speaker, mini course on Limiting spectral distribution of patterned random matrices.

Bose, Arup:

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Visited University of Cincinnati, Dept of Econimics, Nov 22—Dec 06, to deliver a lecture and collaborate with Prof. Debashis Pal.

Bose, Arup:

Visited Indiana University--Purdue University at Indianapolis (IUPUI), Dec 07—08 to deliver a lecture and have research discussions.

Bose, Arup:

Visited University of Minnesota Dec 09—19 to collaborate with Professor Snigdhansu Chatterjee.

Chaudhuri, Probal:

Participated and delivered an invited lecture at the ISI World Statistics Congress in Hong-Kong in August 2013.

Visited the Institute of Mathematical Science in National University of Singapore in March 2014. Participated and delivered an invited public lecture as well as an invited technical lecture in a Workshop on Classification and Regression Trees there.

8.3 Scientific Assignments/Academic Visits in India

Dutta , Amartya Kumar:
Visited Pondicherry University, Sri Aurobindo International Centre of Education and Chennai Mathematical Institute during February 5-14, 2014 and delivered talks on the following topics: ``A new result on Polynomial Rings" (8 February at SAICE), ``How much do we know about Polynomial Rings?" (10 February at Pondicherry U.),

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Bose, Arup:

Visited Dept. of Statistics, Michigan State University, May 27, 2013—May 29, 2013. Delivered a lecture titled ``Consistency of large dimensional sample covariance matrix under weak dependence".

Bose, Arup:

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Bose, Arup:

Workshop on Multivariate Analysis and Random Matrices: New Tendencies. CIMAT, Guanajuato, Mexico, Sep. 19-21, 2013. Invited speaker, mini course on Limiting spectral distribution of patterned random matrices.

Bose, Arup:

SMS

Gupta, Neena:

Participated in a Workshop and Conference on Classical and Nonstable K-theory (15--24 July) held at Tata Institute of Fundamental Research, Mumbai, and delivered a talk on 23rd July 2013.

Gupta, Neena:

Delivered an invited talk at the Ramakrishna Mission Vivekananda University, Kolkata, on 4th September 2013.

Gupta, Neena:

Delivered an invited talk at the Chennai Mathematical Institute, Chennai, on 25th September 2013.

Gupta, Neena:

Delivered an invited talk at the Tata Institute of Fundamental Research, Mumbai, on 31st October 2013, on the occasion of being awarded the inaugural S. Cowsik Medal on the Founder's Day (30 October) of TIFR.

Gupta, Neena:

Visited School of Mathematics, TIFR, during 5th-13th December, 2013.**Gupta, Neena:**

Participated in the International Conference On Automorphisms of affine Varieties organised by ICTS (17--27th February) held at Centre for Theoretical Sciences Kerela, School of Mathematics, Kozhikode and delivered an invited talk on 21st February 2014.

Gupta, Neena:

Participated in the Discussion Meeting on ``Projective Modules and

``History of Galois Theory" (12 February at CMI) and ``G_a-action on Affine Varieties" (13 February at CMI).

Dutta, Amartya, Kumar:
Delivered the R.C. Gupta Endowment Lecture at the 43rd Annual Conference of the AIMT (Association for Improvement of Mathematics Teaching) on 16 February 2014.

Dutta, Amartya, Kumar:
Delivered a talk ``Glimpses from Mathematics in Ancient India" at the UNESCO programme on International Understanding for Human Unity at the Ramakrishna Mission Institute of Culture, Kolkata, on 20 February 2014.

Dutta, Amartya, Kumar:
Delivered a talk ``Some gems from Ancient Indian Mathematics" on 22 February 2014 at the International Seminar on History and Philosophy of mathematics held at the Bose Institute to observe the 150th Birth Anniversary of Sir Ashutosh Mookherjee.

Dutta, Amartya, Kumar:
Participated in the Discussion Meeting on Projective Modules and Affine Fibrations at IIT Bombay during March 10--14, 2014, and delivered a talk on The Epimorphism Problem on 13 March.

Dutta, Amartya, Kumar:
Delivered several lectures on ``Mathematics and Astronomy in Ancient India" and on ``Science and Scientific Temper in Modern India" in the Indology course of the Ramakrishna Mission Institute of Culture (RMIC) during 2013-14. He was a moderator and an examiner for the Examinations of the Indology course (June 2013).

SMS

Affine Fibrations" (10th - 14th March) held at IIT Bombay, Mumbai and delivered a talk on 14th March 2014.

Ganguly, Satadal:

Delivered scientific talk at the conference Analytic Theory of Automorphic Forms held at the Institute of Mathematical Science, Chennai from Dec 09, 2013 to Dec 13, 2013.

Ganguly, Satadal:

Visited School of Mathematics, Tata Institute of Fundamental Research, Mumbai from Oct 01 to Oct 21, 2013 for collaborative research.

Bose, Arup:

Statistics 2013. Conference at C R Rao Advanced Institute of Math., Stat. and Comp.Sc, Hyderabad, Dec. 28-31, 2013. Invited speaker and chairman of a session.

Bose, Arup:

STATQUEST 2014 (Seminars for research scholars). Calcutta University, March 27, 2014. Special invited talk.

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19.5.14

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