

Arindam Chatterjee

Stat-Math Unit
Indian Statistical Institute
7, S.J.S.S. Marg
New Delhi 110016
INDIA

Cell: 91 9873875921
Office: 91 (11) 41493920
Email: cha@isid.ac.in
<http://www.isid.ac.in/~cha/>

Education

Ph.D. in Statistics, Iowa State University, June 2007.

Co-Advisors: Professor S. N. Lahiri and Professor T. Maiti

M.Sc. in Statistics, University of Calcutta, India, 2003.

B.Sc. in Statistics, University of Calcutta, India, 2001.

Academic Experience

Assistant Professor, Stat-Math Unit, Indian Statistical Institute, New Delhi,
Aug 2010 - present.

Postdoctoral Fellow, Department of Statistics, Texas A&M University,
Sep 2007 - July 2010.

Visiting Research Fellow, Department of Mathematics and Statistics,
University of Melbourne, Sep 2009 - Oct 2009.

Graduate Visiting Research Assistant, Department of Statistics, Texas A&M University,
Aug 2006 - Aug 2007.

Graduate Research Assistant, Center for Survey Statistics and Methodology,
Department of Statistics, Iowa State University, Jan 2004 - June 2006.

Research Interests

Bootstrap, Edgeworth Expansions, High-Dimensional Problems, Penalized Regression, Spectral estimation in Time series, Finite Population Inference, Statistics for Networked Data, Astrostatistics.

Honors and Awards

Microsoft Young Faculty Award, 2011. Awarded from Microsoft Research Labs, India, for young faculty members.

George W. Snedecor Award, 2006. Awarded to the most outstanding Ph.D. candidate in the Department of Statistics, Iowa State University.

Holly and Beth Fryer Award, 2005. Awarded to the best graduate student in the second year of the Ph.D. program in Department of Statistics, Iowa State University.

Research Papers

1. Chatterjee, A. and Lahiri, S. N. (2011). Bootstrapping Lasso estimators. **Journal of the American Statistical Association**, **106** (494), 608-625.
2. Chatterjee, A. and Hall, P. (2011). High dimensional classification when useful information comes from many, perhaps all features. (SOLICITED PAPER FOR THE GOLDEN JUBILEE VOLUME OF THE **Journal of the Indian Statistical Association**).
3. Chatterjee, A. and Lahiri, S. N. (2011). Strong consistency of Lasso estimators. **Sankhya Ser A.**, **73** (1), 55-78.
4. Chatterjee, A. (2011). Asymptotic properties of sample quantiles from a finite population. **Annals of the Institute of Statistical Mathematics**, **63** (1), 157-179.
5. 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.
6. 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.
7. Lahiri, S. N., Chatterjee, A. and Maiti, T. (2007). Normal approximation to the hypergeometric distribution in nonstandard cases and a sub-Gaussian Berry Esseen theorem. **Journal of Statistical Planning and Inference**, **137** (11), 3570-3590. (SOLICITED PAPER FOR A SPECIAL VOLUME IN HONOR OF PROF. S. N. ROY)

Working Papers

8. Chatterjee, A. and Lahiri, S. N., Higher order accuracy of bootstrapped Adaptive Lasso estimators.
9. Chatterjee, A. and Lahiri, S. N., Asymptotics for Bridge estimators in high dimensions.

10. Chatterjee, A. and Lahiri, S. N., Edgeworth expansions for spectral density estimates.
11. Chatterjee, A. and Subba Rao, S., Testing for stationarity in continuous time series.
12. Adhya, S. and Chatterjee, A., Variable selection under model misspecification.
13. Adhya, S. and Chatterjee, A., Variance estimation in finite populations under sparsity.
14. Chatterjee, A., Lahiri, S. N. and Carroll, R. J., Choice of regularization parameter in Adaptive Lasso.
15. Chatterjee, A. and Lahiri, S. N., Edgeworth expansions in high dimensional setup.
16. Lahiri, S. N. and Chatterjee, A., Higher order properties of block bootstrap confidence intervals.
17. Chatterjee, A., Lahiri, S. N. and Nordman, D., Block empirical likelihood is not Bartlett-correctible.
18. Lahiri, S. N. and Chatterjee, A., Edgeworth expansions for Gibbs fields.

Unrefereed Proceedings Papers

1. Chatterjee, A., Fuller, W. A. and Opsomer, J. D. (2005). Replication variance estimation for Imputed data. **Proceedings of the Survey Research Methods Section, American Statistical Association**, (CD-ROM), American Statistical Association.

Presentations

Invited Presentations

Variable selection and penalized robust regression for spatial data. At the **International Environmetrics Society Conference, 2012**, Hyderabad, India, January 2012.

Higher order properties of the bootstrapped Adaptive Lasso estimator. At the **2011 IISA Conference**, Raleigh, NC, April 2011.

Bootstrap for Adaptive Lasso estimators. At the **Department of Statistics, Northern Illinois University**, Dekalb, IL, April 2011.

Asymptotics for Lasso-type estimators in high dimensions. At the **Conference on Resampling Methods and High dimensional data, Texas A&M University**, College Station, TX, March 2010.

Asymptotics for the bootstrapped Lasso estimator. At the **Department of Mathematics and Statistics, Indian Institute of Technology**, Kanpur, India, Nov 2009.

Bootstrapping Lasso estimators. At the **Conference on New directions in Asymptotic Statistics, University of Georgia**, Athens, GA, May 2009.

Bootstrapping Lasso estimators. At the **Department of Statistics, University of Michigan**, Ann-Arbor, MI, Feb 2009.

Edgeworth expansions for spectral density estimates. At the **Conference on Recent Advances in Statistics in honor of Prof. H. L. Koul's 65th birthday**, Michigan State University, East Lansing, MI, May 2008.

Topic Contributed Presentations

Bootstrapping Lasso estimators. At the **Joint statistical meetings of the ASA, ENAR/WNAR, IMS, SSC**. Washington, DC, Aug 1-6, 2009.

Finite population quantile estimation and the bootstrap. At the **Joint statistical meetings of the ASA, ENAR/WNAR, IMS, SSC**. Denver, CO, Aug 2-7, 2008.

Contributed Presentations

Variance Estimation for Fractionally Imputed Survey Data. At the **Joint statistical meetings of the ASA, ENAR/WNAR, IMS, SSC**. Minneapolis, MN, Aug 7-11, 2005.

Travel funding

Travel grant of Rs. 82,930/- for the 2011 IISA conference and academic visits from the National Board for Higher Mathematics (NBHM), Department of Atomic Energy, Govt. of India.

Teaching

Instructor for Time Series Analysis at ISI Delhi (Spring 2012).

Introductory Time Series course with emphasis on applications for M.Stat First year students.

Expected Enrollment: 20.

Instructor for Statistical Inference I at ISI Delhi (Fall 2011).

Graduate level course on Topics in classical inference for M.Stat First year students.

Enrollment: 21.

Instructor for a Special topics course on Bootstrap methods, at ISI Delhi (Spring 2011).

An advanced course on Bootstrap for M.Stat Second year students.

Enrollment: 3.

Instructor for Stat 271: Introductory Probability and Statistics, at ISI Delhi (Autumn 2010).

An introductory course in Probability and Statistics at the M.S. level for First year Economics majors.

Text: *An Introduction to Probability and Statistics*, Rohatgi & Saleh (2001).

Enrollment: 22.

Instructor for Stat 611: Theory of Statistics - Inference, at Texas A&M University (Spring 2010).

Independent charge for teaching Graduate course in Statistical Inference at the M.S. level.

Text: *Statistical Inference*, Casella & Berger (2001).

Enrollment: 38.

Graduate Courses

Bootstrap and Machine Learning, Time Series Analysis, Real Analysis, Advanced Probability, Nonparametric Methods, Advanced Inference, Survey Sampling, Statistical Computation, Linear Models, Design of Experiments, Advanced Statistical Methods, Bayesian Analysis, Stochastic Processes, Wavelets (Math), Enumerative Combinatorics (Math), Fourier Analysis (Math), Learning Theory (Math).

Professional Activities

Professional Society Memberships

Institute of Mathematical Statistics, 2005–Present.

Refereeing

Annals of Statistics, Biometrics, Journal of Statistical Planning and Inference, Electronic Journal of Statistics, Metrika, Statistics and Probability Letters, Statistical Methodology, Sankhya (Series A), Computational Statistics and Data Analysis.

Miscellaneous

Computer Skills

Languages: R, S-Plus, \LaTeX .

Operating systems: Windows, Linux.

References

Available upon request.