

CURRICULUM VITAE

PARTHANIL ROY

Date of Birth: October 23, 1978

Citizenship: Indian

Address: Res: 801 Cherry Lane Apt 206
East Lansing, MI 48823, USA
Phone: +15175991293

Off: A408 Wells Hall
Department of Statistics and Probability
Michigan State University
East Lansing, MI 48824, USA
Phone: +15173550318
Fax: +15174321405

E-Mail: roy@stt.msu.edu

Webpage: <http://www.stt.msu.edu/~roy/>

Academic Degrees Earned:

- PhD in Operations Research Cornell University, 2008
(Worked with Prof. Gennady Samorodnitsky on *Stable Random Fields*)
- Master of Statistics Indian Statistical Institute, 2002
- Bachelor of Statistics Indian Statistical Institute, 2000

Academic Positions Held:

- *September 2008 - Present*: Assistant Professor, Department of Statistics and Probability, Michigan State University
- *September 2007 - August 2008*: Post-doctoral Fellow, RiskLab, Department of Mathematics, ETH Zurich
- *August 2002 – August 2007*: Graduate Assistant, School of Operations Research and Information Engineering, Cornell University

Research Interests:

- *Probability Theory*: Random fields, extreme values, heavy tails, long range dependence
- *Statistics*: Statistical inference for heavy-tailed distributions and processes
- *Ergodic Theory*: Nonsingular groups actions and their properties

Publications:

Estimation of angular and hidden angular densities using the kernel method (joint work with Bikramjit Das): In preparation

Large deviation issues of some long memory stable random fields (joint work with Vicky Fasen): In preparation

High risk scenarios for heavy tailed SD -spherical distributions (joint work with Natalia Lysenko): In preparation

Ergodic properties of sum and max-stable stationary random fields via null and positive group actions (joint work with Yizao Wang and Stilian A. Stoev): Submitted, available in <http://arxiv.org/abs/0911.0610>

Parameter estimation for tempered power law distributions (joint work with Mark M. Meerschaert and Qin Shao): Submitted, available in <http://www.stt.msu.edu/~roy/TempParetoEst.pdf>

Nonsingular group actions and stationary SoS random fields: To appear in *Proceedings of the American Mathematical Society*, available in <http://arxiv.org/abs/0910.2186>

Ergodic theory, Abelian groups, and point processes induced by stable random fields: To appear in *Annals of Probability*, available in <http://arxiv.org/abs/0712.0688>

Book review of "Introductory Lectures on Fluctuations of Lévy Processes with Applications" written by Andreas B. Kyprianou: *Journal of the American Statistical Association* (2009) 104(488): 1719

Multivariate extremes of generalized skew-normal distributions (joint work with Natalia Lysenko and Rolf Waeber): *Statistics and Probability Letters* (2009) 79(4): 525-533; available in <http://www.stt.msu.edu/~roy/MultExtGSNfinal.pdf>

Stationary symmetric α -stable discrete parameter random fields (joint work with Gennady Samorodnitsky): *Journal of Theoretical Probability* (2008) 21: 212–233; also available in <http://arxiv.org/abs/math.PR/0607587>

Stable Random Fields: PhD Thesis, Cornell University (2008), also available in <http://www.stt.msu.edu/~roy/My%20Thesis.pdf>

Maharam extension for nonsingular group actions (joint work with Gennady Samorodnitsky): *Cornell ORIE Technical Report TR001453* (2006); also available in <http://arxiv.org/abs/math.DS/0611891>

Teaching Experience:

- Undergraduate Course:
 - *Basic Engineering Probability and Statistics* in Summer 2004
- Graduate Courses:
 - *Theory of Probability and Statistics II* in Spring 2009 and Spring 2010
 - *Theory of Probability and Statistics I* in Fall 2008 and Fall 2009
 - *Theory of Extremes and Point Processes* in Spring 2008

Seminar and Conference Organization:

- Organizing an invited session on *Heavy Tails and Extreme Value Theory* in the 2nd *IMS Asia Pacific Rim Meeting*, Tokyo, July 3 - 6, 2011
- Presently, *Chair of the Colloquium Committee*, Department of Statistics and Probability, Michigan State University
- Served in the *Colloquium Committee*, Department of Statistics and Probability, Michigan State University for the academic year 2008-09
- Helped in organizing *The Mathematics and Statistics of Quantitative Risk Management*, Mathematisches Forschungsinstitut Oberwolfach, March 2008
- Helped in organizing *Workshop on Heavy Tails and Long Range Dependence*, Cornell University, April 2005

Student Advising:

- Supervised the Master's Thesis of Rolf Waeber at ETH Zurich on *Multivariate Skew-Normal Distributions and their Extremal Properties*, 2007-08
- Presently co-advising the Ph.D. Thesis of Yizao Wang, PhD student of Department of Statistics, University of Michigan (jointly with Stilian A. Stoev)

Course Development:

Served in a committee to revise the curriculum of two core courses (*STT 861, 862: Theory of Probability and Statistics*) of the master's program of Department of Statistics and Probability, Michigan State University in Fall 2009

Other Academic Involvements:

- Presently, *Chair of the Advisory Committee*, Department of Statistics and Probability, Michigan State University
- Member of the *Thesis Advising Committee* of Dan Cheng, PhD student of Department of Statistics and Probability, Michigan State University
- Member of the *Master's Exam Committee*, Department of Statistics and Probability, Michigan State University

Refereeing: Refereed papers for the following journals:

- *Stochastic Models*
- *Statistics and Probability Letters*
- *Bernoulli*
- *Monatshefte für Mathematik*
- *Extremes*

Conferences Attended:

- *The 15th INFORMS Applied Probability Society Conference*, Cornell University, Ithaca, New York, July 12 - 15, 2009
- *Graybill VIII: 6th International Conference on Extreme Value Analysis*, Fort Collins, Colorado, June 22 - 26, 2009
- *Workshop on Infinitely Divisible Processes*, CIMAT, Guanajuato, Mexico, March 15 - 21, 2009
- *Risk Modelling in Insurance and Finance in honour of Jan Grandell's 65th birthday*, KTH, Stockholm, June 13, 2008
- *The Mathematics and Statistics of Quantitative Risk Management*, Mathematisches Forschungsinstitut Oberwolfach, March 16 - 22, 2008
- *Recent Advances in Probability*, Indian Statistical Institute, Kolkata, December 11 - 15, 2007
- *Fifth Northeast Probability Seminar*, Columbia University, November 16 - 17, 2006
- *Fifth International Symposium on Probability and its Applications and X Brazilian School of Probability*, Rio de Janeiro, Brazil, July 30 - August 4, 2006
- *Seminar on Stochastic Processes 2006*, Princeton University, Princeton, March 23 - 25, 2006
- *International Conference on Harmonic Analysis and Ergodic Theory*, Depaul University, Chicago, December 2 - 4, 2005
- *First Cornell Summer School in Probability*, Cornell University, Ithaca, July 10 - 23, 2005
- *Workshop on Heavy Tails and Long Range Dependence*, Cornell University, Ithaca, April 22 - 24, 2005
- *2005 Seminar on Stochastic Processes*, Cornell University, Ithaca, March 24 - 26, 2005

Invited Talks:

- *Department of Statistics, Columbia University*, December 2009
- *Probability Seminar, Department of Mathematics, Purdue University*, December 2009
- *Department of Mathematics, Ramakrishna Mission Vivekananda University, Belur*, August 2009
- *Theoretical Statistics and Mathematics Unit, Indian Statistical Institute, Kolkata*, August 2009
- *RiskLab Seminar, Department of Mathematics, ETH Zurich*, May 2009

- *Seminar of Mathematical Statistics, Mathematics Centre, Technical University of Munich, May 2009*
- *Workshop on Infinitely Divisible Processes, CIMAT, Guanajuato, Mexico, March 2009*
- *Graduate Colloquium, School of Operations Research and Information Engineering, Cornell University, March 2009*
- *Department of Statistics and Probability, Michigan State University, February 2009*
- *Theoretical Statistics and Mathematics Unit, Indian Statistical Institute, Kolkata, January 2009*
- *Statistics Colloquium, Department of Mathematics, University of Bern, April 2008*
- *The Mathematics and Statistics of Quantitative Risk Management, Mathematisches Forschungsinstitut Oberwolfach, March 2008*
- *Seminar on Mathematical Statistics, Department of Mathematics, University of Copenhagen, March 2008*
- *Graduate Colloquium, Department of Mathematics, ETH Zurich, February 2008*
- *Mathematical Statistics Seminar, Department of Mathematics, KTH Stockholm, February 2008*
- *Recent Advances in Probability, Indian Statistical Institute, Kolkata, December 2007*
- *Department of Mathematics, Indian Institute of Science, Bangalore, December 2007*
- *Seminar on Stochastic Processes, Department of Mathematics, ETH Zurich, November 2007*
- *Seminar of Statistics, Ecole Polytechnique Federale de Lausanne, November 2007*
- *Department of Statistics, Columbia University, February 2007*
- *Probability Seminar, Department of Statistics, University of California, Berkeley, February 2007*
- *Department of Statistics and Probability, Michigan State University, February 2007*
- *Lehigh Math Colloquium, Department of Mathematics, Lehigh University, January 2007*
- *Seminar on Financial and Insurance Mathematics, Department of Mathematics, ETH, Zurich, January 2007*
- *Statistics Seminar, Department of Mathematical Sciences, Binghamton University, December 2006*
- *Probability Seminar, Department of Mathematics, Cornell University, November 2006*
- *Probability Seminar, Department of Mathematics, University of Rochester, October 2006*

- *Theoretical Statistics and Mathematics Unit, Indian Statistical Institute, Kolkata, May 2006*
- *Department of Mathematics and Statistics, State University of New York, Albany, March 2006*
- *Theoretical Statistics and Mathematics Unit, Indian Statistical Institute, Kolkata, August 2005*

Future Invitations:

- Invited talk in *Department of Mathematics and Statistics, University of Laval, Quebec, March 2010*
- Invited talk in *Montreal Seminar of Actuarial and Financial Mathematics, March 2010*
- Invited talk in *International Conference on Applied Analysis, Donghua University, Shanghai, June 5 - 8, 2010*
- Visit to *RiskLab, Department of Mathematics, ETH Zurich, July 2010*
- Visit to *Mathematics Centre, Technical University of Munich, August 2010*

Prizes and Awards:

- 2007: *Outstanding Teaching Award* for the best teaching assistant at the School of Operations Research and Information Engineering, Cornell University
- 2006: *Laha Travel Award* from Institute of Mathematical Statistics
- 2002-2004: *Shum Award* from School of Operations Research and Industrial Engineering, Cornell University on having been selected as one of the very strongest applicants for PhD
- 2002-2003: *Graduate Fellowship* from Cornell University
- 2002: *Mahalanobis International Symposium on Statistics Prize (Gold Medal)* on having been selected as the most outstanding Master of Statistics student in Indian Statistical Institute

References:

- *Dr. Gennady Samorodnitsky*
School of Operations Research and Information Engineering
Cornell University
Ithaca, NY 14853, USA
Phone: +16072559141
E-mail: gennady@orie.cornell.edu
Homepage: <http://people.orie.cornell.edu/~gennady/>

- *Dr. Paul Embrechts*
Department of Mathematics
ETH Zurich, HG F42.3
Raemistrasse 101
8092 Zurich, Switzerland
Phone: +41446323419
E-mail: embrecht@math.ethz.ch
Homepage: <http://www.math.ethz.ch/~embrecht/>
- *Dr. Sidney Resnick*
School of Operations Research and Information Engineering
Cornell University
Ithaca, NY 14853, USA
Phone: +16072551210
E-mail: sir1@cornell.edu
Homepage: <http://people.orie.cornell.edu/~sid/>