Partha Pratim Ghosh

Postdoctoral Researcher in Probability Theory
Ruhr-Universität Bochum

Personal Details

Place and Date of Birth :	Midnapore, India | 10 October 1993
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Work Experience

Nov 2025 – present	Postdoctoral Researcher at Fakultät für Mathematik, Ruhr-Universität Bochum Mentor: Christoph Thäle
Nov 2022 – Oct 2025	Postdoctoral Researcher at Institut für Mathematische Stochastik, Technische Universität Braunschweig Mentor: Benedikt Jahnel
Jul 2022 – Sep 2022	Visiting Scientist at Theoretical Statistics and Mathematics Unit, Indian Statistical Institute, Delhi Centre

Scientific Education

Sep 2016 – May 2022	PhD in Statistics, Indian Statistical Institute, Delhi Centre Advisor: Antar Bandyopadhyay Thesis: A Last Progeny Modified Branching Random Walk
Jul 2014 – May 2016	Master of Statistics (M. Stat.), Indian Statistical Institute, Kolkata Specialization: Mathematical Statistics and Probability
Jul 2011 – May 2014	Bachelor of Statistics with Honours (B. Stat. (Hons.)), Indian Statistical Institute, Kolkata

Academic Achievements and Honours

1. Recipient of Shyama Prasad Mukherjee Fellowship (in Mathematics) awarded by Council of Scientific and Industrial Research, Government of India in 2019. [PDF]
2. Secured rank **1** in National Eligibility Test (in Mathematics) for Junior Research Fellowship and eligibility for Lectureship conducted by CSIR-UGC, Government of India in June 2018. [PDF]
3. Recipient of NBHM Travel Grant awarded by Department of Atomic Energy, Government of India to attend International Congress of Mathematicians (ICM) held in 2018 in Rio de Janeiro, Brazil. [PDF]
4. Recipient of INSPIRE Scholarship awarded by Department of Science and Technology, Government of India in 2011. [PDF]

Preprints and Publications

Branching Random Walk

1. **P. P. Ghosh**, and B. Jahnel. Coexistence for Competing Branching Random Walks with Identical Asymptotic Shape on $\mathbb{Z}^d$. 2025+. [PDF]
2. **P. P. Ghosh**, and B. Mallein. Extremal Process of Last Progeny Modified Branching Random Walks. To appear in *ALEA Latin American Journal of Probability and Mathematical Statistics*, 2025+. [PDF]
3. A. Bandyopadhyay, and **P. P. Ghosh**. Right-Most Position of a Last Progeny Modified Branching Random Walk. *Journal of Theoretical Probability*, 38(2): Paper No. 34, 2025. [PDF]
4. A. Bandyopadhyay, and **P. P. Ghosh**. Right-Most Position of a Last Progeny Modified Time Inhomogeneous Branching Random Walk. *Statistics & Probability Letters*, 193: Paper No. 109697, 2023. [PDF]
5. **P. P. Ghosh**. Large Deviations for the Right-Most Position of a Last Progeny Modified Branching Random Walk. *Electronic Communications in Probability*, 27: Paper No. 6, 2022. [PDF]

Traffic-flow in Telecommunication Network

1. **P. P. Ghosh**, B. Jahnel, and Y. Steenbeck. Throughput in Inhomogeneous Planar Drainage Networks. 2025+. [PDF]
2. **P. P. Ghosh**, B. Jahnel, and S. K. Jhawar. Large and Moderate Deviations in Poisson Navigations. *Advances in Applied Probability*, 2025. [PDF]

Percolation

1. **P. P. Ghosh**, and R. Roy. Criticality and Covered Area Fraction in Confetti and Voronoi Percolation. *Journal of Statistical Physics*, 186(1): Paper No. 20, 2022 [PDF]

Miscellaneous

1. **P. P. Ghosh**, and S. K. Bhandari. Characterization of Extreme Copulas. *Preprint*, 2017. [PDF]

Research Visits

12–14 Nov 2025	**Anton Bovier**, Universität Bonn, Germany
25 Aug 2025	**Benedikt Jahnel**, Weierstrass Institute for Applied Analysis and Stochastics, Germany
10–14 Feb 2025	**Bastien Mallein**, Université Toulouse III Paul Sabatier, France
21–28 Aug 2024	**Rahul Roy**, Indian Statistical Institute, India
24–27 Jun 2024	**Nina Gantert**, Technical University of Munich, Germany
31 Jul – 08 Aug 2023	**Antar Bandyopadhyay**, Indian Statistical Institute, India
30 Jan – 03 Feb 2022	**Gábor Pete**, Alfréd Rényi Institute of Mathematics, Hungary

Selected Talks

13 Nov 2025	**Invited talk** at *Advanced Seminar on Probability Theory*, Institute for Applied Mathematics, Universität Bonn, Germany *Extremal Process of Last Progeny Modified Branching Random Walks* [Slides]
10 Nov 2025	**Invited talk** at *5th Workshop on Stochastic Geometry and Point Processes*, Ruhr-Universität Bochum, Germany *Large and moderate deviations in Poisson navigations* [Slides]
17 Jul 2025	**Invited talk** at *Colloquium*, Institute for Mathematical Stochastics, Technische Universität Braunschweig, Germany *Criticality and Covered Area Fraction in Confetti Percolation* [Slides]
13 Mar 2025	**Contributed talk** at *German Probability and Statistics Days 2025*, Technische Universität Dresden, Germany *Extremal Process of Last Progeny Modified Branching Random Walks*
14 Aug 2024	**Contributed poster** at *Bernoulli–IMS 11th World Congress in Probability and Statistics 2024*, Ruhr-Universität Bochum, Germany *Extremal Process of Last Progeny Modified Branching Random Walks*
24 Jun 2024	**Invited talk** at *Advanced Seminar on Probability Theory*, Technical University of Munich, Germany *Extremal Process of Last Progeny Modified Branching Random Walks*
23 May 2023	**Contributed poster** at *Branching Processes and Applications*, Angers, France *A Last Progeny Modified Branching Random Walks*
01 Mar 2023	**Invited talk** at *Seminar on Interacting Random Systems*, Weierstrass Institute for Applied Analysis and Stochastics, Germany *A Last Progeny Modified Branching Random Walks*
25 May 2022	**Invited talk** at *Seminar*, International Centre for Theoretical Sciences, Tata Institute of Fundamental Research, Bengaluru, India *A Last Progeny Modified Branching Random Walks*
29 Sep 2021	**Invited talk** at *Colloquium*, Department of Mathematics, Indian Institute of Technology Bombay, India *A Last Progeny Modified Branching Random Walks*

Workshop Organization

17–21 Feb 2025	**Stochastic Processes on Random Geometries** at Technische Universität Braunschweig, Germany. Co-organized with the departmental research team and supported by the DFG Priority Programme SPP 2265.

Teaching Experience

Technische Universität Braunschweig

1. Principal Instructor | **Stochastic Processes and Continuous-time Financial Mathematics**
   Masters in Mathematics and Masters in Mathematics in Finance and Industry, Spring 2025
2. Principal Instructor | **Point Processes**
   Masters in Mathematics and Masters in Mathematics in Finance and Industry, Fall 2024

3. Principal Instructor | **Markov Processes**
   Masters in Mathematics and Masters in Mathematics in Finance and Industry, Spring 2024
4. Principal Instructor | **Stochastic Processes and Continuous-time Financial Mathematics**
   Masters in Mathematics and Masters in Mathematics in Finance and Industry, Spring 2023

Indian Statistical Institute

1. Principal Instructor | **Random Graphs**
   3rd year Bachelors in Statistics, Spring 2021

Indian Statistical Institute (Assistant)

1. Teaching Assistant | **Percolation Theory**
   1st year Ph.D. and 2nd year Masters in Statistics in Probability Specialization, Fall 2021
2. Teaching Assistant | **Probability Theory III**
   2nd year Bachelors in Statistics, Fall 2020
3. Teaching Assistant | **Measure Theoretic Probability**
   1st year Masters in Statistics and 1st and 2nd year Masters of Science in Quantitative Economics, Spring 2019
4. Teaching Assistant | **Martingale Theory**
   2nd year Masters in Statistics in Theoretical Statistics Specialization and Probability Specialization, Fall 2018
5. Teaching Assistant | **Measure Theoretic Probability**
   1st year Masters in Statistics and 2nd year Masters of Science in Quantitative Economics, Spring 2018

References

Prof. Antar Bandyopadhyay
(Ph.D. Supervisor)
Theoretical Statistics and Mathematics Unit
Indian Statistical Institute, Delhi Centre
7 S. J. S. Sansanwal Marg
New Delhi 110016, India.
✉ antar@isid.ac.in

Prof. Rahul Roy
(Collaborator)
Theoretical Statistics and Mathematics Unit
Indian Statistical Institute, Delhi Centre
7 S. J. S. Sansanwal Marg
New Delhi 110016, India.
✉ rahul@isid.ac.in

Prof. Benedikt Jahnel
(Postdoc Mentor)
Institut für Mathematische Stochastik
Technische Universität Braunschweig
Universitätsplatz 2
38106 Braunschweig, Germany.
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Prof. Bastien Mallein
(Collaborator)
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