

# PARTHA PRATIM GHOSH

POSTDOCTORAL RESEARCHER IN PROBABILITY THEORY  
Ruhr-Universität Bochum

## PERSONAL DETAILS

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PLACE AND DATE OF BIRTH : Midnapore, India | 10 October 1993  
OFFICE ADDRESS : Faculty of Mathematics, Ruhr-Universität Bochum  
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## WORK EXPERIENCE

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Nov 2025 – present	POSTDOCTORAL RESEARCHER at <a href="#">Fakultät für Mathematik</a> , Ruhr-Universität Bochum MENTOR: Christoph Thäle
Nov 2022 – Oct 2025	POSTDOCTORAL RESEARCHER at <a href="#">Institut für Mathematische Stochastik</a> , Technische Universität Braunschweig MENTOR: Benedikt Jahnel
JUL 2022 – SEP 2022	VISITING SCIENTIST at Theoretical Statistics and Mathematics Unit, <a href="#">Indian Statistical Institute</a> , Delhi Centre

## SCIENTIFIC EDUCATION

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SEP 2016 – MAY 2022	PHD IN STATISTICS, <a href="#">Indian Statistical Institute</a> , Delhi Centre ADVISOR: Antar Bandyopadhyay THESIS: <a href="#">A Last Progeny Modified Branching Random Walk</a>
JUL 2014 – MAY 2016	MASTER OF STATISTICS (M. STAT.), <a href="#">Indian Statistical Institute</a> , Kolkata SPECIALIZATION: Mathematical Statistics and Probability
JUL 2011 – MAY 2014	BACHELOR OF STATISTICS WITH HONOURS (B. STAT. (HONS.)), <a href="#">Indian Statistical Institute</a> , Kolkata

## ACADEMIC ACHIEVEMENTS AND HONOURS

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1. Recipient of [Shyama Prasad Mukherjee Fellowship](#) (in Mathematics) awarded by Council of Scientific and Industrial Research, Government of India in 2019.
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.
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.
4. Recipient of [INSPIRE Scholarship](#) awarded by Department of Science and Technology, Government of India in 2011.

## PREPRINTS AND PUBLICATIONS

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### 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 TELECOM- MUNICATION 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

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

## SELECTED TALKS

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

## WORKSHOP ORGANIZATION

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17–21 FEB 2025	<b>Stochastic Processes on Random Geometries</b> at Technische Universität Braunschweig, Germany. Co-organized with the departmental research team and supported by the DFG Priority Programme SPP 2265.
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## TEACHING EXPERIENCE

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TECHNISCHE UNIVERSITÄT BRAUNSCHWEIG	<ol style="list-style-type: none"><li>Principal Instructor   <b>Stochastic Processes and Continuous-time Financial Mathematics</b> Masters in Mathematics and Masters in Mathematics in Finance and Industry, Spring 2025</li><li>Principal Instructor   <b>Point Processes</b> Masters in Mathematics and Masters in Mathematics in Finance and Industry, Fall 2024</li></ol>
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INDIAN  
STATISTICAL  
INSTITUTE

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  
(ASSISTANT)

1. Principal Instructor | **Random Graphs**  
3rd year Bachelors in Statistics, Spring 2021
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.  
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**Prof. Benedikt Jahnel**  
(Postdoc Mentor)  
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**Prof. Rahul Roy**  
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**Prof. Bastien Mallein**  
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