

Pratima Hebbar

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EMPLOYMENT **Department of Mathematics and Statistics, Grinnell College**
Assistant Professor (tenure-track)

- Fall 2022 - present

Department of Mathematics, Duke University
Griffiths Assistant Research Professor

- Fall 2019 - Summer 2022

EDUCATION **Department of Mathematics, University of Maryland, College Park**
Ph.D., August 2019

- Advisor: Dr. Leonid Korolov
- Awarded Alexander Prize for Graduate Research in Mathematics for top dissertation by the Department of Mathematics.

Tata Institute of Fundamental Research Centre for Applicable Mathematics, Bengaluru, India
M.Sc. in Mathematics, May 2014

University of Pune, India
B.Sc. in Mathematics, May 2012

- Graduated with rank 1 in the Department of Mathematics

HONORS AND AWARDS

2022-23	Project NExT, Red '22 cohort
2021-22	Preparing Future Faculty Fellow, Duke University (awarded to five Duke university postdocs each academic year)
2021-22	Teaching for Equity Fellow, Duke University (year-long series of workshops designed to address topics around race and identity)
October 2019	Alexander Prize for Graduate Research in Mathematics - awarded to the top dissertation by the Department of Mathematics.
March 2019	Jacob K. Goldhaber Travel Grant
April 2018	Aziz Osborn Gold Medal in Teaching Excellence
2017- 2018	Patrick and Marguerite Sung Fellowship in Mathematics
April 2016	Seymour Goldberg Gold Medal (Spotlight on Graduate Research).
2014–2016	Dean's Fellowship, University of Maryland, Graduate School.
2012–2014	Junior Research Fellowship, Tata Institute of Fundamental Research.

PUBLICATIONS

P. HEBBAR, K. FERNANDO, *Higher order asymptotics for large deviations – Part III*, in preparation (2021).

A. BONAFEDE, P. HEBBAR, P. PHERWANI, *Birth and death processes with deterministic mass growth and symmetric mass division among offspring*, **collaboration with**

undergraduate students, in preparation, preprint available upon request (2021)

P. HEBBAR, K. FERNANDO, *Higher order asymptotics for large deviations – Part II*, Stochastics and Dynamics, Vol. 21, No. 05, 2150025 (2021).

P. HEBBAR, L. KORALOV, J. NOLEN, *Asymptotic behavior of branching diffusion processes in periodic media*, Electronic Journal of Probability, vol. 25, paper no. 126, 40 pp doi:10.1214/20-EJP527 (2020).

P. HEBBAR, K. FERNANDO, *Higher order asymptotics for large deviations – Part I*, Asymptotic Analysis, vol. Pre-press, pp. 1-39, doi:10.3233/ASY-201602 (2020).

D.DOLGOPYAT, P. HEBBAR, L. KORALOV, M. PERLMAN, *Multi-type branching processes with time-dependent branching rates*”, Journal of Applied Probability, 55(3), 701-727. doi:10.1017/jpr.2018.46 (2018).

P. HEBBAR *Branching diffusion processes in periodic media*, **Ph.D Dissertation**, August 2019.

HEBBAR P. *Testing the waters of differential equations*, Physics Today Volume 73, Issue 7, Page 54 (**Book Review**) ; doi.org/10.1063/PT.3.4525 (2020)

INVITED TALKS

- 2022 Union College Mathematics Conference, Session on Stochastic Analysis and Applications, Schenectady, June 4th, 2022.
- Colloquium, Rutgers University - Camden, November 12th, 2021.
- Colloquium, North Carolina Central University (NCCU), October 26th, 2021.
- Probability Seminar, Duke University, October 21st, 2021.
- Computational & Applied Mathematics Seminar, University of North Carolina Charlotte (UNCC), October 15th, 2021.
- SURE: Speakers and Undergraduate Research Engagement, Virginia Tech, USA October 11th, 2021.
- CRM-ISM Probability Seminar, Centre de Recherches Mathematiques (CRM) Montreal, Canada, November 4th, 2020.
- Probability and Statistical Physics Seminar, University of Chicago, October 23rd, 2020.
- National Webinar on Galton-Watson Processes, MES Garware College, Pune, India, October 5th, 2020.
- Probability Seminar, University of Virginia, February 5th, 2020.
- Probability Seminar, Duke University, USA, September 26th, 2019.
- *Conference – Perturbation Techniques in Stochastic Analysis and Its Applications*, CIRM, France, March 14th 2019.
- Probability Seminar, University of Washington, USA, March 4th 2019
- Probability/Math Finance Seminar, Carnegie Mellon University, USA, January 28th 2019.
- Probability Seminar, Boston University, USA, January 24th 2019

- Probability Seminar, Pennsylvania State University, USA, January 11th 2019.
- Poster talk at the *Seminar on Stochastic Processes*, Brown University, Providence, USA, May 10, 2018.
- *Conference on Applied Mathematics*, GWU Chapter of SIAM, George Washington University, USA, April 29, 2017.

UNDERGRADUATE STUDENT ADVISING Pranay Pherwani, Summer Research Project, Duke University, Summer 2021
 Andrew Bonafede, Summer Research Project, Duke University, Summer 2021
 Ankur Patel, Directed Reading Program, University of Maryland, Spring 2016.
 Jiateng Wang, Directed Reading Program, University of Maryland, Fall 2018.

TEACHING EXPERIENCE

Fall	2022	Multivariable Calculus MATH 133 Foundations of Analysis MATH 316
Spring	2022	Probability II MATH 641 (Graduate level)
Fall	2021	Probability MATH 230.
Summer	2021	Applied Stochastic Processes MATH 541.
Spring	2021	Introduction to Real Analysis MATH 431
Fall	2020	Probability MATH 230.
Summer	2020	Probability MATH 230.
Spring	2020	Probability MATH 230, Elementary Differential Equations MATH 356.
Fall	2019	Probability MATH 230.
Summer	2018	Instructor, Elementary Calculus I.
Summer	2017	Instructor, Elementary Statistics and Probability.
Spring	2017	Teaching Assistant, Elementary Calculus I.
Fall	2016	Grading, Undergraduate Real Analysis.
Summer	2016	Graduate Assistant.
Spring	2016	Instructor, College Algebra and Trigonometry.
Fall	2015	Teaching Assistant, Differential Equations.
Summer	2015	Teaching Assistant (Tutor).
Spring	2015	Teaching Assistant, Elementary Statistics and Probability.
Fall	2014	Teaching Assistant, Elementary Calculus I.

SERVICE TO THE ACADEMIC COMMUNITY:

- Co-organizing Mathematics and Statistics Seminar Series at Grinnell College, 2022-23
- Serving as the mentor in the Association for Women in Mathematics at Duke University, 2020-2022.
- Refereeing academic research articles for numerous journals including Applied Probability Journals, Stochastics and Dynamics and Asymptotic Analysis.
- Serving as a Student Councilor representing the College of Computer, Mathematical, and Natural Sciences (CMNS) in the Graduate Council at University of Maryland, College Park, 2018-19.

CONFERENCES ATTENDED

- *Mathfest 2022 and Project NExT*, Philadelphia, USA (August 1-5, 2022)
- *2022 Union College Mathematics Conference*, Union College, Schenectady, USA (June 3-5, 2022)
- *Seminar on Stochastic Processes*, Michigan State University, East Lansing, USA (March 4- 7, 2020).
- *Midwest Probability Colloquium*, Northwestern University, Evanston, USA (October 10 - 12, 2019).

- *Perturbation Techniques in Stochastic Analysis and Its Applications*, Centre International de Rencontres Mathematiques (CIRM), Luminy, Marseille, France (March 11 -15, 2019).
- *Advances in Asymptotic Probability (In honor of Amir Dembo's 60th birthday)*, Stanford University, Stanford, USA (Dec 13 - 17 2018).
- *Northeast Probability Seminar*, NYU Courant Institute, New York, USA (Nov 15 -16 2018).
- *Seminar on Stochastic Processes*, Brown University, Providence, USA (May 9-12, 2018).
- *Transport and Localization in Random Media*, Columbia University, New York, USA (May 1-3, 2018).
- *Dynamics, Aging and Universality in Complex Systems (A celebration in honor of Gérard Ben Arous)*, NYU Courant Institute, New York, USA (June 19 -23 2017).
- *Research School on Random Structures in Statistical Mechanics and Mathematical Physics*, Centre International de Rencontres Mathematiques (CIRM), Luminy, Marseille, France (March 6 -10, 2017).
- *Workshop on probabilistic methods in dynamical systems and applications*, Centre de Recherches Mathematiques, Montreal, Canada (October 4-7, 2016).
- *MSRI - Dynamics of Biological Systems*, University of Alberta, Edmonton, Canada (May 30 - June 11 2016).
- *Seminar on Stochastic Processes*, University of Maryland, College Park, USA (March 16-19, 2016).
- *Getting started with PDE's*, Hebrew University, Jerusalem, Israel (Sept 3-9 2015).
- *Mathematics Training and Talent Search Program*, IIT Kanpur, India (May 2012).
- *Mathematics Training and Talent Search Program*, ICT Mumbai, India (May 2011).
- *Mathematics Training and Talent Search Program*, Visva Bharati University, Santiniketan, India (May 2010).

RELEVANT
SKILLS

Languages: English, Hindi, Marathi, Kannada, Bengali