Akshay Hegde ¹

CONTACT Information S1.28 Mathematical Institute

University of Oxford

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RESEARCH Interests

EDUCATION

Probability theory, Gaussian fields, percolation theory, statistical mechanics models.

University of Oxford

Doctor of Philosophy (DPhil) in Mathematics

Oct 2021- Sept 2025

• Project: Geometry of Smooth Gaussian Fields

• Advisor: Prof. Dmitry Belyaev

Indian Statistical Institute, Bangalore

Masters of mathematics [M.Math]

July 2019 - May 2021

Bachelors of Mathematics (Honours) [B.Math(Hons.)]

July 2016 - May 2019

• First class with distinction (highest honours)

PREPRINTS / PUBLICATIONS

Beliaev, D. and Hegde, A. On Convergence of Volume of Level Sets of Stationary Smooth Gaussian Fields, Electron. Commun. Probab. vol. 28, 1-9, 2023. DOI: 10.1214/23-ECP543

Beliaev, D. and Hegde, A. Limit theorems for high critical points of smooth Gaussian fields (in preparation)

Talks

Durham Symposium 2024, Durham, UK, August 2024

4th Italian meeting on Probability and Mathematical Statistics, Rome, Italy, June 2024

Trinity Talks: Beyond classroom (high-school outreach), March 2024

Trinity College MCR research showcase talk, November 2023

Stochastic Analysis group, internal seminar, Oxford, June 2023

Bangalore probability seminar, April 2023

Conferences / Seminars $International\ colloquium\ on\ randomness, geometry\ and\ dynamics,\ IISER,\ Pune,\ January\ 2024$

Quantum Chaos and Nodal Sets of Random Waves, Kings College London, July 2022

Probability and Mathematical Physics 2022, Helsinki, Finland, July 2022

¹https://www.maths.ox.ac.uk/people/akshay.hegde

St. Petersburg Youth Conference in Probability and Mathematical Physics, December

2021

Honours / Awards Trinity College- Maths Institute Scholarship (2021-2025)

2nd rank in B.Math(Hons.)

• Tutor

VSRP Scholar-2019, by TIFR, Mumbai

TEACHING EXPERIENCE University of Oxford (includes college tutorials)

- 1. Fourier analysis and PDE, I year
- 2. Topology, II year
- 3. Probability, measures and martinagles, III year
- 4. Continuous martingales and stochastic calculus, III year
- 5. Functional analysis, III year
- Teaching assistant
 - 1. Integration, II year
 - 2. Random matrix theory, IV year /master's

Non university teaching

- 1. Oxford Summer Courses (Fractals in probability and analysis)
- 2. Instructor, Monsoon Math Camp July 2021

COMPUTING SKILLS

Basics of programming [Language: C] Math computing in Octave/ MATLAB, R

EXTRA CURRICULAR President, Oxford Hindu Society (2023-24)

Webmaster & archivist, Oxford University walking club (2022-24)

Volunteer, Oxford Maths Fest 2024

Miscellaneous

Full name: Akshay Sateesh Hegde

Citizenship: India