Sarath Yasodharan

Current Position
Assistant Professor
Industrial Engineering and Operations Research
Indian Institute of Technology Bombay
Powai, Mumbai 400076

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Education	**Indian Institute of Science**	*Aug 2016 - Oct 2021*

Education

Indian Institute of Science — *Aug 2016 - Oct 2021*
Doctor of Philosophy in Electrical Communication Engineering
Thesis title: Large time behaviour and metastability in mean-field interacting particle systems
Advisor: Prof. Rajesh Sundaresan

Indian Institute of Science — *Aug 2013 - Jun 2015*
Master of Engineering in Telecommunications

National Institute of Technology Calicut — *Jul 2008 - May 2012*
Bachelor of Technology in Electronics and Communication Engineering

Academic Appointments

Indian Institute of Technology Bombay — *Sep 2024 - present*
Assistant Professor, Department of Industrial Engineering and Operations Research

Brown University — *May 2022 - Aug 2024*
Postdoctoral Research Associate, Division of Applied Mathematics
Mentor: Prof. Kavita Ramanan
Research: Interacting stochastic processes on sparse random graphs

Indian Institute of Science — *Nov 2021 - Apr 2022*
Research Associate, Department of Electrical Communication Engineering
Mentor: Prof. Rajesh Sundaresan
Research: Computational epidemiology and COVID-19 modeling

Industrial Experience

National Instruments R&D, Bengaluru, India — *Jul 2015 - Jul 2016*
Worked on algorithms for radio frequency measurements and receiver design for wireless communication systems

ARM Embedded Technologies, Bengaluru, India — *Jul 2012 - Jul 2013*
Worked on the design and characterization of standard cell libraries

Selected Publications

- Sarath Yasodharan and Rajesh Sundaresan, "Large deviations of mean-field interacting particle systems in a fast varying environment", *The Annals of Applied Probability*, 32(3):1666-1704, June 2022.
- Sarath Yasodharan and Anurag Kumar, "Revenue Optimal Admission Control in a Class of Multihop Networks: Algorithms and Asymptotic Optimality", *IEEE/ACM Transactions on Networking*, 31(5):2251–2266, October 2023.
- Sarath Yasodharan and Patrick Loiseau, "Nonzero-sum Adversarial Hypothesis Testing Games", In Proceedings of the *33rd Conference on Neural Information Processing Systems (NeurIPS)*, December 2019.

Selected Invited Talks

- IMS-Bernoulli 11th World Congress on Probability and Statistics, Bochum, Germany, August 2024.
- INFORMS-Applied Probability Society Conference, Nancy, France, June 2023.
- Workshop on Graphical Models, Statistical Inference, and Algorithms (GRAMSIA), Harvard University, May 2023.
- Joint Mathematics Meetings, special session on Stochastic Analysis and Applications, Boston MA, USA, January 2023.
- Tutorial at ACM SIGMETRICS/IFIP PERFORMANCE Conference, IIT Bombay, June 2022.

Selected Professional Service

- Member, Technical Program Committee, 16th International Conference on Communication Systems & Networks (COMSNETS), January 2024.
- Refereed papers for various journals such as The Annals of Applied Probability, Potential Analysis, IEEE Transactions on Information Theory, and IEEE Transactions on Information Forensics and Security.
- Co-organizer of the Brown Probability Seminar, August 2022 - May 2023.
- Co-organizer of the Networks Seminar at IISc, September 2019 - March 2020.