Sarath Yasodharan

Current Position
Postdoctoral Research Associate
Division of Applied Mathematics
Brown University
Providence RI, USA

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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	**Brown University**	*May 2022 - present*
	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	
Internships	**Netradyne Technologies**, Bengaluru, India	*Nov 2019 - Feb 2020*
	Mentors: Prof. Rajesh Sundaresan, Dr. Pratik Verma	
	Studied the effectiveness of the bus priority lane in Bengaluru	
	Institut de Mathématiques de Toulouse, Toulouse, France	*Jun - Jul 2019*
	Host: Prof. Laurent Miclo	
	Worked on metastability in mean-field models	
	Université Grenoble-Alpes, Grenoble, France	*Feb - Jul 2018*
	Host: Prof. Patrick Loiseau	
	Worked on adversarial hypothesis testing games	
Academic Achievements	• Cisco Research Fellowship Grant from the Centre for Networked Intelligence at the Indian Institute of Science, 2018–2021	

- Central Sector Scholarship for undergraduate studies at NIT Calicut from the Department of Collegiate Education, Government of Kerala

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

- 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.