

Satadal (Sata) Sengupta

Date of Birth 17th September 1991
Nationality Indian

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Education

Sep 2019 - Present - **Princeton University**, USA

Ph.D. Student (4th year), Computer Science
Topic (Tentative): Fine-Grained Internet Measurements in the Data Plane
Advisor: Jennifer Rexford

Jan 2016 - Feb 2019 - **Indian Institute of Technology (IIT) Kharagpur**, India

Master of Science (MS) (By Research), Computer Science and Engineering; *CGPA: 9.66/10*
Thesis: Network Traffic Regulation Techniques for Experience Differentiation
Advisors: Sandip Chakraborty, Niloy Ganguly [Complex Networks Research Group (CNeRG)]

July 2009 - May 2013 - **National Institute of Technology (NIT) Durgapur**, India

Bachelor of Technology (B.Tech.), Computer Science and Engineering; *CGPA: 8.37/10*
Thesis: Secure Routing in Delay Tolerant Networks
Advisors: Subrata Nandi, Sujoy Saha [Mobile Computing and Networking Research Group]

Employment & Internship Experience

June 2022 - Sep 2022 - **Netflix**, California, USA

Applied Research Intern, Open Connect. **Advisor:** Sergey Fedorov

Mar 2019 - Aug 2019 - **ETH Zürich**, Switzerland

Research Intern, Network Design & Architecture Lab. **Advisor:** Ankit Singla

May 2015 - Feb 2019 - **Indian Institute of Technology (IIT) Kharagpur**, India

Research Fellow (SRF/JRF), Computer Science and Engineering

Sep 2013 - Apr 2015 - **Oracle Financial Services Software Ltd.**, Bangalore, India

Associate Applications Developer, Oracle FLEXCUBE Development

May 2012 - July 2012 - **Microsoft India R&D Private Ltd.**, Hyderabad, India

Software Development Engineer (Intern), Microsoft IT

Selected Publications*

*List of all publications available at <https://satadalsengupta.github.io/#publications>

Software-Defined Networking (SDN) for Scalable Network Monitoring

SIGCOMM 2022 Satadal Sengupta, Hyojoon Kim, Jennifer Rexford, ***Continuous In-Network Round-Trip Time Monitoring***, in *ACM SIGCOMM*.

IAB-QoE 2021 Satadal Sengupta, Hyojoon Kim, Jennifer Rexford, ***Fine-Grained RTT Monitoring Inside the Network***, in the *Internet Arch. Board Wkp. on Measuring Network Quality for End-Users*.

Measuring & Improving Video Performance

IMC 2022 Oliver Michel, Satadal Sengupta, Hyojoon Kim, Ravi Netravali, Jennifer Rexford, ***Enabling Passive Measurement of Zoom Performance in Production Networks***, in the *ACM Internet Measurement Conference (IMC)*.

ICNP 2018 Satadal Sengupta, Niloy Ganguly, Sandip Chakraborty, Pradipta De, ***HotDASH: Hotspot Aware Adaptive Video Streaming using Deep Reinforcement Learning***, in the *IEEE International Conference on Network Protocols*.

- NOSSDAV 2017** A. Mondal, **Satadal Sengupta**, B.R. Reddy, M.J.V. Koundinya, Chander G., P. De, N. Ganguly, S. Chakraborty, ***Candid with YouTube: Adaptive Streaming Behavior and Implications on Data Consumption***, in the *ACM SIGMM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV)*.
- IM 2017** **Satadal Sengupta**, V. Yadav, Y. Saraf, H. Gupta, N. Ganguly, S. Chakraborty, P. De, ***MoViDiff: Enabling Service Differentiation for Mobile Video Apps***, in the Mini Conference Track of the *IFIP/IEEE International Symposium on Integrated Network Management (IM)*.
- †COMSNETS 2016 Poster** D. Jain, S. Agarwal, **Satadal Sengupta**, P. De, B. Mitra, S. Chakraborty, ***Prediction of Quality Degradation for Mobile Video Streaming Apps: A Case Study using YouTube***, in the Poster Track of *COMSNETS*, 2016.

Measuring Mobile Traffic at Scale

- WWW 2019** **Satadal Sengupta**, N. Ganguly, P. De, S. Chakraborty, ***Exploiting Diversity in Android TLS Implementations for Mobile App Traffic Classification***, in *The Web Conference*, 2019.
- SIGMETRICS 2017 Poster** S. Singh, V. Nanda, R. Sen, S. Ahmad, **Satadal Sengupta**, A. Phokeer, Z.A. Farooq, T.A. Khan, P. Kumaraguru, I.A. Qazi, D. Choffnes, K.P. Gummadi, ***An Empirical Analysis of Facebook's Free Basics***, in the Poster Track of *ACM SIGMETRICS*, 2017.
- IMC 2016** R. Sen, H.A. Pirzada, A. Phokeer, Z.A. Farooq, **Satadal Sengupta**, D. Choffness, K.P. Gummadi, ***Inspecting the Free Bridge Across the Digital Divide: Assessing the Quality of Facebook's Free Basics Service***, in *ACM Internet Measurement Conference (IMC)*.

Miscellany (Side-Channels, Delay Tolerant Networks)

- MobiCom 2018 Poster** M.R. Dey, **Satadal Sengupta**, B.K. Mohanta, D. Jena, S. Chakraborty, ***Magneto: Leveraging Magnetic Field Changes for Inferring Smartphone App Usage***, in the Poster Track of *ACM MobiCom*, 2018.
- WiNe 2016** S. Saha, S. Nandi, R. Verma, **Satadal Sengupta**, K. Singh, V. Sinha, S.K. Das, ***Design of Efficient Lightweight Strategies to Combat DoS Attack in Delay Tolerant Network Routing***, in *Journal of Wireless Networks (WiNe)*, Springer, 2016.

Grants & Awards

- **Best Academic Demo** at *COMSNETS 2017* & **† Best Poster** at *COMSNETS 2016*.
- **WWW'19 & Microsoft India Student Travel Grants** for attending *WWW 2019*.
- **ICNP'18 & ACM/IARCS-India Student Travel Grants** for attending *IEEE ICNP 2018*.
- **MMSys'17 Student Travel Grant** for attending *ACM MMSys 2017*.

Teaching Experience (as a Teaching Assistant)

Semester	Institute	Course	Faculty Instructor(s)
Fall '20, Spr. '21	Princeton U.	Advanced Programming Techniques	Robert Dondero
Spr. '16, '17, '18	IIT Kharagpur	Computer Networks	Sandip C., Niloy G.
Fall '17	IIT Kharagpur	Performance Modeling of Computer Networks	Sandip Chakraborty
Fall '16	IIT Kharagpur	Smartphone Computing & Applications	Niloy Ganguly

Extra-Curriculars

- Freelance writer for *JÑĀNĀLOK Infotech*—a Kolkata-based creative writing company (2009–2013).
- Served as a volunteer at **The Web Conference 2019** and as the volunteer captain at **COMSNETS 2018**.
- **Languages:** English, Hindi, Bengali (Proficient); Spanish, German, Nepali (Elementary)