

# Satadal Sengupta

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<b>Address</b>	6/8 Golf Nagar, P. O. - Amrai Durgapur, India 713203	<b>Phone</b>	+91 9775719910, +91 9620130009
<b>Date of Birth</b>	17 <sup>th</sup> September 1991	<b>Email</b>	satadal.sengupta@iitkgp.ac.in
		<b>Webpage</b>	<a href="https://satadalsengupta.github.io">https://satadalsengupta.github.io</a>

## Research Interests

Network Traffic Analysis, Mobile Computing, Energy-Aware Computing, Delay Tolerant Networks.

## Education

<b>Jan 2016 - Present</b>	Master of Science (MS) (By Research), Department of Computer Science and Engineering Indian Institute of Technology Kharagpur, West Bengal, India <b>CGPA:</b> 8.36/10.00 <b>Advisors:</b> Asst. Prof. (Dr.) Sandip Chakraborty, Prof. (Dr.) Niloy Ganguly <b>Research Group:</b> Complex Networks Research Group (CNeRG)
<b>July 2009 - May 2013</b>	Bachelor of Technology (B.Tech.), Computer Science and Engineering National Institute of Technology Durgapur, West Bengal, India <b>CGPA:</b> 8.37/10.00 <b>Academic Project:</b> Secure Routing in Delay Tolerant Networks <b>Advisors:</b> Dr. Subrata Nandi, Dr. Sujoy Saha <b>Research Group:</b> Mobile Computing and Networking Research Group (MCN-RG)
<b>May 2009</b>	All India Senior School Certificate Examination (AISSCE), conducted by CBSE Hem Sheela Model School, Durgapur, West Bengal, India <b>Aggregate Marks:</b> 91.6/100
<b>May 2007</b>	Indian Certificate of Secondary Education (ICSE), conducted by CISCE Aurobindo Vidyamandir, Durgapur, West Bengal, India <b>Aggregate Marks:</b> 91.3/100 (School topper)

## Employment History

<b>May 2015 - Present</b>	Indian Institute of Technology Kharagpur, West Bengal, India <i>Junior Research Fellow (JRF), Department of Computer Science and Engineering</i> <b>Research Group:</b> Complex Networks Research Group (CNeRG) <b>Supervisors:</b> Prof. (Dr.) Niloy Ganguly, Asst. Prof. (Dr.) Sandip Chakraborty
<b>Sep 2013 - Apr 2015</b>	Oracle Financial Services Software Ltd., C.V. Raman Nagar, Bangalore, India <i>Associate Applications Developer, Oracle FLEXCUBE Development</i> <b>Project:</b> <b>Oracle FLEXCUBE</b> product enhancements for the <i>Japan Cluster</i> . Roles included, but not limited to: <ul style="list-style-type: none"><li>• Preparation and maintenance of the development and testing environments for <b>FLEXCUBE</b> version 12.0.87.1.0 hosted on <b>Oracle Weblogic Server</b> and <b>Oracle Database Server</b>.</li><li>• Qualification of <b>Oracle FLEXCUBE</b> on <b>Fujitsu Interstage Application Server</b>.</li><li>• Developing an <i>Upgrade Automation Tool</i> based on <b>Java</b> and <b>PL/SQL</b> for <b>FLEXCUBE</b>.</li></ul> <b>Awards:</b> Awarded <b>WeApplaud!</b> for proactive role in solving complex issues related to the development and testing environments. <b>Manager:</b> Venkata Ramkumar Nakka; <b>Software Development Director:</b> Siva S. Rao

## Internships

**May 2012 - Jul 2012** - Microsoft India R&D Private Ltd., Hyderabad, India  
*Software Development Engineer (INTERN), Microsoft IT*

**Project:** Upgrade of **Common Hosted ETL Framework (CHEF)**, a metadata-driven Business Intelligence tool, from v1.0 to v2.0. Roles included, but not limited to:

- Making **CHEF** compliant with **Microsoft SQL Server 2012**, by using a set of APIs called the **Managed Object Model**.
- Introducing flexibility by giving user the option to – (1) overwrite a previous version, (2) add a new version, or (3) execute an existing version – of a **SQL Server Integration Services (SSIS)** package, by adjusting metadata attributes.

**Mentor:** Ram Janam Singh

## Publications

**2017** Abhijit Mondal, **Satadal Sengupta**, Bachu Rikith Reddy, M.J.V. Koundinya, Chander Govindarajan, Pradipta De, Niloy Ganguly, Sandip Chakraborty, ***Candid with YouTube: Adaptive Streaming Behavior and Implications on Data Consumption***, accepted at the *ACM SIGMM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV) 2017*.

**2016** **Satadal Sengupta**, ***Predicting Social Dynamics based on Network Traffic Analysis for CCN/ICN Management***, accepted in the Graduate Forum Track of *COMSNETS 2017*.

Ashish Sharma, Jatin Arora, Pritam Khan, Sidhartha Satapathy, Sumit Agarwal, **Satadal Sengupta**, Sankarshan Mridha, Niloy Ganguly, ***CommBox: Utilizing Sensors for Real-Time Cricket Shot Identification and Commentary Generation***, accepted in the Demos and Exhibits Track of *COMSNETS 2017*.

**Satadal Sengupta**, Vinay Yadav, Yash Saraf, Harshit Gupta, Niloy Ganguly, Sandip Chakraborty, Pradipta De, ***MoViDiff: Enabling Service Differentiation for Mobile Video Apps***, accepted in Mini Conference Track of the *IFIP/IEEE International Symposium on Integrated Network Management (IM)*, 2017.

Rijurekha Sen, Hasnain Ali Pirzada, Amreesh Phokeer, Zaid Ahmed Farooq, **Satadal Sengupta**, David Choffness, Krishna 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)*, 2016.

Sujoy Saha, Subrata Nandi, Rohit Verma, **Satadal Sengupta**, Kartikeya Singh, Vivek Sinha, Sajal K. Das, ***Design of Efficient Lightweight Strategies to Combat DoS Attack in Delay Tolerant Network Routing***, in *Journal of Wireless Networks*, Springer, 2016.

**2015** (**Best Poster Award**) Dhruv Jain, Swapnil Agarwal, **Satadal Sengupta**, Pradipta De, Bivas Mitra, Sandip Chakraborty, ***Prediction of Quality Degradation for Mobile Video Streaming Apps: A Case Study using YouTube***, in Poster Track of *COMSNETS*, Bangalore, India, January 2016.

**Satadal Sengupta**, Harshit Gupta, Pradipta De, Bivas Mitra, Sandip Chakraborty, Niloy Ganguly, ***Understanding Data Traffic Behaviour for Smartphone Video and Audio Apps***, in Poster Track of *COMSNETS*, Bangalore, India, January 2016.

Chander Govindarajan, **Satadal Sengupta**, Pradipta De, Bivas Mitra, Sandip Chakraborty, ***Role of Network Control Packets in Smartphone Energy Drainage***, in Poster Track of *COMSNETS*, Bangalore, India, January 2016.

**2012** Sujoy Saha, **Satadal Sengupta**, Rohit Verma, Subrata Nandi, ***SRSnF: A Strategy for Secured Routing in Spray & Focus Routing Protocol for Delay Tolerant Networks***, in Proc. of the *2<sup>nd</sup> Int'l Conf. on Advances in Computing and Information Technology*, Chennai, India, July 2012.

Sujoy Saha, **Satadal Sengupta**, Rohit Verma, Subrata Nandi, ***Secured Routing in DTNs: Threats & Counter-measures***, in Ph.D. Forum of the *13<sup>th</sup> International Conference on Distributed Computing and Networking (ICDCN)*, Hong Kong Polytechnic University, China, January 2012.

**2011** Sushovan Patra, Sujoy Saha, Vijay Shah, **Satadal Sengupta**, Konsam Gojendra Singh, Subrata Nandi, *A Qualitative Survey on Multicast Routing in Delay Tolerant Networks*, in Proceedings of the 3<sup>rd</sup> International Conference on Wireless & Mobile Networks (WiMO), Turkey, June 2011.

## Teaching Assistance and Mentorship

### Teaching Assistant (TA)

Semester	Course	Instructor
Spring 2016, 2017	Computer Networks	Prof. (Dr.) Niloy Ganguly
Autumn 2016	Smartphone Computing and Applications	Prof. (Dr.) Niloy Ganguly

### Projects Mentored

**Key:** MTP/BTP - Master's/Bachelor's Thesis Project; CTP - Course Term Project; IP - Internship Project

- Sensor-based Cricket Shot Identification and Live Commentary (CTP, Autumn 2016).
- Yes Sir! A Smart Attendance App based on Indoor Localization (CTP, Autumn 2016).
- Analysis of Mobile Video Traffic on Various Platforms (BTP, 2015-16).
- Mobile App Traffic Identification and Service Differentiation (BTP and IP, 2015-16).
- Intelligent Caching based on Social Network Dynamics (CTP and IP, 2016).
- Impact of Network Control Packets on Energy Drainage in Smartphones (BTP and IP, 2015-16).

## Software Skills

### ■ Programming Languages

**Proficient:** C/C++, Python; **Intermediate:** Java, C#, PL/SQL; **Beginner:** UNIX Shell Script, PHP

### ■ Tools and Technologies

**Network Traffic Capture and Analysis Tools:** Wireshark, tcpdump, nDPI, NetFilterQueue

**Server Administration:** Oracle Database Server, Oracle WebLogic Server, Microsoft SQL Server

**IDEs:** Oracle JDeveloper, Eclipse, Microsoft Visual Studio, Kile

**Version Control:** Git, SVN.

## Extra-Curricular Achievements

- Freelance Writer for **JÑĀNĀLOK Infotech** – a Kolkata based creative writing company, from 2009 to 2013.
- Awards & positions in inter-school elocution and quiz competitions; School prefect in Secondary Level.
- **Languages:** English, Hindi, Bengali (Proficient); Spanish, Nepali (Intermediate); German (Elementary).