# SUBHRENDU CHATTOPADHYAY

## 1 Contact Information


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## 2 Current Position

Temporary Project Staff Department of Computer Science and Engineering (From October 2020)
Indian Institute of Technology, Kharagpur
Project Name: Development of Algorithms and Tools for Log Analytics and Vulnerability Assessment
Principal Investigator: Dr. Sandip Chakraborty

## 3 Area of Interests

My research interests include Software Defined Networking, Fog Computing, Next Generation Wireless Networks, Distributed Algorithms and Performance Modeling of Network and Communication System.

## 4 Academic Qualification

**Post Graduation:** Doctor of Philosophy in Computer Science and Engineering from Indian Institute of Technology, Guwahati (July 2014 - April 2021)

**Post Graduation:** Master of Technology in Computer Science and Engineering with **CGPA: 8.81/10** from Indian Institute of Technology, Guwahati (June 2012 - July 2014)

**Graduation:**Bachelor of Technology in Computer Science and Engineering with **CGPA: 8.04/10** from B.P Poddar Institute of Management and Technology, WestBengal University of Technology (July 2006 - June 2010)

**Higher Secondary (10+2):** with **77.5%** from Beldanga C.R.G.S High School, under West Bengal Council of Higher Secondary Examination (May, 2006)

**Secondary (10):** Madhyamik with **81.5%** from Sargachhi Ramakarishna Mission High School, under West Bengal Board of Secondary Education (April, 2003)

## 5 Awards

1. **Fellowship:** Recipient of TCS Research scholarship (Cycle 10) and Fellowship from MHRD
2. **Travel Grants:**
   (a) Received conference travel grant from IEEE COMSNETS and LRN foundation.
   (b) Recipient of travel grant from Mirosoft India, Research and Development
3. **Best paper awards:**
   (a) IEEE INFOCOM 2019 [3] (in a session)
   (b) IEEE COMSNETS 2016 [9]
   (c) IEEE ANTS 2013 [15]

## 6 Teaching Assistance

1. **Teaching Assistant** in IIT, Guwahati For Operating Systems (CS341) (2018 Monsoon)
2. **Teaching Assistant** in IIT, Guwahati For Network Lab (CS343) (2016 Monsoon)
3. **Teaching Assistant** in IIT, Guwahati For Wireless Networks (CS551) (2015 Monsoon, 2017 Monsoon)
4. **Teaching Assistant** in IIT, Guwahati For Systems Lab (CS558) (2014 Winter,2015 Winter,2016 Winter,2018 Winter)
5. **Teaching Assistant** in IIT, Guwahati For Programming Lab (CS513) (2013 Monsoon, 2014 Monsoon)
6. **Teaching Assistant** in IIT, Guwahati For Computing Laboratory (CS110) (2013 Winter)
7. **Teaching Assistant** in IIT, Guwahati For Discrete Mathematics (CS202) (2012 Monsoon)

## 7 Professional Experience

**Automation Test Engineer:** Programmer Analyst Trainee in Cognizant Technology Solution India Pvt. Ltd. (July 2010 - July 2011)

**Professional Certification:** LOMA 280 certified with 99.2%

## 8 Voluntary Services

1. Conference Reviewer: IEEE ANTS (2014 - 2018), IEEE ICC 2017, IEEE NCC 2017, IEEE ISED 2017, IEEE COMSNETS (2018-2019)
2. Journal Reviewer: Springer Journal of Network and Systems Management
3. Member of Technical Program Committee: IEEE COMSNETS (2020-2021)

## 9 Collaborations

I had the opportunity to collaborate with the following distinguished faculty members.

1. Dr. Sandip Chakraborty, Assistant Professor, IIT Kharagpur
2. Prof. Soumya K Ghosh, Professor, IIT Kharagpur
3. Dr. Samar Shailendra, Scientist, TCS Networks Lab
4. Dr. Sushanta Karmakar, Associate Professor, IIT Guwahati
5. Dr. Abhinandan S. Prasad, Associate Professor, NIE Mysore
6. Dr. Debarati Sen, Associate Professor, IIT Kharagpur
7. Dr. Niladri Sett, Assistant Professor, SRM University AP

## 10 Reference Persons

1. Prof. Sukumar Nandi, Senior Professor
   Department of CSE, IIT Guwahati, Assam, India-781039, sukumar@iitg.ac.in, (+91 361 258 2357)
2. Dr. Sandip Chakraborty, Assistant Professor
   Department of CSE, IIT Kharagpur, West Bengal, India-721302, sandipc@cse.iitkgp.ac.in, (+91 322 228 2898)
3. Prof. Soumya Kanti Ghosh, Professor
   Department of CSE, IIT Kharagpur, West Bengal, India-721302, skg@cse.iitkgp.ac.in, (+91 322 228 2332)

# List of Publications


[1] Subhrendu Chattopadhyay, Soumyajit Chatterjee, Sukumar Nandi, and Sandip Chakraborty. Aloe: Fault-tolerant network management and orchestration framework for iot applications. *IEEE Transactions on Network and Service Management*, 17(4):2396–2409, 2020.

[2] Subhrendu Chattopadhyay, Sukumar Nandi, Sandip Chakraborty, and Abhinandan Prasad. Amalgam: Distributed network control with scalable service chaining. In *Nineteenth IFIP Networking Conference (IFIP Networking)*, 2020.

[3] Subhrendu Chattopadhyay, Soumyajit Chatterjee, Sukumar Nandi, and Sandip Chakraborty. Aloe: An elastic auto-scaled and self-stabilized orchestration framework for IoT applications. In *Thirty Eighth IEEE International Conference on Computer Communications (INFOCOM)*, volume 38, 2019.

[4] Shubha Brata Nath, Subhrendu Chattopadhyay, Raja Karmakar, Sourav Kanti Addya, Sandip Chakraborty, and Soumya K. Ghosh. Ptc: Pick-test-choose to place containerized micro-services in iot. In *2019 IEEE Global Communications Conference (GLOBECOM)*, pages 1–6, 2019.

[5] Subhrendu Chattopadhyay, Samar Shailendra, Sukumar Nandi, and Sandip Chakraborty. Improving MPTCP performance by enabling sub-flow selection over a SDN supported network. In *Fourteenth International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob)*, 2018.

[6] Subhrendu Chattopadhyay, Sukumar Nandi, Samar Shailendra, and Sandip Chakraborty. Primary path effect in multi-path TCP: How serious is it for deployment consideration? In *Eigthteenth ACM International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc)*, page 36, 2017.

[7] Subhrendu Chattopadhyay, Niladri Sett, Sukumar Nandi, and Sandip Chakraborty. Flipper: Fault-tolerant distributed network management and control. In *Fifteenth IFIP/IEEE International Symposium on Integrated Network Management (IM)*, 2017.

[8] Pranav Kumar Singh, Subhrendu Chattopadhyay, Pradeepkumar Gajendra Bhale, and Sukumar Nandi. Fast and secure handoffs for v2i communication in smart city wi-fi deployement. In *Fourteenth International Conference on Distributed Computing and Internet Technology (ICDCIT)*, 2017.

[9] Sandip Chakraborty and Subhrendu Chattopadhyay. ES2: Managing link level parameters for elevating data rate and stability in high throughput wlan. In *Eighth International Conference on COMmunication System & NETworks (COMSNET 2016)*, volume 8, 2016.

[10] Sandip Chakraborty, Sukumar Nandi, and Subhrendu Chattopadhyay. Alleviating hidden and exposed nodes in high-throughput wireless mesh networks. *IEEE Transactions on Wireless communications*, 15(2):928–937, 2016.

[11] Subhrendu Chattopadhyay, Sandip Chakraborty, and Sukumar Nandi. Leveraging the trade-off between spatial reuse and channel contention in wireless mesh networks. In *Eighth International Conference on COMmunication System & NETworks (COMSNET 2016)*, volume 8, 2016.

[12] Niladri Sett, Subhrendu Chattopadhyay, Sanasam Ranbir Singh, and Sukumar Nandi. A time aware method for predicting dull nodes and links in evolving networks for data cleaning. In *Fourteenth IEEE/WIC/ACM International Conference on Web Intelligence (WI)*, pages 304–310, 2016.

[13] Sandip Chakraborty, Subhrendu Chattopadhyay, Suchetana Chakraborty, and Sukumar Nandi. Defending concealedness in ieee 802.11n. In *Sixth IEEE International Conference on COMmunication System & NETworks (COMSNET 2014)*, pages 1–8, 2014.

[14] Sushanta Karmakar and Subhrendu Chattopadhyay. A trigger counting mechanism for ring topology. In *Thirty Seventh Australasian Computer Science Conference-Volume (ACSC 2014)*, pages 81–87, 2014.

[15] Sandip Chakraborty, Sukumar Nandi, and Subhrendu Chattopadhyay. Surpassing flow fairness in a mesh network: How to ensure equity among end users? In *Seventh IEEE International Conference on Advanced Networks and Telecommunication Systems (ANTS 2013)*, 2013.