

# SUBHRENDU CHATTOPADHYAY

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## 1 Contact Information

- **Address:** c/o Subhas Ch. Chattopadhyay, 55-Charichara Bazar Lane, Nabadwip, Nadia, Westbengal, India 741302
- **Website:** <https://subhrendu1987.github.io/>
- **Email:** subhrendu.subho@gmail.com
- **Mobile:** +91-9435 658 234, +91-8918 796 261
- **Skype:** live:subhrendu.subho\_1

## 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 Previous Position

Ph.D. Research Scholar (Thesis Submitted) (From July 2014- September 2020)  
Department of Computer Science and Engineering  
Indian Institute of Technology, Guwahati  
Thesis Title: SDN for Large Scale IoT Networks  
Supervisor: Prof. Sukumar Nandi

## 4 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.

## 5 Academic Qualification

**Post Graduation:** Master of Technology in Dept. of 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)

## 6 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]

## 7 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)

## 8 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%

## 9 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)

## 10 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, Research Associate, UCD Ireland

## 11 Reference Persons

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

## 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 *Eighthteenth 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 deployment. 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 iee 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.