

SAMARESH BERA

+91-9641606200 ◇ samareshbera91@gmail.com

Visiting Researcher, Indian Institute of Science, Bangalore, Karnataka, India, 560012

Website: <http://cse.iitkgp.ac.in/~sambera>

EDUCATION

Doctor of Philosophy (Thesis submitted)

January 2015 - Present

Indian Institute of Technology Kharagpur

Thesis: Software-Defined Networking for Internet of Things: Rule Placement and Routing

Supervisor: Prof. Sudip Misra

Master of Science (by research)

2015

Indian Institute of Technology Kharagpur

Thesis: Distributed Pricing Policy and Energy Management in Smart Grid

Supervisor: Prof. Sudip Misra

CGPA: 9.47

Bachelor of Technology, Electronics and Communication Engineering

2011

West Bengal University of Technology

CGPA: 8.2

EXPERIENCE

Visiting Researcher

September 2020 - Present

BTIRC, IISc Bangalore

Research Engineer

January 2020 - April 2020

INRIA, Sophia Antipolis

Nokia Bell Labs, France

Senior Research Fellow

October 2018 - December 2019

IIT Kharagpur

MHRD, Govt. of India

Senior Research Fellow

February 2016 - October 2018

SRIC, IIT Kharagpur

DRDO, Govt. of India

Senior Project Officer

August 2014 - January 2016

SRIC, IIT Kharagpur

DeiTY, Govt. of India

Junior Project Officer

August 2013 - July 2014

SRIC, IIT Kharagpur

DeiTY, Govt. of India

Junior Project Assistant

August 2012 - July 2013

IIT Kharagpur

DeiTY, Govt. of India

TEACHING ASSISTANT

Software Engineering (CS20006 and CS29006)

IIT Kharagpur

Spring 2019, 2018, 2017

Wireless & Ad-Hoc Sensor Networks (IT60119)

IIT Kharagpur

Autumn 2016, 2015, 2014

Internet and Web-based Technologies (IT60102)

IIT Kharagpur

Spring 2015

Advanced Network Technologies (IT60106)

IIT Kharagpur

Spring 2014

Programming and Data Structure (CS10001)

IIT Kharagpur

Spring 2016

Programming and Data Structure Lab (CS19001)

IIT Kharagpur

Autumn 2018

PUBLICATIONS

Book

1. S. Misra and **S. Bera**, “Smart Grid Technology: A Cloud Computing and Data Management Approach”, *Cambridge University Press*, Cambridge, UK, ISBN: 9781108566506, 2018 [⟨link⟩](#).

Journal

1. **S. Bera**, S. Misra, and N. Saha, “Traffic-Aware Dynamic Controller Assignment in SDN”, *IEEE Transactions on Communications*, 2020 (preprint) [⟨link⟩](#).
2. S. Misra and **S. Bera**, “Soft-VAN: Mobility-Aware Task Offloading in Software-Defined Vehicular Network”, *IEEE Trans. on Vehicular Technology*, 2019, [⟨link⟩](#).
3. **S. Bera**, S. Misra, and A. Jamalipour, “FlowStat: Adaptive Flow-Rule Placement for Per-Flow Statistics in SDN”, *IEEE Journal on Selected Areas in Communications*, vol. 37, no. 3, pp. 530-539, 2019 [⟨link⟩](#).
4. **S. Bera**, S. Misra, and M. S. Obaidat, “Mobi-Flow: Mobility-Aware Adaptive Flow-Rule Placement in Software-Defined Access Network”, *IEEE Trans. on Mobile Computing*, 2018 [⟨link⟩](#).
5. N. Saha, **S. Bera**, and S. Misra, “Sway: Traffic-Aware QoS Routing in Software-Defined IoT”, *IEEE Trans. on Emerging Topics in Computing*, 2018 [⟨link⟩](#).
6. **S. Bera**, S. Misra, S. K. Roy, and M. S. Obaidat, “Soft-WSN: Software-Defined WSN Management System for IoT Applications”, *IEEE Systems Journal* vol. 12, no. 3, pp. 2074-2081, Sept. 2018 (**Best paper award 2019**) [⟨link⟩](#).
7. S. Misra, **S. Bera**, Achuthananda M.P., S. K. Pal, and M. S. Obaidat, “Situation-Aware Protocol Switching in Software-Defined Wireless Sensor Network Systems”, *IEEE Systems Journal*, vol. 12, no. 3, pp. 2353-2360, Sept. 2018 [⟨link⟩](#).
8. **S. Bera**, S. Misra, and A. V. Vasilakos, “Software-Defined Networking for Internet of Things: A Survey”, *IEEE Internet of Things Journal*, vol. 4, no. 6, pp. 1994-2008, Dec. 2017 [⟨link⟩](#).
9. **S. Bera**, S. Misra, and D. Chatterjee, “C2C: Community-Based Cooperative Energy Consumption in Smart Grid”, *IEEE Transactions on Smart Grid*, vol. 9, no. 5, pp. 4262-4269, Sept. 2018 [⟨link⟩](#).
10. S. Misra, **S. Bera**, T. Ojha, H. T. Mouftah, and A. Anpalagan, “ENTRUST: Energy Trading Under Uncertainty in Smart Grid Systems”, *Computer Networks* (Elsevier), vol. 110, pp. 232-242, Dec. 2016 [⟨link⟩](#).
11. A. Samanta, **S. Bera**, and S. Misra, “Link-Quality-Aware Resource Allocation With Load Balance in Wireless Body Area Networks”, *IEEE Systems Journal*, vol. 12, no. 1, pp. 74-81, Mar. 2018 [⟨link⟩](#).
12. S. Misra, **S. Bera**, T. Ojha, and L. Zhou, “ENTICE: Agent-Based Energy Trading with Incomplete Information in the Smart Grid”, *Journal of Network and Computer Applications*, Vol. 55, pp. 202-212, Sept. 2015, [⟨link⟩](#).
13. **S. Bera**, P. Gupta, and S. Misra, “D2S: Dynamic Demand Scheduling in Smart Grid Using Optimal Portfolio Selection Strategy”, *IEEE Transactions on Smart Grid*, Vol. 6, No. 3, pp. 1434-1442, Apr. 2015, [⟨link⟩](#).
14. **S. Bera**, S. Misra, and J. Rodrigues, “Cloud Computing Applications for Smart Grid: A Survey”, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 26, No. 5, pp. 1477-1494, 2015,

[link](#).

15. S. Misra, **S. Bera**, and T. Ojha, “D2P: Distributed Dynamic Pricing Policy in Smart Grid for PHEVs Management”, *IEEE Transactions on Parallel and Distributed Systems*, Vol. 26, No. 3, pp. 702–712, Feb. 2015, [link](#).
16. S. Misra, **S. Bera**, and M. S. Obaidat, “Economics of Customer’s Decisions in Smart Grid”, *IET Networks*, Vol. 4, No. 1, pp. 37–43, January 2015, [link](#).
17. S. Misra, **S. Bera**, A. Mondal, R. Tirkey, H. C. Chao, and S. Chattopadhyay, “Optimal Gateway Selection in Sensor-Cloud Framework for Health Monitoring”, *IET Wireless Sensor Systems*, Vol. 3, No. 4, pp. 61–68, December 2013, [link](#).

Conference & Workshop

1. N. Saha, **S. Bera**, and S. Misra, “QoS-Aware Adaptive Flow-rule Aggregation in Software-Defined IoT”, in *Proc. of the IEEE GLOBECOM*, Dec. 2018, [link](#).
2. **S. Bera**, S. Misra, and N. Saha, “DynamITE: Dynamic Traffic Engineering in Software-Defined Cyber Physical Systems”, in *Proc. of the IEEE ICC Workshop*, May 2018, [link](#).
3. **S. Bera**, S. Misra, M. S. Obaidat, “Mobility-Aware Flow-Table Implementation in Software-Defined IoT”, in *Proc. of the IEEE GLOBECOM*, Dec. 2016, [link](#).
4. **S. Bera**, T. Ojha, S. Misra, M. S. Obaidat, “Cloud-based Optimal Energy Forecasting for Enabling Green Smart Grid Communication”, in *Proc. of the IEEE GLOBECOM*, Dec. 2015, [link](#).
5. T. Ojha, **S. Bera**, S. Misra, and N. S. Raghuwanshi, “Dynamic Duty Scheduling for Green Sensor-Cloud Applications”, in *Proc. IEEE International Cloud Computing Technology and Science (CloudCom)*, pp. 841–846, Singapore, Dec., 2014, [link](#).
6. **S. Bera**, S. Misra, and M. S. Obaidat, “Energy Efficient Smart Metering for Green Smart Grid Communication”, in *Proc. of the IEEE Global Communications Conference (GLOBECOM)*, pp. 2466–2471, TX, USA, Dec., 2014, [link](#).
7. S. Misra, A. Mondal, S. Banik, M. Khatua, **S. Bera**, and M. S. Obaidat, “Residential Energy Management in Smart Grid: A Markov Decision Process Based Approach”, *Proc. of the IEEE Internet of Things (iThings/CPSCoM)*, Beijing, China, August 2013, pp. 1152–1157, [link](#).

Book Chapter

1. S. N. Das, **S. Bera**, S. Misra, S. K. Pal, “Introduction to Wireless Sensor Networks”, in Book “Soft Computing Applications in Sensor Networks”, Editors: Misra and Pal, CRC Press, 2016, [link](#).

INVITED TALK

- 5th International Conference on Advanced Computing and Intelligent Engineering (ICACIE), 2020
- AICTE-Sponsored Online Short Term Training Program – III on Computer Networking with SDN, 2020

AWARDS AND SCHOLARSHIPS

- Received **IEEE Richard E Merwin** Student Scholarship from the IEEE Computer Society, 2017.
- Selected as **Young Researcher** for attending 5th **Heidelberg Laureate Forum**, Germany, September 2017.

- Received **travel grant** from **Heidelberg Laureate Forum Foundation** to attend HLF 2017.
- Received **Merit Cum Means scholarship** from **Govt. of West Bengal**, 2007-2008 and 2008-2009.

SOCIAL ACTIVITIES

TPC Member	ICDCN-2020, IEEE TechSym-2016, IEEE ScalCom-2014
Reviewer	IEEE COMST, IEEE JSAC, IEEE TMC, IEEE TCYB, IEEE TVT, and many more
Student Activity	Chair (2019), Vice-Chair (2019), IEEE Student Branch, IIT Kharagpur Treasurer (2016), IEEE Student Branch, IIT Kharagpur
Membership	Graduate Student Member, IEEE Student Member, IEEE Computer Society
Conference Organizer	IEEE TechSym (2016 and 2020)

DECLARATION

I hereby declare that the information furnished above are true to the best of my knowledge.

November 25, 2020

Samaresh Bera