

Siddhartha Sarma

Education

- Aug, 2010–
Jan, 2017 **Ph.D.**, *Department of Electronic Systems Engineering (DESE)*, Indian Institute of Science Bangalore, India.
- 2002–2006 **B.Tech (Electronics and Communication Engineering)**, *National Institute of Technology Jalandhar (NITJ)*, Punjab, India.

Research Interests

Resource allocation in Wireless Networks, Wireless Energy Harvesting, Internet of Things (IoT) and Wireless Sensor Networks

Work Experience

- Jan, 2017–
present **Assistant Professor**, *School of Computing and Electrical Engineering*, Indian Institute of Technology Mandi (IIT Mandi), Himachal Pradesh.
- Aug, 2016–
Jan, 2017 **Teaching Fellow**, *School of Computing and Electrical Engineering*, Indian Institute of Technology Mandi (IIT Mandi), Himachal Pradesh.
- 2008-2010 **Lecturer**, *Electronics and Telecommunication Engineering*, Tripura Institute of Technology, Narsingarh, Agartala, Tripura.

Project

- 2017–2020 **Co-PI**, *Developing a low-cost, scalable and resilient Internet-of-Things framework at IIT Mandi for deployment in multiple application scenarios*, Funding organization: IIT Mandi.

Publications

Journals:

1. **S. Sarma** and J. Kuri, "Optimal power allocation for protective jamming in wireless networks: A flow based model." *Elsevier Computer Networks* 81(0) (2015) 258 – 271
2. A. Sunny, **S. Sarma** and J. Kuri, "Secure Transmission in Cooperative Networks with Weak Eavesdroppers", *IEEE Signal Processing Letters*, vol.22, no.10, pp.1693–1697, Oct. 2015, doi: 10.1109/LSP.2015.2425043
3. **S. Sarma**, S. Agnihotri and J. Kuri, "Secure Communication in Amplify-and-Forward Networks with Multiple Eavesdroppers: Decoding with SNR Thresholds", *Springer Wireless Personal Communications*, Volume 85, Issue 4 (2015), Page 1945-1956, <http://dx.doi.org/10.1007/s11277-015-2881-5>.
4. **S. Sarma**, J. Kuri, "QEP Based Solution for Power Allocation in Amplify and Forward Networks," *IEEE Communications Letters*, vol.19, no.10, pp.1774-1777, Oct. 2015, doi: 10.1109/LCOMM.2015.2456921
5. **S. Sarma**, K. Kandhway, J. Kuri, "Robust Power Allocation and Outage Analysis for Secrecy in

Independent Parallel Gaussian Channels," in *IEEE Wireless Communications Letters*, vol.5, no.1, pp.68-71, Feb. 2016, doi: 10.1109/LWC.2015.2497347

6. **S. Sarma**, K. Kandhway and J. Kuri, "Robust Energy Harvesting Based on a Stackelberg Game", in *IEEE Wireless Communications Letters*, vol.5, no.3, pp.336-339, doi: 10.1109/LWC.2016.2555901.
7. **S. Sarma** and J. Kuri, "SNR based Secure Communication via Untrusted Amplify and Forward Relay Nodes Using Artificial Noise" in *Springer Wireless Networks*, vol. 24, no. 1, pp 127–138, Jan. 2018, doi:10.1007/s11276-016-1318-8.

Conferences:

1. **S. Sarma**, S. Shukla, and J. Kuri, "Joint Scheduling & Jamming for Data Secrecy in Wireless Networks," in *2013 11th International Symposium on Modeling Optimization in Mobile, Ad Hoc Wireless Networks, (WiOpt 13)*, 2013, pp. 248–255.
2. S. Shukla, **S. Sarma** and J. Kuri, "Maximizing Transported Data Before Partition in a Wireless Sensor Network", in *Sixth International Conference on Communication Systems and Networks (COMSNETS 2014)*, pp.1–8, doi: 10.1109/COMSNETS.2014.6734884.
3. A. Sunny, **S. Sarma** and J. Kuri, "Beating Resource Constrained Eavesdroppers: A Physical Layer Security Study", in *13th International Symposium on Modeling Optimization in Mobile, Ad Hoc Wireless Networks, (WiOpt 15)*, pp.167-174, 25-29 May 2015 doi: 10.1109/WIOPT.2015.7151069.
4. **S. Sarma**, K. Kandhway, B. Kotnis and J. Kuri, "Urban Monitoring Using Participatory Sensing: An Optimal Budget Allocation Approach" in *COMSNETS 2016 Social Networking Workshop*, pp. 1-6, doi: 10.1109/COMSNETS.2016.7439968.
5. **S. Sarma**, S. Agnihotri and J. Kuri, "Secure Transmission in Amplify-and-Forward Diamond Networks with a Single Eavesdropper", in *Twenty Second National Conference on Communication (NCC)*, Guwahati, 2016, pp. 1-6., doi: 10.1109/NCC.2016.7561158

Achievements

- *Indo-Japanese Young Research Fellow* (Indo-Japanese Joint Project on Establishment of Young Researcher Fellowship Programme 2018-2019)—visited Prof. Koji Ishibashi in University of Electro-Communications to conduct collaborative research on wireless energy harvesting.