

IoT Energy Efficiency and Energy Sustainability Sub-Project

Swades De

Journals

1. S. Suman, S. De, R. K. Mallik, M. ElKashlan, and A. Nallanathan, "Beamforming based mitigation of hovering inaccuracy in UAV-aided RFET," *IEEE Trans. Commun.*, (accepted, Oct. 2021).
2. V. Gupta and S. De, "Energy-Efficient Temporal Sensing: An Age of Sample Based Approach," *IEEE Internet of Things J.*, (accepted, Jun. 2021).
3. V. Gupta and S. De, "Energy-efficient edge computing framework for decentralized sensing in WSN-assisted IoT," *IEEE Trans. Wireless Commun.*, vol. 20, no. 8, pp. 4811–4827, Aug. 2021.
4. S. Ghosh, S. De, S. Chatterjee, and M. Portmann "Learning-based adaptive sensor selection framework for multi-sensing WSN," *IEEE Sensors J.*, vol. 21, no. 12, pp. 13551–13563, Jun. 2021.
5. S. Kumar, S. Suman, and S. De, "Dynamic resource allocation in UAV-enabled mmWave communication networks," *IEEE Internet of Things J.*, vol. 8, no. 12, pp. 9920–9933, Jun. 2021.
6. M. Roy Chowdhury, S. Tripathi, and S. De, "Adaptive multivariate data compression in smart metering Internet of Things," *IEEE Trans. Ind. Informat.*, vol. 17, no. 2, pp. 1287–1297, Feb. 2021.
7. S. Suman and S. De, "Optimal UAV-aided RFET system design in presence of hovering inaccuracy," *IEEE Trans. Commun.*, vol. 69, no. 1, pp. 558–572, Jan. 2021.
8. N. Varshney and S. De, "Optimum downlink beamwidth estimation in mmWave communications," *IEEE Trans. Commun.*, vol. 69, no. 1, pp. 544–557, Jan. 2021.
9. V. Gupta and S. De, "Collaborative multi-sensing in energy harvesting wireless sensor networks," *IEEE Trans. Signal Inf. Process. Netw.*, vol. 6, no. 1, pp. 426–441, Dec. 2020.
10. A. Thakur, S. De, and G.-M. Muntean, "Co-channel secondary deployment over DTV bands using reconfigurable radios," *IEEE Trans. Veh. Technol.*, vol. 69, no. 10, pp. 12202–12215, Oct. 2020.
11. S. Suman and S. De, "Low complexity dimensioning of sustainable solar-enabled systems: A case of base station," *IEEE Trans. Sustain. Comput.*, vol. 5, no. 3, pp. 438–454, Jul. 2020.
12. V. Gupta, S. Tripathi, and S. De, "Green Sensing and communication: A step towards sustainable IoT systems," (Invited article), *Springer J. Indian Inst. Sc.*, pp. 383-398, Apr. 2020.
13. P. Mukherjee, D. Mishra, and S. De, "Gaussian mixture based context-aware short-term characterization of wireless channels," *IEEE Trans. Veh. Technol.*, vol. 69, no. 1, pp. 26–40, Jan. 2020.

14. S. Suman, S. Kumar, and S. De, "Impact of hovering inaccuracy on UAV-aided RFET," *IEEE Commun. Lett.*, vol. 23, no. 12, pp. 2362–2366, Dec. 2019.
15. S. Suman, S. Kumar, and S. De, "UAV-assisted RFET: A novel framework for sustainable WSN," *IEEE Trans. Green Commun. Netw.*, vol. 3, no. 4, pp. 1117–1131, Dec. 2019.
16. K. Kaushik, D. Mishra and S. De, "Stochastic solar harvesting characterization for sustainable sensor node operation," *IET Wireless Sensor Systems J.*, vol. 9, no. 4, pp. 208–217, Jul. 2019.
17. P. Mukherjee and S. De, "Dynamic feedback based adaptive modulation for energy-efficient communication," *IEEE Commun. Lett.*, vol. 23, no. 5, pp. 946–949, May 2019.
18. S. Tripathi and S. De, "Data-driven optimizations in IoT: A new frontier of challenges and opportunities" (Invited article), *Springer CSI Trans. ICT*, vol. 7, no. 1, pp. 35–43, Mar. 2019.
19. S. Suman, S. Kumar, and S. De, "Path loss model for UAV-assisted RFET," *IEEE Commun. Lett.*, vol. 22, no. 10, pp. 2048–2051, Oct. 2018.

Conferences

1. R. Gupta, V. Gupta, A. K. Mandal, and S. De, "Learning-based multivariate real-time data pruning for smart PMU communication," in *Proc. IEEE CCNC., Virtual (online) Conf.*, Jan. 2022.
2. P. Das, S. Ghosh, W. A. Khan, S. Chatterjee, and S. De, "Prototype implementation of dynamic data pruning in smart energy meter," in *Proc. IEEE GLOBECOM Wksp.*, Madrid, Spain, Dec. 2021.
3. N. Varshney and S. De, "Joint beamwidth and number of concurrent beams estimation in downlink mmWave communications," in *Proc. Nat. Conf. Commun.*, Kanpur, India, Jul. 2021. **(Best paper award)**
4. P. Das, S. Ghosh, S. Chatterjee, and S. De, "Energy harvesting-enabled 5G advanced air pollution monitoring device," in *Proc. 5G World Forum*, Bangalore, India, Sep. 2020.
5. S. Tripathi, M. Roy Chowdhury, and S. De, "Versatile multivariate data pruning in smart grid IoT networks," Poster paper, in *Proc. COMSNETS*, pp. 1-3, Bangalore, India, Jan. 2020. **(Best poster paper award first runner-up)**
6. W. A. Khan, P. Das, S. Ghosh, M. Roy Chowdhury, S. Tripathi, S. Kaur, S. Chatterjee, and S. De, "Smart IoT Communication: Circuits and Systems" Research exhibit, in *Proc. COMSNETS*, pp. 1-2, Bangalore, India, Jan. 2020. **(The runner-up research demo award)**

Book Chapters

1. S. Tripathi and S. De, "Pathway and future of the IoE in smart cities: Challenges of big data and energy sustainability," in *Internet of Energy for Smart Cities: Machine Learning Models and Techniques*, Eds. A. Jindal, N. Kumar, and G. Aujla, CRC Press, Jul. 2021.

News Articles

1. P. das, S. Ghosh, S. Kaur, S. Chatterjee, and S De, "Air pollution monitoring 5G testbed powered by solar energy," *IIT Delhi News Letter*, July-September 2019.