

Experience

27-Oct-2023 – Present, Indian Institute of Technology (Indian School of Mines) Dhanbad

Assistant Professor

13-Jun-2022 – 26-Oct-2023, National University of Singapore

Research Fellow, under project: AIoT-Enabled Smart Grid Applications For Sustainable And Resilient Digital Ports In Singapore (ASGARD Project)

Principal Investigator: Prof. Dipti Srinivasan

Education

2016 - 2022, Indian Institute of Technology Patna

PhD(Visvesvaraya Research Fellow) in Computer Science & Engineering

Supervisor: Dr. Arijit Mondal & Dr. Samrat Mondal

2014 - 2016, Indian Institute of Technology (Indian School of Mines) Dhanbad

M.Tech in Computer Science & Engineering

Supervisor: Dr. Hari Om

2009-2013, Kalinga Institute Industrial of Technology Bhubaneswar

B.Tech in Computer Science & Engineering

Publications

Journal

- Ritam Sarkar, **Pranay Kumar Saha**, Samrat Mondal, Arijit Mondal, "MAGE: Microgrids with Advanced Grid Efficiency through Battery-Aware EV management", *Sustainable Cities and Society*, Volume 107, 2024, 105399, ISSN 2210-6707, doi: /10.1016/j.scs.2024.105399. (IF: 10.5)
- **Pranay Kumar Saha**, Nilotpall Chakraborty, Arijit Mondal, and Samrat Mondal, "Intelligent Real-Time Utilization of Hybrid Energy Resources for Cost Optimization in Smart Microgrids," in *IEEE Systems Journal*, doi: 10.1109/JSYST.2024.3352617, Jan 2024.(IF: 4.4)
- **Pranay Kumar Saha**, Nilotpall Chakraborty, Arijit Mondal, and Samrat Mondal, "Optimal Sizing and Efficient Routing of Electric Vehicles for a Vehicle-On-Demand System," *IEEE Transactions on Industrial Informatics*, vol. 18, no. 3, pp. 1489-1499, March 2022, DOI: 10.1109/TII.2021.3091597, (IF: 12.3)
- **Pranay Kumar Saha** and Arijit Mondal, "Efficient Online Heuristic Approach for Handling Fluctuation in Renewable Energy in a Microgrid," *IEEE Systems Journal*, vol. 16, no. 2, pp. 2471-2482, June 2022, DOI: 10.1109/JSYST.2021.3061453. (IF: 4.4)
- Prajnamaya Dass, **Pranay Kumar Saha**, and Hari Om, "Improved Traceable-Resistant Efficient Authentication Schemes for Wireless Networks," *Int. J. Bus. Data Commun. Netw.*, vol. 12, no. 2, pp. 28-61, 2016, DOI: 10.4018/IJBDCN.2016070103

Conferences

- Yingqi Liang, **Pranay Kumar Saha**, "Energy Consumption Forecasting Based on Long Short-term Memory Neural Network with Realistic Smart Meter Data," *2022 IEEE Symposium Series on Computational Intelligence*, pp. 1374-1379, DOI: 10.1109/SSCI51031.2022.10022120.

- Yingqi Liang, **Pranay Kumar Saha**, Jian Hong Davian Lam, “Optimal Residential Building Energy Management Using Genetic Algorithm,” *2022 IEEE Symposium Series on Computational Intelligence*, pp. 1368-1373, DOI: 10.1109/SSCI51031.2022.10022294
- Ritam Sarkar, **Pranay Kumar Saha**, Samrat Mondal, and Arijit Mondal, “Intelligent Scheduling of V2G, V2V, G2V Operations in a Smart Microgrid”, *In Proceedings of the Eleventh ACM International Conference on Future Energy Systems (e-Energy '20)*. Association for Computing Machinery, New York, NY, USA, 417–418, 2020.
- **Pranay Kumar Saha**, Nilotpal Chakraborty, Arijit Mondal, Samrat Mondal, “Coordinated Scheduling of Residential Appliances and Heterogeneous Energy Sources in a Smart Microgrid,” *BuildSys 2019*, NY, USA, pp. 362–363. DOI:10.1145/3360322.336100

Awards

2018, 1st prize on project, IGCS Winter School on Smart Grid, IIT Madras

Awarded to the student group that was a part of the Rural Electrification project.

2016, Visvesvaraya Fellowship

Awarded from Ministry of Electronics and Information Technology (MeitY), Government of India, as a PhD research scholar in Indian Institute of Technology Patna.

2014, GATE Scholarship

Awarded from AICTE as a postgraduate student in Indian Institute of Technology (Indian School of Mines) Dhanbad