

Pranay Kumar Saha

Research Scholar

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DOB 25-08-1990

Education

2016 - Present (Thesis Submitted), 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

- **Pranay Kumar Saha**, Nilotpal 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: 10.215)
- **Pranay Kumar Saha** and Arijit Mondal, "Efficient Online Heuristic Approach for Handling Fluctuation in Renewable Energy in a Microgrid," *IEEE Systems Journal*, DOI: 10.1109/JSYST.2021.3061453. (Accepted February 2021) (IF: 3.931)
- 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

- 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

Software Development Skills

Programming

- Python
- C
- Java

Computer Software and Tools

- Openmodelica
- Oracle
- Gurobi Optimizer

Teaching Assistantship

At IIT Patna

- Autumn 2016, 2019 - Algorithms Lab (CS224)
- Autumn 2017 - Advances in Algorithm (CS503)
- Spring 2018, 2019, 2020 - Programming and Data Structure Lab (CS112)
- Spring 2017 - Computer System Lab (CS515)
- Autumn 2018 - Java Programming Lab (CS382)
- Autumn 2020 - DataBase (CS354)

at IIT(ISM) Dhanbad

- Autumn 2015, Spring 2016 - Computer Programming Lab (CSC16205)
- Autumn 2015 - Cryptography and Network Security Lab (CSC17201)
- Spring 2016 - Advance Algorithm Lab (CSC15201)

Career Interests

Automated tools and development for smart grid are quite difficult; the majority of problems are NP-Hard. It's fascinating to solve problems that are more relevant to our daily lives. There, I'll be concentrating my efforts on smart grid and electric vehicle challenges. Additionally, I'm investigating novel methodologies, such as reinforcement learning performance in smart grid and electric vehicle applications.

References

Dr. Arijit Mondal

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Indian Institute of Technology Patna, Patna, Bihar, India
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Dr. Samrat Mondal

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Indian Institute of Technology Patna, Patna, Bihar, India
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