

# Dr. Pranay Kumar Saha, Assistant Professor

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## Research Publications

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### Journal Articles

- 1 **P. K. Saha**, A. Trivedi, and D. Srinivasan, "Robust optimization for optimal electrical asset placement in small and medium-sized industries," in *Sustainable Energy, Grids and Networks*, vol. 43, p. 101736, ISSN: 2352-4677.  DOI: [10.1016/j.segan.2025.101736](https://doi.org/10.1016/j.segan.2025.101736) (Quartile: **Q1**, Impact Factor: **4.8**).
- 2 **P. K. Saha**, N. Chakraborty, A. Mondal, and S. Mondal, "Intelligent real-time utilization of hybrid energy resources for cost optimization in smart microgrids," in *IEEE Syst. J.*, vol. 18, no. 1, pp. 186–197.  DOI: [10.1109/JSYST.2024.3352617](https://doi.org/10.1109/JSYST.2024.3352617) (Quartile: **Q1**, Impact Factor: **4**).
- 3 R. Sarkar, **P. K. Saha**, S. Mondal, and A. Mondal, "Mage: Microgrids with advanced grid efficiency through battery-aware ev management," in *Sustainable Cities and Society*, vol. 107, p. 105399, ISSN: 2210-6707.  DOI: [10.1016/j.scs.2024.105399](https://doi.org/10.1016/j.scs.2024.105399) (Quartile: **Q1**, Impact Factor: **10.5**).
- 4 **P. K. Saha**, N. Chakraborty, A. Mondal, and S. Mondal, "Optimal sizing and efficient routing of electric vehicles for a vehicle-on-demand system," in *IEEE Trans. Ind. Informatics*, vol. 18, no. 3, pp. 1489–1499.  DOI: [10.1109/TII.2021.3091597](https://doi.org/10.1109/TII.2021.3091597) (Quartile: **Q1**, Impact Factor: **11.7**).
- 5 **P. K. Saha** and A. Mondal, "Efficient online heuristic approach for handling fluctuation in renewable energy in a microgrid," in *IEEE Syst. J.*, vol. 16, no. 2, pp. 2471–2482.  DOI: [10.1109/JSYST.2021.3061453](https://doi.org/10.1109/JSYST.2021.3061453) (Quartile: **Q1**, Impact Factor: **4**).
- 6 P. Dass, **P. K. Saha**, and H. Om, "Improved traceable-resistant efficient authentication schemes for wireless networks," in *Int. J. Bus. Data Commun. Netw.*, vol. 12, no. 2, pp. 28–61.  DOI: [10.4018/IJBDCN.2016070103](https://doi.org/10.4018/IJBDCN.2016070103).

### Conference Proceedings

- 1 Y. Liang and **P. K. Saha**, "Energy consumption forecasting based on long short-term memory neural network with realistic smart meter data," in *IEEE Symposium Series on Computational Intelligence, SSCI 2022, Singapore, December 4-7, 2022*, H. Ishibuchi, C. Kwoh, A. Tan, *et al.*, Eds., IEEE, 2022, pp. 1374–1379.  DOI: [10.1109/SSCI51031.2022.10022120](https://doi.org/10.1109/SSCI51031.2022.10022120).
- 2 Y. Liang, **P. K. Saha**, and J. H. D. Lam, "Optimal residential building energy management using genetic algorithm," in *IEEE Symposium Series on Computational Intelligence, SSCI 2022, Singapore, December 4-7, 2022*, H. Ishibuchi, C. Kwoh, A. Tan, *et al.*, Eds., IEEE, 2022, pp. 1368–1373.  DOI: [10.1109/SSCI51031.2022.10022294](https://doi.org/10.1109/SSCI51031.2022.10022294).
- 3 R. Sarkar, **P. K. Saha**, S. Mondal, and A. Mondal, "Intelligent scheduling of v2g, v2v, G2V operations in a smart microgrid," in *e-Energy '20: The Eleventh ACM International Conference on Future Energy Systems, Virtual Event, Australia, June 22-26, 2020*, ACM, 2020, pp. 417–418.  DOI: [10.1145/3396851.3403517](https://doi.org/10.1145/3396851.3403517).

**P. K. Saha**, N. Chakraborty, A. Mondal, and S. Mondal, “Coordinated scheduling of residential appliances and heterogeneous energy sources in a smart microgrid,” in *Proceedings of the 6th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation, BuildSys 2019, New York, NY, USA, November 13-14, 2019*, ACM, 2019, pp. 362–363.  DOI: [10.1145/3360322.3361001](https://doi.org/10.1145/3360322.3361001).