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Research Publications:

Journal Articles

1. **Saugata Roy**, Nabajyoti Mazumdar, Rajendra Pamula. "A multi-depot provisioned UAV swarm trajectory optimization scheme for collaborative data acquisition in a large-scale IoT environment". *Ad Hoc Networks (Elsevier)*. 2025
<https://doi.org/10.1016/j.adhoc.2025.103974>
2. Nabajyoti Mazumdar, **Saugata Roy**, Amitava Nag, Jyoti Prakash Singh. "A buffer-aware dynamic UAV trajectory design for data collection in resource-constrained IoT frameworks". *Computers and Electrical Engineering (Elsevier)*.
<https://doi.org/10.1016/j.compeleceng.2022.107934>
3. **Saugata Roy**, Nabajyoti Mazumdar, Rajendra Pamula. "An energy optimized and QoS concerned data gathering protocol for wireless sensor network using variable dimensional PSO". *Ad Hoc Networks (Elsevier)*. 2021
<https://doi.org/10.1016/j.adhoc.2021.102669>
4. Nabajyoti Mazumdar, **Saugata Roy**, Amitava Nag, Sukumar Nandi. "An adaptive hierarchical data dissemination mechanism for mobile data collector enabled dynamic wireless sensor network". *Journal of Network and Computer Applications (Elsevier)*. 2021
<https://doi.org/10.1016/j.jnca.2021.103097>
5. **Saugata Roy**, Nabajyoti Mazumdar, Rajendra Pamula. "An optimal mobile sink sojourn location discovery approach for the energy-constrained and delay-sensitive wireless sensor network". *Journal of Ambient Intelligence and Humanized Computing (Springer)*. 2021
<https://doi.org/10.1007/s12652-020-02886-z>
6. **Saugata Roy**, Nabajyoti Mazumdar, Rajendra Pamula. "An energy and coverage sensitive approach to hierarchical data collection for mobile sink based wireless sensor networks". *Journal of Ambient Intelligence and Humanized Computing (Springer)*. 2020
<https://doi.org/10.1007/s12652-020-02176-8>

Conference Proceedings

1. Vikash Chandra Sharma, **Saugata Roy**. "An Intelligent Approach to UAV Path Planning with Battery Optimization and Charging Station Selection". **International Conference on Electronics, AI and Computing (EAIC), NIT Jalandhar, India. 2025**
<https://doi.org/10.1109/EAIC66483.2025.11101488>
<https://doi.org/10.1109/EAIC66483.2025.11101488>
2. **Saugata Roy**, Nabajyoti Mazumdar, Rajendra Pamula, Divya Tarkas. "Efficient Pest Bird-Controlling Algorithm in Unmanned Agriculture System". ***Evolving Technologies for Computing, Communication and Smart World***. Springer, C-DAC Noida, India. 2021
https://doi.org/10.1007/978-981-15-7804-5_37
3. Nabajyoti Mazumdar, Debasish Chouhan, Bhargav Bordoloi, Debakanta Gogoi, Bishnu Prasad Saikia, Suman Sau, Saugata Roy. "An Efficient Communication Protocol for Energy-Constraint IoT Devices for Environment Monitoring Applications" ***Evolving Technologies for Computing, Communication and Smart World***. Springer, C-DAC, Noida, India. 2021
https://doi.org/10.1007/978-981-15-7804-5_36
4. Nabajyoti Mazumdar, **Saugata Roy**, and Soumen Nayak. "A survey on clustering approaches for wireless sensor networks". ***2018 2nd International Conference on Data Science and Business Analytics (ICDSBA)***, IEEE. 2018
<https://doi.org/10.1109/ICDSBA.2018.00049>