

LIST OF PUBLICATIONS

Patent

1. A. Kalita, "An Internet of Things (IoT) enabled System and Process for real-time Monitoring of an Infant to Prevent Falling Off a Surface above Ground level". [Indian Patent Filed on 24/10/2024; Ref No: 202431081152]

Journals

15. A. Hazra, A. Kalita, M. Gurusamy, and D. Sah, "Potential of Zero-Touch Network Management in Industry 5.0: A Future Prospect" in IEEE Internet Computing, I.F: 3.7, 2024. (Accepted). [PDF](#)
14. A. Kalita, and M. Gurusamy, "On-the-Fly Autonomous Slot Allocation in 6TiSCH-based Industrial IoT Networks", *IEEE Transactions on Industrial Informatics*, IF-12.34, 2024, (Accepted). [PDF](#)
13. A. Hazra, A. Kalita, and M. Gurusamy, "Distributed Service Provisioning with Collaboration of Edge and Cloud in Industry 5.0", *IEEE Internet of Things Journal*, I.F: 10.6, vol. 11, no. 12, pp. 21885-21894, 2024. [PDF](#)
12. A. Hazra, P. Maurya, A. Kalita, S. Deb, M. Gurusamy, and V. G. Menon, "Cognitive Computing and Machine Intelligence in Fog-Cloud Infrastructure for Industry 5.0" in *IEEE Consumer Electronics Magazine*, I.F: 4.5, 2024 (Accepted). [PDF](#)
11. A. Hazra, A. Kalita, and M. Gurusamy, "Meeting the Requirements of Internet of Things: The Promise of Edge Computing", *IEEE Internet of Things Journal*, IF-11.7, 2023, (Accepted). [PDF](#)
10. A. Kalita, A. Hazra, and M. Gurusamy, "Parrando's Paradox based Enhanced Beacon Transmission in 6TiSCH Networks", *IEEE Networking Letters*, IF-NA, vol. 5, no. 4, pp. 204-207, 2023. [PDF](#)
9. A. Kalita, M. Gurusamy, and M. Khatua "A Gaming and Trust Model based Counter Measure for DIS Attack on 6TiSCH IoT Networks", in *IEEE Internet of Things Journal*, IF-11.7, vol. 10, no. 11, pp. 9727-9737, 2023. [PDF](#)
8. A. Kalita and M. Khatua, "Time-Variant RGB Model for Minimal Cell Allocation and Scheduling in 6TiSCH Networks," in *IEEE Transactions on Mobile Computing*, IF-7.9, vol. 23, no. 2, pp. 1803 - 1814, 2023. [PDF](#)
7. A. Kalita and M. Khatua, "6TiSCH – IPv6 Enabled Open Stack IoT Network Formation: A Review," in *ACM Transactions on Internet of Things*, IF-2.7, vol. 3, no. 24, pp. 1-36, 2022. [PDF](#)
6. A. Kalita, A. Brighente, M. Khatua, and M. Conti, "Effect of DIS Attack on 6TiSCH Network Formation," in *IEEE Communications Letters*, IF-3.55, vol. 26, no. 5, pp. 1190-1193, May, 2022. [PDF](#)
5. A. Kalita and M. Khatua, "A Non-cooperative Gaming Approach for Control Packet Transmission in 6TiSCH Network," in *IEEE Internet of Things Journal*, IF-11.7, vol. 9, no. 5, pp. 3954-3961, 2022. [PDF](#)
4. A. Kalita and M. Khatua, "Adaptive Control Packet Broadcasting Scheme for Faster 6TiSCH Network Bootstrapping," in *IEEE Internet of Things Journal*, IF-11.7, vol. 8, no. 24, pp. 17395–17402, 2021. [PDF](#)
3. A. Kalita and M. Khatua, "Autonomous Allocation and Scheduling of Minimal Cell in 6TiSCH Network," in *IEEE Internet of Things Journal*, IF-11.7, vol. 8, no. 15, pp. 12242-12250, 2021. [PDF](#)
2. A. Kalita and M. Khatua, "Opportunistic Transmission of Control Packets for Faster Formation of 6TiSCH Network," in *ACM Transactions on Internet of Things*, IF-2.7, vol. 2, no. 1, pp. 1-29, 2021. [PDF](#)
1. A. Kalita and M. Khatua, "Channel Condition Based Dynamic Beacon Interval for Faster Formation of 6TiSCH Network," in *IEEE Transactions on Mobile Computing*, IF-7.9, vol. 20, no. 7, pp. 2326–2337, 2021. [PDF](#)

Conferences

14. V. Tummala, A. Hazra, **A. Kalita**, M. Gurusamy, “Cluster Based Pseudo Hierarchical Decentralized Federated Learning in UAV Networks” in IEEE 99th Vehicular Technology Conference (VTC-Fall’2024). Accepted.
13. V. Tummala, A. Hazra, **A. Kalita**, M. Gurusamy, “Efficient Task Offloading through Federated Learning in UAV-Assisted Edge Networks” in IEEE 99th Vehicular Technology Conference (VTC), 2024. [PDF](#)
12. P. Joshi, **A. Kalita**, M. Gurusamy, “Securing the Skies: An IRS-Assisted AoI-Aware Secure Multi-UAV System with Efficient Task Offloading” in IEEE 99th Vehicular Technology Conference (VTC), 2024. [PDF](#)
11. **A. Kalita**, A. Hazra, and M. Gurusamy, ‘RIM: Reputation-Based Incentives for Optimizing Service Pricing in Metaverse”, In Proc. of IEEE Future Networks World Forum, USA, Baltimore ([FNWF](#)), 2023. [PDF](#)
10. V. Sebastiani*, **A. Kalita***, and M. Gurusamy, ‘Dynamic Resource Allocation and Pricing for Edge-Assisted Metaverse”, In Proc. of IEEE Future Networks World Forum, USA, Baltimore ([FNWF](#)), 2023. [PDF](#)
9. A. Hazra, B. Mali, **A. Kalita**, and M. Gurusamy, ‘Federated Learning for Cost Optimized Offloading in Edge-enabled Industrial Internet of Things”, In Proc. of IEEE Future Networks World Forum, USA, Baltimore ([FNWF](#)), 2023. [PDF](#)
8. A. Hazra, **A. Kalita**, and M. Gurusamy, ‘A Combined Approach of Industrial Edge Computing and Machine Learning for Predictive Maintenance”, In IEEE GLOBECOM WKSHPS: AI/ML for Edge/Fog Networks program ([GLOBECOM - A4E](#)), 2023. [PDF](#)
7. **A. Kalita**, A. Hazra, and M. Gurusamy, “Efficient Schemes for Improved Performance in 6TiSCH Networks”, In IEEE INFOCOM WKSHPS: The 10th International Workshop on Computer and Networking Experimental Research using Testbeds ([INFOCOM - CNERT](#)), 2023, [PDF](#).
6. **A. Kalita** and M. Khatua, “Opportunistic Priority Alternation Scheme for Faster Formation of 6TiSCH Network,” In Proc. of the International Conference on Distributed Computing and Networking ([ICDCN](#)), 2020. [PDF](#)
5. **A. Kalita** and M. Khatua, “Faster Joining in 6TiSCH Network using Dynamic Beacon Interval”, In Proc. of the International Conference on Communication Systems Networks ([COMSNETS](#)), 2019. [PDF](#)
4. **A. Kalita**, N. Ahmed, H. Rahman, and M. I. Hussain, “A QoS-aware MAC protocol for large-scale networks in Internet of Things,” In Proc. of the International Conference on Advanced Networks and Telecommunications Systems ([ANTS](#)), 2017. [PDF](#)
3. **A. Kalita**, K. Ray, A. Biswas, and M. A. Hussain, “A topology for network-on-chip”, In Proc. of the International Conference on Information Communication and Embedded Systems ([ICICES](#)), 2016. [PDF](#)
2. K. Ray, **A. Kalita**, A. Biswas, and M. A. Hussain, “A multipath network on-chip topology”, In Proc. of the International Conference on Information Communication and Embedded Systems ([ICICES](#)), 2016. [PDF](#)
1. A. Biswas, M. A. Hussain, and **A. Kalita**, “An improved congestion free modified fat tree network”, In Proc. of the International Conference on Signal Processing, Communication, Power and Embedded System ([SCOPES](#)), 2016. [PDF](#)

Book Chapter

1. A. Hazra, P. Maurya, **A. Kalita**, I. Sarkar, “Offloading Strategies and Computing Paradigms in IoT: A Survey”, in book “IoT Sensors, ML, AI and XAI: Empowering A Smarter World. Smart Sensors, Measurement and Instrumentation”, vol 50. Springer. [PDF](#)

Technical Report

1. **A. Kalita**, “Contiki-NG, CC2650 IoT devices, and FIT IoT-LAB.” [PDF](#)

Pre-print

1. A. Kalita, “Large Language Models (LLMs) for Semantic Communication in Edge-based IoT Networks” arXiv, 2024. [PDF](#)
2. J. Poorvi, A. Kalita, and M. Gurusamy, “Reliable and Efficient Data Collection in UAV-based IoT Networks”, arXiv, 2024. [PDF](#)
3. A. Kalita and M. Gurusamy, “D2R2: Distributed and Dynamic Reputation based Resource Allocation in Meta-verse”, TechXiv, 2022. [PDF](#)

SIMULATOR

1. A. Kalita, “6TiSCH Cell Allocation Simulator” <[GitHub](#)>