

DAFTAR PUSTAKA

- [1] E. Testi and E. Paolini, “Packet collision probability analysis in contention-based direct-to-satellite IoT uplink,” presented at the IEEE Int. Symp. Pers. Indoor Mob. Radio Commun., Valencia, Spain, Sep. 2024.
- [2] O. Kodheli, N. Maturo, S. Chatzinotas, S. Andrenacci, and F. Zimmer, “NB-IoT via LEO satellites: An efficient resource allocation strategy for uplink data transmission,” *IEEE Internet Things J.*, vol. 9, no. 7, pp. 5094–5107, Aug. 2022.
- [3] M. Centenaro, C. E. Costa, F. Granelli, C. Sacchi, and L. Vangelista, “A survey on technologies, standards and open challenges in satellite IoT,” *IEEE Commun. Surveys Tuts.*, vol. 23, no. 3, pp. 1693–1720, 3rd Quart., 2021.
- [4] J. Jiao, S. Wu, R. Lu, and Q. Zhang, “Massive access in space-based Internet of Things: Challenges, opportunities, and future directions,” *IEEE Wireless Commun.*, vol. 28, no. 5, pp. 118–125, Oct. 2021.
- [5] J. Fraire, S. Céspedes, and N. Accettura, “Direct-to-satellite IoT—A survey of the state of the art and future research perspectives: Backhauling the IoT through LEO satellites,” in *Proc. 18th Int. Conf. Ad-Hoc Netw. Wireless*, Oct. 2019, pp. 241–258.
- [6] A. A. Doroshkin, A. M. Zadorozhny, O. N. Kus, V. Y. Prokopyev, and Y. M. Prokopyev, “Experimental study of lora modulation immunity to doppler effect in CubeSat radio communications,” *IEEE Access*, vol. 7, pp. 75721–75731, 2019.
- [7] Z. Qu, G. Zhang, H. Cao, and J. Xie, “LEO satellite constellation for Internet of Things,” *IEEE Access*, vol. 5, pp. 18391–18401, 2017.
- [8] S. K. Routray, R. Tengshe, A. Javali, S. Sarkar, L. Sharma, and A. D. Ghosh, “Satellite based IoT for mission critical applications,” in *Proc. Int Conf. Data Sci. Commun.*, Mar. 2019, pp. 1–6.
- [9] V. Almonacid and L. Franck, “Extending the coverage of the Internet of Things with low-cost nanosatellite networks,” *Acta Astronautica*, vol. 138, pp. 95–101, Sep. 2017.
- [10] I. F. Akyildiz and A. Kak, “The Internet of Space Things/CubeSats,” *IEEE Netw.*, vol. 33, no. 5, pp. 212–218, Sep. 2019.
- [11] G. Álvarez, J. A. Fraire, K. A. Hassan, S. Céspedes, and D. Pesch, “Uplink transmission policies for LoRa-based direct-to-satellite IoT,” *IEEE Access*, vol. 10, pp. 72687–72701, 2022.
- [12] M. A. Ullah, A. Yastrebova, K. Mikhaylov, M. Höyhtyä, and H. Alves, “Situational awareness for autonomous ships in the arctic: mMTC direct-to-satellite connectivity,” *IEEE Commun. Mag.*, vol. 60, no. 6, pp. 32–38, Jun. 2022.
- [13] G. Álvarez, J. A. Fraire, K. A. Hassan, S. Céspedes, and D. Pesch, “Uplink transmission policies for LoRa-based direct-to-satellite IoT,” *IEEE Access*, vol. 10, pp. 72687–72701, 2022.
- [14] J. A. Fraire, S. Céspedes, and N. Accettura, “Direct-to-satellite IoT—A survey of the state of the art and future research perspectives,” in *Proc. 18th Int. Conf. Ad-Hoc Netw. Wireless*, Oct. 2019, pp. 241–258.
- [15] M. A. Ullah, K. Mikhaylov, and H. Alves, “Experiment-based models for air time and current consumption of LoRaWAN LR-FHSS,” *IEEE Internet Things J.*, vol. 11, no. 3, pp. 2345–2358, Feb. 2024.
- [16] C. D. Gedara, M. D. Khattak, M. A. Ullah, and K. Mikhaylov, “Direct-to-satellite connectivity for IoT:

Overview and potential of reduced capability (RedCap),” *Proc. IEEE VTC-Fall*, 2024.

[17] F. A. Tondo et al., “Non-orthogonal multiple-access strategies for direct-to-satellite IoT networks,” *arXiv preprint*, arXiv:2409.02748, 2024.

[18] J. de A. Farhat et al., “Probabilistic allocation of payload code rate and header copies in LR-FHSS networks,” *IEEE Access*, vol. 13, pp. 30010–30025, 2025.

[19] M. Asad Ullah, K. Mikhaylov, and H. Alves, “Energy performance of LR-FHSS: Analysis and evaluation,” *Sensors*, vol. 24, no. 17, p. 5770, 2024.