

DAFTAR PUSTAKA

- Affandi, F.F.M., Mahiddin, N.A., Mohamad, Z. dan Sarkar, N.I., 2024, Revealing trends: a 25-year bibliometric analysis of MANETs in disaster research publications using the Scopus database, *Int. J. Adv. Technol. Eng. Explor.*, 119, 11, 1363-1391, <http://dx.doi.org/10.19101/IJATEE.2024.111100648>.
- Ai-Thinker, 2021, ESP32-LoRa Series Module Specification, <https://docs.ai-thinker.com/en/lora/docs>, diakses tanggal 12 Desember 2025.
- Alameri, I., 2018, MANETS and Internet of Things: The Development of a Data Routing Algorithm, *Eng. Technol. Appl. Sci. Res.*, 1, 8, 2604-2608, <https://doi.org/10.48084/etasr.1810>.
- Álamos, J., Kietzmann, P., Schmidt, T. dan Wählisch, M., 2022, DSME-LoRa: Seamless Long-range Communication between Arbitrary Nodes in the Constrained IoT, *ACM Trans. Sens. Netw.*, 4, 18, 1-43, <https://doi.org/10.1145/3552432>.
- Augustin, A., Yi, J., Clausen, T. dan Townsley, W., 2016, A Study of LoRa: Long Range & Low Power Networks for the Internet of Things, *Sensors*, 9, 16, 1466, <https://doi.org/10.3390/s16091466>.
- Beltramelli, L., Mahmood, A., Ferrari, P., Österberg, P., Gidlund, M. dan Sisinni, E., 2021, Synchronous LoRa Communication by Exploiting Large-Area Out-of-Band Synchronization, *IEEE Internet Things J.*, 10, 8, 7912-7924, <https://doi.org/10.1109/jiot.2020.3041818>.
- Berto, R., Napolitano, P. dan Savi, M., 2021, A LoRa-Based Mesh Network for Peer-to-Peer Long-Range Communication, *Sensors*, 13, 21, 4314, <https://doi.org/10.3390/s21134314>.
- Biradar, M. dan Mallapure, S., 2024, Multipath Load Balancing in MANET via Hybrid Intelligent Algorithm, *J. Inf. Knowl. Manag.*, 02, 23, 2450010, <https://doi.org/10.1142/s0219649224500102>.
- Bor, M., Roedig, U., Voigt, T. dan Alonso, J., 2016, Do LoRa Low-Power Wide-Area Networks Scale?, *Proc. MSWiM '16*, 59-67, <https://doi.org/10.1145/2988287.2989163>.
- Chakravarty, S. dan Hopkins, A., 2020, LoRa Mesh Network with BeagleBone Black, *IEEE Access*, 8, 114643-114654, <https://doi.org/10.1109/ACCESS.2020.3003502>.
- Coutinho, M., Afonso, J. dan Lopes, S., 2023, An Efficient Adaptive Data-Link-Layer Architecture for LoRa Networks, *Future Internet*, 8, 15, 273, <https://doi.org/10.3390/fi15080273>.
- Divya, K. dan Srinivasan, B., 2021, A Trust-Based Predictive Model for Mobile Ad Hoc Networks, *Int. J. Adhoc Netw. Syst.*, 03, 11, 13-23, <https://doi.org/10.5121/ijans.2021.11302>.

- Ebi, C., Schaltegger, F., Rüst, A. dan Blumensaat, F., 2019, Synchronous LoRa Mesh Network to Monitor Processes in Underground Infrastructure, *IEEE Access*, 7, 57663-57677, <https://doi.org/10.1109/access.2019.2913985>.
- Espressif Systems, 2023, ESP32 Series Datasheet v4.1, https://www.espressif.com/sites/default/files/documentation/esp32_datasheet_en.pdf, diakses tanggal 5 Desember 2025.
- Faruque, J. dan Helmy, A., 2003, Gradient-based routing in sensor networks, *ACM SIGMOBILE Mob. Comput. Commun. Rev.*, 4, 7, 50-52, <http://dx.doi.org/10.1145/965732.965740>.
- Harikrishna, T. dan Subramanyam, A., 2017, Design Issues of Routing Protocols for MANET'S, *Int. J. Adv. Sci. Technol. Eng. Manag. S.*, 5, 3, 19, <https://doi.org/10.22413/ijastems/2017/v3/i5/49022>.
- Haxhibeqiri, J., Abeele, F., Moerman, I. dan Hoebeke, J., 2017, LoRa Scalability: A Simulation Model Based on Interference Measurements, *Sensors*, 6, 17, 1193, <https://doi.org/10.3390/s17061193>.
- Haxhibeqiri, J., Moerman, I. dan Hoebeke, J., 2019, Low Overhead Scheduling of LoRa Transmissions for Improved Scalability, *IEEE Internet Things J.*, 2, 6, 3097-3109, <https://doi.org/10.1109/jiot.2018.2878942>.
- Huang, R., Ma, L., Zhai, G., He, J., Chu, X. dan Yan, H., 2020, Resilient Routing Mechanism for Wireless Sensor Networks With Deep Learning Link Reliability Prediction, *IEEE Access*, 8, 64857-64872, <https://doi.org/10.1109/access.2020.2984593>.
- Huh, H. dan Kim, J. Y., 2019, LoRa-based Mesh Network for IoT Applications, *J. Sensors*, 2019, 1-12, <https://doi.org/10.1155/2019/3156512>.
- Jebril, A., Sali, A., Ismail, A. dan Rasid, M., 2018, Overcoming Limitations of LoRa Physical Layer in Image Transmission, *Sensors*, 10, 18, 3257, <https://doi.org/10.3390/s18103257>.
- Jia, D., Lu, K., Wang, J., Zhang, X. dan Shen, X., 2016, A Survey on Platoon-Based Vehicular Cyber-Physical Systems, *IEEE Commun. Surv. Tutorials*, 1, 18, 263-284, <https://doi.org/10.1109/comst.2015.2410831>.
- Jiang, H., Lu, L., Han, G., Wang, H., Ma, S. dan Sun, R., 2018, Routing algorithm for supporting data-differentiated service in hybrid wireless mesh networks in underground mines, *Int. J. Distrib. Sens. Netw.*, 11, 14, 155014771881202, <https://doi.org/10.1177/1550147718812024>.
- Jiang, X., Zhang, H., Barsallo Yi, E. A., dkk., 2021, Hybrid Low-Power Wide-Area Mesh Network for IoT Applications, *IEEE Internet Things J.*, 8, 2, 901-915, <https://doi.org/10.1109/JIOT.2020.3010372>.
- Lalle, Y., Fourati, M., Fourati, L. dan Barraca, J., 2021, Routing Strategies for LoRaWAN Multi-Hop Networks: A Survey and an SDN-Based Solution for Smart Water Grid, *IEEE Access*, 9, 168624-168647, <https://doi.org/10.1109/access.2021.3135080>.

- Liao, C. H., Zhu, G., Kuwabara, D., Suzuki, M. dan Morikawa, H., 2017, Multi-Hop LoRa Networks Enabled by Concurrent Transmission, *IEEE Access*, 5, 21430-21446, <https://doi.org/10.1109/ACCESS.2017.2759244>.
- Liu, X., Qin, Z., Gao, Y. dan McCann, J., 2019, Resource Allocation in Wireless Powered IoT Networks, *IEEE Internet Things J.*, 3, 6, 4935-4945, <https://doi.org/10.1109/jiot.2019.2895417>.
- Mahmood, A., Sisinni, E., Guntupalli, L., Rondón, R., Hassan, S. dan Gidlund, M., 2019, Scalability Analysis of a LoRa Network Under Imperfect Orthogonality, *IEEE Trans. Ind. Informat.*, 3, 15, 1425-1436, <https://doi.org/10.1109/tii.2018.2864681>.
- Muladi, Wijaya, H., Prasetyo, S. D., Hamzah, S. A. dan Mahamad, A. K., 2024, LoRa Mesh-Based IoT GPS Tracking System for Mountain Climbers, *Int. J. Adv. Comput. Sci. Appl.*, 15, 1, 10-18, <https://doi.org/10.14569/IJACSA.2024.0150102>.
- Paria, S., Nath, S., Mallick, C. dan Das, D., 2023, Building Multihop LoRa Network for Enhanced Range and Quality Transmission of Healthcare Data, *IEEE Trans. Instrum. Meas.*, 72, 1-12, <https://doi.org/10.1109/TIM.2023.3283250>.
- Raza, U., Kulkarni, P. dan Sooriyabandara, M., 2017, Low Power Wide Area Networks: An Overview, *IEEE Commun. Surv. Tutorials*, 2, 19, 855-873, <https://doi.org/10.1109/comst.2017.2652320>.
- Reynders, B., Wang, Q., Tuset-Peiró, P., Vilajosana, X. dan Pollin, S., 2018, Improving Reliability and Scalability of LoRaWANs Through Lightweight Scheduling, *IEEE Internet Things J.*, 3, 5, 1830-1842, <https://doi.org/10.1109/jiot.2018.2815150>.
- Şahin, A. dan Arslan, H., 2024, A Self-Healing Mesh Network without Global-Time Synchronization, *IEEE Commun. Lett.*, 28, 3, 642-646, <https://doi.org/10.1109/LCOMM.2024.3353456>.
- Semtech Corporation, 2022, SX1261/2 Long Range Low Power LoRa Transceiver Datasheet, <https://www.semtech.com/products/wireless-rf/lora-connect/sx1262>, diakses tanggal 20 Desember 2025.
- Shajin, F. dan Rajesh, P., 2020, Trusted Secure Geographic Routing Protocol: outsider attack detection in mobile ad hoc networks by adopting trusted secure geographic routing protocol, *Int. J. Pervasive Comput. Commun.*, 5, 18, 603-621, <https://doi.org/10.1108/ijpcc-09-2020-0136>.
- Smart, G., Deligiannis, N., Surace, R., Loscrí, V., Fortino, G. dan Andreopoulos, Y., 2016, Decentralized Time-Synchronized Channel Swapping for Ad Hoc Wireless Networks, *IEEE Trans. Veh. Technol.*, 10, 65, 8538-8553, <https://doi.org/10.1109/tvt.2015.2509861>.
- Solé, J. M., Centelles, R. P., Freitag, F. dan Meseguer, R., 2022, Implementation of a LoRa Mesh Library, *Sensors*, 22, 13, 4786, <https://doi.org/10.3390/s22134786>.

- Wu, D. dan Liebeherr, J., 2023, A Low-Cost Low-Power LoRa Mesh Network for Large-Scale Environmental Sensing, *IEEE Internet Things J.*, 19, 10, 16700-16714, <https://doi.org/10.1109/jiot.2023.3270237>.
- Younus, M., Khan, M., Anjum, M., Afridi, S., Arain, Z. dan Jamali, A., 2021, Optimizing the Lifetime of Software Defined Wireless Sensor Network via Reinforcement Learning, *IEEE Access*, 9, 259-272, <https://doi.org/10.1109/access.2020.3046693>.
- Zhu, G., Liao, C., Sakdejayont, T., Lai, I., Narusue, Y. dan Morikawa, H., 2019, Improving the Capacity of a Mesh LoRa Network by Spreading-Factor-Based Network Clustering, *IEEE Access*, 7, 21584-21596, <https://doi.org/10.1109/access.2019.2898239>.