

REFERENCES

- [1] R. Bajwa, E. Coleri, R. Rajagopal, P. Varaiya, and C. Flores, "Pavement performance assessment using a cost-effective wireless accelerometer system," *Computer-Aided Civil and Infrastructure Engineering*, vol. 35, no. 9, pp. 1009–1022, Sep. 2020, doi: 10.1111/mice.12544.
- [2] S. V. Gomes, S. Fontul, I. Knight, and T. Breemers, "The effect of overweight vehicles on road pavements and safety," in *Transportation Research Procedia*, Elsevier B.V., 2023, pp. 4010–4017. doi: 10.1016/j.trpro.2023.11.378.
- [3] S. A. Putra, B. R. Trilaksono, M. Riyansyah, D. S. Laila, A. Harsoyo, and A. I. Kistijantoro, "Intelligent sensing in multiagent-based wireless sensor network for bridge condition monitoring system," *IEEE Internet Things J.*, vol. 6, no. 3, pp. 5397–5410, Jun. 2019, doi: 10.1109/JIOT.2019.2901796.
- [4] T. Yin, N. Nassir, J. Leong, E. Tanin, and M. Sarvi, "Transferable supervised learning model for public transport service load estimation," *Transportation (Amst)*, 2023, doi: 10.1007/s11116-023-10411-2.
- [5] M. Abdulkareem, K. Samsudin, F. Z. Rokhani, and M. F. A. Rasid, "Wireless sensor network for structural health monitoring: A contemporary review of technologies, challenges, and future direction," *Struct Health Monit.*, vol. 19, no. 3, pp. 693–735, May 2020, doi: 10.1177/1475921719854528.
- [6] L. Oubrich, M. Ouassaid, and M. Maaroufi, "A New Analog Filter for Piezoelectric Sensors Signal Processing Designed for High Speed Weigh in Motion System," *IEEE Access*, vol. 9, pp. 138057–138066, 2021, doi: 10.1109/ACCESS.2021.3117514.
- [7] L. Warscotte and J. Boreux, "Designing High Speed Weigh-in-Motion System With Principal Component Regression in Wallonia (Belgium) Toward Direct Weight Enforcement," *IEEE Transactions on Intelligent Transportation Systems*, pp. 1–10, Jul. 2024, doi: 10.1109/tits.2024.3423375.
- [8] K. Gulati, R. S. Kumar Boddu, D. Kapila, S. L. Bangare, N. Chandnani, and G. Saravanan, "A review paper on wireless sensor network techniques in Internet of Things (IoT)," in *Materials Today: Proceedings*, Elsevier Ltd, 2021, pp. 161–165. doi: 10.1016/j.matpr.2021.05.067.
- [9] L. K. Ketshabetswe, A. M. Zungeru, M. Mangwala, J. M. Chuma, and B. Sigweni, "Communication protocols for wireless sensor networks: A survey and comparison," May 01, 2019, *Elsevier Ltd.* doi: 10.1016/j.heliyon.2019.e01591.
- [10] H. El Alami and A. Najid, "ECH: An Enhanced Clustering Hierarchy Approach to Maximize Lifetime of Wireless Sensor Networks," *IEEE Access*, vol. 7, pp. 107142–107153, 2019, doi: 10.1109/ACCESS.2019.2933052.
- [11] Z. Al Aghbari, A. M. Khedr, W. Osamy, I. Arif, and D. P. Agrawal, "Routing in Wireless Sensor Networks Using Optimization Techniques: A Survey," *Wirel Pers Commun*, vol. 111, no. 4, pp. 2407–2434, Apr. 2020, doi: 10.1007/s11277-019-06993-9.
- [12] B. Shi, Y. Jiang, Y. Bao, B. Chen, K. Yang, and X. Chen, "Weigh-in-Motion System Based on an Improved Kalman and LSTM-Attention Algorithm," *Sensors*, vol. 23, no. 1, Jan. 2023, doi: 10.3390/s23010250.
- [13] S. A. Putra, B. R. Trilaksono, M. Riyansyah, and D. S. Laila, "Multiagent Architecture for Bridge Capacity Measurement System Using Wireless Sensor Network and Weight in Motion," *IEEE Trans Instrum Meas*, vol. 70, 2021, doi: 10.1109/TIM.2020.3031126.
- [14] M. Al-Tarawneh, Y. Huang, P. Lu, and R. Bridgelall, "Weigh-In-Motion System in Flexible Pavements Using Fiber Bragg Grating Sensors Part A: Concept," *IEEE Transactions on Intelligent Transportation Systems*, vol. 21, no. 12, pp. 5136–5147, Dec. 2020, doi: 10.1109/TITS.2019.2949242.
- [15] M. Preeti, K. Guha, K. L. Baishnab, K. Dusralapudi, and K. Narasimha Raju, "Low frequency MEMS accelerometers in health monitoring – A review based on material and design aspects," in *Materials Today: Proceedings*, Elsevier Ltd, 2019, pp. 2152–2157. doi: 10.1016/j.matpr.2019.06.658.
- [16] Y. M. Mohammed and N. Uddin, "Acceleration-based bridge weigh-in-motion," *Bridge Structures*, vol. 14, no. 4, pp. 131–138, 2018, doi: 10.3233/BRS-190143.
- [17] L. Ge, D. Dan, Z. Liu, and X. Ruan, "Intelligent Simulation Method of Bridge Traffic Flow Load Combining Machine Vision and Weigh-in-Motion Monitoring," *IEEE Transactions on Intelligent Transportation Systems*, vol. 23, no. 9, pp. 15313–15328, Sep. 2022, doi: 10.1109/TITS.2022.3140276.
- [18] H. B. Birgin, S. Laflamme, A. D'alessandro, E. Garcia-Macias, and F. Ubertini, "A weigh-in-motion characterization algorithm for smart pavements based on conductive cementitious materials," *Sensors (Switzerland)*, vol. 20, no. 3, Feb. 2020, doi: 10.3390/s20030659.
- [19] M. Sujon and F. Dai, "Application of weigh-in-motion technologies for pavement and bridge response monitoring: State-of-the-art review," Oct. 01, 2021, *Elsevier B.V.* doi: 10.1016/j.autcon.2021.103844.
- [20] Z. Dong, H. Song, X. Ma, Y. Li, and D. Wang, "Intelligent Weigh-in-Motion System Using Embedded MEMS Sensors for Pavement Monitoring," *IEEE Trans Instrum Meas*, 2024, doi: 10.1109/TIM.2024.3457928.
- [21] I. Agape, A. I. Dontu, A. Maftai, L. Gaiginschi, and P. D. Barsanescu, "Actual types of sensors used for weighing in motion," in *IOP Conference Series: Materials Science and Engineering*, Institute of Physics Publishing, Aug. 2019. doi: 10.1088/1757-899X/572/1/012102.
- [22] S. Mustafa, H. Sekiya, S. Hirano, and C. Miki, "Iterative linear optimization method for bridge weigh-in-motion systems using accelerometers," *Structure and Infrastructure Engineering*, vol. 17, no. 9, pp. 1245–1256, 2021, doi: 10.1080/15732479.2020.1802490.
- [23] D. Liu, Z. Deng, W. Yin Hai, and E. I. Kaisar, "Method for identifying truck traffic site clustering using weigh-in-motion (WIM) data," *IEEE Access*, vol. 8, pp. 136750–136759, 2020, doi: 10.1109/ACCESS.2020.3011433.
- [24] B. Szinyéri, B. Kövári, I. Völgyi, D. Kollár, and A. L. Joó, "A strain gauge-based Bridge Weigh-In-Motion system using deep learning," *Eng Struct*, vol. 277, Feb. 2023, doi: 10.1016/j.engstruct.2022.115472.
- [25] W. A. A. Kustiana *et al.*, "Bridge Damage Detection with Support Vector Machine in Accelerometer-Based Wireless Sensor Network," *Journal of Vibration Engineering and Technologies*, Dec. 2024, doi: 10.1007/s42417-024-01400-5.
- [26] E. O. Rocheti, R. M. Bacurau, and R. Moreira Bacurau, "Weigh-In-Motion Systems Review: Methods for Axle and Gross Vehicle Weight Estimation," 2023, doi: 10.1109/ACCESS.2024.0429000.
- [27] M. Lydon *et al.*, "Development of a bridge weigh-in-motion sensor: Performance comparison using fiber optic and electric resistance strain sensor systems," *IEEE Sens J*, vol. 14, no. 12, pp. 4284–4296, Dec. 2014, doi: 10.1109/JSEN.2014.2332874.
- [28] Y. Zhu, H. Sekiya, T. Okatani, I. Yoshida, and S. Hirano, "Acceleration-Based Deep Learning Method for Vehicle Monitoring," *IEEE Sens J*, vol. 21, no. 15, pp. 17154–17161, Aug. 2021, doi: 10.1109/JSEN.2021.3082145.
- [29] T. Kawakatsu, K. Aihara, A. Takasu, T. Nagayama, and J. Adachi, "Data-Driven Bridge Weigh-in-Motion," *IEEE Sens J*, vol. 23, no. 15, pp. 17064–17077, Aug. 2023, doi: 10.1109/JSEN.2023.3283849.
- [30] M. Sujon and F. Dai, "Application of weigh-in-motion technologies for pavement and bridge response monitoring: State-of-the-art review," Oct. 01, 2021, *Elsevier B.V.* doi: 10.1016/j.autcon.2021.103844.
- [31] T. Kawakatsu, K. Aihara, A. Takasu, and J. Adachi, "Deep Sensing Approach to Single-Sensor Vehicle Weighing System on Bridges," *IEEE Sens J*, vol. 19, no. 1, pp. 253–256, Jan. 2019, doi: 10.1109/JSEN.2018.2872839.