

## DAFTAR PUSTAKA

- [1] ABU (Asia-Pacific Broadcasting Union), Completed Field, Phnom Penh: ABU Robocon 2023, 2023.
- [2] ABU (Asia-Pacific Broadcasting Union), ABU Asia-Pacific Robot Contest 2023 Phnom Penh, Cambodia Rule Book, Phnom Penh: ABU Robocon 2023, 2023.
- [3] N. Y. Hohmann & Barnard, "Safety Data Sheet: Stainless Steel (Types 304 and 316)," 31 5 2015. [Online]. Available: <https://www.hob.com/images/sds/StainlessSteel.pdf>. [Accessed 10 6 2023].
- [4] I. A. Wolverine Tube, "Safety Data Sheet: Aluminium Alloys," Wolverine Tube: Alabama, 20 5 2015. [Online]. Available: [https://www.wlv.com/wp-content/uploads/2015/06/aluminum\\_alloys\\_sds.pdf](https://www.wlv.com/wp-content/uploads/2015/06/aluminum_alloys_sds.pdf). [Accessed 10 6 2023].
- [5] E. Kurt J. Lesker, "Safety Data Sheet: Iron," 16 3 2017. [Online]. Available: <http://www.nano.pitt.edu/sites/default/files/MSDS/Metals/Fe-Iron.pdf>. [Accessed 10 6 2023].
- [6] N. Trafigura Ventures V.B.V., "Safety Data Sheet: Copper," 20 03 2018. [Online]. Available: [https://www.trafigura.com/media/1563/2018\\_sds\\_copper\\_english.pdf](https://www.trafigura.com/media/1563/2018_sds_copper_english.pdf). [Accessed 10 6 2023].
- [7] V. Kumar, J. Schmiedeler and H.-J. S. S.V. Sreenivasan, Advances in Mechanisms, Robotics, and Design Education and Research, Springer International Publishing Switzerland, 2013.
- [8] J. S. L. Leong, K. T. K. Teo and H. P. Yoong, "Four Wheeled Mobile Robots: A Review," 2022 IEEE International Conference on Artificial Intelligence in Engineering and Technology (IICAJET), 2022.

- [9] H. A. H. R. M. A. G. Aghus Sofwan, "Development of Omni-Wheeled Mobile Robot Based-on Inverse Kinematics and Odometry," pp. 144 - 145, 2019.
- [10] N. S. Nise, Control System Engineering, California: Wiley, 2020.  
181
- [11] R. T. Yunardi, D. Arifianto, F. Bachtiar and J. I. Prananingrum, "Holonomic Implementation of Three Wheels Omnidirectional Mobile Robot using DC Motors," Journal of Robotics and Control, vol. 2, no. 2, p. 66, 2021.
- [12] E. Savaee, A. R. Hanzaki and Y. Anabestani, "Kinematic Analysis and Odometry-Based Navigation of an Omnidirectional Wheeled Mobile Robot on Uneven Surfaces," Journal of Intelligent & Robotic Systems, vol. 13, no. 108, p. 3, 2023.
- [13] A. Sofwan, H. R. Mulyana, H. Afrisal and A. Goni, "Development of Omni-Wheeled Mobile Robot Based-on Inverse Kinematics and Odometry," in IEEE, Semarang, 2019.
- [14] N. Zijie, L. Qiang and S. Zhijun, "Fuzzy Control Strategy for Course Correction of Omnidirectional Mobile Robot," International Journal of Control, Automation and Systems 17, pp. 2354 - 2364, 2019.
- [15] A. U. Darajat, U. Murdika, A. S. Repelianto and R. Annisa, "Inverse Kinematic of 1-DOF Robot Manipulator Using Sparse Identification of Nonlinear Systems," INTEK Jurnal Penelitian, vol. 10, no. 1, pp. 22-25, 2023.
- [16] Z. Mukhamedov, V. M. Turdaliev and A. A. Kosimov, "Kinematic Nonuniformity of the Rotation of a Toothed Belt Transmission with a Composite Pulley," Russian Engineering Research, vol. 40, no. 9, p. 705, 2020.
- [17] F. Bucchi and F. Frendo, "Analysis of Belt Transmissions Capabilities Using the Brush Model," in IOP Conference Series: Materials Science and Engineering,

Genova, Italy, 2021.

[18] G.-H. Jang, C.-W. Kim, S.-W. Seo, K.-H. Shin, I.-J. Yoon and J.-Y. Choi, "Torque Characteristic Analysis and Measurement of Magnetic Rack–Pinion Gear Based on Analytical Method," *IEEE Transactions on Magnetics*, vol. 55, no. 7, p. 1, 2019.

[19] J. Shao, K. Ding and D. Wang, "Kinematics Analysis of Incomplete Gear and Rack Pumping Unit," *Journal of Physics: Conference Series*, vol. 2095, no. 1, pp. 2-5, 2021.

182

[20] D. Guo, H. Li, Y. Wang, S. Ge and X. Bai, "A decoupling method for multi-stage gear transmission error," *Journal of the Brazilian Society of Mechanical*

*Sciences and Engineering*, vol. 45, no. 8, p. 3, 2023.

[21] N. Z. D. T. F. U. E. L. Udeh Tochukwu Livinus, "Effects of a PID Controller in Closed Loop Feedback System," *International Journal of Scientific & Engineering Research*, no. 9, pp. 1255-1258, 2018.

[22] S. K. P. G. Huma Khan, "Comparison of various controller design for the speed control of DC motors used in two wheeled mobile robots," *International Journal of Information Technology*, pp. 713-720, 2021.

[23] A. I. A. N. K. N. Wan Mohd Nafis Wan Lezaini, "Integration of PI-Anti-windup and Fuzzy Logic Control with External Derivative Solution for Leg's Robot Angular Joint Precision," *Proceedings of the 10th National Technical Seminar on Underwater System Technology*, no. 2018, pp. 161 - 171, 2018.

[24] MATLAB, "Anti - Windup Control Using PID Controller Block," *The Mathworks Inc.*, 2023. [Online]. Available:

<https://au.mathworks.com/help/simulink/slref/anti-windup-control-using-a-pid-controller.html>.  
[Accessed 8 Agustus 2023].

[25] S. N. E. Aisha Sir Elkhatem, "Robust LQR and LQR-PI control strategies based on adaptive weighting matrix selection for a UAV position and attitude tracking control," Alexandria Engineering Journal, no. Science Direct, pp. 6275 - 6292, 2021.

[26] D. A. L. Robert L. Williams II, Linear State-Space Control Systems, New York: Wiley, 2007.

[27] K. H.-G. S. Y. P. I. Kim Kwansu, "Design and Simulation of an LQR-PI Control Algorithm for Medium Wind Turbine," Energies, 2019.

[28] L. Tagliavini, G. Colucci, A. Botta, P. Cavallone, L. Baglieri and G. Quaglia, "Wheeled Mobile Robots: State of the Art Overview and Kinematic Comparison Among Three Omnidirectional Locomotion Strategies," Journal of Intelligent & Robotic Systems, vol. 106, no. 2, p. 3, 2022.

183

[29] S. Habibian, M. Dadvar, B. Peykari, A. Hosseini, M. H. Salehzadeh and F. Najafi, "Design and implementation of a maxi-sized mobile robot (Karo) for rescue missions," Habibian et al. Robomech Journal, vol. 8, no. 1, p. 7, 2021.

[30] L. Tagliavini, G. Colucci, A. Botta, P. Cavallone, L. Baglieri and G. Quaglia, "Wheeled Mobile Robots: State of the Art Overview and Kinematic Comparison Among Three Omnidirectional Locomotion Strategies," Journal of Intelligent & Robotic Systems, 2022.

[31] W. S. Cory Beard, Wireless Communication Networks and Systems, Kansas: Pearson, 2016.

[32] T. Sutikno, "Dasar - Dasar Motor DC dan Pengemudiannya," Diktat II Kuliah

Kendali Motor, 2018.

[33] A. W. Alhashimi, "Statistical Sensor Calibration Algorithms," Luleå University of Technolog, Luleå, 2018.

[34] D. U. Rijalusalam and Iswanto, "Implementation Kinematics Modeling and Odometry of Four Omni Wheel Mobile Robot on The Trajectory Planning and Motion Control Based Microcontroller," Journal of Robotics and Control, vol. 2, no. 5, p. 450, 2021.

[35] T. A. B. S. N. G. I. I. H. Muhammad Rakha Firdaus, "Identifikasi Sistem Motor DC dan Penerapan Kendali PID, LQR, dan Servo Tipe 1 Berbasis Arduino □MATLAB," Jurnal Listrik, Instrumentasi, dan Elektronika Terapan, no. 2023, 2023.