REFERENSI

[1]   F. Utaminingrum *et al.*, "Development of
       computer vision based obstacle detection and
       human tracking on smart wheelchair for disabled
       patient," in *2017 5th International Symposium on
       Computational and Business Intelligence (ISCBI)*,
       Aug. 2017, pp. 1–5, doi:
       10.1109/ISCBI.2017.8053533.

[2]   E. Kim, "Wheelchair Navigation System for
       Disabled and Elderly People," *Sensors*, vol. 16,
       no. 11, p. 1806, Oct. 2016, doi:
       10.3390/s16111806.

[3]   M. Callejas-Cuervo, A. X. González-Cely, and T.
       Bastos-Filho, "Design and implementation of a
       position, speed and orientation fuzzy controller
       using a motion capture system to operate a
       wheelchair prototype," *Sensors*, vol. 21, no. 13,
       2021, doi: 10.3390/s21134344.

[4]   Pusat Data dan Informasi Kementrian Kesehatan
       RI, "Situasi Disabilitas," *Pus. Data dan Inf.
       Kementrian Kesehat. RI*, pp. 1–10, 2019.

[5]   H. Tamura, T. Murata, Y. Yamashita, K. Tanno,

and Y. Fuse, "Development of the electric wheelchair hands-free semi-automatic control system using the surface-electromyogram of facial muscles," *Artif. Life Robot.*, vol. 17, no. 2, pp. 300–305, Dec. 2012, doi: 10.1007/s10015-012-0060-2.

[6]   G. Lee, K. Kim, and J. Kim, "Development of hands-free wheelchair device based on head movement and bio-signal for quadriplegic patients," *Int. J. Precis. Eng. Manuf.*, vol. 17, no. 3, pp. 363–369, 2016, doi: 10.1007/s12541-016-0045-5.

[7]   G. Jang and Y. Choi, "EMG-based continuous control method for electric wheelchair," *IEEE Int. Conf. Intell. Robot. Syst.*, no. Iros, pp. 3549–3554, 2014, doi: 10.1109/IROS.2014.6943058.

[8]   Z. Alibhai, T. Burreson, M. Stiller, I. Ahmad, M. Huber, and A. Clark, "A Human-Computer Interface for Smart Wheelchair Control Using Forearm EMG Signals," *Proc. - 2020 3rd Int. Conf. Data Intell. Secur. ICDIS 2020*, pp. 34–39, 2020, doi: 10.1109/ICDIS50059.2020.00011.

[9]   M. M. Abdulghani, K. M. Al-Aubidy, M. M. Ali,

and Q. J. Hamarsheh, "Wheelchair Neuro Fuzzy Control and Tracking System Based on Voice Recognition," *Sensors*, vol. 20, no. 10, p. 2872, May 2020, doi: 10.3390/s20102872.

[10] L. Chen, S. Wang, H. Hu, D. Gu, and I. Dukes, "Voice-directed autonomous navigation of a smart-wheelchair," in *Smart Wheelchairs and Brain-Computer Interfaces*, Second Edi., Elsevier, 2008, pp. 405–424.

[11] A. Ruíz-Serrano, R. Posada-Gómez, A. M. Sibaja, G. A. Rodríguez, B. E. Gonzalez-Sanchez, and O. O. Sandoval-Gonzalez, "Development of a Dual Control System Applied to a Smart Wheelchair, using Magnetic and Speech Control," *Procedia Technol.*, vol. 7, pp. 158–165, 2013, doi: 10.1016/j.protcy.2013.04.020.

[12] E. Yulianto and T. B. Indrato, "The Design of Electrical Wheelchairs with Electromyography Signal Controller for People with Paralysis," *Electr. Electron. Eng.*, vol. 8, no. 1, pp. 1–9, 2018, doi: 10.5923/j.eee.20180801.01.

[13] T. Masuzawa, K. Tanaka, and S. Minami, "Development of a Safety Driving System for

Electric Wheelchair," *J. Asian Electr. Veh.*, vol. 7, no. 2, pp. 1325–1332, 2009, doi: 10.4130/jaev.7.1325.

[14] D. A. Sanders, "Using Self-Reliance Factors to Decide How to Share Control Between Human Powered Wheelchair Drivers and Ultrasonic Sensors," *IEEE Trans. Neural Syst. Rehabil. Eng.*, vol. 25, no. 8, pp. 1221–1229, Aug. 2017, doi: 10.1109/TNSRE.2016.2620988.

[15] A. Ruiz-Serrano, M. C. Reyes-Fernandez, R. Posada-Gomez, A. Martinez-Sibaja, and A. A. Aguilar-Lasserre, "Obstacle avoidance embedded system for a smart wheelchair with a multimodal navigation interface," in *2014 11th International Conference on Electrical Engineering, Computing Science and Automatic Control (CCE)*, Sep. 2014, pp. 1–6, doi: 10.1109/ICEEE.2014.6978290.

[16] S. Desai, S. S. Mantha, and V. M. Phalle, "Advances in smart wheelchair technology," *2017 Int. Conf. Nascent Technol. Eng. ICNTE 2017 - Proc.*, 2017, doi: 10.1109/ICNTE.2017.7947914.

[17] J. Pu, Y. Jiang, X. Xie, X. Chen, M. Liu, and S. Xu, "Low cost sensor network for obstacle

avoidance in share-controlled smart wheelchairs under daily scenarios," *Microelectron. Reliab.*, vol. 83, no. March, pp. 180–186, 2018, doi: 10.1016/j.microrel.2018.03.003.

[18]   M. Rojas, P. Ponce, and A. Molina, "Novel fuzzy logic controller based on time delay inputs for a conventional electric wheelchair," *Rev. Mex. Ing. Biomed.*, vol. 35, no. 2, pp. 127–144, 2014.

[19]   T. Debnath, A. Z. Abadin, and M. A. Hossain, "PWM Based Android Controlled Wheel Chair," *Int. J. Comput. Sci. Inf. Technol.*, vol. 10, no. 2, pp. 57–64, 2018, doi: 10.5121/ijcsit.2018.10205.

[20]   M. F. Ruzaij and S. Poonguzhali, "Design and implementation of low cost intelligent wheelchair," *Int. Conf. Recent Trends Inf. Technol. ICRTIT 2012*, pp. 468–471, 2012, doi: 10.1109/ICRTIT.2012.6206809.

[21]   V. Sankardoss, P. Geethanjali, V. Sankardoss, and P. Geethanjali, "Design and Low-Cost Implementation of an Electric Wheelchair Control," *IETE J. Res.*, vol. 0, no. 0, pp. 1–10, 2019, doi: 10.1080/03772063.2019.1565951.

[22]   G. Pires and U. Nunes, "A wheelchair steered

through voice commands and assisted by a reactive fuzzy-logic controller," *J. Intell. Robot. Syst. Theory Appl.*, vol. 34, no. 3, pp. 301–314, 2002, doi: 10.1023/A:1016363605613.

[23] R. U. S. A. Data, "United States Patent (19)," no. 19, 1987.

[24] H. Seyedroudbari *et al.*, "Design and Implementation of a Two-Dimensional Ultrasonic Radar using FPGA," pp. 1–8, 2018.

[25] MaxBotix, "Understanding How Ultrasonic Sensors Work." https://www.maxbotix.com/articles/how-ultrasonic-sensors-work.htm.

[26] H. Performance and S. Range, *LV - MaxSonar ® - EZ^{TM} Series*. 2015.

[27] F. Wahab, A. Sumardiono, A. R. Al Tahtawi, and A. F. A. Mulayari, "Desain dan Purwarupa Fuzzy Logic Control untuk Pengendalian Suhu Ruangan," *J. Teknol. Rekayasa*, vol. 2, no. 1, p. 1, 2017, doi: 10.31544/jtera.v2.i1.2017.1-8.

[28] E. Kayacan and M. A. Khanesar, "Fundamentals of Type-1 Fuzzy Logic Theory," *Fuzzy Neural Networks Real Time Control Appl.*, pp. 13–24,

2016, doi: 10.1016/b978-0-12-802687-8.00002-5.

[29] D. Veit, "Fuzzy logic and its application to textile technology," *Simul. Text. Technol. Theory Appl.*, pp. 112–141, 2012, doi: 10.1533/9780857097088.112.

[30] B. Triwahyu, E. Yulianto, and T. Indrato, "Kursi Roda Dengan Kontrol Sinyal EMG Berbasis Wireless Dilengkapi Sensor Pengaman Benturan (Parameter EMG)," *Poltekes Kemenkkes Surabaya*, pp. 1–8, 2017.