

DAFTAR PUSTAKA

- Agrawal, P., S.R. and T.V., (2023) "Development of Agricultural Robotic Arm for Precision Farming," . *International Journal of Robotics and Automation*, pp. 155–162.
- Ajagbe, S.A., S.A.J., (2024) "Design and development of Arduino-based automation home system using the Internet of Things."
- Arduino.cc. (2024) *UNO R3 | Arduino Documentation*, <https://docs.arduino.cc/hardware/uno-rev3>.
- Arefin, A.M.E., K.N.R., K.N.& R.M.J., (2021) *Polymer 3D Printing Review: Materials, Process, and Applications*.
- Ayu Martini, N.P.D., Lukmana, M.A. and Pradana, S. (2025) "Development of a Smart Plant Watering Robot Using Soil Moisture and Light Intensity based on Fuzzy Logic Control," *Jurnal Edukasi Elektro*, 9(1), pp. 93–103. Available at: <https://doi.org/10.21831/jee.v9i1.85932>.
- Cano-Vicent, A., D.-R.J., L.-R.A.& L.J.M., (2021) *Fused Deposition Modelling: Current status, methodology, applications, and future prospects*.
- Chen, T.F., Lee, D.W. and Sung, C.K. (1998a) "An experimental study on transmission efficiency of a rubber V-belt CVT," *Mechanism and Machine Theory*, 33(4), pp. 351–363. Available at: [https://doi.org/10.1016/S0094-114X\(97\)00049-9](https://doi.org/10.1016/S0094-114X(97)00049-9).
- Chen, T.F., Lee, D.W. and Sung, C.K. (1998b) "An experimental study on transmission efficiency of a rubber V-belt CVT," *Mechanism and Machine Theory*, 33(4), pp. 351–363. Available at: [https://doi.org/10.1016/S0094-114X\(97\)00049-9](https://doi.org/10.1016/S0094-114X(97)00049-9).
- Craig, J.J. (2009) *Introduction to Robotics: Mechanics and Control*.
- Cristoiu, C. *et al.* (2023) "The Importance of Embedding a General forward Kinematic Model for Industrial Robots with Serial Architecture in Order to Compensate for Positioning Errors," *Mathematics*, 11(10), p. 2306. Available at: <https://doi.org/10.3390/math11102306>.
- Demir, E., (2024) "The Mechanical Properties of 3D-Printed Polylactic Acid and PETG: A Comparative Study," *Journal/Repository (PMC)* [Preprint].
- Dereyne, S., (2016) "An Efficiency Measurement Campaign on Belt Drives," *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, pp. 1761–1771.
- Dobrzyńska, E.& M.D., (2021) "State of the art in additive manufacturing and its possible applications in mechanical engineering," *Journal of Manufacturing Systems*, pp. 738–753.
- Domek, G. (2020) "Development and optimization of a noncircular pulley for motion decoupling," *Journal of Mechanical Design* [Preprint].
- Fallatah, A. (2024) "The Versatile World of Arduino Boards: A Comprehensive Review," *Juniper Online Journal Material Science*, 9(1). Available at: <https://doi.org/10.19080/JOJMS.2024.09.555753>.

Flores, P. (2022) “Reviewer acknowledgments and awards: Recognition awards for distinction of reviewing in 2021,” *Mechanism and Machine Theory*, 174, p. 104887. Available at: <https://doi.org/10.1016/j.mechmachtheory.2022.104887>.

Gao, P., Xie, L. and Pan, J. (2019) “Reliability and Availability Models of Belt Drive Systems Considering Failure Dependence,” *Chinese Journal of Mechanical Engineering*, 32(1), p. 30. Available at: <https://doi.org/10.1186/s10033-019-0342-x>.

Gonçalves, F. *et al.* (2022) “A Recursive Algorithm for the Forward Kinematic Analysis of Robotic Systems Using Euler Angles,” *Robotics*, 11(1), p. 15. Available at: <https://doi.org/10.3390/robotics11010015>.

Gravalos, I. *et al.* (2019) “A robotic irrigation system for urban gardening and agriculture,” *Journal of Agricultural Engineering*, 50(4), pp. 198–207. Available at: <https://doi.org/10.4081/jae.2019.966>.

Hayashi, A. *et al.* (2021) “Forward kinematics Model for Evaluation of Machining Performance of Robot Type Machine Tool,” *International Journal of Automation Technology*, 15(2), pp. 215–223. Available at: <https://doi.org/10.20965/ijat.2021.p0215>.

Hsueh, M.-H. *et al.* (2021) “Effect of Printing Parameters on the Thermal and Mechanical Properties of 3D-Printed PLA and PETG, Using Fused Deposition Modeling,” *Polymers*, 13(11), p. 1758. Available at: <https://doi.org/10.3390/polym13111758>.

Iftekar, S.F. *et al.* (2023) “Advancements and Limitations in 3D Printing Materials and Technologies: A Critical Review,” *Polymers*, 15(11), p. 2519. Available at: <https://doi.org/10.3390/polym15112519>.

IJSRP (2017) *Real time application of robots for smart crop cultivation: Gantry robot for precision irrigation and soil monitoring*, *International Journal of Scientific & Research Publications*.

Ismailov, A.S., & J.Z.B. (2022) “Study of Arduino microcontroller board.”

Kafle, A. *et al.* (2021) “3D/4D Printing of Polymers: Fused Deposition Modelling (FDM), Selective Laser Sintering (SLS), and Stereolithography (SLA),” *Polymers*, 13(18), p. 3101. Available at: <https://doi.org/10.3390/polym13183101>.

Kamberov, K., I.Y., & P.Y. (2024) “Virtual prototyping-based development of stepper motor,” *Machines*, 13(12), 512 [Preprint].

Kiran Patel (2025) “Stepper motor Operation and Control: A Holistic Review,” *International Journal of Scientific Research in Science, Engineering and Technology*, 12(5), pp. 187–193. Available at: <https://doi.org/10.32628/IJSRSET25125412>.

Krawiec, P. *et al.* (2022) “Efficiency and Slippage in Draw Gears with Flat Belts,” *Energies*, 15(23), p. 9184. Available at: <https://doi.org/10.3390/en15239184>.

Kumar, A. and S.P., (2021) “Design and Control of a Low-Cost Robotic Arm for Object Handling Applications,” *International Journal of Advanced Robotic Systems*, pp. 1–10.

Lakkala, P., P.J.& P.H. (2023) *Additive manufacturing technologies with emphasis on polymer-based processes and materials: A review*.

- Li, G. *et al.* (2013) “Development of a directly self-adaptive robot hand with pulley-belt mechanism,” *International Journal of Precision Engineering and Manufacturing*, 14(8), pp. 1361–1368. Available at: <https://doi.org/10.1007/s12541-013-0184-x>.
- Mahmood, A., N.M.B.K., J.N., A.M.A.& K.I., (2024) *Polymer Composites in 3D/4D Printing: Materials, Manufacturing, and Applications*.
- Makulavičius, M. and Sivilevičius, H. (2021) “Baltic Countries Mineral Resources And Aggregates Used In Transport Infrastructure Extraction Analysis,” *IOP Conference Series: Materials Science and Engineering*, 1202(1), p. 012013. Available at: <https://doi.org/10.1088/1757-899X/1202/1/012013>.
- Mappa, M., (2018) “Mikrokontroler dan Aplikasinya dalam Sistem Embedded,” *Andi Offset, Yogyakarta* [Preprint].
- Martins, R.F. *et al.* , (2024) “Mechanical Properties of Additively Manufactured PLA and PETG for Biomedical Applications,” *Journal/Repository (PMC)* [Preprint].
- El Mehtedi, M. *et al.* (2024) “Optimizing Milling Parameters for Enhanced Machinability of 3D-Printed Materials: An Analysis of PLA, PETG, and Carbon-Fiber-Reinforced PETG,” *Journal of Manufacturing and Materials Processing*, 8(4), p. 131. Available at: <https://doi.org/10.3390/jmmp8040131>.
- Okubanjo, A.A., O.O.K., O.M.O., O.O.O., & A.P.O. (2017) “Modeling of 2-DOF robot arm and control,” *FUTO Journal Series*, pp. 80–92.
- Park, J. *et al.* (2018) “A passively adaptive variable-radius pulley for a tendon-driven robotic joint,” *Mechanism and Machine Theory*, 128, pp. 110–124. Available at: <https://doi.org/10.1016/j.mechmachtheory.2018.04.006>.
- Paty, T. *et al.* (2021) “Cable-driven parallel robot modelling considering pulley kinematics and cable elasticity,” *Mechanism and Machine Theory*, 159, p. 104263. Available at: <https://doi.org/10.1016/j.mechmachtheory.2021.104263>.
- Pott, A. (2012) “Influence of Pulley Kinematics on Cable-Driven Parallel Robots,” in *Latest Advances in Robot Kinematics*. Dordrecht: Springer Netherlands, pp. 197–204. Available at: https://doi.org/10.1007/978-94-007-4620-6_25.
- Putra, M.A., N.R. and H.T., (2022) “Design and Fabrication of 4-DOF Robotic Arm Using Servo Motors and Arduino,” *Indonesian Journal of Applied Robotics*, pp. 45–53.
- Rakhonde, R.S., L.P.R., B.S.K., R.A.B., & S.D.P. (2021) “A review on role of *Arduino uno* used in dual axis solar tracker,” . *International Journal of Scientific & Engineering Technology* [Preprint].
- Roshanna, L.N., & K.N.R. (2017) “IoT based *stepper motor* position control for industrial automation,” *American Journal of Science, Engineering and Technology*, pp. 106–111.
- Samsugi, S., N.F.& P.D., (2016) “Rancang Bangun Sistem Kendali Lengan Robot Menggunakan Mikrokontroler *Arduino uno R3*,” *Jurnal Teknik Elektro dan Komputer (JTEK)*, pp. 101–108.
- Satya Durga Manohar Sahu, V., Samal, P. and Kumar Panigrahi, C. (2022) “Modelling, and control techniques of robotic manipulators: A review,” *Materials Today: Proceedings*, 56, pp. 2758–2766. Available at: <https://doi.org/10.1016/j.matpr.2021.10.009>.

Siciliano, B. and K.O., (2016) *Springer Handbook of Robotics. 2nd ed. Cham: Springer International Publishing.*

da Silveira, F., Lermen, F.H. and Amaral, F.G. (2021) “An overview of agriculture 4.0 development: Systematic review of descriptions, technologies, barriers, advantages, and disadvantages,” *Computers and Electronics in Agriculture*, 189, p. 106405. Available at: <https://doi.org/10.1016/j.compag.2021.106405>.

Srivastava, M., S.N.& T.S.K., (2022) “A review of various materials for additive manufacturing and their properties,” *Materials Today: Proceedings*, pp. 2452–2462.

Sultan, M.M., (2025) “Optimization of PETG 3D Printing Parameters for Cranial Implant Design,” *Materials/PMC article* [Preprint].

Tunçel, O., Kahya, Ç. and Tüfekci, K. (2024) “Optimization of Flexural Performance of PETG Samples Produced by Fused Filament Fabrication with Response Surface Method,” *Polymers*, 16(14), p. 2020. Available at: <https://doi.org/10.3390/polym16142020>.

Vetyukov, Yu., Eliseev, V. and Krommer, M. (2015) “Modeling the Dynamics of a Flexible Belt Drive Using the Equations of a Deformable String with Discontinuities,” *IFAC-PapersOnLine*, 48(1), pp. 604–609. Available at: <https://doi.org/10.1016/j.ifacol.2015.05.097>.

Wang, B. *et al.* (2018) “Nominal Stiffness of GT-2 Rubber-Fiberglass Timing Belts for Dynamic System Modeling and Design,” *Robotics*, 7(4), p. 75. Available at: <https://doi.org/10.3390/robotics7040075>.

Widodo, A., Muzakki, A. and Baskoro, F. (2019) “A 2-DoF Robot Arm Simulation for Kinematics Learning,” in *Proceedings of the 2nd International Conference on Vocational Education and Training (ICOVET 2018)*. Paris, France: Atlantis Press. Available at: <https://doi.org/10.2991/icovet-18.2019.60>.

Yang, F. *et al.* (2022) “A Geometric Approach for Real-Time *Forward kinematics* of the General Stewart Platform,” *Sensors*, 22(13), p. 4829. Available at: <https://doi.org/10.3390/s22134829>.

Yusoff, M.S., M.A.P., & R.N.A. (2020) “Design and control of 2-DOF robotic arm for precision agriculture system,” *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*, pp. 56–65.

Zhou, L., Z.W., C.Y.& L.D., (2024) “Additive Manufacturing: A Comprehensive Review on Process, Materials, and Applications,” p. 456.

Zhu, H., Zhu, W.D. and Fan, W. (2021) “Dynamic modeling, simulation and experiment of power transmission belt drives: A systematic review,” *Journal of Sound and Vibration*, 491, p. 115759. Available at: <https://doi.org/10.1016/j.jsv.2020.115759>.