



## DAFTAR PUSTAKA

- Abadi, M., dan Haddad, B., 2019, On the impact of variable in wireless power transfer system using a robust design method, *Annals of Electrical and Electronic Engineering*, Vol.2, No.7, pp.1–6
- Adnan Padhilah, F. 2024. *Electric vehicles can reduce carbon emissions in the transportation sector*. Institute for Essential Services Reform. Retrieved from <https://iesr.or.id/en/electric-vehicles-can-reduce-carbon-emissions-in-the-transportation-sector/>
- Ahire, D. B., Gond, V. J., & Chopade, J. J. 2022. Coil material and magnetic shielding methods for efficient wireless power transfer system for biomedical implant application. *Biosensors and Bioelectronics: X*, 10, 100123. <https://doi.org/10.1016/j.biosx.2022.100123>
- Alhamrouni, I., Iskandar, M., Salem, M., Awal, L. J., Jusoh, A., & Sutikno, T. 2020. Application of inductive coupling for wireless power transfer. *International Journal of Power Electronics and Drive System*, 11(3), 1109–1116. <https://doi.org/10.11591/ijpeds.v11.i3.pp1109-1116>
- Antony, J. (2014). *Design of experiments for engineers and scientists* (2nd ed.). Retrieved from <https://www.researchgate.net/publication/362080058>
- Aziz, A. F. A., Anuar, N. A. B., Zainol, M. Z., & Romlie, M. F. 2018. Effect of ferromagnetic material in circular magnetic structure for electric vehicle wireless power transfer. In *2018 International Conference on Intelligent and Advanced System (ICIAS)* (pp. 1–6). IEEE.
- Ayisire, Erhuvwu, "Modeling of Magnetic Resonance Wireless Electric Vehicle Charging" 2019. *Electronic Theses and Dissertations*. 1935. <https://digitalcommons.georgiasouthern.edu/etd/1935>
- Aw, J. J. J. 2023. *Wireless charging for E-mobility* (Undergraduate Final Year Project Report, Nanyang Technological University). Nanyang Technological University. <https://hdl.handle.net/10356/167325>
- Bemporad, A. 2023. A piecewise linear regression and classification algorithm with application to learning and model predictive control of hybrid



- systems. *IEEE Transactions on Automatic Control*, 68(6), 3194–3209. <https://doi.org/10.1109/TAC.2022.3183036>
- Bergeron, J. 2006. *Writing Testbenches using SystemVerilog*, Springer, pp.1–15
- Bertoluzzo, M., Giacomuzzi, S., dan Sieni, E., 2020, Automatic optimization of the compensation networks of a wireless power transfer system, *Energies*, Vol.13, No.20, Article 5298, pp.1–15
- Bi, Z., Song, L., De Kleine, R., Mi, C. C., & Keoleian, G. A. 2015. Plug-in vs. wireless charging: Life cycle energy and greenhouse gas emissions for an electric bus system. *Applied Energy*, 146, 11–19. <https://doi.org/10.1016/j.apenergy.2015.02.031>
- Budhia, M., Boys, J. T., dan Covic, G. A., 2013, Development of a single-sided flux magnetic coupler for electric vehicle IPT charging systems, *IEEE Transactions on Industrial Electronics*
- Campi, T., Cruciani, S., Palandrani, F., De Santis, V., Hirata, A., & Feliziani, M. 2016. Wireless power transfer charging system for AIMDs and pacemakers. *IEEE Transactions on Microwave Theory and Techniques*, 64(2), 633–642. <https://doi.org/10.1109/TMTT.2015.2511011>
- Chen, Q., Zhang, X., Chen, W., dan Wang, C., 2022, Winding loss analysis of planar spiral coil and its structure optimization technique in wireless power transfer system, *Scientific Reports*, Vol. 12, No. 19418, pp. 1–13
- Coca, E. (Ed.). 2016. *Wireless power transfer: Fundamentals and technologies*. InTechOpen. <https://doi.org/10.5772/61488>
- C. Panchal, S. Stegen, and J. Lu, “Review of static and dynamic wireless electric vehicle charging system”, *International Journal of Engineering Science and Technology*, Vol. 21, No. 5, pp. 922–937, 2018
- Electric Power Research Institute. 2015. *Environmental Assessment of a Full Electric Transportation Portfolio: Volume 2: Greenhouse Gas Emissions* (Rep. No. 3002006876). Palo Alto, CA: Electric Power Research Institute.
- Farahmand, M. 2017. *Current of inductor in parallel to resistor*. Electronics Stack Exchange. <https://electronics.stackexchange.com/q/308702>



- Hassan, A. U., & Aula, F. T. 2025. Analytical analysis of dynamic wireless power transfer system controllers for electric vehicles: A review. *Applications of Modelling and Simulation*, 9, 51–66.
- H. Feng, T. Cai, S. Duan, J. Zhao, X. Zhang, and C. Chen, “An LCC-Compensated Resonant Converter Optimized for Robust Reaction to Large Coupling Variation in Dynamic Wireless Power Transfer”, *International Journal of IEEE Transactions on Industrial Electronics*, Vol. 63, No. 10, pp. 6591–6601, 2016.
- Jeebkum, P., Kirawanich, P., & Sumpavakup, C. 2021. Dynamic wireless power transfer with a resonant frequency for light duty electric vehicle. *International Journal of Intelligent Engineering and Systems*, 14(6), 417–426. <https://doi.org/10.22266/ijies2021.1231.37>
- Kang, J., Wang, Y., Li, L., Chen, P., Chen, J., Zhang, X., Cheng, S., Yang, F., Xu, G., Eldeeb, H. H., & Zhao, H. 2023. Misalignment tolerance of inductive power transfer coupler with low loss and high magnetic induction ferromagnetic materials. *IEEE Transactions on Industry Applications*, 59(6), 7848–7857.
- Kenan Ünal, Güngör Bal, Selim Öncü, Chapter 21 - Wireless Power Transfer, Editor(s): Muhammad H. Rashid, *Power Electronics Handbook (Fifth Edition)*, Butterworth-Heinemann, 2024, Pages 759-778, ISBN 9780323992169, <https://doi.org/10.1016/B978-0-323-99216-9.00007>.
- Kim, J., Kim, H., Kim, M., Ahn, S., Kim, J., & Kim, J. 2012. *Analysis of EMF noise from the receiving coil topologies for wireless power transfer*. In *Proceedings of the 2012 Asia-Pacific Symposium on Electromagnetic Compatibility (APEMC)* (pp. 645–648). IEEE. <https://doi.org/10.1109/APEMC.2012.6237964>
- Kishan, D. 2022. Magnetic Coupling Characteristics and Efficiency Analysis of Spiral Magnetic Power Pads for Inductive WPT System. *Distributed Generation & Alternative Energy Journal*, 37(5), 1703–1720. <https://doi.org/10.13052/dgaej2156-3306.37517>



- Konghirun, M., Nutwong, S., Sangswang, A., & Hatchavanich, N. 2023. Design of the transmitter coil used in wireless power transfer system based on genetic algorithm. *International Journal of Power Electronics and Drive Systems (IJPEDS)*, 14(4), 2307–2318. <https://doi.org/10.11591/ijpeds.v14.i4.pp2307-2318>
- Laksono, P. B., dan Alaydrus, M., 2019, Improved efficiency of inductive power transfer in misalignment conditions with multi-coil design, *Advanced Electromagnetics*, Vol. 8, No. 1
- Larbi, M., Trincherro, R., Canavero, F. G., Besnier, P., & Swaminathan, M. 2020. Analysis of parameter variability in an integrated wireless power transfer system via partial least-squares regression. *IEEE Transactions on Components, Packaging and Manufacturing Technology*, 10(11), 1795–1802. <https://doi.org/10.1109/TCPMT.2020.3002226>
- Lee, C., Park, S., dan Jeong, J., 2016, Comprehensive comparison of normality tests: Empirical study using many different types of data. *Journal of the Korean Data and Information Science Society*, Vol.27, No.5, pp.1399–1412.
- Li, H., Li, J., Wang, K., Chen, W., & Yang, X. 2015. A maximum efficiency point tracking control scheme for wireless power transfer systems using magnetic resonant coupling. *IEEE Transactions on Power Electronics*, 30(7), 3998–4008. <https://doi.org/10.1109/TPEL.2014.2349534>
- Li, J., Yin, F., & Wang, L. 2021. Transmission efficiency of different shielding structures in wireless power transfer systems for electric vehicles. *CSEE Journal of Power and Energy Systems*, 7(6), 1247–1255.
- Li, L., Deng, J., Wang, Z., Wang, S., & Gao, F. 2020. FEA-assisted optimization design of asymmetric DD type structure magnetic coupler for wireless electric vehicle charger. In 2020 IEEE 29th International Symposium on Industrial Electronics (ISIE) (pp. 1611–1616). IEEE. <https://doi.org/10.1109/ISIE45063.2020.9152733>



- Luo, Z., dan Wei, X., 2018, Analysis of square and circular planar spiral coils in wireless power transfer system for electric vehicles, *IEEE Transactions on Industrial Electronics*, Vol. 65, No. 1, pp. 331–341
- Maisnam, N., Sutnga, D., Affijulla, S., & Singh, K. M. 2024. Mutual inductance and magnetic flux in dynamic wireless charging for EVs with circular and rectangular coils. In *2024 6th International Conference on Energy, Power and Environment (ICEPE)* (pp. 1–6). IEEE. <https://doi.org/10.1109/ICEPE63236.2024.10668920>
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. 2019. Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, 22(1), 67–72. [https://doi.org/10.4103/aca.ACA\\_157\\_18](https://doi.org/10.4103/aca.ACA_157_18)
- Mohammed, M. H., Ameen, Y. M. Y., & Mohamed, A. A. S. 2020. Dish-shape magnetic flux concentrator for inductive power transfer systems. *International Journal of Electrical and Electronic Engineering & Telecommunications*, 9(6), 455–461. <https://doi.org/10.18178/ijeetc.9.6.455-461>
- Montgomery, D. C., 2013, *Design and Analysis of Experiments*, 8th Edition, John Wiley & Sons, Hoboken
- Montgomery, D. C., 2017, *Design and Analysis of Experiments*, 9th Edition, John Wiley & Sons, Hoboken, NJ.
- Moslezzaman, M., Hussain, M. D., Shamsuzzaman, H. M., & Mia, A. 2024. Wireless charging technology for electric vehicles: Current trends and engineering challenges. *Global Mainstream Journal of Innovation, Engineering & Emerging Technology*, 3(4), 69–90. <https://doi.org/10.62304/jieet.v3i04.205>
- Nkambule, M. S., Hasan, A. N., & Ali, A. 2021. A hybrid model of modified robust linear regression optimized by ant colony optimization for photovoltaic system efficiency improvement under sudden change of environmental conditions. In *Proceedings of the IECON 2021 – 47th Annual Conference*



- of the IEEE Industrial Electronics Society (pp. 1–6).  
IEEE. <https://doi.org/10.1109/IECON48115.2021.9589195>
- Pei, Y. 2022. *Design and optimization of inductive power transfer systems by metamodeling techniques* (Doctoral dissertation, Université Paris-Saclay).  
HAL Open Science. <https://theses.hal.science/tel-04147736>
- Pillai, N. V., & Mohan, A. R. 2024. Perfect multicollinearity and dummy variable trap: Explaining the unexplained. MPRA Paper No. 120376. Munich Personal RePEc Archive. <https://mpra.ub.uni-muenchen.de/120376/>
- Plexim GmbH. 2024. PLECS user manual (Version 4.9). Plexim GmbH.
- Rahulkumar, J., Narayanamoorthi, R., Vishnuram, P., Bajaj, M., Blazek, V., Prokop, L., & Misak, S. 2023. An empirical survey on wireless inductive power pad and resonant magnetic field coupling for in-motion EV charging system. *IEEE Access*, 11, 4660–4693. <https://doi.org/10.1109/ACCESS.2022.3232852>
- Rathee, S., & Pahuja, G. L. 2025. An approach for the reliability realization of dynamic wireless charging of electric vehicle system. *Proceedings of the 2025 First International Conference on Advances in Computer Science, Electrical, Electronics, and Communication Technologies (CE2CT)*, 1150–1156. <https://doi.org/10.1109/CE2CT64011.2025.10939799>
- Ren, S., Xia, C., Liu, L., Wu, X., & Yu, Q. 2018. Cross-shaped magnetic coupling structure for electric vehicle IPT charging systems. *Journal of Power Electronics*, 18(4), 1278–1292. <https://doi.org/10.6113/JPE.2018.18.4.1278>
- Sample, P., Meyer, D. A., & Smith, J. R. 2011. Analysis, experimental results, and range adaption of magnetically coupled resonators for wireless power transfer. *IEEE Transactions on Industrial Electronics*, 58(2), 544–554. <https://doi.org/10.1109/TIE.2010.2046002>
- Shah, Raj & Mittal, Vikram & Matsil, Eliana & Rosenkranz, Andreas. 2021. Magnesium-Ion Batteries for Electric Vehicles - Current Trends and Future Perspectives. *Advances in Mechanical Engineering*. 13. 10.1177/16878140211003398.

- Shi, Z., Fang, S., Chen, N., & Xie, Z. 2016. High efficiency wireless power transfer system for medium power. In Proceedings of the 2016 International Conference on Electrical, Mechanical and Industrial Engineering (pp. 31–33). Atlantis Press. <https://doi.org/10.2991/icemie-16.2016.8>
- Song, K., Koh, K. E., Zhu, C., Jiang, J., Wang, C., & Huang, X. 2016. A review of dynamic wireless power transfer for in-motion electric vehicles. In *Wireless Power Transfer - Fundamentals and Technologies* (pp. 109–128). InTechOpen. <https://doi.org/10.5772/64331>
- Supriyanto, T., & Wulandari, A. 2015. Rancang bangun wireless power transfer (WPT) menggunakan metode multi-magnetic resonator coupling. *Politeknologi*, 14(2), 1–10.
- Tang, W., Jing, L., Cao, W., Xu, W., Wu, X., & Liao, H. 2024. Optimization of magnetic coupling mechanism of dynamic wireless power transfer based on NSGA-II algorithm. *Scientific Reports*, 14, 5121. <https://doi.org/10.1038/s41598-024-55512-9>
- Tye, H. 2004. Application of statistical ‘design of experiments’ methods in drug discovery. *Drug Discovery Today*, 9(11), 485–491.
- Yadav, A., & Bera, T. K. 2025. Design and optimization of circular and rectangular couplers for wireless power transfer: Efficiency enhancement and human safety assessment. *Discover Energy*, 5(7). <https://doi.org/10.1007/s43937-025-00065-9>
- Yang, D., Won, S., & Hong, H. 2017. *Design of range adaptive wireless power transfer system using non-coaxial coils*. In Proceedings of the 2017 2nd Asia Conference on Power and Electrical Engineering (ACPEE 2017) (pp. 1–8). Shanghai, China.
- Ying, T., Chi, H., Zheng, M., Li, Z., dan Uher, C., 2014, Low-temperature electrical resistivity and thermal conductivity of binary magnesium alloys, *Journal of Alloys and Compounds*, Vol. 617, pp. 973–979
- Yuan, Z., Saeedifard, M., Cai, C., Yang, Q., Zhang, P., & Lin, H. 2022. A misalignment tolerant design for a dual-coupled LCC-S-compensated WPT



- system with load-independent CC output. *IEEE Transactions on Power Electronics*, 37(6), 7480–7492
- Van Mulders, J., Delabie, D., Lecluyse, C., Buyle, C., Callebaut, G., Van der Perre, L., & De Strycker, L. 2022. Wireless power transfer: Systems, circuits, standards, and use cases. *Sensors*, 22(15), 5573. <https://doi.org/10.3390/s22155573>
- Wang, J., Chen, R., Cai, C., Zhang, J., & Wang, C. 2023. An onboard magnetic integration-based WPT system for UAV misalignment-tolerant charging with constant current output. *IEEE Transactions on Transportation Electrification*, 9(1), 1973–1984
- Wang, X., Pang, J., Zhao, N., Liu, L., Dong, H., Tan, Q., & Xiong, J. 2022. Lateral and angular misalignments of coil in wireless power transfer system. *Sensors and Actuators A: Physical*, 341, 113577. <https://www.sciencedirect.com/science/article/pii/S0924424722002151>
- Waters, B. H., Mahoney, B. J., Lee, G., dan Smith, J. R., 2014, Optimal coil size ratios for wireless power transfer applications, *IEEE International Symposium on Circuits and Systems (ISCAS)*.
- Wen, Z., Wu, Q., Yildiz, Ö. F., dan Schuster, C., 2019, Design of experiments for analyzing the efficiency of a multi-coil wireless power transfer system using polynomial chaos expansion, *Proceedings of EMC Sapporo & APEMC 2019*, ThuAM1B.1, pp. 499–502
- Zeng, M., Andrenko, A. S., Liu, X., Zhu, B., Li, Z., & Tan, H.-Z. 2016. Differential topology rectifier design for ambient wireless energy harvesting. In 2016 IEEE International Conference on RFID Technology and Applications (RFID-TA) (pp. 97–101). IEEE. <https://doi.org/10.1109/RFID-TA.2016.7750756>
- Zhang, H., Liao, M., He, L., dan Lee, C.-K., 2024, Parameter optimization of wireless power transfer based on machine learning, *Electronics*, Vol.13, No.1, Article 103, pp.1–13
- Zhong, W., & Hui, S. Y. R. 2017. Maximum energy efficiency operation of series-series resonant wireless power transfer systems using on-off keying



modulation. *IEEE Transactions on Power Electronics*, 33(4), 3595–3603.

<https://doi.org/10.1109/TPEL.2017.2740840>

Zhou, G.-Q. 2014. The equivalent self-inductance of N coupled parallel coils. *Progress In Electromagnetics Research Letters*, 46, 59–

66. <https://doi.org/10.2528/PIERL14031105>

Zhu, J., Ma, L., Ni, M., & Li, Z. 2021. A bootstrap method to calculate the  $p$ -value of Fisher's combination for a large number of weakly dependent  $p$ -values. *Communications in Statistics - Simulation and Computation*, 52(9), 4210–4217. [https://doi-](https://doi-org.ezproxy.ugm.ac.id/10.1080/03610918.2021.1955265)

[org.ezproxy.ugm.ac.id/10.1080/03610918.2021.1955265](https://doi-org.ezproxy.ugm.ac.id/10.1080/03610918.2021.1955265)