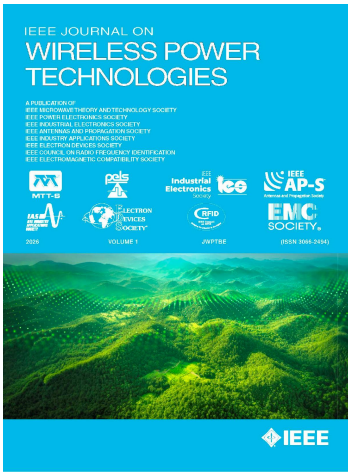
Products Newsletter

August 2025 | Issue 61

Welcome to a New Journal



The IEEE Power Electronics Society (PELS) is pleased to present the *IEEE Journal on Wireless Power Technologies* (JWPT), a multi-disciplinary publication promoting the latest developments in wireless power technologies with an emphasis on hardware implementation. JWPT is jointly sponsored by the following IEEE groups: Power Electronics Society, Microwave Theory and Technology Society, Industrial Electronics Society, Antennas and Propagation Society, Industry Applications Society, Electron Devices Society, Council on Radio Frequency Identification, and Electromagnetic Compatibility Society. The submission portal for the journal will be opening on August 19. The Author Portal link can be found **here**. For more information, please visit the **website**.

Call for Papers: PELS Publications

JESTPE

Special Issue: Interactive Power Converters for Renewable Energy Grid-Tied Systems. Submission Deadline: August 31.

Special Issue: Integrated Machine Drives. Submission Deadline: September 30.

The scope of this SI has been widened to include new relevant topics, including:

- Novel integration of magnetic bearings into machines, e.g. making use of stator windings
- Integration of gearbox functions into machine via magnetic gears or novel topologies
- Integration of drive with the load in a manner which produces significant system advantages

Special Issue: Power Electronics for Distributed Generation Systems. Post-conference version of papers presented at the IEEE International Symposium on Power Electronics for Distributed Generation Systems (PEDG 2025) are welcome.
Submission Deadline: November 15.

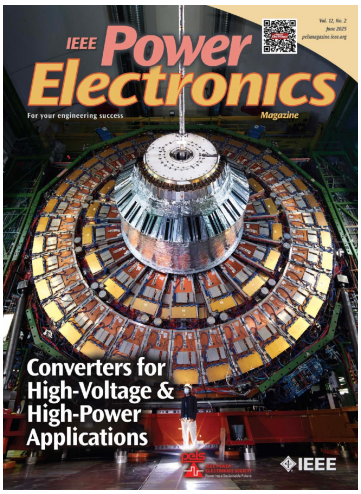
OJPEL

The editors from OJPEL would like to announce a Special Compendium on the 2025 IEEE 7th International Conference on DC Microgrids (ICDCM 2025). Papers that show the latest advancements in dc grid technologies and applications are welcome for this special compendium. The scope encompasses aspects of power electronics, system architectures, controls, protection, intelligent system management, energy storage, and ac grid interfaces that are unique to dc microgrids. We will accept selected full journal article versions of already accepted papers at ICDCM 2025. A paper submission is still expected to include a literature review to establish its relationship to prior work, and present sufficient results to prove the validity and viability of proposed concepts. The deadline for manuscript submission is November 1, 2025. The scheduled publication time is August 2026. For more information, please consult the **Call**.

TPEL

The editorial team of TPEL **announces** a Call for Letters Proposals and a Call for Regular Papers Proposals. The papers will be published in 2026. Submit your team's ideas today! Proposals Deadline: August 31.

IEEE Power Electronics Magazine



2025 APEX Awards
We're very pleased, humbled, and proud to announce that *IEEE Power Electronics Magazine* has been recognized with 2025 APEX Awards for Publications Excellence. The article "**Energy Efficiency is Not Enough!**" by Jonas Huber, Luc Imperiali, David Menzi, Franz Musil, and Johann W. Kolar won in the APEX Grand Award category. Robert V. White was recognized with an APEX Award of Excellence for his "White Hot" column "**Not Your Grandpa's Flyback**."

Get Access to Previous Issues
For editorial from back issues of the magazine, visit our **website**. You will discover Open Access columns, along with Society News. Stay tuned for the September 2025 print issue!

IEEE Transactions on Power Electronics (TPEL)

TPEL IEEE Transactions on Power Electronics 40 YEARS

Welcome New Co-EICs
The TPEL editorial team has added two new Co-EICs to its board.

- Ali Khajehoddin (University of Alberta, Canada) will take on the role of TPEL Letters Co-EIC for a three-year term.
- Minjie Chen (Princeton University, USA) will take on the role of Co-EIC for TPEL regular papers. This also is a three-year term.

Call for Associate Editors
TPEL is accepting applications and nominations for Associate Editors. Please visit the **website** for the application requirements.

TPEL editors have selected a few papers to highlight from the **August 2025** issue.

"**Triple Phase Ratio Shift Control for Bidirectional Wireless Power Transfer Application Based on Totem-Pole Single-Stage AC-AC Converter**" by Xi Zhang, Qianfan Zhang, and Fan Zhang. This work presents a triple phase ratio shift control strategy for a totem-pole single-stage ac–ac converter for bidirectional wireless power transfer systems. The proposed approach not only achieves PFC functionality, but also regulates the system power by adjusting the external phase shift ratio. In addition, the proposed technique is able to assure a wide range of ZVS operation on the transmitter-side.

"**Design of a Megawatt-Scale IGCT-Based Medium-Voltage Direct Current Transformer**" by Rui Wang, Nikolina Djekanovic, and Drazen Dujic. This article discusses the design of a bidirectional medium voltage direct current transformer based on an LLC resonant converter topology. Zero-voltage-switched neutral-point-clamped switching stacks with IGCT devices support operation at medium voltage levels with a demonstrated experimental power throughput of 0.5MW at a switching frequency of 5kHz, achieving a peak efficiency in excess of 98%.

IEEE Power Electronics Letters

The **August 2025** issue of TPEL features 13 Letters advancing the state of the art in power electronics, spanning topics such as EMI mitigation, high-frequency magnetics, wireless charging, advanced control strategies, and converter innovations. Two standout Letters from this issue address critical packaging and magnetic design challenges in medium- and high-voltage applications.

"**EMI Mitigation for SiC Power Module With Chip-on-Ceramic Heatsink Packaging**" by Zhaobo Zhang, Wenzhi Zhou, Xibo Yuan, Elaheh Arjmand, and Lihong Xie. This Letter introduces a novel packaging approach that directly mounts SiC MOSFETs onto a metallized aluminum nitride (AlN) ceramic heatsink. This chip-on-ceramic structure reduces common-mode (CM) capacitive coupling between the switching node and ground, significantly mitigating EMI at the source.

"**Matrix-Based Inductor Structure for MV Applications**" by Anup Anurag, Rudy Wang, and Peter Barbosa. This Letter presents a modular, medium-voltage (MV) inductor design utilizing a matrix-based configuration. By using distributed air gaps across five separate magnetic cores, the structure achieves both the desired inductance and MV insulation. The design withstands partial discharge voltages up to 20 kV, validated in a 20 kW, 10 kV SiC-based converter. The air-insulated, modular inductor enables scalable and manufacturable magnetic solutions for MV power conversion systems.

IEEE Transactions on Transportation Electrification (TTE)

IEEE Transactions on Transportation Electrification (TTE) continues its robust growth, recently reaching an highly impressive Impact Factor of 8.3. The Editors would like to thank the Editorial Board for their hard work and unwavering dedication to the journal.

Authors are encouraged to submit their manuscripts for publication in TTE. All manuscripts can be submitted through the IEEE Author Portal. For more information, please click **here**.

To read the August 2025 issue of TTE, visit**Xplore**.

IEEE Open Journal of Power Electronics (OJPEL)

The *IEEE Open Journal of Power Electronics* (OJPEL) is a 100% open access journal that publishes high-quality, peer-reviewed papers. This means that all content is freely available without charge to users and their institutions. Users can copy, distribute, download, link, print, read, and search the full texts of the articles and can use them for any lawful purpose (as long as proper attribution is given). For the recent issue, please visit **Xplore**.

IEEE Journal of Emerging and Selected Topics in Power Electronics (JESTPE)

JESTPE is proud to announce Prize Paper Awards and Recognitions for 2024.

First Place Prize Paper Award
X. Li, F. Zheng, H. Wang, Y. Sun, X. Dai, and J. Hu, "**A Simultaneous Power and Data Transfer Method for Dynamic Wireless Charging Electric Vehicles**," in IEEE Journal of Emerging and Selected Topics in Power Electronics, Feb. 2024.

Second Place Prize Paper Awards
Z. Deng, H. Hu, Y. Su, F. Chen, J. Xiao, C. Tang, and T. Lin, "**Design of a 60-kW EV Dynamic Wireless Power Transfer System With Dual Transmitters and Dual Receivers**," in IEEE Journal of Emerging and Selected Topics in Power Electronics, Feb. 2024.

X. Zhao, R. Phukan, C. Chang, R. Burgos, S. Uicich, P. Asfaux, M. Debbou, A. Plat, and D. Dong. "**Design and Implementation of SiC-Based 200-kW High-Density High-Speed High-Altitude Electric Propulsion AC Drive System**," in IEEE Journal of Emerging and Selected Topics in Power Electronics, Oct. 2024.

X. Tian, W. Liu, K. T. Chau, and S. M. Goetz, "**Omnidirectional Magnetic Resonant Extender Design for Underwater Wireless Charging System**," in IEEE Journal of Emerging and Selected Topics in Power Electronics, Aug. 2024.

D. Mohanraj, J. Gopalakrishnan, B. Chokkalingam, and J. O. Ojo, "**An Enhanced Model Predictive Direct Torque Control of SRM Drive Based on a Novel Modified Switching Strategy for Low Torque Ripple**," in IEEE Journal of Emerging and Selected Topics in Power Electronics, April 2024.

L. Yi and J. Moon, "**Accurately Disentangling Core and Winding Losses in Experimental, In-Situ Magnetic Loss Measurement for Power Electronic Circuits and Applications**," in IEEE Journal of Emerging and Selected Topics in Power Electronics, Dec. 2024.

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IEEE Electrification Magazine

IEEE Electrification Magazine is a quarterly magazine dedicated to disseminating information on all matters related to electrification in vehicles, ships, trains, planes, and spacecraft. Feature articles in the magazine focus on advanced concepts, technologies, and practices associated with all aspects of electrification in the transportation and off-grid sectors from a technical perspective in synergy with non-technical issues, such as business, environmental, and social concerns. For detailed submission guidelines, please refer to the magazine **website**.