Products Newsletter

July 2025 | Issue 60

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.

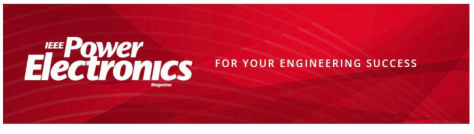
TPEL
The editorial team of TPEL **announces** a Call for Letters Proposals and a Call for Regular Papers Proposals. The papers will be published in 2026. Submit your team's ideas today! Proposals Deadline: August 31.

TPEL 40
The TPEL 40 Committee presents a **Call** for a Special Section on Visionary Papers. This Call seeks groundbreaking ideas, emerging paradigms, and forward-looking research that push the boundaries of current technological and theoretical frameworks. Contributions are encouraged that challenge conventional methodologies, propose disruptive innovations, and address the long-term challenges in power conversion, energy storage, and high-efficiency power systems.

Pubs Education

We are pleased to share the latest Impact Factors of our IEEE PELS journals. Our journals have maintained strong influence, made possible by our editorial team's collaborative management and committed effort, and more importantly, by the steadfast support from our authors, reviewers, and readers. TPEL (Transactions on Power Electronics) maintains its top reputation with an Impact Factor of 6.5. TTE (Transactions on Transportation Electrification) continues its robust growth, reaching an highly impressive Impact Factor of 8.3. JESTPE (Journal of Emerging and Selected Topics in Power Electronics) and OJPEL (Open Journal of Power Electronics) both hold steady in their influence, with Impact Factors of 4.9 and 3.9, respectively. We all recognize that Impact Factor is influenced by many variables and does not solely determine the quality of a journal. However, the consistently high Impact Factors across all PELS journals reflect the significant role we play in disseminating cutting-edge research—particularly in the field of power electronics. For more about the IEEE PELS publications, please visit the PELS **website**.

IEEE Power Electronics Magazine



Summer is a Time for Reading and Writing!
Welcome to the July newsletter. I hope you enjoy it! For many, summer is a time to curl up with a good book at the beach, in the woods, or just on a comfortable chair at home. Don't forget to add the PELS Power Electronics Magazine to that mix. It's always full of informative articles, columns, and social news to keep you up to date. If you are thinking about writing, have you thought about contributing to the publication with an article on your area of power technology expertise? **Reach out** to us and we'll tell you how!

Get Access to Previous Issues
For more editorial from previous issues of the magazine, you can now visit the **website**.

You will discover a variety of Open Access columns, along with Society News stories. Stay tuned for the June 2025 issue!

IEEE Transactions on Power Electronics (TPEL)

TPEL has a few announcements to share this month.

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 **July 2025** issue.

"**An EMI-Compliant and Automotive-Rated 48 V to Point-of-Load Dickson-Based Hybrid Switched-Capacitor DC-DC Converter**" by Sahana Krishnan, Margaret E. Blackwell, and Robert C. N. Pilawa-Podgurski. This article discusses the incorporation of control based EMI mitigation techniques into a hybrid switched capacitor converter for 48V applications. A 150W prototype is demonstrated showing compliance with the CISPR 25, Class 5 EMI regulation limits, with a peak efficiency of 97.1%.

"**Sliding Mode Observer-Based Robust Switch Fault Diagnosis of Bidirectional Interleaved Converters for Energy Storage System**" by Shengrong Zhuo, Yuqi Ma, Ruixin Zhang, Yigeng Huangfu, and Fei Gao. This article propose a sliding mode observer-based robust switch fault diagnosis method for a bidirectional interleaved dc–dc buck/boost converter for the energy storage system. The sliding mode observer is designed to generate residuals for fault diagnosis using only the nominal converter model. It is demonstrated by simulation and experimental results that the proposed fault diagnosis method shows strong robustness to modeling imperfections and disturbances.

"**Unilateral Compensation for Compact and Lightweight IPT Converters With Near Unity Power Factor and Load-Independent Constant Output**" by Zhihao Guo, Xiaohui Qu, Jinghang Liu, Yundi Li, and Chi K. Tse. This paper proposes a generalized transformer model-based design method for IPT unilateral compensation, which can take full advantage of the freedom provided by the generalized transformer model to achieve multiple design objectives simultaneously, including near unity power factor, soft switching, and flexible load-independent constant outputs.

IEEE Power Electronics Letters

The **July 2025** issue of TPEL features 11 Letters. Here are a few of those Letters highlighted.

"**High Current Output for AGV Wireless Charging Systemwith Intertwined Receiving Coils and Split Compensating Capacitors**" by Yiming Zhang, Hongjing Ouyang, Tao Zhang, Ronghuan Xie, Xiaoying Chen, Xiangpeng Cheng, and Zhongqi Li. High charging current is required for fast charging in Automotive Guided Vehicles. To achieve this objective, this letter proposes an interesting scheme based on intertwined receiving coils and split compensation capacitors.

"**A Unified Variable Active Impedance Module With Minimum Power Processing**" by Zhihao Lin, Bo Yao, Henry Shu-Hung Chung, Hongjian Lin, Khalifa Al Hosani, and Huai Wang. This letter proposes a unified concept of the active impedance module and its control method with minimum power processing. The impedance value and

type of the proposed active impedance module can be adjusted by configuring the control functions. This enables it to operate as a variable capacitor or inductor, supporting both positive and negative capacitance or inductance. The proposed solution addresses the limitations of existing methods in balancing achievable impedance, power processing, and control requirements. The concept, circuit structure, control method, and impedance characteristics are discussed.

"**A Novel Active EMI Filter Based on Transferring Common-Mode Noise to Differential-Mode Noise**" by Hongpeng Wang, Wenjie Chen, Wenxia Chen, Rui Cheng, Yongqi Huo, Wenjie Du, and Xu Yang. This letter proposes a novel common-mode (CM) to differential-mode (DM) active electromagnetic interference (EMI) filter (C2D-AEF). First, CM noise is transferred to DM noise by an active circuit. Then, DM noise can be reduced by an X-capacitor with ease. Therefore, equivalently, CM noise can be eliminated.

IEEE Transactions on Transportation Electrification (TTE)

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 June 2025 issue of TTE, visit**Xplore**.

IEEE Open Journal of Power Electronics (OJPEL)

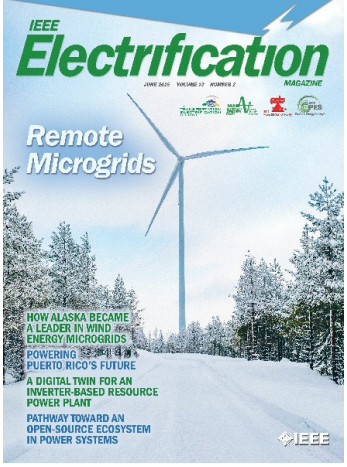
The editors from **OJPEL** would like to announce a Special Compendium on the 2025 IEEE 7th International Conference on DC Microgrids (ICDCM 2025). Papers that show the latest advancements in dc grid technologies and applications are welcome for this special compendium. The scope encompasses aspects 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**.

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

The June 2025 issue of **JESTPE** features two Special Issues.
* Digital Twin Driven High-Reliability Power Electronic Systems.
Guest Editors: Jiangbiao He, Paolo Mattavelli, Fernando Briz
* Power Electronics Role in Future Renewables and Power-to-X Systems.
Guest Editors: Ahmed Abdelhakim, Dmitri Vinnikov, Jon Are Suul
For more information on JESTPE, please visit**online**.

IEEE Electrification Magazine

The **June 2025** issue of *IEEE Electrification Magazine* presents new insights into remote microgrids, with a focus on real-world implementations in locations such as Alaska, Antarctica, and Puerto Rico. It also highlights relevant monitoring and simulation technologies. The issue comprises seven feature articles, two history column pieces, and two newsfeed columns. If you are interested in submitting an article to the magazine, please **email** the editorial team. For



detailed submission guidelines, please visit the magazine **website**.

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This message is being sent to you because of your membership with and/or your interest in publications of the IEEE Power Electronics Society. For any questions about the newsletter, please contact Mary Beth Schwartz (marybeth.schwartz@ieee.org).