IEEE POWER ELECTRONICS SOCIETY

# Products Newsletter

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IEEE Advancing Technology for Humanity

## Call for OJPEL Editor-in-Chief

The IEEE Power Electronics Society is accepting applications and nominations for Editor-in-Chief (EIC) for the *IEEE Open Journal of Power Electronics* (OJPEL). The term will be 3 years from January 1, 2026 to Dec 31, 2028, with the possibility of renewal for another 3 year-term.

OJPEL was established in 2020 as a GOLD open journal. Since its inception it has established itself as one of the fastest submission-to-first decision journals in all of IEEE (approximately 4 weeks). The journal operates with three Co-EICs, approximately 50 AEs, and a huge cache of highly responsive reviewers. Its current impact factor stands at 5.0.

OJPEL covers the development and application of power electronic systems and technologies. Some topics include the use of electronic components, the application of circuit theory and design techniques, and the development of analytical methods and tools for efficient electronic conversion, control, and conditioning of electric power to enable the sustainable use of energy. The aim is to publish novel developments as well as tutorial and survey articles, including those of value to the practicing professional, research, and development segments of the field. The deadline for receipt of all materials is May 1, 2025.

For more information, please read the Call.

**Call for AEs and Reviewers**

The editorial team of OJPEL also is seeking reviewers and Associate Editors in the topic areas listed below. It is requested that applicants profile their experience against these areas, along with other areas. Please email a CV and short profile of expertise to the EIC.

**Topic Areas**

Control of grid-connected converters
DC/DC converters, including digital control
Digital twins
HVDC and, in general, electronic grid applications of power converters
Lithium batteries
Magnetic components and design
Power Hardware-in-the-loop
Power ICs
WBG semiconductor devices and converters
Wireless Power Transfer

## Pubs Education


The PELS staff would like to share the following educational guidelines this month.

**AI Policy for PELS Publications**

With the rapid development of AI technology, we would like to share the following guidelines for authors and reviewers.

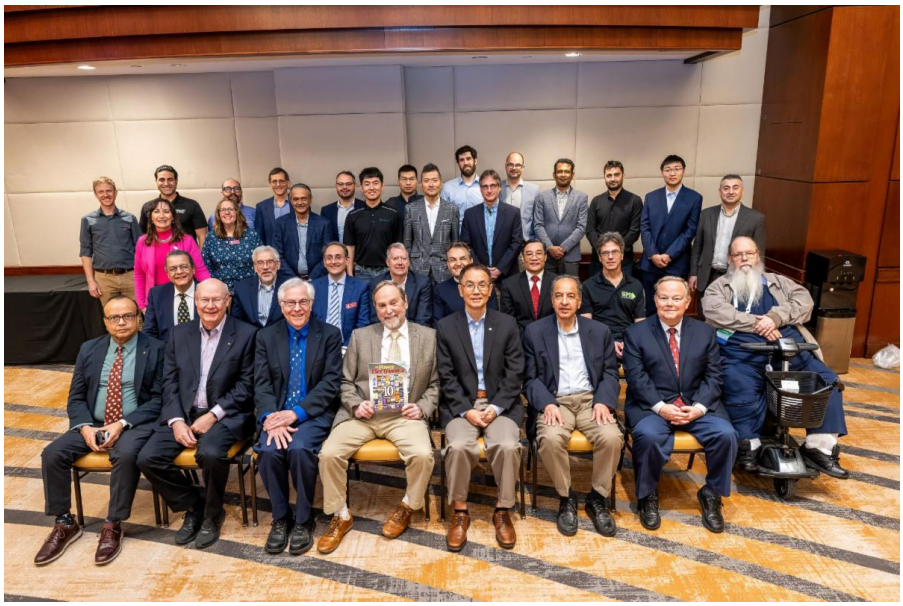
**For paper authors**: "The use of content generated by artificial intelligence (AI) in an article (including but not limited to text, figures, images, and code) shall be disclosed in the acknowledgments section of any article submitted to an IEEE publication. The AI system used shall be identified, and specific

sections of the article that use AI-generated content shall be identified and accompanied by a brief explanation regarding the level at which the AI system was used to generate the content. The use of AI systems for editing and grammar enhancement is common practice and, as such, is generally outside the intent of the above policy. In this case, disclosure as noted above is recommended." (IEEE Publication Services and Products Board Operations Manual, Section 8.2.1.B.10)

**For paper reviewers**: "Information or content contained in or about a manuscript under review shall not be processed through a public platform (directly or indirectly) for AI generation of text for a review. Doing so is considered a breach of confidentiality because AI systems generally learn from any input." (IEEE Publication Services and Products Board Operations Manual, Section 8.2.1.C.6)

The IEEE Power Electronics Society recently posted its IEEE PELS Publication Accessibility and Inclusive Language Guide online. This guide includes global IEEE policies, including the Accessibility Statement, IEEE Code of Ethics, Ethics Reporting Line, IEEE Event Conduct & Safety Statement for Conferences, and the Non-discrimination Policy. To access the guide, click here.

## IEEE Power Electronics Magazine



**Looking Back on APEC 2025, and Forward to the June Issue**

One of the healthy aspects of the power engineering space is that it is part of a larger community, manifested in events where we congregate to not only learn, sell, and organize, but also chat, visit, and socialize. One of the leading shows in this industry is APEC, the Applied Power Electronics Conference. Now in its 40th year, APEC 2025 was also where the *IEEE Power Electronics Magazine* celebrated its 10th anniversary at a luncheon that honored the publication's founders. Check out our coverage of that celebration and some interesting articles on power electronics in the June issue of the magazine, which has an issue theme of high-voltage power systems and solutions.

**Get Access to Previous Issues**
For more editorial from previous issues of the magazine, you can now visit thewebsite. You will discover a variety of Open Access columns, along with Society News stories. Stay tuned for the June 2025 issue!

*Photo: Jason Meek*

## IEEE Transactions on Power Electronics (TPEL)

TPEL has several announcements to share this month.

**Call for Co-EICs**
TPEL is accepting applications and nominations for the opening of:
TPEL Co-EICs (Letters and Regular Papers)
All application materials should be sent by May 1, 2025
For more information, please click on the Call.

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

**TPEL Administrative Updates**
The TPEL topics and submission guidelines have recently been updated. Please see the website for the latest information.

**Extended Deadlines for Special Sections: April 30, 2025**
Two TPEL special section submissions have been extended.

1. Special Section on Advanced Wide Bandgap Single-Stage Grid-Connected Power Interface
2. Special Section on Very High Frequency Resonant Converters for Efficient and Miniaturized Power Conversions

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

"Postfault Operation of Three-Level Inverter Driven Six-Phase PMSM With Enhanced Torque–Speed Region" by Partha Pratim Das, Subhransu Satpathy, and Subhashish Bhattacharya. An open-switch post-fault operational technique with the enhanced torque–speed region for 3L-ANPC inverter-driven SSPPMSM is presented in this article. The post-fault operational technique is experimentally validated using a Gallium Nitride (GaN) device-based 3L-ANPC inverter-driven SSP-PMSM.

"A Soft-Switching High Step-Down Regulated DC–DC Converter: Topology Construction and Control Method" by Yueshi Guan, Xiang Li, Tingting Yao, Wei Yang, Yijie Wang, Wei Wang, and Dianguo Xu. This paper presents a soft-switching high voltage step-down ratio hybrid switched-capacitor converter able to regulate the output voltage. The converter achieves a peak efficiency of 98.4% and is intended for data center power supply applications.

## IEEE Power Electronics Letters

The editors of TPEL Letters present two new Special Sections for publication in 2025.

1. Special Section on Fabrication and Design of High-Power-Density and High-Frequency Passive Components (Submission Deadline: May 1, 2025)
2. Special Section on AI-Enhanced Power Electronic Systems: Design, Control, and Maintenance (Submission Deadline: June 1, 2025)

The April 2025 issue features 17 Letters on advancements in power electronics and related technologies. Key topics include real-time simulation methods, dynamic wireless charging systems, electric vehicle charging, optimized modulation techniques, compact rectifiers, virtual capacitor control, harmonic field suppression, zero-voltage switching, GaN HEMT drivers, grid-forming inverters, solid-state transformers, hybrid power transfer systems, SiC MOSFET temperature measurement, and quantum power pulse modulation for DAB converters.

One of the highlighted Letters in this issue, "A Novel Comb-Shaped Coupler for Hybrid

Inductive and Capacitive Wireless Power Transfer System," by Siqi Li, Ke Xia, Tong Li, Sizhao Lu, Jinglin Xia, and Zhe Liu, presents a novel approach to enhancing wireless power transfer (WPT) systems. This approach integrates both magnetic and electric field transmission channels into a single, efficient structure using a unique comb-shaped design. The key innovation in this work is the placement of electric field coupling plates between two magnetic field coils. This configuration ensures that the magnetic flux passes unobstructed, while simultaneously minimizing eddy current losses, which are a common issue in traditional WPT systems. By leveraging both inductive and capacitive coupling mechanisms, this hybrid design significantly improves the overall efficiency and power transfer capability of the system.

Another intriguing Letter in this issue, "High-Accuracy Online Junction Temperature Measurement of Medium-Voltage SiC MOSFETs Based on Passive Turn-On Delay Time Integrator," by Jialong Dou, Zhiqiang Wang, Guoqing Xin, and Xiaojie Shi, introduces a novel nonintrusive method for measuring the junction temperature of medium-voltage SiC MOSFETs. This method leverages a passive turn-ON delay time integrator to provide high-accuracy, online junction temperature measurement without the need for large gate resistances. Notably, the approach also tracks the highest junction temperature among the chips in a multi-chip power module.

## 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 April 2025 issue of TTE, visitXplore.

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

The JESTPE editorial team has a few news announcements for April.

**A New Call for Papers**

Submissions will open on April 15, 2025 for a new Special Issue: Interactive Power Converters for Renewable Energy Grid-Tied Systems. A brief synopsis is as follows. Interactive power converters serve as critical components in the pursuit of sustainable energy solutions. This special issue focuses on the future trend of interactive power converters for renewable energy grid-tied systems, highlighting their role in energy generation, conversion, storage, and utilization. Future trends in this field include intellectualization and digitalization, high efficiency and power density, multi-source integration, and intelligent microgrids for renewable energy. We invite research on power converter topologies, modulation, control techniques, and optimization methods for renewable energy grid-tied systems. Topics also include fault tolerance, cybersecurity, hybrid energy storage, and advanced simulation methods, aiming to contribute to a more reliable and efficient energy future. The manuscript submission deadline is August 31, 2025.

**April Issue**

The April 2025 issue ofJESTPE includes 43 articles accepted for the Special Issue on Advanced Technologies of Motor Drives for Zero-Emission E-Mobility. Editors for the Special Issue are Yunwei (Ryan) Li (University of Alberta, Canada), Wei Hua (Southeast University, China), and Luca Zarri (University of Bologna, Italy).

**Call for Associate Editors**

JESTPE will be soon opening positions for Associate Editors. Stay tuned to social media, the upcoming Products Newsletter, and the website.

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