

## Calls: PELS Publications

### JESTPE

JESTPE **announces** its Special Issue: Interactive Power Converters for Renewable Energy Grid-Tied Systems. The editors 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. Submission Deadline: August 31.

### 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. Submissions Deadline: June 30.

### TPEL Letters

The editors of TPEL Letters present a **Special Section** for publication in 2025: Special Section on AI-Enhanced Power Electronic Systems: Design, Control, and Maintenance. Submission Deadline: June 1.

## 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

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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

### In Praise of the Power Electronics Engineer

There is a saying, “April showers bring May flowers,” as we look forward to the spring and coming warm summer months. May is also the month we celebrate the Institute of Electrical and Electronics Engineers Inc. (IEEE) Global Engineering Day (May 13) to recognize the role engineers play in creating the products and systems that enrich and empower our society. We need engineers to apply the technologies we discover to address the various application spaces with useful devices and solutions along with the crucial infrastructures that support them. In a time of global uncertainty, we must create policies and practices that promote and support our engineering community to ensure we have the tools and products to grow and expand our homes, businesses, and society.

### 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.

### TPEL Administrative Updates

Please visit the TPEL [website](#) for the latest information on topics and submission guidelines, including page limits and guidelines on survey/review/overview papers.

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TPEL editors have selected a few papers to highlight from the [May 2025](#) issue.

**“Low-Voltage Thyristor Based Multi-Port DC Breaker for Single-Source Multi-Loads System in Substation”** by Weijie Wen, Chenyang Li, Qingyao Sun, Hezhi Jin, Jinghan Fan, and Bin Li. A novel thyristor based multiport dc breaker (T-MP-CB) is proposed for the  $\pm 110$  V single-source multi-loads power supply system in a substation. With special configuration of MOV, TIV can be suppressed within  $\sim 1.6$  p.u., and with no voltage applied on MOV during normal state, the potential degradation of MOV caused by leakage current is avoided. By taking both reliable extinguishing of thyristor and economic performance into consideration, a parameter optimization design method for T-MP-CB is proposed.

**“Novel Current Sensor Based on Parasitic Inductance With Adaptive Compensation for Parasitic Resistance”** by Xingchen Zhao, Tam Nguyen, Dong Dong, and Rolando Burgos. This paper presents a current sensor based on parasitic inductance to reconstruct device current providing high bandwidth, small footprint, low cost, and non-intrusiveness. The work investigates the impact of parasitic resistance on output deviation

and presents a programmable compensation circuit to effectively mitigate this influence.

## IEEE Power Electronics Letters

The **May 2025** issue of TPEL features nine Letters showcasing novel advancements in power electronics, wireless power transfer, grid interaction, and control techniques for energy systems. Two standout Letters from this issue tackle key challenges in high-power wireless charging systems.

**“Laminated Cores in Inductive Power Transfer: A Viaduct Structure for Balanced Flux and Minimal Shielding Loss”** by Yibo Wang, C. Q. Jiang, Xiaosheng Wang, Liping Mo, Weisheng Guo, and Teng Long presents a novel laminated core structure using Fe-based nanocrystalline materials. Traditional laminated IPT cores often suffer from edge flux concentration and increased shielding loss. Drawing inspiration from viaduct bridges, this design combines horizontally laminated cores (main flux paths) with vertically laminated cores (flux balancers), achieving a quasi-isotropic flux distribution.

**“A Self-Resonant Foreign Object Detection (FOD) System for Metal and Living Object Detection in Electric Vehicle Wireless Charging Systems”** by Yingyao Zheng, Yicheng Zhou, Ronghuan Xie, Xingkui Mao, Xiaoying Chen, Xiangpeng Cheng, and Yiming Zhang. The paper proposes a new FOD method using self-resonant detection coils composed of unipolar windings and comb-shaped capacitor plates. Unlike traditional systems, it requires no decoupled coils or high-pass filters and operates independently of the 85-kHz power transmission. By scanning a narrow frequency range and observing voltage slope characteristics, the system distinguishes between metal objects (slope  $< -0.15$ ) and living objects (slope  $> 0.15$ ).

## 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, visit [Xplore](#).

## IEEE Open Journal of Power Electronics (OJPEL)

The editors from OJPEL would like to highlight the following papers this month related to converters. For more papers from OJPEL, visit [Xplore](#).

**“High-Bandwidth Isolated Voltage Measurements With Very High Common Mode Rejection Ratio for WBG Power Converters”** by Pascal S. Niklaus, Reto Bonetti, Christof Stäger, Johann W. Kolar, and Dominik Bortis. This article derives the minimum necessary Common Mode Rejection Ratio (CMRR) at different frequencies to constrain the time-domain measurement error below a certain limit.

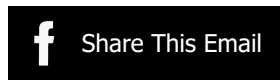
**“Analysis and Design of High-Efficiency Modular Multilevel Resonant DC-DC Converter”** by Yanchao Li, Mengxuan Wei, Xiaofeng Lyu, Ze Ni, and Dong Cao. This paper demonstrates a high-efficiency modular multilevel resonant DC-DC converter (MMRC) with zero-voltage switching (ZVS) capability.

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

The JESTPE editorial team has a few news announcements for the month of May.

JESTPE is searching for new Associate Editors to join its editorial board. Interested applicants should complete the form in this [link](#). The application deadline is May 31.

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The April 2025 issue of JESTPE features a Special Issue on Advanced Technologies of Motor Drives for Zero-Emission E-Mobility. Please click [here](#) for the issue.



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