

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. 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: July 1.

Pubs Education

The PELS staff would like to share the following educational tips this month courtesy of the **IEEE Authors Newsletter**.

Responding to Challenging Reviewer Comments

Most comments from reviewers are straightforward for the author to address but, occasionally, an author may receive comments that present more of a challenge. Below are some tips for handling challenging feedback.

The reviewer misunderstood something in the article .

When this happens, it can be tempting to dismiss the reviewer as someone who is not knowledgeable or insightful enough to be taken seriously. However, remember that it is your responsibility as an author to explain your research and your conclusions to the reviewer, and eventually, to the reader of your published article as well. If the reviewer misunderstood something, perhaps the reader of the published article will misunderstand it as well. Instead of being dismissive, take the viewpoint that there is always room for improvement and try to bring more clarity to the area the reviewer is questioning.

The reviewer asks questions or requests additional data that your research does not address.

In your response to the reviewers, you can acknowledge that the requested answers or data would be useful but respectfully state that the scope of your current research project does not include those items.

Your article's reviewers contradict each other.

Your first step should be to reread the editor's comments in the decision letter; the editor

may have weighed in on the debate in favor of one side or the other. If the editor did not comment or left it up to you to decide, you should consider each reviewer's points carefully and then choose the suggestion that you agree with the most. Justify your choice to the other reviewer in your response.

The reviewer asks you to add additional references, some of which seem irrelevant to your subject matter.

It is not uncommon for a reviewer to recommend that you update your reference list with one or two of the most recent articles in the field. However, if the reviewer requests references to irrelevant material, or an excessive number of references, contact your Editor-in-Chief immediately and explain your concerns, before you submit your revised article.

The reviewer contacts you directly about your submission.

This is a serious breach of publishing ethics. Do not respond to the reviewer; instead, notify the Editor-in-Chief immediately and provide full details about the communication that you received from there viewer.

Watch the "[**Tips for Responding to Reviewers' Comments**](#)" video tutorial for more guidance on this topic.

IEEE Power Electronics Magazine



Avoiding the Summertime Blues

Welcome to the June newsletter! As we enter summer, our thoughts turn to warm days and (hopefully) mild nights, and maybe even some time off to enjoy them! From an engineering point,

summer means ensuring your cooling and refrigeration systems are operating in an optimal manner, as poorly functioning systems can be power-hungry and wasteful. HVAC, air conditioning, and refrigeration are all very motor-dependent systems, and efficient operation is key to cost-effectiveness.

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.

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

"Enabling High-Frequency Operation of MMC-Based Chargers: Frequency-Decoupled Modulation Strategy and Soft Switching" by Kaveh Pouresmaeil, Maurice G. L. Roes, Nico H. Baars, and George A. Papafotiou. This paper proposes a novel modulation strategy for a Modular Multilevel Converter (MMC) that separates the low-frequency and medium-frequency components within the modulation stage. This separation

results in size reduction of the power conversion system, while maintaining good quality waveforms and high efficiency. The solution is aimed for ultra-fast charging systems. The paper provides theoretical analysis, simulation, and experimental results.

“Multi Module Parallel MHz Power Amplifier with Hybrid Structure and Optimized Control Strategy” by Chang Liu, Yueshi Guan, Tingting Yao, Yijie Wang, and Dianguo Xu. This work presents a MHz power amplifier based on four parallel module structure. The system is optimized using two operating modes: four modules turn-on at high power and only two modules turn-on at low power to reduce the effective susceptance range at low power. A combining network made of four independently optimized T-networks is used to provide ideal load conditions for each module during phase variation. Experimental results from a 13.56-MHz prototype using four Class E modules are shown.

“Experimental Validation of Fault-Tolerant Control With Signal-Based Diagnosis Approach for Interleaved Boost Converter in Fuel Cell Applications” by Meryem Benzine, Issam Salhi, Arnaud Gaillard, and Fei Gao. The study presented in this article proposes a Fault-Tolerant Control that guarantees converter reliability in the presence of open-circuit faults. The proposed signal-based FDI method compares the error between phase currents with the average current to detect the faulty phase. The proposed fault-tolerant control has been implemented in MicroLabBox 1202 using its processor and internal FPGA board. This approach does not require additional sensors or high sampling rate and is easy to implement. It can even be extended to other multilevel converter topologies.

IEEE Power Electronics Letters

The **June 2025** issue of TPEL features 7 Letters showcasing novel advancements in power conversion architectures, wireless power transfer (WPT), soft-switching inverter design, and high-performance control strategies for grid and vehicle applications. Two standout Letters from this issue address key challenges in electric vehicle charging systems, targeting efficiency, integration, and misalignment tolerance.

“Simplified Integration of Bidirectional OBC and WPT Charging Systems With Reconfiguring Topology for Electric Vehicles” by Cheol-Hee Jo and Dong-Hee Kim, presents a unified charger architecture that merges on-board charging (OBC) and WPT capabilities. By sharing active switch bridges and magnetic coupler coils—without relying on mechanical switches—the proposed system reduces the cost, weight, and volume of EV power electronics. A novel magnetic coupler allows the secondary coil to be used in both OBC and WPT modes, with magnetic decoupling of the OBC primary coil during wireless operation.

“A Hybrid Topology Relay Based Wireless Power Transfer System With Mutual Inductance Enhancement and High Misalignment Tolerance” by Yiming Zhang, Guo Wei, Jiantao Zhang, Lingjun Hao, and Lianbin Cheng, introduces a WPT system that boosts performance under alignment variability—a common issue in real-world EV charging scenarios. The proposed hybrid topology relay, integrated on the receiver side, introduces two adjustment factors (α and β) to enhance mutual inductance (MI) and reduce its fluctuation during misalignment.

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 highlight the following papers this month related to inverters. For more papers from OJPEL, visit [Xplore](#).

“Modeling of Power Electronics Systems and PWM Modulators in Harmonic-State Space” by Jayesh Kumar Motwani, Yaosuo Xue, Arash Nazari, Dong Dong, Igor Cvetkovic, and Dushan Boroyevich. Modeling and simulation of the converter dominated systems have recently emerged as a monumental challenge. These simulations are useful for predicting instability and system's harmonic content, consequently assisting in developing better control and filters. But, as more and more converters are incorporated into the system, time-domain simulation models have a tradeoff of either limited accuracy or fewer simulated converters. On the contrary, frequency-domain modeling methods like linear time-invariant models cannot capture the system's time-varying nature and complex converter interactions. The recently developed harmonic state space (HSS) modeling approach has emerged to provide an alternate avenue to model and simulate these converter-dominated systems. HSS models, while accurate, until recently have not been able to reliably model the non-linear pulse width modulator. This paper solves this challenge and develops a new modulator model for harmonic domain models, including HSS. The proposed large-signal modulator is computationally less demanding and can reliably capture the harmonic spectrum of complex multi-converter systems till converter switching frequencies. Several optimization methods are introduced to utilize the unique multi-harmonic nature of HSS, making simulations faster than conventional time-domain methods. Results are verified with extensive simulations and experiments. The application, challenges, and future scope for this method are also highlighted.

“Grid Integration of DC Buildings: Standards, Requirements and Power Converter Topologies” by Edivan Laercio Carvalho, Andrei Blinov, Andrii Chub, Pietro Emiliani, Giovanni de Carne, and Dmitri Vinnikov. The paper focuses on various aspects of the integration of dc buildings and includes analysis of related standards, directives, operational and compatibility requirements, as well as classification of voltage levels. In addition, power converter configurations and modulation methods are analyzed and compared. A classification of topologies that can provide the required functionality for the application is proposed. Finally, future trends and remaining challenges pointed out to motivate new contributions to this topic.

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

The June 2025 issue of **JESTPE** will feature 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

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.



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