Products Newsletter

November 2025 | Issue 64

Pubs Education

Did you know that PELS has a new website function, an AI-powered search? This search, utilizing vector-based or semantic search, represents a major advancement over traditional keyword-based methods. Unlike keyword search, vector search comprehends the meaning behind words, delivering more relevant results by analyzing the context and relationships between terms. This PELS pilot project currently includes two years of full-text articles from *IEEE Transactions on Power Electronics* (TPEL). For guidelines on using the search, please visit **online**. For direct access to the search, click **here**. Don't forget to provide feedback on the site regarding your experience with the AI-powered search.

Call for Papers: PELS Publications

JESTPE

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.
Deadline for Submission of Manuscript: November 15, 2025.
Guest Editors: Samir Kouro, Pedro Rodriguez, Xinbo Ruan

Special Issue: Applications of Wide-bandgap Technology for Innovative Future Grid Applications
Deadline for Submission of Manuscripts: March 1, 2026.
Guest Editors: Leon M. Tolbert, Shiqi Ji, Carl Ho

Special Issue proposals within scope of the journal are welcome, guidelines available online at PELS **website** and IAS **website**. For further information, **email** JESTPE DEiC Sudip Mazumder.

JWPT

IEEE Journal on Wireless Power Technologies (JWPT) announces a **Call for Papers** for the Special Issue of IEEE Wireless Power Transfer Conference and Expo 2025 (WPTCE 2025). Authors of papers accepted for presentation at WPTCE 2025 are invited to submit an expanded version of their conference papers to the Special Issue. Publication Date: March 2026. Submission Deadline extended until November 23, 2025.

TPEL

Special Section on Advanced Model Predictive Control for Resilient Converter-Dominated Electrical Grids
Deadline for Submission of Manuscripts: March 31, 2026.
Guest Editors: Jose Rodriguez, Zhenbin Zhang

IEEE Power Electronics Magazine

The editorial team of *IEEE Power Electronics Magazine* is busy at work preparing the December 2025 issue. The issue will focus on

Digital Twins and AI Tools.

Get Access to Previous Issues
For editorial from back issues of the magazine, visit our **website**. You will discover Open
Access columns, Society News, Industry News, and much more.

IEEE Transactions on Power Electronics (TPEL)

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 these papers to highlight from the **November 2025** issue.

"**D-Axis High-Frequency Impedance Extraction Method for Online Diagnosis of Inter-Turn Short-Circuit Faults in Traction Motors**" by Lisong He, Jinsong Kang, Dongliang Ke, and Fengxiang Wang. This article presents an online method for diagnosing interturn short circuit (ITSC) faults in traction induction motors by injecting a high-frequency voltage signal into the d-axis and analyzing the extracted high-frequency impedance of the d-axis. First, an ITSC model for induction motors is established, and the impedance characteristics of faulty traction motors are analyzed using a finite element method. Second, the d-axis impedance model of a motor with ITSC faults is developed under high-frequency squarewave voltage injection, providing an in-depth perspective on the impact of ITSC faults on the motor's high-frequency impedance. Finally, the Goertzel algorithm is utilized to extract the high-frequency current response of the d-axis from the high frequency square wave voltage after injection, allowing the calculation of the high-frequency impedance of the motor on the d-axis. The fault diagnosis is then implemented on the basis of the average modulus of high-frequency d-axis impedance. Experimental results are provided to demonstrate the efficacy of this diagnostic method

"**Analytical Double-2D Models of Leakage Inductance and Frequency-Dependent Resistance for Litz-Wire Medium Frequency Transformer**" by Yu Jiang, Liangcai Shu, Dongsheng Yang, and Chuang Liu. This paper proposes analytical double-2D models based on the no-shape-approximation (NSA) concept, aiming at accurately predicting the leakage inductance and frequency dependent resistance for medium-frequency transformers (MFTs) with round litz-wire windings. The models are validated through experimental measurements of transformer prototypes with different geometry parameters. Owing to their accuracy, flexibility, and computational efficiency, the proposed double-2D NSA models are suitable for the optimized design of litz-wire MFTs.

IEEE Power Electronics Letters

The **November 2025** issue of TPEL features 14 Letters. Here is a Letter with a special focus on AI.

"**Coordination of Machine Learning and Current Modulation for DC Series Arc Fault Detection and Extinguishing for Module-Level PV Systems**" by Byungki Kim, Wan Kim, Minseo Jeon, Sung-Geun Song, and Hwa-Pyeong Park. Module-level power electronics can achieve the maximum power generation for each photovoltaic (PV) panel with overcoming the partial shading. However, it increases the possibility of dc series arc

fault condition between the PV panel and converter. The current modulation can detect and extinguish the dc series arc fault condition using the characteristics of arc resistance. However, this method degrades the power generation according to inaccurate fault detection. This article proposes the dc series arc fault detection and extinguishing with coordination of current modulation and machine learning method, which can improve the accuracy of fault detection through double screening. The proper machine learning algorithm can minimize the undesired trigger of current modulation, which improves the PV power generation at normal condition. The proposed method is possible to distinguish between arc fault and normal conditions regardless of impedance and external changes. The operational principle is analyzed to coordinate the current modulation and machine learning. The experimental results using 800-W prototype dc–dc converter can verify the arc fault detection and extinguishing.

IEEE Journal on Wireless Power Technologies (JWPT)

Meet the Associate Editors
We are proud to introduce the distinguished Associate Editors of the*IEEE Journal on Wireless Power Technologies* (JWPT). Their expertise and dedication will help shape the journal and ensure the highest quality of published research.

Wenquan Che – South China University of Technology, China
Alireza Safaee – Apple Inc., USA
Naoki Shinohara – Kyoto University, Japan
Grant Covic – University of Auckland, New Zealand

With their diverse backgrounds spanning academia and industry, they bring invaluable knowledge to support JWPT's mission of advancing innovation in wireless power technologies with a strong emphasis on hardware implementation.

We are delighted to have them on board and look forward to their contributions in guiding the journal's success.

For more information on JWPT, click**here**.

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 latest issue of TTE, visit**Xplore**.

IEEE Open Journal of Power Electronics (OJPEL)

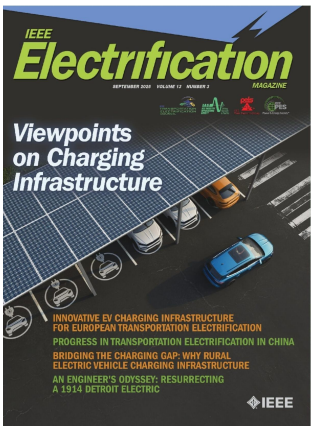
The *IEEE Open Journal of Power Electronics* (OJPEL) covers the development and application of power electronic systems and technologies, which encompass the effective use of electronic components, the application of circuit theory and design techniques, and the development of analytical methods and tools toward efficient electronic conversion, control, and conditioning of electric power to enable the sustainable use of energy. To discover papers from the current volume, please click **here**.

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

Fernando Briz, JESTPE EIC, is pleased to introduce, on behalf of the editorial board, the new Editor and Associate Editors who have joined the journal in 2025. The Call for

Associate Editors was announced in the PELS and IAS Newsletters, as well as through the TCs of both Societies. More than 250 qualified candidates applied, of which less than 10% could be selected. Technical qualification, suitability to JESTPE needs, and geographical and gender diversity were considered for the selection process. At present, the editorial body of JESTPE consists of 18 editors and 82 Associate Editors spread worldwide. The workload involved in carrying out editorial activities for a high-quality journal such as JESTPE is highly demanding and must be undertaken without neglecting many other obligations to their institutions. The JESTPE Editors and Associate Editors are, undoubtedly, the backbone of the journal. To access the latest issue of JESTPE, please visit **online**.

IEEE Electrification Magazine



The latest issue of *IEEE Electrification Magazine* focuses on critical enabling technologies and infrastructure for modern multi-modal electrified transportation systems. 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).