

Products Newsletter



September 2024 | Issue 50

Meet the EICs at ECCE

For those attending ECCE North America in person, PELS Publications will feature a roundtable event, Meet the EICs. It will take place on Wednesday, October 23, from 2:00-3:30. Attendees are welcome to exchange questions and ideas, ask about volunteer opportunities, or just say hello. The following guests will be at this special event.

- •Ashok Bindra (Editor-in-Chief of *IEEE Power Electronics Magazine*)
- •Yaow-Ming Chen (Editor-in-Chief of IEEE Transactions on Power Electronics)
- •Xiongfei Wang (Executive Editor of *IEEE Power Electronics Letters*)
- Fei Gao (Deputy Editor-in-Chief of IEEE Transactions on Transportation Electrification)
- •Wenkang Huang (Co-Editor-in-Chief of IEEE Open Journal of Power Electronics)
- •Tsorng-Juu Liang (Editor-in-Chief of *IEEE Journal of Emerging and Selected Topics in Power Electronics*)

Call for Executive Editor and Co-EICs

IEEE Transactions on Power Electronics (TPEL) is accepting applications and nominations for the opening of:

Executive Editor for TPEL Letters (formerly known as EIC for TPEL Letters)
TPEL Co-EICs

All application materials should be sent by September 30, 2024. For more information, please click on the **<u>Call</u>**.

IEEE Power Electronics Magazine



While providing tremendous advancements in power density, features, and functionality, modern power electronics systems are also performing sophisticated functions like controlling, monitoring, and reporting data. As a result, they are expected to provide long and continuous operation, often in harsh environments, and are subjected to increasingly stringent safety and warranty regulations. To address these challenges, electronic design engineers typically employ state-of-the-art semiconductor ICs and devices that are often vulnerable to electrostatic discharge (ESD) and other transient events. In the June 2024 issue of *IEEE Power Electronics Magazine*, the article "**ESD Protection for Power Electronic ICs and Discrete Devices**" by Kevin Parmenter addresses the design and regulatory challenges that come with protecting the newest generation of power electronics systems against the problem of ESD. It presents a simple protection solution: replacing standard rectifiers used in the system's power converter with automotive-qualified, ESD-capable rectifier diodes.

Free for All

For more editorial from the June 2024 issue of IEEE Power Electronics Magazine, visit the

redesigned magazine <u>website</u>. You will discover a variety of Open Access columns, along with Society News stories. Stay tuned for the September 2024 issue, which will be dedicated to the magazine's tenth anniversary.

IEEE Transactions on Power Electronics (TPEL)

The TPEL editors have selected a few papers to highlight from the September 2024 issue

"Figures-of-Merit Study for Thermal Transient Measurement of SiC MOSFETs " by Yi Zhang, Yichi Zhang, Voon Hon Wong, Sven Kalker, Antonio Caruso, Lukas Ruppert, Francesco Iannuzzo, and Rik W. de Doncker. This study highlights some important facts, notably that successful TSEP calibration does not guarantee reproducible TTM, and compliance with current standards may also yield incorrect results.

"Analysis and Comparison of Integrated Planar Transformers for 22-kW On-Board Chargers" by Tianlong Yuan, Feng Jin, and Qiang Li. This article presents a detailed analysis and design approach for a 22-kW PCB-based transformer with good current sharing, controllable leakage inductance, and a simplified core structure. The study also has an in-depth analysis of the transformer's flux distribution to minimize core loss.

IEEE Power Electronics Letters

The editorial team of TPEL Letters has a few announcements this month. First of all, three new **Special Sections** for publication in 2025.

•Special Section on Highly Robust Power Electronics in the Era DC Grid(Submissions will open on October 1, 2024.)

• Special Section on Fabrication and Design of High-Power-Density and High-Frequency Passive Components (Submissions will open on November 1, 2024.)

•Special Section on AI-Enhanced Power Electronic Systems: Design, Control, and Maintenance (Submissions will open on December 1, 2024.)

Second, the **September 2024** issue of TPEL features 10 Letters covering a wide spectrum of power electronics applications, including electrical drives, grid-forming converters, battery impedance measurement, energy harvesting, wireless power, and new topologies and fault diagnosis method for power converters. One intriguing letter from this issue is highlighted below.

"**Optimum Design of Wireless Power Transfer-Based Snubbers for SiC MOSFET Switching Oscillations**," by Bowang Zhang, Wei Han, Binhong Cao, Weikang Hu, and Youhao Hu. This work presents a snubber circuit that is based on wireless power transfer for suppressing the switching rings of SiC MOSFET devices. The ringing energy is transferred via a magnetic resonant coupling to a receiver. Experimental results confirm the effectiveness and superior features of the proposed design.

IEEE Transactions on Transportation Electrification (TTE)

The editorial team of TTE is pleased to welcome its new Area Editors. For more information about the publication, please visit **<u>online</u>**.



Pooya Davari Aalborg University, Denmark



Qi Li Southwest Jiaotong University, China



Deepak Ronanki Indian Institute of Technology Madras, India



Babak Fahimi University of Texas at Dallas, USA



Babak Nahid-Mobarakeh McMaster University, Canada



Mohammad Khodayar Southern Methodist University, USA



Stefano Nuzzo University of Modena and Reggio Emilia, Italy



Shankar C. Subramanian Indian Institute of Technology Madras, India

IEEE Open Journal of Power Electronics (OJPEL)

The pilot program for Transparent Peer Review (TPR) is now live with OJPEL. TPR increases the transparency of the peer review process and allows readers to see the exchange between authors and reviewers throughout the review process. All Power Electronics topics are eligible to be a part of this program, including papers that are submitted for a special compendium. To learn more about this pilot program and how you can participate, please click on the **Call**. The submission deadline is December 1, 2024.

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

The editorial team of JESTPE presents Calls for two Special Issues.

•Special Issue on Power Electronics and Drive Systems for Aviation Electrification (The submission deadline is October 15, 2024.)

•Special Issue on Modular Power-Electronics and Reconfigurable Circuits in Energy Storage, Energy Conversion, and Power Management (The submission deadline is December 31, 2024.)

For more information, please visit online.



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

IEEE Power Electronics Society | 445 Hoes Lane | Piscataway, NJ 08854 US

Unsubscribe | Update Profile | Constant Contact Data Notice



Try email marketing for free today!