

Products Newsletter



February 2024 | Issue 43

Call for New TPEL EIC and Co-EICs

IEEE Transactions on Power Electronics (TPEL) is now accepting applications and nominations for the opening of Editor-in-Chief (EIC for Regular papers), as well as Co-Editor-in-Chiefs (Co-EICs). This is an open call to all qualified IEEE PELS members. Feel free to contact and encourage colleagues to apply for the position. For more information, click **here**. The application deadline is March 15, 2024. All application information can be **emailed** to the TPEL Administrator.

Pubs Education: AI Policy

Do you know how to properly use AI language tools, such as ChatGPT, in publications and paper reviews? The following is PELS policy on this.

For Paper Authors

The use of artificial intelligence (AI)-generated text (e.g., by ChatGPT) in an article shall be disclosed in the acknowledgements section of any paper submitted IEEE Conference or Periodical. The section of the paper that use AI-generated text shall have a citation to the AI system used to generate the text.

For Paper Reviewers

The use of artificial intelligence (AI)-generated text (e.g., by ChatGPT) in a paper review process should be done with extreme caution. Using such language tools to improve the writing for better communication with the authors may be permitted. However, uploading a confidential manuscript to such a tool to generate review comments is a clear and serious violation of IEEE review policies.

IEEE Power Electronics Magazine



Traditionally, electric vehicles (EV) require two separate power processors, one for propulsion and the other for onboard wired charging operations. However, if wireless charging feature is added to the EV, it requires an additional power processing unit. Thus, an EV with wired and wireless charging capabilities requires three separate power processors. Existing integrated chargers support any two of these operating modes (i.e., either propulsion and wired charging or wired and wireless charging) out of three required operating modes. In order to optimize size, volume, and weight, along with the cost, a novel reconfigurable power processor (RPP) is presented in the article, A

Reconfigurable Power Processor for Electric Vehicle Facilitating Both Wired and Wireless Charging, by Soumya Ranjan Meher and Rajeev Kumar Singh. The proposed single power processor restructures itself as three different power electronic topologies during three operations modes. In addition, for wireless charging mode, a new converter topology is proposed in this article for the transmitting unit at the primary side.

For more editorial from the December 2023 issue of *IEEE Power Electronics Magazine*, visit the magazine **website**. You will discover various Open Access columns along with Society news stories. The March 2024 issue will be presented online later this month. Stay tuned for the September 2024 issue, which will be dedicated to the magazine's tenth anniversary.

IEEE Transactions on Power Electronics (TPEL)

• Call for TPEL Special Section Proposals (Deadline: March 31, 2024))

The TPEL editorial team is now accepting special section proposals for manuscripts to be published in 2025. To find out the requirements for a proposal, click **here**.

2 Three Special Sections (Submission Deadline: March 31, 2024)

The following special sections will be published in October 2024.

- Special Section on Advanced MV Power Electronics for Grid Interactive Applications
- Special Section on Advancing Power Electronics Reliability: Components, Systems, and Intelligent Operation
- •Special Section on Ultrawide/Wide Bandgap Device, Packaging, Control, EMI, and Applications for Power Electronics

To download the Call for Papers, please visit the TPELwebsite.

3 Highlighted Papers from March 2024 TPEL

The editors have selected the following papers from the March 2024 issue of TPEL.

- "Dynamic Model of AC–AC Dual Active Bridge Converter Using the Extended Generalized Average Modeling Framework," by Kartikeya Jayadurga Prasad Veeramraju and Jonathan W. Kimball. This paper presents generalized averaging framework for dynamic modeling of AC-AC DAB converters.
- •"Large-Signal Stability of Phase-Balanced Equilibria in Single-Phase Grid-Forming Inverter Systems," by Minghui Lu, Weiqian Cai, Sairaj Dhople, and Brian Johnson. The authors investigate large-signal stability of grid-forming inverter systems.

IEEE Power Electronics Letters

1 Letters Special Section (Submission Deadline Extended to March 31, 2024)

The editorial team of *TPEL Letters* announces a *Special Section on Power Electronics Technologies for Transforming Electrical Grids*. Manuscripts can be submitted through **ScholarOne**. To access the Call PDF, clickhere.

2 Highlighted Letters from February 2024 TPEL

The TPEL **February 2024 issue** presents 11 Letters exploring topics such as wireless power transfer, modulation and control techniques for power converters, MHz power converters, the application of artificial intelligence, and wide-bandgap power devices. Two intriguing letters from this issue are highlighted below.

- "PCB Based Inductor Structure for MV Applications," by Anup Anurag and Peter Barbosa. This work presents a medium-voltage (MV) inductor using printed circuit board (PCB) structured windings. The partial discharge and thermal testing of the MV PCB-based inductor are showcased in the letter.
- "High-Frequency Core Loss Modeling Based on Knowledge-Aware Artificial Neural Network," by Junyun Deng, Wenbo Wang, Zhansheng Ning, Prasanth Venugopal, Jelena Popovic, and Gert Rietveld. This work presents the use of knowledge-aware artificial neural network for efficient estimation on the core loss of high-frequency magnetic cores. The effectiveness of the method is demonstrated. The source code is available under an open-source license.

IEEE Transactions on Transportation Electrification (TTE)

Authors are encouraged to submit their manuscripts for publication in TTE. All manuscripts can be submitted through **ScholarOne**. For author guidelines, please visit TTE **online**.

IEEE Open Journal of Power Electronics (OJPEL)

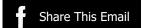
If you are searching for Open Access papers on converters, visit OJPEL on**Xplore**. Some highlighted papers on converters include these listed below.

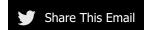
- "Channel Coding and Receiver Design for Simultaneous Wireline Information and Power Transfer," by Peter A. Hoeher, Maximilian Mewis, and Marco Liserre.
- "Quasi Single-Stage Three-Phase Filterless Converter for EV Charging Applications," by Andrei Blinov, Denys Zinchenko, Jacek Rąbkowski, Grzegorz Wrona, and Dmitri Vinnikov.

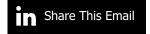
IEEE Journal of Emerging and Selected Topics in Power Electronics (JESTPE)

The next issue of **JESTPE** is coming out this month! Be on the lookout for some great papers, including ones that are a part of the *Special Issue on Advanced Charging Technologies for Next-Generation Electric Vehicles*.









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>marybeth.schwartz@ieee.org</u>).

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

Unsubscribe pels-staff@ieee.org

<u>Update Profile</u> | Constant Contact Data <u>Notice</u>

Sent bypels-staff@ieee.orgpowered by



Try email marketing for free today!