
June 09, 2020 | Issue 2



Did you see the announcement from our IEEE Power Electronics Society (PELS) President, Frede Blaabjerg?

PELS has extended open access to our PELS Resource Center. Until September 1st, non members can view **all** past PELS webinars and slides in our PELS Resource Center for free.

Take advantage of this great offer and share the news with your colleagues and students!

PELS Resource Center: <https://resourcecenter.ieee-pels.org>

Volunteers Needed: Digital Education Initiatives

IEEE Power Electronics Society (PELS) has several major initiatives to expand our web-based education material and provide more PELS membership benefits. A few of the larger, new activities include:

1. Creating a library of short video tutorials on various topics of PELS interest
2. Developing web-based power electronics courses and modules of longer length
3. Cataloging and describing existing web based power electronic education material

It should be enjoyable and have high impact to our PELS. If interested, please fill out the survey/sign-up sheet: [1-minute survey](#).

IEEE Transactions on Power Electronics (TPEL)

In the July 2020 issue we published 78 new papers, including four papers with active content, three papers in our new topic of Reliability, and four Wireless Transfer papers, our other new topic!

<https://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=9037388&punumber=63>

"How Can a Cutting-Edge Gallium Nitride High-Electron-Mobility Transistor Encounter Catastrophic Failure Within the Acceptable Temperature Range?" by Sungyoung Song, Stig Munk-Nielsen, and Christian Uhrenfeldt [includes a video](#) demonstrating dynamic thermal distribution difference between thermography measured in a practical experiment and a Multiphysics simulation result during a single power cycling of a PC test. The video can prove that a FEM simulation in the main manuscript is very close to the real experiment.

Check out all four of this month's active content papers and their videos!

July's Highlighted Papers:

[Efficient Microchannel Cooling of Multiple Power Devices With Compact Flow Distribution for High Power-Density Converters](#)

Remco van Erp; Georgios Kampitsis; Elison Matioli

Interesting microchannel cooling techniques for high power density converters.

[Mission Profile-Based System-Level Reliability Prediction Method for Modular Multilevel Converters](#)

Yi Zhang; Huai Wang; Zhongxu Wang; Frede Blaabjerg; Maryam Saeedifard

A system-level reliability prediction method for modular multilevel converters.

IEEE Transactions on Power Electronics Letters

For the July 2020 issue, TPEL Letters features 12 short articles covering new ideas and interesting developments in the areas of wireless power transfer, WBG devices, MMC, synchronization, DC technologies as well as electric machines. All TPEL Letters undergo rigorous expert reviews and have the same impact factor as regular papers, while featuring shorter review and publication time.

Please enjoy reading those short articles here:

<https://ieeexplore.ieee.org/xpl/tocresult.jsp?isnumber=9037388>

IEEE Power Electronics Magazine

Last September, the second Design Automation for Power Electronics (DAPE) workshop was held in the historical city of Genova, Italy. A complete overview of DAPE 2019 is presented in the March 2020 issue of *IEEE Power Electronics Magazine*. Written by Kevin Hermanns, Yarui Peng, and Alan Mantooth, this article highlights the increasing role of design automation in power electronics and identifies key players advancing the art. Plus, it underlines the needs and challenges in this area that must be addressed to do more.

<https://ieeexplore.ieee.org/document/9003563>

Lookout for the **June 2020** issue of *IEEE Power Electronics Magazine* with a focus on integrating PV and batteries for distributed storage.

IEEE Open Journal of Power Electronics (OJ-PEL)

Have you read all seventeen papers published in the *IEEE Open Journal of Power Electronics*? As a fully open access journal, all articles are free to all readers!

<https://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=8782709>

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Interested in Contributing to *IEEE Power Electronics Magazine*?

Practicing engineers, experienced designers, and researchers from both industry and academia contribute articles to *IEEE Power Electronics Magazine*. These articles offer effective use of electronic components and devices; application of control theory and circuit design techniques; and the development of analytical tools used in efficient and effective energy conversion, control, utilization, and conditioning of electric power. If you are interested in contributing an original article to the magazine, please submit an abstract (<250 words) of the article to the Editor-in-Chief: bindra1@verizon.net. If your abstract is approved, you will be sent author guidelines to complete your article and submit it to the EiC. The article will be peer-reviewed by at least two experts. If it is accepted for publication, the article will be scheduled

for an upcoming issue once authors make any changes/corrections recommended by reviewers and sign an IEEE **copyright form**.

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