Call for Papers

CPSS Transactions on Power Electronics and Applications

Special Issue on Applications of Wide Bandgap Devices, 2018

Scheduled Publication Time: December 31, 2018

The emergence of wide bandgap (WBG) semiconductor devices such as WBG devices such as silicon carbide (SiC) and gallium nitride (GaN) devices promises to revolutionize next-generation power electronics converters. Featuring high breakdown electric field, low specific on-resistance, fast switching speed, and high junction temperature capability, these devices are beneficial for the efficiency, power density, reliability, and/or cost of power electronics converters. Applications of WBG devices have been seen in the electric utility grid, transportation, industrial motor drives, power supplies, and consumer electronic products. And more emerging applications can be expected. However, extremely fast switching and other superior characteristics of WBG device, and high switching frequency/high voltage/high junction temperature operation, present new design challenges in gate drive, packaging and layout, EMI suppression, converter control, etc. Addressing these design and application issues is critical to the adoption, commercialization, and success of WBG based power electronics. This special issue intends to publish the latest results on these important application topics.

Prospective researchers are invited to submit original contributions or survey papers for peer review for publication in CPSS Transactions on Power Electronics and Applications. Topics of interest of this Special Issue include, but are not limited to:

- Application in motor drives
- Applications in renewable energy, energy storage, and grid
- Transportation applications
- Applications in communications, digital systems, and data centers
- Emerging applications of WBG devices
- Gate drive, protection and other auxiliary circuits
- Packaging and passive components
- EMI issues and solutions
- High-quality sensing and control
- Design methodologies for WBG power electronics

The manuscripts should be submitted through Manuscript Central at https://mc03.manuscriptcentral.com/tpea-cpss. Submissions must be clearly marked “Special Issue on Applications of Wide Bandgap Devices, 2018” on the cover page. The information about manuscript preparation and requirements is provided on http://tpea.cpss.org.cn/a/For_Authors/. Manuscripts submitted to this Special Issue will be reviewed and handled by the guest editorial board as noted below.

Deadline for Submission of Manuscripts: November 11, 2018

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Proposed Timeline:
- November 11, 2018 – Manuscripts submission deadline
- December 5, 2018 – Final acceptance notification
- December 31, 2018 – Camera-ready manuscripts for publication