



Call for Papers

CPSS Transactions on Power Electronics and Applications

Special Issue on Grid-Friendly Power Converter Systems

Scheduled Publication Time: December 31, 2020

Various challenges are acknowledged in practical cases with massive renewables, like solar photovoltaic and wind, leading to the continuous revolution of grid-connection requirements. Power electronic converters, as the intermediate stage, are becoming more active in grid regulations, and now are more being integrated with energy storages. Design, operation, and control of grid-friendly power converters are imperative to reduce the cost of energy by addressing the efficiency, reliability, and stability issues. More power electronics are expected in modern energy conversion along with the development of emerging power semiconductors, control and communication technologies, and data storage, and also driven by the demand of environmental-friendly and sustainable energies. Power electronics enable efficient and flexible power conversion in decarbonization. However, the “digitalized” power conversion with fast dynamics imposes challenges to the conventional grid. It thus calls for grid-friendly power electronic converters underpinned by advanced control. Hence, this Special Issue on Grid-Friendly Power Converter Systems will be a timely and important topic and of great interest for academics and industries. It will bring together researchers and experts from both power electronics and power systems communities to tackle the technological challenges in future ultracomplex power systems with more power electronic devices.

Prospective authors are invited to submit original contributions or survey papers for peer review for publication in CPSS Transactions on Power Electronics and Applications. Editors invite original manuscripts presenting recent advances in these fields with special reference to the following topics:

- Modeling and stability analysis of power electronic systems
- Design and control for grid-friendly power converter systems
- Inertia enhancement for future low-inertia grids
- Grid frequency and voltage stability
- Flexible active power control of renewable generation
- Coordinated control and operation of mixed energy systems
- Fault ride-through and grid support
- Power system oscillation damping
- Black start, system protection, and restoration
- Other ancillary services from power converters for grid resilience

Manuscripts should be submitted through the Manuscript Central at <https://mc03.manuscriptcentral.com/tpea-cpss>. All submissions must be clearly marked “Special Issue on Grid-Friendly Power Converter Systems, 2020” on the cover page. Detailed information about manuscript preparation and requirements can be found on http://tpea.cps.org.cn/a/For_Authors/. The manuscripts submitted to this Special Issue will be reviewed and handled by the guest editorial board as noted below.

Deadline for Submission of Manuscripts: September 30, 2020

Guest Editor-in-Chief: Yongheng Yang, Aalborg University, Denmark (yoy@et.aau.dk)

Guest Co-Editor-in-Chief: Yi Tang, Nanyang Technological University, Singapore (yitang@ntu.edu.sg)

Guest Associate Editors

Yang Du, James Cook University, Australia

Shunfeng Yang, Southwest Jiaotong University, China

Zhixiang Zou, Southeast University, China

Nick Peter Papanikolaou, Democritus University of Thrace, Greece

Jingyang Fang, Duke University, USA

Ghanshyam Gohil, The University of Texas at Dallas, USA

Proposed Timeline

September 30, 2020

November 30, 2020

December 1, 2020

Manuscript Submission Deadline

Final Acceptance Notification

Camera-ready Manuscript for Publication