Call for Papers

CPSS Transactions on Power Electronics and Applications

Special Issue on Control and Analysis of

Distributed Power Converters in Microgrids, 2020

Scheduled Publication Time: September 30, 2020

Worldwide electrical grids are undergoing an evolution, from traditional model of centralized generation, towards a smart decentralized architecture of distributed renewable sources and energy storages. This decentralized architecture bringsreducedpollution and increasednetwork efficiency and reliability. To handle the intermittent powergeneration and bidirectional power flows, the concept of grid-tied microgrid has been accepted to be the keyto organize the distributed renewable sources and energy storages, which are interfaced with the microgrid through distributed power converters. Meanwhile, for increasing reliability, microgrids should be able to operate in standalonemode and disconnected from utility grid when utility fails. Under this circumstance, the microgrid bus voltage quality and the power sharing among these distributed power converters are crucial for the safe and reliable system operation.Besides, seamless transferbetween grid-tied and standalonemodes of microgrids is also significant in order to reduce the voltage or current spike and shorten the time during the mode transition. Furthermore, microgrids are prone to sufferingtransient and stability issues due to the interactions among multiple distributed power converters, andtherefore stability studyand stabilization control ofmicrogrids have become a critical topic.

This special issue targetsthe control and analysis of distributed power converters in microgrids. Prospective authors 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:

- Control of power converters for renewable sources and energy storages
- Strategies for grid-tied and standalone operationof microgrids
- Microgrid power quality control
- Control of microgrid clusters
- Islanding detection, operation mode transition, and synchronizationof microgrids
- Modeling and stability of microgrids
- AC, DC and hybrid AC/DC microgrid structures
- Smart converters in microgrids
- Microgrid protection

The manuscripts should be submitted through Manuscript Central at https://mc03.manuscriptcentral.com/tpea-cpss. Submissions must be clearly marked “Special Issue on Control and Analysis of Distributed Power Converters in Microgrids, 2020” 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 thisSpecial Issue will be reviewed and handled by the guest editorial board as noted below.

Deadline for Submission of Manuscripts: July15, 2020

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Proposed Timeline:

- July15, 2020 – Manuscripts submission deadline
- August15, 2020 – Final acceptance notification
- September1, 2020 – Camera-ready manuscripts for publication