

Call for Papers

IEEE Journal of Emerging and Selected Topics in Power Electronics

Special Issue on DC Microgrid Protection

Scheduled Publication Time: August 2020

DC microgrids have attracted significant attention over the last decade in both academia and industry. The dc microgrid has demonstrated superiority over the ac microgrid with respect to reliability, efficiency, control complexity, integration of renewable energy sources, and connection of dc loads. Despite these numerous advantages, designing and implementing an appropriate protection system for dc microgrids remains a significant challenge. The challenge stems from the rapid rise of dc fault current which must be extinguished in the absence of naturally occurring zero crossings, potentially leading to sustained arcs. In order to address these dc microgrid protection challenges, proper grounding architectures, fast efficient fault detection/location strategies, fault current limiting methods, and well-designed dc circuit breakers are required. This special issue on Dc Microgrid Protection seeks original contributions or survey papers for review and publication from researchers working in this area. The topics of interest include, but are not limited to:

- Power hardware-in-the-loop techniques for protection system design and verification
- Successful implementation of the next-generation protection technologies for inverter-dominated dc microgrid.
- Requirements and techniques for communications and control in dc microgrids
- Grounding systems
- Fault detection and location methods
- DC fault current limiters
- Ultrafast wide bandgap solid-state dc circuit breakers
- Hybrid dc circuit breakers for medium- and high-voltage applications
- Breakerless based protection architecture
- Converters with fault ride-through capability

All manuscripts must be submitted through Manuscript Central at <http://mc.manuscriptcentral.com/jestpe-ieee>. Submissions must be clearly marked “Special Issue on DC Microgrid protection” on the cover page. When uploading your paper, please select your manuscript type as “Special Issue.” Refer to <https://www.ieee-pels.org/> for general information about electronic submission through Manuscript Central. Manuscripts submitted for the special issue will be reviewed separately and will be handled by the guest editorial board noted below.

Deadline for Submission of Manuscripts: September 15, 2019

Guest Editors: **Josep M. Guerrero**, Aalborg University, Denmark (joz@et.aau.dk)

Robert Cuzner, University of Wisconsin-Milwaukee, USA (cuzner@uwm.edu)

Guest Associate Editors:

- **Alex Huang**, (University of Texas at Austin, USA)
- **Rik De Doncker** (RWTH Aachen University, Germany)
- **Siavash Beheshtaein** (University of Wisconsin-Milwaukee, USA)
- **Michael Steurer** (Florida State University, USA)
- **Mario Paolone** (École Polytechnique Fédérale de Lausanne, Switzerland)
- **Pavol Bauer** (Delft University of Technology, Netherlands)
- **Alexandre Oudalov** (ABB Power Grids, Switzerland)
- **Lisa Qi** (ABB Corporate Research Center, USA)
- **Ahmed Elasser** (GE Global Research Center, USA)
- **Juan Sabate** (GE Global Research Center, USA)
- **John Shen** (Illinois Institute of Technology, USA)
- **Manuela Sechilariu** (Sorbonne University - Université de Technologie de Compiègne, France)
- **John Fletcher** (University of New South Wales, Australia)
- **Keith Corzine** (University of California at Santa Cruz, USA)
- **Mahesh S. Illindala** (Ohio state university, USA)
- **Giorgio Sulligoi** (University of Trieste, Italy)
- **Burak Ozpineci** (Oak Ridge National Laboratory, USA)
- **Damir Novosel** (Quanta Technology, USA)
- **Slobodan Krstic** (Krstic Power Solutions, USA)
- **Fletcher Fleming** (DRS Power and Control Technologies, USA)

Proposed Timeline:

- May 15, 2019 – Call for Papers to IEEE JESTPE Editorial Board Office
- September 15, 2019 – Manuscripts Submission Deadline
- May 15, 2020 – Final Acceptance Notification
- June 15, 2020 – Manuscripts Forwarded to IEEE for Publication
- August 2020 – Special Issue Appears in IEEE JESTPE