

Call for Papers

IEEE Journal of Emerging and Selected Topics in Power Electronics

Special Issue on Emerging Applications of Power Electronics in Developing Economies

Scheduled Publication Time: September 2021

Three billion people around the world live in severe energy poverty, including 1.1 billion who live completely off-grid. Providing affordable energy access to them can dramatically impact their living standard, health, education, productivity and ability to be a part of modern society. In developing economies, the utilization of energy is also limited to some extent. Many programs and initiatives (e.g., the IEEE Empower a Billion Lives and the IEEE Smart Village) have been doing stellar work in tackling energy poverty in developing economies. However, much remains to be done to crowdsource relevant innovation to accelerate deployment of energy access solutions in the affected areas including the developing economies. According to the previous programs and initiatives, it has been identified that power electronics is one of the key technologies to address real-life issues in energy access and utilization, water supply, rural transportation, etc for the developing economies. In this context, it calls for innovative and scalable solutions that should be for **emerging applications of power electronics with an emphasize on technical innovation and business viability** to rapidly and sustainably scale to a wide range of customers in the developing economies.

Prospective authors are thus invited to submit original contributions and survey papers of emerging applications of power electronics in developing economies, for review for publication in this Special Issue. Topics of interest that should emphasize the *emerging applications of power electronics*, include, but are not limited to:

- Power electronics converters and applications
- Control, design, modeling of power converters
- Quality, reliability, cost and security
- PV and energy storage for developing economies
- Energy access solutions based on frugal innovation
- Electrical pumps, lighting, cooling and refrigeration
- Rural transportation electrification
- Resilient power systems and adhoc grids
- Self-organizing off-grid energy systems
- Mini- and micro-grids design and operation
- Integrated solutions: power, communications, market
- Ensuring device interconnection and interoperability
- RT control of integrated transactive and physical grids
- Energy policy and other emerging technologies

All manuscripts must be submitted through Manuscript Central at <https://mc.manuscriptcentral.com/jestpe-ieee>. Submissions must be clearly marked "**Special Issue on Emerging Applications of Power Electronics in Developing Economies**" on the cover page. When uploading your paper, please select your manuscript type "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 Manuscript: March 31, 2021

Guest Editors: Frede Blaabjerg, Aalborg University, Denmark (fbl@et.aau.dk)

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Proposed Timeline

- August, 2020 – Call for Papers to IEEE JESTPE Editorial Office
- March 31, 2021 – Manuscripts Submission Deadline
- June 30, 2021 – Final Acceptance Notification
- July 31, 2021 – Manuscripts Forwarded to IEEE for Publication
- September, 2021 – Special Issue Appears in IEEE JESTPE