



## Call for Papers

### CPSS Transactions on Power Electronics and Applications

#### Special Issue on Power Quality Conditioning in Modern Power Grids Integrated

#### Emerging Power Electronic Systems, 2021

**Scheduled Publication Time: September 30, 2021**

Due to the environment concerns, energy risks, fossil fuel problems, and the evolution of smart grid, the penetration of renewable energy systems and electric transportation systems is booming with a fast pace. Besides, with the proliferation and increased use of motor loadings and power electronic devices into all kinds of energy processing systems, the power quality (PQ) problems such as: reactive power and harmonics become more serious. This kind of PQ problems distort the source, lower the efficiency, and may cause resonance, thus strongly affects the performance and reliability of the grid or microgrid. In this regard, to ensure secure, reliable, and efficient power supply and transmission in power electronics controlled systems, the PQ issue should be properly taken care of. That is, the desires to develop PQ-free or PQ-compensated power electronics systems and infrastructures are of high interest and importance.

This special issue targets the analysis, topology and control strategy of PQ-free or PQ-compensated power converters in renewable energy systems, electric transportation systems, PQ conditioning systems, industrial automation systems, lighting systems, etc. The detection, characterization and analysis methods of the PQ issue are also considered. 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:

- Reactive power control of grid-tied power converters for renewable energy sources.
- Topology and control of power quality conditioners, e.g. DVR, UPQC, APF, StatCom.
- V2G and G2V methodologies.
- Technology of Smart Load.
- Power quality control for microgrids.
- Modeling and stability analysis of microgrids with multiple power converters.
- Case study of PQ impacts from emerging power electronic systems, e.g. PV, EV, MMC, LED lighting.
- System modeling and characterization of PQ issues in modern power grids.
- Power-HIL real time simulations for evaluating PQ impacts with power electronics apparatus.

The manuscripts should be submitted through Manuscript Central at <https://mc03.manuscriptcentral.com/tpea-cpss>. Submissions must be clearly marked “Special Issue on Power Quality Conditioning in Modern Power Grids Integrated Emerging Power Electronic Systems, 2021” on the cover page. The information about manuscript preparation and requirements is provided on [http://tpea.cpss.org.cn/a/For\\_Authors/](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: July 1, 2021**

**Guest Editor-in-Chief:** Carl Ngai Man Ho, University of Manitoba, Canada ([Carl.Ho@umanitoba.ca](mailto:Carl.Ho@umanitoba.ca))

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#### **Timeline:**

- July 1, 2021 – Manuscripts submission deadline
- August 1, 2021 – Final acceptance notification
- September 1, 2021 – Camera-ready manuscripts for publication