Call for Papers

IEEE Journal of Emerging and Selected Topics in Power Electronics

Special Issue on Green Power Supplies, 2015

Scheduled Publication Time: September 2015

As a traditional mainstream application of Power Electronics, Power Supply is still the key application area, which cover computing, telecommunication, server and data center, industry, automobile and Electric Vehicles, medical, appliance, solar inverters, etc. It is observed that new power electronics technologies have been applied to the power supply and make power supply greener than before. The power supply becomes more energy efficient, cost effective and environment friendly. Firstly both the improvement of existing silicon power device and new Wide Band gap devices have improved both the power density and conversion efficiency of power supply. With combination of emerging devices and better conversion topologies, cooling space and passive component size are shrinking due to reduction of power loss and increased switching frequency. Secondly, magnetic material, magnetic component design and passive integration technology development have contributed to miniaturization of power supply. Not only passive size is reduced, but also the manufacturability of the power supply is enhanced. Thirdly, digital control with low cost DSP and other control IC has advanced the overall performance of the power systems significantly. The emerging power supply technologies in these three areas are the main focus of this special issue.

Prospective authors are invited to submit original contributions, or survey papers, for review for publication in this special issue on Green Power Supplies. Papers with applications in nature are particularly welcome. Topics of interest include, but are not limited to:

- Power supply with novel Si devices
- Power Supply with Wide Band gap devices
- New magnetic material and novel magnetic component design
- Inductor, transformer and capacitor integrations and applications
- PWM or PFM power conversion topologies, such as AC/DC converter, DC/DC converter, bi-directional converters, for power supplies
- High efficiency and high density power supplies
- HVDC power system architecture and applications
- Power Supply for Wireless charging
- Power Supply for Micro inverter
- High power density DC/DC converter for EV or HEV
- Power Supply in appliance, medical application, energy harvesting etc
- Advanced modeling and digital control of power supplies

All manuscripts must be submitted through Manuscript Central at http://mc.manuscriptcentral.com/jestpe-ieee. Submissions must be clearly marked “Special Issue on Green Power Supplies, 2015” on the cover page. When uploading your paper, please select your manuscript type “Special Issue.” Refer to http://www.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 listed below.

Deadline for Submission of Manuscript: April 1, 2015

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Proposed Timeline:
- November 1, 2014: Call for Papers to IEEE JESTPE Editorial Office
- April 1, 2015: Manuscripts Submission Deadline
- July 1, 2015: Final Acceptance Notification
- August 1, 2015: Manuscripts Forwarded to IEEE for Publication
- September 1, 2015: Special Issue Appears in IEEE JESTPE