Distributed Generation (DG) is expected to play vital role in future to improve the human living. DG and its integration to local AC grid provide options for economical, continuous, and bi-directional power flow (utility interface). In addition, it provides a back-up to support during grid failure or blackouts. Extensive promotion of the DC grid is also proposed for the future to facilitate easy integration of renewable resources. Low voltage DC grid derived from DG is safe and may cover significant portion of residential load, which is mostly DC load avoiding inefficient AC/DC power supply. Vehicles in smart grid have introduced a concept of living and mobility, i.e. sustainable living and low carbon mobility and are foreseen as a part of future Microgrid. Research is needed to push and commercialize these technologies to make the environment clean by replacing conventional generation system.

Editors invite original manuscripts presenting recent advances in these fields with special reference to the following topics:

- Highly efficient and reliable converter/inverter topologies for DG Systems
- Low scale residential inverters (off-grid and grid-tied) and micro-inverters: compact, low cost, and reliable
- MPPT and optimal control algorithms/techniques
- Power quality improvement techniques (including power factor correction and modulation techniques)
- Storage for grid integration and firming of renewables
- Energy storage from distributed energy resources (DER) and transient issues
- Smart buildings and integration of DERs
- Hybrid residential micro-grid (AC+DC)
- Energy efficiency analysis in micro-grid, micro-grid dynamics and control, lab-scale verification
- Intelligent control of grid-connected power converters or converters/inverters in micro-grid/smart-grid
- Storage for grid integration and firming of renewables
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Timetable

Deadline for manuscript submissions: 30 April, 2014
Information about manuscript acceptance: Winter, 2014
Publication date: Spring, 2015