UNIVERSITAT POLITÈCNICA DE CATALUNYA
BARCELONATECH
Departament d'Enginyeria Electrònica

Conference announcement:

Introducing the DCM Flyback Micro-inverters for Photovoltaic Applications.

Presenter:
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Abstract:
Grid connected photovoltaic (PV) power systems are widespread throughout the world since they have considerable energy potential, reduced number of components, and easy installation etc. However the outdoor experiences revealed that the PV systems are affected significantly from the environmental conditions (e.g. partially shading, dust, aging etc.) and therefore the system designs are needed to be improved. This talk presents a review of the grid-connected photovoltaic power system topologies at first. Tree different system topologies are comparatively discussed; such as central, string and module inverter (also named as micro-inverter) based topologies. Among them the micro-inverter based PV systems are better option against non-uniform operating conditions, however they have some drawbacks. Several converter topologies has been proposed in the literature for micro-inverters, but flyback based topology is an attractive solution for micro-inverter applications due to its simplicity of control and potentially low cost. Then the analysis of a DCM flyback micro-inverter is presented in detail. Its operation and design precautions are emphasized. Finally, a conclusion is given summarizing the market status of micro-inverters in general.

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Where: Aula de Postgrau. Building C5. First floor. North Campus UPC, Barcelona.

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