

CALL FOR PAPERS

SPECIAL SESSION (SS):

ADVANCES IN POWER ELECTRONICS SYSTEMS

ORGANIZERS:

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Dear Colleagues,

The organizers of this special session encourage you to participate in publishing contributions aimed at recent advances in control and design of power electronics for industry requirements. The use of power electronics is continuously increasing because it is involved in systems like renewable energy, electromobility, and illumination, among others. Thus, the power electronics energy systems are the present and future of the electrical energy conversion. Around the world, there is an energetic revolution that requires technological contributions in the area to establish electrical energy systems able to integrate efficiently, reliably, and safely solutions. The scope of the SS is related but not limited to recent advances on power electronics applied to power converters for renewable energy systems, smart grids, and electromobility. For instance, the following topics are suggested.

- Transformer-less grid-connected converters,
- Virtual Inertia systems through power electronics,
- Stochastic control for renewable-based generation systems,
- Power converters for renewable energy systems in smart grids,
- Advanced control techniques applied to smart grids and renewable energy systems,
- Integration of renewable energy sources,
- Energy storage systems,
- Power converters for solar energy,
- Power converters for wind turbines,
- Grid Integration of wind farms,
- DC-DC power converters applied to the use and conditioning of RES,
- PWM techniques for DC-AC power converters,
- Efficient grid-connected converter,
- Efficient power converters suitable for MPPT,
- Battery management systems,

- Fault diagnosis in power converters for renewable energy systems.
- Power electronics applied to electric vehicles
- Control and energy conversion for microgrids

The accepted papers that fulfill the conference publication policies will be published in the ROPEC proceedings and indexed by IEEE Xplore.

General information regarding manuscript submission, important dates, conference fees, and local accommodation can be found at the ROPEC website: <http://ropec.org>

**Sincerely yours,
Organizers of the SS**

PANFILO RAYMUNDO MARTINEZ-RODRIGUEZ (M'09) received his Ph.D. degree in Applied Sciences from a Mexican Council of Science and Technology research center-IPICyT, San Luis Potosi, Mexico, in 2007. From 2006 to 2016, he was a Professor-Researcher at the Technological Institute of Superior Studies of Irapuato (ITESI), Mexico. He is currently a Professor at the School of Sciences at the Autonomous University of San Luis Potosi (UASLP), San Luis Potosi, Mexico. His contributions are mainly aimed at the fields of industrial electronics, power electronics, and automatic control, where his main research interests include modeling, analysis, control design of power electronic systems for power quality, and renewable energy systems.

Gerardo Vazquez-Guzman (M'07) was born in Mexico, Mexico, on September 24, 1977. He received the M.S. degree in electronic engineering from the National Center of Research and Technological Development, Cuernavaca, Mexico, in 2006 and the Ph.D. degree in electrical engineering from the Technical University of Catalonia in Barcelona, Spain, in 2013. In 2009, he was a Visiting Scholar at the Aalborg University, Aalborg, Denmark. From 2012 to 2024, he was a Professor-Researcher at the Technological Institute of Superior Studies of Irapuato. He is currently a Professor-Researcher at the Coordinacion para la Innovacion y Aplicacion de la Ciencia y Tecnologia (CIACyT), Universidad Autonoma de San Luis Potosi, Mexico. His research interests include the analysis and design of power electronics converters, renewable energy systems and grid connected converters.

FERNANDO ORNELAS-TELLEZ (M'11) was born in Patzcuaro, Michoacan, Mexico, in 1981. He received the B. Sc. degree from Instituto Tecnologico de Morelia (ITM) in 2005, the M.Sc. and D.Sc. degrees in electrical engineering from the Advanced Studies and Research Center of the National Polytechnic Institute (CINVESTAV-IPN), Guadalajara Campus, in 2008 and 2011, respectively. Since 2012 he has been with Universidad Michoacana de San Nicolas de Hidalgo, where he is currently a professor of Electrical Engineering graduate programs. His research interest centers on optimal control, neural control, sliding modes control and passivity, and their applications to smart grids, power electronics, mechanical systems and electrical machines.