

# CALL FOR PAPERS

## Special Session on Advanced Control Strategies for Wind Turbines Fault Ride-Through Capability Enhancement

to be held in the frame of  
IECON 2013 - The 39<sup>th</sup> Annual Conference of the IEEE Industrial Electronics Society  
10<sup>th</sup> -13<sup>th</sup> of November 2013, Austria Center, Vienna, Austria



### TOPIC OF THE SPECIAL SESSION

During the last decades, many large wind farms have already been installed so far and recently huge offshore wind farms have also been integrated into power grids. As wind power capacity has increased, so has the need for wind power plants to become more active participants in maintaining the operability and power quality of the power grid. Hence, it becomes necessary to require wind plants to behave as much as possible as conventional power plants. Therefore, an increasing number of power system operators have implemented technical standards known as grid codes that wind turbines must meet when connecting to the grid. In particular, Low Voltage Ride-Through (LVRT) capability is considered to be the biggest challenge in wind turbines design and manufacturing technology. LVRT requires wind turbines to remain connected to the grid in presence of grid voltage dips. In this context, the implementation of classical flux-oriented vector control techniques (PI controllers) has been proven to work well for the accomplishment of the initial grid code requirements. Recent network operators requirements seem leading for more

### SPECIAL SESSION ORGANISATION

Mohamed Benbouzid  
Mohamed.Benbouzid@univ-brest.fr

Marwa Ezzat  
mm\_ezzat@mans.edu.eg

Lennart Harnefors  
lennart.harnefors@se.abb.com

S.M. Muyeen  
smmuyeen@pi.ac.ae

### Important Dates

Regular Paper submission:	April 01, 2013
Notification of acceptance:	June 15, 2013
Final submission:	August 01, 2013

The organizers look forward to welcoming you to Vienna, Austria from 10<sup>th</sup> to 13<sup>th</sup> November 2013.



robust control techniques. Indeed, the above classical control techniques main drawback is their linear nature that lacks robustness when facing a worst case operation scenario. This special session intends therefore to focus on state-of-the-art researches and developments as well as future trends in advanced control strategies wind

turbines fault ride-through capability enhancement.

Topics of interest include, but are not limited to:

1. Passive control strategies (blade pitch control, ...);
2. Active control strategies (nonlinear control, sliding mode control, ...).

## **SUBMISSION OF PAPERS**

The working language of the conference is English. Submit the full paper as PDF following the IEEE layout requirements by using the templates given at the conference web page. Accepted and presented papers will be published in an IEEE Proceedings volume and will be sent to IEEE Xplore. In addition, selected authors are encouraged to submit their papers for publication in the IEEE Transactions on Industrial Electronics or in the IEEE Transactions on Industrial Informatics.

## **THE CONFERENCE**

IECON 2013 is the 39th Annual Conference of the IEEE Industrial Electronics Society, focusing on industrial and manufacturing theory and applications of electronics, controls, communications, instrumentation and computational intelligence. The objectives of the conference are to provide high quality research and professional interactions for the advancement of science, technology, and fellowship.

Papers with new research results are encouraged for submission. IECON 2013

will be held concurrently with the 7th IEEE International Conference on E-Learning in Industrial Electronics (ICE-LIE 2013). Participation in any of these events just requires a single conference registration fee. The world's industry, research, and academia are cordially invited to participate in the wealth of presentations, tutorials, special sessions and social activities, and furthermore, enjoy beautiful Vienna.