

# CALL FOR PAPERS

## Special Session on Sensorless Control of Permanent Magnet Synchronous Machines

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

Permanent magnet synchronous machines (PMSMs) get increasing importance for drive solutions. They offer a very high efficiency, high compactness and are well controllable with high dynamics. However, normally, a mechanical sensor for detection of the rotor position is necessary (Hall sensors, encoders, resolvers etc). However, these mechanical sensors reduce robustness considerably and increase costs, space and complexity of hardware. Hence, a sensorless solution by calculating rotor position and velocity by using active (signal injection) and passive (back EMF utilization) mathematical methods combined with electrical measurements offers attractive possibilities for compact, highly efficient and low-cost drive solutions.

Both, active and passive methods are addressed by this special session.

A special focus is put on methods enabling high-quality low-speed and standstill behaviour, usually based on frequency evaluation or step response implementation. Another task is the operation at very high velocities, usually evaluating back EMF voltage. Furthermore, combining high-speed and low-speed methods should be addressed.

### SPECIAL SESSION ORGANISATION

Manfred Schrödl  
manfred.schroedl@tuwien.ac.at

Gerald Kalteis  
gerald.kalteis@tuwien.ac.at

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

### Important Dates

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



### **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.