

# CALL FOR PAPERS

## Special Session on Matrix Converters

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

The world must solve important challenges to control and transform energy in an efficient way. Examples of this are in transportation, renewable energies and industrial processing applications. These problems can be solved using power converters based on modern power semiconductor devices. The ideal converter in many of these applications may have the following characteristics:

- i) Sinusoidal input and output currents.
- ii) Operation with unity power factor.
- iii) Regeneration capability.
- iv) Compact design with a good power to weight ratio.

All these characteristics can be fulfilled by matrix converters and this is the reason for the tremendous interest in this topology. In the last decade many advances in the development of this topology have been presented, including industrial applications up to megawatt level. The use of Matrix Converters in real applications and the challenges that these applications present is very timely and important. This special session will present to the power electronics community the most recent advances with topics such as, but not limited to, the following:

- Experience of Matrix Converter demonstrators for aerospace, transportation,

### SPECIAL SESSION ORGANISATION

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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



renewable energy and industrial applications.

- New control/modulation methods for Matrix Converter applications, including SVM, DTC, Predictive Control.
- Implementation of intelligent current commutation strategies in application examples.
- Matrix Converter derived topologies (indirect, sparse, very sparse, ultra sparse, etc.).
- New semiconductor devices for use in matrix converters.
- Power quality issues, converter reliability, and converter stability.
- Comprehensive comparative evaluation of the Matrix Converter against converter concepts with DC link energy storage elements.

### **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.