



## CALL FOR PAPERS



### Special Issue on **Matrix Converters**

#### **The Theme**

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 topical and important. This special issue 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, 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.

#### **Manuscript Preparation and Submission**

Follow the guidelines in "Information for Authors" in the IEEE Transaction on Industrial Electronics

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On the submitting page #1 in popup menu of manuscript type, select: SS on Matrix Converters.

#### **Important Dates**

Deadline for manuscript submissions Information about  
Manuscript acceptance  
Estimated publication date

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