Call for Papers
IEEE Open Journal of Industry Applications
Special Issue on Matrix Converters

The world must solve important challenges to control and transform energy in efficient ways. 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 AC to AC converter in many of these applications may have the following characteristics:

i.   Sinusoidal input and output currents.

ii.   Operation with unity input power factor.

iii.   Regeneration capability for many applications

iv.   Potential for 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 ongoing 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 a very timely and important topic.

This special issue will present to the power electronics and industry community the most recent advances with topics including, but not limited to:

- 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 and the application of new semiconductor device technologies.

- Matrix Converter derived topologies (indirect, sparse, very sparse, ultra-sparse, multi-level, cascaded configurations, etc.).

Solutions and improvements to power quality issues, input filter design, converter reliability and converter stability.

All manuscripts must be submitted through the IEEE author portal https://ieee.atyponrex.com/journal/oj-ia. Authors should select, during the submission stage, the option "Special Issue on Matrix Converters". Manuscripts submitted for the special issue will be reviewed separately and will be handled by the guest editorial board noted below.

For all manuscripts a 50% discount on the APC will be applied

Deadline for Submission of Manuscripts: 30/06/2023

Editor-in-Chief: Pericle Zanchetta, University of Nottingham, UK, pericle.zanchetta@nottingham.ac.uk