



**12<sup>th</sup> International Conference on  
Compatibility, Power Electronics and  
Power Engineering  
CPE-POWERENG 2018  
10-12 April, 2018, Doha, Qatar**



**Special Session on  
Multiphase and High Power Machines  
organized and co-chaired by:**

Ayman Abdel-Khalik	<a href="mailto:ayman.abdel-khalik@alexu.edu.eg">ayman.abdel-khalik@alexu.edu.eg</a>
Mahmoud Masoud	<a href="mailto:m.masoud@squ.edu.om">m.masoud@squ.edu.om</a>
Shady Gadoue	<a href="mailto:s.gadoue@aston.ac.uk">s.gadoue@aston.ac.uk</a>
Shehab Ahmed	<a href="mailto:ahmed@qatar.tamu.edu">ahmed@qatar.tamu.edu</a>

**Call for Papers**

**Outline of the Session:**

High-power medium-voltage three-phase drives are widely used in many industry sectors with a power range extending up to 100 MW in applications such as oil and gas, hot rolling mill drives, pumps, ship propulsion, and traction. Of these different applications, the common basic requirements include very high reliability and availability, low line harmonics, high power factor and efficiency, high torque density, compactness, low-noise level, and simplicity of use and integration. Since its inception and over the last few decades, the multiphase machine has been recognized as a potential alternative to conventional three-phase drives in high-power applications. This is due to their myriad outstanding features, as proven in the state-of-the-art literature. This special session on multiphase and high power machines intends to present new research results and latest innovations in multiphase drive systems addressing different applications, control techniques, converter topologies, modeling, design, and fault tolerant operation, through bringing together researchers and designers from academia and industry to share and exchange ideas in contemporary issues of this.

***Topics of interest include, but are not limited to:***

- Design, analysis, and parameters identification of multiphase machines.
- Topologies and control of power electronic converters for multiphase machines (e.g. two-level and multilevel converters with their control, and matrix converter with its control).
- Multiphase drive systems for hybrid and electric vehicles, railway traction, ship propulsion, more electric aircraft, etc.
- Fault tolerant capability and operation of multiphase drive systems (machines and converters).
- Vector, direct torque, direct power, predictive and sensorless control methods for multiphase drive systems.

**Author's schedule:**

Deadline for submission of special session papers	November 15, 2017
Notification of acceptance	January, 2018
Deadline for submission of final manuscripts	February, 2018

All the instructions for paper submission are included in the conference website:

<http://www.cpe-powereng2018.org/>