

 	<p>The 38<sup>th</sup> Annual Conference of the IEEE Industrial Electronics Society</p> <p>IECON' 2012</p>	 Le génie pour l'industrie
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## Proposal for IECON 2012 Special Session

### Send your proposal to the SS chairs

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Special Session on: **Multiphase Variable Speed Drives**

Special Session Organizers (names and contact emails):

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Technical Outline of the Session (50 words) and Topics:

More than three-phase electrical systems (including multiphase machines and power converters) have gained recent interest of the research community. Their intrinsic advantages, such as fault tolerance or power splitting, are especially interesting for safety-critical propulsion applications (more-electric aircraft, electrical and hybrid vehicles, all-electric ship propulsion). In spite of the increasing research and industrial use of multiphase systems, this area is far from achieving a well-established technology and needs further development.

This special session will address, among others, the following topics:

- Multiphase variable-speed drive systems, including applications in high-power industries, electric and hybrid electric vehicles, ship propulsion and more electric aircraft.
- PWM of power electronic converters for multiphase drive systems, including modulation of matrix, two-level and multilevel multiphase power converters.
- Control strategies for multiphase drive systems, including vector, direct torque, direct power, predictive and sensorless control methods.
- On-line/off-line identification techniques of multiphase machine parameters.
- Fault detection and fault-tolerant operation of multiphase drive systems.