



**IEEE INTERNATIONAL SYMPOSIUM ON INDUSTRIAL ELECTRONICS ISIE'18
12-15 JUNE 2018, CAIRNS, AUSTRALIA**

Special Session on

DC Shipboard Power Systems for the future All Electric Ships

Organized by

Marco Cupelli, RWTH Aachen University, Aachen, Germany, mcupelli@eonerc.rwth-aachen.de

Thomas Strasser, AIT Austrian Institute of Technology, Vienna, Austria, thomas.i.strasser@ieee.org

Andrea Benigni, University of South Carolina, Columbia, USA, benignia@cec.sc.edu

Marcelo Perez, Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, marcelo.perez@usm.cl

Call for Papers

Nowadays electrical technology deserves an even more important role in the marine industry, both in naval and merchant sectors. Considering this trend, the increasing use of shipboard electrical applications, from generation to utilization (propulsion, thrusters, air conditioning, safety, etc.) is a matter of fact. Electrical applications are therefore commonly utilized in many classes of “all electric” and “more electric” ships: cruise liners, naval vessels, yachts, offshore supply vessels, drilling rigs, cable/pipe-layers, and so on. In this context, an innovative technology for shipboard power systems is given by the Medium Voltage Direct Current (MVDC) power distribution, which is aimed at further enhancing power density and system’s efficiency, while enabling new capabilities (e.g. management of storage systems, supplying of pulsed loads and innovative radars, system reconfiguration in case of fault, improved power flow control). By focusing on this scientific/industrial interest, the special session is therefore devoted to cover the latest developments in DC Shipboard Power Systems

Topics of interest include, but are not limited to:

- Electric propulsion: machines and variable speed drives
- Generating systems: machines and control
- Power conversion: AC-DC and DC-DC interface converters, filtering solutions
- DC power system architectures
- Analysis of DC short-circuit
- Short Circuit Detection
- Power converters for system reconfiguration
- Integration, control and impact of energy storage and pulsed loads
- Centralized/decentralized control strategies for regulating the DC power system
- Analysis of Constant Power Load behaviour in shipboard applications
- Power management and load sharing

All the instructions for paper submission are included in the conference website: <http://www.ieee-isie2018.org>