

Special Session on

## ELECTRIC POWER SYSTEMS FOR GREEN SHIPS

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### Call for Papers

Maritime transport sector is responsible of about 4% of the humanity CO<sub>2</sub> emissions. Emissions related to maritime activities are rapidly growing due to the increasing of maritime traffic. This is why regulations of the International Maritime Organization on greenhouse gases and pollutant emissions are getting more and more stringent. New challenges must be reached to improve ship systems in terms of energy efficiency and environmental behaviour. From the 90's, the use of electricity as an energy vector in naval propulsion is of growing interest. Thanks to the progress in power electronic and control technologies more and more solutions are studied and used to efficiently improve the naval energy and propulsion systems for several specifications (large vessels, military vessels, small ships, etc.). This special session is devoted to research work covering the fields of new trends in electric or hybrid power systems contributing to reduce ship emissions and increase ship efficiency.

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

- Hybridization of marine propulsion systems;
- High efficiency electric propulsion applications;
- Special electrical machines and drives;
- Efficient electric power generators;
- On-board renewable energy sources;
- Energy storage systems;
- Waste heat recovery units;
- Electric energy saving devices;
- Ship to shore interconnection and on-board smart grids;
- Electric power, management and control system;
- DC applications for increased efficiency in ships and off-shore plants.

#### Deadlines:

Submission of abstracts: Mar. 31, 2017

Notice of acceptance: June 15, 2017

Submission of full papers: Sep. 15, 2017

All special session digests must be prepared and submitted in the same way as those for the conference regular tracks (see <http://www.vppc2017.org/>), except that the corresponding special session should be identified during submission.

**Jean-Frédéric Charpentier** received the M.Sc. and Ph.D. degree in electrical engineering from the EN-SEEIHT, National Polytechnic Institute of Toulouse, Toulouse, France in 1993 and 1996 respectively. He obtained the "Habilitation à Diriger les Recherches" degree in 2010. From 1996 to 1997 he was a post-doctoral fellow at Laval University, Canada. From 1997 to 2002 he was an Assistant Professor at the University of Western Brittany, France. Since 2002, he is an Associate Professor in the French Naval Academy in Brest, France. His current research topics include modeling and design aspects on electrical machines and drives, electrical naval propulsion systems and marine renewable energy. Dr. Charpentier is the author or the co-author of more than 100 publications in scientific journals, book chapters and conferences.

**Walter Lhomme** received the M.S. degree in 2004, and the Ph.D. degree in 2007, both in electrical engineering, from the University of Lille 1, France, specializing on graphical description tools and methods for modeling and control of electrical systems. He worked as hybrid electric vehicle engineer within the Department Controls, Hybrid Vehicle Technologies Team at AVL Powertrain UK Ltd., England, for 10 months. Since September 2008 he has been engaged as Associate Professor at the Laboratory of Electrical Engineering and Power Electronics of Lille (L2EP), University of Lille 1. His research activities deal with the modeling, control and energy management applied in hybrid and electric vehicles field.