

Maritime Microgrids

Organizer: Professor Josep M. Guerrero, Associate Professor Juan C. Vasquez

Lecturers: Josep M. Guerrero, Prof., AAU; Tomasz Tarasiuk, Professor, Gdynia Maritime University, Poland, Assistant prof, Giorgio Sulligoi, Trieste university, Italy

ECTS: 2 ECTS

Date/Time: May 2-3, 2019

Max no. of participants: 25

Description: Nowadays, an important kind of islanded microgrids can be found in maritime power systems. For example, under normal operating conditions, the ship power system can be considered as a typical isolated microgrid and its characteristics, including variable frequency, are matched to terrestrial islanded microgrids. This course provides an overview of the present and future architectures of such microgrids, associated control technologies, optimization methods, power quality issues and state of the art solutions. The significant role of power electronics in realizing maritime microgrids, challenges in meeting high power requirements and regulations in the maritime industry, state-of-the-art power electronic technologies and future trend towards the use of medium voltage power converters in maritime microgrids are also presented in this course.

Prerequisites: Matlab/Simulink knowledge is recommended for the exercises.

Form of evaluation: The participants will be grouped and asked to team work on several case study scenarios and tasks proposed along the course. The assessment in this course will be done through a final multi-choice test in combination with delivery of exercises reports

Link: <http://www.et.aau.dk/phd/phd-courses/>