



AALBORG UNIVERSITY  
DENMARK

## **PhD Position within Cooperative Control and Management of Distribution AC MicroGrids**

Within the programme Science without Borders, Aalborg University is offering a PhD position at the Department of Energy Technology, Pontoppidanstræde 101, DK-9220 Aalborg East.

The position is administrated by “Science without borders” and financed by stipends through CAPES. The overall theme is “Renewable Energy”. Acceptance of employment is on condition of the grant from CAPES.

A Microgrid can be defined as a part of the grid with elements like distributed energy sources, power electronics converters, energy storage devices and controllable local loads that can operate autonomously islanded but also interacting with the main power network, in a controlled, coordinated way. In this talk, the distributed control of these elements will be studied. Cooperative control and hierarchical control schemes will be introduced to coordinate the power electronics converters of the Microgrid in order to control the power flow and to enhance the power quality. Power electronics control and communications will be emphasized.

AC MicroGrid coordinated control with plug-and-play integration of communication control systems. Design of control strategies for frequency/voltage management for generation/consumption in order to balance the system supply and demand.

### **Requirements**

Master on Electrical Engineering, Power Electronics, Control, or equivalent

Language English

Contact person: Professor Josep M. Guerrero, e-mail: [joz@et.aau.dk](mailto:joz@et.aau.dk)

**To apply please see the link below:**

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