

Séminaires SATIE

Lundi 6 et mardi 7 octobre 2014 de 9h30 à 12h,

Amphithéâtre 63 (ENS Cachan)

Ramon Blasco-Gimenez

Professeur à l'Université Polytechnique de Valence (UPV), Espagne

« Les systèmes de génération à base d'énergies renouvelables et leurs impacts sur le réseau électrique »

Biography : Dr Ramon Blasco-Gimenez obtained his BEng. degree from the Technical University of Valencia, Spain, in 1992, and his Ph.D. degree in Electrical and Electronic Engineering from the University of Nottingham, U.K., in 1996.

From 1992 to 1995, he was a Research Assistant in the Department of Electrical and Electronic Engineering, University of Nottingham. He is currently an Associate Professor at the Dept. of Systems Engineering and Control of the Technical University of Valencia, where he teaches advanced control techniques and control of drives.

He has been a consultant to main Spanish utilities on integration of wind farms in weak grids and to large wind farm operators on risk based operation and maintenance of off-shore wind farms. His research interests include control of motor drives, wind power generation, off-shore wind farms and grid integration of renewable energy.

Dr Blasco-Gimenez was Chair of the 11th International Conference on Modeling and Simulation of Electric Machines, Converters and Systems (Electrimacs 2014).

Dr Blasco-Gimenez has been a co-recipient of the 2005 IEEE Transactions on Industrial Electronics Best Paper Award. He is a Senior Member of the IEEE, member of the IEEE Electronics Society Technical Committee in Renewable Energy, member of the ElectriMACS Technical Committee, guest member of the Solar Energy Research Center (SERC-Chile), Chartered Engineer (U.K.) and member of the [Institute of Engineering and Technology](#).

TALK 1: Large scale wind power generation. The Spanish Case

October 6, 2014 9:30 - 12h

One of the main goals of the German energy revolution (Energiewende) is to achieve 60% renewable energy share by 2025. In 2013, Spain had a 45% renewable electricity generation, with wind power being for the first time ever the first source of electrical energy in the country. In some cases, wind power generation in Spain has reached 68% of the demand. The technical and economic challenges of such large scale generation can will be covered in this talk, based on data from the Spanish Electricity system.

The talk will cover:

- The need for additional storage due to large penetration of wind power.
- Effects on system stability (frequency stability).
- Evaluation of the effects of wind power on electricity prices in Spain.

TALK 2: HVDC systems and wind power plant connection to HVDC links

October 7, 2014 9:30 - 12h

Large off-shore wind power plants (WPP) far away from shore will be connected by means of HVDC links. As the number of such farms increase, the technical requirements to the combined WPPs HVDC link will increase, demanding similar capability as traditional generators (e.g. black-start operation, more stringent fault-ride-through characteristics, etc).

This talk will cover a description of technology Line Commutated Converter (LCC) HVDC stations, Voltage Source Converter VSC-HVDC stations, together with control strategies for the integral control of HVDC links and WPPs.