

Seminarios a cargo de

**Dr. Eng. Giuseppe Forte, Ph.D.**

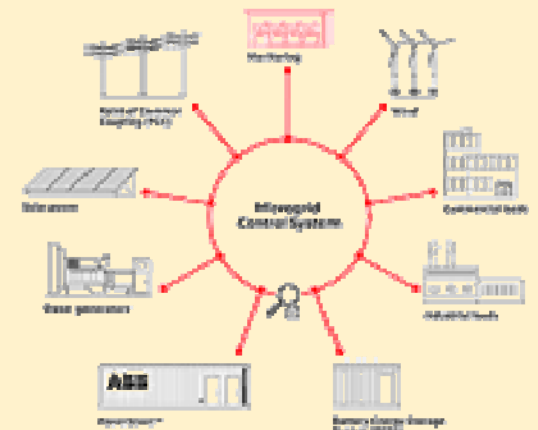
DEI – Politecnico di Bari

Fecha: **Lunes, 5 de Marzo de 2018**

Hora: **17:40h**

Lugar: **Sala de Juntas**

Título: **Planning, management and control of Microgrids**



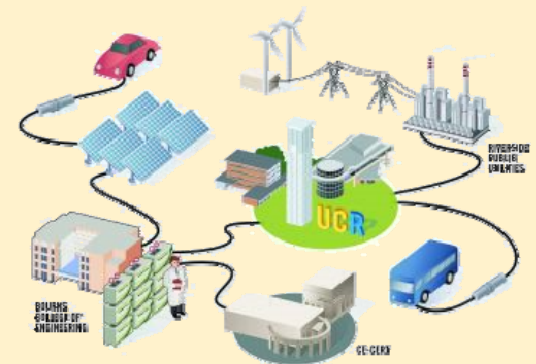
**Resumen:** The first part of the talk is dedicated to the introduction of the concept of microgrids and relevant control schemes (centralized/decentralized, master/slave vs. droop). Therefore the experimental testbed realized at POLIBA-SEPELab within PrInCE Project is introduced, detailing components and preliminary test experiences. Specific programs for day ahead operation management and static and dynamic verifications are described, along with studies of microgrids as multi-energy systems. Finally, Italian regulatory framework for microgrid is discussed, including incentive schemes and integration with ancillary service market.

Fecha: **Martes, 6 de Marzo de 2018**

Hora: **17:40h**

Lugar: **Sala de Juntas**

Título: **Electric vehicles and their integration in power systems**



**Resumen:** The seminar introduces the standards for charging stations and electric vehicle connectors, and the policy initiatives for their diffusion in Italy. Therefore, the concept of smart charging is discussed, along with the role of electric vehicle aggregators, detailing research experience in the field of their influence in microgrid management. The development of Electric vehicle supply infrastructures is analyzed, in the framework of the use case to be realized at Bari port area in CONNECT Project, focusing on AC and DC architectures, optimal sizing, reliability issues and operation programming.

Fecha: **Miércoles, 7 de Marzo de 2018**

Hora: **11:40h**

Lugar: **Sala de Juntas**

Título: **Interactions of electricity markets and networks**



**Resumen:** This talk discusses the most recent innovation in electricity markets in Italy, enforcing the presence of the network in market environment. For this aim, a flow-based method for network analysis starting from market data is presented, in the framework of a collaboration with Terna S.p.A. (the Italian TSO). The exploitation of network sensitivity factors is analyzed, assessing their potential for static operation and security analysis through proper tests, and the role of power flow controllers is dealt with. Moreover, a model for cost benefit analysis of transmission network expansion initiatives is presented. A model dealing with the studies of interactions of electricity and gas systems at international level is introduced. Finally, the influence on markets of renewable sources equipped with energy storage is discussed.