

Seminar announcement

On the operation and control of isolated electric systems with mixed generation: the case of Corsica

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Viale Risorgimento 2 – Aula Magna – ore: 14.30

Corsica is considered an isolated system, in that it is not part of the interconnected European network: a power imbalance can lead to very fast frequency/voltage variation and possibly load shedding, due to the small size of the electrical system. Corsica has a high share of renewable energy (mainly hydro and fotovoltaic), but it is still dependent on thermal production (from small power plants, with fuel imported by boat) and imports (from Sardinia via an AC link and from Italy via an HVDC link). The high share of Distributed Energy Resources already poses challenges that interconnected systems may face in a near future: fast variability, low system inertia (lack of rotating machines), reliability of generation to voltage transients. EDF in Corsica (and in other French islands) handles the Transmission and Distribution Network and is the main producer, and sole commercial operator as no energy market exists in an isolated system. This integrated model offers the possibility to develop and test new methods and technologies interacting both with the network, as well as with conventional and renewable production.

Bio sketch: Alberto Pagnetti

I have studied Telecommunications Engineering at the University of Bologna, M.Sc. in 2009. I then did a PhD on "Cable modelling for transients in power System", directed by Prof. Nucci, and working at Electricité de France R&D Centre, from 2009 to 2012. I then worked 5 years as a researcher in EDF R&D studying connection of renewables in distribution grids, voltage regulation, use of load profiles in techno-economic studies. I also modelled the impact of wind production in the European transmission grid. Since 2017, I am the System Planning Engineer at EDF SEI (*Systèmes Electriques Insulaires*) in Ajaccio, Corsica, in charge of the planning and optimization team.

