

Project Manager and Postdoctoral researcher

in H2020 RIA POSYTYF project

Key words: renewable energy, power converters, ancillary services, inter-area oscillations, small-signal/transient stability, advanced control

Context:

Ecole Centrale Nantes (ECN) is fully involved in Renewable Energies (RE) technologies such as offshore and onshore wind, wave and solar. *Dynamics of Smart Grids* team of LS2N Laboratory of ECN tackles some important themes of control of modern power systems. In particular, this team has, from 2020 to 2023, the lead of the H2020 POSYTYF project. This project is a Research and Innovation action of the European Commission focused on the development of an innovative concept of Dynamic Virtual Power Plant (DVPP). The latter is supposed to allow an optimal portfolio of dispatchable and non dispatchable RE sources. Dynamics in the sense of stability assessment and control for RE sources participation to ancillary services are in the center of the project. POSYTYF groups 11 partners with a total budget of 4.8 M€

Job profile:

The recruited person will share activities as follows:

1. part-time (approx. 50%) as Project Manager. For this, the candidate will:

- assist the Project Coordinator in
 - o supervising the technical progress of the project (monitoring of milestones and deliverables)
 - o ensuring the interaction with the Project Officer of the European Commission
- ensure efficient communication flow among the project partners, and with the administration at ECN and the European Commission
- organize the project meetings (logistics, agenda, registration, gathering of preparatory material, minutes)
- supervise the technical and financial reporting of the project every 12 or 18 months (compiling the activity reports by each partner, supervising the partners' financial reporting on the EC portal)
- maintain a dedicated shared repository for the consortium ("sharepoint" type with deliverables, meeting presentations, etc)
- participate to the communication and dissemination activities of the project (project presentation at workshops, representation in conferences, social media posts).

2. part-time (approx. 50%) as postdoctoral researcher or research engineer. For this, the candidate will join the research-engineering team for activities in accordance with his profile: power systems or automatic control. More specifically, DVPP are a collection of heterogeneous power generation sources (including solar, wind, bio, etc.) in a power park all with their own individual constraints (variable or dispatchable, limited in energy or power). One should investigate how to define and organize – both at transmission and distribution levels - the DVPP for ancillary services. At this stage, we envision control solutions that trade-off between optimality - when *centralized* approaches are taken - and resilience (i.e., maintaining a good level of performance in case of failure of one or more units of the DVPP) for *decentralized* approaches.

The recruited person will participate to:

- the definition of DVPP perimeter, structure and control
- the implementation and validation of control solutions in hardware-in-the loop (HIL) benchmark

Competences needed:

The candidate should have experience in one European or important international project. Management experience in such a project would be a plus. Very good English level and communication skills are mandatory.

For the technical/scientific part, background and experience in power systems or in automatic control are needed at engineering or/and research level. Please provide the names and contacts of 2 or 3 referees (if possible, not exclusively the PhD advisors).

Schedule:

Recruitment: June 1st, 2020

Duration : 12months with possibility of 2 years extension
Work will take place in ECN-LS2N, Nantes-France.

Contact:

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