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Research Topic

Project title: Optimisation of Offshore Renewable Energy Farms
Related Work Packages: 5 Farm Design, Implementation and O&M

Short Biography

2013 – 2014 Research Engineer at Cranfield University
2012 – 2013 MSc in Renewable Energy Engineering at Cranfield University, UK.
2008 – 2012 Degree in Industrial Engineering at ETSEIB (School of Industrial Engineering of Barcelona, Spain).

Publications

Not yet

Current Research

The optimization of wave energy and floating wind turbine farms requires numerical models aiming at predicting as accurately as possible the production of a single device on a given site over long periods (typically a year).

Such models have been developed as specialized software, generally using BEM methods, in the framework of the theory of potential flow for the description of wave/device interaction. They are globally efficient for the optimization of one device alone, or a small group of devices, under simplified and rather idealized conditions.

But now, as we advance towards applications to real cases of multiMW farms featuring ,for instance O(100) machines, these models can no longer be used for optimization, and a new generation of fast running computer codes must be developed.

Supervisor(s)

Professor Alain Clément