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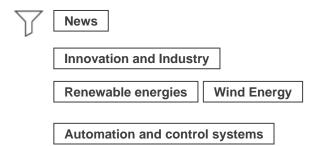
The COIN (Control-Oriented INnovations for Future Wave Energy Farms) project has been selected as part of the Horizon Europe call for projects *"Critical Technologies for Future Ocean Energy Farms"*. **Bringing together nine industrial and academic partners, including IFPEN, the project, which will begin in the fall and run for four years, aims to develop technological solutions to support the deployment of wave energy farms. The work optimizes the performance of a wave energy harvesting system developed by Carnegie Clean Energy, a member of the consortium, and which is intended for large-scale deployment in a pilot farm.**

The IFPEN teams' contribution to the project will focus on developing a wave force monitoring and prediction solution to enable real-time control of wave energy systems and thus maximize electrical energy production. It should be noted that the wave prediction solutions developed in the COIN project also target applications in wind energy, particularly for the safety of maintenance operations and the control of floating wind turbines.

It should be noted that IFPEN's expertise in this field is already widely recognized, notably through: the prize won in 2019 at the WECCCOMP competition; a previous collaboration with Carnegie Clean Energy to optimize an earlier version of the technology that will be used in the COIN project; and finally, scientific contributions (e.g., [1]).

Référence :

[1] Mérigaud A, Zhu J, Tona P. ***Assessing the predictability of random ocean waves***. Journal of Fluid Mechanics. 2025;1007:A47.
    >> DOI : https://doi.org/10.1017/jfm.2025.84

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