



Case Study

Elie Ronge



EPSRC & NERC Industrial CDT
for Offshore Renewable Energy www.idcore.ac.uk

Choosing a Sponsor

Being a native French speaker, a project with EDF in Paris was an obvious choice for Elie, especially when they were offering a project oriented towards civil engineering, the subject of his first degree.

EDF's research laboratories at Chatou have a strong culture of engagement with academia and

he is working alongside a number of other PhD students. However, he is finding that through IDCORE he has received far more practical engineering training than many of them. Also, the EngD places a lot more value on the practical work Elie is doing for EDF than a normal PhD would.

IDCORE has been a really positive experience. Working as a team with the rest of my cohort has been a great way to gain knowledge – we were not competing for grades we were just all there to learn. This knowledge is already paying off with my sponsor, EDF. They have given me the freedom to take the initiative. This was not comfortable at first, but it has enhanced the experience.

Why IDCORE?

After graduating from UCL with an MEng in Civil Engineering, Elie joined the coastal engineering team at Mott McDonald, hoping to pursue interests that he had developed during his undergraduate studies. Working on projects like a tidal barrage started to shape his desire to gain deeper technical knowledge of tidal energy. He found IDCORE while looking for PhD opportunities.

The first year of training at IDCORE helped him to “catch-up” on a broad range of offshore renewables knowledge and led to him re-focussing on floating wind as an area offering greater opportunity.

IDCORE isn't just about engineering knowledge. Like many of the students, Elie really enjoyed the residential course at the Scottish Association for Marine Science in Oban, and his experience of all the IDCORE training has been enhanced by being part of a mutually supportive cohort.



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Elie's Project

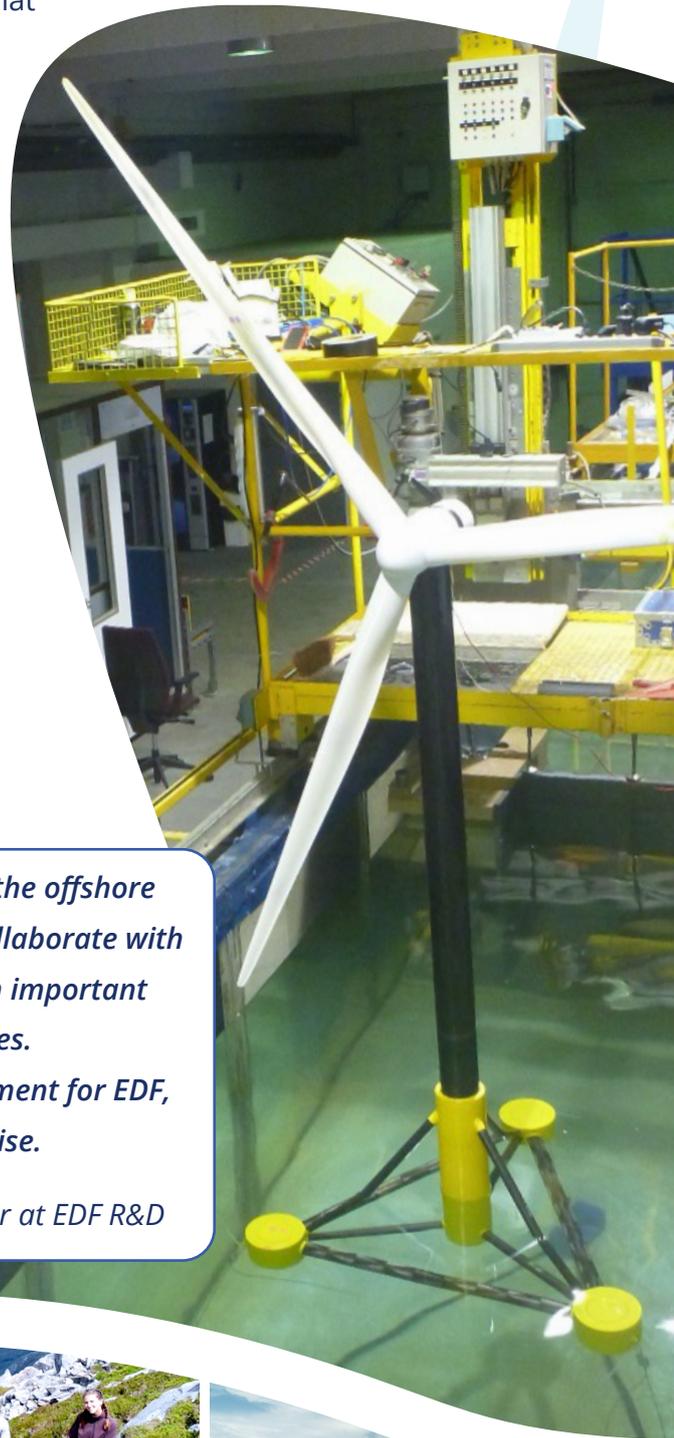
Elie's project builds on the work of a previous IDCORE student, Daniel Milano, modelling the impact of waves on floating offshore wind turbines constructed using tension leg platforms. He is exploring how to model extreme tensions in the moorings more accurately, analysing the non-linear modelling approaches that have been used previously and validating them with tank testing, creating the capability needed by EDF to undertake further tank testing of floating offshore wind platforms. He is currently working on a paper that he will be presenting at a conference and is hoping that he will also be able to publish a journal paper based on his work.

The pandemic has had an impact on Elie's progress, restricting access to the labs and making communication with the experimental team difficult. He is concerned about gathering all the data he needs to complete his project, but the work is now progressing well and the team at EDF are very supportive. He has a great industrial supervisor and EDF have unparalleled in-house facilities.

They also have an excellent relationship with IDCORE. Elie can see that EDF value the contribution of past IDCORE students, access to the software and facilities in the partner universities, and the practical approach to problem solving offered by the British Universities.

Although there are over 2000 people working in R&D for EDF, the offshore wind team is a small group and we need to learn from and collaborate with universities and research centres. The IDCORE students are an important bridge for us to the capabilities in the three partner universities. The completion of Elie's experimental work will be a huge moment for EDF, underpinning a significant step forward in our internal expertise.

Christophe Peyrard, Floating Wind Expert Research Engineer at EDF R&D



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