



## Alumni Case Study

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EPSRC & NERC InDustrial CDT  
for Offshore Renewable Energy [www.idcore.ac.uk](http://www.idcore.ac.uk)



Engineering and  
Physical Sciences  
Research Council

### EPSRC

Rebecca (Becky) is now a Senior Portfolio Manager in the Mathematical Sciences Theme at the Engineering and Physical Sciences Research Council (EPSRC) where her experience in IDCORE and the skills she developed whilst working on her EngD project give her credibility. She understands the academic environment and what's needed to operate effectively in a research context, but she also has a wider perspective of the needs of funding partners because of the time she also spent in industry.

EPSRC provides the funding for IDCORE as part of their support for talent and skills. Consequently, to avoid any conflicts of interest, since working for EPSRC Becky has not been involved in marine renewables. Instead, she has worked on programmes that fund manufacturing, artificial intelligence and robotics, fellowships and now mathematical sciences. Her role has been about moving grant applications through the peer review process, although now that she is a Senior Portfolio Manager she is also becoming more involved in the strategic development of UKRI funding programmes.

### Training

One of the benefits of the IDCORE programme, was the focus that they put on data analytics. The training that Becky received in this was vital to the successful completion of her project, but it has also been invaluable since. It solidified her understanding that there are a range of methods available for understanding complex systems, experience that she still draws on to provide a holistic view when interacting with different disciplines to address the diversity of challenges that she encounters in her day-to-day work.

Becky was a member of the first ever cohort to undertake the IDCORE programme. Consequently, there were more potential sponsors than there were researchers available to take on projects and so there was choice. Becky chose to work for EDF Energy in their UK R&D Centre, where one of the senior managers had previously been a Portfolio Manager for the EPSRC. Discussions with her influenced Becky as she was looking for potential career opportunities after completing her EngD. One of the most enjoyable aspects of working at EPSRC is the support she gives, and engagement with academic researchers.



*I came to IDCORE having completed a foundation degree in Cornwall and then a bachelor's degree in Renewable Energy at the University of Exeter. I had subsequently spent some time with Regen and when the IDCORE opportunity came up I was working as a Research Assistant at Exeter monitoring tidal flows and exploring vortex-induced vibrations in marine structures.*

*Moving to IDCORE felt like the natural thing to do, as I had been working in a research environment and I was interested offshore renewable energy. At the time there were no other CDTs focused in this area. I have never regretted the decision.*

*I have realised since that it was the emphasis on the cohort-based approach to training that appealed to me, along with opportunities like the training programme at SAMS and gaining access to the expertise in three of the leading institutions working in the offshore sector.*

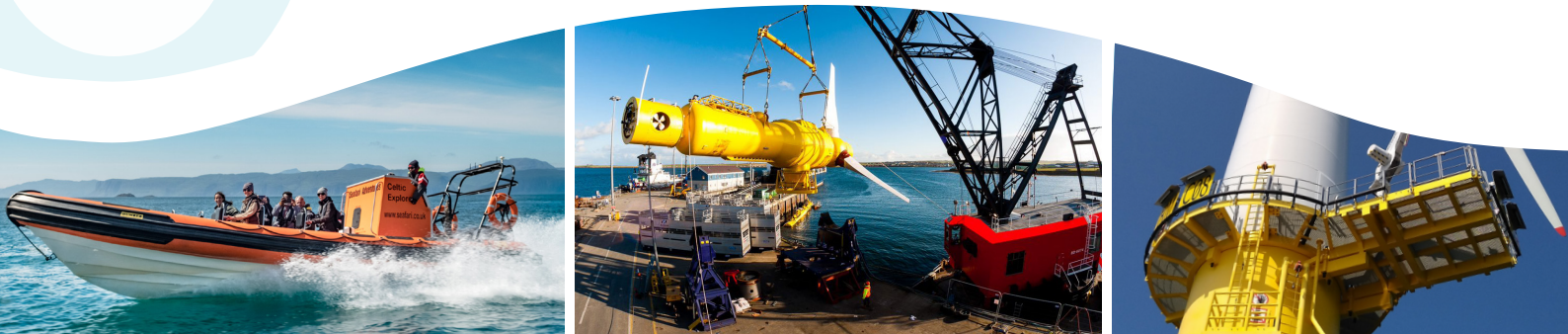
*The experience also showed me that research capability does not just exist in universities – there is a much wider community that organisations like the EPSRC need to draw on in the pursuit of knowledge, and EngD's are a very effective way of helping to build these relationships*

*Quote: Rebecca Williams, Senior Portfolio Manager, EPSRC*

## Project

Becky's project focussed on the application of an operation and maintenance tool for offshore wind farms that had been developed by colleagues in France. It was a stochastic model and Becky used it to carry out a sensitivity analysis of offshore wind operations under different weather, reliability and vessel availability conditions. She benchmarked the results against other similar tools and developed a detailed understanding of this model's handling of risk and uncertainty.

Delivering a project in a pressurised commercial environment, taught Becky influencing skills. EDF Energy had only just started to explore the potential for offshore wind technology in the UK. The capability that had been developed within the company was all situated in Paris, so Becky had to establish effective international relationships as well as the ones within her own business unit. The work resulted in a number of academic papers and Becky led on the development of EDF's involvement in SPARTA, an industry-wide sharing of reliability data from offshore wind installations that EDF still supports.



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