Alumni Case Study

David Young

EPSRC & NERC InDustrial CDT for Offshore Renewable Energy

www.idcore.ac.uk

When I was younger my two older brothers, my brother-in-law and three of my cousins worked in transmission for Northern Ireland Electricity, so when I was exploring my options at school I was determined not to follow them but instead to go and do something completely different. This is slightly ironic when you consider the role I have now.

After leaving school I studied Chemical Engineering at Queens University Belfast and was exposed to environmental engineering on a summer internship through the IAESTE scheme at the Federal University of Vicosa in Brazil. Then, before starting my Masters year I did a 15-month placement with BP in Aberdeen. I enjoyed being involved in energy production, and BP are a good employer, but I didn't want to go into the oil and gas industry.

I feel fortunate to have found IDCORE – it allowed me to continue my academic career but in a far more applied context and without having to follow the classical PhD route. It also allowed me to pursue my joint interests in engineering and the environment.

Quote: David Young, Senior Cable Specialist, Ørsted

Benefits of IDCORE

David really enjoyed his time with IDCORE. The first year was very intense, especially for someone who hadn't trained as a mechanical or electrical engineer. However, this is where the cohort training model comes into its own – the students learn from each other and provide a vital mutual support network. David is not the only alumni to have highlighted how important IDCORE has been for his career, emphasising the significance of the first year training programme in preparing him for the roles he has had since.

The wider IDCORE network has also been of huge benefit to David. At each stage in his career he has worked with people who have been part of, or at least know of and respect IDCORE and the role it is playing in the industry. Whilst Ørsted, David's current employer, haven't yet sponsored anyone in IDCORE, David is acting as the industrial supervisor for a PhD at the University of Exeter, working with members of the IDCORE Team.

Project

David's IDCORE project was sponsored by the ORE Catapult and was focussed on predicting insulation degradation and subsequent mechanical and electrical fatigue failures in the dynamic cables that are being used in the wind, wave and tidal sectors, with particular relevance to the burgeoning floating offshore wind industry.

Although David's project was not well defined initially, the modelling tool that he developed and the contribution he was able to make to the wider high voltage test capabilities that the Catapult was developing became so important to the team that they asked for the publication of his thesis to be embargoed.

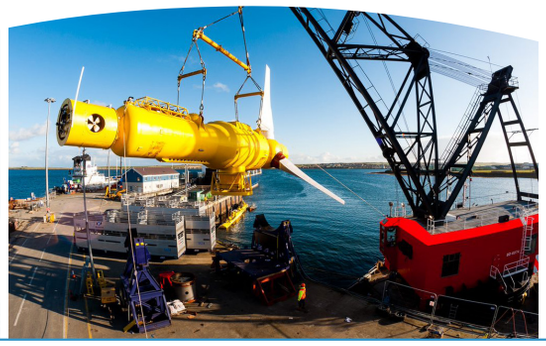
Career post-IDCORE

David completed his IDCORE project and the associated write-up within the funding period, but he had enjoyed working at the Catapult so much that he stayed on throughout the COVID lockdown, helping to develop their capabilities as a centre of excellence for the floating offshore wind community.

In some ways, IDCORE has become a feeder programme for the Catapult, with the training provided and the active engagement with the organisation's needs and challenges being complimentary to other graduate training schemes that they run.

During this period he was able to continue making a significant contribution to the research team as their cable research engineer continuing develop coding, and test regimes and also supporting other deep machine learning on failure modes for power electronics.

In 2020 David moved to his current role as Senior Cable Specialist at Ørsted, the first time they had employed someone in this role to support the mechanical considerations of subsea cables and applications utilising dynamic cables, particularly for floating offshore wind installations. He found the job through contacts he had made during his time at IDCORE and he is not the only IDCORE alumni working there.



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