Stakeholder Case Study

Callum Guy

EPSRC & NERC InDustrial CDT for Offshore Renewable Energy

www.idcore.ac.uk

First Contact

Callum first came across IDCORE when he was looking for a PhD himself. He wanted to work in renewables and had an interest in the programme, but unfortunately, he was looking in 2018, the one year since 2012 when IDCORE didn't recruit any new researchers. Instead, he secured a place in the Wind and Marine Energy Systems and Structures (WAMSS) CDT led by the University of Strathclyde. This CDT operates in a similar way to IDCORE with an initial year of training but the projects they undertake are 'standard' PhDs rather than EngDs based in industry.

Callum continued to observe IDCORE from the outside and then became more directly involved when he became an Experimental Officer at FloWave, initially on a six-month contract alongside his PhD. FloWave is the world's largest circular combined wave and current basin and is based at the University of Edinburgh. The University runs it as a separate company, and a number of IDCORE projects have either been sponsored by them or made use of their facilities.

Having made an impact at FloWave during his initial contract, Callum continued the role on a part-time basis throughout the rest of his PhD, which he completed in March 2024. Since then, he has taken on the role full-time. Callum works with academic and industrial clients to design and carry out test campaigns on a range of offshore renewable energy applications. This has included working closely with three IDCORE researchers as they have delivered their projects.

> ***Working with IDCORE researchers is a real privilege, and the opportunity to mentor them as they learn how to use FloWave has been a real highlight of my time in the organisation.***
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> ***The culture in IDCORE marries well with the FloWave approach. The researchers are all lovely people and a pleasure to work with. They are inclusive and collaborative, not just with their industry partners but also with one another, which increases their capability. They're also open and keen, they all go 'above and beyond', and they take advantage of the time that you give them.***
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> ***Their input has been very valuable both to FloWave and to me personally. I have learnt as much from them as they have from me – they find solutions to the technical problems we encounter, and they are always looking for ways to improve what we do.***
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> *Callum Guy, Experimental Officer, FloWave*

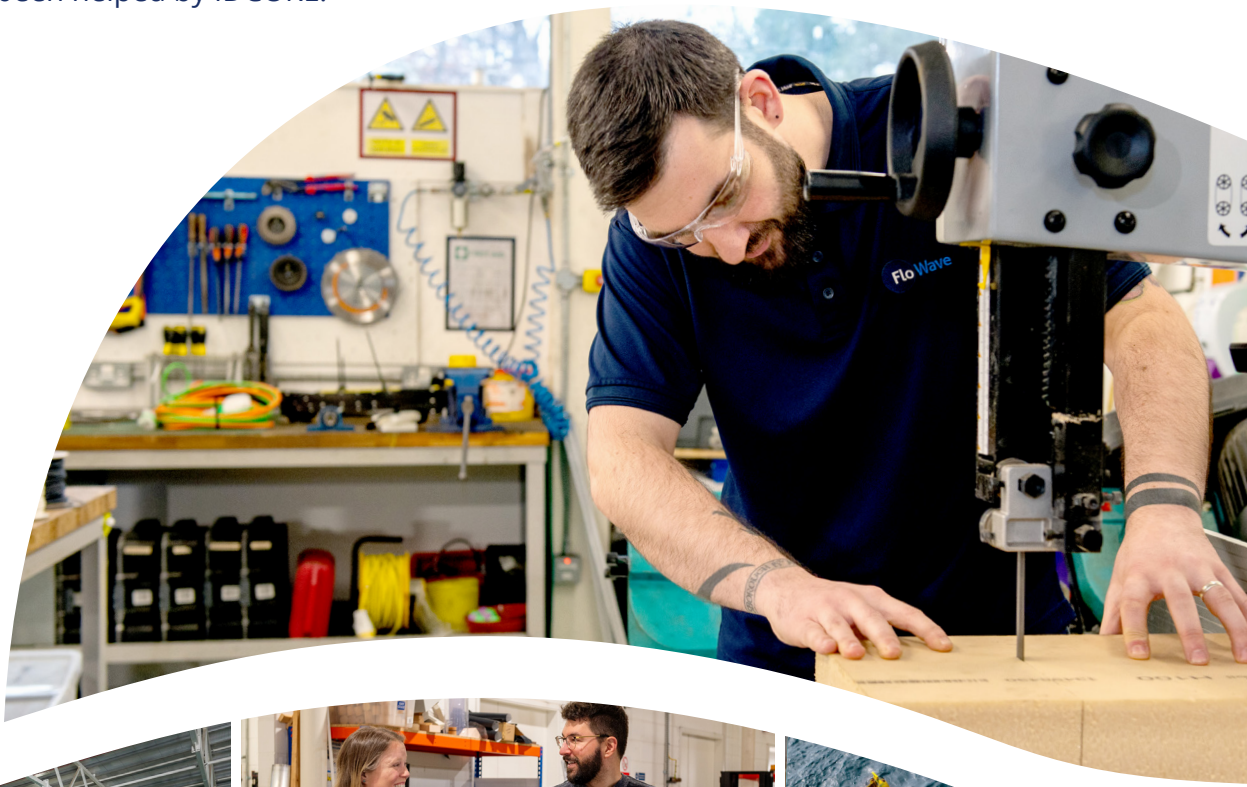
IDCORE Impact

The first IDCORE project that Callum worked on was Anita Nuñes Leite's software-in-the-loop project, looking at thrust loading on floating wind turbine models. He supported Anita in building the hardware, designing the software and then implementing and testing the approach on a commercial client's device. The system has since been taken forward by Callum to become a significant offering to commercial clients, increasing FloWave's reach into the floating wind market.

This has been Callum's largest involvement with IDCORE to date, and such development would have been unachievable alongside their busy commercial test schedule without IDCORE. With the FloWave team acting as technical support, Anita's project delivered the best outcome Callum has ever seen from a PhD project.

IDCORE continues to support the development of FloWave's floating offshore wind capabilities in addition to challenging previous assumptions on general tank test methodologies. IDCORE projects have provided essential research in understanding the experimental implementation of complex mooring dynamics. They have also furthered the technical knowledge of scaling models, with a greater focus on material scaling.

Floating offshore wind has become FloWave's biggest area of growth. They are one of the few test facilities with the capabilities to focus on this challenge, which is impressive for such a small team and has certainly been helped by IDCORE.



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