# Alumni Case Study

## Diana Jeleňová

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

### Sponsor Selection

Diana's IDCORE project was sponsored by her employer, Wood, where she works as a Senior Renewables and Hydrogen Consultant delivering onshore and offshore hydrogen production projects. Wood is a global leader in consulting and engineering, delivering critical solutions across energy and materials markets. Employing over 35,000 people, they provide consulting, projects and operations solutions in 60 countries.

At IDCORE, Diana was part of a small cohort - only five researchers started the course in her year. The reputation that the Centre has built means that their researchers are sought after, consequently there were more projects available than researchers to deliver them and she found herself in a 'buyer's market'. She has never regretted her choice.

Initially, her project was going to be about the development of floating offshore wind, but early in the process of defining the work programme an opportunity arose to re-focus the work on the potential offshore production of hydrogen and the re-use of oil and gas infrastructure to support this development.

### A Role for Hydrogen

One of the challenges in the race to net zero is decarbonisation of sectors that are hard to electrify. Hydrogen can achieve near zero-carbon footprint when produced from renewable feedstocks thus allowing for decarbonisation of these sectors. Hydrogen can also help to balance intermittent renewable energy supply by storing the excess power that would otherwise be curtailed. Wood saw this as a potential commercial opportunity and were keen to understand the implications for them as a business.

Diana's project became a techno-economic study of the potential for re-using existing oil and gas infrastructure to produce hydrogen offshore. She modelled existing pipelines to show what was possible but also to identify where further development would be required and the likely impacts on the 'levelised cost of energy' from such facilities.

There are many issues still to be addressed before such operations can be developed as commercial projects and whilst Wood have seen interest from clients, most of the projects are still early phase with only a few pilots being operational. Diana has, however, continued to work on the development of hydrogen as a solution, focussing instead on on-shore installations. She is seen as a subject matter expert and is now working as a senior consultant, more often than not delivering project management support to hydrogen projects. This illustrates one of the benefits of IDCORE, Diana was able to join Wood in a substantive post rather than on their graduate scheme and she has progressed quickly.

*I found IDCORE when I was looking for an industrially focussed PhD in the renewable energy sector. My first degree was an Integrated Masters in Chemistry with Management from Heriot-Watt University, but as I explored the opportunities I could see that there would be more potential to work in areas and industries that I was interested in if I was qualified as an engineer. I also liked the idea of spending three years in industry getting experience to support my future career.*

*I have been proved right in my decision. I am really enjoying my role within Wood, which has put me at the cutting edge of the world's net zero transition. I have even been given a 'Women in Hydrogen' award this year by the Hydrogen Economist, in recognition of the increasing diversity needed in our industry.*

*Diana Jeleňová, Senior Consultant, Wood*

## Benefits of IDCORE

Reflecting on her time in IDCORE, Diana was extremely complimentary. She had clearly enjoyed the experience and was keen to promote the benefits not only for the researchers but also for the companies involved. Her experience at Wood has shown just how difficult it is to recruit talented staff. In a centre like IDCORE, both sides win – not only does the student receive an unrivalled experience but the sponsor gains direct access to skilled staff whose links with academia put them at the forefront of developments in the energy sector. It also creates a network of early career professionals who support each other both as friends and as colleagues as their respective careers develop.

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SAMS Scottish Association for Marine Science

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