



Case Study

Lubica Slabon



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

Background

Lubica developed her passion for the geosciences while working with the British Geological Survey. She subsequently completed an MSc in Reservoir Evaluation and Management at Heriot Watt and wanted to continue studying in this area. She came across the IDCORE programme at the right time, viewing it as an opportunity to go deeper, building her field of expertise by applying her skills to offshore renewables. In this way she could produce research directly applicable to the industry.

Lubica's project

In partnership with the Universities of Strathclyde and Edinburgh, Lubica's project focuses on the underground storage of hydrogen. The issue of how hydrogen behaves underground is key in this rapidly emerging global industry, which is being seen as a vital element of a net zero energy system.

Lubica's work explores the storage site selection process to inform the secure containment of hydrogen. Her research aims to understand the role of capillary pressure on caprock sealing integrity under different fluid pressure conditions. This is needed to ensure that stored hydrogen remains in the reservoir until it is extracted and used. It involves carrying out experiments on selected samples of prospective caprocks to measure the capillary pressure and understand the factors that control this, and implications for hydrogen containment. She is undertaking experimental measurements at the University of Edinburgh, whilst also using imaging facilities at the University of Strathclyde to understand the structure and composition of selected caprock samples and implications for the flow of hydrogen in the subsurface.



The IDCORE courses give you a great overview of industry, so you can see the whole jigsaw but then be able to think outside the box. With a young family to support, the flexibility and encouragement from the IDCORE team and the other students in my cohort have been really valuable.

Other Benefits

Lubica has also become involved in delivering tutorials for MSc students at the University of Edinburgh, a role that she had not before considered but is deeply enjoying. In addition, she is deriving huge value from opportunities to engage the Faults and Fluid Flow research group at the University of Strathclyde, and the Geenergy research group at the University of Edinburgh.

The courses delivered in the first year of IDCORE provide a very usefully curated mixture of topics, including business, environment and engineering, which have developed Lubica's ability to understand and talk competently about these topics. Studying these alongside a diverse cohort of students from a mixture of backgrounds meant that they were able to support one another as a community, creating the opportunity to learn from one another as well as the course tutors. The residential courses in Oban and on Orkney were particularly enjoyable.



I enjoy supporting Lubica and the other IDCORE students I am supervising. She has worked closely with a previous IDCORE student to look at hydrogen storage concepts, and their work is having a really positive impact on my own research. The cohort nature of IDCORE and the network it creates between students and supervisors has helped with this. It is a unique and valuable approach.

Dr Julia Race, University of Strathclyde



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