

Dan Graham

Product Owner, GL Garrad Hassan

NERC PhD provides valuable software development skills for the wind energy industry

Dan Graham's NERC-funded PhD in geophysics gave him a taste for software development that has led him to job in an industry he cares about: renewable energy.



Dan chose a PhD in geophysics, which he studied for at Durham University between 1989 and 1992, because was looking for a practical, real-world application for his physics knowledge. His project involved studying the structure of the Earth's lower crust in Scandinavia by analysing echoes from sound waves sent into the ground. He liked the mathematical elements of the research and developing software, and enjoyed knowing he was working on something new that hadn't been done before.

After completing his PhD, Dan worked on a NERC-funded postdoctoral research project before moving to the oil industry, where he used his skills in seismic data processing and modelling to help his company find new oil reserves. But he realised that what he really wanted to do was develop software. "My PhD gave me a taste for software development," says Dan, "and when I left the oil industry I made a conscious decision to find that type of work."

Dan found such a position at the Met Office, developing software tools to help forecasters interpret weather data. He enjoyed this work, but a desire to increase his salary to support his family motivated a move to the telecommunications industry, where he developed software for the user interfaces of mobile phones.

Since 2009, Dan has worked for GL Garrad Hassan, a renewable energy consultancy. He is in charge of developing the wind farm design software package WindFarmer, which his company sells. "The software is designed to place the turbines where they are going to produce the maximum amount of energy, at the same time as minimising the noise and the visual impact," explains Dan.

Dan's role is to make decisions about new developments to the software and communicate these to a team of programmers. "I enjoy producing a product which people use and I like being part of the renewable energy industry," he says. "I'm still using skills I learned doing software development during my PhD, like numerical modelling and signal processing."

Dan also continues to draw on the presentation skills he developed during his PhD. "I have to lead team meetings, present plans to various groups, and run workshops where I'm gathering information," he explains, "so just being able to stand up in front of people and talk is really important."