

FINALIST IN THE NEWCOMER OF THE YEAR CATEGORY

Dr Vera Hazelwood



Industrial Mathematics Knowledge Transfer Network

When Vera became the Programme Manager in 2008 for the Industrial Mathematics Internships Programme, the programme was in early days of its life after a successful year-long pilot (establishing six internship projects) as a new way of putting mathematics to work at the heart of business through short projects carried out by current PhD students acting as catalysts for new collaborations. The projects are aimed at extending the innovation impact of mathematics by achieving knowledge transfer from academia to industry for problems where exploiting some existing capability translates into business impact.

Vera's responsibility was to achieve a four-fold expansion within a year and to ensure continuation of the programme well into the future. Vera was responsible for creating strategies for business and academic outreach, plus PhD students.

Knowledge transfer

For PhD students the programme brings an additional benefit of training in knowledge transfer. Vera also had to apply her personal knowledge transfer skills, such as understanding a business problem and translating it to the language of mathematics but also demonstrating the value of mathematics to the business community and helping them to establish relationships with academic groups.

Examples of the programme's projects include:

- British Swimming/Sheffield University using mathematical modelling to inform coaching strategies for divers in preparation for London Olympics,
- National Grid/Edinburgh University using mathematics to satisfy the regulatory requirements for the security of the electricity supply through National Grid,
- Met Office/Exeter University using a pioneering mathematical approach to study risks associated with climate change, leading to better understanding of how to engage researchers with decision-makers,
- VR Technology/Birmingham University/University College London developing a new model to achieve a safer decompression of deep divers, which can potentially save lives.

The programme has also achieved penetration into the sectors such as financial services, where knowledge exchange has previously been difficult. Now there are five internship projects with insurance and actuarial companies.

There are now over 35 internship projects, with the total investment of over £300,000. The Industrial Internships Programme has been so successful that it is now becoming a part of a wider Knowledge Transfer landscape by joining efforts with the Knowledge Transfer Partnerships Programme while retaining its identity as a programme targeted specifically at knowledge transfer in mathematics. The success of the Programme will strongly contribute to recognition of the importance of mathematics in innovation and the impact it has on the UK businesses.

Personal contribution

Strongly supported by the colleagues from the KTN, Vera put a significant personal effort in establishing over 25 new internship projects of outstanding quality in the last 18 months.

Vera has also led discussions with NERC that have established a new strand of internships in the area of Environmental Risk Management, with NERC as an additional funder for the programme.

Vera's efforts have been central in creating and expanding the Internships Programme, which is now becoming a permanent and exciting feature of the UK innovation landscape.

Key points

- 35 internships established with an investment of >£300K
- Industrial Internships Programme now an established element with the wider KTP programme
- Engaged previously difficult-to-reach sectors
- Strategies in place for business and academic outreach