Fully Funded Engineering Doctorate (EngD) Research Studentship Opportunity

Project Title: "Evaluating and forecasting weather and climate impacts on telecommunications infrastructure"

Based at our Whiteknights campus, this 4 year fully funded research studentship will be working within the University of Reading's, internationally renowned Department of Meteorology and the R&D team in BT Group.

Closing Date for Applications: Monday 26 August 2013

Openreach, as part of the BT Group, operates the largest telecommunications access network in the UK and connects more than 25 million premises. This is a critical part of UK infrastructure, used by multiple communications providers and an important enabler for the UK economy. The network is delivered over a mixture of underground and overhead cabling as well as passive and active street-based electronics.

Research within BT has shown that adverse weather is a significant contributing factor to network faults. Thus, weather affects customer service, increases costs of operating the infrastructure and increases BT's Carbon Footprint through hundreds of thousands of "truck rolls" by engineers. BT, therefore, wish to develop a better understanding of these weather impacts, the extent to which they can be predicted days and months ahead, and how the likelihood of disruptive weather may be altered by climate change. The aim is to find methods to make the best possible use of knowledge derived from state-of-the-art weather and climate models within an infrastructure business.

The main research objectives of this project over the 4 year period are to:

(a) develop models for analysing the impact of weather on BT's infrastructure,
(b) quantify the probabilities and impact distributions of "disruptive" events for present and projected future climates,
(c) design methodologies to effectively exploit short, medium and long term probabilistic weather forecasts in terms of business impact.

The aim is to develop methodologies, tools and data sources that can be used by a company like BT to carry out weather analyses and business forecasts for the sustainability of large infrastructure business.

We are seeking self-motivated, pro-active and ambitious applicants that are capable of engaging enthusiastically with colleagues and business partners on this exciting multi-disciplinary project. Applicants should have a strong background in a numerate physical science (e.g., physics, mathematics, meteorology or engineering) and must possess a good relevant degree (2:1 or higher) or MSc in a related area.

The research will be supervised at the University by Dr David Brayshaw, Willis Lecturer in Weather and Climate Risk, for the Dept. of Metrology and Dr Stefan Smith, Lecturer in Energy Systems in the Built Environment, for the School of Construction and Engineering. Their collective expertise spans climate modelling, large-scale meteorology, and its impact on human and environmental systems.

4 Year Package

- Stipend of £20,000p.a (typically tax-free)
- All tuition fees are included
- Expenses package included
- EngD awarded by the University of Reading

Eligibility

Please note there are eligibility requirements, for more details refer to the EPSRC web site
http://www.epsrc.ac.uk/skills/students/help/Pages/eligibility.aspx

Further details

Supervisors from the University of Reading:
Dr David Brayshaw (d.j.brayshaw@reading.ac.uk)
Dr Stefan Smith (s.t.smith@reading.ac.uk)
Supervisor from BT Technology, Service & Operations:Kjeld Jensen, Principal Research Scientist (kjeld.jensen@bt.com)
Further information on the TSBE Centre can be found at: http://www.reading.ac.uk/tsbe

Applications

Applications should be made online through our website at:
http://www.reading.ac.uk/Study/apply/pg-applicationform.aspx

You also need to submit a full CV and Personal Statement to tsbe@reading.ac.uk
Vacancy Reference No: P38-2013

Interviews will be held 6 September for a proposed start date in October 2013.