

Comparison of models of disruption to GNSS

Code: 19/28

Company: Nottingham Trent University

Location: Nottingham Trent University (NTU), Clifton Campus

Company Description:

Nottingham Trent University is a Higher Education Institute in the East Midlands. The university aspires to excellence in teaching and was recently awarded a gold rating in the Teaching Excellence Framework. NTU has a track record of excellence in research within physics and engineering. The University's REF2014 submission under General Engineering (Unit of Assessment B15, <http://www.ref.ac.uk/>) was highly rated, having 84% of overall activity at the highest 3* (internationally excellent) and 4* (world-leading) grades with 94.6% of outputs judged as attaining 3* and 4* levels.

Project Description:

Global Navigation Satellite Systems (GNSS) such as GPS have become a ubiquitous technology. The ionosphere is the part of the Earth's upper atmosphere and ionospheric structures can disrupt GNSS. Nottingham Trent University (NTU) has developed statistical models of key ionospheric and neutral atmosphere parameters under a limited range of conditions. This placement is to compare the predictions from the NTU models with those from empirical models, and to quantify the improvement.

Applicant Specification

Minimum Requirements:

The successful applicant must:

- Be in the second year, or above, of an undergraduate degree course in physics, mathematics, engineering or a closely related subject.
- Have end-of-line mark from year 1 should be in the 2.1 or first class categories.
- Be able to demonstrate a strong interest in, and excellence within experimental work or project work or programming. Applicants are advised to discuss in detail a piece of lab, project or programming work from their undergraduate degree. Applicants are also advised to discuss exactly what this work involved, exactly what they did, what they achieved and why they are particularly proud of this piece of work.

Preferred Additional Requirements:

The following criteria are advantageous, but not essential:

- Some experience of scientific programming in a language such as MATLAB (or equivalent).
- Some experience of having studied the ionosphere and/or space weather during their undergraduate degree.

Further details:

Eight week fixed term contract. The precise dates are to be agreed with successful applicant, but will be within the window of 24th June 2019 – 6th September 2019. The successful candidate must also be available for the SPIN induction day on 17th June 2019 at the Satellite Applications Catapult in Harwell, Oxfordshire.

The successful candidate must also be available to attend the SPIN Showcase Event during the UK Space Conference on 24th – 26th September 2019 in Newport, Wales. The costs of attending these events will be paid from the project (i.e. the successful applicant only needs to be available on these days, and does not need to meet the costs of attending these events).

The total salary for this eight week project is £2,431 (gross), corresponding to approximately £304 per week. Nottingham Trent University has a positive approach to flexible working and, while it is expected that the successful candidate will be primarily based at our Clifton campus to enable them to be a full and productive member of the research group, a limited amount of remote working and flexi-time is available.

Closing Date for Applications: 5pm on Monday 15 April

Applications should be made through the online form attaching a CV, before the closing date. Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer.