

PhD studentship on the use of machine learning to inspect asphalt roads (Engineering/Materials/Computational Sciences)

Applications are invited to work on a joint PhD between the Faculty of Engineering and the School of Computer Science at the University of Nottingham, in the field of construction materials, specifically asphalt mixture, which is the most commonly used material for roads. We aim to advance the inspection of asphalt roads by combining novel visual inspection with unsupervised machine learning techniques.

Specifically, the successful candidate will use advanced visualization techniques to analyse the texture of asphalt road surfaces and investigate the applicability of Deep learning approaches to predict general properties of the asphalt mixture. This is a novel field and has potential applications beyond construction materials, such as metallurgy, medicine, art, or history.

The project will require occasional collaboration with a Computer Game and Virtual Reality developer that will contribute to implement the tools that the student will investigate into real life applications for the inspection of roads.

Due to the nature of the project, the following skills would be desirable in the successful candidate:

- * Creative problem solving
- * Good English level (IELTS above 6.5 will be required)
- * An interest for computer programming

Candidates must hold a good honours degree or equivalent in an engineering or a numerical science topic or be able to demonstrate equivalent experience.

This is a 3-year programme. Two start dates are available: July 2019 or October 2019. The studentship includes fees and a tax-free stipend of £14,777 per annum. Please note that due to funding restrictions, current funding is available to UK/EU nationals only. There will be ample funding available for national and international travel, and equipment.

This position is available immediately and applications will be considered until the 31st of May. Please direct enquiries to Dr. Alvaro Garcia, alvaro.garcia@nottingham.ac.uk (Faculty of Engineering) or Dr Isaac Triguero, Isaac.triguero@nottingham.ac.uk (School of Computer Science).

The University of Nottingham is an equal opportunities employer and welcomes applications from all sections of the community.