Newcastle University PhD Studentship Award

Title
The Internet of Persuasive Things and Material Recovery for Completing the Circular Economy Cycle of Plastic Waste

Value of award
Full UK/EU fees (eligibility criteria applies to EU students) and annual living allowance of £14,777 (at the 2018/19 UKRI rate)

Number of awards
1

Start date and duration
To start before September 2019 for 3.5 years

Application closing date
15th February 2019

Overview
This PhD studentship in Computer Science will combine computing science and plastic waste conversion technology to develop a novel, digital eco-system that can positively influencing people’s behaviour (at different stages of the plastic circular economy) with the aim of reducing dependence on natural resources. It is located in Open Lab (the University’s centre for cross-disciplinary research in digital technologies and a world leading human-computer interaction research group) at the School of Computing in collaboration with the School of Engineering.

Plastic is versatile and convenient in our modern society evidenced by a steady increase in plastic demand. It is non-biodegradable but disintegrates into small fragments under the sunlight, which have polluted water sources and affected life under the water. Recycling of plastic is still very limited (more than 31% plastic waste ended in landfill in the EU/UK whereas >80% in USA.) Plastic is produced from petroleum-based feedstock, which potentially can recover materials for its next cycle, creating circular economy of plastic waste. The project will investigate the role of technology in collecting data of the plastic material lifecycle along with the human decisions made at key points in the process, and in persuading people throughout their different roles in the process lifecycle to make more responsible and environmentally friendly decisions. The project builds on the fields of interaction design, persuasive technologies, Internet of Things, data science and plastic material conversion technology.

You will develop the knowledge and expertise necessary to succeed in an interdisciplinary research environment. In partnership with your supervisory team, you will develop a Personal Development Plan, identifying areas for development and training. You will have the opportunity to attend international summer schools, workshops and courses, and to participate in Masters-level training, including MSc modules from Chemical Engineering and Computing.

Sponsor
Engineering and Physical Sciences Research Council

Name of supervisor(s)
Dr Ahmed Kharrufa
Eligibility Criteria
UK/EU citizens with a first-class or 2.1 degree, or equivalent qualifications and/or experience. Ideally, students should have a BSc or MSc degree in computing or a related discipline.

How to apply
You must apply through the University's online postgraduate application system. To do this please ‘Create a new account’. All relevant fields marked with a red asterisk must to be completed.

The following information will help us to process your application. You will need to:
• Insert the programme code 8050F in the programme of study section
• Select ‘PhD Computer Science - (Computing Science) as the programme of study
• Insert the studentship code COMP014 in the studentship/partnership reference field
• Attach a covering letter and CV. The covering letter must state the title of the studentship, quote reference code COMP014 and state how your interests and experience relate to the project
• Attach degree transcripts and certificates and, if English is not your first language, a copy of your English language qualifications

Please also send a copy of your CV and covering letter to computing.phd@ncl.ac.uk.

Contact
ahmed.kharrufa@ncl.ac.uk; anh.phan@newcastle.ac.uk