Newcastle University PhD Studentship award

Title
EPSRC PhD project – Autonomous and Scalable Power-Infused Hardware Design

Value of award
100% of UK/EU tuition fees plus an annual tax-free stipend of £14,777 (at 2019/20 rate)

Number of awards
1

Start date and duration
September 2019 for 3.5 years

Application closing date
31st January 2019

Overview
The School of Engineering at Newcastle University invites applications for a fully funded PhD studentship [EU/UK] to join the ‘ASPIRE: Autonomous and Scalable Power-Infused Hardware Design’ project.

The basic premise is to integrate cheap perovskite solar cell-based energy microgeneration, together with power management and compute logic, within one scalable integrated circuit. The successful candidate will:

1. DESIGN a scalable computer hardware architecture using industry-standard tools.
2. FABRICATE a prototype with distributed perovskite solar cells feeding power into compute circuits.
3. ANALYSE the scalability of a network of hardware components.
This project will be complemented by industrial support from Temporal Computing, an Artificial Intelligence Hardware spin-out based in Newcastle.

The student will be expected to have a strong interest in practical problem solving in manufacturing and/or electronics. At the end of the PhD, the student will have developed a variety of skills that will enable them to enter the fast-growing world of networked microelectronics.

**The Candidate:**
This is an interdisciplinary project between Engineering and Physics. Therefore graduates from these disciplines are welcome to apply. Previous experience with integrated circuit design and/or programming is desirable but not essential.

More details about the project and the skills that the successful candidate will acquire during the PhD programme are available [here](#).

**Sponsor**

Engineering and Physical Sciences Research Council (EPSRC)

**Name of supervisor(s)**

Dr Rishad Shafik, Dr Pablo Docampo and Dr Thomas Billam.

**Eligibility Criteria**

You must have, or expect to achieve, at least a 2:1 honours degree or international equivalent, in Electrical and Electronic Engineering, Physics, or a related subject.

The studentships are open to applicants satisfying [EPSRC home/UK or EU fee criteria](#), and are eligible for home fees. EU candidates may only be available for a partial award.

English language skills (if English is not your native language): an overall score of IELTS 6.5 or equivalent, with individual scores of 6.0 in each of the four sub-skills: writing, reading, speaking and listening.

**How to apply**

You must apply through the University’s online [postgraduate application system](#). To do this please ‘Create a new account’.

The following information will help us to process your application. You will need to:
• insert the programme code **8060F** in the programme of study section
• select **PhD EECE (FT)** as the programme of study
• insert the studentship code **ENG038** 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 **ENG038** 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.

**Contact**

For any question, contact
Dr Rishad Shafik, Lecturer in Electronic Systems, School of Engineering.
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