CANDIDATE BRIEF

Research Fellow in Network Architecture

Faculty of Engineering & Physical Sciences

Salary: Grade 7 (£33,797– £40,322 p.a.). Due to funding restrictions an appointment will not be made above £38,017 p.a.

Reference: EPSEE1021

Closing date: 31 May 2020

Fixed-term for 3 years

We will consider flexible working arrangements

Research Fellow in Network Architecture, School of Electronic and Electrical Engineering.

Are you an experienced researcher in electronic engineering looking for your next challenge? Can you drive and inspire the pursuit of technical excellence with a range of organisations? Do you want to further your career in one of the UK's leading research intensive Universities?

The Communications Networks and Systems research team in the Institute of Communication and Power Networks (ICaPNet) in the School of Electronic and Electrical Engineering offers an exciting opportunity to undertake internationally-leading research in the field of Optical Wireless Communication as part of the 6m EPSRC (Engineering and Physical Sciences Research Council) Terabit Bidirectional Multi-user Optical Wireless System (TOWS) for 6G LiFi.

This project aims to use new concepts in cellular optical communications to demonstrate indoor Terabit/s multiuser wireless systems that offer capacities at least two orders of magnitude higher than the current planned optical and radio wireless systems for 5G, with a roadmap to wireless systems that can offer up to four orders of magnitude higher capacity.

The Communications Networks and Systems research team has pioneered the development of optical wireless systems (OW) over the past 20 years, where a number of world-first contributions to optical wireless were made leading to data rates that increased as a result from few Mbit/s to multi Gbit/s with full mobility. The research team is supported by facilities including a multi-million pound investment in test-beds for optical communication networks and internet-of-things networks.

With a PhD (or close to completion) in Electronic Engineering, Communications, Networks, or a related area, you will have experience in communication network design and optimisation using mixed integer linear programming (MILP). A good track record of publications and a proven ability to integrate into research teams are also highly desirable.

What does the role entail?

As a Research Fellow, your main duties will include:

- Developing new front haul and back haul network architectures to enable multiuser and multi-service operation with varying requirements and constraints per user and per service;
- Developing MILP optimisation models and heuristics for real time implementation on NetFPGA platforms;
- Preparing papers for publication in the top recognised journals and conferences in the field, and, where possible, to contribute to the preparation of grant proposals;
- Leading and supporting all the activities associated with the project;
- Contributing to joint discussions with the wider research group and collaborators;
- Interacting with, and providing assistance to, other staff in the research group;
- Continually updating your knowledge and understanding in the field or specialism, applying this knowledge to your work;
- Contributing to the training of both undergraduate and postgraduate students, including assisting with the supervision of projects in areas relevant to the project.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.

What will you bring to the role?

As a Research Fellow you will have:

- A first degree and PhD (or close to completion) in Electronic Engineering, Communications, Networks, or a closely allied discipline;
- Research experience in in communication network design and optimisation using MILP;
- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;
- A proven track record of peer-reviewed publications in high impact factor journals;
- Excellent written and verbal communication skills including presentation skills;

- A proven ability to manage competing demands effectively, responsibly and without close support;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development.

You may also have:
- The ability to develop industrial relationships and seek future funding;
- Experience of assisting PhD students with their research.

How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

Contact information

To explore the post further or for any queries you may have, please contact:

Professor Jaafar Elmirghani, School of Electronic and Electrical Engineering
Tel: +44 (0)113 34 2013
Email: J.M.H.Elmirghani@leeds.ac.uk

Additional information

Faculty and School Information
Further information is available on the research and teaching activities of the Faculty of Engineering & Physical Sciences, and the School of Electronic and Electrical Engineering.

A diverse workforce
The Schools in the Faculty of Engineering & Physical Sciences are proud to have been awarded the Athena SWAN Bronze or Silver Award from the Equality Challenge Unit, the national body that promotes equality in the higher education sector. Our equality and inclusion webpage provides more information.

Working at Leeds
Find out more about the benefits of working at the University and what it is like to live and work in the Leeds area on our Working at Leeds information page.

Candidates with disabilities
Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our Accessibility information page or by getting in touch with us at disclosure@leeds.ac.uk.

Criminal record information

Rehabilitation of Offenders Act 1974
A criminal record check is not required for this position. However, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our Criminal Records information page.