



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

Lecturer in Power Electronics

Faculty of Engineering and Physical Sciences



**Salary: Grade 8 (£41,526 – £49,553 p.a.)**

**Reference: EPSEE1009**

**Closing date: 24 November 2019**

**We will consider flexible working arrangements**

# Lecturer in Power Electronics

## School of Electronic and Electrical Engineering

**Do you have an excellent research track record with the vision and drive to tackle new challenges? Are you passionate about delivering world leading research and an exceptional student experience?**

The University of Leeds is strengthening its research activity in next-generation electrical power and energy systems to address the national and international grand challenges to achieve sustainable, secure and resilient infrastructures for energy supply and for transport. In the latter, a major investment from government, industry and the University has been confirmed to establish the [Leeds Institute of High Speed Rail and System Integration](#), which will comprise a new engineering and technology campus adjacent to the city's Enterprise Zone. Two opportunities are currently available within the [Institute of Communication and Power Networks](#) (ICaPNet) in the [School of Electronic and Electrical Engineering](#). The Institute combines world class expertise in energy-efficient communication networks with innovation in electrical power systems and smart grids to provide a fertile platform for novel technological developments in sustainable, responsive and interactive energy networks.

As a Lecturer in Power Electronics, you will have research expertise in the design and analysis of contemporary power electronics, with experience of application to electric power or traction systems. We will also be particularly interested in your experience in system integration and power quality analysis.

ICaPNet facilities include a multi-million pound investment in test-beds for energy-efficient communication networks and internet-of-things networks, and a new smart grid prototype laboratory with power-hardware-in-the-loop capabilities. Within the new Institute of High Speed Rail and System Integration (IHRSI), the School is establishing major new laboratories for power systems analysis, electromagnetic interference, and a vehicle test facility for studying electric locomotives under fully powered operation.

In addition to developing an active research portfolio you will make a significant contribution to teaching in the School on our undergraduate and postgraduate courses. The University has an ethos of research-led teaching, and you will use your



cutting-edge research to inform an innovative, creative approach to teaching and inspiring students at all levels.

## What does the role entail?

As a Lecturer in Power Electronics your main duties will include:

- Undertaking internationally leading research and inspirational teaching; playing a role in translating excellence in research and scholarship into learning opportunities for students;
- Developing a distinctive research activity and building your research team;
- Securing external funding to support your research;
- Establishing and maintaining a high quality record of research output in leading internationally-recognised publications, whilst achieving sustained levels of research funding individually and/or in collaboration with others;
- Inspiring students through research-led teaching on undergraduate and postgraduate taught courses; taking a lead role in the design, development and planning of taught courses and achieving high standards of student feedback;
- Attracting high quality postgraduate research students to the University and providing them with excellent supervision which supports timely completion and subsequent employability;
- Developing external collaborations and promoting your research field nationally and internationally;
- Contributing to the academic development and effective operation of the School;
- Participating in the IHSRSI and in other initiatives and/or multidisciplinary areas of work which improve School, Faculty or University performance.

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 Lecturer in Power Electronics you will have:

- A PhD in electronic/electrical engineering or a relevant discipline;



- Demonstrable research expertise in an area relevant to the post, as listed above;
- A track record of peer-reviewed international journal publications in fundamental or applied electrical power systems or power electronics;
- Evidence of the use of your research by other academic groups, industries, or end-users;
- Evidence of strong potential for securing external income to support and develop your research activity;
- The ability to work in collaborative teams, and to work across subject areas, linking appropriately with other disciplines and research groups;
- The potential to build and develop research teams;
- The ability to design and deliver high quality taught courses in one or more of: electrical power systems, electric drives, power electronics, smart energy systems, smart grids, microgrids and electric vehicles;
- Ability and enthusiasm to proactively develop new teaching approaches and materials;
- The ability to provide high-quality study support for students (through, for example, project supervision, tutorials, seminars, informal study discussions, etc);
- Good organisational skills, with the ability to contribute to management and administrative processes and structures, including managing resources and/or staff;
- Excellent interpersonal and communication skills, including a high quality of written and spoken English and excellent presentation skills.

You may also have experience of applying electrical power systems or power electronics technologies in the rail transport sector.

## 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

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## 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](mailto: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.

