



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

**Early-Stage Researcher – Green-lubricated contacts through nanotechnology, Faculty of Engineering & Physical Sciences**



**Salary: In line with the Marie Skłodowska-Curie ITN requirements for Early Stage Researchers**

**Reference: EPSME1021**

**Closing date: 15 May 2020**

**Fixed-term for 3 years**

**We will consider flexible working arrangements**

## Early-Stage Researcher (ESR)

### Marie Skłodowska-Curie Innovative Training Network/ European Joint Doctorate (ITN/EJD): GreenTRIBOS School of Mechanical Engineering

**Are you a rising star in the field of tribology, engineering materials or material science? Would you like to contribute to the development of cutting-edge technologies to impact on a green revolution in lubrication, friction and wear? Do you want to further your career and attain a PhD in one of the UK's leading research intensive universities?**

You will join a recently funded Innovative Training Network/European Joint Doctorate (ETN/EJD) GreenTRIBOS (project ID 860246, call H2020-MSCA-ITN-2019). GreenTRIBOS offers high-level doctoral training to a total of 12 Early-Stage Researchers (ESRs). Three will be primarily based at and employed by Leeds University with another three receiving dual degrees with [Leeds University](#) and Universities of [Lulea/Coimbra/Ljubljana](#). The project lead is [Prof Mitjan Kalin](#) at the University of Ljubljana.

The project will investigate the use of nanoparticles in a reactive tribological contact to provide low friction and low wear. Nanoparticles will be synthesised and dispersed in an active lubricant to then form a self-healing and a sustainable low friction and wear surface for some of the most arduous contacts in machine elements. This project will be supervised by [Prof Anne Neville](#), [Prof Ardian Morina](#) in Leeds, in collaboration with several other researchers across the network and in particular [Prof Nazanin Emami](#) from Lulea Technology University. You will receive a dual award PhD from the University of Leeds and Lulea Technology University on successful completion of your research work.

You will have a top-class undergraduate degree and/or a Masters degree, or equivalent, in Mechanical Engineering, Materials Science or Engineering or a relevant Physical Science, with research experience or an interest in Tribology, Materials and/or nanotechnology, and the flexibility to travel throughout the EU.

#### **Important eligibility rules for this position:**

There are no restrictions on the nationality, but



- Applicants must, at the time of recruitment, have not yet been awarded a doctorate degree and be in the first 4 years (full-time equivalent) of their research careers. This is measured from the date that you obtained the degree which would entitle you to embark on a PhD.
- At the time of recruitment, applicants must not have resided or carried out their main activity (work, studies, etc...) in the UK for more than 12 months in the 3 years immediately prior to their recruitment under the GreenTRIBOS project. Compulsory national service and/or short stays such as holidays are not taken into account.

### Salary:

The Marie Skłodowska-Curie Early-Stage Researcher living allowance is fixed at **€62,058** per annum including the mobility allowance. This figure is before employer's and employee's deductions for national insurance and taxes per year, which will be paid in Sterling using an appropriate conversion rate.

### What does the role entail?

As an Early-Stage Researcher, your main duties will include:

- Developing the skills to deliver world class research focussing on aspect of green tribology;
- Adapting nanotechnologies from other fields to be functional in tribology
- Developing initiative, creativity and judgement in applying appropriate approaches to research activities;
- Actively participating in all relevant activities organised by the network as advised by the Supervisor;
- Attending meetings as required to discuss the project. This will involve occasional EU-wide travel;
- Ensuring good day-to-day progress of work, and maintaining accurate records;
- Writing up results for publication, attending and presenting at suitable conferences and undertaking other forms of dissemination including patient groups and the general public;
- Working both independently and also as part of a larger team of researchers, including interacting with and providing assistance to other staff in the research group and the GreenTRIBOS network and engaging in knowledge-transfer activities where appropriate and feasible;



- Contributing to joint discussions within the wider research group and network;
- Maintaining your own continuing professional development.

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 an ESR, you will have:

- A top-class undergraduate degree and/or a Masters degree, or equivalent, in Mechanical Engineering, Materials Science or Engineering or a relevant Physical Science;
- Satisfy the eligibility requirements set for an Early-Stage Researcher funded by Marie Skłodowska-Curie and you must be eligible to be appointed as an Early Stage Researcher in the UK - this means:
  - At the time of recruitment, you must not already hold a doctorate degree and you must be in the first 4 years of your research career (measured from the date of obtaining the degree which entitles you to embark on PhD studies)
  - At the time of recruitment, you must not have resided or carried out your main activity in the UK for more than 12 months in the 3 years immediately prior to your start date;
- Satisfy the [eligibility requirements](#) to enrol on a PhD degree. This includes acceptable English language requirements if English is not your first language;
- Research experience or an interest in Tribology, Materials and/or nanotechnology;
- The flexibility to travel throughout the EU;
- Good time management and planning skills, with the ability to meet tight deadlines and work effectively under pressure;
- Excellent written and verbal communication skills including presentation skills;
- 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:

- Evidence of being able to publish good quality journals and conferences.

## 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:

**[Prof Anne Neville](#), School of Mechanical Engineering**

Tel: +44 (0) 113 343 6812

Email: [a.neville@leeds.ac.uk](mailto:a.neville@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 Mechanical Engineering](#) and the [Marie Skłodowska-Curie](#) research and innovation scheme.

### 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.

