



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

**Marie Skłodowska-Curie Doctoral Researcher in Quantum Communications,  
Faculty of Engineering and Physical Sciences**



**Salary: In line with Marie Skłodowska-Curie Doctoral Network**

**Reference: EPSEE1080**

**Closing date: Wednesday 30 November 2022**

**Fixed-term for 3 years**

**We are open to discussing flexible working arrangements**

# Marie Skłodowska-Curie Doctoral Researcher in Quantum Communications, School of Electronic and Electrical Engineering, Faculty of Engineering and Physical Sciences.

Are you a rising star in the field of quantum communications research? Would you like to contribute to the development of cutting-edge technology? 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 European Doctoral Network (DN) on quantum-safe Internet: QSI. QSI offers high-level doctoral training to over 10 Doctoral Researchers (DRs). DRs will be supervised by researchers across the network, will be exposed to different sectors via planned placements, attend summer schools, and contribute to and organise workshops and conferences. You will be funded for 3 years and will pursue a doctoral degree during this time.

This DR position is based in the University of Leeds and concerns the future generation of quantum communications networks. In particular, this project looks at different architectures for quantum-repeater based networks and performs a cost comparison for different solutions proposed. This project will be supervised by [Prof Razavi](#), in collaboration with several other researchers across the network.

## 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 QSI project. Compulsory national service and/or short stays such as holidays are not taken into account.





### Salary:

- The Marie Skłodowska-Curie Doctoral Researcher living allowance is fixed at **€63,055.20** 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 a Marie Skłodowska-Curie Doctoral Researcher, your main duties will include:

- Executing world-class research focussed on quantum key distribution (QKD) and quantum repeater systems and QSI activities;
- 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 good records;
- Preparing papers for publication in leading international journals and disseminating research results through other recognised forms of output such as conferences or public engagement;
- 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 QSI network and engaging in knowledge-transfer activities where appropriate and feasible;
- Delivering the outcomes guided by the research aims and objectives, and contributing to setting the direction of the research project and team;
- 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 a Marie Skłodowska-Curie Doctoral Researcher, you will have:

- A first class or 2:1 undergraduate degree and/or a Master's degree (or equivalent degree) in Science or Engineering;
- Satisfy the eligibility requirements set for an Early Stage Researcher funded by Marie Skłodowska-Curie as outlined above and you must be eligible to be appointed as an Early Stage Researcher in the UK;
- 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 familiarity with QKD protocols and their security analysis;
- Research experience or familiarity with quantum repeater systems;
- Research experience or familiarity with quantum memories and the basics of quantum optics;
- 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;
- 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:

- Experience of publishing scientific work in peer reviewed journals;
- Experience of pursuing external funding to support 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:

**[Mohsen Razavi](#)**, Professor in Quantum Communications

Tel: +44 (0)113 343 9406

Email: [M.Razavi@leeds.ac.uk](mailto:M.Razavi@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

As an international research-intensive university, we welcome students and staff from all walks of life and from across the world. We foster an inclusive environment where all can flourish and prosper, and we are proud of our strong commitment to student education. Within the Faculty of Engineering and Physical Sciences we are dedicated to diversifying our community and we welcome the unique contributions that individuals can bring, and particularly encourage applications from, but not limited to Black, Asian and ethnically diverse people; people who identify as LGBT+; and people with disabilities. Candidates will always be selected based on merit and ability.

The Faculty of Engineering and Physical Sciences are proud to have been awarded the Athena SWAN [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

We are a campus based community and regular interaction with campus is an expectation of all roles in line with academic and service needs and the requirements of the role. We are also open to discussing flexible working arrangements. To find out more about the benefits of working at the University and what it is like to live and work in the Leeds area visit our [Working at Leeds](#) information page.





### **Information for disabled candidates**

Information for disabled candidates, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at [hr@leeds.ac.uk](mailto:hr@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.

