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| <b>School</b>             | Electronic Engineering                      |
| <b>Post title</b>         | Postdoctoral Researcher in Photonic Systems |
| <b>Level on Framework</b> | Level 1                                     |
| <b>Post duration</b>      | Fixed Term Contract up to 36 Months         |

#### **Research Career Framework**

As part of this role the researcher will be required to participate in the DCU Research Career Framework. This framework is designed to provide significant professional development opportunities to Researchers and offer the best opportunities in terms of a wider career path.

#### **Background & Role**

The School of Electronic Engineering is seeking to appoint a highly motivated Postdoctoral Researcher to undertake leading edge research in the domain of high-speed optical communication systems. The successful applicant will join a multidisciplinary team to work in liaison with current researchers on the development of high-capacity optical transmission systems (wired and wireless) for future 6G networks.

The project will focus on Free Space Optical Communications (FSOC) - or wireless optical communication - which is emerging as a key disruptive technology that will meet the needs and KPIs of 6G and beyond. FSOC have been proposed as a means to wirelessly augment and support the existing wired and wireless backbone communications links through the provision of potentially 1,000x increase in data rates and throughput. The FreeSpace project is bringing together both industry and academic partners in Ireland to develop new photonic integrated circuit technologies for high capacity free space optical systems.

## **Principal Duties and Responsibilities**

Please refer to the job description for a full list of duties and responsibilities associated with this role.

## **Minimum Criteria**

Applicants should have a PhD in Physics or Electronic Engineering with some experience at postdoctoral level being preferable.

In addition, it is desirable that the candidate has experience in some of the following areas:

- Simulation of optical systems
- Optical frequency combs
- Optical free space communications
- Terahertz communications systems
- Coherent optical communication systems
- Experimental test-beds for photonic integrated circuits and systems
- Excellent communication, presentation and facilitation skills
- Report writing, time management and working to deadlines
- Presentation and academic article writing

## **Candidates will be assessed on the following competencies:**

**Discipline knowledge and Research skills** – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline

**Understanding the Research Environment** – Demonstrates an awareness of the research environment (for example funding bodies) and the ability to contribute to grant applications

**Communicating Research** – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students

**Managing & Leadership skills** - Demonstrates the potential to manage a research project including the supervision of undergraduate students

**Salary:** €41,025 – €50,029

*Appointments will be commensurate with qualifications and experience and will be made on the appropriate point of the salary scales, in line with current Government pay policy.*

**Closing date:** January 11<sup>th</sup>, 2021

**Informal enquiries to:**

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*Please do not send applications to this email address, instead apply as described below.*

**Application Procedure:**

Application forms are available from the DCU Current Vacancies (open Competitions) website at <http://www.dcu.ie/vacancies/current.shtml>

Applications should be submitted by email to [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie).

**Please clearly state the role that you are applying for in your application and email subject line: Job Ref #RF1456 Postdoctoral Researcher in Photonic Systems**

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*In line with the Employment Equality Acts 1998 – 2015, the University is committed to equality of treatment for all those who engage with its recruitment, selection and appointment processes.*

*The University's Athena SWAN Bronze Award signifies the University's **commitment to promoting gender equality and addressing any gender pay gaps**. Information on a range of university policies aimed at creating a supportive and flexible work environment are available in the DCU Policy Starter Packs*