

**School of Mechanical & Manufacturing Engineering Faculty
of Engineering & Computing
Dublin City University**

The School of Mechanical & Manufacturing Engineering is looking to host an experienced researcher via funding through Marie Skłodowska-Curie Individual Fellowships. In order to secure funding, the experienced researcher must develop a proposal with the host for the September 9th, 2020 deadline.

Organisation Description

DCU is a research-intensive University. DCU is committed to ensuring the highest standards of integrity in all aspects of our research, in line with the National Policy Statement on Ensuring Research Integrity in Ireland and the European Code of Conduct for Research Integrity. DCU provides research students with excellent designated research office space, internet and library resources. Key to DCU's development of the Graduate students is the University's development of the DCU ENRICH framework: a programme through which research students can identify, target and obtain the skills required for career progression in a variety of fields and settings. Specific to the applicants there is a new hydrogen lab in the faculty of Engineering & Computing where hydrogen technology is tested, including fuel cells, electrolyzers and storage materials. There is a strong modelling team in Insight and ECRN (Energy Climate Research Network) in DCU and materials development within the Mechanical & Manufacturing Engineering School in IFORM and APT. The school has had successful funding from; National funders: Enterprise Ireland, SEAI RD&D, etc; EU funding: Interreg, UN-ECE, etc; and through industry research activities; ESA, Energia, Viridian, Element-Energy, etc.

Project ideas and researcher opportunities

Research Field: Energy / Climate / Sustainability

Project Idea 1: Our collective climate and environmental commitments require a drastic shift in our reliance on fossil fuels. Governments and policy makers can leverage clean technology pathways to achieve policy objectives and targets which can coexist with a competitive and sustainable economy. Hydrogen is one of these pathways. The challenge is to develop a saleable techno economic roadmap for hydrogen as an energy vector in Ireland's energy (transport, electricity and heating) sector.

Project idea 2: Fuel cells offer a zero-emissions technology solution to electric powered vehicles including drone applications. The challenge for drones is to integrate the correct drone platform with the fuel cell, hydrogen storage and backup batteries in a configuration that maximises efficiency, safety and flight time.

Research and training opportunities for the researcher include secondment to industry, training on technical writing and data analytics, and hydrogen training.

Researcher Requirements

- The researcher must fulfil the MSCA-IF mobility and experienced researcher requirements.¹
- Applicants should have a PhD (or more than 4 years of research experience) in a relevant area of Energy or Sustainability and demonstrate a promising track record of early research achievements.
- The applicant will have demonstrable motivation toward advancement of the proposed research area.

Application procedure

The applicant should send:

1. A two-page CV with relevant publication list
2. A one-page research proposal
3. A one-page statement with your personal motivations for this project and why DCU and the School of Mechanical & Manufacturing Engineering would be the best host institution for your research project

Contact information

If you are interested in applying for a MSCA-IF with DCU School of Mechanical & Manufacturing Engineering please email Dr James Carton james.carton@dcu.ie and Dr Ines Perić (ines.peric@dcu.ie) as early as possible.

¹ **MSCA-IF mobility:** The researcher must not have resided or carried out the main activity (work, studies, etc.) in the country of the beneficiary for more than 12 months in the 3 years immediately before the call September 9th deadline (flexible 36 months in the 5 previous years if eligible for career restart or reintegration fellowship <https://www.iua.ie/irish-marie-curie-office/funding-calls/individual-fellowships/>)

Experienced researcher requirements: The researcher must have at least 4-years full time research experience or hold a doctorate before the September 9th deadline.