



Postdoctoral research on “Life Cycle Assessment of Nano-Enabled Surfaces and Coatings Applications” (Level 1)

School of Mechanical and Manufacturing Engineering

Fixed Term Contract up to 12 Months

Dublin City University

Dublin City University (DCU) is a young, ambitious and vibrant university, with a mission ‘to transform lives and societies through education, research, innovation and engagement’. Known as Ireland’s ‘University of Enterprise’, DCU is a values-based institution, committed to the delivery of impact for the public good. DCU was named Sunday Times Irish University of the Year 2021.

DCU is based on three academic campuses in the Glasnevin-Drumcondra region of north Dublin. More than 18,000 students are enrolled across five faculties – Science and Health, DCU Business School, Computing and Engineering, Humanities and Social Sciences and DCU Institute of Education.

DCU is committed to excellence across all its activities. This is demonstrated by its world-class research initiatives, its cutting-edge approach to teaching and learning, its focus on delivering a transformative student experience, and its positive social and economic impact. The university continues to develop innovative programmes in collaboration with industry, such as the DCU Futures suite of degrees, which are designed to equip graduates with the skills and knowledge required in a rapidly evolving economy.

DCU’s pursuit of excellence has led to its current ranking among the top 2% of universities globally. It is also one of the world’s Top Young Universities (QS Top 100 Under 50, Times Higher Top 150 Under 100). In the Times Higher Education University Impact Rankings 2021, DCU ranked 23rd in the world for its approach to widening participation in higher education and its ongoing commitment to eradicating poverty, while it ranks 38th globally for its work in reducing inequality and 89th globally for gender equality.

The university is ranked 23rd in the world and first in Ireland for its graduate employment rate, according to the 2020 QS Graduate Employability Rankings. Over the past decade, DCU has been the leading Irish university in the area of technology transfer, as reflected by licensing of intellectual property.

The School of Mechanical & Manufacturing Engineering

The DCU School of Mechanical & Manufacturing Engineering has been at the forefront of Teaching and Learning, and Research and Innovation since its establishment in 1987. The Schools strive for excellence and development which is evident through their taught and research programme options offered both at undergraduate and postgraduate levels. Our programmes are much in demand and draw some of the highest-achieving students entering third-level education both within and outside Ireland.

The Project

The NewSkin project (newskin-oitb.eu) is a Pan-European collaboration of 35 academic and industry partners. The project aims to create an Open Innovation Test Bed (OITB) to provide the Innovation Ecosystem (IE) with the necessary technologies, resources and services to uptake efficient and cost-effective innovative processes to manufacture nano-enabled industrial and consumer products as well as the necessary testing capabilities to demonstrate the features of nano-enhanced goods.

The Role

This position is for a 12-month postdoctoral researcher who will be recruited on a fixed term contract basis. The successful candidate will be responsible for the selection suitable set of case studies from the suite of NewSkin applications with the objective of translating improvements in function and mechanical properties of product coatings into measurable end-user benefits. This will be achieved by conducting life cycle assessments, and where appropriate Levelised Cost of Energy (LCoE) analysis of selected product systems.

Principle Duties and Responsibilities

The specific duties of this post include but are not limited to:

- Coordinate data exchange with relevant project partners
- Develop partner-specific data acquisition templates
- Develop LCA and LCoE models for selected systems
- Carry out documentation and reports for project deliverables in a timely manner
- Attend project meetings and workshops
- Submit final report
- Publish study findings in a relevant peer-reviewed journal

Qualifications, Skills and Experience Required

Applicants should have PhD in mechanical, mechatronic engineering, or equivalent. In addition to the above, it is desirable that the candidate possess a subset of the following skills;

- Experience or training in life cycle assessment
- Familiar with GaBi software or other LCA software packages
- Excellent written and oral proficiency in English (essential)
- Excellent written and verbal communication and interpersonal skills
- Proven ability to prioritise workload and work to strict deadlines
- Ability to work independently
- Strong problem solving abilities

Essential Training

The post holder will be required to undertake the following essential compliance training: Orientation, Health and Safety and Intellectual Property and Data Protection (GDPR). Other training may need to be undertaken when required.

Dublin City University is an equal opportunities employer.

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](#)