



Assistant Professor in Mechanical/Mechatronic Engineering
School of Mechanical Engineering
Fixed Term Four Year Contract

Introduction

Dublin City University (www.dcu.ie) is a research-intensive, globally-engaged, dynamic institution that is distinguished by both the quality and impact of its graduates and its focus on the translation of knowledge into societal and economic benefit. DCU prepares its students well for success in life, and in the workplace, by providing a high-quality, rounded education appropriate to the challenges and opportunities of the 21st century. As Ireland's University of Enterprise and Transformation, DCU is characterised by a focus on innovation and entrepreneurship and a track-record of effective engagement with the enterprise sector, including commercial, social and cultural enterprises. Excellence in its education and research activities has led to DCU's consistent position in the rankings of the world's top young universities. DCU has a strong track record in attracting both Irish and European Union funding under FP7, Horizon 2020, Marie Curie Actions and Erasmus. We offer a dynamic and internationally focused environment in which to advance your academic career.

The Faculty of Engineering and Computing at Dublin City University is home to the Schools of Computing, Mechanical and Manufacturing Engineering and Electronic Engineering and hosts or participates in a number of large scale SFI research centres, including: INSIGHT (Data Analytics), ADAPT, and [I-Form](#) and BioDesign Europe. We offer programmes at Bachelors, Masters and PhD levels and our graduates are highly sought after by industry both nationally and internationally. Our teaching, learning and research activities are about transforming lives and societies.

School of Mechanical Engineering

The School of Mechanical & Manufacturing Engineering has been at the forefront of Teaching, Learning, Research and Innovation in engineering since its establishment in 1987. Current programmes include Mechanical and Manufacturing Engineering, Mechatronic Engineering and Biomedical

Engineering. The School is a research-intensive school that is home to key researchers affiliate to the research centres listed above and also to ESIPP, MEDeng and the Water Institute, and has particular strengths in Biomedical Engineering, Advanced Manufacturing and Sustainable Systems and Energy. At postgraduate levels the school offers taught Master's programmes with Majors in Biomedical Engineering, Simulation Driven Design and Sustainable Systems and Energy, each also with a pathway integrated with bachelor's degrees. A new pathway to a Master's pathway in Mechatronic Engineering is planned for the near future.

Role Profile

The School is now seeking to recruit an Assistant Professor with expertise in Mechanical/Mechatronic Engineering. The appointee will be expected to assist the School in implementing an innovative curriculum project, specifically

- developing and delivering new modules in the Mechatronic programme, ensuring an industry engaged, research-led approach including integration of challenge based learning, digital tools and hybrid delivery.
- broader implementation of teaching approaches into other target programmes in the school.
- engaging with university-wide elements of the initiative including cross faculty cooperation, project evaluation and reporting.

The role includes teaching, supervision of laboratory sessions, student mentoring and supervision of taught projects and research.

The role will encompass activities across three domains, as follows:

Teaching and Learning

The appointee will be expected to contribute directly to undergraduate and master's level programmes through research-led teaching, on-line delivery modes, supervision of laboratory sessions, student mentoring and supervision of capstones projects. Our Mechatronic programme prepares graduates with the knowledge and aptitude to implement technological solutions at the interface between mechanical, electronic and software systems using modern analysis and design approaches. The current Bachelor's degree will be extended to incorporate a pathway to a Master's degree.

Research and Scholarship

The appointee will be expected to have clearly articulated research interests and research profile development plans within the scope of mechatronics/electromechanical systems and software that

support the Faculty/University's strategic plan. They will be expected to sustain and conduct research, engage in scholarship of quality and substance, generate research income, supervise postgraduate students and publish to the highest international standard.

Service and Contribution to University and Society

Activities taken on the successful candidate's own initiative, or allocated by the Head of School, may include:

- Participating in school and university meetings,
- Representing the School in marketing and the recruitment of students,
- Developing relationships with stakeholders within and outside the University.

Duties and Responsibilities:

Specifically, the successful applicant will be required to (*inter alia*):

- Engage with and guide aspects of research and teaching in areas of Mechatronics and Mechanical Engineering.
- Pursue an active research agenda in the area of Mechatronics and Mechanical Engineering with ongoing research publications in leading international academic journals, peer-reviewed conferences, and with high profile book publishers, both individually and, where appropriate, in partnership with colleagues in DCU and elsewhere.
- Undertake professional development in research management.
- Deliver course content to students, including lectures, laboratories and tutorials at undergraduate and postgraduate levels in a manner consistent with DCU's high academic standards and in an environment which is a hybrid of campus and remote delivery.
 - Develop resources required to facilitate student learning both in-class and on-line
 - Set and assess examinations and continuous assessment materials.
 - Use a wide range of learning and teaching methodologies and assessments which foster a positive and encouraging learning environment for students.
- Work proactively in improving existing courses and programmes, and contribute to the design and development of new courses and programmes.
- Undertake professional development for teaching.
- Contribute to team effectiveness, leadership/management, and to strategic planning, quality reviews and improvement processes and external programme accreditation processes.
- Support the internationalisation agenda of the Faculty and university, including undertaking international travel.

- Engage with the development of working relationships with industry, employers and professional bodies.
- Undertake such administration/outreach duties as will be defined by the Head of School and may include some of the following: degree programme coordination; participation in committees; visits to industry; student recruitment.

Qualifications & Experience

Applicants for the post must hold an honours degree in Mechanical/Mechatronic Engineering, and be qualified to PhD level with a specialism in a Mechatronic related area. The successful candidate should also have a minimum of three year's relevant postdoctoral experience, with a record of high quality university level teaching.

In addition, the ideal candidate will:

- Have teaching experience to include experience of content generation, exam preparation and assessment, project supervision and the use of online teaching platforms and technology assisted learning
- Demonstrate an Internationally relevant research track record
- Be goal orientated, collaborative, use their initiative and show management potential
- Demonstrate excellent interpersonal and communication skills consistent with the highest quality of teaching and learning, with evidence of successful teamwork and a collegial approach
- Applications are specifically invited from those with strong relevant research credentials and publication record. Of particular interest is high level research in the area of electromechanical systems, power generation, system dynamics and robotics/automation.

Mandatory Training

The appointee will be required to undertake the following mandatory compliance training: GDPR; Orientation, and Compliance. Other training may need to be undertaken when required.