Dublin City University
Faculty of Science and Health
School of Physical Sciences
Full Professor of Plasma Physics
Permanent Contract

Dublin City University
Dublin City University [www.dcu.ie](http://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, broad education appropriate to the challenges and opportunities of the 21st century. As Ireland’s University of Enterprise, it is characterised by a focus on innovation and entrepreneurship along with a track record of effective engagement with the enterprise sector. Excellence in its education and research activities has led to its consistent position in the rankings of the world’s top young universities (e.g. THE 100 Under 50).

DCU School of Physical Sciences
The DCU School of Physical Sciences was established in 1980 as one of the foundation schools of DCU (then NIHED). The School offers a wide range of undergraduate and postgraduate programmes and also supports a vibrant community of PhD scholars. It takes great pride in the achievements of its graduates who have gone on to play key roles nationally and internationally in research, education, industry and many other professional domains. The focus of the School is on applied physics and translational research, with plasma science as one of its main priority areas.

National Centre for Plasma Science and Technology (NCPST)
Reflecting the focus on translational research, underpinned by excellence in fundamental physics, the National Centre for Plasma Science and Technology (NCPST) is one of four research centres hosted by the School. The NCPST was established in 1999 through a combination of state and private funding under the HEA- PRTLI Phase 1 programme. Since its establishment, the NCPST has enabled researchers at DCU to secure funding from Science Foundation Ireland (SFI), Enterprise Ireland (EI), Irish Research Council (IRC), a range of EU research funding programmes and industry. It has also brought together large-scale collaborations with major industry leaders such as IMEC, Scientific Systems Ltd, LAM Research, Johnson & Johnson, and INTEL. Of international importance, the NCPST is part of the Euratom fusion R&D programme which has its focus on the construction of the world’s largest energy research project, ITER. Europe is represented in this project by F4E (Fusion for Energy) and NCPST manages Ireland’s contribution. The NCPST has also grown a significant presence and activity in plasma applications and technology, now a major focus of the centre. It has also provided a platform for significant initiatives in undergraduate, postgraduate and continuing education. The NCPST is one of DCU’s longest standing and important research centres and is a key contributor to DCU’s international standing in terms of annual publications and citations.

Full Professor of Plasma Physics
In line with its strategy as a University of Enterprise, and with a focus on translational research, Dublin City University seeks to appoint an outstanding individual to the position of Full Professor of Plasma Physics with an emphasis on applications of low temperature plasmas. The successful candidate will have a high profile in the field and possess an exceptional track record of teaching, research and contribution to the field.
Reporting to the Head of School, the DCU School of Physical Sciences is now seeking to appoint an exceptional, internationally recognised plasma physicist, committed to the pursuit of cutting-edge research, who will support strategic research leadership in the School and the NCPST Research Centre, and also to DCU, as the need arises. The successful candidate will also be expected to use prior experience to support teaching, curriculum development, and administrative activities in the School, across all levels. This position presents an exciting opportunity for an appointee to make a significant contribution to the future of DCU as it enters its next stage of major development.

Duties and Responsibilities:
Duties and responsibilities attaching to this post include, but are not limited to:

-Research & Scholarship
Leading research and scholarship activity in the DCU School of Physical Sciences by:
  - Publishing new ideas and findings in top tier international journals
  - Seeking substantial funds from external agencies and/or organisations to support personal and School research initiatives
  - Leading the development of collaborative and interdisciplinary research within the School and wider University
  - Providing research mentorship to support early career academics
  - Leading the dissemination of research via the hosting of research conferences, workshops, seminars, etc
  - Enhancing the reputation of the School in the international research community via conference presentations, journal editorships, external examining, etc
  - Developing and leveraging international research networks to enrich the research activity of the School
  - Enriching the research culture and environment in the School

-Teaching and Learning
Leading teaching and learning activity in the DCU School of Physical Sciences by:
  - Delivering teaching in a manner consistent with the highest academic standards
  - Using a wide range of teaching and assessment methodologies which foster a deep approach to learning and which equip students with the skills and attributes needed to be lifelong learners
  - Designing and developing a new Level 9 (Masters) degree level programme in plasma physics and its applications and a suite of microcredentials, in collaboration with relevant industry partners, as appropriate
  - Fostering a culture of teaching innovation within the School as it relates to on-campus, blended and remote/online activities
  - Supervising PhD students and contributing to the School’s PhD supervisory process
  - Enriching the scholarship of teaching within the School

-Service and Contribution to School and University
  - Contributing to the leadership, management and administration of the DCU School of Physical Sciences and the NCPST Centre by:
    - Delivering management and service roles to a high standard (including, as required, roles such as, Head of School, Associate Dean and Executive Dean)
    - Actively engaging in accreditation-related activities
    - Engaging in, and contributing to, staff development activities
  - Contributing proactively to relevant School and University committees, working groups and meetings

-External Engagement
Enhancing the reputation of the DCU School of Physical Sciences through engagement in, and leadership of,
external academic, business (including consultancy), professional, public sector and community activities (approved by the Executive Dean, where appropriate).

**Candidate Requirements**

Applications are invited from senior academics who are highly active researchers within the area of low temperature plasma physics with an emphasis on applications. Applicants must possess a PhD in Physics.

The successful candidate will be expected to have:

- An outstanding track record of research in low-temperature plasma physics, including both low pressure and atmospheric pressure plasmas
- An excellent and sustained publication record of the highest international standard in plasma physics and its applications
- Significant evidence of esteem in the field of plasma physics by way of prizes, awards, invitations to speak at international conference, carry out reviews, editorships, etc.
- A proven track record of significant success in attracting external research funding
- Deep knowledge of plasmas in molecular gases, with relevance to novel interdisciplinary applications, such as plasma medicine, plasma agriculture and environmental applications
- Evidence of working at the interface of experiments and computational techniques with experience in both, including advanced diagnostics and laser spectroscopy techniques
- The ability to exploit of ultrafast plasma diagnostic techniques
- Experience of working with stake holders such as industrial partners
- Experience of leadership, including strategy development and management of complex research programmes

The successful candidate will also be expected to have:

- Deep experience of teaching delivery along with module and/or programme development at undergraduate and postgraduate levels
- Evidence of teaching excellence and innovation in on-campus, blended and/or online settings
- A track record of successful supervision of a substantial number of PhD students to completion as sole or joint primary supervisor.

Candidates must also demonstrate excellent interpersonal and communication skills consistent with the highest quality of teaching, research, management and external engagement, together with evidence of successful teamwork and a collegial approach.

The successful candidate will play an important role in the further enrichment of the School’s national and international reputation; they must demonstrate clear leadership attributes and skills and have the ability, interest and commitment to inspire and motivate colleagues with regard to all areas of activity of the DCU School of Physical Sciences.

Evidence of effective external engagement (academia, business community, media and wider society) is highly desirable and candidates must demonstrate a commitment to such activities which are in keeping with School’s mission and strategy.

**Mandatory Training**

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