College | Management Unit:	UCD College of Engineering & Architecture
School | Unit:	UCD School of Civil Engineering
Post Title & Subject Area: *(if relevant)*	**UCD Post-doctoral Research Fellow Level 1**
Project:	Advanced Rock Anchoring for Offshore Renewable Energy (ARORE)
Post Duration:	Temporary 24 months post
Salary Scale:	€46,805 - €53,391 per annum
Line Manager:	Dr Budi Zhao
Competition Ref. N^{o}:	019659
HR Administrator:	Arianna Eady
For Applications and Closing Date:	https://www.ucd.ie/workatucd/jobs/
Eligible for Work Permit:	Yes

Position Summary:

This project aims to advance the testing, modelling, and design of rock anchor systems for offshore renewable energy infrastructure, with a focus on shallow and fractured bedrock conditions relevant to Irish offshore sites. The role will contribute to an integrated programme of laboratory testing, numerical modelling, data analysis, and design-oriented interpretation of single and group rock anchor behaviour under static and cyclic loading.

This is a research focused role, where you will conduct a specified programme of research supported by research training and development under the supervision and direction of a Principal Investigator.

The primary purpose of the role is to further develop your research skills and competences, including the processes of publication in peer-reviewed academic publications, the development of funding proposals, the mentorship of graduate students along with the opportunity to develop your skills in research led teaching.

In addition to the Principal Duties and Responsibilities listed below, the successful candidate will also carry out the following duties specific to this project:

- Lead the development, calibration, and operation of laboratory test rigs for rock anchor and micropile testing.
- Design and conduct static and cyclic loading tests on single and group anchor configurations.
- Process and interpret experimental data, including load–displacement response, failure mechanisms, cyclic response, and group interaction effects.
- Develop and calibrate numerical models of rock anchor behaviour using software such as PLAXIS, ABAQUS, or similar.
- Integrate experimental and modelling results to support design recommendations for offshore anchor systems.
- Contribute to journal papers, conference papers, technical reports, presentations, and stakeholder-facing outputs.
- Assist with mentoring research students and supporting project meetings, reporting, and dissemination activities.

Principal Duties and Responsibilities:

- Conduct a specified programme of research and scholarship under the supervision and direction of your Principal Investigator.

- Engage in appropriate training and professional development opportunities as required by your Principal Investigator, your School or Institute, or the University.
- Engage in the dissemination of the results of the research in which you are engaged as directed by and with the support of and under the supervision of your Principal Investigator.
- Engage in the wider research and scholarly activities of your research group, School and Institute.
- Mentor and assist, as appropriate and as directed, the research graduate students in your group, School and Institute.
- Carry out administrative work associated with your programme of research.

Overview of the School/Unit:

The UCD School of Civil Engineering is one of Ireland's leading centres for civil engineering education and research. The School has strong expertise across geotechnical engineering, structural engineering, water and environmental engineering, transport, infrastructure, and sustainable built environment research. It supports a vibrant research culture, with active collaborations across academia, industry, public bodies, and international partners.

The successful candidate will join a growing geotechnical research environment focused on offshore geotechnics, energy geostructures, ground improvement, geomaterial behaviour, and infrastructure resilience. The role will provide opportunities to contribute to research with direct relevance to offshore renewable energy and low-carbon infrastructure.

PD1 Salary: €46,805 - €53,391 Per Annum

Appointment on the above range will be dependent on qualifications and experience

Details on eligibility to compete and pension information is available at
https://www.ucd.ie/hr/resourcing/eligibilitytocompete/

About University College Dublin

University College Dublin (UCD) is one of Europe's leading research-intensive universities and Ireland's largest universities, with a vibrant community of over 39,000 students and 4,000 staff from more than 152 countries. UCD combines a rich academic heritage with a global outlook, fostering innovation, creativity, and excellence across teaching, research, and public engagement.

Situated on a beautiful, parkland campus at Belfield, UCD offers a dynamic and inclusive environment where ideas flourish and collaboration thrive. As a world top 1% university, UCD is recognised for its impact on society - from groundbreaking research and sustainable innovation to nurturing future leaders across all disciplines.

Joining UCD means becoming part of a community that values excellence, integrity, diversity, and collaboration. Staff enjoy exceptional professional development opportunities, a supportive and flexible working culture, and the chance to contribute to meaningful work that shapes the future locally and globally.

UCD is committed to creating an inclusive environment where diversity is celebrated and everyone is afforded equality of opportunity. We welcome applications from applicants from all backgrounds, including those who identify with any of the protected characteristics that are set out in our Equality, Diversity and Inclusion policy. Learn more about Diversity at https://www.ucd.ie/workatucd/diversity/

Reasonable accommodations will be provided to any applicant during the interview process who discloses they have a disability or are neurodiverse.

Benefits of Working at University College Dublin

Working at University College Dublin offers a wide range of benefits designed to support staff wellbeing, professional growth, and work–life balance. Employees enjoy flexible and family-friendly working arrangements, including hybrid work options, job sharing, and generous leave policies. UCD provides a strong pension scheme, income protection, and travel-related savings such as tax-efficient commuter and cycle-to-work plans. Staff have access to professional development opportunities through LinkedIn Learning, study leave, and structured career progression frameworks. The university fosters an inclusive and supportive community, offering wellbeing programs and employee assistance services, while the Belfield campus provides excellent facilities, discounts, and sports amenities. Overall, UCD promotes a positive, balanced, and development-focused working environment.

More details can be found here: Benefits - Work at UCD

Selection Criteria

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

Mandatory:

- PhD in Civil Engineering, Geotechnical Engineering, Structural Engineering, or a closely related discipline.
- Research experience in geotechnical engineering, rock mechanics, offshore foundations, soil/rock–structure interaction, laboratory testing, or numerical modelling.
- Experience in finite element modelling using PLAXIS, ABAQUS, COMSOL, or similar software.
- Experience in data analysis and scientific programming, for example Python, MATLAB, or equivalent.
- A demonstrated commitment to research and publications.
- An understanding of the operational requirements for a successful research project.
- Evidence of research activity (publications, conference presentations, awards) and future scholarly output (working papers, research proposals, and ability to outline a research project.
- Excellent Communication Skills (Oral, Written, Presentation etc).
- Excellent Organisational and Administrative skills including a proven ability to work to deadlines.
- Candidates must demonstrate an awareness of equality, diversity and inclusion agenda.

The PD1 position is intended for early-stage researchers, either just after completion of a PhD or for someone entering a new area for the first time. If you have already completed your PD1 stage in UCD or will soon complete a PD1, or you are an external applicant whose total Postdoctoral experience, inclusive of the duration of the advertised post, would exceed 4 years, you should not apply and should refer to PD2 posts instead.

Desirable:

- Experience with static or cyclic loading tests, pull-out testing, instrumentation, or laboratory test rig development.
- Experience with offshore renewable energy infrastructure, anchor systems, pile foundations, shallow bedrock, or fractured rock.

- Experience presenting research at scientific conferences through posters or oral presentations.
- Demonstrated ability in technical report writing.
- Experience in setting own research agenda.

Supplementary information:

The University:	https://www.ucd.ie/
UCD Strategy 2030: Breaking Boundaries	https://strategy.ucd.ie/
The College/Management Unit:	https://www.ucd.ie/eacollege/
The School/Programme Office/Unit:	https://www.ucd.ie/civileng/
Equality Diversity and Inclusion at UCD:	https://www.ucd.ie/workatucd/diversity/
Moving to Ireland Guidelines:	https://www.ucd.ie/workatucd/locationculture/movingtoireland/
Other:	https://www.seai.ie/seai-research/research-funding/research-development-and-demonstration-fund

UCD offers a comprehensive **Research Careers Framework** in line with the Advisory Science Council Report '*Towards a Framework for Researcher Careers'*. This model provides a structured and supportive **Career and Skills Development** system designed to ensure that Post-docs in UCD are able to plan their careers and prepare for future opportunities in academia, industry or the public sector. For more information, please click here

Informal Enquiries ONLY to:

Name:	Dr Budi Zhao
Title:	Assistant Professor
Email address:	budi.zhao@ucd.ie

College | Management Unit:	UCD College of Engineering & Architecture
School | Unit:	UCD School of Civil Engineering
Post Title & Subject Area: *(if relevant)*	**UCD Post-doctoral Research Fellow Level 2**
Project:	Advanced Rock Anchoring for Offshore Renewable Energy (ARORE)
Post Duration:	Temporary 24 months post
Salary Scale:	€54,850 - €59,654 per annum
Line Manager:	Dr Budi Zhao
Competition Ref. N^{o}:	019659
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Position Summary:

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This is an advanced research focused role, building on your prior experience as a post-doctoral fellow, where you will conduct a specified programme of research supported by research training under the supervision and direction of a Principal Investigator.

The primary purpose of the role is to develop new or advanced research skills and competences, on the processes of publication in peer-reviewed academic publications and scholarly dissemination, the development of funding proposals, and the supervision and mentorship of graduate students along with the opportunity to develop your skills in research led teaching.

In addition to the Principal Duties and Responsibilities listed below, the successful candidate will also carry out the following duties specific to this project:

- Lead the development, calibration, and operation of laboratory test rigs for rock anchor and micropile testing.
- Design and conduct static and cyclic loading tests on single and group anchor configurations.
- Process and interpret experimental data, including load–displacement response, failure mechanisms, cyclic response, and group interaction effects.
- Develop and calibrate numerical models of rock anchor behaviour using software such as PLAXIS, ABAQUS, or similar.
- Integrate experimental and modelling results to support design recommendations for offshore anchor systems.
- Contribute to journal papers, conference papers, technical reports, presentations, and stakeholder-facing outputs.
- Assist with mentoring research students and supporting project meetings, reporting, and dissemination activities.

Principal Duties and Responsibilities:

- Conduct a specified programme of research and scholarship under the supervision and direction of your Principal Investigator.
- Engage in appropriate training and professional development opportunities as required by your Principal Investigator, your School or Institute, or the University.
- Support your Principal Investigator and research group in the design and development of the research programme.
- Support if required, the development of proposals for research funding.
- Engage in the dissemination of the results of the research in which you are engaged as directed by and with the support of and under the supervision of your Principal Investigator.
- Engage in the wider research and scholarly activities of your research group, School and Institute.
- Take responsibility as requested for day-to-day advice and support of graduate research students associated with your research group.
- Mentor and assist, as appropriate and as directed, the research graduate students in your group, School and Institute.
- Carry out administrative and management work associated with your programme of research.

Overview of the School/Unit:

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PD2 Salary: €54,850 - €59,654 Per Annum

Appointment on the above range will be dependent on qualifications and experience

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Selection Criteria

Selection criteria outline the qualifications, skills, knowledge and/or experience that the successful candidate would need to demonstrate for successful discharge of the responsibilities of the post. Applications will be assessed on the basis of how well candidates satisfy these criteria.

Mandatory:

- PhD in Civil Engineering, Geotechnical Engineering, Structural Engineering, or a closely related discipline.
- 2 years postdoctoral research experience,
- Research experience in geotechnical engineering, rock mechanics, offshore foundations, soil/rock–structure interaction, laboratory testing, or numerical modelling.
- Experience in finite element modelling using PLAXIS, ABAQUS, COMSOL, or similar software.
- Experience in data analysis and scientific programming, for example Python, MATLAB, or equivalent.
- Demonstrated understanding of operational requirements for a successful research project and managing resources.
- Knowledge and application of the principles underpinning successful grant application.
- Ability to identify and fulfil the academic writing requirements for target publications.
- Proven record of working with team members and PhD students to help build their research skill and knowledge and to support and guide their professional development.
- Generates new ideas and links and builds upon existing ideas to generate unique concepts and solutions.
- Candidates must demonstrate an awareness of equality, diversity and inclusion agenda.

The PD2 post is intended for researchers that have completed PD1. As with the PD1, if you have already completed your PD2 stage in UCD or will soon complete a PD2, or your total Postdoctoral experience, inclusive of the duration of the advertised post, would exceed 6 years, you should not apply and should refer to Research Fellow posts instead.

Desirable:

- Experience with static or cyclic loading tests, pull-out testing, instrumentation, or laboratory test rig development.
- Experience with offshore renewable energy infrastructure, anchor systems, pile foundations, shallow bedrock, or fractured rock.
- Experience presenting research at scientific conferences through posters or oral presentations.
- Demonstrated ability in technical report writing.
- Experience in setting own research agenda.

- Demonstrated understanding of the value of academic and commercial information e.g. non-disclosure agreements.
- Knowledge of IP processes and know how to protect findings.

Supplementary information:

The University:	https://www.ucd.ie/
UCD Strategy 2030: Breaking Boundaries	https://strategy.ucd.ie/
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The School/Programme Office/Unit:	https://www.ucd.ie/civileng/
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Moving to Ireland Guidelines:	https://www.ucd.ie/workatucd/locationculture/movingtoireland/
Other:	https://www.seai.ie/seai-research/research-funding/research-development-and-demonstration-fund

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Informal Enquiries ONLY to:

Name:	Dr Budi Zhao
Title:	Assistant Professor
Email address:	budi.zhao@ucd.ie