

Research Associate in Offshore Renewable Energy Structures

Department	Naval Architecture, Ocean and Marine Engineering (www.strath.ac.uk/engineering/navalarchitectureoceanmarineengineering/)		
Faculty	Faculty of Engineering (www.strath.ac.uk/engineering/)		
Staff Category	Research	Reference No	590334
Reports To	Professor Ali Mehmanparast	Grade:	7
Salary Range:	£36,024 - £44,263	Contract Type:	Fixed Term (36 months)
FTE:	1 (35 hours/week)	Closing Date	Friday, 30 August 2024

Job Advert

University of Strathclyde hosts the highest ranked Naval Architecture, Ocean and Marine Engineering (NAOME) Department in Europe and is a world-leader in marine structural integrity. The NAOME Department has recently secured a major programme grant awarded by the Engineering and Physical Sciences Research Council (EPSRC) to establish a world leading research partnership on tidal stream energy in collaboration with the Universities of Oxford, Edinburgh and Sheffield. “Co-design to deliver Scalable Tidal Stream Energy” (CoTide) is an ambitious 5-year programme to develop and demonstrate holistic integrated tools and design processes for tidal stream energy that will help to reduce costs and support innovation to accelerate technology development and deployment for the tidal stream industry. Together, a team of around 35 researchers and academics from the Universities of Oxford, Edinburgh, Strathclyde and Sheffield will develop holistic integrated models covering all aspects of tidal stream turbine design from hydrodynamics, through structures and fatigue, to reliability.

The NAOME Department seeks to appoint a Research Associate with strong track record in materials, manufacturing and structural integrity to join the CoTide research team at the University of Strathclyde. The successful candidate will be working in a collaborative multi-disciplinary environment to identify engineering challenges associated with Material Degradation, Structural Integrity, Materials & Manufacturing Technologies, and establish engineering solutions to provide reliable, sustainable, scalable and affordable tidal energy. The research associate will particularly focus on understanding of environmental damage effects on material degradation and structural response in corrosion and abrasion environments, development of a tidal stream specific experimental database of material structural integrity properties, and establishment of numerical and experimental models of functionally graded and hybrid additively manufactured materials for fabrication and repair of tidal turbine support structures.

As a Research Associate, under the general guidance of a research leader, you will play a key role in delivery of the research objectives in the CoTide programme, conduct individual and collaborative research related to offshore renewable energy structures, contribute to the development of new research methods, and contribute to the securing of funds for future research. You will write up research work for publication, individually or in collaboration with colleagues, and disseminate the results via peer-reviewed journal publications and presentation at international conferences. You will join external networks to share information and ideas, inform the development of research objectives and to identify potential sources of funding. You will collaborate with colleagues to ensure that research advances inform departmental teaching effort and work on the development of knowledge exchange activities by, for example, participating in initiatives which establish research links with industry and influence public policy and the professions. You will supervise student projects, provide advice to students and contribute to teaching as required. You will contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees and engage in continuous professional development.

To be considered for the role, you will be educated to a minimum of PhD level in a relevant discipline such as Mechanical/Civil/Materials/Aerospace/Structural Engineering or Naval Architecture, or have significant experience in addition to

a relevant degree. You will have sufficient breadth or depth of knowledge in structural integrity, materials science and engineering, advanced manufacturing technologies, offshore renewable energy structures, and a developing ability to conduct individual research work to disseminate results and to prepare research proposals. You will have an ability to plan and organise your own workload effectively and work within a collaborative team environment. You will have excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.

Job Description

Brief Outline of Job:

To undertake structural integrity research in CoTide programme and broader offshore renewable energy projects under the general guidance of a research leader; to establish a personal research portfolio and plan research proposals with assistance from senior colleagues as required; to engage where required in relevant teaching, professional and knowledge exchange activities; and input to administrative activities.

Main Activities/Responsibilities:

1.	Play a key role in relation to the CoTide programme and broader offshore renewable energy projects, and develop research objectives and proposals for wider range of relevant research activities.
2.	Plan and manage own workload, with guidance from colleagues as required.
3.	Conduct individual and/or collaborative research, including determining appropriate research methods and contributing to the development of new research methods.
4.	Identify sources of funding and contribute to the securing of funds for research, including drafting grant proposals and planning for future proposals.
5.	Write up research work for publication, individually or in collaboration with colleagues, and disseminate results as appropriate to the discipline by, for example, peer-reviewed journal publications and presentation at international conferences.
6.	Join external networks to share information and ideas, inform the development of research objectives and to identify potential sources of funding.
7.	Collaborate with colleagues to ensure that research advances inform departmental teaching effort.
8.	Collaborate with colleagues on the development of knowledge exchange activities by, for example, participating in initiatives which establish research links with industry and influence public policy and the professions.
9.	Supervise student projects, provide advice to students and contribute to teaching as required.
10.	Contribute in a developing capacity to Department/School, Faculty and/or University administrative and management functions and committees.
11.	Engage in continuous professional development.

Person Specification

Educational and/or Professional Qualifications

(E=Essential, i.e. a candidate must meet all essential criteria to be considered for selection, D=Desirable)

E1 Good honours degree and PhD (or equivalent professional experience) in an appropriate discipline such as Mechanical/Civil/Materials/Aerospace/Structural Engineering or Naval Architecture

D1 Membership of relevant Chartered/professional bodies (including Higher Education Academy).

Experience

E2 Sufficient breadth or depth of knowledge in experimental and numerical offshore structural integrity to contribute to CoTide programme and to the development of research activities.

D2 Some relevant work experience in offshore renewable energy sector.

D3 Experience of relevant student supervision and teaching activities.

D4 Experience of knowledge exchange related activities.

Job Related Skills and Achievements

- E3 Developing ability to conduct individual research work, to disseminate results and to prepare research proposals.
- E4 Ability to plan and organise own workload effectively.
- E5 Ability to work within a team environment.

Personal Attributes

- E6 Excellent interpersonal and communication skills, with the ability to listen, engage and persuade, and to present complex information in an accessible way to a range of audiences.
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Application Procedure

Applicants are required to complete an application form including the name of three referees who will be contacted without further permission, unless you indicate that you would prefer otherwise. Applicants should also submit a Curriculum Vitae and a covering letter detailing the knowledge, skills and experience you think make you the right candidate for the job. Applicants should also complete the Equal Opportunities Monitoring Form.

Other Information

Further information on the application process and working at Strathclyde can be found on our website (<http://www.strath.ac.uk/hr/workforus>).

Informal enquiries about the post can be directed to Prof. Ali Mehmanparast, Professor of Structural Integrity (ali.mehmanparast@strath.ac.uk).

Conditions of Employment

Conditions of employment relating to the Research staff category can be found at: [Conditions of Employment](#).

Rewards and Benefits

Our staff have access to a wide range of outstanding benefits that include financial rewards, family friendly and wellbeing benefits and career development opportunities, details of which can be found [here](#).

Probation

Where applicable, the successful applicant will be required to serve a 9 month probationary period.

Pension

The successful applicant will be eligible to join the Universities' Superannuation Scheme. Further information regarding this scheme is available from [Payroll and Pensions](#).

Relocation

Where applicable, the University offers a relocation package to support new employees who meet the eligibility criteria. The relocation package is offered as a contribution towards costs incurred, and is designed to be flexible, allowing staff to use the financial support available in the way that will be most helpful to them. Further details are outlined in the Relocation Policy.

Interviews

Formal interviews for this post are scheduled to be held on a date to be confirmed.

Equality and Diversity

The University of Strathclyde is a socially progressive institution that strives to ensure equality of opportunity and celebrates the diversity of its student and staff community. Strathclyde is people-oriented and collaborative, offering a supportive and flexible working culture with a deep commitment to our equality, diversity and inclusion charters, initiatives, groups and networks.

We strongly encourage applications from Black, Asian and minority ethnicity, women, LGBT+, and disabled candidates and candidates from lower socio-economic groups and care-experienced backgrounds.

University Values

The University's Values capture what we're all about: who we are, what we believe in and what we stand for. [Our Values](#) have been derived from how we act and how we expect to be treated as part of Strathclyde.

