Candidate Information

Position:	Research Fellow - CASE
School/Department:	Environmental Change and Resilience
Reference:	21/108648
Closing Date:	Monday 1 March 2021
Salary:	£33,797 to £40,322 per annum
Anticipated Interview Date:	Friday 12 March 2021
Duration:	15-20 months depending on hours

JOB PURPOSE:

To be an active member of the research project/team contributing to the delivery of the research objective of the Centre for Advanced Sustainable Energy (CASE) funded project entitled “Floating Solar Energy – a contributor to decarbonisation”. The key objectives of the overall research programme are to support the development of design tools for floating solar arrays through the development of numerical models and the verification and validation of wind loading from physical measurements on a prototype. Also, the deployment potential for FPV in Northern Ireland will be researched along with initial studies on the feasibility of combined floating thermal and PV arrays.

MAJOR DUTIES:

1. Research under supervision within “Floating Solar Energy – a contributor to decarbonisation” Project.
2. Be an active research member of the project research team with the aim of delivery of the project objectives and contribute to the wider goals of CASE (The Centre for Advanced Sustainable Energy).
3. Support the verification and validation of the suite of numerical models under development designed to accurately predict the motions and loading of various floating solar platform designs.
4. Establish the potential for floating solar energy deployment in Northern Ireland and engage with potential stakeholders.
5. Undertake preliminary research on the feasibility of a combined floating solar PV and thermal installation.
6. Produce an outline proposal for a community-scale project.
7. Develop strong working relationships with the industrial partners working with CASE project.
8. Disseminate the results of the research within the sector through the presentation of conference papers and attendance/presentations at seminars and exhibitions etc. in consultation with the supervisor.
9. Writing journal papers in consultation with the supervisor in high impact factor journals in the field of marine/offshore/ocean engineering.
10. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to the area of research.
11. Present regular progress reports on research to project partners, members of the CASE management team or to external audiences to disseminate and publicise research findings.
12. Assist the academic supervisors and industrial partners with administrative tasks associated with the project to ensure it is completed on time and within budget, e.g. organisation of project meetings and documentation, risk assessment of research activities, collection and collation of industry timesheets. These include the organisation of project meetings and documentation, financial control, risk assessment of research activities.
13. Read academic papers, journal and textbooks to keep abreast of developments in own specialism and related disciplines.

Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-6 months in advance and contribute to research group planning.
2. Plan for the use of research resources, field, laboratories and workshops where appropriate.
3. Plan own day-to-day activity within the framework of the agreed research programme.

4. Plan up to a year in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group overwork progress.
6. Coordinate and liaise with industrial project partners and subcontractors.

Resource Management Responsibilities:

1. Ensure research resources are used effectively and efficiently to ensure the timely delivery of research outputs.
2. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:

1. Liaise regularly with the industrial partners to ensure the work programme is supporting the development of floating solar technology.
2. Liaise regularly with colleagues and students interested in marine research.
3. Participate and support the CASE Researcher group.
4. Build internal contacts and participate in internal networks for the exchange of information and form relationships for future collaboration.
5. Disseminate the output from the research project to relevant commercial and government organisations.
6. Join external networks to share information and ideas.
7. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a PhD in Naval Architecture, Ocean/Offshore engineering, Coastal and marine engineering, Mechanical or Civil Engineering.
2. At least 3 years recent relevant research experience in Marine engineering or Offshore/Ocean engineering with proven experience of research methods and techniques used in established research programmes.
3. Evidence of a strong publication record commensurate with career stage and experience.
4. Proven ability in managing resources and project finances.
5. Willingness to contribute to the School's outreach programme by establishing links with local community groups, industries etc.
6. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
7. Proven skills of working with industrial partners.
8. Ability to communicate complex information.
9. Ability to build contacts and participate in internal and external networks.
10. Demonstrable intellectual ability.
11. Ability to assess and organise resources; Proven ability to assess and organise resources to ensure delivery to project milestones.
12. Ability to meet the travel requirements of this post, e.g. site visits.

DESIRABLE CRITERIA:

1. Fluid-Structure-Interaction and/or Hydrodynamic analysis as part of their PhD subject.
2. One-year post-doctoral experience in the design of marine structures for commercial projects.
3. Proven Experience of working on an industry lead project or project with considerable industry input, working in a multi-institutional and interdisciplinary team.
4. Previous experience in using data acquisition, data analysis and post-processing tools.
5. Having track record of real world physical testing of marine engineering structures for the validation of numerical models.

ADDITIONAL INFORMATION:

This position is available either on a Full-time basis (1.0) for 15 months or on a part-time basis (0.75) for 20 months. This project has a funding end date of 1 March 2023.