

## Candidate Information

<b>Position:</b>	PDRA - NodeZero
<b>School/Department:</b>	School of Natural and Built Environment
<b>Reference:</b>	24/112291
<b>Closing Date:</b>	Monday 25 November 2024
<b>Salary:</b>	£39,922 - £43,605 per annum.
<b>Anticipated Interview Date:</b>	Monday 2 December 2024
<b>Duration:</b>	6 months

### JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of the Marine research group (MRG). The post is for the principal researcher for sea trials of a novel wave-energy conversion technology for industry-academia collaborative research and will be supported as part of a team to deliver on-water research.

The sea trials will provide critical performance assessment and insight for advancing the technologies to commercialisation. The post is a critical role, and as such, successful applicants will have responsibilities in independent research, planning, data analysis, publications, collaborations, and outreach.

### MAJOR DUTIES:

1. Undertake research as a member of the research team to support the assessment a Wave Energy Converter (WEC) performance criterion against the designed criteria.
2. Carry out analyses, critical evaluations, and interpretations of experimental data and the literature using methodologies and other techniques appropriate to area of research for example:
  - o Resource assessment of wave energy deployment site.
  - o Performance assessment of wave energy converter.
  - o Seakeeping and mooring analysis.
3. Specify and procure relevant instrumentation and services within budget and timelines of the project.
4. Document working procedures, method statements and risk assessments in association with the proposed work.
5. Produce high quality research outputs consistent with project aims and commensurate with career stage. This will include collaborating and co-authoring with PI and project team (as appropriate) on outputs.
6. Manage data collection and storage.
7. Assist grant holder in the preparation of funding proposals and applications to external bodies.
8. Carry out occasional undergraduate/ postgraduate project supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
9. Provide assistance and feedback to PhD students and other Post Docs with regards to presentations, journal publications and general research work.
10. Contribute to the effective running of the marine research group and Queen's marine laboratory in collaboration with the group.

### ESSENTIAL CRITERIA:

1. Normally have or be about to obtain a PhD in Engineering or Physics. (NB 'About to obtain' is normally defined as within 3 months of application date).
2. Specific, relevant research experience to include:
  - Undertaking research in the area of experimental/ commercial testing of wave energy converters (or similar offshore structures).
  - Demonstrable experience of resource analysis and evaluation of experimental data from lab or field testing.
  - Strong publication record commensurate with stage of career.
3. Ability to contribute to broader management and administrative processes.

4. Contribute to the School's outreach programme by links with industry, community groups etc.
5. Practical problem solving skills, independence of thought and initiative.
6. Ability to assess and organise resources.
7. Ability to communicate complex information in English effectively in oral and written format.
8. Ability to build relationships to develop internal and external networks.
9. Commitment to continuous professional development.

**DESIRABLE CRITERIA:**

1. Proven track record in:
  - Numerical modelling of wave energy converters.
  - Sea-trials of marine renewable energy technology.
  - Seakeeping or mooring design.
  - Simulink modelling of mechanical-electrical systems or mechanical-hydraulic systems.

**ADDITIONAL INFORMATION:**

Informal enquiries can be directed to: Paul Brewster - [paul.brewster@puremarinegen.com](mailto:paul.brewster@puremarinegen.com)