



OLLSCOIL NA GAILLIMHĒ
UNIVERSITY OF GALWAY



HR EXCELLENCE IN RESEARCH

**Postdoctoral Researcher/Research Associate – Increasing Coastal Resilience
Using Terrestrial and Ocean-based Nature-based Solutions
School of Engineering
Ref. No. 011721**

JOB ADVERTISEMENT

Applications are invited from suitably qualified candidates for a 1½-year, full-time, fixed term position as a Postdoctoral Researcher/Research Associate with Discipline of Civil Engineering at the University of Galway, Ireland.

This position is funded by the Marine Institute and is available from 1st July 2026 to contract end date of 31st December 2027.

The project is seeking a highly qualified and ambitious candidate to undertake an 18-month fixed term postdoctoral research project aimed at enhancing our understanding of coastal and ocean-based nature-based solutions (NbS) for coastal protection in Ireland. The project will focus on numerical modelling of ocean-based NbS and habitat suitability mapping using GIS. The modelling will involve coupled wave and coastal morphology modelling to simulate the wave energy dissipation potential of marine vegetation. The habitat suitability mapping will be achieved by developing a GIS system using all relevant databases available in Ireland to support NbS feasibility projects, including historic maps of ocean-based NbS ecosystem extent (e.g., oyster reefs, seagrass meadows, kelp forests) and data on the important factors (essential and/or desirable) to consider in site selection for restoration projects. The position is funded by the Irish Marine Institute Postdoctoral Fellowship Programme grant. The researcher will work closely with [Dr. Stephen Nash](#) (Civil Engineering) and [Dr. Eugene Farrell](#) (Geography). The position is suitable for candidates with backgrounds in ocean modelling and GIS mapping. This is an exciting opportunity to join a collaborative, supportive work environment where your research will not only advance scientific knowledge, but also deliver tangible benefits for society.

Salary: Postdoctoral Researcher/Research Associate salary scale €46,805 - €59,654 per annum, (subject to the project's funding limitations), and pro rata for shorter and/or part-time contracts.

The default position for all new public sector appointments is the 1st point of the salary scale. This may be reviewed, and consideration afforded to appointment at a higher point on the payscale (subject to the project's funding limitations), where evidence of prior years' equivalent experience is accepted in determining placement on the scale above point 1, subject to the maximum of the scale.

[\(Research Salary Scales - University of Galway\)](#)

Closing date for receipt of applications is 17:00 (Irish Time) on 14th April 2026. It will not be possible to consider applications received after the closing date.

***Please review full job description for further details and essential requirement**



JOB DESCRIPTION

Job Description:

The successful candidate will join the coastal and ocean engineering research group where they will work on an exciting coastal resilience Nature-based Solution project with two main components:

- (1) Conduct a numerical modelling investigation of the wave energy dissipation potential of marine plants such as kelp, seaweeds and sea grasses.
- (2) Develop a GIS system that will be used to produce suitability maps for NbS projects in Irish coastal waters and identify where data knowledge gaps exist.

Duties:

The main duties of the post will involve:

- Develop wave and coastal morphology models using SWAN and XBeach.
- Design model scenarios and analyse model outputs to quantify the wave energy dissipation potential of kelp, seagrasses and seaweed and inform the design of ocean nature-based solutions for coastal protection.
- Create a spatial database for Ireland using open-source tools to help identify potential NbS sites for a range of coastal and ocean habitats (dunes, wetlands, oysters, seagrass, kelp) and provide an assessment of data quality, human impacts, and management priorities.
- Prepare habitat map databases and report production (map structure and attribute tables; compile database; data management and presentation of results).
- Plan and manage day-to-day research activities, coordinate work packages, maintain documentation, and meet project milestones and deliverables.
- Prepare reports, technical documentation, and peer-reviewed publications, and present findings at meetings, workshops and conferences.
- Support the supervision and mentoring of postgraduate and undergraduate students, and contribute to training and limited teaching activities where appropriate.
- Maintain research records, data management, and compliance with funder and university policies, including research integrity, data protection and health & safety.
- Any other duties assigned commensurate to this level of post.

ELIGIBILITY REQUIREMENTS

Essential Requirements:

- PhD in coastal/ocean engineering, civil/mechanical engineering, oceanography, or a closely related discipline (candidates that have submitted their thesis but are awaiting their viva will also be considered).
- Proven experience with wave and coastal morphology models such as SWAN and XBeach.
- Strong proficiency in coding languages such as Python, Matlab, Fortran, or similar.



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- Proven experience with GIS software such as ArcGIS or QGIS and geospatial data management and analysis.
- Proven experience with using satellite imagery and Earth Observation tools.
- Demonstrated research track record, evidenced by peer-reviewed publications and ability to communicate results clearly (written and oral English).
- Strong project management skills including a proven record of meeting project deadlines.
- Excellent communication skills (in English), both oral and written.

Desirable Requirements:

- Strong computational skills including modification/development of wave/tidal modelling codes.
- Demonstrated ability to collect, manage and analyse large quantitative and/or qualitative datasets and conduct statistical analyses.
- Experience in model calibration, validation and quantitative analysis of environmental data, including use of observational datasets (e.g., buoy, satellite or met-ocean data).
- Demonstrate an interest and previous experience in areas such as habitat mapping and coastal and ocean science.
- Proven ability to work well in a team.

CONTINUING PROFESSIONAL DEVELOPMENT

Continuing Professional Development/Training:

Researchers at University of Galway are encouraged to avail of a range of training and development opportunities designed to support their personal career development plans. University of Galway provides continuing professional development supports for all researchers seeking to build their own career pathways either within or beyond academia. Researchers are encouraged to engage with our Researcher Development Centre (RDC) upon commencing employment - see [HERE](#) for further information.

FURTHER INFORMATION/LINKS

- **TO APPLY:** [Search Current University of Galway vacancies](#). Applications must be submitted online.
 - [How to apply guide](#)
- For informal enquiries, please contact Dr Stephen Nash (Senior Lecturer in Civil Engineering), School of Engineering. Email: stephen.nash@universityofgalway.ie.
- [University's Strategic Plan](#)
- [Working in Research at University of Galway](#)



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- [Moving to Ireland \(Euraxess\)](#)
- [Applicant Information](#)
- We reserve the right to re-advertise or extend the closing date for this post.
- University of Galway is an equal opportunities employer.
- All positions are recruited in line with Open, Transparent, Merit (OTM) and Competency based recruitment.

