Ollscoil na Gaillimhe
University of Galway

HR EXCELLENCE IN RESEARCH

Postdoctoral Researcher – Remote sensing of water quality

College of Science and Engineering

Ref. No. University of Galway 045-23

Applications are invited from suitably qualified candidates for a full-time fixed term position as a Postdoctoral Researcher with Civil Engineering at the University of Galway.

This position is funded by EPA and is available from 31st of March 2023 to contract end date of 31st of March 2026.

Job Description:
Since mid-20th century there has been observed a continuous deterioration of their quality across Europe. Irish transitional and coastal (TraC) waters are threatened by the synergistic effects of multiple environmental pressures such as nutrient enrichment, oxygen depletion and acidification among others. The overarching aim of this research post is to exploit Copernicus data to improve efficiency, accuracy and implementation of coastal water monitoring programmes. This project will bring forward the collection of environmental data into the 21st century and generate a significant step forward in our understanding of nutrient cycling, feedbacks, water quality problems and environmental stressor/pressures on aquatic environment related to human activities including climate change.

The successful candidate will be based at the University of Galway, Ireland and contribute towards a recently awarded project in the field of environmental protection. This project is funded by EPA, Ireland. The postdoctoral researcher/research assistant will be employed to undertake work in the area of a big data analysis for environmental applications. The researcher will develop machine learning (ML) and artificial Intelligence (AI) algorithms for water quality assessment. The successful candidate will work in a multidisciplinary team with colleagues in Civil Engineering Department at the University of Galway.

Duties:

- Conduct research (both independently and as part of a team) in the area of water quality and big data.
- Analysis and reconstruction of environmental data.
- Developing ML and AI algorithms for environmental applications.
- Application of water quality index models and assessment of water quality.
- Contribute to the writing of scientific papers and reports for international journals and progress reporting to other researchers and industry partners.
- Assist with the coordination of research activities and actively contribute to research outputs to meet project milestones.
- Participate in and/or present at conferences and/or workshops relevant to the project as required.
- Assist with the supervision of PhD and research students.

Qualifications/Skills required:

Essential Requirements:

- PhD (or be near to completing a PhD) in engineering, environmental science or related area.

- Demonstrated experience with machine learning and/or artificial intelligence models.
- Demonstrated experience with water quality assessment.
- Demonstrated experience with handling and analysis of big data for environmental applications.
- Experience in working with Matlab and/or Phyton.
- Demonstrated understanding of nutrients cycling in aquatic environment.
- Demonstrate excellent communication skills in English.
- Demonstrated track record of publications and conference presentations relative to opportunity.

Desirable Requirements:

- Demonstrated understanding of Water Quality Index models.
- Demonstrated ability to conduct independent research with limited supervision.
- Demonstrated ability to work in a team, collaborate across disciplines and build effective relationships.

Salary: Postdoctoral Researcher Point 1 €41,209 per annum pro rata for shorter and/or part-time contracts (public sector pay policy rules pertaining to new entrants will apply).

Start date: Position is available immediately

Continuing Professional Development/Training:
The 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 www.universityofgalway.ie/rdc for further information.'

Further information on research and working at University of Galway is available on Research at University of Galway

For information on moving to Ireland please see www.euraxess.ie

Further information about School of Engineering is available at weblink https://www.universityofgalway.ie/engineering/.
Informal enquiries concerning the post may be made to Dr. Indiana Olbert (Indiana.olbert@universityofgalway.ie)

To Apply:
Applications to include a covering letter, CV, and the contact details of three referees should be sent, via e-mail (in word or PDF only) to Indiana Olbert: Indiana.olbert@universityofgalway.ie

Please put reference number **University of Galway 045-23** in subject line of e-mail application.

Closing date for receipt of applications is 5.00 pm 7th March 2023.

We reserve the right to re-advertise or extend the closing date for this post.

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The University of Galway is an equal opportunities employer.

All positions are recruited in line with Open, Transparent, Merit (OTM) and Competency based recruitment

epa Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Athena Swan Ireland
EQUALITY CHARTER