OLLSCOIL NA GAILLIMHE
UNIVERSITY OF GALWAY

HR EXCELLENCE IN RESEARCH

Postdoctoral Researcher/Research Associate - Timber Engineering

Biofabricate Project

School Of Engineering

College of Science and Engineering/Ryan Institute

Ref. No. 011831

JOB ADVERTISEMENT

Applications are invited from suitably qualified candidates for a full-time, fixed-term 38-month contract position as a Postdoctoral Researcher/Research Associate with the Timber Engineering Research Group (TERG) at the School of Engineering, University of Galway, Ireland.

This position is funded by the Department of Agriculture, Food and the Marine (DAFM) and is available from 1 September 2026 to contract end date of 30 October 2029.

The *Integrated BIO-based Innovations for Sustainable Manufacturing, Construction, and Pharmaceutical Applications from Irish Forest Biomass* (BIOFABRICATE) project is funded in Ireland by DAFM under the 2025 Thematic Research Call (Project Ref: 2025R_544). This research is being carried out as part of a consortium led by University of Galway in collaboration with partners in Trinity College Dublin, Technological University Dublin, Atlantic Technological University Galway, Dublin City University and Teagasc, and includes 6 industry partners.

Project Background:

BIOFABRICATE aims to develop and validate advanced bio-based materials, products and technologies from the growing supply of Irish forest biomass, for applications in engineered timber construction, manufacturing, food packaging and pharmaceuticals.

The role at University of Galway directly supports the development of sustainable bio-based solutions for advanced engineered wood products (EWPs) using Irish forestry resources. The overall project focuses on low-emission pulping to produce micro- and nanocrystalline cellulose and their application in high-value sectors. Novel adhesives and coatings derived from lignin, tannin, proteins, and microbial processes will address durability, flammability, and moisture challenges and tested in EWP applications. A bioengineering framework will enable investigation of fungal-derived biocoatings with enhanced fire-retardant and antimicrobial properties. The project also promotes adhesive-free, recyclable design, while prototyping structural EWP components from Irish timber. Performance validation and comprehensive lifecycle assessment will ensure environmental, technical, and economic viability for sustainable construction applications.

The research this role encompasses will be conducted using the equipment, technical expertise, office and research space within the School of Engineering at University of Galway. The Alice Perry Engineering building houses state-of-the-art Structural Engineering facilities, testing laboratories, research space and computer suites.

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Salary: Postdoctoral Researcher/Research Associate salary scale €47,273 - €60,250 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 10th July 2026. It will not be possible to consider applications received after the closing date.

Interviews are planned to be held on 20th July 2026.

***Please review full job description for further details and essential requirements.**

JOB DESCRIPTION

Job Description:
The successful candidate will work with the project team to investigate and validate the structural performance of engineered wood products incorporating biobased coatings, adhesives, Irish-grown hardwoods and C16 softwoods. This will include dowel laminated timber elements for applications in walls, floors and beams. This will be achieved through structural design and analysis, fabrication, and experimental testing in the laboratory. Long-term performance of the novel components will be assessed through creep behaviour testing under variable climate and accelerated aging testing in the timber laboratory at University of Galway. Dynamic performance and serviceability behaviour of floor systems will also be assessed. These activities will support numerical modelling and lifecycle assessment of the building system carried out by partners, leading to development of a commercialisation strategy for biobased timber building systems using Irish-grown wood. The successful candidate will also be responsible for knowledge transfer and dissemination of project results.

Duties:

- Support the implementation of the project programme in association with the PI
- Structural design and detailing of engineered wood products considering Irish-grown hardwoods, softwoods, biobased coatings and adhesives, including laminated timber systems
- Coordination of material processing and fabrication of engineered wood products for experimental testing programme
- Design, develop and implement an experimental testing programme to assess structural performance and creep behaviour of timber elements
- Support the development of finite element models
- Record, analyse and critically evaluate experimental results.
- Contribute to supervision and mentoring of PhD students
- Coordinate and liaise with project partners, industry partners, colleagues and stakeholders
- Preparation of project progress reports and research outputs for publication in international peer reviewed journals and conference papers

- Carry out routine administrative tasks associated with the research project to ensure that project is completed on time and within budget; includes organisation of project meetings and documentation, risk assessment of research activities.
- Disseminate and publicise research findings of the project, as outlined in the project proposal and knowledge transfer plan (social media, industry and outreach activities, workshops, webinars, etc).
- Plan own activities within the framework of the agreed research programme.
- Plan for the use of research resources, laboratories and workshops where appropriate.
- Assist with project proposals and grant applications to external bodies.
- Build internal and external contacts and participate in networks for the exchange of information, and to form relationships for future collaboration.
- Any other duties assigned commensurate to this level of post

ELIGIBILITY REQUIREMENTS

Essential Requirements:

- A PhD (including near completion with thesis submitted) in Structural or Civil Engineering, Wood Science or a related discipline, or 4 years full-time relevant research experience after primary degree
- Experience in structural design
- Experience in timber engineering
- Experience in experimental testing of construction materials, structural assemblies or components
- Excellent communication skills, demonstrated commitment to deliver and publish results, adaptability and the ability to work in a team environment and engage with industry to achieve project outputs.
- Demonstrable experience of project management, including organisation of resources and administrative processes

Desirable Requirements:

- Experience of industry engagement
- Experience in creep performance testing
- Experience in dynamic testing and/or vibration analysis of engineering structures
- Experience in the analysis of hygrothermal and mechanical behaviour of wood
- Experience in bond testing and durability assessment of laminated timber products

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

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University of Galway

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- **TO APPLY:** Search Current University of Galway vacancies. Applications must be submitted online.
    - How to apply guide
- For informal enquiries, please contact Dr Patrick J. McGetrick, Director of the Timber Engineering Research Group and Associate Professor in Civil Engineering: patrick.mcgetrick@universityofgalway.ie
- University's Strategic Plan
- Working in Research at University of Galway
- 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.

Athena Swan Ireland Equality Charter

An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine