OLLSCOIL NA GAILLIMHE
UNIVERSITY OF GALWAY

HR EXCELLENCE IN RESEARCH

Postdoctoral Researcher, Bioengineering (x2), Centre for Research in Medical Devices (CÚRAM)

School of Engineering, College of Science and Engineering

Ref. No. 011029

JOB ADVERTISEMENT

Applications are invited from suitably qualified candidates for invited from suitably qualified candidates for two full-time, fixed term contract research positions at the Mechanobiology and Medical Devices Research Group (www.mechanobiology.ie) and CÚRAM, the SFI Research Centre for Medical Devices at University of Galway.

This position is funded by Science Foundation Ireland and co-funded by Stryker, a Cork based medical device company and is available from 1st May 2025 to contract end date of April 2026.

Organisation:
The Mechanobiology and Medical Device Research Group use multidisciplinary computational and experimental mechanobiology and biomechanics approaches to understand mechanobiology and how this process contributes to bone development and disease, and for the pre-clinical assessment of surgical and minimally invasive medical devices. CÚRAM, the SFI Research Centre for Medical Devices is a national centre funded through Research Ireland, which aims to create a sustainable future for the Medtech sector in Ireland and train the next generation of world class Medtech scientists and entrepreneurs.
Stryker is a world leader in the area of surgical instrument innovation. Stryker is committed to the design and development of novel technologies for various applications, including hard and soft tissue resection in a surgical environment. The proposed research is focused on specific topics that will drive innovation and development of next generation of surgical instruments for soft tissue.

Salary: Postdoctoral Researcher salary scale €45,846 - €58,481 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 April 24th . It will not be possible to consider applications received after the closing date.

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

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JOB DESCRIPTION

Job Description:
Two Postdoctoral positions have become available to develop novel experimental and computational models to aid in the development of medical device technologies being developed with our industry partners. Stryker is interested in the response of soft tissue to the cutting action of different heat generating Instruments and various ablation devices. This research will be conducted using the equipment, technical expertise, office and research space within the Alice Perry Engineering Building and the BioSciences Research Building (BRB) at University of Galway, which house state-of-the-art facilities including cell culture laboratories, biomechanical testing laboratories, micro-CT scanning, microscopy, research space and computer suites. The Postdoctoral Fellows will work closely with other members of a multidisciplinary project team at University of Galway, including PIs, postdoctoral and postgraduate researchers, and research engineers at Stryker (Cork).

Duties:
Position 1:
The Postdoctoral Researcher will be responsible for development and validation of test methods examining thermal tissue damage in response to using various surgical instruments in accordance with latest FDA requirements. The successful applicant will be required to:

- Conduct extensive in vitro experimentation
- Analyse data in an accurate and precise manner;
- Actively participate in international conferences and meetings;
- Publish data in high impact factor journals;
- Maintain regular contact with industrial partner with project updates;
- Publish reports and hold project reviews with industrial partner;
- Any other duties assigned commensurate to this level of post

Position 2:
The Postdoctoral Researcher will be responsible for development and validation of test methods examining thermal tissue damage in response to ablation device in accordance with latest FDA requirements. The successful applicant will be required to:

- Conduct extensive in vitro experimentation
- Analyse data in an accurate and precise manner;
- Actively participate in international conferences and meetings;
- Publish data in high impact factor journals;
- Maintain regular contact with industrial partner with project updates;
- Publish reports and hold project reviews with industrial partner;
- Any other duties assigned commensurate to this level of post

ELIGIBILITY REQUIREMENTS

Essential Requirements: Ideal candidates **MUST:**

- Hold a doctoral degree in a relevant discipline (Biomedical Engineering, Biomedical Science, Electrical/Mechanical Engineering or a related field)
- Have experience in the below techniques:
    - Histological tissue processing
    - Biomechanical testing
    - Biological tissue composition characterisation
    - Experimental and computational validation
- Have a proven track record in a research environment
- Possess excellent communication and organizational skills and attention to detail
- Proven independent initiative and ability to work in a collaborative environment
- Be highly motivated and passionate about advancing medical device technology

Desirable Requirements:
As well as the above essential skills, it is **DESIRABLE** that applicants have expertise in as many of the following areas as possible:

- Computational modelling (Finite Element analysis)
- Experience in use of electrosurgical units
- Knowledge of biophysics/bioelectronics in high frequency electrosurgery
- Knowledge of tissue mechanics and fracture characteristics in soft tissue cutting.
- Knowledge of AC theory and high voltage RF power transmission for Electrical Systems.
- Knowledge of plasma mediated discharge at electrode tissue interfaces.
- Knowledge of FDA guidance documents

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 Professor Laoise McNamara, School of Engineering, Email: Laoise.mcnamara@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.