**PhD Position in Computational and**

**Experimental Mechanobiology (Cancer)**

**Biomedical Engineering**

**University of Galway, Ireland**

Applications are invited from suitably qualified candidates for a full-time, fully-funded position that will investigate the mechanobiology of tumour growth and therapy resistance. This position is funded by a **European Research Council Starting Grant** and will be under the supervision of **Dr Eoin McEvoy**, Associate Professor in Biomedical Engineering. The researcher will join Dr McEvoy’s group, which brings together expertise in biophysical modelling, active cell biomechanics, and *in-vitro* tumour models. The group’s overall focus is to develop advanced computational and experimental models that provide a mechanistic understanding of cell and tissue remodelling in cancer and disease, motivating novel mechano-therapeutics and treatment strategies. For further information, see [www.mechanomodel.ie](http://www.mechanomodel.ie).

**University of Galway:** The University of Galway has world-recognized expertise in biomedical science and engineering, with a particularly strong track-record of developing innovative diagnostic and therapeutic solutions to healthcare challenges. Located in the vibrant cultural city of Galway in the west of Ireland, with over 18,000 students and more than 2,400 staff, the university has a distinguished reputation for teaching and research excellence (<https://www.universityofgalway.ie/our-research/>). Dr McEvoy is also an investigator at CÚRAM, the Science Foundation Ireland Research Centre for Medical Devices, which is embedded in Galway’s vibrant Med-Tech ecosystem.

**Project Description:** Personalised medicine presents an exciting frontier in healthcare that tailors disease mitigation and intervention to an individual patient. This project will develop integrated computational and experimental models for the prediction of patient-specific cancer cell biomechanics, to uncover new mechanistic insight and advance multi-scale models. Specifically, the candidate will develop novel microfluidic systems for single cells and spheroids and coupled predictive models using finite element analysis and agent based modelling. This frontier research will bridge subcellular remodelling and single cell mechanobiology to provide a new fundamental understanding of tumour growth and therapy resistance in breast cancer.

**Stipend:** Fully-funded four-year scholarship - €22,000 per annum (tax-exempt award). University fees are fully covered by the scholarship. You will also receive a high-end laptop or desktop computer for your research. Travel expenses are included to attend frontier international conferences.

**Academic entry requirements:** Applicants must hold a Bachelor’s degree in Biomedical or Mechanical Engineering, Applied Maths or a related field. Prospective candidates should be enthusiastic, motivated, and willing to learn new skills.

**Start Date:** October- January 2024; the position will remain open until filled.

**How to Apply:** Interested candidates should send their CV (including the names of two referees) and a one-page cover letter outlining their motivation to work on these projects to Dr Eoin McEvoy at eoin.mcevoy@universityofgalway.ie. Please use the email subject line “PhD Application” to ensure that applications are processed. You are also welcome to reach out for an informal discussion on the available projects and positions.

**Application Deadline:** Applications will be reviewed periodically until September 20th, 2024.