



OLLSCOIL NA GAILLIMHE
UNIVERSITY OF GALWAY

PhD Scholarship Advertisement

Fully Funded PhD Scholarship in Radiation Dosimetry for FLASH Radiotherapy

Application(s) are invited from suitably qualified candidates for a full-time funded PhD scholarship starting in September 2024, affiliated with the College of Science & Engineering / School of Natural Sciences / Physics Unit, at the University of Galway.

University of Galway

Located in the vibrant cultural city of Galway in the west of Ireland, the University of Galway has a distinguished reputation for teaching and [research excellence](#).

Detailed Project Description

Radiotherapy is a fundamental component of cancer treatment, typically administered over several weeks to allow normal tissues to recover between doses (treatment fractions). FLASH radiotherapy, an emerging modality, delivers therapeutic doses at ultra-high dose rates (>40 Gy/s), significantly reducing normal tissue toxicity while maintaining tumour control. However, the extreme dose rates and short exposure duration present challenges for precise and accurate radiation dosimetry, which is crucial for ensuring treatment efficacy and safety.

This PhD project will consider the application of scintillation dosimetry in FLASH radiotherapy. The dosimeter(s) considered will be employed for radiation dosimetry measurements on a FLASH SARRP (Small Animal Radiotherapy Research Platform) at Queen's University Belfast (QUB) for preclinical studies. Supplementary Monte Carlo simulations can be performed to refine and corroborate experimental radiation dosimetry measurements, ensuring high precision and reliability. Additionally, a comprehensive quality assurance (QA) protocol for the FLASH SARRP will be developed, to standardise and streamline dosimetric procedures, ensuring consistent and accurate dose delivery during preclinical experiments.

Living allowance (Stipend): €22,000 per annum [tax-exempt scholarship award]

University fees: Fees are paid on behalf of the PhD candidate

Start date: September 2024

Academic Entry Requirements: First or upper-second class honours undergraduate degree (or equivalent) in physics or completed a master's degree in medical physics.

To Apply for the Scholarship:

Applications are to include a cover letter (outlining academic experience, interests, and motivation for pursuing a PhD), curriculum vitae, and details of three referees. Applications should be e-mailed to michael.martyn@universityofgalway.ie.

Application Deadline: Wednesday, July 31st, 2024, and time 17:00 (Irish time 24hr format)

Supervisor(s): Dr Michael Martyn (primary supervisor) and Dr Mark Foley (co-supervisor)