



POSTGRADUATE RESEARCH OPPORTUNITY

Project Title: Swallowing and Treatment Assessment Through Electrical Impedance Tomography and Ultrasound Imaging

Short Project Description:

This project is a translational research project to develop an EIT-EMG and US-based system to assess dysphagia. EIT-EMG is based on electrical conductivity, currently used in the monitoring of lung function, and ultrasound is used clinically for soft tissue assessment. In the project, we adapt EIT and US for swallowing assessment, with applications ranging from initial screening at the bedside and as a wearable device for remotely tracking patient swallowing. We aim to democratise patient diagnostics in dysphagia, lowering risk to the patients, shortened recovery time, and repeatability of assessment translates into reduced cost of patient stay.

Type of Degree Offered: PhD

Duration of Project: 4 years

Funding Agency: Strategic Research Fund TUS

Funding Details:

- **PhD Stipend: €16,000 per annum**
- **Materials and consumables: €1,500 per annum**
- **University fees waiver for 4 years**

Minimum Qualifications/Experience Necessary/Any Other Requirements:

The candidates must have a primary degree in a field related to Electronics, computer engineering or applied Physics

Minimum classification of *2.1 honours or equivalent*.

IELTS [International English Testing System] Applicants must have a minimum of 6.5 with no component score less than 6.5.

Project Lead Supervisor: Dr Niall Colgan

For further information, please contact: Niall.Colgan@tus.ie

Closing date for receipt of completed application form is 6th June 2026. Interviews will take place within subsequent weeks.

Download TUS Scholarship application form below, put project title in the subject line and email pro@tus.ie:

<https://tus.ie/rdi/research/office/funded-research/>