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| **Post Title:** | PhD Studentships |
| **Post Status:** | Full-time  |
| **Research Group / Department / School:** | Monaghan Research Group, School of Engineering, Trinity College Dublin, the University of Dublin |
| **Location:** | Trinity BioSciences Institute, 152-160 Pearse Street, Trinity College Dublin, Dublin 2, Ireland  |
| **Reports to:** | Professor Michael Monaghan |
| **Terms & Conditions:**  | €25,000 per annum stipend + cover of PhD Registration fees |
| **Hours of Work:** | Full time ~ 38 hours/week |
| **Closing Date:**  | Open until suitable candidate is identified |

**Post Summary**

The [Monaghan Lab](http://www.monaghanlab.com) at Trinity College Dublin is seeking PHD students for the ERC Consolidator Grant PiezoMac project focused on the development, characterization and application of novel materials in the application of immunomodulatory repair in cardiac tissue. The researchers will work closely with other members of a multidisciplinary project team including PIs and postgraduate researchers within this research cluster. This is an innovative cutting-edge project which will yield transformative developments in the field of Biomedical Engineering. The Monaghan research group is known for their prowess in biomaterials, stem cell biology and microscopy research in Ireland and internationally. Funding is offered for 48 months.

The PhD students will join on a full-time basis on a project to develop a materials-based approach in modulating injury-based inflammation. The projects are highly interdisciplinary and merge the fields of biomedical engineering, computer science, in silico modelling, iPSC-culture and differentiation and study of 3D in vitro models of cardiac disease. These posts are held in the School of Engineering and Discipline of Mechanical and Manufacturing Engineering, Trinity College Dublin.

**Standard Duties and Responsibilities of the Posts**

Applicants should ideally hold a primary degree in biomedical engineering, materials science, biomaterials, biomedical science. Preference will be given to candidates who have experience in biomaterials or in cell culture techniques. Specific skills that would enhance a candidate’s application for the position might include experience in some of the following areas: porous scaffold fabrication, freeze drying, cell culture (in particular the culture of primary cells), mechanical testing of materials, advanced microscopy, PCR, immunohistochemistry and other histological and imaging techniques. Excellent written and oral communication skills are essential.

**Funding Information**

This position is supported by the European Research Council Consolidator Grant ‘PIEZOMac’

**Person Specification**

**Qualifications**

The ideal candidate must should hold an honours undergraduate degree in a relevant discipline (e.g. materials engineering, biomedical engineering, biomedical science). There is no one ‘specific’ discipline that fits this project. Ideally an engineer/biomedical scientist. We are looking for someone that is motivated, intrigued by scientific discovery, diligent and pays attention – taking pride in their work; and overall a good team player. This is the primary criteria.

**Knowledge & Experience (Essential & Desirable)**

Desirable

PhD 1

* Wet lab experience
* Knowledge of biomaterials and tissue engineering
* Cell culture (ideally stem cells)
* A keen desire to learn and become proficient in new skills

PhD 2

* Wet lab experience
* In silico modelling (COMSOL/FEA)
* Computer Science

Essential

* Experience working with statistical software, e.g. GraphPad Prism, R,
* Experience working as a research assistant in applied settings
* Experience working with qualitative and/or quantitative data
* Demonstrable research interests within regenerative medicine
* Proven ability to plan, prioritise and meet deadlines.
* Excellent communication and interpersonal skills.
* Ability to work independently and as part of a team.
* Excellent IT skills, including MS Office, e-mail and Internet.

**Skills & Competencies**

While candidates may not possess all the skills above, I still welcome applications from individuals in complimentary skills. For many of the techniques above, candidates will be expertly trained by existing members in the lab and through collaborators. It really is key that an individual is open to such training and can grasp concepts quickly.

**Application Procedure**

Applicants should submit a full Curriculum Vitae to include the names and contact details of 2 referees (including email addresses) via this link below: <https://form.jotform.com/240714806350047> . Only shortlisted applicants will be responded to, the next stage being a zoom call with Prof Monaghan and the team.
Please include a cover letter, CV, relevant academic transcripts and other information in ONE uploaded .pdf file.

**Further Information for Applicants**

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| URL Link to Area | [www.tcd.ie](http://www.tcd.ie) |
| URL Link to Human Resources | <https://www.tcd.ie/hr/> |

**Trinity College Dublin, the University of Dublin**

Trinity is Ireland’s leading university and is ranked 108th in the world (QS World University Rankings 2020). Founded in 1592, the University is steeped in history with a reputation for excellence in education, research and innovation.

Located on an iconic campus in the heart of Dublin’s city centre, Trinity has 18,000 undergraduate and postgraduate students across our three faculties – Arts, Humanities, and Social Sciences; Engineering, Mathematics and Science; and Health Sciences.

Trinity is ranked as the 17th most international university in the world (Times Higher Education Rankings 2020) and has students and staff from over 120 countries.

The pursuit of excellence through research and scholarship is at the heart of a Trinity education, and our researchers have an outstanding publication record and strong record of grant success. Trinity has developed [19 broad-based multidisciplinary research themes](https://www.tcd.ie/research/themes/) that cut across disciplines and facilitate world-leading research and collaboration within the University and with colleagues around the world. Trinity is also home to 5 leading flagship research institutes:

* Trinity Biomedical Sciences Institute (TBSI)
* Trinity College Institute of Neuroscience (TCIN)
* Trinity Translational Medical Institute (TTMI)
* Trinity Long Room Hub Arts and Humanities Research Institute (TLRH)
* Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN)

Trinity is the top-ranked European university for producing entrepreneurs for the past five successive years and Europe’s only representative in the world’s top-50 universities

(Pitchbook Universities Report).

Trinity is home to the famous Old Library and to the historic Book of Kells as well as other internationally significant holdings in manuscripts, maps and early printed material. The Trinity Library is a legal deposit library, granting the University the right to claim a copy of every book published in Ireland and the UK. At present, the Library’s holdings span approximately 6.5 million printed items, 400,000 e-books and 150,000 e-journals.

With over 120,000 alumni, Trinity’s tradition of independent intellectual inquiry has produced some of the world’s finest, most original minds including the writers Oscar Wilde and Samuel Beckett (Nobel laureates), the mathematician William Rowan Hamilton and the physicist Ernest Walton (Nobel laureate), the political thinker Edmund Burke, and the former President of Ireland Mary Robinson. This tradition finds expression today in a campus culture of scholarship, innovation, creativity, entrepreneurship and dedication to societal reform.

**Rankings**

Trinity is the top ranked university in Ireland and ranked 108th in the world (QS World University Rankings 2020). Trinity ranks in the top 50 in the world on 6 subjects and in the top 100 in 20 subjects (QS World University Rankings by Subject 2019). Full details are available at: [www.tcd.ie/research/about/rankings](http://www.tcd.ie/research/about/rankings).

**The Selection Process in Trinity**

The Selection Committee (Interview Panel) may include members of the Academic and Administrative community together with External Assessor(s) who are expert in the area. Applications will be acknowledged by email. If you do not receive confirmation of receipt within 1 day of submitting your application online, please contact the named Recruitment Partner on the job specification immediately and prior to the closing date/time.

Given the degree of co-ordination and planning to have a Selection Committee available on the specified date, the University regrets that it may not be in a position to offer alternate selection dates. Where candidates are unavailable, reserves may be drawn from a shortlist. Outcomes of interviews are notified in writing to candidates and are issued no later than 5 working days following the selection day.

In some instances the Selection Committee may avail of telephone or video conferencing. The University’s selection methods may consist of any or all of the following: Interviews, Presentations, Psychometric Testing, References and Situational Exercises.

It is the policy of the University to conduct pre-employment medical screening/full pre-employment medicals. Information supplied by candidates in their application (Cover Letter and CV) will be used to shortlist for interview.

Applications from non-EEA citizens are welcomed. However, eligibility is determined by the Department of Business, Enterprise and Innovation and further information on the Highly Skills Eligible Occupations List is set out in Schedule 3 of the Regulations <https://dbei.gov.ie/en/What-We-Do/Workplace-and-Skills/Employment-Permits/Employment-Permit-Eligibility/Highly-Skilled-Eligible-Occupations-List/> and the Ineligible Categories of Employment are set out in Schedule 4 of the Regulations <https://dbei.gov.ie/en/What-We-Do/Workplace-and-Skills/Employment-Permits/Employment-Permit-Eligibility/Ineligible-Categories-of-Employment/> . Non-EEA candidates should note that the onus is on them to secure a visa to travel to Ireland prior to interview. Non-EEA candidates should also be aware that even if successful at interview, an appointment to the post is contingent on the securing of an employment permit.

**Equal Opportunities Policy**

Trinity is an equal opportunities employer and is committed to employment policies, procedures and practices which do not discriminate on grounds such as gender, civil status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community. On that basis we encourage and welcome talented people from all backgrounds to join our staff community. Trinity’s Diversity Statement can be viewed in full at <https://www.tcd.ie/diversity-inclusion/diversity-statement>.

**Application Procedure**

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**Name**

**Email Address**

