Hamilton Institute

Post Ref: 031802

Maynooth University
National University of Ireland Maynooth

Maynooth University
Ollscoil Mhá Nuad

Hamilton Institute & Department of Computer Science
Technical Officer or Senior Technical Officer
(Temporary 24-Month Contract)

The Role

Maynooth University is committed to a strategy in which the primary University goals of excellent research and scholarship and outstanding education are interlinked and equally valued.

We are seeking applications for a Technical Officer/Senior Technical Officer in the research group (https://dna.hamilton.ie/) of Professor Damien Woods at the Hamilton Institute, with a possible co-appointment in the Department of Computer Science. Our group works on the topics of DNA computing, DNA data storage and DNA nanostructures.

EU and Irish national funding is provided by the DISCO project funded by the EIC Pathfinder Challenge programme (https://disco-tech.eu/), and the Active tiles project funded by Science Foundation Ireland Frontiers of the Future Programme (SFI FFP).

The Technical Officer/Senior Technical Officer role requires a background in use of lab-based experimental techniques. Example techniques include, but are not limited to: atomic force microscopy (AFM), fluorescence microscopy, bulk fluorescence assays (using qPCR machine, or fluorescence plate reader), agarose /polyacrylamide gel electrophoresis, etc. The role could involve use of other techniques including preparing samples via pipetting by hand, liquid handler and/or an acoustic liquid handler, and play a supporting role on several ongoing laboratory projects. We use python code to control lab equipment, so having familiarity with programming is a bonus, and at the very least there is expectation to be willing to learn how to program. Familiarity and competency with wet-lab procedures/techniques would be best, but other experimental research experience may also be considered as relevant. Mainly, the candidate needs to show an aptitude for lab-based experimental protocols and showing competence with lab equipment.

In addition, the role will include some administrative duties, including managing a lab, ordering of supplies, instruction on safety procedures, routine equipment maintenance. There will be room to take a key role on experimental projects in DNA computing, DNA data storage and DNA self-assembly in

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Athena Swan Ireland Charter Chomhionannais

Athena SWAN Bronze Award Gender Charter

Science Foundation Ireland sfi For what's next

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collaboration with experienced group members, should the candidate demonstrate a willingness and competency to do so. Suitable candidates could be from an experimental physics, chemistry, molecular biology or bioengineering background, and should have an honours degree or equivalent relevant qualification, in Science, Engineering, Instrumentation or a related discipline. Useful assets include the ability to write code for taking and analysing data (e.g. experience with Python, Rust, C++, Java, R, Matlab or other programming languages for data analysis), an aptitude for and/or experience at quantitative thinking and data analysis, and willingness and enthusiasm to support cutting-edge research on molecular computing.

The level of appointment and salary (i.e. whether "**Senior**" or not) will be in accordance with the experience and demonstrated abilities of the candidate. Please see https://www.dna.hamilton.ie/ for more details about the research group.

Principal Duties

Administrative and other duties:

This will include:

- Experimental lab techniques, as described above/below;
- Play a supporting role on several ongoing lab projects;
- Managing a small-to-medium size wet-lab; ordering supplies, giving instruction on safety procedures, routine equipment maintenance; lab admin; budgeting; safety;
- Administrative support for our group funding, willingness to help with future funding applications
- Willingness to take on supportive or technical roles to make our lab a better place for the group;
- Attendance at group meetings, and relevant institute, department and faculty meetings;
- Help with outreach activities; group morale; make our workplace fun!

The ideal candidate will have:

Essential

- A degree and/or relevant qualification in any of Physics, Chemistry, Computer Science, Engineering, Biology, Mathematics, Instrumentation or a cognate discipline with preference for experimental work;
- Experience in use of lab-based experimental techniques, e.g. atomic force microscopy (AFM), fluorescence microscopy, bulk fluorescence assays (using qPCR machine, or fluorescence plate reader), agarose/polyacrylamide gel electrophoresis, etc. Other techniques could be relevant, but please describe skill set in detail.
- Familiarity, competency and aptitude for lab procedures and techniques.
- Ability to trouble-shoot equipment and experiments.
- Either familiarity with programming (python, etc.) or a desire to learn basic programming for control of experiments and data analysis.
- An aptitude for and/or experience at quantitative thinking and data analysis, and willingness and enthusiasm to support cutting-edge research on molecular computing.
- To be appointed as a Senior Technical Officer, candidates must have at least two years' experience closely related to the job specification, and should clearly demonstrate reasons why their experience make them are more suited to a senior role that will involve aspects of leadership.

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Desirable

- Familiarity with programming (e.g. experience with Python, Rust, C++, Java, R, Matlab or other programming languages); write code for taking and analysing data;
- Demonstrated scientific aptitude, through achievements/projects/publications/etc;.
- Desire to take an active role on our lab projects, which may lead to publication co-authorship;
- Interested in helping to further the goals of the group, e.g. by helping out with group initiatives such as public scientific outreach, media communication, interactions with university departments/admin units, etc.
- Working with our international collaborators.

Faculty and Research Institutes

The Hamilton Institute is the university's pilar research institute that aims to bridge the gap between mathematics, computation and its applications. Founded in 2001 with support from Science Foundation Ireland, the Hamilton Institute has been internationally recognized for its work across communication networks, mathematical biology and fundamental mathematics.

The Institute's commitment to real applications work is reflected in its strong industry links, including partnerships with IBM, Medimmune, AstraZeneca and Unilever. Its commitment to research excellence is reflected in its research output as well as active links with leading international research groups (at MIT, Caltech, Imperial College London, the Walter and Eliza Hall Institute of Medical Research, Institute Curie, amongst others) and consistently high ratings in external quality reviews. The Institute has an active international visitor and workshop programme.

Major focuses of research activity at the institute currently include the computational sciences, DNA and molecular computing, DNA nanotechnology, machine learning, optimization, probability and statistics, and the mathematics of networks.

The University

Maynooth University is a very distinctive university, a collegial institution focused on science and engineering, humanities, and social sciences, and equally committed to research, teaching and community engagement. Located in Ireland's only university town, its distinctive features and character owe much to its unique history and heritage. It provides a high-quality educational experience to over 15,000 students on a campus with 18th century roots and 21st century dynamism.

The strategic trajectory and accomplishments of Maynooth University, in the 25 years since its establishment as an autonomous public university, are exceptional, and a source of great pride to the university community, staff, students and alumni. Maynooth University in 2024 ranked in the top 90 global Times Higher Education (THE) Young University rankings, placing 86th in the world. Maynooth University's growing global reputation is based on the originality, quality, importance and impact of its research and scholarship, commitment to teaching and learning, the quality of academic programmes, and its leadership in widening participation in higher education. The sources of success are the dedication of its staff and the energy and engagement of its students.

Maynooth University is a place of lively contrasts – a modern institution, dynamic, rapidly-growing, research-led and engaged, yet grounded in historic academic strengths and scholarly traditions. With over 15,000 students Maynooth offers a range of programmes at undergraduate, postgraduate and

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doctoral level in the humanities, science and engineering and social sciences, including business, law and education. The University also offers a range of international programmes and partnerships.

Maynooth's unique collegial culture fosters an interdisciplinary approach to research, which its world-class academics bring to bear in tackling some of the most fundamental challenges facing society today. The University's research institutes and centres consolidate and deliver this impact as vibrant communities of learning, discovery and creation. Research at Maynooth also is very much central to its teaching and the University prides itself on placing equal value on its research and teaching missions.

Maynooth University's Values

Our values define who we are, what we believe in and how we act as a community. They underpin our future success and guide our expectations of ourselves and each other. Our values apply to everyone in the University community:

- Integrity
- Collegiality
- Responsibility
- Freedom of expression
- Ambition

Maynooth University Strategic Plan 2023 – 2028

The University's Strategic Plan 2023 - 2028 builds on our rich academic history and strong foundations to set out an ambitious and forward-looking path for the future of our University. This roadmap underscores our commitment to adapt to a changing world while staying true to our values.
Our vision is to be a university of excellence, opportunity and impact, having a significant stake in all three.

For more information about Maynooth University's future direction, please visit: https://strategy.maynoothuniversity.ie/

Plean Straitéiseach Ollscoil Mhá Nuad 2023 - 2028

Tógann Plean Straitéiseach na hOllscoile 2023 - 2028 ar ár stair acadúil shaibhir agus ar ár mbunchlocha láidre chun conair uaillmhianach agus cheannródaíoch a leagadh amach do thodhchaí ár nOllscoile. Soiléiríonn an treochlár seo ár dtiomantas do dhul i dtaithí ar dhomhan atá ag síorathrú agus ár ngníomhaíochtaí a chur in oiriúint dó, agus san am céanna a bheith dílis dár luachanna Ollscoile. Is í an fhís atá againn a bheith mar ollscoil feabhais, deiseanna agus tionchair, agus lámh láidir a bheith againn i ngach ceann de na trí ghné seo.

Léigh anseo le haghaidh breis eolais faoi thodhchaí Ollscoil Mhá Nuad: https://strategy.maynoothuniversity.ie/?lang=ga

Selection and Appointment

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- Only shortlisted candidates will be invited to attend for interview;
- Candidates invited for interview will be required to make a brief presentation;
- Appointments will be approved by the President based on the report of the selection board;
- It is anticipated that interviews will be held during the month of December;
- The appointment is expected to be effective from as soon as possible thereafter.

Equality and Diversity

Maynooth University actively works to ensure equality, celebrate the diversity of our community, and promote inclusion. To learn more about our commitment to Equality and Diversity, please read the Maynooth University Equality and Diversity Policy / Polasaí Comhionannais agus Éagsúlachta, our policy on the Employment of People with Disabilities, and our Gender Equality Action Plan 2023-2026. We aim to reflect the diversity of the community we serve and welcome applications from all individuals across our society.

Terms and Conditions

Tenure	This a full-time, temporary post for a specified purpose, anticipated to be 2 years duration. The DISCO project end date is anticipated to be 30/09/2028.
Salary	Senior Technical Officer (2024)*: €59,888 – €71,982 p.a. (7 points – with increment) Technical Officer (2024): €45,652 – €59,889 p.a. (7 points) Appointments will be made in accordance with public sector pay provisions.
Hours of work	A 37.5 hour working week is in operation in respect of full-time positions (pro-rated for part-time positions). This can be reviewed or adjusted from time to time through national agreements.
Location	The place of work is the campus of Maynooth University, Maynooth, Co. Kildare.
Annual Leave	Annual leave and public holidays are provided for in the University policy: https://www.maynoothuniversity.ie/human-resources/policies/annual-leave-policy Annual leave will be allocated on a pro-rata basis for part-time and temporary positions.
University policies and schemes	Employees of the University will be subject to the terms of the University policies and schemes, available on the University website at: https://www.maynoothuniversity.ie/university-policies https://www.maynoothuniversity.ie/human-resources/policies

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Pension	This is a pensionable post. Employees of the University will enter into a public sector pension scheme, and as such, applicants must ensure they are eligible to become a member of a public sector pension scheme for the duration of the appointment. Details of the public sector pension schemes are available at: https://www.maynoothuniversity.ie/human-resources/pension-information
Eligibility	Applicants should note that eligibility is determined by the Department of Enterprise, Trade and Employment. Further information regarding eligibility is available at: https://enterprise.gov.ie/en/what-we-do/workplace-and-skills/employment-permits/employment-permit-eligibility/ Non-EEA applicants are responsible for ensuring they can secure a visa to travel to Ireland. Any offer of employment is conditional on applicants securing the appropriate employment permissions. **Former Irish Public Service employees - Certain Restrictions on Eligibility** Eligibility of applicants formerly employed by an Irish Public Sector body, and who availed of an Irish Public Service Redundancy or Incentivised Retirement Scheme under the Schemes below, may be affected: • Collective Agreement: Redundancy Payments to Public Servants • Incentivised Scheme for Early Retirement (ISER) • Department of Health and Children Circular (7/2010) • Department of Environment, Community & Local Government (Circular Letter LG(P) 06/2013) Applicants should ensure that they are eligible to be re-engaged in the Irish Public Service under the terms of such Schemes. Applicants should address queries with their former Irish Public Sector employer.
Garda vetting	Garda vetting or clearance may be required by the University.
Medical	The University may require a medical examination as a condition of employment.

Data Protection Law

Applications to the University will be treated in accordance with the University Data Protection Policies. For information on the University's Data Protection Policies and Privacy Notice, please see our website: https://www.maynoothuniversity.ie/data-protection

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Application Procedure

Closing Date:

23:30hrs (local Irish time) on **Sunday, 5 January 2025.**

Please note all applications must be made via our **Online Recruitment Portal** at the following link:

https://www.maynoothuniversity.ie/human-resources/vacancies

Applicants should submit a CV along with a cover letter. The cover letter should up to 4 pages in length articulating suitability for the position. The letter should be used as an opportunity to elaborate on the candidate's experience, ability to work with and support a research team, and overall suitability for the role. Please feel free to add other relevant points not listed above.

Applications must be submitted by the closing date and time specified above. Any applications which are still in progress at the closing time on the specified closing date will be cancelled automatically by the system.

Late applications will not be accepted.

Maynooth University is an equal opportunities employer

The position is subject to the Statutes of the University

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