

Post Specification

Post Title:	Research Fellow in Root Phenotyping
Post Status:	Specific Purpose Contract – Full-time (1.5 years)
Research Group / Department / School:	School of Natural Sciences, Discipline of Botany, Trinity College Dublin, the University of Dublin
Location:	Botany Building, Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland
Reports to:	Dr Richard Nair
Salary:	Appointment will be made on the Postdoctoral Researcher pay scale at a point in line with Government Pay Policy [€42032 to €45819 per annum], appointment will be made no higher than point 4
Hours of Work:	Full Time
Closing Date:	12 Noon (GMT), 5 TH SEPTEMBER 2023 or until filled

Post Summary

The post is a postdoctoral role as part of a project team based in the main Trinity College Campus (Botany Department) and the University College Dublin (Rosemount Research Station). The role will report to Dr Richard Nair (TCD) and Prof Saoirse Tracy (UCD). The successful candidate will be integrated into working groups at both universities. The successful candidate will work to understand links between root appearance under near infrared imagery, with root health and other properties relevant to future food systems. As the role is part of a solution-orientated project, the exact tasks of the role may change during the project. The role has an initial length of 1.5 years, and may be renewed following funding reviews and the good performance of the candidate.

Standard Duties and Responsibilities of the Post

The successful candidate will:

- Assemble a database of hyperspectral properties of roots of crop species
- Develop a proof-of-concept machine learning models to predict root physiology and health from NIR imagery
- Collaborate with other researchers on the project and researchers within TCD, UCD and Agri-Food and BioSciences Institute (AFBI).
- Engage with stakeholders in the agri-tech field and disseminate research results
- Contribute to the project research output by producing high quality results and publications.
- Co-supervise research assistants.
- Participate in internal and external networking events and engage with broader science communication and outreach activities.
- Contribute to project reporting and reviews where necessary.
- Perform other duties that arise from time to time as directed by the project.

Funding Information

Science Foundation Ireland

Person Specification

Qualifications

PhD in field relevant to the project (i.e. agronomy, ecophysiology, soil science)

Knowledge & Experience (Essential & Desirable)

Essential

- Demonstrated knowledge in plant ecophysiology and ecology, root ecology/ root phenotyping, hyperspectral imaging of plants, or applied biological applications of machine learning methods.
- Experience at the doctoral level in designing and undertaking a research programme and analysing complex numerical data.
- Evidence of research activity relevant to career level (i.e. publications, preprints, conference presentations)
- Experience working with programming languages such as R or python. Experience in applied machine learning, high-level statistical or numerical techniques.
- Demonstrated ability to generate and communicate new ideas and experience in setting research agenda.

Desirable

- Experience working with hyperspectral imaging systems and multispectral data
- Experience in leading and managing field sampling campaigns, handling and processing soil and/or root samples.
- Experience in identifying opportunities for external funding sources, preparing grant proposals and assessing research outputs for prospective applied use.

Skills & Competencies

- Proven ability to work as part of a team and independently.
- Highly motivated individual with the ability to effectively plan, execute, and deliver research project outputs within deadlines.
- Effective communication, interpersonal and organisation skills.
- Excellent team working skills with emphasis on equality, diversity, and inclusion.

Application Procedure

Applicants should submit a full Curriculum Vitae, including the names and contact details of 2 referees and a letter of interest (max 1 page), to:-

Richard Nair richard.nair@tcd.ie

Informal enquiries are welcome. For the full application, please title your email 'Root Phenotyping PDRA job application'.

Further Information for Applicants

URL Link to Area	https://www.tcd.ie/Botany/ https://rosemount.ucd.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 98th in the world (QS World University Rankings 2023). 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 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 1st in Europe for Producing Entrepreneurs for the 7th year in a row and Europe's only representative in the world's top-50 universities (Pitchbook 2021-2022).

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 College Dublin is the top ranked university in Ireland. Using the QS methodology we are ranked 98th in the world and using the Times Higher Education World University Ranking methodology we are 146th in the World.

- Trinity College Dublin is Ireland's No.1 University (QS World University Ranking 2023, Times Higher Education Rankings 2022)
- Trinity is ranked 98th in the World (QS World University Ranking 2023)
- Trinity is ranked No.1 in Europe for Producing Entrepreneurs for the 7th year in a row Pitchbook 2021-2022

Full details are available at: 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 hiring lead 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>.

Pension Entitlements

This is a pensionable position and the provisions of the Public Service Superannuation (Miscellaneous Provisions) Act 2004 will apply in relation to retirement age for pension purposes. Details of the relevant Pension Scheme will be provided to the successful applicant.

Applicants should note that they will be required to complete a Pre-Employment Declaration to confirm whether or not they have previously availed of an Irish Public Service Scheme of incentivised early retirement or enhanced redundancy payment. Applicants will also be required to declare any entitlements to a Public Service pension benefit (in payment or preserved) from any other Irish Public Service employment.

Applicants formerly employed by the Irish Public Service that may previously have availed of an Irish Public Service Scheme of Incentivised early retirement or enhanced redundancy payment should ensure that they are not precluded from re-engagement in the Irish Public Service under the terms of such Schemes. Such queries should be directed to an applicant's former Irish Public Service Employer in the first instance.

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Richard Nair

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universityvacancies.com

