

Post Specification

Post Title:	Research Assistant
Post Status:	Specific purpose, Full-time.
Research Group / Department / School:	Plant Ecophysiology Research Group, Botany Department, School of Natural Sciences, Trinity College Dublin, the University of Dublin
Location:	School of Natural Sciences Botany Department Building Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland
Reports to:	Dr Matthew Saunders
Salary:	Appointment will be made on 2024-2026 IUA Researcher Salary Scale at a point in line with Government Pay Policy €32,962 per annum, appointment will be made no higher than point 1
Hours of Work:	39 hours per week
Closing Date:	12 Noon (GMT), 31/10/2025

Post Summary

The Department of Botany at Trinity College, the University of Dublin are seeking a research assistant to work with Dr Matthew Saunders on the FarmAI project (Agricultural Methane Emissions: Farm Scale to Regional Scale) funded by the Department of Agriculture Food and the Marine (DAFM) and undertaken in collaboration with the university of Galway and partners in New Zealand. The successful candidate will be hosted in the School of Natural Sciences, Botany Discipline and will become a member of the Plant Ecophysiology Research Group.

General enquires regarding this post should be addressed to saundem@tcd.ie

Project summary

This project will bridge the gap between quantifications of methane fluxes at regional and farm scales and introduce a new, practical means of standardising on-farm emission estimates under natural farming conditions. The research will provide a comprehensive intercomparison of on-farm measurement techniques will cross validate measurements on mobile platforms, such as cars and drones, against alternative research methods and technologies (GreenFeed, chamber and micrometeorological). The mobile measurements will be combined with data from satellite derived earth observations, cutting edge machine learning and a wealth of existing data, including process and production data, will be used to accurately predict methane emissions at the farm scale across a wide region. This project will contribute to a standardisation of methodologies to support climate-related action and management practices in agriculture. It also enables the development of new technologies, developed with groups of animals under natural farming conditions, which enables technology providers to demonstrate the effect of their products in a realistic context and with high accuracy.

Standard Duties and Responsibilities of the Post

The particular duties and responsibilities for the position are detailed below:

- Development and execution of field-based measurement campaigns of methane emissions from agricultural systems.
- Undertake ancillary measurements/assessments to aid the interpretation and analysis of data collected and to help identify proxies for emission dynamics.

- Compile all relevant data/information to support the analysis of measurements.
- Undertake responsibilities for the QA/QC of all data produced.
- Collaborate with the project team to provide required data products for other complementary activities.
- Communicate the outputs of this work through technical reports and internal/external progress meetings.
- Participate in the wider research activities of the TCD Botany department and contribute to the academic mission of Trinity College Dublin.

Funding Information

The post funded is by the Environmental Protection Agency.

Person Specification

Qualifications

A bachelors degree in Environmental Science, Agricultural Science, Soil Science, Plant Science/Botany, Biochemistry or related discipline is essential. A full clean Irish/EU driving license is essential for this position.

Knowledge & Experience (Essential)

- Knowledge of the production and emission of methane within and between atmospheric and terrestrial systems.
- Knowledge of methane emissions from agricultural systems.
- An understanding of appropriate greenhouse gas measurement techniques and associated standardised protocols for data acquisition, processing and analysis.
- An understanding of experimental design in relation to field-based research.
- Awareness of approaches to measure soil, plant, animal and ecosystem gas exchange at various spatial and temporal scales.
- The ability to compile and interrogate large datasets.

Skills & Competencies

- Good organisational, communication and team working skills.

- High levels of initiative and self-motivation are essential.
- Good practical and technical skills.
- Interest in field-based research and willingness to travel to Irish field sites and training workshops which will be held in New Zealand.
- Good scientific writing skills and command of the English language.

Application Procedure

Applicants should submit a full Curriculum Vitae to include the names and contact details of 2 referees (including email addresses), to:-

Dr Matthew Saunders

saundem@tcd.ie

Further Information for Applicants

The School of Natural Sciences, comprising the Disciplines of Botany, Geography, Geology and Zoology, the Centre for the Environment and the TCBR, is one of the largest schools in the Faculty of Engineering, Mathematics and Science and hosts biological, physical and social scientists.

URL Link to Area	https://www.tcd.ie/botany/
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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