

Post Specification

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| Post Title: | Post Doctoral Research Fellow (MAPSERS-C Project) |
| Post Status: | Specific Purpose Contract – Full-time. |
| Research Group / Department / School: | Plant Ecophysiology Research Group, School of Natural Sciences, Botany Discipline, Trinity College Dublin, the University of Dublin |
| Location: | School of Natural Sciences, Botany Discipline, Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland |
| Reports to: | Dr Matthew Saunders |
| Salary: | Appointment will be made in line with Government Pay Policy at Point 1 of the Postdoctoral Researcher Scale [€46,805]. |
| Hours of Work: | Full time |
| Closing Date: | 12 Noon (GMT), 24 th October 2025 |

Post Summary

The School of Natural Sciences invites applications for the position of Post-Doctoral Research Fellow to join the Plant Ecophysiology research group in the discipline of Botany, led by Dr Matthew Saunders. This position is part of the project entitled Modelling and measuring agricultural management on peat soils to enhance removals and sequestration of carbon (MAPSERS-C) that is funded by the Department of Agriculture Food and the Marine (DAFM) and is led by Teagasc.

The MAPSERS project:

Ireland and New Zealand aim to at least halve greenhouse gas (GHG) emissions by 2030 and reach net zero carbon by 2050. A significant contribution common to both countries national GHG estimates comes from grassland over drained organic (peat) soils with upper estimates of approximately 9Mt CO₂eq and 5.4Mt CO₂eq for Ireland and NZ, respectively. For policy makers to decide on appropriate carbon sequestration and GHG mitigation actions to implement at national levels, scenario projections of management changes and future climate impacts on these soils that better reflect the nuance of each country are urgently needed. The successful candidate will contribute to the MAPSERS-C project by providing enhanced in-situ greenhouse gas emission data from agricultural peat soils in Ireland. This research will utilise the NASCO network of towers to measure the ecosystem atmosphere exchange of carbon dioxide and methane from selected sites using eddy covariance techniques. One further key aspects of the MAPSERS-C project is to foster research excellence and development of early career researchers through succession and exchange of expertise and skills between Ireland and New Zealand. The main objectives of this project are to:

- Utilise the national agricultural soil carbon observatory to measure carbon losses from drained organic soils under a range of agricultural production systems
- Provide providing high temporal resolution, ecosystem scale measurements of CO₂ and CH₄ fluxes using eddy covariance techniques.
- Improve our understanding of the key drivers of carbon losses (e.g. peat characteristics, climate, management intensity).

- Compare and contrast emission profiles from agricultural peatland systems between Ireland and New Zealand.
- Provide information needed to other project tasks such as the development and verification of models that will allow the development of models for Tier 3 inventory reporting of emissions from grassland on organic soils.
- Contribute to developing optimised management strategies in these agro-ecosystems to contribute to emissions savings and the pathway to net carbon zero agricultural systems.

Standard Duties and Responsibilities of the Post

Applications are invited from individuals holding a PhD in Environmental Sciences, Plant Biology/Botany, Plant/Environmental Ecophysiology, Soil Science, Agricultural Science, Atmospheric Physics, Biochemistry or related discipline. The successful candidate will lead and conduct field based experiments measuring point to ecosystem scale greenhouse gas emissions from a range of peat-based sites as well as comprehensive assessments of soil characteristics at the experimental sites. The successful candidate must have experience in the measurement of greenhouse gas dynamics in the field using eddy covariance and chamber techniques. They should be practically and technically minded, and have an interest in using state-of-the-art technology and sensors to measure terrestrial C/GHG dynamics. All applicants should be self-motivated, prepared for extensive field-based and laboratory work and someone who has a clear track record of data analysis, writing/publication of their research and communicating/disseminating their work.

A mandatory requirement for this position is a full, clean Irish/European driving licence.

In addition, the postholder will supervise and mentor research assistants, students, and volunteers, fostering a collaborative and inclusive working environment. They will also work directly with the Teagasc NASCO team and other partner institutions in Ireland and New Zealand.

Funding Information

This position is funded by the Department of Agriculture Food and the Marine.

Person Specification

Qualifications

A PhD in Environmental Sciences, Plant Biology/Botany, Plant/Environmental Ecophysiology, Soil Science, Agricultural Science, Micrometeorology/Atmospheric Physics or related discipline.

Knowledge & Experience (Mandatory)

- Strong background in fieldwork and laboratory research in carbon and greenhouse gas dynamics.
- Experience of measuring carbon and greenhouse gas dynamics using eddy covariance techniques
- Experience with data management and analysis workflows (e.g., R, open science platforms).
- Proven publication record in peer-reviewed journals.
- Candidates must have a full, clean Irish/European driving licence

Knowledge & Experience (Desirable)

- Knowledge of peat-based agricultural systems and impacts of key soil type, management intervention and climatic drivers on carbon/greenhouse gas uptake and release.
- Experience or knowledge of field-based greenhouse gas measurement techniques.
- Experience in agricultural research.
- Prior involvement with multi-institutional research collaborations.
- Experience in science communication and dissemination.

Skills & Competencies

- Excellent leadership, communication, and organisational skills.
- Proven ability to supervise and mentor junior researchers.
- Strong commitment to equality, diversity, and inclusion.
- Capacity to work independently and as part of an interdisciplinary, international team.
- High level of technical competence with both field and laboratory equipment.

Application Procedure

Applicants should submit a full Curriculum Vitae to include the names and contact details of 2 referees (including email addresses) and a letter of interest, including a list of publications stating your rationale for applying to:

Dr Matthew Saunders

saundem@tcd.ie

Further Information for Applicants

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| 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 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 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.

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.

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/Highly-Skilled-Eligible-Occupations-List/>

[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>.

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Dr Matthew Saunders

saudem@tcd.ie



**UNIVERSITY
VACANCIES IRELAND**
universityvacancies.com

