Post Specification

<table>
<thead>
<tr>
<th>Post Title:</th>
<th>PhD Studentship</th>
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<tbody>
<tr>
<td>Post Status:</td>
<td>Fixed-term up to 4 years full time.</td>
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<tr>
<td>Research Group / Department / School:</td>
<td>Trinity Coastal Research Group (Prof Iris Möller), Department of Geography, School of Natural Sciences, Trinity College Dublin, the University of Dublin</td>
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<tr>
<td>Location:</td>
<td>Museum Building, Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland</td>
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<tr>
<td>Reports to:</td>
<td>Prof Iris Möller</td>
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<tr>
<td>Terms &amp; Conditions:</td>
<td>PhD studentship</td>
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<tr>
<td>Hours of Work:</td>
<td>Full time; TCD (EU student rate) fees of €7,748 per annum and an annual stipend of €16,000 for up to 4 years.</td>
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<tr>
<td>Closing Date:</td>
<td>12 Noon (GMT), [30th April 2021]</td>
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NOTE: Applicants must have been resident in an EU member state for 3 out of the last 5 years to be eligible for EU fees

Post Summary

Comparing the geomorphological functioning of natural and managed realignment in constrained estuarine settings, Ireland

The restoration of coastal wetlands through managed realignment (MR; the relocation and/or breaching of coastal protection structures) is being increasingly adopted as a viable strategy towards addressing multiple pressing environmental challenges (Oppenheimer et al., 2019). The various ecosystem services provided by coastal wetlands are a key driver of such restoration schemes and include carbon sequestration, hazard regulation (through surge and wave dissipation), biodiversity
enhancement, and physical and mental health benefits to local communities. In the current context of the European Union Green Deal and the commitment of national governments towards biodiversity and climate targets, the importance of ensuring that restoration efforts are efficient and effective is being brought into ever sharper focus.

Existing MR sites within the UK and Ireland have a history of either accidental or abrupt breaching of sea defences with only limited pre-breach monitoring. Furthermore, any monitoring that is conducted before interventions take place is often focused on ecological rather than hydrogeomorphological site assessments. To fully understand the likely outcome of interventions, particularly in terms of carbon sequestration, soil stability, wave and water level attenuation, however, knowledge on the geomorphological functioning of naturally developed versus restored sites is critical. Existing hydrogeomorphological insights suggest a high context-dependency of all of the above processes, requiring detailed site-specific bio-physical knowledge to underpin larger-scale (e.g. remote sensing based) assessments of site-suitability for restoration and potential future site-performance with respect to key ecosystem services.

This project will focus on two saltmarsh sites on the Irish Sea coast, at which managed or unmanaged realignment has led to marsh reestablishment to gain insight into the linkage between biological, physical, and hydrodynamic processes. This knowledge will be used as a basis for (a) conceptual model(s) of how the present functioning is likely to alter through time and under altered forcing conditions and to explore what aspects of this knowledge are transferrable to other sites.


Standard Duties and Responsibilities of the Post

Field monitoring of water levels, waves, and sediment transport, alongside ecological surveys will be conducted by the PhD candidate at (a) the ‘restored’ marsh sites and (b) an adjacent natural marsh sites to understand the link between hydrogeomorphological processes, spatial variation in plant productivity and current carbon stocks and how these process relationships vary between the natural and restored areas.

More specifically, the candidate will deploy state-of-the-art digital water level/wave and suspended sediment sensors alongside ground surveys of vegetation and below-ground soil, root, and organic matter properties. A series of sedimentation-erosion and accretion measurement sites will be established to provide insights into the dynamics of tidal versus below-ground and above-ground organic matter contributions to surface elevation change (and thus likely persistence under future sea level rise scenarios).

The research will be developed and carried out in close collaboration with a post-doctoral researcher, who will act to assist the PhD in the starting phase of the fieldwork campaign.

The research student will be based in the Department of Geography, Trinity College Dublin, and will working alongside another PhD student, a post-doctoral researcher and the supervisor, Professor Iris Möller, as well as dedicated field and laboratory support staff within the Department.

Funding Information

The award includes a contribution towards TCD (EU student rate) fees of €7,748 per annum and an annual stipend of €16,000 for up to 4 years. Note that applicants from non-EU countries will need to apply for scholarships to cover the difference between the international and EU fee component.

Person Specification

This PhD will suit someone with a (Physical) Geography or Environmental Science/Management background, as well as an interest in - and experience of - working in challenging physical environmental conditions and of geomorphological field monitoring methods. Candidates will have shown an aptitude for independent research through previous study, the ability to write at a high level and have an aptitude for and, ideally, personal experience of the application of digital sensing equipment, knowledge of a programming language (e.g. Matlab or ‘R’), and statistical data analysis.
Qualifications

Applicants must have received a first class or upper second class honours degree (or equivalent) in (Physical) Geography, Environmental Science or related subject from an Irish university or equivalent university in another country (note fee restrictions if applying from non-EU countries under ‘Funding information’). A Masters degree is desirable. A full, clean driving license is required at the point of starting the PhD.

Knowledge & Experience (Essential & Desirable)

Knowledge of (Physical) Geography or Environmental Science/Management alongside experience of geomorphological field monitoring methods is essential. Candidates will also need to demonstrate an aptitude for and, ideally, personal experience of the application of digital sensing equipment, knowledge of a programming language (e.g. Matlab or ‘R’), and statistical data analysis.

Skills & Competencies

A high level of competence in the English language; strong academic writing skills, numeracy skills, and communication skills; ability to conduct field work in challenging environmental settings; ability to work independently and within a team.

Application Procedure

Applicants should submit their application (see below) to:

Prof Iris Möller (moelleri@tcd.ie)

by Friday 30th April 2021 12:00 GMT (please use ‘Coastal SM PhD’ as the email subject line).

The application must consist of a single PDF document that contains the following:

● A cover letter: Your letter should clearly set out your suitability and motivation for the particular PhD with reference to your past relevant experience and achievements.

● A CV that includes your relevant experience, undergraduate results and postgraduate results (if applicable), and contact information for 2 academic referees.
Candidates will be notified of the outcome of the shortlisting process by Friday May 7th and successful candidates will be invited to proceed to Interview. Interviews (by video call) will be scheduled to take place in the week of 17th May.

The successful candidate will then be invited to submit a full application to Trinity College Dublin for entry to the graduate program.

Further Information for Applicants

<table>
<thead>
<tr>
<th>URL Link to Area</th>
<th><a href="http://www.tcd.ie">www.tcd.ie</a></th>
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<tr>
<td>URL Link to Human Resources</td>
<td><a href="https://www.tcd.ie/hr/">https://www.tcd.ie/hr/</a></td>
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</table>
GARDA CLEARANCE:

Police vetting will be sought in respect of individuals who come under consideration for a post.

PLEASE NOTE: Applicants will be required to complete and return a Garda vetting form should they come under consideration for appointment. In some cases they may be requested to complete the form on the day of interview. This form will be forwarded to An Garda Síochána (Irish Police) for security checks on all Irish addresses at which they have resided. An Garda Síochána will make enquiries with the Police Service of Northern Ireland with respect to addresses in Northern Ireland. If an applicant is not successful in obtaining the post for whatever reason, this information will be destroyed. If an applicant, therefore, subsequently comes under consideration for another position, they will be required to supply this information again.

While applicants must complete information in relation to all addresses at which they have resided, the vetting is only done on addresses on the island of Ireland.

If an applicant has resided / studied in countries outside of Ireland for a period of 6 months or more, it is mandatory for them to furnish a Police Criminal Records Check/ Police Certificate from those countries stating that they have no convictions recorded against them while residing there. Applicants will need to provide a separate Police Criminal Records Check/ Police Certificate for each country in which they have resided. The Police Criminal Records Check/ Police Certificate must be dated after the date the applicant left the relevant country. Applicants should provide documentation in the English and/or Irish language. Translations must be provided by a registered translation company/institute in the Republic of Ireland; all costs will be borne by the applicant. Only original version documents will be accepted.
Applicants should be aware that any information obtained in the Garda Vetting process can be made available to the employing area.

It is the responsibility of the applicant to seek security clearances in a timely fashion as they can take some time. No applicant will be appointed without this information being provided and being in order.

The following websites may be of assistance in this regard:

www.disclosurescotland.co.uk
www.psni.police.uk

This website provides information on obtaining a national police clearance certificate for Australia
www.afp.gov.au

This website provides information on obtaining police clearance in New Zealand.
www.courts.govt.nz

For other countries not listed above applicants may find it helpful to contact the relevant embassies who could provide information on seeking Police Clearance. Original Police Clearance documentation should be forwarded to Human Resources where it will be copied and the original returned to the applicant by post. Any cost incurred in this process will be borne by the Applicant.
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 4 subjects and in the top 100 in 18 subjects (QS World University Rankings by Subject 2020). 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 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

See above.