



Post Specification

Post Title:	Postdoctoral Research Fellow in Machine Learning for Sustainable Mobility
Post Status:	Specific Purpose Contract – Full Time Tenable immediately
Research Group / Department / School:	Distributed Systems Group, Discipline of Networks and Distributed Systems, School of Computer Science and Statistics
Location:	Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland
Salary:	Commensurate with experience and achievement (in the range €42,782-€47,854)
Reports to:	Dr. Melanie Bourouche
Hours of Work:	39 hours per week
Closing Date:	The closing date for applications is 3 rd July 2023. Late applications will be considered if the post remains unfilled.

Post Summary

We are seeking to recruit a Postdoctoral Research Fellow to investigate the use of Machine Learning for sustainable mobility, within CONNECT - the Science Foundation Ireland Research Centre for Future Networks and Communications in collaboration with the E3 Kinsella SUMMIT (Sustainable Mobility Models for a Just Transition) initiative.

This project will seek to extend the state-of-the art in machine learning to support the delivery of personalized mobility services at scale. The project may address topics such as enabling personalized on-demand travel services, optimizing journey-time predictability or collaborative journey planning in the context of limited transportation capacity. The successful candidate is expected to make contributions to the state of the art in machine learning applied to cyber-physical systems in areas such as deep/reinforcement learning, multi-agent cooperation, lifelong learning, and/or transfer learning. The position will be based in the CONNECT research centre at Trinity College Dublin, Ireland. The researcher will also be part of the School of Computer Science and Statistics in TCD. The position will be under the direction of [Dr. Mélanie Bourouche](#). For informal inquiries please contact Melanie.Bourouche@tcd.ie.

Required Qualifications

The successful candidate must have a PhD in Computer Science, Computer Engineering, Electronic Engineering, or a related field. The post is applicable to both new and experienced PhD holders, and salary will be commensurate with experience and achievement. The successful candidate will join an inter-disciplinary team of highly-skilled and innovative researchers in Sustainable Mobility.

Essential Knowledge & Experience

- Expertise in machine learning, in particular deep and/or reinforcement learning
- Established track record of publication in leading journals/conferences, on relevant topics
- Excellent software engineering and programming skills
- Excellent written and oral communication skills
- The ability to work well in a group
- Strong self-motivation and willingness to learn

Desirable Knowledge & Experience

Experience in one or more of the following areas, is desirable:

- Intelligent transport systems/intelligent mobility
- Optimisation
- Distributed computing
- Experience of project proposal writing
- Industry collaboration

Post Funding

The post is funded by Science Foundation Ireland (SFI), as part of CONNECT the SFI research centre for Future Networks and Communications.

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.

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.

Application Procedure

Please send applications by email to Melanie.Bouroche@tcd.ie and Vinny.Cahill@tcd.ie quoting “Personalized Mobility as a Service Fellowship” in the subject line and containing three PDF files as follows:

(1) a cover letter,

(2) a curriculum vitae (giving full details of qualifications and experience, including transcripts of degrees, a description of your contribution to relevant project work, identification of your three most-significant publications relevant to the project, and the names and contact details of two referees), and

(3) a 1-2 page research proposal.

Please do not provide other documents, documents in other formats, or include any substantive information in the body of your email.

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