



Post Specification

Post Title:	Post-doc fellow in System Integration of Biodiversity Sensors
Post Status:	18 months contract
Funded by:	Trinity College Dublin Kinsella Challenge-Based E3 Award
Location:	Trinity College Dublin, CONNECT Research Centre
Salary:	€40,023 – €46,109 gross per annum, commensurate with experience
Closing Date:	Until position filled

Open position

Digitising Biodiversity is an exciting new project under the E3 umbrella of Engineering, Environment and Emerging Technologies. We aim to develop a ground-breaking new smart environmental monitoring system, which will bring about a step-change in the monitoring of biodiversity, transforming the resolution, quality and interpretation of data. Over the period of 5 years, it will develop and integrate acoustic, visual and mm-wave all-weather radar sensors, process, analyse and interpret the data they produce using AI species-recognition and a range of statistical tools.

One postdoctoral position is currently available to work on the **system integration of novel biodiversity sensors**. The position will involve integration of multiple sensors (i.e. acoustic, video, radar etc.) into a working proof-of-concept device. The device should process raw data from sensors and upload compressed relevant information over the LPWAN network. The candidate is expected to be familiar with design of hardware electronics, preferably in the context of **wireless IoT, wireless sensors and/or edge computing**.

The postdoctoral researcher will also be involved in activities of the broader Digitising Biodiversity team, which involves researchers from various areas of the college, including computer science, engineering, zoology and botany; they will be expected to support its activities, help with management of the project and proactively engage with all stakeholders.

The position will be based predominantly in the CONNECT research centre at Trinity College Dublin, Ireland and will be funded for **at least 18 months, but contract extension is possible based on mutual satisfaction**. The position will be under the direction of Dr Adam Narbudowicz and Prof Ian Donohue.

Qualifications

The candidate must have a PhD degree in electronic engineering (or related topic) or at least 4 years of comparable R&D experience in industry. The post is applicable to both new or more experienced PhD holders, and salary will be commensurate with experience and achievement. The successful candidate will join an interdisciplinary team of highly skilled and innovative researchers, addressing global environmental challenges.

Required Knowledge & Experience



- Experience with hardware electronics, especially sensors and/or wireless IoT
- Experience with system integration
- Willing to work in interdisciplinary environment, proactively engaging with non-technical partners in the project (zoology and botany experts)
- The ability to work well in a group, and the ability to mentor junior researchers, such as PhD students
- Excellent written and oral communication skills
- Strong self-motivation and willing to learn attitude

Funding

The post is funded by Trinity College Dublin Kinsella Challenge-Based E3 Award, and Nature+CONNECT, funded by Microsoft and Science Foundation Ireland through CONNECT, the SFI Research Centre for Future Networks and Communications.

Post Location

The post will be hosted at the CONNECT Centre (<https://connectcentre.ie/>), which is Ireland's largest telecommunications research centre. The Centre carries out industry-informed research focusing on wireless and optical networks of the future with a strong emphasis on the technologies that will underpin these networks.

We pride ourselves in carrying out research that is of the highest quality and that has international impact. We also pride ourselves in being an inclusive, diverse, creative, and friendly place to work.

Trinity College Dublin

Founded in 1592, Trinity College Dublin is the oldest university in Ireland and one of the oldest universities of Western Europe. On today's campus, state-of-the-art libraries, laboratories and IT facilities, stand alongside historic buildings on a city-centre 47-acre campus.

Trinity College Dublin offers a unique educational experience across a range of disciplines in the arts, humanities, engineering, science, human, social and health sciences. As Ireland's premier university, the pursuit of excellence through research and scholarship is at the heart of a Trinity education. TCD has an outstanding record of publications in high-impact journals, and a track record in winning research funding which is among the best in the country.

The Library of Trinity College is the largest research library in Ireland and is an invaluable resource to scholars. In addition to purchases and donations accrued over four centuries, the College has had 200 years of legal deposit. By this right Trinity can claim a copy of every book published in Ireland the UK. The Library has over 4.25 million books, 22,000 printed periodical titles and access to 60,000 e-journals and 250,000 e-books. The Library's research resources also include internationally significant holdings in manuscripts (the most famous being the Book of Kells), early printed material and maps. Its collections and services support the College's research and teaching community of 15,000+ students and academic staff.

Trinity continues to attract intellectually strong students from Ireland and abroad. The accessibility of a Trinity education to all students of ability is very important. Trinity College was the first university in Ireland to reserve 15% of first year undergraduate places for students from non-traditional learning groups – students with a disability, socio-economically disadvantaged students as well as mature students. There



is also an exciting international mix of its student body where 16% of students are from outside Ireland and 40% of these students are from outside the European Union. Students also benefit from a scholar teacher model where they have the opportunity of being taught by world-leading experts in their field. Interdisciplinarity forms a key element in the College strategy in increasing Trinity's international standing as a research-led university.

Many of Trinity College Dublin's alumni have helped shape the history of Ireland and Western Europe. They include author, Jonathan Swift, philosopher, George Berkeley, political philosopher, Edmund Burke, wit and dramatist, Oscar Wilde, historian, William Lecky, religious scholar, James Ussher, scientists, John Joly, George Johnstone Stoney, William Rowan Hamilton and physicians, William Stokes and Denis Burkitt.

Four of Trinity College's alumni have won Nobel prizes, in Physics (1951), Literature (1968), Peace (1976), and Medicine (2015). The first President of Ireland, Douglas Hyde was a TCD graduate as was the first female President of Ireland, Mary Robinson.

Equal Opportunities Policy

Trinity College Dublin is an equal opportunities employer and is committed to the 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.

Application Procedure

Candidates should submit a cover letter together with a **curriculum vitae to include the names and contact details of 3 referees (along with their email addresses)** to:

narbudoa@tcd.ie

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