

Post Specification

Post Title:	Research Fellow (Post-Doctoral Researcher) x 4 in Autonomous and Adaptive Systems
Post Status:	Specific-purpose contract (full-time) to undertake research on urban-scale, autonomous, adaptive systems for the Internet of Things, as part of Enable Research Programme, hosted at CONNECT Centre.
Research Group / Department / School:	Enable Research Programme, CONNECT Centre, Trinity College Dublin, the University of Dublin
Location:	CONNECT Centre, Trinity College Dublin, the University of Dublin, College Green, Dublin 2, Ireland
Reports to:	Professor Siobhán Clarke
Salary:	Appointment will be made on IUA Post-Doctorate Research salary scale in line with government pay policy [€36,854 to €47,728 per annum] ¹
Hours of Work:	37 hours per week
Closing Date:	12 Noon (Irish Standard Mean Time), 17 th August 2018

Post Summary

The Enable Research Programme (<https://www.enable-research.ie/>) is currently seeking four Postdoctoral researchers in Autonomous and Adaptive Systems. The positions will be hosted by the CONNECT Centre based in Trinity College Dublin. Enable programme is funded by Science Foundation Ireland (SFI) and is co-funded by the European Regional Development Fund.

Enable's focus is on connecting communities to smart urban environments through the Internet of Things. Enable's research strands address challenges relating to sensing and

¹ Candidates who fulfill certain eligibility requirements, once in the position, will have the opportunity to apply to transform their role into a Marie Skłodowska-Curie Fellowship on the EDGE Programme, with additional supports and potential for increased salary. Further details of the EDGE scheme are available on www.edge-research.eu and by contacting edge@tcd.ie.

actuation at large scale in dynamic environments, data analytics of large volumes of data with challenging properties such as uncertainty and heterogeneity, security and privacy concerns, and engaging citizens in a co-design approach.

CONNECT is Ireland's Future Networks and Communications Research Centre whose mission is to research, develop and innovate new communications solutions to address many of the challenges facing society. Enable is also linked with Insight (<https://www.insight-centre.org/>), which is Ireland's Data Analytics Research Centre, and Lero (<https://www.lero.ie/>), Ireland's Software Research Centre.

The Enable academics who will act, individually or collaboratively, as supervisors for the open positions are:

- Professor Siobhán Clarke (Enable Director)
- Professor Melanie Bourroche
- Professor Ivana Dusparic
- Professor Vinny Cahill

FOUR experienced postdoctoral researcher positions are available to investigate a range of different challenges relating to enabling software-based technologies for smart communities/cities, particularly at the edge of the network. The expertise of interest includes:

- Artificial intelligence, multi-agent systems and machine learning;
- Service-oriented computing for edge and mobile devices;
- Vehicle-to-X communications towards safety-critical applications support;
- Information-centric networking.

Standard Duties and Responsibilities of the Post

- Investigate the challenges for software-based enabling technologies for smart communities/cities at the edge of the network;
- Collaborate with other academic and industry partners;
- Mentoring of PhD students;
- To conduct a specified programme of research under the supervision and direction of a Principal Investigator/Project Leader;
- To engage in appropriate training and professional development opportunities as required by your Principal Investigator, School or College in order to develop research skills and competencies;

- To engage in the dissemination of the results of the research in which you are engaged, as directed by and with the support of and under the supervision of the Principal Investigator;
- To engage in the wider research and scholarly activities of the research group, School or College;
- To carry out administrative work to support your programme of research.

Funding Information

Science Foundation of Ireland

Person Specification

Qualifications

- The candidate must have a **Ph.D.** in the area of Computer Engineering, Computer Science or a related field, with a track record of research in adaptive, autonomous systems. The candidate must be an independent researcher willing to take a leadership role in the group.

Knowledge & Experience (Essential & Desirable)

Essential:

- 3+ years' experience in design and development of software-based enabling technologies at the edge of the network.
- Excellent knowledge of software programming languages (e.g. C, C++, Java, Python, Matlab);
- Excellent oral and communication skills, including the proven ability to write in English at a suitable standard for the preparation of written reports, publications and presentations of the work at generalist and specialist levels, including discussions with engineers and scientists in different fields.
- It is expected that applicants will have:

- Established track record of publication in leading journals/conference, on relevant topics such as service-oriented computing, multi-agent learning, artificial intelligence, networking, edge computing, vehicular networks, etc.;
- Proven experience in mentoring junior researchers, such as Ph.D. students;
- Experience of working with collaborators.

Desirable:

- Experience with application of software-based enabling technologies to smart cities' challenges such as Intelligent Transportation Systems, Energy Demand-Side Management, Water Management, Waste Management or other city service management.

Skills & Competencies

- The ideal candidate will have a background in the development of architecture and software for dynamic systems at the edge of the network.
- Ability to engage with industrial collaborators.
- Well-organised and self-motivated with the ability to manage the day-to-day running of a research project, to identify research objectives and to carry out appropriate research activities within a given timescale.

Further Information for Applicants

URL Link to Area	www.tcd.ie
URL Link to Human Resources	https://www.tcd.ie/hr/

Trinity College Dublin, the University of Dublin

Trinity is Ireland's premier university, with a proud tradition of excellence stretching back to its foundation in 1592. The oldest university in Ireland, and one of the oldest in Europe, today Trinity sits at the intersection of the past and the future, and is ideally positioned as a major university in the European Union. Our 47-acre campus is located in the heart of Dublin city centre and is home to historic buildings dating from the University's establishment, as well as some of the most cutting-edge teaching and research facilities in Ireland. Students at Trinity benefit from a unique educational experience across a range of disciplines in our three faculties – Arts, Humanities, and Social Sciences; Engineering, Mathematics and Science; and Health Sciences. 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 [18 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. These internationally recognised themes include such diverse areas as Cancer, Immunology, Telecoms, Identities in Transformation, Nanoscience, Neuroscience, and Making Ireland. Researchers from across the University work together in innovative ways to develop new and exciting approaches to their research and explore the frontiers of knowledge in the 21st century. In creating these dedicated research themes, Trinity's researchers are able to become a more powerful force on the global stage, successfully competing for large-scale grants and attracting top students and faculty to the University. Trinity is home to Ireland's first purpose-built Nanoscience research institute, CRANN, which opened in January 2008. This state-of-the-art facility houses 150 scientists, technicians, and graduate students in specialised laboratories, fostering creative innovations that have seen Trinity's researchers make significant breakthroughs.

The Trinity Long Room Hub for Arts and Humanities Research Institute is the University's flagship institute for research in the Arts and Humanities, providing a world-class environment for cross-disciplinary collaborative projects. The Long Room Hub provides a central location through which the University's internationally respected Arts and Humanities research can become more visible, demonstrating its relevance for contemporary and future societies.

Researchers from across the University regularly participate in debates on topical issues facing the world today. As well as operating an International Visiting Research Fellowship programme, the Long Room Hub also hosts major EU-funded Digital Humanities projects.

One of the most instantly recognised parts of Trinity's campus is the famous Old Library, home to the historic Book of Kells as well as other internationally significant holdings in manuscripts, maps, and early printed material. Trinity's Library is the largest research library in Ireland and is an invaluable resource to Trinity's students and research community. Built up over the four centuries of the University's existence, the Library's collections have benefitted from its status as a Legal Deposit library for the past 200 years, granting Trinity the right to claim a copy of every book published in Ireland and the UK. At present, the Library's holdings span approximately 4.25 million books, 22,000 printed periodical titles, and access to 60,000 e-journals and 250,000 e-books.

Trinity attracts top students from Ireland and abroad and prides itself on the consistently high standard of student admitted to the University every year. These students are drawn to Trinity for the excellence of our research-led teaching and for the quality and prestige a degree from this University confers. Trinity has also pioneered accessibility to education in Ireland, becoming the first university in the country to reserve 15% of its undergraduate places for students from non-traditional learning groups. Trinity is the top-ranked European university for student entrepreneurship and Europe's only representative in the world's top-50 universities.

Our alumni have gone on to shape the history of Ireland and of Western Europe in a wide range of fields. These include such notable figures as Jonathan Swift, Oscar Wilde, William Rowan Hamilton, Edmund Burke, William Stokes, Denis Burkitt, Louise Richardson, Lenny Abrahamson, and Anne Enright. Three of Trinity's graduates have been awarded Nobel prizes: Ernest Walton for Physics in 1951; Samuel Beckett for Literature in 1968; and William Campbell for Physiology / Medicine in 2015. Trinity also counts the first female President of Ireland among its alumni in Mary Robinson, as well as other notable former Presidents Douglas Hyde and Mary McAleese. At Trinity we are justifiably proud of our tradition, and we strive to uphold this excellence as we face the demands of the 21st century.

Ranking Facts

Trinity is the top ranked university in Ireland. Using the QS methodology, the University is ranked 104th in the world and using the Times Higher Education World University Rankings methodology Trinity is 117th in the world.



Overall

- Trinity is Ireland's No.1 University in the QS World University Ranking, THE World University Ranking and the Academic Ranking of World Universities (Shanghai).
- Trinity is ranked 104th in the World, and 36th in Europe, in the 2018/2019 QS World University Ranking.
- Trinity is ranked in the Top 120 for Graduate Employability in the QS 2018 Rankings.
- Trinity is in the Top 50 most innovative universities in Europe according to Reuters.²
- Between 2010 and 2015, Trinity was ranked the top university in Europe for entrepreneurship according to Pitchbook's independent analysis.³

² <http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT>

³ <http://pitchbook.com/news/reports/2015-2016-pitchbook-universities-report>

Internationalisation

- Trinity is ranked 52nd in the world in the THE World University Ranking for international outlook.

Research Performance

- Of the 981 institutions included in the THE World University Rankings for 2017, Trinity is in the top 15% internationally for research performance.
- Trinity is ranked in the top 15% internationally by QS for citations.

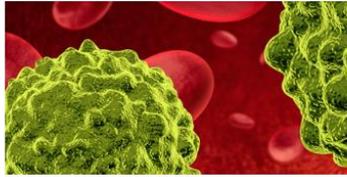
In the QS World University Subject Rankings:

- Trinity is ranked in the top 50 worldwide in four subject areas according to the QS World University Subject Rankings 2018. The University is ranked in the top 100 globally for 20 subjects overall.
- Trinity's Top 50 subjects include Nursing (25th), Classics (28th), English (28th) and Politics (43rd).
- Trinity is ranked in the top 100 for each of the following 16 subjects: History, Languages, Philosophy, Theology, Computer Science, Biology, Medicine, Pharmacy, Chemistry, Geography, Materials Science, Education, Law, Social Policy, Sociology and Sport.
- The University is ranked in the top 100 for three broad subject areas: Arts & Humanities (57th), Life Sciences & Medicine (87th), and Engineering & Technology (89th).

Research Themes



Ageing



Cancer



Creative Arts Practice



Creative Technologies



Digital Engagement



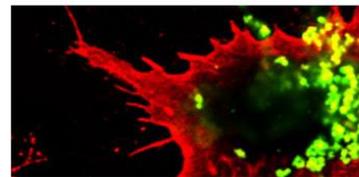
Digital Humanities



Genes & Society



Identities in Transformation



Immunology, Inflammation & Infection



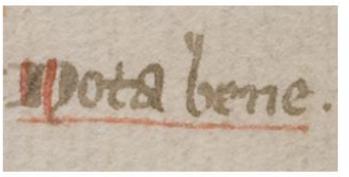
International Development



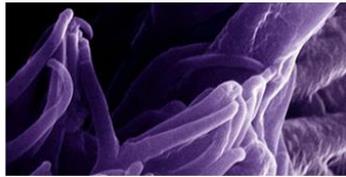
International Integration



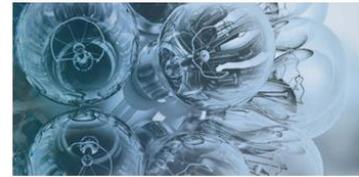
Making Ireland



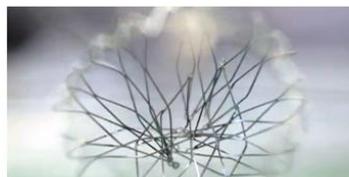
Manuscript, Book and Print Cultures



Nanoscience



Neuroscience



Telecommunications



Smart Sustainable Planet



Next Generation Medical Devices

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 Jobs, Enterprise and Innovation and further information on the Highly Skills Eligible Occupations List is set out in Schedule 3 of the Regulations <https://www.djei.ie/en/What-We-Do/Jobs-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://www.djei.ie/en/What-We-Do/Jobs-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

Application Procedure

Applicants should submit a full Curriculum Vitae to include the names and contact details of 3 referees (including email addresses), together with a cover letter (1x A4 page) that specifically addresses the application procedure set out above, to siobhan.clarke@scss.tcd.ie

Name Professor Siobhán Clarke

Email Address siobhan.clarke@scss.tcd.ie



**UNIVERSITY
VACANCIES IRELAND**
universityvacancies.com

