**Post Specification (Comp: 034368)**

<table>
<thead>
<tr>
<th>Post Title:</th>
<th>Associate Professor in Computer Science (Software and Systems)</th>
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<tr>
<td>Post Status:</td>
<td>Permanent, full-time contract.</td>
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<tr>
<td>Department/Faculty:</td>
<td>Discipline of Software and Systems, School of Computer Science and Statistics, Faculty of Engineering, Mathematics and Science, Trinity College Dublin, the University of Dublin</td>
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<tr>
<td>Location:</td>
<td>O’Reilly Institute, Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland</td>
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<td>Reports to:</td>
<td>Head of School of Computer Science and Statistics</td>
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<tr>
<td>Salary:</td>
<td>Appointment to be made on the Associate Professor (Senior Lecturer) Salary Scale at a point in line with Government Pay Policy [€76,170 to €97,604 per annum]. <a href="https://www.tcd.ie/hr/assets/pdf/monthly-academic.pdf">https://www.tcd.ie/hr/assets/pdf/monthly-academic.pdf</a></td>
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<tr>
<td>Hours of Work:</td>
<td>Hours of work for academic staff are those as prescribed under Public Service Agreements. For further information please follow the link below: <a href="http://www.tcd.ie/hr/assets/pdf/academic-hours-public-service-agreement.pdf">http://www.tcd.ie/hr/assets/pdf/academic-hours-public-service-agreement.pdf</a></td>
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<tr>
<td>Closing Date:</td>
<td>12 Noon (Irish Standard Time), 17th March 2020</td>
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The successful applicant will be expected to take up post as soon as possible.
Post Summary

The School of Computer Science and Statistics is seeking to appoint an Associate Professor in Computer Science in the Discipline of Software and Systems. The successful candidate will be an outstanding researcher and teacher who has a strong international research track record and who is already demonstrating research leadership within their field. A strong commitment to research-led teaching at both undergraduate and postgraduate level, research excellence, developing academic and industrial research partnerships and the ability to establish a dynamic, high impact, world-class research programme are essential.

Applications are encouraged from candidates working in areas including, but not limited to: programming languages (compilers, language design, concurrency, type systems), software engineering (formal methods, program analysis, verification tools, social software engineering), embedded systems (low-energy computing, resource-constrained AI, resource allocation), and parallel computing (embedded multicore, SIMD, synchronization, algorithm design).

The successful applicant must have a PhD in Computer Science or a related discipline. The School particularly welcomes applicants who will play an active role in interdisciplinary research within the School, E3 and the University. The E3 initiative is an ambitious project to expand education and research activities across three of its Schools: Computer Science and Statistics, Engineering, and Natural Sciences.

The School will support the successful applicant with funding to recruit one PhD student. Furthermore, the post holder can seek further PhD funding under the Science Foundation Ireland (SFI) funded Centres for Research Training (CRTs) hosted in the School which offer PhD positions in areas relevant to Software and Systems. The successful candidate can join Lero – the Irish Software Research Centre, which is funded by SFI and benefit from its large and diverse streams of research funding, particularly in collaboration with industry. With its CRTs and SFI Research Centres, the School offers significant opportunities for faculty to advance their research.
Further Information

Informal enquiries about this post should be made to Prof. David Gregg, Head of Discipline of Software and Systems (david.gregg@cs.tcd.ie)

Standard Duties and Responsibilities of the Post

Research:
As part of research duties, the appointee is required to engage in research and/or other creative and innovative activity as appropriate to the discipline. The appointee is required to disseminate their research in academic publications, recognised conferences, or other outlets as appropriate. The appointee is expected to engage in initiatives to seek funding for research in their own field and/or interdisciplinary or multidisciplinary research as appropriate. The appointee is also required to be available to participate in postgraduate research supervision including student recruitment, thesis definition, preparation, advice and regular advisory and guidance meetings.

Teaching:
As part of normal teaching duties, the appointee is obliged to give instruction and supervision, as directed by the Head of School (or designated Head of Discipline), to undergraduate and postgraduate students of the University in courses and programmes organised by the School. It is expected that the candidate will be responsible for delivering teaching in core computer science areas such as software development and computer organization and more specialized areas relating to the expertise of the discipline.

Such duties include curriculum and course design, preparation and delivery of lectures, tutorials and general examination and other assessment duties. The appointee is also required to be available to students for academic guidance and advice. In some disciplines, academic activities may also include laboratory, workshop or clinical instruction, supervision of fieldwork, site visits and other off-campus activities.

Contribution and Scholarly Activity:
As part of the contribution to the School and University, the appointee is required to participate in academic administration at School level (as directed by the Head of School) and at University level. In representing the University externally, the appointee is required to maintain the
highest professional standards. The appointee is also required to commit to engage in scholarly activity such as, but not limited to, refereeing of journals, external examining, membership of learned societies, advisory bodies and peer review panels.

**Person Specification**

**Qualifications**

The successful candidate must have a PhD degree in Computer Science or a related area

**Knowledge and Experience**

**Research**

**Essential:**

- Proven record in research publication, supervision and funding, and an ability to contribute to the field of Software and Systems.
- Demonstrate research plans that complement the strategic plans of the School of Computer Science and Statistics.
- Proven ability or evidence of potential to continue a strong record of research and publication in Software and Systems.
- Experience of recruiting and supervising research postgraduate students.
- Publication of articles in peer-reviewed journals and conferences.
- Participation in research seminars and conferences.
- Ability for research collaboration with industry and across disciplines.

**Teaching**

**Essential:**

- Ability to provide lectures and practical classes in computer science to undergraduate and postgraduate students.
- Evidence of a personal commitment to excellence in teaching.
- Excellent communication and interpersonal skills.
- Experience of supervising undergraduate and postgraduate dissertations.
- Experience of developing new modules and teaching material.

**Desirable:**

- Experience of using new teaching methods.
• Experience of working collaboratively and effectively in an inter and multidisciplinary environment.

Expected Skills and Competencies

• Career driven, enthusiastic and motivated.
• Good communication skills.
• Good organizational skills.
• Strong leadership skills.
• Ability to work effectively as member of a team.
• Honesty and integrity.
• Ability to be flexible when necessary.
• Willingness to contribute to the Discipline, School, College and the wider community.
• Ability to take the initiative.
• A commitment to own professional development.

In addition, candidates will be assessed on their potential contribution to the School, College and the wider community.

Application Information

Applicants should provide the following information when applying for this position:

• A cover letter.
• A comprehensive curriculum vitae including a full list of publications.
• The names and contact details (i.e. addresses, e-mail, etc.) of three referees.
• A research plan for the next two years with details of how funding will be secured (max 2 pages).
• A teaching statement summarising your teaching experience and approach (max 2 pages).

PLEASE NOTE: Candidates who do not submit this additional information may not be considered for shortlisting.
Candidates should note that the interview process for this appointment will include the delivery of a short presentation to the School.

Further Information for Applicants

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<thead>
<tr>
<th>URL Link to Area</th>
<th><a href="http://www.scss.tcd.ie">www.scss.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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Discipline of Software and Systems

The Discipline of Software and Systems consists of ten academic faculty members, six postdoctoral researchers and about 13 postgraduate research students. Its research is primarily concerned with:

- Software performance and correctness, programming language design, compilers, formal methods, program analysis, software engineering, algorithm design, concurrency.

- Computer systems research, embedded systems, low-energy computing, resource-constrained AI, parallel computing and synchronization, computer architecture

The Discipline also conducts research through the School’s affiliated Research Centres and Groups, including the SFI-funded Lero – The Irish Software Research Centre. For further information on the Discipline, please visit: https://www.scss.tcd.ie/disciplines/software_and_systems/

School of Computer Science and Statistics


The School has 65 academics, 40 support staff and over 100 research staff. The School is internationally recognised for the quality of its research and teaching and is ranked in the top
100 Computer Science Schools worldwide (QS Subject Rankings 2019) and is the highest ranked in Ireland.

The School offers a wide range of undergraduate and taught postgraduate degree programmes and has approximately 1,200 registered students. In addition, the School has over 120 PhD students.

The School hosts two Science Foundation Ireland (SFI) Research Centres: ADAPT and CONNECT, hosts the ENABLE SFI research spoke on the Internet of Things and the FinTech Fusion SFI research spoke and is a partner in a further two SFI Research Centres (Insight and Lero). Four TCD-wide multidisciplinary research themes, namely Creative Technologies, Digital Humanities, Digital Engagement, and Smart Sustainable Cities are led by members of the School. The School currently coordinates seven European Commission projects and is partner in a further eight. The School has signed research contracts in excess of €50 million over the last three years from a range of national and international agencies such as SFI, Enterprise Ireland and the European Commission’s Horizon 2020 Framework Programme.

For further information, please visit https://www.scss.tcd.ie/.

The E3 Vision

Trinity College Dublin is embarking on an ambitious project to expand education and research activities across three of its Schools: Computer Science and Statistics, Engineering, and Natural Sciences. Recognising the importance for humanity of addressing the global problem of sustainable technological development, the expansion of the three Schools is being executed as a single strategic activity - the E3 initiative.

The E3 initiative is premised on the realization that:

- human inquisitiveness is unquenchable and the need and desire for advanced technologies is a positive characteristic of the human spirit; and
- the natural capital of the planet is finite and should be used to provide flows of goods and services sustainably and equitably.

With the E3 initiative, Trinity promotes the vision of a society where the interdependence between technological innovation and our natural capital is advanced by world-leading research, education and entrepreneurship. The E3 initiative will position Ireland at the forefront of research in Science, Technology, Engineering, and Mathematics (the STEM disciplines), that
are crucial for future economic development. It will educate engineers and scientists for employment in existing and new technology sectors, equip them with the skills and attributes to direct the creation of new businesses, and place Ireland in a leading role globally for the quality of graduates in the STEM disciplines.

The School of Computer Science and Statistics, as part of the E3 initiative, is expanding its research and teaching in the key area of Artificial Intelligence.

The E3 initiative will be without precedent in Ireland, and among the first internationally to integrate engineering, technology and scientific expertise, at scale, to address some of the grand challenges facing our country and our world.

**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.\(^1\)
- Between 2010 and 2015, Trinity was ranked the top university in Europe for entrepreneurship according to Pitchbook’s independent analysis.\(^2\)

**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 (25\(^{th}\)), Classics (28\(^{th}\)), English (28\(^{th}\)) and Politics (43\(^{rd}\)).
- 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 (57\(^{th}\)), Life Sciences & Medicine (87\(^{th}\)), and Engineering & Technology (89\(^{th}\)).

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\(^1\) [http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT](http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT)

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 applicants are unavailable, reserves may be drawn from a shortlist. Outcomes of interviews are notified in writing to applicants 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 applicants 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’s current Critical Skills Eligible Occupations List. Non-EEA applicants should note that the onus is on them to secure a visa to travel to Ireland prior to interview. Non-EEA applicants 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

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), a Teaching Statement and Research Plan as outlined in the Application Process above.

APPLICATIONS WILL ONLY BE ACCEPTED BY E-RECRUITMENT:

http://jobs.tcd.ie

If you have any application queries, please contact:

Yasmin Madigan
Human Resources, House No. 4,
Trinity College Dublin, the University of Dublin

Tel: +353 1 896 3327
Email: madigany@tcd.ie