Post Specification (Comp: 034275)

<table>
<thead>
<tr>
<th>Post Title:</th>
<th>Hitachi Assistant Professor in High-Performance Computing, Tenure Track</th>
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<tr>
<td>Post Status:</td>
<td>Tenure Track*</td>
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<tr>
<td>Department/Faculty:</td>
<td>School of Mathematics, Trinity College Dublin, the University of Dublin</td>
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| Location:           | School of Mathematics, Trinity College Dublin, the University of Dublin  
                      | College Green, Dublin 2, Ireland                                       |
| Reports to:         | Head of School of Mathematics                                          |
| Salary:             | Appointment will be made on the Assistant Professor salary scale (109)  
                      | at a point in line with Government Pay Policy [€34,813 to €84,556 per annum], appointment will be made no higher than point 8 [i.e. €49,422] 
                      | [https://www.tcd.ie/hr/assets/pdf/monthly-academic.pdf](https://www.tcd.ie/hr/assets/pdf/monthly-academic.pdf) |
| Hours of Work:      | Hours of work for academic staff are those as prescribed under Public Service Agreements. For further information please follow the link below: [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) |
| Closing Date:       | 12 Noon (Irish Standard Time), 31st January 2020                       |

*This position is a Tenure Track position which is 5-years in the first instance, permanency is subject to satisfying the tenure requirements.

The successful applicant will be expected to take up post on 1st September 2020 or as soon thereafter as possible.
Post Summary

The School of Mathematics at Trinity College, Dublin is seeking a candidate for the above post. The appointment will be tenable from September 2020. This is a teaching and research position; the successful candidate will be required to contribute to all levels of teaching and supervision undertaken by the School, and will be expected to conduct a vigorous research programme.

Applicants must have a Ph.D. (or equivalent) in theoretical physics, mathematics or a related field and a demonstrated potential for excellence in research and teaching.

Candidates’ research should be broadly aligned with the research strengths in the School and should have a focus on advanced scientific computing.

Further Information

Prospective applicants may discuss the positions further by contacting the Head of School, Professor Sinéad M. Ryan by email to headmath@maths.tcd.ie

Standard Duties and Responsibilities of the Post

The successful candidate will be expected to undertake high-quality research and develop a high profile in the national and international research communities. The appointee will assist in the delivery of the School’s undergraduate and postgraduate programmes, and supervise research students. The successful candidate will be expected to assist in delivery of the School’s one-year taught M.Sc. In High-Performance Computing including teaching, supervision and administration. Applicants will have excellent organisational and interpersonal skills, and the ability to work both independently as well as part of a team. Candidates are also expected to raise external research funding and are encouraged to pursue further training in higher education teaching.
Person Specification

The ideal candidate will have the following:

Qualifications
- PhD

Knowledge & Experience (Essential & Desirable)

Essential:
- Proven publication record in high quality peer reviewed journals and potential for substantial publication record in medium term
- Demonstrable excellence in teaching in both small and large group environments
- Ability to design and deliver lectures to postgraduate M.Sc in HPC students.
- Potential for building and development of the subject area with demonstrated vision and commitment

Desirable:
- Experience of research supervision
- Experience of course coordination and administration
- Proven experience and potential for attracting research funding and graduate student recruitment initiatives
- Experience of working collaboratively and effectively in an inter- and multi-disciplinary environment.
- Previous participation in, and potential to co-ordinate, research seminars and conferences
- Awareness and understanding of current and future developments in the discipline – including hardware and software for HPC.

Skills & Competencies
- Ability to work effectively as a member of a team and collaborate with colleagues at an inter-disciplinary level and participation at School, Faculty and College level
• Excellent communication skills
• Strong organisational skills
• Willingness to contribute to the discipline and wider community.
• Demonstrable commitment to advancing equality, diversity and inclusion or provide a contextual qualification e.g. within their research group/institution or career to date.

Application Information

Applicants should provide the following information when applying for the Hitachi Assistant Professor in High-Performance Computing, Tenure Track

Example of details required for Application Process:

1. A comprehensive curriculum vitae, including a full list of publications
2. The names and contact details (i.e. addresses, e-mail, etc.) of three referees
3. A research plan (summarising research to be carried out in the next two years and including details of funding to be sought - 2 pages) and a teaching statement (summarising teaching experience and approach – 2 pages)
4. PLEASE NOTE: Candidates who do not submit this additional information may not be considered for shortlisting

Note:

Candidates should note that the interview process for this appointment may include the delivery of a presentation.
The School of Mathematics

Mathematics in Trinity has a long history stretching back to 1613 while the first appointment to a professorship of Mathematics in the College was in 1652. Noteworthy among the mathematicians associated with the College are Hamilton and E. T. Whittaker (Andrews’ Professors of Astronomy) and J. L. Synge who held the University Chair of Natural Philosophy for a period in the 1920s. A full account of the historical development of Mathematics in the first 400 year of the College can be found in the booklet written by T.D. Spearman (University Professor of Natural Philosophy 1966-1997). The text of that booklet is available on the web at https://www.maths.tcd.ie/pub/official/400Hist.

The School of Mathematics carries out research in Pure Mathematics, Applied Mathematics and in Theoretical Physics. There are established weekly seminar series in Analysis, Theoretical Physics and Computational Applied Mathematics. A colloquium series in Pure Mathematics is run jointly with other neighbouring universities. Members of the School have been successful in winning grants from the national funding agencies: the Irish Research Council (IRC) www.research.ie, and Science Foundation Ireland (SFI) www.sfi.ie as well as e.g. ERC, Marie Curie fellowships and H2020 Training Networks. The Hamilton Mathematics Institute (HMI) based in the School was recently awarded a second grant from the Simons Foundation to support a programme of workshops and visiting professors.

The School of Mathematics has a range of research strengths in

- **Pure Mathematics**

- **Applied Mathematics, Theoretical and Mathematical Physics**
  - General Relativity, Lattice Quantum Chromodynamics, Numerical Analysis, Quantum Field Theory, String Theory.

For further details, please see https://www.maths.tcd.ie/research/

Postgraduate Research and Teaching
The School has an active commitment to postgraduate research including through M.Sc. And PhD programmes. In addition, a one-year taught M.Sc. in High Performance Computing is delivered by the School. The appointee will be expected to play an active role in increasing the number of postgraduate research students. Details of the School's postgraduate programmes can be found at [https://www.maths.tcd.ie/postgraduate](https://www.maths.tcd.ie/postgraduate)

**Undergraduate Education**

The School offers the following degree programmes:

- Moderatorship in Mathematics
- Two-Subject Moderatorship in Mathematics
- Moderatorship in Theoretical Physics (with the School of Physics)

The School also delivers mathematics teaching to:

- Science Students
- Engineering Students
- Computer Science Students
- Management Science Students

Further details of our Undergraduate programmes can be found at [https://www.maths.tcd.ie/undergraduate](https://www.maths.tcd.ie/undergraduate)

**Further Information for Applicants**

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<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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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

¹ [http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT](http://www.reuters.com/article/us-innovative-stories-europe-idUSKCN0Z00CT)
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).
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 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/Ineligible-Categories-of-Employment/. 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 3333
Email: recruit@tcd.ie