### Post Specification (Comp: 033465)

<table>
<thead>
<tr>
<th><strong>Post Title:</strong></th>
<th>Ussher Assistant Professor in Number Theory and Cryptography</th>
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<tbody>
<tr>
<td><strong>Post Status:</strong></td>
<td>5 Year Fixed Term Contract with a view to permanency</td>
</tr>
<tr>
<td><strong>Department/Faculty:</strong></td>
<td>School of Mathematics/Faculty of Engineering, Mathematics and Science</td>
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<tr>
<td><strong>Location:</strong></td>
<td>School of Mathematics, Trinity College Dublin, the University of Dublin College Green, Dublin 2, Ireland</td>
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<td><strong>Reports to:</strong></td>
<td>Head of School</td>
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<tr>
<td><strong>Salary:</strong></td>
<td>Appointment will be made on the Lecturer Merged Salary Scale at a point in line with Government Pay Policy [€34,214 – €48,572 per annum - appointment will be made no higher than point 8. ]</td>
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<td><strong>Hours of Work:</strong></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><strong>Closing Date:</strong></td>
<td>12 Noon (Irish Time), Wednesday 2nd January 2019</td>
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The successful applicant will be expected to take up post on 1st October 2019

Interviews for those who have been successful at the shortlisting stage will take place in February 2019

**Post Summary**
The successful candidate will have demonstrated strong research promise in areas of mathematics closely related to number theory, preferably with an interest in cryptography as
an explicit or implicit application. While this appointment is a new research direction the appointee will join the algebra group in the School. There is demand from students, at undergraduate and postgraduate levels, for modules in number theory and cryptography and to engage in project or research work in these areas. Applicants must have a PhD and a demonstrated excellence in research and teaching.

Further Information
Informal enquiries about this post should be made to Professor John Stalker, Head of School stalker@maths.tcd.ie

Application Details:
Candidates should submit by e-recruitment:

• Cover letter
• Full curriculum vitae, list of publications and include the names and contact details of 3 referees (e-mail address if possible)
• Research plan summarising research to be carried out in the next two years and including details for funding to be sought (2 pages maximum)
• Teaching statement summarising teaching experience and approach (2 pages maximum)

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 delivery of a presentation and may include a test of practical skills.
• Candidates should arrange for three letters of reference in support of their application to be sent by closing date to Ms Karen O’Doherty via e-mail at kod@maths.tcd.ie
Standard Duties and Responsibilities of the Post

Role of the USSHER Assistant Professor.
The successful candidate will be expected to conduct the following:

• Teaching
  - Teach modules in their field at the advanced undergraduate or postgraduate level
  - Teach undergraduate modules to our Mathematics, Theoretical Physics and Joint Honors students.
  - Teach service modules offered by the School of Mathematics for undergraduate students in other programmes.
  - Supervise research projects for advanced undergraduate students in mathematics and theoretical physics.
  - Supervise research M.Sc. and PhD students in their field

• Research
The successful candidate will be expected to
  - Maintain an active international research profile
  - Apply for appropriate research funding, where available

• Administration
The successful candidate will be expected to
  - Take an active part in the functioning of the School
  - Serve, in due course, in the administrative posts of the School, as assigned by the Head of School.

Person Specification
Qualifications
The successful candidate must have:
• A doctoral degree in Mathematics
• An undergraduate degree in Mathematics or a related field.
Knowledge & Experience

Research

Essential

- Proven record in research and an ability to establish an independent research programme.
- Proven ability or evidence of potential to establish a strong record of research and publication in the relevant field and to contribute to the School's research environment
- An ability to conduct research in the specified field and to supervise research projects
- Publication of articles in peer-reviewed journals
- Participation in research seminars and conferences

Desirable

- Proven ability or evidence of potential to attract external research funding

Teaching

Essential

- Ability to provide lectures in Mathematics generally to undergraduate and postgraduate students, including the design of specialised modules related to the specified research area.
- Ability to develop and coordinate teaching modules relevant to the BA (Mod) in Mathematics
- Evidence of personal contribution and commitment to excellence in teaching
- Excellent communication and interpersonal skills

Desirable

- Experience of supervising undergraduate and postgraduate dissertations
- Experience of developing new modules and teaching material
- Experience of using new teaching media
- Experience of working collaboratively and effectively in an inter- and multi-disciplinary environment
- Potential for recruiting and supervising research postgraduate students
Administration

Essential

- Potential to co-ordinate, manage and develop modules and courses in a university setting
- Excellent organisational and administrative skills
- Ability to establish targets and goals to support School and College strategies
- A commitment to student care

Desirable

- Experience of organizing research seminars, recruitment initiatives and other activities

Other essential attributes

- Ability to work effectively as member of a team.
- Honesty and integrity
- Good communication skills
- Good organizational skills
- Willingness to contribute to the Discipline, School, College and to the wider community.
- Career driven, enthusiastic and motivated
- A commitment to own professional development.

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

The School of Mathematics at Trinity while relatively small has a very good international reputation. The School has research strengths in Mathematics and Theoretical Physics. We run undergraduate programmes in Mathematics and Theoretical Physics. In addition we contribute teaching to Science, Engineering, Computer Science and at graduate level to a taught Masters in Financial Economics. The School has research M.Sc and Ph.D programmes in Mathematics and Theoretical Physics and a taught M.Sc in High Performance Computing.
Further Information for Applicants

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<tr>
<th>URL Link to Area</th>
<th><a href="https://www.maths.tcd.ie/">https://www.maths.tcd.ie/</a></th>
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<tbody>
<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
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/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 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:

Lisa Hynes
Human Resources, House No. 4,
Trinity College Dublin, the University of Dublin

Tel: +353 1 896 1893
Email: lihynes@tcd.ie