# Post Specification

<table>
<thead>
<tr>
<th>Post Title:</th>
<th>Naughton Assistant Professor* in Physics</th>
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<tr>
<td>Post Status:</td>
<td>Permanent</td>
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<tr>
<td>Department/Faculty:</td>
<td>School of Physics, Faculty of Engineering, Maths and Science</td>
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<tr>
<td>Salary:</td>
<td>This appointment will be made on the Department of Education and Skills Lecturer Scale in line with current Government pay policy. The starting salary for this post will be no higher than point 8 of the lecturer / lecturer new entrant salary scale</td>
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<tr>
<td>Closing Date:</td>
<td>12 Noon on Wednesday 6th June 2012</td>
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The School of Physics wishes to appoint an Assistant Professor in photonics theory, with an emphasis on theoretical condensed matter physics applied to photonic systems.

The successful candidate will be at an early stage of her/his career with clear potential for research excellence. S/he will be a full member of the academic staff of the School and contribute to its teaching and research activities. In addition, world-class researchers in the School and in CRANN will provide the appointee with an outstanding environment for collaborative research.

The successful candidate will be expected to create and lead a theory group to include both strong theoretical work and collaborations with key experimental photonics programmes (physics of microcavities, quantum dots and conical refraction) in the School of Physics, TCD. A demonstrated ability to collaborate with experimental groups as well as leading high quality theoretical research is essential, as is a strong record of publishing in high impact journals.

Experience in teaching courses in quantum optics and in condensed matter physics at both undergraduate and graduate level would be a distinct advantage.

* The new academic title of Assistant Professor, previously known as Lecturer, as approved by University Council (15 June 2011) and Board (29 June 2011).
Standard Duties of the post:

As a full member of the teaching staff of the School of Physics, the successful candidate will be expected to:

- Develop and teach undergraduate and/or postgraduate lecture modules;
- Teach practical physics in an experimental or computation teaching laboratory;
- Give small group tutorials to Freshman (first- or second-year) students taking physics;
- Assess, examine and advise undergraduate and postgraduate students;
- Supervise final year undergraduate research projects.

S/he will also contribute to the School’s successful outreach programmes.

As a member of the School’s academic staff, the successful candidate will lead and develop independent research within the focus stated above and, in particular:

- Publish in leading peer-reviewed journals;
- Supervise postgraduate (MSc and PhD) research students;
- Raise independent research funding from agencies;
- Develop and maintain collaborations and links with other colleagues within the School, CRANN and elsewhere;
- Develop intellectual property and, when possible, ensure that new ideas/innovations are exploited appropriately.

The successful candidate will also undertake some administrative responsibilities as required by the School and College.

Qualifications, Knowledge & Experience

Qualifications
The successful candidate will have a Ph.D. in Physics or in a cognate subject.

Teaching
Experience in undergraduate and/or post-graduate teaching would be a distinct advantage.

The types of teaching experience that are desirable are:

- Development and teaching of lectures to large groups at undergraduate level;
- Small-group tutorials and the teaching of problem-solving skills;
- Supervision of undergraduate research projects;
- Development and teaching of postgraduate taught modules.

Administration

Any experience in course management and development at either undergraduate or postgraduate level is desirable and would be an advantage. Such experience may include
lecture modules, the design of undergraduate experimental or computational practicals, projects and/or tutorial classes.

Experience in managing assessment (whether continuous or by examination), project planning, extra-curricular work and/or outreach would also be advantageous, as would experience of serving on any academic or other committees, involvement in research seminars, recruitment initiatives and other activities.

Research
The successful candidate will have at least 2 years’ post-doctoral experience in research in photonics theory. The appointee will be able to demonstrate though her/his publication record that s/he has the potential to become a leader in the field, and to develop new areas of research. Publications in high-ranking journals will be taken into account.

The successful candidate will have played a role in applications for research funding or may even have already been successful in winning such awards as Principal Investigator. In either case, knowledge of funding sources in the field and a demonstrable potential to attract external grant funding is required.

The post holder will have experience in assisting in the supervision of postgraduate research students (e.g. by being an assistant or co-supervisor) and experience in acting as a referee in the peer-review process is also desirable.

Other
It is essential that the successful candidate have:

- An ability to work effectively as a member of a team;
- Good communication skills;
- Good organizational skills;
- Willingness to contribute to the School, College and to the wider community

Informal enquiries regarding the position may be made to Prof. James Lunney, e-mail: headphys@tcd.ie, tel: +353 (0)1 896 1259

Application Information
Candidates should submit a cover letter together with a full curriculum vitae to include the names and contact details of 3 referees (email addresses if possible), your list of publications and a research plan (summarizing research to be carried out in the next two years and including details for funding to be sought – 2 pages) and a teaching statement (summarizing teaching experience and approach – 2 pages) by e-Recruitment
Discipline/Area Summary

The School of Physics is the oldest and largest physics department in Ireland. Its history stretches back to the appointment of its first professor in 1724. It is now characterized by its vibrant and dynamic teaching and research programme. It runs two undergraduate physics degree programmes (in physics and physics and astrophysics) and two joint degrees with the Schools of Mathematics and Chemistry in theoretical physics and nanoscience, respectively.

Its research programme is impressive with over 35 postdoctoral researchers and 110 postgraduate research students working along with the 28 academics. These principal investigators raise considerable funding from Irish, EU and international funding agencies. The areas of research in the School are:

- Astrophysics
- Magnetism and spin electronics
- Nanobiophysics/soft matter
- Photonics
- Nanoelectronics and nanotechnology
- Theoretical and computational solid state physics

The School is a significant player in two Trinity initiatives. It is the major academic partner in CRANN, Ireland’s national centre for nanoscience and it is actively engaged with the Science Gallery. Staff in the School of Physics have significant collaborations with the best international scientists and publish extensively in leading peer-reviewed journals.
Trinity College Dublin

Founded in 1592, Trinity College Dublin is the oldest university in Ireland and one of the older 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.

TCD has developed significant strength in a broad range of research areas including the 18 broadly-based multi-disciplinary thematic research areas listed below.

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<th>Sustainable Environment</th>
<th>Next Generation Medical Devices</th>
<th>Human Condition</th>
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<td>Smart and Sustainable Cities</td>
<td>Creative Technologies – Digital Media, Arts and Entertainment</td>
<td>International Development</td>
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<tr>
<td>Cancer</td>
<td>Neuroscience</td>
<td>Immunology and Infection</td>
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<tr>
<td>Nanoscience</td>
<td>Telecommunications</td>
<td>Cultural Heritage &amp; Arts</td>
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<tr>
<td>Sustainable Society</td>
<td>Abstract, Generalize, Apply</td>
<td>Human and Social Networking</td>
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<tr>
<td>Ageing</td>
<td>International Integration</td>
<td>Digital Humanities</td>
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Its current flagship interdisciplinary research institutes are in areas such as molecular medicine, neuroscience, international integration studies, nanostructures and nanodevices. The construction of Ireland’s first purpose built nanoscience research institute, CRANN, was opened in January 2008, which houses 150 scientists, technicians and graduate students in specialised laboratory facilities.

The building also includes an innovative public venue, the Science Gallery. In 2011, it received the Shorty Award for Best Cultural Institution on Twitter globally and the Irish Web Award for Best Education and Third Level Website. These joined a list of awards that includes European Museum of the Year Award – Special Commendation 2010 and National IT award for best use of technology in education, 2009. In 2012, during Dublin's tenure as European City of Science, Science Gallery will continue to develop inspiring new exhibitions and experiences.
The recently opened Trinity Biomedical Sciences Institute (TBSI) is an unprecedented development for Biomedical Research in Ireland, both in terms of scale and ambition. It provides a facility for TCD to continue its upward trajectory in both basic and translational research programmes, notably in the areas of Immunology, Cancer and Medical Devices.

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. More than half of its incoming undergraduates have earned in excess of 500 out of a maximum 600 points in the national Leaving Certificate examination. The accessibility of a Trinity education to all students of ability is also 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. The College has met its target in this respect. 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. TCD students also have an opportunity to study abroad in other leading European universities through Trinity’s partnership agreements.

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.

Two of Trinity College’s alumni have won Nobel prizes – Ernest Walton for Physics in 1951 and Samuel Beckett for Literature in 1968. The first President of Ireland, Douglas Hyde was a graduate as was the first female President of Ireland, Mary Robinson.

The Selection Process in Trinity

- The Selection Committee (Interview Panel) will include members of the Academic community together with an External Assessor who is an expert in the area.
Applications will be acknowledged by email. If you do not have confirmation of receipt within 1 day of submitting your application online, please get in touch with us 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 College 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 College’s selection methods may consist of any or all of the following:
- Interviews
- Presentations
- Psychometric Testing
- References

It is the policy of the College 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.

**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, marital status, family status, age, disability, race, religious belief, sexual orientation or membership of the travelling community.

**Pension Entitlements**

This is a pensionable position. Details of the applicable Pension Scheme will be provided to successful candidates.

The Normal Retirement Age for pension purposes is 30 September on or after your 65th birthday and the terms of the Public Service Superannuation (Miscellaneous) Provisions Act 2004 presently apply.

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1 The Public Service Superannuation (Miscellaneous Provisions) Act 2004 set a minimum retirement age of 65 and removed the upper compulsory retirement age for certain New Entrants to the Public Sector on or after 1 April 2004. In the December 2009 Budget, the Government indicated its intention to (i) increase the minimum retirement age for all new Public Servants to equal the qualifying age for the Irish State Pension that is anticipated to be 67 for the foreseeable future; and (ii) to again introduce an upper compulsory retirement age of 70 initially. Legislation is pending and this appointment will be subject at all times to the provisions of such legislation.
Application Procedure

Candidates should submit a cover letter together with a full curriculum vitae to include the names and contact details of 3 referees (email addresses if possible), your list of publications and a research plan (summarising research to be carried out in the next two years and including details for funding to be sought - 2 pages), and a teaching statement (summarising teaching experience and approach - 2 pages) by e-Recruitment:

APPLICATIONS WILL ONLY BE ACCEPTED BY E-RECRUITMENT

If you have any query regarding this, please contact:

Ms. Christine Devlin, Recruitment Executive, Human Resources, House No. 4, Trinity College Dublin
Tel: +353 1 896 3584
Email: Christine.devlin@tcd.ie