



Post Specification

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| Post Title: | Research Fellow (Post-Doctoral Researcher) |
| Post Status: | 2-year fixed term contract (Full-time) |
| Research Group/Department/School: | CONNECT Research Centre, School of Computer Science & Statistics |
| Location: | CONNECT Research Centre, Dunlop Oriel House, Trinity College Dublin, The University of Dublin |
| Reports to: | Dr Marco Ruffini |
| Salary: | This appointment will be made at a point on the IUA Post Doctorate Researcher commensurate with experience |
| Closing Date and Time: | 17:00 GMT on Friday 16 th December 2016 |

Post Summary

CONNECT (formerly CTVR – www.ctvr.ie) is Ireland's largest telecommunications research centre. The Centre carries out industry-informed research focusing on wireless and optical networks of the future with a strong emphasis on the technologies that will underpin these networks. This position, under the direction of Dr. Marco Ruffini, is funded by Science Foundation Ireland (SFI).

A senior and a junior postdoctoral researcher position are available in **virtualised software-defined-networks architectures**, at the optical networking and communications laboratory of the CONNECT research centre, based in Trinity College Dublin. The position is funded by Science Foundation Ireland, and will be appointed as junior or senior post-doctoral researcher, depending on the candidate's experience. The successful candidate will join a team of highly skilled and innovative researchers in the area of access network architectures.



Standard duties and Responsibilities of the Post

- Lead the software and architectural development of an SDN-based framework for next generation access network architecture. Preparation of project funding proposal at European and national level;
- Collaborate with other academic and industry partners;
- Co-supervision of PhD students.

Funding Information

Science Foundation Ireland

Person Specification

Qualifications

- The candidate must have a **Ph.D. or equivalent technical experience** in the area of Electrical Engineering, Computer Engineering, Computer Science, or a related field, with a track record of research in optical communications and networks. The candidate must be an independent researcher willing to take a leadership role in the optical and telecommunications laboratory.

Knowledge & Experience (Essential & Desirable)

Essential:

- 3+ years experience in design and development of network virtualisation software architectures, cloud computing, cloud networking (openstack, OpenFlow/SDN, Network Function Virtualisation)
- Good working knowledge of software programming languages (e.g., c++, python, matlab)
- Solid written and oral communications skills;



- It is expected that applicants with academic background will have:
 - Established track record of publication in leading journals/conferences, on topics such as PON protocols, switching and routing, optical access and core networks;
 - Proven experience in mentoring junior researchers, such as Ph.D. students.

Desirable:

- Experience with protocols and architectures for passive optical networks and access networks is highly desirable.

Skills & Competencies

- The ideal candidate will have a background in development of architecture and software for network virtualization, cloud networking, OpenFlow/SDN systems.

Further Information for Candidates

CONNECT is Ireland's largest telecommunications research centre. We carry out industry-informed research in the telecommunications field. We focus on optical and wireless networks of the future with a strong emphasis on the technologies that will underpin these networks. We pride ourselves in carrying out research that is of the highest quality and that has international impact. We also pride ourselves in being an inclusive, diverse, creative, and friendly place to work.

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

Trinity College Dublin, the University of Dublin



Trinity College Dublin

Coláiste na Tríonóide, Baile Átha Cliath

The University of Dublin

Founded in 1592, Trinity is at the nexus of tradition and innovation, offering undergraduate and postgraduate programmes across 24 schools and three faculties: arts, humanities, and social sciences; engineering, maths and science; and health sciences. Spread across 47 acres in Dublin's city centre, Trinity's 17,000-strong student body comes from all 32 counties of Ireland, and 16% of students come from outside the country. Of those, 40% are from outside the European Union, making Trinity's campus cosmopolitan and bustling, with a focus on diversity.

As Ireland's leading university, the pursuit of academic excellence through research and scholarship is at the heart of the Trinity education. Trinity is known for intellectual rigour, excellence, interdisciplinarity, and research-led teaching. Home to Nobel prize-winners such as scientist Ernest Walton and writer Samuel Beckett, Trinity draws visitors from across the world to its historic campus each year, including to the Book of Kells and Science Gallery which capture the university's connection to both old and new.

Trinity accounts for one-fifth of all spin-out companies from Irish higher education institutions, helping to turn Ireland into an innovation-intensive, high-productivity economy. That culture of innovation and entrepreneurship is a defining characteristic of our campus as we help shape the next generation of job creators.

Trinity has developed significant strength in a broad range of research areas, including the 19 broadly based multi-disciplinary thematic research areas.



Ireland's first purpose-built nanoscience research institute, CRANN, houses 150 scientists, technicians and graduate students in specialised laboratory facilities. Meanwhile, the state-of-the-art Biomedical Sciences Institute is carrying out breakthrough research in areas such as immunology, cancer and medical devices.

The Old Library, which houses the Long Room, in Trinity is the largest research library in Ireland, with a collection of six million printed items, 500,000 maps, 80,000 electronic journals, and 350,000 electronic books. Some of the world's most famous scholars are graduates of Trinity, including writer Jonathan Swift, dramatist Oscar Wilde, philosopher George Berkeley, and political philosopher, and political theorist Edmund Burke. Three Trinity graduates have become Presidents of Ireland - Douglas Hyde, Mary Robinson and Mary McAleese.



Trinity is the highest ranked university in Ireland, and among the world's leading higher education institutions.

Trinity College Dublin World University Rankings

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 78th in the world and 27th in Europe in the 2015/2016 QS World University Ranking across all indicators.

Internationalisation

- Trinity is ranked 35th in the world in terms of International Outlook in the Times Higher Education World University Ranking 2015/2016.

Teaching Performance

- Trinity is ranked in the top 20% of universities in the world in terms of Teaching Performance in the Times Higher Education World University Ranking 2015/2016.

Research Performance

- Trinity ranks in the top 1% of research institutions in the world in the following 17 Essential Science Indicators fields (an increase of over 150% from 2004): Physics, Chemistry, Engineering, Social Sciences (General), Immunology, Neurosciences, Nanosciences, Materials Science, Pharmacy and Toxicology, Molecular Biology and Genetics, Biology and Biochemistry, Microbiology, Plant and Animal Science, Clinical Medicine, Agriculture, Psychiatry/Psychology, Environment/Ecology.

In the QS Faculty Rankings 2015*:

- Trinity is ranked 61st in the world in Arts and Humanities.



In the QS Subject Rankings 2015:**

Trinity College Dublin features in the world's elite (Top 200) institutions in 25 of the 28 subjects in which it was evaluated by the QS World University Rankings by Subject 2015. Of these, Trinity ranks in the top 100 in the world in 14 subjects and in the top 5 in the world in 5 subjects.

Top 50

- Trinity is ranked 32nd in the world in English Language and Literature.
- Trinity is ranked 33rd in the world in Politics and International Studies.
- Trinity is ranked 39th in the world in History.
- Trinity is ranked 48th in the world in Biological Sciences.
- Trinity is ranked 49th in the world in Modern Languages.

Top 100

- Trinity is in the top 100 in the world in Chemistry.
- Trinity is in the top 100 in the world in Computer Science and Information Systems.
- Trinity is in the top 100 in the world in Education.
- Trinity is in the top 100 in the world in Geography.
- Trinity is in the top 100 in the world in Law.
- Trinity is in the top 100 in the world in Medicine.
- Trinity is in the top 100 in the world in Pharmacy and Pharmacology.
- Trinity is in the top 100 in the world in Philosophy.
- Trinity is in the top 100 in the world in Psychology.

Trinity subjects ranked in the world top 101-200 (QS Subject Ranking 2015)

| Subject | Trinity Rank |
|---------------------------------|--------------|
| Accounting and Finance | 101-150 |
| Business and Management Studies | 101-150 |
| Economics and Econometrics | 101-150 |
| Linguistics | 101-150 |



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| Physics and Astronomy | 101-150 |
| Sociology | 101-150 |
| Engineering - Civil and Structural | 151-200 |
| Engineering – Electrical | 151-200 |
| Engineering – Mechanical | 151-200 |
| Environmental Sciences | 151-200 |
| Mathematics | 151-200 |

* QS 'Faculty' Rankings 2015: www.topuniversities.com/faculty-rankings

** QS Subject Rankings 2015: www.topuniversities.com/subject-rankings

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



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queries should be directed to an applicant's former Irish Public Service Employer in the first instance.

Equal Opportunities Policy

Trinity College 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 College's Diversity Statement can be viewed in full at <https://www.tcd.ie/diversity-inclusion/diversity-statement>

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) to marco.ruffini@tcd.ie

Dr. Marco Ruffini,
CONNECT Telecommunications Research Centre,
Dunlop Oriel House,
Trinity College Dublin,
Fenian Street,
Dublin 2

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