



**Engaging Content**  
Engaging People

<b>Post Title:</b>	Two PhD Studentship in Next-Generation Blockchain Networks
<b>Post Status/Ref:</b>	Fixed Term, 4 years PhD Studentship in the area of distributed ledger technology (DLT)
<b>Funding:</b>	Stipend (€18,500) & Academic fees
<b>Closing Date and Time:</b>	12 Noon on 7 <sup>th</sup> of August 2019

### **Post Summary**

The ADAPT Centre, has openings for two PhD Scholarships for a programme of research in Next-Generation Blockchain Networks. These positions are relevant for well-qualified students with postgraduate degrees in Computer Science, Engineering or Mathematics and related disciplines. The programme of research will focus on the area of distributed ledger technology (DLT).

In order to evolve distributed ledger technology (DLT) into the next generation of financial networks, we will need to scale the number of transactions per second (TPS) handled by the technology by an order of magnitude from where they are today. In order to achieve this goal, we need to fundamentally re-evaluate DLT on a number of levels, such as the peer-to-peer (P2P) networking protocol, the off-chain processing of transactions, the interoperability of disparate blockchain systems, the underlying distributed database technologies that blockchains employ and the distributed consensus algorithms used to secure transactions on these networks. In addition, we need to employ zero-knowledge proofs, machine learning and other artificial intelligence techniques that can further allow us to build trust and protect the privacy of users on such networks.

We are looking to take on students to pursue a PhD in the area of DLT in order to conduct fundamental research into the next-generation of blockchain technologies for the FinTech industry.

The PhD position will be located at Trinity College Dublin and supervised by Dr Hitesh Tewari.

The successful candidates will be expected to start in September 2019.

### **Duties and Responsibilities**

The successful candidate will work within a large group of Academics, Postdoctoral Researchers and PhD students. The programme of research will focus on the area of distributed ledger technology (DLT). The tasks to be performed as part of this position will include:

- Liaise and maintain relationships with the research sites & participants
- Contribute to the dissemination and publication strategy of the research group
- Undertake research training & complete a PhD thesis
- Develop a range of research skills

**Background on the ADAPT Centre – [www.adaptcentre.ie](http://www.adaptcentre.ie)**



The ADAPT Centre is Ireland's Centre of excellence for digital content technology. Funded by Science Foundation Ireland, ADAPT focuses on developing next generation digital technologies that transform how people communicate by helping to analyse, personalise and deliver digital data more effectively. ADAPT researchers are based in four leading universities: Trinity College Dublin, Dublin City University, University College Dublin and Dublin Institute of Technology. Our research is spearheading the development of next-generation digital technologies that enable seamless tech-mediated interaction and communication. The breadth of ADAPT's research expertise is unique globally and the Centre's structure supports collaborative innovation with industry to unlock the potential of digital content.

### **Why join The ADAPT Centre?**

- Work on hard problems in an interdisciplinary and exciting research environment. The ADAPT Centre combines expertise of researchers at Trinity College Dublin, Dublin City University, University College Dublin, and Dublin Institute of Technology. It brings together more than 150 researchers that have collectively won more than €100M in competitive research funding and have an international track record of bridging research and innovations to more than 140 companies. With €50M in research funding from SFI and industry, ADAPT research and technologies will help businesses in all sectors to manage, personalise and deliver digital content more effectively
- Work in a centre focussed on advancing your career. Whether you want to take an academic, industrial, or entrepreneurial career path, ADAPT prides itself in the support and mentoring that enables all its postdocs to reach their full potential. This year alone its postdoc-to-PI programme has helped three postdocs transition to be Principal Investigators on their own H2020 projects, while four other have recently won funding with ADAPT support to realise the commercialisation of their research through spin outs and licensing.
- As well as providing an exciting work environment with access to cutting edge research, ADAPT support flexible working hours for students and staff, and family friendly working practices.

### **Person Specifications Qualifications**

#### **Knowledge & Experience (Essential & Desirable)**

Applicants wishing to apply must have a degree in Computer Science, Engineering or Mathematics, and should have achieved a minimum of a II.1 or equivalent in their undergraduate degree programme. A background in network security and cryptography would be advantageous.

#### **Skills & Competencies**

- Excellent communication, teamwork and organisational skills.
- Problem-solving skills



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- Aptitude for technology
- Must be willing to travel.
- Should have English language certification if English is not their first language, the requirement being: IELTS: 7.0+, TOEFL iBT: 100+, TOEFL pBT: 600+, CEF: C1+, or equivalent.

### **Application Procedure**

Please send expressions of interest to Monica Lechea ([monica.lechea@adaptcentre.ie](mailto:monica.lechea@adaptcentre.ie)) and include a;

1. A statement of research interests
2. A detailed CV
3. Transcripts of degrees
4. The name and email contacts of two academic referees

**Please include the reference code: PhD\_N-GBN on all correspondence.**

There will be an interview process, and the successful candidate will be invited to apply via the TCD graduate studies admission system.