



<b>Research Centre</b>	ADAPT Centre, Centre for Digital Content Platform Research
<b>Post title</b>	Post-Doctoral Researcher in Machine Translation Models and Evaluations
<b>Level on Framework</b>	Level 1
<b>Post duration</b>	Up to 36 Months

As part of this role the researcher will be required to participate in the DCU Research Career Framework. This framework is designed to provide significant professional development opportunities to Researchers and offer the best opportunities in terms of a wider career path.

### **Background & Role**

The ADAPT Centre, the centre for digital content platform research seeks to appoint a postdoctoral researcher in Machine Translation Models and Evaluations. ADAPT is Ireland’s global centre of excellence for digital content and media innovation. Led by TCD, it combines the expertise of researchers at four universities (Trinity College Dublin, Dublin City University, University College Dublin, and Dublin Institute of Technology) with that of its industry partners to produce ground-breaking digital content innovations.

ADAPT brings together more than 120 researchers who collectively have won more than €100m in funding and have a strong track record of transferring world-leading research and innovations to more than 140 companies. With EURO 50M in new research funding from Science Foundation Ireland and industry, ADAPT is seeking talented individuals to

join its growing research team. Our research and technologies will continue to help businesses in all sectors and drive back the frontiers of future Web engagement.

The successful applicant will be assigned to work on the QT21 project. The objective of the QT21 project is to produce significantly improved machine translation models for language pairs that include “difficult” languages, focusing on morphologically rich and syntactically divergent languages and languages that are under-resourced. This will be achieved by developing new machine-learning-based Syntactic and Semantic Translation Models for High-Quality Translation, develop new Translation Models for Under-resourced and Morphologically Complex Languages, and new approaches to Human Informed Evaluation of translations and Continuous Learning.

### **Principle Duties and Responsibilities**

The successful candidate will work within a large group of Postdoctoral Researchers, PhD students and Software Developers. The research will combine both applied research and platform research.

Reporting to his/her Principal Investigator the Postdoctoral Researcher will:

- Apply machine learning algorithms to translation quality estimation and evaluation.
- Apply translation quality estimation and evaluation to tuning of machine translation system.
- Carry out research on deep and abstract syntactic and especially semantic representations of linguistic information.
- Explore deep language analysis as well as graph-based translation methods with complex representations and related topics, such as general feature selection and use, use of content reference, and the capture of surface-to-semantic relations.
- Provide support and advice to PhD students in the same project, as well as to others working in the Theme.
- Produce top-quality journal and conference publications, in collaboration with the PI.
- Participate in ADAPT centre activities, such as industry showcases, annual reviews and industry targeted projects.
- Report on progress at meetings and in writing to ADAPT centre management.
- Assist in identifying and developing future research and funding initiatives, identify and write proposals for research funding.
- Engage in the dissemination of the results of the research in which he/she is engaged with the support of and under the supervision of the Principal Investigator.
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University.
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators.
- Carry out administrative work associated with the programme of research as necessary.

## **Funding Information**

This position is funded through the Horizon 2020 programme of the European Commission.

## **Minimum Criteria**

It is essential that applicants have a PhD in Machine Translation, Natural Language Processing or a related discipline. The successful candidate should have a strong background in machine learning and statistical machine translation (SMT), as well as experience with state-of-the-art machine learning and SMT technologies. In addition, the candidate should have:

### *Required Skills:*

- Excellent research skills with proven publication record in machine translation, especially in semantic and syntactic translation models, translation evaluation metrics, and discriminative training for machine translation.
- Strong academic writing and presentation skills.
- Excellent programming skills.
- Ability to work independently as well as a team member.
- Self-motivated, mature and good time management/planning skills.

### *Desirable Skills:*

- Ability to supervise postgraduate or PhD students.
- Experience in project management.
- Experience of working with industries.

**Salary:** €37,750 - €46,255

Appointment will be commensurate with qualifications and experience.

**Closing date:** Friday 3<sup>rd</sup> April, 2015.

## **Candidates will be assessed on the following competencies:**

**Discipline knowledge and Research skills** – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline.

**Understanding the Research Environment** – Demonstrates an awareness of the research environment (for example funding bodies) and the ability to contribute to grant applications

**Communicating Research** – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students

**Managing & Leadership skills** - Demonstrates the potential to manage a research project including the supervision of undergraduate students.

### **Application Procedure**

#### **Informal enquiries to:**

Professor Qun Liu, School of Computing, DCU, Dublin 9, Ireland

E-mail: [qliu@computing.dcu.ie](mailto:qliu@computing.dcu.ie)

Phone: +353 (0)1 7005644

*Please do not send applications to this email address, instead apply as described below*

Application forms are available from the DCU Current Vacancies (open Competitions) website at <http://www.dcu.ie/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0) 1 7005149.

Applications should be submitted by email to [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie) or by Fax: +353 (0)1 7005500 or by post to the Human Resources Department, Dublin City University, Dublin 9. Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149; Fax: +353 1 700 5500 Email: Insert [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie)

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