



Research Centre	ADAPT Centre for Digital Content Technology
Post title	Research Fellow in Machine Translation
Level on Framework	Level II
Post duration	Fixed Term Contract up to Two Years

As part of this role the researchers 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

ADAPT is Ireland’s global centre of excellence for digital content technology. 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 €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.

Principal Duties and Responsibilities

The successful candidate will work within a large group of Postdoctoral researchers, PhD students and Software Developers. The work of the Research Fellow will be fundamental in discovering ADAPT research breakthroughs in SMT as identified in the research plan agreed with SFI. The successful candidate is being 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.

The successful candidate is also affiliated with SFI ADAPT project in Theme B Transforming Global Content. Working within a large group of Postdoctoral Researchers, PhD students and Software Developers, he/she is expected to combine both applied research and platform research.

Reporting to his/her Principal Investigator the Research Fellow 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.
- Carry out research on Irish MT project and assist on dialog translation research to find good ways of evaluation.
- Provide support and advice to PhD students in the same project, as well as to others working in the Theme.
- Contribute to teaching and supervision in the School of Computing.
- Produce top-quality journal and conference publications, in collaboration with the PI.
- Assist in identifying and developing future research and funding initiatives
- Identify and write proposals for research funding.
- 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.
- 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

The position is jointly funded by the EU H2020 QT21 project and the Science Foundation Ireland (SFI) ADAPT Research Centre project (Theme B).

Minimum Criteria

It is essential that applicants have a PhD in Machine Learning or a related discipline. Applicants should have a minimum of 4 years relevant postdoctoral research experience or equivalent at Level 1 of the Research Career Framework. Previous experience at the level of Research Fellow (or equivalent) is preferred. In addition, it is desirable that the candidate has a subset of the following skills:

- A strong background in main areas and up-to-date technologies on SMT and Neural MT.
- Strong practice experience in MT, ideally, in the following:
 - SMT system-building and deployment expertise,
 - Automatic and human MT evaluation metrics, and
 - Translation quality estimation.
- Excellent machine learning skills.
- Familiar with a range of linguistic formalisms.
- Excellent programming skills.
- Excellent presentation and communication skills.
- Excellent team-working skills.

Note that demonstrable experience in the translation and/or localisation industry would be advantageous, as the successful applicant will be expected to spend approximately 20% of their time on the ADAPT Spokes programme on applied research topics of interest to our industry partners. Demonstrable engagement in problems related to users would also be beneficial.

Salary: €51,716 - €56,442

Appointment will be commensurate with qualifications and experience, and will be made on the appropriate point of the salary scales, in line with current Government pay policy.

Closing date: 26th August 2016

Candidates will be assessed on the following competencies:

Discipline knowledge and Research skills – Demonstrates the ability to design and implement part of a programme of research (for example by using critical thinking and the application of relevant research methodologies).

Understanding the Research Environment – Demonstrates a thorough understanding of the research environment both nationally and internationally and the ability to contribute substantially to grant applications.

Communicating Research – Demonstrates the ability to communicate their research effectively to the research community and wider society (for example by publishing their research in high quality peer reviewed journals) and the ability to teach and tutor students.

Managing & Leadership skills - Successfully manages research projects including the management and supervision of postgraduates and/or junior research staff.

Application Procedure

Informal Queries to: Sinead Gorham sinead.gorham@adaptcentre.ie Please include the ADAPT Position Title in all email communications.

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

Please clearly state the role that you are applying for in your application and email subject line: Job Ref 390 Research Fellow in Machine Translation

Applications should be submitted by email to 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: hr.applications@dcu.ie

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