



Research Centre	ADAPT Centre for Digital Content Technology
Post title	Research Fellow in Irish Natural Language Processing
Level on Framework	Level 3
Post duration	4 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

The ADAPT Centre for digital content platform technology seeks to appoint one research fellow in Natural Language Processing (NLP) which addresses core research areas related to the Irish language. It is envisaged that this post will commence in October 2017.

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 research breakthroughs in Irish NLP.

The successful candidate will be assigned to work on the GaelTech project. The objectives of this project include (i) advancing statistical dependency parsing of Irish as part of the Universal Dependencies Project (<http://universaldependencies.org/>), (ii) improving the treatment of multi-word expressions in Irish, and (iii) improving the treatment of social media NLP for Irish user-generated content.

The successful candidate will also be affiliated with the SFI-funded ADAPT project in Theme A Understanding Global Content (headed by Prof. Qun Liu) and Theme B Transforming Global Content (headed by Prof. Andy Way). The successful candidate will report to Prof. Way. Working within a large group of Postdoctoral Researchers, PhD students and Software Developers, he/she is expected to combine both applied research and basic, fundamental research.

Reporting to his/her Principal Investigator the Research Fellow will:

- Carry out research on syntactic (and, later, semantic) representations of linguistic information for the Irish language, leading to improved treebank-based grammar and parser development for Irish.
- Conduct investigations on the appropriate treatment of multi-word expressions for Irish.
- Improve the treatment of social media NLP for Irish user-generated content.
- Contribute to improving the quality of the Tapadóir English-to-Irish MT system, with particular attention to the potential benefit of porting this to neural MT, and investigating the suitability of well-known automatic evaluation models for languages like Irish.
- Contribute to the application of suitable machine learning algorithms to translation quality estimation and evaluation, with particular attention to Irish.
- Provide support and advice to PhD students on similar topics within ADAPT.
- 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, developing and writing future research and funding proposals.
- 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 funded by the GaelTech project, supported by the Department of Arts, Heritage and the Gaeltacht.

Minimum Criteria

It is essential that applicants have a PhD in Natural Language Processing or a related discipline. Applicants should preferably have a minimum of 4 years relevant postdoctoral/industry-related research experience or equivalent at Level 1 of the Research Career Framework. In addition, it is desirable that the candidate has a subset of the following skills:

- A strong background in up-to-date technologies related to (i) treebank-based grammar and parsing development, (ii) the processing of multi-word units, and (iii) social media analysis.
- Excellent Irish language skills.
- Excellent knowledge of the Irish funding context.
- Good practical experience of SMT and Neural MT, especially in the deployment of MT for real users.
- Very good machine learning skills.
- Familiarity with a range of linguistic formalisms.
- Very good programming skills.
- Excellent presentation and communication skills.
- Excellent team-working skills.

Note that demonstrable knowledge of the language processing and/or translation/localisation industry would be advantageous, especially in the Irish context. Demonstrable engagement in problems related to a range of users would also be beneficial.

Salary: €52,716 - €57,442

Appointment will be commensurate with qualifications and experience.

Closing date: Friday 31st August 2017.

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: Cliodhna Horan cliodhna.horan@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://www.dcu.ie/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 639 Research Fellow in in Irish Natural Language Processing

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: Insert hr.applications@dcu.ie

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