Job - PhD position within the visuAAL Marie Skłodowska-Curie Innovative Training Network

PhD position

Details

Location	Trinity College Dublin (Ireland)
Function types	PhD position
Scientific fields	Computer Science/Artificial Intelligence
Hours	37.5 hours per week (in annual calculation)
Salary	See below
Education	Doctoral Programme in Computer Science
Job number	visuAAL ESR 9
Employer	Trinity College Dublin
Short link	https://www.tcd.ie

Job description

visuAAL is a four-year (2020-2024) Marie Skłodowska-Curie Actions Innovative Training Network, funded by the European Union, that aims at bridging the knowledge gap between users' requirements and the appropriate and secure use of video-based AAL technologies to deliver effective and supportive care to older adults managing their health and wellbeing.

visuAAL will seek to increase awareness and understanding of the context-specific ethical, legal, privacy and societal issues necessary to implement visual system across hospital, home and community settings, in a manner that protects and reassures users; outputs will stimulate the development of a new research perspective for constructively addressing privacy-aware video-based working solutions for assisted living.

visuAAL will provide a transdisciplinary and cross-sectoral combination of training, non-academic placements, courses and workshops on scientific and complementary skills to 15 high achieving Early Stage Researchers (ESRs). These newly hired ESRs will contribute through their individual research projects to fulfil visuAAL's aims.

visuAAL brings together 5 universities:
- Chair of Communication Science, Human-Computer Interaction Center, RWTH Aachen University, Germany
- The Swedish Law and Informatics Research Institute (IRI), Stockholm University, Sweden
- The Trinity Centre for Practice and Healthcare Innovation, School of Nursing and Midwifery, Trinity College Dublin, Ireland
- Computer Vision Lab, TU Wien, Austria
- Department of Computing Technology, Universidad de Alicante, Spain (Project Coordinator)

This Consortium is complemented by 14 partner organisations from Austria, Germany, Ireland, Italy, Portugal, Spain, Sweden, and United Kingdom; that will contribute to the research and training activities.

For more information about visuAAL, see https://www.visuaal-itn.eu/.

In the framework of visuAAL, Trinity College Dublin is recruiting a PhD researcher for a period of three years.

Project description

Project title: Personalisation of self-management education/training for individuals with multiple chronic health conditions (multimorbidity) using visual based data
Objectives: The aim of this PhD is to explore machine learning or artificial intelligence (AI) approaches to the use of visual based data to aid personalisation of education and training for individuals living with multimorbidity. Research will involve defining user and behaviour change models to facilitate appropriate AI approaches to tailor educational and training interventions, based on an individual's self- management needs as captured from camera based systems in the home. The PhD will also focus on understanding data protection, ethical and privacy concerns in relation to the use of AI approaches for using visual data to inform an individual's education and training in relation to their self-management.
Expected Results: Outcomes from this PhD will seek to recommend AI approaches to facilitate education, training and as such positive behavioural changes to the use of camera based technology in the home. The output from this PhD is anticipated to produce AI based personalised education and training approaches which will seek to demonstrate the how visual based AAL interventions may be used to promote positive behaviour change in relation to multimorbid disease management. The PhD will explore how visual based data can inform 'user friendly' alternate representations linked to health and well-being indictors and as such better direct individuals managing multimorbidity to tailored training and educational content to support their self-management needs and goals.
Supervisory Committee: • Main Supervisor: Prof Owen Conlon (Trinity College Dublin) • Second Supervisor: Dr F. Florez (University of Alicante) • Co-Supervisor: Dr. John Dinsmore (Trinity College Dublin) • Advisor: Dr Alessandra Pascale (IBM)
Planned secondment(s): • **Secondment 1**: IBM Research Ireland. (Supervisor: Dr Alessandra Pascale), M21-M23: Training and research on machine learning for multiple disease management • **Secondment 2**: University of Alicante (Supervisor: Dr F. Florez), M31-M33: Transferability of Irish approaches to the Spanish context.
Enrolment in Doctoral degree(s): Doctoral Programme in Computer Science, ADAPT Centre and Trinity Centre for Practice and Healthcare Innovation.

Requirements

- Applicants must hold a relevant Master's degree (or equivalent) in Computer Sciene, Artificial Intelligence, Machine Learning or related discipline.
- Applicants must not have been awarded a PhD degree
- At the time of recruitment, applicants must have less than four (full time equivalent) years of experience within a research career (measured from the date when the

applicant obtained the first degree entitling him/her to embark on a doctorate, even if a doctorate was never started or envisaged)

- Applicants must not have resided or carried out their main activity (work, studies, etc.) in the country of the recruiting institution for more than 12 months in the 3 years immediately before the recruitment date
- A fluent command of the English language (See requirements below)
- Be highly motivated;
- Creativity and high level of independency;
- It is the policy of the visuAAL project to promote equal opportunities between men and women and stimulate gender balance.
- Additional requirements: None

Language Requirements

All applicants to Trinity College Dublin whose first language is not English or who have not been educated through the medium of English must present one of the following qualifications in the English language:

- IELTS: Grade 6.5 overall with a minimum of grade of 6.5 in each category
- TOEFL: 88 internet-based, 570 paper-based, 230 computer-based. The test taken here should be TOEFL IBT
- University of Cambridge:
  Proficiency Certificate, Grade C or better (CEFR Level C1 or C2)
  Advanced Certificate, Grade C or better (CEFR Level C1 or C2)
- Pearson Test of English (Academic) - PTE Academic: a minimum score of 63 to be eligible (with no section score below 59)
- An award certificate with a minimum II.1 overall score from Trinity's Centre for English Language Learning and Teaching's Pre-sessional Pathway Programme

Please also note that existing IELTS, TOEFL, Cambridge and PET scores up to three years old (rather than two) will be accepted for 2020/21 applications in light of test centre closures.

For further details on these English Language Proficiency Tests, please contact the appropriate organisation directly.

www.ets.org/toefl
www.ielts.org
www.cambridgeesol.org/exams

Conditions of employment

We offer a 3-year full-time PhD contract. The first year will be a probation period, after a positive assessment the position will be extended with another 2 years.

The full-time gross annual living allowance amounts to €36,049 or €3,004 per month (plus mobility allowance of €6,483 and allowance according to family charges of €5,402 per annum).

The salary and terms of employment for this position will correspond to the provisions set out in the Statutes of Irish employment legislation and in the provisions of the Marie Skłodowska-Curie Actions.

We offer a dynamic and challenging job in an internationally-oriented organisation where young people receive an advanced education and scholars conduct exciting research.

You will participate in the research training sessions in the framework of the visuAAL Marie Skłodowska Curie ITN project.

Contract type: Temporary, we offer a 3-year full-time PhD contract.

Organisation

Trinity is Ireland's leading university and is ranked 108th in the world (QS World University Rankings 2020). Founded in 1592, the University is steeped in history with a reputation for excellence in education, research and innovation.

Located on an iconic campus in the heart of Dublin's city centre, Trinity has 18,000 undergraduate and postgraduate students across our three faculties – Arts, Humanities, and Social Sciences; Engineering, Mathematics and Science; and Health Sciences.

Trinity is ranked as the 17th most international university in the world (Times Higher Education Rankings 2020) and has students and staff from over 120 countries.
The pursuit of excellence through research and scholarship is at the heart of a Trinity education, and our researchers have an outstanding publication record and strong record of grant success.

Trinity has developed 19 broad-based multidisciplinary research themes that cut across disciplines and facilitate world-leading research and collaboration within the University and with colleagues around the world. Trinity is also home to 5 leading flagship research institutes:
- Trinity Biomedical Sciences Institute (TBSI)
- Trinity College Institute of Neuroscience (TCIN)
- Trinity Translational Medical Institute (TTMI)
- Trinity Long Room Hub Arts and Humanities Research Institute (TLRH)
- Centre for Research on Adaptive Nanostructures and Nanodevices (CRANN)

Trinity is the top-ranked European university for producing entrepreneurs for the past five successive years and Europe's only representative in the world's top-50 universities (Pitchbook Universities Report).

Trinity is home to the famous Old Library and to the historic Book of Kells as well as other internationally significant holdings in manuscripts, maps and early printed material. The Trinity Library is a legal deposit library, granting the University the right to claim a copy of every book published in Ireland and the UK. At present, the Library's holdings span approximately 6.5 million printed items, 400,000 e-books and 150,000 e-journals.

With over 120,000 alumni, Trinity's tradition of independent intellectual inquiry has produced some of the world's finest, most original minds including the writers Oscar Wilde and Samuel Beckett (Nobel laureates), the mathematician William Rowan Hamilton and the physicist Ernest Walton (Nobel laureate), the political thinker Edmund Burke, and the former President of Ireland Mary Robinson. This tradition finds expression today in a campus culture of scholarship, innovation, creativity, entrepreneurship and dedication to societal reform.

Trinity Centre for Practice and Healthcare Innovation (TCPHI) -
https://www.tcd.ie/tcphi/

The TCPHI is a research centre based in the School of Nursing & Midwifery, Trinity College Dublin. This research centre was developed in 2012. Our mission is to work collaboratively with healthcare staff, industry and the public to improve healthcare services and develop, implement and evaluate new innovative healthcare interventions and models of care. The expertise of the TCPHI team in implementation science, healthcare knowledge and experience is available for sharing and supporting research capacity between academic staff, post-doctoral researchers, post graduate research students and staff in affiliated healthcare providers and industry. We have successful collaborations with a large network of clinical, industry and research partners and are actively engaged in the synthesis and translation of evidence into every day healthcare.

The research activities of the TCPHI contribute to and are shaped by the research themes in the School of Nursing and Midwifery. The TCPHI is also an invaluable resource for those seeking evaluation of healthcare policy, quality improvement and innovation in health care service development and delivery. Its staff have a proven track record in generating research income from National, and European sources to enable such innovation, particularly in relation to digital health initiatives for behavioural change and self-management.

ADAPT Centre - https://www.adaptcentre.ie

ADAPT, the world-leading SFI Research Centre for Digital Media Technology combines the expertise of researchers at seven higher education institutions with that of industry partners to produce ground-breaking innovation in digital content that is revolutionising the way people interact with content, systems and each other. ADAPT's research aims to "empower people for deeper engagement in a digital world" by enabling seamless technology-mediated interaction and communication.

ADAPT is pioneering new techniques and technologies in Content Analytics and Knowledge Extraction, Intelligent Machine Translation & Enhanced Human Translation, Dynamic Personalised Digital Media Discovery, Recomposition, and Interaction, Multimodal Engagement, and the Management of Data Quality, Privacy and Ethics in content processing.

Our AI-powered analysis techniques allow more powerful tailored access to customer and community insights

- ADAPT is pushing the boundaries of human speech and gesture recognition to increase the accuracy of robotic interpretation

- We extend the effectiveness of all the MT system types across a wide range of languages and domains to break down communications barriers.

- ADAPT research is transforming and delivering personalised content

- Our Machine Learning models enable the analysis of complex data such as financial data sets giving accurate results on large scale data sets

- ADAPT's technology facilitates the recognition of relationships between multi-dimensional data sets by providing new ways to interpret, interact with and gain insights from data.

- ADAPT's applications of ethics and standards technologies empower individuals to navigate new engagement channels with confidence through visibility and control of their personal data.

Rankings

Trinity is the top ranked university in Ireland and ranked 108th in the world (QS World University Rankings 2020). Trinity ranks in the top 50 in the world on 4 subjects and in the top 100 in 18 subjects (QS World University Rankings by Subject 2020). Full details are available at: www.tcd.ie/research/about/rankings.

Department

Trinity Centre for Practice and Healthcare Innovation and the ADAPT Centre

How to apply?

Submit your application to https://www.visuaal-itn.eu/esr-vacancies. Please, ensure that you select vacancy number ESR9.

The following documents must be submitted with your application:
(a) Written documentation concerning prior education, including a certified copy of your Master certificate and list of grades (with certified translation for languages other than English or Spanish);
(b) A personal letter of motivation, indicating why you wish to conduct this research project offered by University of Alicante, and why you expect that you will be able to complete the research and training programme successfully;
(c) Detailed curriculum vitae, including – if applicable – relevant publications;
(d) Two references from academic referees; (who will be contacted by the Consortium using standardised forms),
(e) A fluent command of the English language (see requirements above)
(f) Draft project proposal (3000 words), including timeline
(g) A substantial piece of writing in English, such as a (draft) master thesis or research paper.

Selection procedure

What?	When?
Deadline for submission applications	30 November 2020, 23:59 CET
Candidates pre-selected for interviews will be informed	8 December 2020
Selection interviews (candidates may be asked to give a short presentation about the topic of the project)	17, 18, 21, 22 December 2020 (online)
Successful candidates will be informed	23 December 2020
Acceptance by successful candidates	8 January 2021
Start of employment	March 2021

Selection criteria

Criteria	Rate
Relevant academic background (including the quality of the substantial piece of writing)	0-30
Motivation statement	0-10
Relevant publications/work experience	0-15
Draft project proposal, including timeline	0-30
Mobility (during Bachelor and/or Master)	0-5
Evaluation by referees	0-10

Information

For questions related to this project proposal, please contact dinsmorj@tcd.ie
For all other questions, please use the following email address, clearly indicating the visuAAL vacancy number ESR: info@visuaal-itn.eu