

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

### PhD position

#### Details

<b>Location</b>	University of Alicante (SPAIN)
<b>Function types</b>	PhD position
<b>Scientific fields</b>	Computer science
<b>Hours</b>	37.5 hours per week (in annual calculation)
<b>Salary</b>	See below
<b>Education</b>	Doctoral Programme in Computer Science
<b>Job number</b>	visuAAL ESR 13
<b>Employer</b>	University of Alicante
<b>Short link</b>	<a href="https://web.ua.es/es/welcome.html">https://web.ua.es/es/welcome.html</a>

#### 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, the University of Alicante is recruiting a PhD researcher for a period of three years.

## Project description

<p><b>Project title:</b> Privacy preservation in video-based AAL applications</p>
<p><b>Objectives:</b> Visual data exposes a lot of information about individuals appearing on images and videos. Individuals may want to conceal all of this data, but in this case, the remaining information would be useless for the AAL services that build upon it. Therefore, there is a need to establish a trade-off between privacy and intelligibility of the images. This project will advance in a privacy-by-context approach, in which different visualisations are produced depending on the context in which images or videos are captured: Identity, appearance, location, ongoing activity of the subject being monitored; event triggered; identity and access rights of the observer; closeness between observer and monitored subject... While these privacy-by-context approach has been successfully employed using RGB-D cameras, it has been difficult to address privacy preservation using regular RGB cameras either located in the environment (preferably on the ceiling) or worn by the user. Therefore, this project will investigate visualisations methods to conceal visual privacy in applications and services for older and frail people that employ RGB cameras.</p>
<p><b>Expected Results:</b> Computer vision algorithms to locate a person in the scene from top-view videos (for environmental cameras) or front-view videos (for wearable cameras), and to extract their pose. Design and development of different visualisation algorithms to modify the image (particularly the person/s been seen) in multiple ways according to the context for the de-identification of biometric (face, body) and behavioural (gait, gesture) identifiers. Validation in real environments (homes of older persons, care homes...)</p>
<p><b>Supervisory Committee:</b></p> <ul style="list-style-type: none"> <li>• Main Supervisor: Dr F. Flórez (University of Alicante)</li> <li>• Second Supervisor: Prof P. Wahlgren (Stockholm University)</li> <li>• Co-Supervisor: Prof J.M. García (University of Alicante)</li> <li>• Advisor: Dr E. Vazquez (Anyvision (NI) Ltd.)</li> </ul>
<p><b>Planned secondment(s):</b></p> <ul style="list-style-type: none"> <li>• <b>Secondment 1:</b> Stockholm University (Supervisor: Prof P. Wahlgren), M18-M20: Training and research on legal aspects of technology</li> <li>• <b>Secondment 2:</b> Anyvision (NI) Ltd. (Supervisor: Dr E. Vazquez), M32-M34: Training and research on video-based monitoring and applications</li> </ul>
<p><b>Enrolment in Doctoral degree(s):</b> Doctoral Programme in Computer Science, University Institute for Computer Research, Universidad de Alicante</p>

## Requirements

- Applicants should hold a relevant Master's degree (or equivalent) in Computer Science, Electronic and Electrical Engineering, or a related area
- Applicants should not have been awarded a PhD degree
- At the time of recruitment, applicants should 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
- Proficiency in written and spoken English
- 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

### 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 yearly salary amounts to € 35,264.39 (plus bonus according to family charges).

The salary and terms of employment for this position will correspond to the provisions set out in the Statute of Workers' Rights, in the Science Law (Ley 14/2011) 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

The University of Alicante (UA) (<https://web.ua.es/es/welcome.html>) was created in 1979. Today it educates and trains more than 20.000 national and 3.000 international students and offers 43 undergraduate and 80 postgraduate programmes: consequently it is proportionally one of the fastest growing universities in Spain. Thus, the UA employs 3.862 researchers and management staff (46% women), which involves an annual budget of 200 million Euros. Currently, UA is investing near to 39M Euros for boosting frontier research and technology transfer processes via spin off, licensing and international promotion mainly. In 2018 the University generated an income of 19 million Euros from research funded projects on a National, Regional, European level and private R&D thanks to its 251 research groups in many knowledge areas and its 13 Research Institutes, most of them multidisciplinary-based. Despite its youth, the University of Alicante is already present in the three main university rankings in the world ARWU-FIELD ([Shanghai](#)), Quacquarelli Symonds ([QS](#)) and [Times Higher Education \(THE\) World University](#).

The campus is considered one of the best campuses in Europe: one million square meters with the best urban design, the most innovative architecture in a framework of environmental excellence (large green areas, landscape design, pedestrian, cultural, sporting, educational areas...) and a wide variety of services. In addition to the strong commitment by the

innovation and technology, the University of Alicante reaches the most prestigious heights in its firm commitment to culture and heritage. A virtual tour to the 100% pedestrian campus is available at <http://web.ua.es/tour-virtual-ua/ua.html>.

## Department

Department of Computing Technology

## How to apply?

Submit your application to <https://www.visuaal-itn.eu/esr-vacancies>. Please, ensure that you select vacancy number ESR13.

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) The applicant should have a minimum level of proficiency in English language, which could be demonstrated by providing an English language certificate and that will be confirmed in a later interview, if needed.
- (f) Draft project proposal, including timeline (max length. 3000 words)
- (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	7 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	22-23 December 2020
Acceptance by successful candidates	8 January 2021
Start of employment	February-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 [francisco.florez@ua.es](mailto:francisco.florez@ua.es)

For all other questions, please use the following email address, clearly indicating the visuAAL vacancy number ESR13: [info@visuaal-itn.eu](mailto:info@visuaal-itn.eu)