

Part A. PERSONAL INFORMATION

CV 2019-07-12

NAME	Juan Antonio Álvarez García		
ID NUMBER	28637158L	Age	39
Researcher id numbers	Researcher ID	A-6223-2008	
	Orcid Code	0000-0002-4106-6044	

A.1. Current position

Organization	University of Seville		
Dpt./Centre	Depto. Lenguajes y Sistemas Informáticos/ETS Ingeniería Informática		
Address	Avda. Reina Mercedes s/n 41012, Sevilla		
Phone	652922261	Email address	jaalvarez@us.es
Professional role	Associate Professor (Prof. Titular)	From	2018-11-21
UNESCO codes	120302 , 120304, 120317, 120318, 120325		
Keywords	Ubiquitous computing, mobile and wearable computing, activity recognition, deep learning, computer vision		

A.2. Academic information

Degree / PhD	University	Year
Computer Science Engineer	Universidad de Sevilla	2003
PhD in Computer Science	Universidad de Sevilla	2010

A.3. General indicators of quality of scientific production

Directed thesis: 2

National Six-year research period: 2 (2012,2018)

H-index (Google Scholar Profile): 10

Total cites (Google Scholar Profile): 414

JCR Journals: 15 (8 Q1, 3 Q2, 1 Q3, 3 Q4)

Total funding as main researcher: 360.000€ approx. (2 national projects, 13 private)

Parte B. Curriculum Vitae

He defended his PhD in 2010 (Cum Laude unanimously). He got the Lecturer (Contratado doctor) position in 2011 and Senior Lecturer (Titular) in 2018. He has two national six-year research period (2007-2012/2013-2018), 5 lecturer trienniums (2003-2018) and 2 quinquennium (2003-2013). He belongs to the research group TIC134.

From 2003 he has been involved in research tasks and technology transfer. His research focuses on human activity, mobility and behaviour recognition and prediction. Machine and deep learning techniques are applied to data gathered with wearable sensors or cameras.

He is author of more than 50 publications in international journals and congress, 2 patents and 2 registered software applications. He has been guest editor from a special issue of a JCR journal. In 2012 and 2013 he was chosen as Chair of Technical Committee of the international contest EvAAL for the track "Activity Recognition for AAL", being this contest part of the European project FP7 UniversAAL (Project ID: 247950) where teams from leading Universities from USA, EU and Japan took part in. He also was chosen as expert on the technical committee of the competition [Pedestrian Dead-Reconing Challenge](#) part of Ubicomp in 2015. He has participated in more than 20 public or privately funded R&D projects, being director of 7 of them and he has also been reviewer of 9 JCR journals of high impact factor and 9 international conferences.

From 2013 to 2017 he was the main researcher and coordinator of HERMES (Healthy and Efficient Routes in Massive Open-Data Based Smart Cities-Citizen) a national R&D project where teams from 4 Spanish Universities (Vigo, Coruña, Carlos III and Seville) participate. UoS group main responsibility lies on monitoring the habits of the smart-city inhabitants and their physical activities, having in mind privacy and appropriate treatment of gathered data.

Other tasks in this HERMES project triggered off a new research area in the TIC134 group concerning Deep Learning applied to traffic sign recognition and classification. Currently he leads VICTORY (Vision and Crowdsensing Technology for an Optimal Response in Physical-Security) a national R&D project where violent attacks in building are recognized using machine and deep learning from CCTV images and accelerometers sensors from smartphones workers. So far, the supervising and mentoring experience of Dr. Álvarez García concerns 50 undergraduate students, 8 master's degree students and 2 PhD students (3 JCR journals each one).

He has taught Spanish and English classes in several degrees (Computer Engineering, Technical Computer Engineering, Health Informatics) and Masters (Software Engineering and Technology), being coordinator of several subjects related to algorithms and software technology. He also directed several courses focused on work-related technologies (Oracle, iOS and Android).

He has carried out several research stays (Polytechnic University of Catalonia 2007 1 month, German Research Centre for Artificial Intelligence 2011 3 months, Pisa University 2015 2 months and Slovenian Jozef Stefan Institute 2017 3 months).

Parte C. Major indicators

C.1. Publications (last 10 more relevant)

1. Damián Fernández-Cerero, Jorge Yago Fernández-Rodríguez, Juan A. Álvarez-García, Luis M. Soria-Morillo, Alejandro Fernández-Montes. Single-Board-Computer clusters for Cloudlet Computing in Internet of Things. *Sensors*. Impact Factor: 3.031 JCR Q1 (2019)
2. Arcos-García, Á., Álvarez-García, J. A., Morillo Soria, L. M. Deep neural network for traffic sign recognition systems: An analysis of spatial transformers and stochastic optimisation methods. *Neural Networks*. Impact Factor: 5.785. JCR Q1 (2018)
3. Arcos-García, Á., Álvarez-García, J. A., Morillo Soria, L. M. Evaluation of deep neural networks for traffic sign detection systems. *Neurocomputing*. Impact Factor: 4.072 JCR Q1 (2018)
4. Fernandez-Rodriguez, J.Y., Álvarez-García, J.A., Arias Fisteus, J., Rodríguez Luaces, M.A. Corcoba Magaña, V. Benchmarking real-time vehicle data streaming models for a Smart City. *Information Systems*. Impact Factor: 2.551 JCR Q2 (2017)
5. Arcos-García, Á., Soilán, M., Álvarez-García, J. A., & Riveiro, B. Exploiting synergies of mobile mapping sensors and deep learning for traffic sign recognition systems. *Expert Systems with Applications*. Impact Factor: 3.768. JCR Q1 (2017)
6. Álvarez de la Concepción, M. Á., Morillo Soria, L. M., Álvarez-García, J. A., & González-Abril, L. Mobile activity recognition and fall detection system for elderly people using Ameva algorithm. *Pervasive and Mobile Computing*. Impact Factor: 2.974. JCR Q1 (2017)
7. LM Soria Morillo, JA Álvarez-García, L Gonzalez-Abril, JA Ortega Ramírez. Discrete classification technique applied to TV advertisements liking recognition system based on low-cost eeg headsets. *Biomedical Engineering Online*. Impact Factor: 1.683 JCR Q3. (2016)
8. H Gjoreski, S Kozina, M Gams, M Lustrek, JA Álvarez-García, JH Hong, Julian Ramos, Anind K Dey, Maurizio Bocca & Neal Patwari. Competitive Live Evaluations of Activity-Recognition Systems. *Pervasive Computing, IEEE, 14(1)*, 70-77. Impact Factor: 1.836. JCR Q1 (2015)
9. Álvarez-García, J. A., Barsocchi, P., Chessa, S., & Salvi, D. Evaluation of localization and activity recognition systems for ambient assisted living: The experience of the 2012 EvAAL competition. *Journal of Ambient Intelligence and Smart Environments*, 5(1), 119-132. Impact Factor: 1.082. JCR Q2 (2013)
10. Morillo Soria, L. M., Ortega, J. A., Álvarez-García, J. A., & Gonzalez-Abril, L. (2012). Outdoor exit detection using combined techniques to increase GPS efficiency. *Expert Systems with Applications*, 39(15), 12260-12267. Impact Factor: 1.854

C.2. Projects

Title: Vision and Crowdsensing Technology for an Optimal Response in Physical-Security

Principal investigator: Juan Antonio Álvarez García/Fernando Enríquez de Salamanca Ros

Funder Company/Institution: Plan Estatal 2013-2016 Retos, 2017

Reference: TIN2017-82113-C2-1-R

From: 01-01-2018 To: 31-12-2020

Funder Company/Institution: Ministerio de Economía y Competitividad

Funds: 91.718€

Role: Main researcher and coordinator

Title: Healthy and Efficient Routes in Massive Open-Data Based Smart Cities-Citizen

Principal investigator: Juan Antonio Ortega Ramírez / Juan Antonio Álvarez García

Funder Company/Institution: Plan Estatal 2013-2016 Retos, 2013

Reference: TIN2013-46801-C4-1-R

From: 01-01-2014 To: 31-12-2016

Funder Company/Institution: Ministerio de Economía y Competitividad

Funds: 142.800€

Role: Main researcher and coordinator

Title: Smart Helmet: a Wearable IoT Helmet for Monitor Worker Safety

Principal investigator: Juan Antonio Álvarez García/Luis Miguel Soria

Funder Company/Institution: AERTEC Solutions, S.L.

Reference: P050-18/E17

From: 01-10-2018 To: 31-12-2018

Funds: 4.000€

Role: Main Researcher

Title: Simon, Saving Energy by Intelligent Monitoring

Principal investigator: Juan Antonio Ortega Ramírez

Funder Company/Institution: Proyectos de Excelencia de la Junta de Andalucía, 2011

Reference: P11-TIC-8052

From: 26-03-2013 To: 25-03-2017

Funds: 125.045€

Role: Researcher

Title: OSAMI-Commons Open Source Infrastructure Ambient Intelligence Commons.

Principal investigator: Juan Antonio Ortega.

Funder Company/Institution: Proyectos Europeo ITEA2

Reference: P024-08/E05

From: 25-07-2008 To: 25-12-2011

Funds: 1.043.857,30 €

Role: Researcher

Title: Ubiquitous system of care and assistance controlled by family and medical centers for people with dependencies. CUBICO.

Principal investigator: Juan Antonio Ortega.

Funder Company/Institution: Proyectos de Excelencia de la Junta de Andalucía, 2007.

Reference: P06-TIC-02141

From: 01-04-2007 To: 30-03-2010.

Funds: 80.500 €.

Role: Researcher

Title: Integrated platform for interaction between family and medical centers for electronic care for people with dependencies.

Principal investigator: Juan Antonio Ortega

Funder Company/Institution: Plan Estatal Ministerio de Educación y Ciencia. 2006

Reference: TSI2006-13390-C02-02

From: 01-10-2006 To: 01-03-2010.

Funds: 118.850 €.

Role: Researcher

C.3. Contracts

Reference: P008-15/E05

Principal researcher: Juan Antonio Álvarez García/ Luis Miguel Soria Morillo

Title: D-BoNES: Management software for deboning olives machines.

Funder Company/Institution: Pymesuma, S.L.

From:16-02-2015 To:30-09-2015

Aim: Develop a scalable solution for monitoring sensors in real time machines creating software that allow operators remote parameters change.

Reference: P026-14/E05

Principal researcher: Juan Antonio Álvarez García/ Luis Miguel Soria Morillo

Title: Olive-NaOH: Software Prediction Olives Cooking Application.

Funder Company/Institution: Pymesuma, S.L.

From: 01-08-2014 To:30-09-2014

Aim: Develop a mobile frontend and backend infrastructure to visually analyze the concentration of NaOH in olives to detect their point of maturity.

Reference: PP045-12/E05

Principal researcher: Juan Antonio Álvarez García/Juan Antonio Ortega Ramírez

Title: Plataforma de Diseño de Instalaciones de Energías Renovables (PDIER).

Funder company: Irradia Energía Solar S.L.

Funds: 22.500€ Inicio:01-02-2012 Fin:30-06-2014

C.4. Patents

Patent: ES-2386134_B1: Sci (Simple Cluster Interface): Architecture For Managing User Tasks In A Cluster Via The Web. J. A. Ortega, A. Fernández-Montes, L. González, F. Velasco, J. Torres, M. J. Escalona, J. A. Alvarez, M. A. Álvarez, D. Fuentes, C. Angulo. Pub. No.: WO/2012/052581 International Application No.: PCT/ES2011/000310 Fecha de publicación: 26.04.2012 International Filing Date: 21.10.2011

Patent: ES-2377371_B2: Energy-Efficient Monitoring And Localisation Device, System And Method. L. M. Soria, J.A. Álvarez, A. Fernández-Montes, J. A. Ortega, L. González. Pub. No.: WO2012/010727. International Application No.: PCT/ES2011/000237 Fecha de publicación: 26.01.2012 . International Filing Date: 22.07.2011

C.5. Software registered

Grid'5000 Toolbox: Software for grid computing environments, published for the research community.

CReTe (Claudicantes y Registro Telemático): Android software for monitoring patients with peripheral arterial disease

C.6. Research Stays

1. Universidad Politécnica de Cataluña. 19/01/2007-19/02/2007. Host: Dr. Cecilio Angulo.
2. DFKI: Deutsches Forschungszentrum für Künstliche Intelligenz (Germany). 01/06/2011-01/09/2011. Host: Dr. Alexander Kroener.
3. Pisa University (Italy). 31/05/2015 -30/07/2015. Host: Dr. Stefano Chessa.
4. Jozef Stefan Institute (Slovenia). 01/06/2017-30/09/2017. Host: Dr. Mitja Lustrek