



AYUDAS RAMÓN Y CAJAL CONVOCATORIA 2019

Turno de acceso general

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Área Temática: Ciencias de la educación
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Título:

Artificial Intelligence for pre-participation screening and exercise prescription for sport and health purposes

Resumen de la Memoria:

My research career started in 2005 when I was awarded with a Collaborative Scholarship aimed at initiation in the research ambit and that I carried out during the last year of my undergraduate program (completed with honours). Afterwards, I started my postgraduate studies by enrolling in two different postgraduate Masters. I finished my postgraduate studies with the public presentation and defence of my Master Theses, which were awarded with the maximum qualification.

Then, I wrote my PhD project, which was rewarded with a four year long pre-doctoral scholarship (FPI program). During my pre-doctoral years, I carried out 3 external stays at the University of Gloucestershire (England) for five months long each. My pre-doctoral stage concluded with the deposit and public defence of my International PhD thesis structured as a compendium of publications (12 articles) in February 2012.

My post-doctoral stage started in October 2012, when I become part of the Faculty of Socio-Sanitary Sciences at Miguel Hernandez University of Elche. During my first post-doctoral years, I gained experience on teaching undergraduate, master and PhD students and greatly improved my skills on statistical modeling (machine learning algorithms). Later, I used my unique interdisciplinary profile that combine machine learning and artificial intelligence, physical education and sport sciences to create and lead my own research line whose main purpose is to develop robust and generalizable pre-participation models (based on neural networks and classification algorithms) that might allow to prospectively identify individuals at high risk of sport injuries (e.g.: muscle injuries) and sedentary-related diseases (e.g.: low back pain) and to design tailored prevention and rehabilitation measures. This research line quickly aroused a special interest by the research community as I was awarded with two very competitive post-doctoral scholarships (José Castillejo program and Seneca Foundation Postdoctoral Development program) to carry out them first at the Cincinnati Children's Hospital Medical Center (USA, 2016) and at University of Gloucestershire (2018-2020). Furthermore, the cutting-edge and applied knowledge that I presented in different conferences and published in top international journals during the first years of this research line's life also attracted the attention of a number of PhD students and reputed researchers from different Universities so that currently I am leading an international and interdisciplinary team of researchers.

The real transference into practice of the scientific knowledge generated by the research line I am leading is reflected by the fact that I collaborate as external assessor with recognized sports entities, standing out the research contracts signed with the FC Barcelona and Athletic Club Bilbao.

In 2019, I obtained a visiting readership at the University of Gloucestershire due to my exceptional research career, where I am carrying out an extensive activity of mentoring master and PhD students and teaching undergraduate students.

During my research career I have published 77 articles and two books, directed a number of PhD and Master theses, I have been involved in 10 national and international research projects and I was rewarded with 2 prizes for my scientific productivity (2018) and excellence (2019) by two public entities.

Resumen del Currículum Vitae:

The main scientific results of my research career have been presented in form of six invited presentations and 39 communications at different national and international congresses. I was awarded with the first and second prizes for the best scientific presentation at three International Congresses.

I have published a total of 77 manuscripts, 43 manuscripts in journals indexed in the Journal Citation Reports (JCR) catalogue and 34 manuscripts in journals indexed in other data bases such as Scopus. The distribution per quartiles of my 43 published articles in the JCR catalogue is as follows:

- Q1 = 13 (leader or key author [first or correspondence author] in 92.3% of my articles).
- Q2 = 15 (leader or key author [first or correspondence author] in 80% of my articles).
- Q3 = 4 (key author in all of my articles).
- Q4 = 11 (key author in 54.5% of my articles).



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General research quality indicators of my publications:

- Average impact factor per article = 2.2 points.
- Accumulative (total) impact factor = 91.3 points.
- H-index = 20 (Google Academic) / 11 (Scopus) / 10 (Publons [Web of Science]).
- Total citations = 1208 (Google Academic) / 430 (Scopus) / 276 (Publons [Web of Science]).
- Average number of citations/year during the postdoctoral period (2012 -) = 142.8 (Google Academic) / 58.3 (Scopus) / 42.4 (Publons [Web of Science]).

I have successfully directed two doctoral theses (one of them was awarded with the first prize for the best thesis in the Faculty of Sport Sciences at University of Murcia) and 17 Masters theses. Currently, I am supervising six full-time funded PhD students (FPI program).

I have acted as reviewer more than 40 times for 10 international scientific journals indexed in the JCR catalogue

I have taken part in 5 R&D research projects funded by public institutions (4 national projects and an Erasmus+ project), acting as the principal investigator in one of them. Furthermore, I have successfully obtained and completed 4 highly competitive scholarships for my undergraduate (junior scholar on collaborative projects, Spanish Ministry of Education, Culture and Science [1 year]), pre-doctoral (FPI program, Region of Murcia Ministry of Employment, Universities and Enterprises [4 years]) and postdoctoral studies (José Castillejo Postdoctoral Program, Spanish Ministry of Education, Culture and Science [6 months]; Regional Subprogram focuses on the Postdoctoral Development, Seneca Foundation-Agency for Science and Technology in the Region of Murcia [2 years]).

I have carried out 3 pre-doctoral (United Kingdom) and 3 post-doctoral (United Kingdom and USA) external stays for at least 5 months long each (48 months in total).

My experience of teaching undergraduate students started in 2007 in the Faculty of Physical Activity and Sports Sciences at the Catholic University of San Antonio. In this Faculty, I was teaching for four years. Later, in 2012, I become part of the Faculty of Socio-Sanitary Sciences at Miguel Hernandez University of Elche, where I worked until June 2018 as a reader in the degree of Sports Sciences and in the Official Masters of "Health and Sport Performance" and "Gerontology and Health". In 2019, I obtained a visiting readership at the University of Gloucestershire.



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Referencia: RYC2019-028398-I

Área Temática: Ciencias de la educación

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Título:

Technology-enhanced student-centred learning strategies in higher education

Resumen de la Memoria:

The research career of Victoria Marín started in 2010, as a Research Assistant in the I+D national-funded project EDU2008-05345 "Design of methodological strategies for using shared spaces of knowledge in virtual learning environments" with the Educational Technology Group (GTE) of the University of the Balearic Islands (UIB). She was awarded with the FPI (Formación de Personal Investigador) scholarship in 2011 for two years by the UIB to carry out her PhD in Educational Technology, in the same research line as her Master thesis: the design, development, implementation and evaluation of higher education learning scenarios and strategies to integrate digital technologies to support student-centred learning effectively and to help them enriching their personal learning environments (activities, resources, tools, etc. that are used to learn in any context).

During her PhD studies, she did a doctoral stay (3 months) with the CIMO scholarship (Finnish National Agency for Education) at the Finnish Institute of Educational Research of the University of Jyväskylä (Finland), and collaborated with the research group "ICT in Learning and Working Environments" to study the implementation of learning scenarios from the teachers' perspective by considering the boosted strategies for personal learning environments designed in the university courses. She obtained her PhD in October 2014 (Cum Laude, European Mention) and was awarded with the Extraordinary PhD prize and the Santander prize for the best academic record of the PhD program in 2012/2013.

Since 2016, Victoria Marín is postdoctoral researcher at the University of Oldenburg (Germany) (40 months by the deadline of the application), where her focus is on technology-enhanced learning design, concretely in research-based learning processes from the perspective of course design, both for teachers and students. She is member of the Center for Open Education Research (COER) of the University of Oldenburg.

Victoria Marín has participated in different international, national and local I+D projects as researcher. She was invited as a member of the international association EDUTEC (Asociación para el Desarrollo de la Tecnología Educativa y de las Nuevas Tecnologías Aplicadas a la Educación) and is a researcher collaborator of the Group of Childhood Technology, Education and Diversity at the Institute of Innovation and Educational Research (IRIE) of the UIB.

The first publication of Victoria Marín was in 2010 and, since then, she has published 48 papers in scientific journals (first author in 19 of them), 8 chapter books and 45 presentations in international conferences. Some of those works include the publication with international scholars. She is also reviewer for numerous recognised international journals and scientific committee for different international conferences. Many of the scientific outputs had also dissemination and transfer formats in international, national and local seminars, training offer and presentations delivered by the candidate.

She has acted as supervisor of 5 master theses, and is supervisor in 2 doctoral theses and co-supervisor in 4 PhD. She has also been examiner of 5 master theses and 3 doctoral theses. She was also invited as a keynote speaker in different universities and to chair a session and a discussion panel in the international EDUTEC Conference 2018.

Resumen del Currículum Vitae:

Victoria Marín is PhD of Educational Technology by the University of the Balearic Islands (UIB) (2014). She is Research Collaborator of the Group of Childhood Technology, Education and Diversity (which currently includes the Educational Technology Group) at the Institute for Educational Research and Innovation of the UIB and Member of the Association for the Development of Educational Technology and New Technologies Applied to Education (EDUTEC). She is also member of the Center for Open Education Research of the University of Oldenburg.

She has done several research stays, both pre-doctoral (Argentina: 3 months in 2011 and 2012, Finland: 3 months in 2014) and post-doctoral (as Research Associate in Germany: 40 months by the deadline of the application, and a shorter one in Colombia: 0.5 months). She has participated in 5 international projects, 4 I+D national-funded projects, 2 I+D local-funded projects, 6 innovation teaching projects and 3 cooperation projects.

She has also been invited as an expert in her research area to seminars and symposiums organized by different national and international institutions (Universidad de Alicante, Universidad Casa Grande in Ecuador, Universidad de Guadalajara in Mexico).

She is active in the research community by acting as reviewer in diverse scientific journals in the field (e.g., Edutec, Comunicar, NAER, BJET, Computers & Education), as scientific committee in international conferences (e.g., Edutec, FIET, Edmedia) and as participant in diverse recognised international education conferences (e.g., Edutec, Edmedia, ECER, EDEN, The PLE Conference).

Since the beginning of her research career in 2010, Victoria Marín has 50 published scientific papers in international journals, 19 of them indexed in the Social Sciences Citations Report or in Scopus. In addition, she has presented 45 contributions in international conferences



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and 8 chapter books.

She has also received positive ANECA accreditations for the positions of Ayudante Doctor and Profesor Contratado Doctor and has university teaching experience in different modalities: online, blended learning and face-to-face, international (University of Oldenburg, Universidad Nacional de la Patagonia Austral in Argentina, Universidad Casa Grande in Ecuador) and national (UIB, UNIR-Universidad Internacional de la Rioja), and in four different languages (Spanish, Catalan, English, German).