

Fecha del CVA

27/01/2020

Parte A. DATOS PERSONALES

Nombre y Apellidos	Carlos Garcia Sanchez		
DNI	50860258J	Edad	43
Núm. identificación del investigador	Researcher ID		
	Scopus Author ID		
	Código ORCID	0000-0002-3470-1097	

A.1. Situación profesional actual

Organismo	Universidad Complutense de Madrid		
Dpto. / Centro	Arquitectura de Computadores y Automática / Facultad de Informática		
Dirección			
Teléfono		Correo electrónico	garsanca@ucm.es
Categoría profesional	Profesor Titular de Universidad	Fecha inicio	2019
Espec. cód. UNESCO	330406 - Arquitectura de ordenadores		
Palabras clave			

A.2. Formación académica (título, institución, fecha)

Licenciatura/Grado/Doctorado	Universidad	Año
Doctor Complutense	Universidad Complutense de Madrid	2007
Lic. Ciencias Físicas Especialidad Cálculo Automático	Universidad Complutense de Madrid	1999

A.3. Indicadores generales de calidad de la producción científica

Number of six-year periods with Positive Evaluation granted by the "Spanish Research Evaluation Commission (CNEAI)": Three. Last period: from 2012 to 2018.

Citations: 530 Average citations/year (2014-2019): 378/5=76

h-index: 13

Source for citations and h-index: Google Scholar

Parte B. RESUMEN LIBRE DEL CURRÍCULUM

I have achieved the degree in Physics in 1999, at Complutense University of Madrid. After that, I got my PhD in Computer Science in 2007, at Universidad Complutense de Madrid.

I began my research task in the Department of Computer Architecture at 1999. After a scholarship of one year, I began to teach as Assistant Professor. With updates on University Law (LOU 2001), my figure was changed into Associate Professor (Contratado Doctor-Associate). Since 2019, I am tenured civil servant, Associate Professor (Prof. Titular de Universidad).

Member of five CICYT project since 2000, part of the European network HIPEAC and the renewed HIPEAC2 and HIPEAC3. I have also part of other interdisciplinary European projects in Bioinformatic fields. I have worked as member and head of several projects linked with enterprise, which more relevant results are some productive software to predict and avoid river flooding. I have two research tracks recognized by CENAI (2001-2006 and 2007-2012). Regarding publications, I am the first and second author of several articles in relevant international journals and conferences. Author of JCR 25 publications (6 of them in the first quartile) and 7 articles in prestige conference indexed in the GII-GRIN-SCIE (GGS) Conference Rating. I have also been editor of two Special-Issue in two impact journals indexed in the JCR (one positioned in Q1 and another in Q3). I had completed four research visits financed by the competitive program TRACS (Training Research Access on Advance Computer Systems), the CAPAP-H network (High Performance Computing for Heterogeneous Parallel Architecture), the

SeyC network (Consolider Supercomputing network and eCiencia) and José Castillejo program in the ICHEC institute in Ireland.

Parte C. MÉRITOS MÁS RELEVANTES (ordenados por tipología)

C.1. Publicaciones

- 1 **Artículo científico.** Fernández, D.G.; et al. (4/4). 2017. Fast and effective CU size decision based on spatial and temporal homogeneity detection Multimedia Tools and Applications. ISSN 1573-7721.
- 2 **Artículo científico.** Jimenez, L.I.; et al. 2016. GPU Implementation of Spatial-Spectral Preprocessing for Hyperspectral Unmixing IEEE Geoscience and Remote Sensing Letters. 13-11, pp.1671-1675. ISSN 1545-598X.
- 3 **Artículo científico.** Garcia, C.; et al. 2016. OpenIRS-UCM: An Integral Solution for Interactive Response Systems International Journal of Engineering Education. 32, pp.873-885. ISSN 0949-149X.
- 4 **Artículo científico.** Poljicak, A.; et al. 2016. Portable real-time DCT-based steganography using OpenCL Journal of Real-Time Image Processing. Springer. ISSN 1861-8219.
- 5 **Artículo científico.** Rucci, E.; et al. 2015. An energy-aware performance analysis of SWIMM: Smith-Waterman implementation on Intel's Multicore and Manycore architectures Concurrency and Computation: Practice and Experience. John Wiley & Sons. ISSN 1532-0634.
- 6 **Artículo científico.** Mejía-Roa, E.; et al. 2015. NMF-mGPU: Non-negative matrix factorization on multi-GPU systems BMC Bioinformatics. 16-1.
- 7 **Artículo científico.** Tabas-Madrid, D.; et al. 2015. Proteogenomics dashboard for the human proteome project Journal of Proteome Research. ACS Publications. 14-9, pp.3738-3749.
- 8 **Artículo científico.** Meyer-Baese, U.; et al. 2014. Code obfuscation using very long identifiers for FFT motion estimation models in embedded processors Journal of Real-Time Image Processing.
- 9 **Artículo científico.** Igual, F.D.; et al. 2014. Non-negative Matrix Factorization on Low-Power Architectures and Accelerators: A Comparative Study Journal Computers and Electrical Engineering. Elsevier. 46, pp.136-156. ISSN 0045-7906.
- 10 **Artículo científico.** Botella, G.; García, C. 2014. Real-time motion estimation for image and video processing applications Journal of Real-Time Image Processing.
- 11 **Libro o monografía científica.** Rucci, E.; et al. 2017. Accelerating smith-waterman alignment of long DNA sequences with OpenCL on FPGA International Conference on Bioinformatics and Biomedical Engineering. Springer International Publishing. pp.500-511. ISBN 978-3-319-56154-7.
- 12 **Libro o monografía científica.** Hidalgo, J.H.; et al. 2017. Embedded grammars for grammatical evolution on GPGPU Applications of Evolutionary Computation: 20th European Conference, EvoApplications 2017. Springer International Publishing. ISBN 978-3-319-55849-3.
- 13 2019. SWIMM 2.0: Enhanced Smith-Waterman on Intel's Multicore and Manycore Architectures Based on AVX-512 Vector Extensions
- 14 2018. SWIFOLD: Smith-Waterman implementation on FPGA with OpenCL for long DNA sequences.
- 15 2018. Acceleration and energy consumption optimization in cascading classifiers for face detection on low-cost ARM big. LITTLE asymmetric architectures
- 16 2018. Multicore Real-Time Implementation of a Full Hyperspectral Unmixing Chain

C.2. Proyectos

- 1 CABAHLA-CM: Convergencia BigData-Hpc: de Los sensores a las Aplicaciones. P2018/TCS-4423 Francisco Tirado Fernández. (Dept. Arquitectura de Computadores y Automática). 01/01/2019-31/12/2021.
- 2 Computación Heterogénea Eficiente: del Procesador al Datacenter Manuel Prieto Matías. (Dept. Arquitectura de Computadores y Automática). 01/01/2015-31/12/2018. 439.240 €.

- 3 Arquitecturas y Tecnologías Emergentes. Eficiencia energética mediante heterogeneidad Manuel Prieto Matías. (Dept. Arquitectura de Computadores y Automática). 01/01/2013-31/12/2015. 439.240 €.
- 4 Arquitectura hardware/software para sistemas de alto rendimiento Francisco Tirado Fernandez. (Dept. Arquitectura de Computadores y Automática). 01/01/2009-31/12/2015. 1.217.260 €.

C.3. Contratos

- 1 Diseño e Implantación de un Sistema Inteligente para Detección Rápida de Problemas de Aprendizaje en Población Infantil Enclave. Atención psicológica y educativa. Carlos García Sánchez. 12/04/2014-12/10/2014. 2.700 €.
- 2 Sintonización Arquitectónica de software hidráulico para previsión de avenidas INCLAM S.A. Manuel Prieto Matias. 12/03/2008-P4M. 30.000 €.
- 3 Paralelización arquitectónica de software hidráulico para previsión de avenidas en sistemas Multicore y tarjetas gráficas INCLAM S.A. Carlos Garcia Sanchez. 12/03/2008-P1Y. 30.000 €.

C.4. Patentes