

Part A. Personal Information

DATE	June 20 th 2018
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Surname(s)	Enrique	
Forename	Alba Torres	
ID number	52574844H	
Sex	Male	
Age	50	
Researcher codes	WoS Researcher ID (*)	L-8604-2014
	SCOPUS Author ID(*)	7007101440
	Open Researcher and Contributor ID (ORCID)	0000-0002-5520-8875

(*) At least one of these is mandatory

A.1. Current position

Post/ Professional Category	Full Professor (Catedrático de Universidad)	
UNESCO Code	120304, 120315, 120317	
Key Words	HPC, parallelism, smart cities, intelligent systems, IA	
Name of the University/Institution	Universidad de Málaga	
	Department/Centre	Lenguajes y Ciencias de la Computación
	Full Address	ETSI Informática, 29071 Málaga, ESPAÑA
	Email Address	eat@lcc.uma.es
	Phone Number	+34 952132803
Start date	August 28 th , 2009	

A.2. Education (title, institution, date)

Year	University	Degree	Title
1989	Universidad de Málaga	BsC in Computer Science	Technical Engineer in Computer Science
1992	Universidad de Málaga	Degree in Computer Science	Engineer in Computer Science, then in 1994 DEA studies
1999	Universidad de Málaga	PhD in Computer Science	Dr. in Computer Science

A.3. Indicators of Quality in Scientific Production (See the instructions)

H index:	54 (Google Scholar)
Cites:	14160 (Google Scholar)
Spanish ranking (Informatics):	6 th in Spain [http://indice-h.webcindario.com/]
DBLP:	List of most prolific reserachers
Webometrics in Spain (all disciplines):	1% top, first in engineering in Málaga
Indexed ISI Journal publications:	104 journal articles indexed by Clarivate
Books:	15 written and edited books
Positive evaluation of 6 year research periods:	95-00, 01-06, 07-12, <i>next demand at Dec18</i>
PhD theses directed in total:	18 PhD theses defended, 8 more running now

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

<p>B1. TEACHING</p> <ul style="list-style-type: none"> • Coordinator of the master “Ingeniería del Software e Inteligencia Artificial” (14-15-16) • 17 specialized courses: 3 to companies, 1 Andalusian Government, 1 human training, and +12 postgraduate courses • Erasmus coordinator (Luxembourg, Austria) and intl. collaborations (Uruguay, Ostrava) • Director of 4 official degrees at UMA
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B2. SCIENTIFIC PRODUCTION

- 105 JCR-SCI impact journal articles
- 15 books (7 proceedings, 5 authored/ed., 3 authored)
- 43 book chapters
- 4 national journal articles
- 25 international journal articles (not JCR-SCI)
- 40 articles in Springer LNCS series
- 300+ conference articles

B3. QUALITY INDICATORS

- I'm included in the list of most prolific authors in DBLP
- Best article out of the research done in University of Málaga in engineering (ISI 2005...)
- Cites to my works: >14 000 (years 1993-2018)
- 60 invited speeches in impact events and international research institutions
- Scientific committees for more than 80 multi-annual events
- Scientific reviewer for more than 31 journals
- Best paper awards in 5 conferences
- Direction of 7 theses awarded as "best year thesis" at UMA (Spain) and 1 in Uruguay
- Positive evaluation of the teaching excellence granted by the Andalusian Commission for the Evaluation of Autonomic Complements (1998-2003), resulting in 3 acknowledged tracks
- Institutional evaluation of UMA on teaching, up to 2008, "excellent, 4 out of 4"

B4. MANAGEMENT OF THE RESEARCH

- Editor of 10 special issues in impact journals
- Organization of 35 scientific events
- Director of 18 PhD theses
- Other 8 PhD theses running at present
- Director of 20 Master Theses (and Spanish DEA)
- Stable relationship with 23 foreign universities and 8 Spanish ones
- Evaluator: ANEP, Xunta de Galicia, Extremadura, Canarias, CyL and DGI
- Evaluator for the European Research Council (2011 on)
- Evaluator for the Research Executive Agency (REA), from 2014 on
- Evaluator for H2020, FET-OPEN Research and Innovation Action
- Evaluator for research ministries in Holland, Rumania, Norway, Argentina and Chile
- New initiative of AI in Europe, CLAIRE in 2018
- Editor in 18 journals (6 of them JCR-SCI)
- Regular reviewer in 31 international journals and more than 80 conferences
- Creation and direction of a working local team of 13-15 researchers
- Creation and direction of a macro team of 33 researchers (2002-2005) in 5 Spanish universities, 36 researchers (2005-2008) in 4 Spanish universities, 41 researchers (2009-2011) in 4 Spanish universities
- Director in 5 national research projects (03-05, 06-08, 09-11, 12-14, 15-18)
- Director of 2 Andalusian research projects, DIRICOM 462,000.00 € (08-12), maxCT (15)
- Local director in 4 bilateral research projects in Europe (05-11), with France and Germany
- Director in 4 international research European projects CARLINK (06-08), ImAppNIO (16-20), FIQARE (2017-2020) and NeCOL (18-21)
- UMA IP in 1 FP7-PEOPLE project, 518,400.00 € for the whole consortium (09-12)
- IP in 10 innovation contracts with enterprises (04-18)
- Participation (no direction) in other different 8 public projects and 1 company project
- Principal Investigator in the European Innovation Partnership on Smart Cities and Communities #6904 (Holistic Intelligence, 21 international participant nodes)

B.6 OGMIOS ANALYSIS: RESEARCH PROJECTS

Average number of projects per year:	2.9
Average incoming per year:	90,522.63 €
Incomes to UMA as principal investigator:	1,376,023.33 €
Incomes to UMA as Project participant:	524,952.00 €
ROI as a PI:	21%
ROI as a participant researcher:	345%

Part C. Relevant accomplishments

C.1. Publications (Only 10 pubs, see <http://www.lcc.uma.es/~eat/publi.html>)

1. J. Toutouh, E. Alba, **Parallel Multi-objective Metaheuristics for Smart Communications in Vehicular Networks**, *Soft Computing*, 21(8):1949-1961, 2017
2. P. Vidal, F. Luna, E. Alba, **Solving Optimization Problems Using a Hybrid Systolic Search on GPU Plus CPU**, *Soft Computing*, pp.1-19, January 2016
3. M. Pedemonte, F. Luna, E. Alba, **Systolic Genetic Search, a Systolic Computing-based Metaheuristic**, *Soft Computing*, 19(7):1779-1801, 2015
4. C. Salto, E. Alba, **Adapting Distributed Evolutionary Algorithms to Heterogeneous Hardware**, *Transactions on Computational Collective Intelligence*, 19:103-125, 2015
5. P. Vidal, F. Luna, E. Alba, **Systolic Neighbourhood Search on Graphics Processing Units**, *Soft Computing*, 18:125-142, 2014
6. J. Dominguez, E. Alba, **Dealing With Hardware Heterogeneity: A New Parallel Search Model**, *Natural Computing*, 12(2):179-193, 2013
7. J. Toutouh, S. Nasmachnow, E. Alba, **Fast Energy-aware OLS Routing in VANETs by Means of a Parallel Evolutionary Algorithm**, *Cluster Computing*, 16:435-450, 2013
8. E. Alba, G. Luque, S. Nasmachnow, **Parallel Metaheuristics: Recent Advances and New Trends**, *International Transactions in Operational Research*, 20(1):1-48, 2013
9. G. Luque, E. Alba, **Parallel Genetic Algorithms. Theory and Real World Applications**, Springer-Verlag, ISBN 978-3-642-22083-8, July 2011
10. E. Alba, **Parallel Metaheuristics: A New Class of Algorithms**, Wiley, ISBN 0-471-67806-6, July 2005

C.2. Research Projects and Grants (Public) / C.3. Contracts (Private)

Title of the project or contract	Relationship with this proposal (1)	Principal Investigator	Budget (EUROS)	Funding agency and project reference	Project period (2)
NeCOL, UMA(Spain) + MIT (USA)	1	Enrique Alba	239 191	H2020-MSCA-IF-2017 (#799078)	Sept 2018 Sept 2021
6city: Cross-Intelligence for Smart Cities	1	Enrique Alba Francisco Chicano	76 956	Spanish Ministry MINECO (TIN2017-88213-R)	Jan 2018 Dec 2020
FIQARE – QUALITY AND FIWARE	2	Enrique Alba	90 750	EMERGYA - company (OTRI #8.06/5.47.4997)	Dec 2017 Nov 2020
FIQARE – GENERIC ENABLERS IN FIWARE	2	Enrique Alba	54 450	SECMOTIC - company (OTRI #8.06/5.47.4996)	Dec 2017 Nov 2020
Energy Sequence	2	Enrique Alba	31 460	VATIA - company (OTRI #8.06/47.4792)	Jan 2017 Dec 2017
CI-RTI	1	Enrique Alba	12 000	Spanish MICINN (TIN2016-81766-REDT)	April 2017 April 2019
ImAppNIO	2	Thomas Jansen	96 000	H2020 COST Action (EU) (CA15140)	Mars 2016 Mars 2020
Smart Mobility: Routes, Wi-Fi & Pollution (maxCT)	1	Enrique Alba	101 821	Public Works Agency (AOP Junta de Andalucía)	Jan 2015 Oct 2015
moveON: Metaheuristics, Smart Mobility and Holistic Intelligence	1	Enrique Alba Gabriel Luque	133 705	Spanish Ministry MINECO (TIN2014-57341-R)	2015 2018
CTC: A Smart Platform for the Centralized Control of Train Traffic	1	J.M Troya & Alba & Díaz & López	279 000	Indra and UMA contract	Nov 2013 Mar 2018
Research Consulting	2	Enrique Alba	64 000	Technical Univ. of Ostrava (OTRI 8.06/5.47.4142)	Nov 2013 Dec 2014
roadME: Fundamentals for Real World Applications of Metaheuristics. The vehicular case	1	Enrique Alba	101 640	Spanish Ministry MINECO	2012 2014
DIRICOM: Intelligent Design of Wireless Communication Networks	2	Enrique Alba	462 000	Junta de Andalucía	2008 2011
COADVISE	2	INRIA	518 400	7FP (PRISES-GA-2008-230833)	Feb 2009 Jan 2012
CARLINK: Wireless Traffic Service Platform for Linking Cars	1	Enrique Alba	191 000	Eureka-Celtic (Ministerio de Industria)	July 2006 July 2008
M*: Multidisciplinary Multiobjective Metaheuristics	2	Enrique Alba	150 040	MEC (TIN2008-06491-C04-01)	Jan 2009 Dec 2011
OPLINK: Net Centric Optimization	3	Enrique Alba	86 000	MEC (TIN2005-008818-C04)	Dec 2005 Dec 2008

TRACER: Advanced Optimisation Techniques for Complex Problems	2	Enrique Alba	61 600	CICYT (TIC2002-04498-C05)	Dec 2002 Dec 2005
PERFORM	2	INRIA	30 000	INRIA (M06/04)	Jan 2006 Dec 2008
MOID	2	INRIA	30 000	INRIA (M09/06)	Jan 2009 Dec 2011
SAP Solutions: Generating Tools	3	Enrique Alba José M. Troya	34 800	Industry ARELANCE S. L. (8.06/5.47.3155)	Oct 2008 Dec 2010
Optimization in Mobile Telephony	2	Enrique Alba José M. Troya	125 910	Industry TARTEC/OPTIMI (8.06/47.2269)	May 2004 Dec 2008
Integrated Action Spain-Germany	3	Enrique Alba	10 820	Ministerio de Educación y Ciencia (HA2004-0008)	Jan 2005 Dec 2006

(1) Write 0, 1, 2 or 3 according to: 0 = Similar project; 1 = Very related; 2 = Low related; 3 = Unrelated.

International Research Actions of the NEO group:

- Integrated Actions Spain-Germany, 2005-2007
- European EUREKA-CELTIC, 2006-2009
- INRIA – Programme 3+3 Méditerranée, 2006-2008 & 2009-2011
- ITN European Union 2009-2012
- ERC COST Action 2016-2020
- Marie Curie 2017-2020
- Bilateral agreements and research activities with: Univ. Ostrava (Czech Republic), Lille (France), Univ. Luxembourg (Luxembourg), Univ. Linz & Upper Austria & Vienna & (Austria), Univ. Constantine 2 (Algeria), Univ. Tunis-LAROC (Tunisia), Univ. Shinshu (Japan), Univ. Polytech Montreal (Canada), Univ. Colorado State (USA), MIT (USA), IPN-CINVESTAV (México), IPN (México), CIMAT-Guanajuato (México), Univ. Aut. Estado Morelos (México), UCI (Cuba), Univ. La Habana (Cuba), Univ. Libre de la República (Uruguay), Univ. Nacional de San Luis (Argentina), Univ. Nacional Patagonia Austral (Argentina), Univ. Bahía Blanca (Argentina).

C.4. Patents and other IPR

- **Desarrollo de Software en Explotación (Software in Use)**
 - Desarrollo del módulo de optimización para la herramienta software x-AFP que está siendo utilizada por la empresa Euro-americana OPTIMI para diseño de redes de telefonía móvil (optimización de frecuencias en 2G/3G, 2004/2006).
 - Desarrollo del módulo de optimización para la herramienta software x-ACP que está siendo utilizada por la empresa Euro-americana OPTIMI para diseño de redes de telefonía móvil (optimización de "location area" en celdas 2G/3G, 2006/2007).
- **Registro de Software - Propiedad Intelectual (Own Software- Int. Property)**
 - #1403260434551 – SAFE CREATIVE E. Alba, "ssGA - simulador de la evolución animal para dispositivos portables y tratamiento de soluciones tentativas", registrado el 26-mar-2014 20:04 UTC
 - #1403300452729 – SAFE CREATIVE E. Alba, "xxGA 9-6-98 - Procedimiento informático para explotar múltiples máquinas resolviendo un problema de optimización global", registrada el 30-mar-2014 14:12 UTC
 - #RTA-133-14 – Registro de la Propiedad Intelectual (Consejería de Cultura y Deporte de la Junta de Andalucía) "UVO: Procedimiento informático basado en evaluaciones parciales para la elección de rutas para vehículos en la ciudad", registrado el 02/04/2014
- **National OEPM Patents**
 - #P201400635, J. Ferrer, J.F. Chicano & E. Alba, "A Method for estimating software testing complexity", Patente nacional Española OEPM, registrada el 6 agosto de 2014.
- **Patents Based in my Work**
 - Alba & Tomassini 2002:
Agrawal, Sanjay S., Sastry VSM Durvasula, Narasimha Murthy, Sandeep Sacheti, Deep Thomas, and Karl Von Wolff. "Infrastructure and architecture for development and execution of predictive models." U.S. Patent 8,229,973, issued July 24, 2012. GOOGLE.

Instructions

Important Announcement

Following the Call for Proposals, **ONLY CVS SUBMITTED IN THIS FORMAT WILL BE TAKEN INTO CONSIDERATION. CVs presented in other formats WILL BE DISMISSED with no possibilities for modifications.**

GENERAL CONSIDERATIONS

Following the call it is mandatory to use the following format when filling the document: Font Times New Roman / Arial (minimum size 11), single interlineal space, lateral margins of 2.5 cm and top and bottom margins of 1.5 cm.

Max. length of the whole document (Part A, B and C) cannot exceed four pages.

PART A. PERSONAL INFORMATION

Researcher ID is a unique identifier that consists of alphanumeric characters that enable researchers to manage their publication lists, track their times cited counts and h-index, identify potential collaborators and avoid author misidentification. It is hosted by Web of Science.

Access: Web of Science > My Tools > Researcher ID.

Author ID is a unique identifier that consists of alphanumeric characters that enable researchers to manage their publication lists, track their times cited counts and h-index, identify potential collaborators and avoid author misidentification. It is assigned automatically by SCOPUS. You can find an author identifier by running a search for that author. It will appear underneath the author details.

Access: SCOPUS > Author Feedback Wizard> Researcher name.

Open Researcher and Contributor ID (ORCID) provides a persistent digital identifier that distinguishes the researcher from every other person and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.

Access: www.orcid.org

A.3. Indicators of Quality in Scientific Production

Please add information on a) total number of citations, average number of citations during the last five years, b) total number of publications in the first quartile (Q1) and first decile (D1), c) h-index, d) thesis supervised, and e) any other indicators that you may consider relevant.

To calculate these values, use default data collected in the Web of Science or Scopus. When this is not possible, other indicators may be used, specifying the reference database.

PART B. FREE SUMMARY OF CV (Max. of 3.500 characters, including spaces)

Describe briefly your scientific career, the main scientific-technical achievements, and the mid-to-long term scientific-technical interests and objectives of your research agenda. Indicate any other aspects that you may consider important to understand your career path.

PART C. ACCOMPLISHMENTS (Order by typology)

Given the limitations in number of characters, please mention the most relevant achievements sorted by the typology that best suits your scientific profile. Please be clear and avoid ambiguities.

Use reverse chronological order within each section. Limit your merits over the past 5 years, except for those which have an extraordinary importance for your CV.

C.1. Publications

Include a full review of relevant 5 to 10 publications.

In case of an article, please include authors in order of signature, year of publication, title of the article, name of the journal, volume, start page to end page.

If it's a book or chapter of a book, include its publisher and ISBN also.

If there are many authors, please indicate the total number of signatories and the position of the researcher (total number/ position of researcher) as for example 95/18.

C.2. Participation in Research, Development and Innovation Projects

Indicate the most important projects in which you have participated (maximum 5 to 7 projects), including a) its reference, b) title, c) funding body and call for proposals, d) name of the principal investigator and his/her institution affiliation, e) date of start and end of the project, f) amount of subsidy, and g) your type of participation, e.g.: researcher, principal investigator, European project coordinator, etc..

C.3. Participation in Research, Development and Innovation Contracts

Indicate the most important contracts in which you have participated (maximum 5 to 7 contracts), including a) title, b) company or entity, c) name of principal investigator and his/her institution affiliation, d) date of start and end of the contract, and e) amount of funding.

C.4. Patents

Indicate the most important patents and other intellectual property in which you have collaborated. Give a) the order of signing authors, b) reference, c) title, d) priority countries, e) date, f) holder entity and companies that are exploiting the patents.

C.5, C.6, C.7... Other

By sequential numbering (C.5, C.6, C.7 ...) please include any other achievements that you deem necessary, such as for example: direction of works, participation in assessment or advisory tasks, membership of international committees, management of scientific activity, editorial boards, scientific awards, etc.

FINAL CONSIDERATIONS

Please remember that all the submitted achievements must be presented concisely, including dates or periods for each performance.

The short CV aims to facilitate, organize and streamline the evaluation process. The use of the individual researcher identifier facilitates access to the published scientific papers and information on the impact of each of them.

Remember that only CVs submitted either in this format or in CVN abridged version will be taken into consideration.