MINISTERIO DE CIENCIA, INNOVACIÓN Y UNIVERSIDADES

CURRICULUM VITAE (maximum 4 pages)

AGENCIA ESTATAL DE INVESTIGACIÓN

CV date	Oct 9th 2023

Part A. PERSONAL INFORMATION

First and Family name	Fernando Rubio Diez		
Social Security, Passport, ID number		Age	48
Researcher codes	WoS Researcher ID *(*)*	H-6334-2015	
	SCOPUS Author ID*(*)*	7102361995	
	Open Researcher and Contributor ID (ORCID) **	0000-0002-8969-6002	

(*) At least one of these is mandatory
(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad Complutense de Madrid			
Department	Dpto Sistemas Informáticos y Computación. Facultad Informática			
Address and Country	C/ Profesor José García Santesmases 9, Madrid, 28040. Spain			
Phone number	913947629	E-mail	fernando@sip.ucm.es	
Current position	Profesor Titular de Universidad		From	2005
Key words	Formal methods, Declarative Programming, Parallel Computing, Bioinspired computation			

A.2. Education

PhD	University	Year
PhD in Computer Science Engineering	Universidad Complutense de Madrid	2001
MS in Computer Science Engineering	Universidad Complutense de Madrid	1997

A.3. JCR articles, h Index, thesis supervised…

- Three official recognitions for six consecutive years of distinguished research (*sexenios*): 1999-2004, 2005-2010, 2012-2017.
- Two PhD thesis co-supervised, presented in 2008 and 2010.
- Citation metrics (according to Google Scholar):
  - Total references: 1310
  - Average number of references (last five years): 77.8
  - h-index: 20
  - i10-index: 33
  - 104 publications indexed
- Citation metrics (according to Scopus):
  - Total references: 711
  - h-index: 15
  - 90 publications indexed
- 29 journal papers. 22 of them published in JCR indexed journals: 8 Q1, 5 Q2, 3 Q3, 6 Q4 (according to 2022 JCR index). 13 of them have been published after 1/1/2013: 7 Q1,4 Q2, 2 Q4.
- Papers published (since 2013) in journals such as Applied Soft Computing; Formal Aspects of Computing; Complexity; Fundamenta Informaticae; Journal of Computational Science; Journal of Logical and Algebraic Methods in Programming, etc.
- Papers published (since 2013) in conferences such as IEEE SMC, IEEE CEC, GECCO, ICCS, etc.

Part B. CV SUMMARY *(max. 3500 characters, including spaces)*

Fernando Rubio obtained his MS degree in Computer Science Engineering at Complutense University of Madrid in 1997, and he was awarded by the Spanish Ministry of Education with "Primer Premio Nacional Fin de Carrera". He finished his PhD in the same subject and university four years later, and he received the Best Thesis Award of his Faculty in 2001.

His research interests cover Formal Methods, Declarative Programming, Parallel Computing, and Bioinspired computation. In particular, the main topic of his PhD thesis was Parallel Functional Programming, the main topic of the first PhD thesis that he supervised (Alberto de la Encina) was the application of formal methods in the context of Declarative Programming, and the main topic of the second PhD thesis that he supervised (Pablo Rabanal) was the application of Formal Methods in the context of bioinspired computation.

He is author of more than 100 publications (more than 30 since 2013) in international journals and peer-reviewed conferences, and he has been a researcher in 18 competitive research projects (5 since 2013), including regional, national and European projects. He is currently co-leader of a national research project.

He has been a member of the Programme Committee of more than 30 international Conferences, including IFL (Symp. on Implementation and Application of Functional Languages), TFP (Trends in Functional Programming), ICCI (IEEE Int. Conf. on Cognitive Informatics), IWANN (Int. Work-Conf. on Artificial Neural Networks), etc.

Regarding his teaching work, the activities he has developed include 24 years of experience in undergraduate courses, and 15 years of experience in postgraduate courses. Since 2013, he has supervised the bachelor thesis of more than 50 students. Since 2014-15, his teaching activity has been evaluated in the context of Docentia-UCM evaluation system, obtaining always the Excellent mark.

He has been vice-dean of his Faculty during four years (2006-2010), vice-head of his Department one year (2012-13), secretary of the Instituto de Tecnología del Conocimiento three years (since 2020 until now), and coordinator of the UCM Bachelor Degree on Computer Science Engineering during nine years (2014-2023).

Part C. RELEVANT MERITS

C.1. Publications (including books)

Since 2013, he has published 16 papers in international refereed conferences classified as Core A or Core B, and 14 papers published in international journals (13 of them indexed in JCR). The publications in JCR indexed journals (since 2013) are the following:

Galiana, J., Rodríguez, I., & Rubio, F. (2023). How to stop undesired propagations by using bi-level genetic algorithms. Applied Soft Computing, 136, 110094.

Rodríguez, I., Rubio, D., & Rubio, F. (2023). Complexity of adaptive testing in scenarios defined extensionally. Frontiers of Computer Science, 17(3), 173206.

Muñoz, A., & Rubio, F. (2021). Evaluating genetic algorithms through the approximability hierarchy. Journal of Computational Science, 53, 101388.

Carrero, J., Rodríguez, I., & Rubio, F. (2021). On the Hardness of Lying under Egalitarian Social Welfare. Mathematics, 9(14), 1599.

Rodríguez, I., Rosa-Velardo, F., & Rubio, F. (2020). Introducing complexity to formal testing. Journal of Logical and Algebraic Methods in Programming, 111.

de la Encina, A., Hidalgo-Herrero, M., Llana, L., & Rubio, F. (2020). A Semantic Framework to Debug Parallel Lazy Functional Languages. Mathematics, 8(6), 864.

Rubio, F., & Rodríguez, I. (2019). Water-based metaheuristics: how water dynamics can help us to solve NP-hard problems. Complexity, 2019.

Rodríguez, I., Rabanal, P., & Rubio, F. (2017). How to make a best-seller: optimal product design problems. Applied Soft Computing, 55, 178-196.

Rabanal, P., Rodríguez, I., & Rubio, F. (2017). Applications of river formation dynamics. Journal of computational science, 22, 26-35.

de la Encina, A., Rodríguez, I., & Rubio, F. (2014). pHood: Tool Description, Analysis Techniques, and Case Studies. New Generation Computing, 32(1), 59-91.

Rabanal, P., Rodríguez, I., & Rubio, F. (2013). An ACO-RFD hybrid method to solve NP-complete problems. Frontiers of Computer Science, 7(5), 729-744.

Rabanal, P., Rodríguez, I., & Rubio, F. (2013). Testing restorable systems: formal definition and heuristic solution based on river formation dynamics. Formal Aspects of Computing, 25(5), 743-768.

Hidalgo-Herrero, M., Rabanal, P., Rodriguez, I., & Rubio, F. (2013). Comparing problem solving strategies for NP-hard optimization problems. Fundamenta Informaticae,124(1-2),1-25

C.2. Research projects and grants

Member of five research projects since 2013. Amongst them, (co-)main researcher of the UCM team of the following two research projects:

Título: Métodos rigurosos para el desarrollo de sistemas software de calidad y fiabilidad certificadas (ProCode)

Funding Entity: Ministerio de Ciencia, Innovación y Universidades (ref.PID2019-108528RB-C22)

Participating organizations: IMDEA Software, Universidad Complutense de Madrid

Duration: Jun-2020 to May-2024

Main researchers (UCM team): Narciso Martí Oliet, Fernando Rubio Diez

Coordinator: Manuel Carro (IMDEA Software)

Funding (UCM part): 172,800 euros

Título: Contratos Inteligentes y Blockchains Escalables y Seguros mediante Verificación y Análisis (BLOQUES-CM)

Funding Entity: Consejería de Educación, Juventud y Deporte de la Comunidad Autónoma de Madrid (ref. S2018/TCS-4339)

Participating organizations: IMDEA Software, Universidad Politécnica de Madrid, Universidad Complutense de Madrid

Duration: Jan-2019 to Apr-2022

Main researcher (UCM team): Fernando Rubio Diez

Coordinator: Juan Caballero Bayerri (IMDEA Software)

Overall funding: 763,600 euros

C.3. Contracts C.4. Patents

C.5 Institutional responsibilities

Secretary of the UCM Instituto de Tecnología del Conocimiento: Jan-2020 to now

Assistant coordinator UCM Bachelor Degree on Computer Engineering: Oct-2023 to now

Coordinator of the UCM Bachelor Degree on Computer Engineering: Apr-2014 to Sep-2023

Vice-head of the UCM Computing Science Department: Oct-2012 to Sep-2013

Vice-dean of the UCM Computer Science Faculty: Jul-2006 to Jun-2010

C.6 Memberships of scientific committees

Editorial Board member of Journal of Systems and Information Technology (since 2018)

Editorial Board member of Int. J. Cognitive Informatics and Natural Intelligence (2007-2019)

Programme Committee member of more than 30 international conferences

Evaluator of 4 PhD Thesis abroad: Mischa Dieterle (Marburg University, Germany, 2016), Siaw Ling (The University of Newcastle, Australia, 2017), Deepika Bishnoi (Indian Institute of Technology Guwahati, India, 2023), and Farshid Keivanian (The University of Newcastle, Australia, 2023)

C.7 Awards

Primer Premio Nacional Fin de Carrera 1996/97: Best overall grades of all Computer Engineering graduates in Spain, awarded by Spanish Ministry on Education and Culture

Premio Extraordinario de Licenciatura 1996/97: Best overall grades of all Computer Engineering graduates at UCM

Best Thesis Award of the 2001/02 UCM Computer Science Faculty

Best paper award IEEE International Conference on Cognitive Informatics and Cognitive Computing (ICCI*CC'23)