PERSONAL INFORMATION

		CV date	18/11/2020

First and Family name	Joaquín Aranda Almansa	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0001-5496-927X
	SCOPUS Author ID (*)	
	WoS Researcher ID (*)	K-9725-2014

(*) Optional
(**) Mandatory

Current position

Name of University/Institution	Universidad Nacional de Educación a Distancia
Department	Dpt. Informática y Automática / ETSI Informática
Address and Country	C/ Juan del Rosal, 16. 28040-Madrid
Current position	Profesor (Catedrático de Universidad)
Key words	Real time control, robust control, modelling and simulation of continuous and discrete process. Application to Aerospatiale and marine systems.

General indicators of quality of scientific production (see instructions)

Five six-year research period (sexenios) (last 12/31/2019, with five Q1 papers), and one "knowledge and innovation transfer" period in 2018. The last five-year teacher period (quinquenio) was in 2018.
In the last ten years he has been advisor of seven Ph.D. thesis.
The h-index is 12 (ResearcherID), 18 (ResearchGate) and 34 in Google Scholar.
He is the author or co-author of more than 40 articles in scientific journals and more than 160 scientific publications (more than 20 since 2014, in the current research period), with more than 800 citations (in ResearchGate) and more than 1200 in Google Scholar (more than 560 since 2013). Average citations in the last five years is 114 in Google Scholar and 62 in ResearchGate.

CV SUMMARY (max. 3500 characters, including spaces)

Full Professor of Systems Engineering and Automation. I received the Licentiate degree in Physical Sciences from the Complutense University of Madrid (1983), and the PhD degree from UNED (National University of Distance Education) (1989). I was Assistant Professor in the Computer and Automation Department of the Faculty of Physics of the Complutense University of Madrid. Since 1988 he is in the Computer and Automation Department (Departamento de Informática y Automática) of the UNED where he is currently a Full Professor and in which he was previously Assistant Professor and Professor.

I was deputy director of the University School of Informatics of the UNED (1997-2001), Director of the Higher Technical School of Computer Engineering (2001-2005), Director of the Department of Informatics and Automation of the UNED (2007-2013), secretary of the Master of Systems Engineering and Control (2010-13), and Vice Chancellor of Media and Technology of the UNED (2013-2016). I am the head and coordinator of the Research Group in Industrial Informatics (1997 -...) recognized as a group consolidated by the Governing Council of the UNED. I was a Collaborator in the Management of the National Research Plan in the Department of Production and Communications Technology (Industrial Design and Production area) (September 2008-December 2011), member of the external experts panel of the ACADEMIA Accreditation Program National (since October 2008). I have also been Coordinator of the Automatic Thematic Network in Maritime-Naval Systems, Secretary of the

Spanish chapter of the IEEE Oceanic Engineering Society, and Member of the Spanish Automation Committee.

I am the author or co-author of more than 40 articles in scientific journals, and more than 160 scientific publications (including book chapters, scientific articles and publications of scientific conference proceedings).

I have directed ten doctoral theses, seven in the last ten years.

My research activity covers various aspects of the field of control engineering: controller design, robust control, computer control, modeling and simulation, and control and simulation applications for high-speed vessels, naval and marine systems, aerospace and robotics.

I have participated in 39 research projects in relation to these issues: national competitive projects, european collaboration (into GARTEUR), regional projects (Comunidad de Madrid), transnational activities, transfer to the industry (PROFIT, "Retos-colaboration", and transfer by art. 83), special actions, etc. In 20 of which I have been the principal investigator or coordinator.

The last projects under development are "Autonomous system for the localization and performance against pollutants in the sea" and "Autonomous system for containment of discharges into the sea (SAVEMAR)". This last is a "Retos-Colaboracion" project with the industries (CEPSA and Petronuba), And participation in the Transnational Access Activities "Range-based multiple underwater target localization and tracking using cooperative ASVs".

RELEVANT MERITS *(sorted by typology)*

Publications *(10 more relevant publications in the last 10 years)*

- David Moreno-Salinas, Raul Moreno, Augusto Pereira, Joaquin Aranda, Jesus M. de la Cruz. Modelling of a surface marine vehicle with kernel ridge regression confidence machine. **Applied Soft Computing**. Volume 76, March 2019, Pages 237-250. ISSN: 1568-4946. DOI: https://doi.org/10.1016/j.asoc.2018.12.002.
- R. Moreno, D. Moreno-Salinas, J. Aranda. Black-box Marine Vehicle Identification with Random Maneouvres. **Electronics** 8(5), 492, 2019. ISSN: 2079-9292
- N. Crasta, D. Moreno-Salinas, A. Pascoal, J. Aranda. Multiple ASV motion planning for cooperative rangebased underwater target localization. **Annual Reviews in Control**. (Volume 46, 2018, Pages 326-342. DOI: https://doi.org/10.1016/j.arcontrol.2018.10.004. ISSN: 1367-5788.
- David Moreno-Salinas, Antonio Manuel Pascoal and Joaquín Aranda. "Multiple underwater target positioning with optimally placed acoustic surface sensor networks". **International Journal of Distributed Sensor Networks** 2018, Vol. 14(5).
- D. Moreno-Salinas, A. M. Pascoal and J. Aranda. "Optimal sensor placement for acoustic underwater target positioning with range-only measurements". **IEEE Journal of Oceanic Engineering**, 41(3), 620-643, 2016.
- David Moreno-Salinas, António M. Pascoal, Joaquín Aranda. Sensor networks for optimal target localization with bearings-only measurements in constrained 3-dimensional scenarios. **Sensors**. 2013. Volumen: 13(8). Pág.: 10674-10710.
- Dictino Chaos, David Moreno-Salinas, Rocío Muñoz-Mansilla and Joaquín Aranda.Nonlinear Control for Trajectory Tracking of a Nonholonomic RC-hovercraft with Discrete Inputs. **Mathematical Problems in Engineering**. 2013. Volume 2013 (2013), Article ID 589267, 16 pages
- D. Moreno-Salinas, A.M. Pascoal, J. Aranda. 2013. Optimal Sensor Placement for Multiple Target Positioning with Range-Only Measurements in Two-Dimensional Scenarios. **Sensors**. 2013, Vol. 13, no. 8: 10674-10710.
- R. Muñoz-Mansilla, D. Chaos, J. Aranda, J.M. Díaz. Application of quantitative feedback theory techniques for the control of a non-holonomic underactuated hovercraft. **IET Control Theory & Applications**. 2012, Vol. 6, Iss. 14, pp. 2188–2197.

- J. Crespo, J. Aranda. Eigenstructure Assignment Based Controllers Applied to Flexible Spacecraft. **Proceedings of the Institution of Mechanical Engineers, Part G, Journal of Aerospace Engineering**. 2011 Vol. 225. Pp. 709-720.

Research projects *(in the last 10 years)*

1. Transnational Access Activities (TNA): Range-based multiple underwater target localization and tracking using cooperative ASVs (TNA Code: ISTID-local).
IP: David Moreno Salinas.
Funding Institution: EU Marine Robotics project, European Union's Horizon 2020 research and innovation programme under grant agreement No 731103, 2018/2019 call. Resources granted: access to infrastructures for carrying out experiments during 2019/2020 in the Instituto Superior Técnico of Lisbon.

2. Autonomous System for Locating and Acting against Sea Pollutants (Sistema autonomo para la localizacion y actuacion ante contaminantes en el mar, SALACOM).
Funded by: Ministerio de Economía y competitividad. DPI2013-46665-C2-2-R.
Duration: 2014-2018.
IP: Joaquín Aranda Almansa.
Partners: Departamento de Informática y Automática (UNED). Departamento de Arquitectura de Computadores y Automática (U. Complutense).
Web: http://ctb.dia.uned.es/.

3. Autonomous System for containment of sea spills (Sistema autónomo para contención de vertidos en el mar, SAVEMAR).
Funded by: Ministerio de Economía y Competitividad. RTC-2014-2306-5. (Retos-Colaboración).
Duration: 2014-2018.
IP UNED: Joaquín Aranda Almansa.
Partners: CEPSA PETRONUBA SA, COMPAÑIA ESPAÑOLA DE PETROLEOS, S.A., UNIVERSIDAD COMPLUTENSE DE MADRID, UNIVERSIDAD NACIONAL DE EDUCACION A DISTANCIA.

4. System for surveillance, search and rescue in the sea by means of collaboration of autonomous marine and air vehicles (Sistema de vigilancia, búsqueda y rescate en el mar mediante colaboración de vehículos autónomos marinos y aéreos).
Funded by: Ministerio de Ciencia e Innovación. DPI2009-14552-C02-02.
Duration: 2009-2013.
IP: Joaquín Aranda Almansa.
Partners: Departamento de Informática y Automática (UNED). Departamento de Arquitectura de Computadores y Automática (U. Complutense),
Web: http://ctb.dia.uned.es/.

Contracts, technological or transfer merits *(in the last 10 years)*

Pruebas de navegación autónoma de vehículos marinos. Canal de Isabel II.
CONVENIOS INVESTIGACIÓN (ART.83). Start date: 24/09/2012. End date: 16/10/2015

Pruebas de navegación autónoma de vehículos marinos. Canal de Isabel II.
CONVENIOS INVESTIGACIÓN (ART.83). Start date: 17/10/2015. End date: 17/10/2016

Patents

System and procedure of automatic docking and undocking for autonomous vehicles (Sistema y procedimiento de atraque y desatraque automático para vehículos autónomos). In process.

Institutional responsibilities

Deputy Director of the University School of Computer Science, from 17/03/1997 to 26/04/2001.

Director of the Higher Technical School of Computer Engineering, from 27/04/2001 to 04/05/2005.

Director of the Department of Computer Science and Automatic Control, from 02/10/2007 to 14/07/2013.

Vice Chancellor of Media and Technology, from 15/07/2013 to 24/01/2016.

Secretary of the master's degree in Systems and Control Engineering, from 04/05/2010 to 02/01/2014.

Memberships and positions of scientific societies

Secretary of the Spain Chapter of the IEEE Oceanic Engineering Society, 2004-06.

Member of the Spanish Automation Committee (CEA).

Member of the CEA board of directors 2009-12

Secretary of the Foundation-CEA. Since 2016

Collaborator in the National Research Plan in the area of Industrial Design and Production of the Ministry of Science and Innovation. From 2008 to 2011.

Member of the panel of external experts of the ACADEMIA Program for National Accreditation. Since 2008.