



CV date	14-09-2021
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Part A. PERSONAL INFORMATION

First and Family name	Carlos Manuel del Pino Peñas		
Social Security, Passport, ID number	NIF: 44581825M	Age	45
Researcher numbers	Researcher ID		
	Author ID	8876489600	
	ORCID code	0000-0002-9793-5253	

A.1. Current position

Name of University/Institution	Universidad de Málaga		
Department	Department of Mechanical Engineering and Fluid Mechanics		
Address and Country	C/ Doctor Ortiz Ramos s/n. Escuela de Ingenierías. Campus de Teatinos. 29071 Málaga, España (Spain)		
Phone number	951952429	E-mail	cpino@uma.es
Current position	Full Professor (Catedrático de Universidad)	From	2019
UNESCO code	2204.04, 2205.04, 3301.01		
Key words	Fluid Mechanics, Hydrodynamic stability, Aerodynamics, Ventilation systems		

A.2. Education

Degree/PhD	University	Year
Undergraduate studies in Industrial Engineering	Malaga	2000
Postgraduate studies in Advanced Fluid Mechanics	Malaga	2001
PhD in Fluid Mechanics	Malaga	2004

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

38 JCRs articles, h Index= 12, 426 total citations (Scopus source), Journals of high impact: Physics of Fluids, Journal of Fluid Mechanics, Journal of Wind Engineering and Industrial Aerodynamics, Journal Computational Physics, Physical Review Letter, Applied Thermal Engineering, Building and Environment, International Journal for Numerical Methods in Biomedical Engineering, Computers and Fluids, etc.

Supervised Thesis.

1) PhD student: José Manuel Gallardo Ruiz. Title: On the influence of co-flow and density difference on the 3D structure of jets with spins and its relevance for combustion processes. University: Málaga. Facultad/Escuela: Escuela Técnica Superior de Ingeniería Industrial. Date: 31/01/2013



- 2) PhD student: Faiçal Feodul. Title: Experimental study of the interaction of wakes originating from sails used in tidal stream energy extraction systems for energy optimisation and reduction of their environmental impact. University: Málaga. Faculty: Escuela Técnica Superior de Ingeniería Industrial. Date: 01/07/2014
- 3) PhD student: Antonio Miranda Barea. Title: Experimental study of rotating flows in pipes. University: Málaga. Faculty: Escuela Técnica Superior de Ingeniería Industrial. Date: 12/12/2014
- 4) PhD student: Alberto Fernández Gutiérrez. Title: Experimental and numerical techniques applied to air-conditioning systems using diffusers and cool floor. University: Málaga. Faculty: Escuela Técnica Superior de Ingeniería Industrial. Date: 19/12/2014
- 5) PhD student: Juan José Martínez Almansa. Title: On the dynamics of airflow in mixing and displacement diffusers. University: Málaga. Faculty: Escuela de Ingenierías Industriales. Date: 20/07/2017
- 6) PhD student: José Hermenegildo García Ortiz. Title: Experimental study in near-and far-field of trailing vortices and their active control. University: Málaga. Faculty: Escuela de Ingenierías Industriales. Date: 27/10/2017
- 7) PhD student: Jorge Aguilar Cabello. Title: On the steady and unsteady aerodynamics of wing models at low Reynolds numbers for micro air vehicle applications. University: Málaga. Faculty: Escuela de Ingenierías Industriales. Date: 06/07/2021

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

Thanks to the research carried out in the area of Fluid Mechanics at the University of Málaga, and in collaboration with other Spanish and international Universities through my short research stays at the Centre for Nonlinear Dynamics at the University of Manchester (for 9 months discontinuously), as well as through collaborations that came up after attending international conferences, I have published a total of 38 research papers in high impact journals in the field of Fluid Mechanics (Physics of Fluids, Journal Fluid Mechanics, Journal Computational Physics, Physical Review Letter, etc), as well as an ASME Proceeding paper in collaboration with the Universities of Bristol and Johannesburg, a chapter in an international book and the participation or paper in the proceedings of more than 40 international congresses, 1 international congress with poster session and 3 national congresses. One third of the co-authors of my scientific production are professors from foreign universities and another third from other Spanish universities other than Malaga, which proves the intense mobility at the research level. I have given 3 seminars by invitation abroad (2 in Manchester, 1 at the Max Planck Institute in Göttingen) and 1 at national level (International Workshop held in Cadiz and organised by the company ENEROCEAN S.L.). In relation to my research activity and the projects in which I have participated, Professor Ramón Fernández Feria leads the Production Technology group of the Junta de Andalucía (TEP-146) to which I belong since November 2000. I have collaborated continuously and actively in two European projects, five national projects and three regional projects of excellence, all of them obtained in competitive calls. I have been Principal Investigator (PI) of a project of excellence of the Junta de Andalucía in the call for young researchers that ended in 2017, leading the group of four researchers who have supported it. I have also participated in eight other projects with the Office for the Transfer of Research Results with companies (OTRI, art. 83 LOU), being co-IP in three of them related to mixing and displacement ventilation systems. Three of the OTRI projects with companies (completed with the reference CTAN) have been funded by the Technological Corporation of Andalusia, with support from the Centre for the Development of Industrial Technology (CDTI) and the IDEA agency (Agency for Innovation and Development of Andalusia), following a peer review process similar to competitive programmes. Thanks to the funding of these OTRI

projects with companies, I have co-directed two doctoral theses in collaboration with the companies Airzone S.A. and AZVI S.A. I have co-authored more than a dozen reports and deliverables resulting from the management of these OTRI projects. The research results of the OTRI projects have also been included in the technical product catalogue of the Corporación Empresarial Airzone S.A. company. I am co-author of two patents with review (prior examination), one of which has been published internationally and has not yet been exploited. I am reviewer for a National Agency ANEP, an EQA technical expert and I have also evaluated European projects.

Part C. RELEVANT MERITS

C.1. Publications (including books)

1. F. Fedoul, L. Parras, C. del Pino; R. Fernandez-Feria (2014) Experimental study of the aerodynamic characteristics of a low-aspect-ratio flat plate array in a configuration of interest for a tidal energy converter, *Journal of Fluids and Structures*, 48, 487-496
2. E. Medina-López, A. Moñino Ferrando, M. Clavero-Gilabert, C. del Pino; M.A. Losada Rodríguez (2015) Note on a real gas model for OWC. *Renewable Energy*, 85, 588-597
3. J.J. Serrano-Aguilera, J.H. García-Ortiz, A. Gallardo-Claros, L. Parras, C. del Pino (2016) Experimental characterization of wingtip vortices in the near field using smoke flow visualizations, *Experiments in Fluids*, 57, 137(1)-137(12)
4. F.J. Bello-Millán, T. Mäkelä, L. Parras, C. del Pino, C. Ferrera (2016) Experimental study on Ahmed's body drag coefficient for different yaw angles, *Journal of Wind Engineering and Industrial Aerodynamics*, 157,140-144
5. F.J. Blanco-Rodríguez, L. Parras, C. del Pino (2016) Frequency response of Lamb-Oseen vortex, *Fluid Dynamics Research* 9. S.
6. S. Martínez-Aranda, L. García-González, L. Parras, J. F. Velazquez-Navarro, C. del Pino (2018) Dynamic Response of Low-Aspect-Ratio Cantilever NACA0012 Airfoil at Low-To-Moderate Reynolds Numbers, *International Journal of Aeronautical and Space Sciences*,1-11.
7. J. H. García-Ortiz, A. Domínguez-Vázquez, J. J. Serrano-Aguilera, L. Parras, C. del Pino, (2019) A complementary numerical and experimental study of the influence of Reynolds number on theoretical models for wingtip vortices, *Computers and Fluids*, 180, 176-189.
8. E. Sanmiguel-Rojas, P. Gutierrez-Castillo, C. del Pino, J. A. Auñón-Hidalgo (2019) Cavitation in transient flows through a micro-nozzle. *Journal of Fluids Engineering - Transactions of the ASME*, 141(9), 091107.
9. J. H. García-Ortiz, F. J. Blanco-Rodríguez, L. Parras, C. del Pino (2020) Experimental observations of the effects of spanwise blowing on the wingtip vortex evolution at low Reynolds numbers. *European Journal of Mechanics - B/Fluids*, 80, 133-145.
10. J. Aguilar-Cabello, P. Gutierrez-Castillo, L. Parras, C. del Pino, and E. Sanmiguel-Rojas (2020), On the onset of negative lift in a symmetric airfoil at very small angles of attack 32, 055107.
11. P. Gutierrez-Castillo, J. Aguilar-Cabello, S. Alcalde-Morales, L. Parras and C. del Pino (2021) On the lift curve slope for rectangular flat plate wings at moderate Reynolds number 208, 104459.

C.2. Research projects and grants

- Research collaborator in six National projects, two Andalusian projects and two European projects (FAR-WAKE and SWIRL-JET-STUDY).
- Research Coordinator with object of study the “Experimental study of the wake behind a NACA0012 airfoil and its active control” conducted by the Andalusian Government for Young researchers (2013-2017)

C.3. Contracts

Companies: Eneoceen (2009-2011), AZVI (2010-2015), AIRZONE (2014-2018)

C.4. Patents

Inventors Antonio García Rubio, Carlos del Pino Peñas, Juan Antonio Cabrera Carrillo, Antonio Simón Mata Title: Tobera de inyección para la mejora aerodinámica de vehículos. Request number PCT/ES2012/000326. International Patent WO 2013/098438 A1 (with revision). Date 27/12/2012. Requesting entity: Universidad de Málaga

Inventors Manuel Antonio Burgos Olmos, Enrique Sanmiguel Rojas, Carlos Manuel Del Pino Peñas. Title: Computational rhinomanometry. Requesting number PCT/ES2016/08861. Date 30/06/2016

C.5, C.6, C.7... (e. g., Institutional responsibilities, memberships of scientific societies...)

Reviewer Spanish Agency of Research and Development (2011-).

Technical expert for the national Agency EQA (2013-).

Vicedean of postgraduate studies and research at Faculty of Industrial Engineering in Malaga University (2017-2021).

Member of European Mechanical Society (Euromech)

Member of Research Committee of several positions for joint applications at Malaga, Badajoz, Carlos III, Córdoba, Politécnica de Madrid. Jaén.

External examiner of Phd Committee in several Universities: Politécnica de Madrid, Badajoz, Witwatersrand, Pretoria.

Invited talks: Max Planck, Manchester, Carlos III, Granada, Universidad Politécnica de Cataluña.

Reviewer of different journals: Physics of Fluids, European Journal of Mechanics B/Fluids, Experimental Thermal and Fluid Science, Aeronautical Science and Technology, Experiments in Fluids, etc

PhD supervised are currently working as follows:

Dr José Manuel Gallardo Ruiz (Engineering at Lumon)

Dr Faiçal Fedoul (Tetuan University, Morocco)

Dr Antonio Miranda (Industrial Engineering at SMASSA S.L.)

Dr Alberto Fernandez (Associate Professor at Malaga University, Spain)

Dr Juan José Martínez Almansa (Manager of Dry-Surf SL)

Dr José Hermenegildo García Ortiz (Associate Professor at Cadiz University, Spain)

Dr Jorge Aguilar Cabello (Industrial Engineering at Linde Material Handling)