



## Javier Cubas Cano

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## Summary of CV

This section describes briefly a summary of your career in science, academic and research; the main scientific and technological achievements and goals in your line of research in the medium -and long- term. It also includes other important aspects or peculiarities.

Javier Cubas completed his Ph.D. in Aerospace Engineering in 2015 from the UPM with an International Doctor mention, Extraordinary Doctorate Award (2015/2016 academic year) and the Prize for the Most Cited Scientific Article Originating in a Doctoral Thesis 2019. He is an Aeronautical Engineer (2010) and Master in Aerospace Engineering (2012) by the Universidad Politécnica de Madrid.

Javier Cubas is currently an assistant professor of the Escuela Técnica Superior de Ingeniería Aeronáutica y del Espacio, in the Aerospace Systems, Air Transport and Airports Department. He teaches in the Aerospace Engineering Degree, the Master's Degree in Aerospace Engineering and the Master's Degree in Systems Space

He is a member of the Instituto Universitario de Microgravedad Ignacio da Riva (IDR / UPM) and of the Development and Aerospace Testing Research Group, where he develops his research in photovoltaic energy, space systems (mission analysis, power subsystem and attitude control) and air transport. To date, he has co-authored more than 25 publications in indexed journals with an impact index on JCR and more than twenty national and international conferences. (H16 index with more than 700 citations since 2014, source Google Scholar)

He has done research stays at Yale University (New Haven, USA 2015) and Ryerson University (Toronto, Canada 2017). In addition, he has received the scholarship for mobility stays abroad "José Castillejo" for young doctors 2017.



## General quality indicators of scientific research

This section describes briefly the main quality indicators of scientific production (periods of research activity, experience in supervising doctoral theses, total citations, articles in journals of the first quartile, H index...). It also includes other important aspects or peculiarities.

I am co-author of 26 publications in JCR indexed journals and more than 15 national and international conferences.

Index h13, more than 700 cites citas 2014. (Google Scholar)

Google Scholar web page:

<https://scholar.google.es/citations?user=IBq-rB0AAAAJ&hl=es&oi=ao>

ResearchGate web page:

[https://www.researchgate.net/profile/Javier\\_Cubas/stats](https://www.researchgate.net/profile/Javier_Cubas/stats)

**Javier Cubas Cano**

Surname(s): **Cubas Cano**  
 Name: **Javier**  
 DNI: **72097709-T**  
 ORCID: **0000-0001-9787-3796**  
 ScopusID: **55865221300**  
 ResearcherID: **L-2075-2014**  
 Date of birth: **07/12/1984**  
 Gender: **Male**  
 Nationality: **Spain**  
 Country of birth: **Spain**  
 Aut. region/reg. of birth: **Cantabria**  
 Contact province: **Madrid**  
 City of birth: **Isla, Arnuero**  
 Contact address: **C/ Carmen 26 4I**  
 Postcode: **28013**  
 Contact country: **Spain**  
 Contact aut. region/reg.: **Community of Madrid**  
 Contact city: **Madrid**  
 Land line phone: **(+34) 9426931359**  
 Email: **j.cubas@upm.es**  
 Mobile phone: **(+34) 660619114**  
 Personal web page: **[https://www.researchgate.net/profile/Javier\\_Cubas](https://www.researchgate.net/profile/Javier_Cubas)**

**Current professional situation**

**Employing entity:** U. Politécnica de Madrid  
**Professional category:** Profesor Ayudante Doctor  
**Start date:** 09/11/2016  
**Type of contract:** Temporary employment contract      **Dedication regime:** Full time  
**Primary (UNESCO code):** 330108 - Airportsandairtransport  
**Performed tasks:** Profesor Ayudante Doctor

**Previous positions and activities**

	Employing entity	Professional category	Start date
1	Universidad Politécnica de Madrid	Profesor Ayudante	01/09/2014
2	Universidad Politécnica de Madrid	Investigador en formación. Contrato de Prácticas	01/03/2014
3	Universidad Politécnica de Madrid	Inventisgador en formación. Beca homologada.	01/03/2012
4	Sener Ingenieria y Sistemas, S.A.	Becario	01/06/2009



- 1** **Employing entity:** Universidad Politécnica de Madrid  
**Professional category:** Profesor Ayudante  
**Start-End date:** 01/09/2014 - 08/11/2016  
**Type of entity:** University  
**Duration:** 2 years - 2 months - 7 days
- 2** **Employing entity:** Universidad Politécnica de Madrid  
**Professional category:** Investigador en formación. Contrato de Prácticas  
**Start-End date:** 01/03/2014 - 31/08/2014  
**Type of entity:** University  
**Duration:** 6 months
- 3** **Employing entity:** Universidad Politécnica de Madrid  
**Professional category:** Inventisgador en formación. Beca homologada.  
**Start-End date:** 01/03/2012 - 28/02/2014  
**Type of entity:** University  
**Duration:** 2 years
- 4** **Employing entity:** Sener Ingenieria y Sistemas, S.A.  
**Professional category:** Becario  
**Start-End date:** 01/06/2009 - 31/10/2010  
**Type of entity:** Business  
**Duration:** 17 months



## Education

### University education

#### 1st and 2nd cycle studies and pre-Bologna degrees

##### 1 University degree: Master

**Name of qualification:** Master Universitario en Ingeniería Aeroespacial

**City degree awarding entity:** Madrid, Community of Madrid, Spain

**Degree awarding entity:** Universidad Politécnica de Madrid **Type of entity:** University

**Date of qualification:** 15/10/2012

**Average mark:** Excellent

##### 2 University degree: Higher degree

**Name of qualification:** Ingeniero Aeronáutico

**City degree awarding entity:** Madrid, Community of Madrid, Spain

**Degree awarding entity:** Universidad Politécnica de Madrid **Type of entity:** University

**Date of qualification:** 16/11/2010

**Average mark:** Good

#### Doctorates

**Doctorate programme:** Programa Oficial de Doctorado en Ingeniería Aeroespacial

**Degree awarding entity:** Universidad Politécnica de Madrid **Type of entity:** University

**City degree awarding entity:** Madrid, Community of Madrid, Spain

**Date of degree:** 30/11/2015

**European doctorate:** Yes

**Date of certificate:** 02/12/2015

**Thesis title:** Analytical models for the power subsystem and the attitude control subsystem of a microsatellite

**Thesis director:** Santiago Pindado Carrión

**Thesis co-director:** Ángel Sáenz Andrés

**Obtained qualification:** Sobresaliente - Cum Laude

**Recognition of quality:** Yes

**Special doctorate award:** Yes

**Date of award:** 26/01/2018



## Attended advanced, improvement and innovative teacher training and new technology courses and seminars focused on improving teaching

- Title of course/seminar:** Introducción a Simulink con Arduino y Raspberry Pi  
**Organising entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Instituto de Ciencias de la Educación  
**Duration in hours:** 8 hours  
**Start-End date:** 21/05/2019 - 22/05/2018
- Title of course/seminar:** El papel de la ANECA en el desarrollo y evaluación de la carrera docente: programa de evaluación del profesorado (PEP)  
**Goals of the course/seminar:** " Conocer las diferentes figuras contractuales laborales y funcionariales establecidas en la LOU. Comprender la utilidad e importancia de los procesos de evaluación para la contratación del profesorado. Presentar y analizar los contenidos del Programa de Evaluación del Profesorado (PEP). Aprender a utilizar la aplicación informática que se utiliza para solicitar la evaluación para la contratación del profesorado. Conocer los procesos de entrega, seguimiento y resolución de las solicitudes del Programa de Evaluación del Profesorado (PEP)."  
**Organising entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Instituto de Ciencias de la Educación  
**Duration in hours:** 8 hours  
**Start-End date:** 28/10/2015 - 29/10/2015

## Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
Chinese	A1	A1	A1	A1	A1
English	C1	C1	C1	C1	C1
Spanish	C2	C2	C2	C2	C2

## Teaching experience

### General teaching experience

- Name of the course:** Análisis de la demanda del transporte aéreo  
**University degree:** Master Universitario en Sistemas del Transporte Aéreo (MUSTA)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- Name of the course:** Caso de estudio II  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos



- 3** **Name of the course:** Garantía de calidad  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 4** **Name of the course:** Impacto ambiental del transporte aéreo  
**University degree:** Master Universitario en Ingeniería Aeroespacial (MUIA)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 5** **Name of the course:** Planificación de flotas de compañías aéreas  
**University degree:** Master Universitario en Ingeniería Aeroespacial (MUIA)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 6** **Name of the course:** Planificación de flotas de compañías aéreas  
**University degree:** Master Universitario en Sistemas del Transporte Aéreo (MUSTA)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 7** **Name of the course:** Seminario sobre industria e Instituciones Espaciales  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 8** **Name of the course:** Sostenibilidad del transporte aéreo  
**University degree:** Master Universitario en Sistemas del Transporte Aéreo (MUSTA)  
**Start date:** 2016 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 9** **Name of the course:** Caso de estudio I  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2015 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 10** **Name of the course:** Caso de estudio III  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2015 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 11** **Name of the course:** Dinámica orbital y control de actitud  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2015 **End date:** 2019





**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos

**12 Name of the course:** Generación y gestión de potencia eléctrica  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2015 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos

**13 Name of the course:** Entorno espacial y análisis de misión  
**University degree:** Master Universitario en Sistemas Espaciales (MUSE)  
**Start date:** 2014 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos

**14 Name of the course:** Explotación del transporte aéreo  
**University degree:** Master Universitario en Ingeniería Aeroespacial (MUIA)  
**Start date:** 2014 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos

**15 Name of the course:** Transporte aéreo  
**University degree:** Grado en Ingeniería Aeroespacial (GIA)  
**Start date:** 2014 **End date:** 2019  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos

**16 Name of the course:** Ingeniería del transporte aéreo  
**University degree:** Grado en Ingeniería Aeroespacial (GIA)  
**Start date:** 2014 **End date:** 2017  
**Entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos

## Teaching experience in courses and seminars for university teacher training

**1 Name of the event:** Attitude Control in Simulink: The UPMSat-2  
**Organising entity:** Instituto Universitario de Microgravedad Ignacio Da Riva **Type of entity:** University Research Institute  
**Hours of teaching:** 2  
**Teaching date:** 2015

**2 Name of the event:** Product Assurance Applied to Space Programs  
**Organising entity:** Instituto Universitario de Microgravedad Ignacio Da Riva **Type of entity:** University Research Institute  
**Hours of teaching:** 3  
**Teaching date:** 2015



## Scientific and technological experience

### Research and development groups/teams

**Name of the group:** Desarrollo y Ensayos Aeroespaciales

**Aims of the group:** Grupo de Investigación

**Type of collaboration:** Co-authorship of publications

**Affiliation entity:** Universidad Politécnica de Madrid

**Start date:** 01/10/2011

**Type of entity:** University

**Duration:** 4 years - 5 months

### Scientific or technological activities

#### R&D projects funded through competitive calls of public or private entities

**1 Name of the project:** Collaborative network for the development of educational nanosatellites in Europe

**Entity where project took place:** Instituto Universitario de Microgravedad Ignacio Da Riva

**Type of entity:** University Research Institute

**City of entity:** madrid, Community of Madrid, Spain

**Name principal investigator (PI, Co-PI....):** Gustavo Alonso Rodrigo

**Nº of researchers:** 5

**Funding entity or bodies:**

Unión Europea, Interreg Sudoe,

**Type of entity:** Agencia Europea

**City funding entity:** santander, Cantabria, Spain

**Start-End date:** 01/04/2018 - 30/10/2020

**Total amount:** 250.000 €

**2 Name of the project:** Actuadores Aerodinámicos Activos para el Control de Cargas

**Entity where project took place:** Instituto Universitario de Microgravedad Ignacio Da Riva

**Type of entity:** University Research Institute

**City of entity:** Madrid, Community of Madrid, Spain

**Name principal investigator (PI, Co-PI....):** Sebastián Franchini Longhi; Santiago Pindado Carrión

**Nº of researchers:** 5

**Funding entity or bodies:**

Ministerio de Economía y competitividad

**Type of entity:** ministerio

**City funding entity:** Madrid, Community of Madrid, Spain

**Start-End date:** 01/01/2017 - 01/01/2020

**Total amount:** 85.000 €

**3 Name of the project:** Caracterización y análisis de la atmósfera de Marte. Explotación científica del instrumento NOMAD de la misión TGO-Exomars.

**Entity where project took place:** Instituto Universitario de Microgravedad Ignacio Da Riva

**Type of entity:** University Research Institute

**City of entity:** Madrid, Community of Madrid, Spain

**Name principal investigator (PI, Co-PI....):** Gustavo Alonso

**Nº of researchers:** 10

**Funding entity or bodies:**

Ministerio de Economía y Competitividad

**Type of entity:** Ministerio**City funding entity:** Madrid, Community of Madrid, Spain**Start-End date:** 01/01/2016 - 31/12/2018**Total amount:** 29.400 €**4 Name of the project:** Física Solar desde el Espacio: PHI para Solar Órbiter e IMAX y SP para Sunrise**Entity where project took place:** Instituto**Type of entity:** University Research Institute

Universitario de Microgravedad Ignacio Da Riva

**City of entity:** MADRID, Community of Madrid, Spain**Name principal investigator (PI, Co-PI....):** Isabel Perez Grande**Nº of researchers:** 5**Funding entity or bodies:**

Ministerio de Economía Industria y Competitividad

**Type of entity:** Ministerio**City funding entity:** Madrid, Community of Madrid, Spain**Start-End date:** 30/12/2016 - 29/12/2018**Total amount:** 217.800 €**5 Name of the project:** Desarrollo de la aviónica Avanzada de un Microsatélite de Propósito General (EBOX)**Entity where project took place:** Instituto**Type of entity:** University Research Institute

Universitario de Microgravedad Ignacio Da Riva

**City of entity:** Madrid, Community of Madrid, Spain**Name principal investigator (PI, Co-PI....):** Angel Sanz Andres**Nº of researchers:** 8**Start-End date:** 01/01/2013 - 31/12/2015**Total amount:** 95.768,75 €**6 Name of the project:** Estudio de las Atmósferas Planetarias y Cometarias. Misión ExoMars-NOMAD Fase 2**Entity where project took place:** Instituto**Type of entity:** University Research Institute

Universitario de Microgravedad Ignacio Da Riva

**City of entity:** Madrid, Community of Madrid, Spain**Name principal investigator (PI, Co-PI....):** Gustavo Alonso Rodrigo**Nº of researchers:** 8**Funding entity or bodies:**

Ministerio de Ciencia e Innovación

**Type of entity:** Ministerio**City funding entity:** Madrid, Community of Madrid, Spain**Start-End date:** 01/01/2013 - 31/12/2015**Total amount:** 175.450 €

## R&D non-competitive contracts, agreements or projects with public or private entities

- 1** **Name of the project:** Anser Modulos de Control de Actitud  
**Degree of contribution:** Coordinator of total project, network or consortium  
**N° of researchers:** 1  
**Participating entity/entities:** Instituto Universitario de Microgravedad Ignacio Da Riva  
**Funding entity or bodies:**  
Instituto Nacional de Técnica Aeroespacial **Type of entity:** Public Research Body  
**City funding entity:** Mazagón, Andalusia, Spain  
**Start date:** 24/11/2018 **Duration:** 1 month  
**Total amount:** 23.000 €
- 2** **Name of the project:** CDF-L Adecuación de una instalación de diseño concurrente (CDF) para la planificación de un sistema de calibración embarcado en satélite para misiones espaciales de Fondo Cósmico de Microondas en el segundo punto de Lagrange Tierra-Sol  
**Degree of contribution:** Coordinator of total project, network or consortium  
**Name principal investigator (PI, Co-PI....):** Javier Cubas Cano  
**N° of researchers:** 1  
**Participating entity/entities:** Instituto Universitario de Microgravedad Ignacio Da Riva  
**Funding entity or bodies:**  
Instituto de Física de Cantabria **Type of entity:** State agency  
**City funding entity:** Santander, Cantabria, Spain  
**Start date:** 18/09/2018 **Duration:** 1 month  
**Total amount:** 10.000 €
- 3** **Name of the project:** Satélite UPM/SAT UNIÓN  
**Degree of contribution:** Researcher  
**Name principal investigator (PI, Co-PI....):** Angel Sanz Andres  
**N° of researchers:** 20  
**Participating entity/entities:** Universidad Politécnica de Madrid  
**Funding entity or bodies:**  
Universidad Politécnica de Madrid **Type of entity:** University  
**City funding entity:** Madrid, Community of Madrid, Spain  
**Start date:** 01/01/2002 **Duration:** 17 years  
**Total amount:** 109.701,03 €



## Scientific and technological activities

### Scientific production

#### Publications, scientific and technical documents

- 1 Han Chan; Huan Chen; Gustavo Alonso; Yinrui Rao; Javier Cubas; Jianfeng Yin. A linear model for relative motion in an elliptical orbit based on a spherical coordinate system. Acta Astronautica. Pergamon, 2019.  
**Type of production:** Scientific paper **Format:** Journal
- 2 J Piqueras-Carreño; J Cubas; S Pindado; R Rodriguez-Rojo. UPMSat-2 ACDS magnetic sensors test campaign. Measurement. 131, pp. 534 - 545. Elsevier, 2019.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 3 F Sorribes-Palmer; F Bugallo-Siegel; E Roibás-Millán; J Cubas; S Pindado. Assessment of Explicit Models for Different Photovoltaic Technologies. Energies. 11 - 6, pp. 1 - 22. MDPI, 2018.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 4 J Cubas; S Pindado; Angel Porras-Hermoso. Lithium-ion battery performance modeling based on the energy discharge level. Measurement Science and Technology. 2018.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 5 F Sorribes-Palmer; J Cubas; E Roibás-Millan; S Pindado. Project-based learning applied to spacecraft power systems: A long-term engineering and educational program at UPM University. CEAS Space Journal. 10 - 3, pp. 307 - 323. Springer, 2018.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 6 F Sorribes-Palmer; S Pindado; J Cubas. Analytical calculation of photovoltaic systems maximum power point (MPP) based on the operation point. Applied Sciences. 7 - 9, pp. 870 - 885. MDPI, 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 7 Santiago Pindado; Carlos Pindado; Javier Cubas. Fréchet Distribution Applied to Salary Incomes in Spain from 1999 to 2014. An Engineering Approach to Changes in Salaries' Distribution. Economies. 5 - 2, pp. 1 - 19. MDPI, 2017.  
**Type of production:** Scientific paper
- 8 Santiago Pindado; Javier Cubas. Simple mathematical approach to solar cell/panel behavior based on datasheet information. Renewable Energy. 103 - April 2017, pp. 729 - 738. Elsevier, 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No

- 9** E Pindado; J Cubas; E Roibás-Millan. Studies on Cup Anemometer Performances Carried out at IDR/UPM Institute. Past and Present Research. *Energies*. 10 - 11, pp. 1860 - 1878. MDPI, 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 10** A Juan; A Alonso; J Cubas; J Garrido; J Zamorano. The Design and Implementation of the UPMSAT-2 Attitude Control System. *IFAC-PapersOnLine*. 50, pp. 11245 - 11250. 2017.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 11** S. Robert; A.C. Vandaele; I. Thomas; Y. Willame; F. Daerden; S. Delanoye; C. Depiesse; R. Drummond; E. Neefs; L. Neary; B. Ristic; J. Mason; J.-J. Lopez-Moreno; J. Rodriguez-Gomez; M.R. Patel; G. Bellucci; The Nomad Team. Expected performances of the NOMAD/ExoMars instrument. *Planetary and Space Science*. 124, pp. 94 - 104. 2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 12** I Thomas; A Vandaele; Many Others; Javier Cubas Cano. Optical and radiometric models of the NOMAD instrument part II: the infrared channels - SO and LNO. *Optics Express*. 24, pp. 3790 - 3805. OSA Publishing, 2016.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 13** Javier Cubas Cano; Santiago Pindado Carrion; Angel Sanz Andres. Accurate simulation of MPPT methods performance when applied to commercial photovoltaic panels. *Scientific World Journal*. 2015, pp. 914212 - 914228. Hindawi Publishing Corporation, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 14** Santiago Pindado Carrion; A Ramos Cenzano; Javier Cubas Cano. Improved analytical method to study the cup anemometer performance. *Measurement Science and Technology*. 26 - 10, pp. 107001 - 107007. IOPscience, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 15** Javier Cubas Cano; Assal Farrahi; Santiago Pindado Carrion. Magnetic Attitude Control for Satellites in Polar or Sun-Synchronous Orbits. *Journal of Guidance, Control, and Dynamics*. 38 - 10, pp. 1947 - 1958. AIAA, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 16** Eddy Neefs; A Vandaele; Many Others; Javier Cubas Cano. NOMAD spectrometer on the ExoMars trace gas orbiter mission: part 1-design, manufacturing and testing of the infrared channels. *Applied Optics*. 54 - 28, pp. 8494 - 8520. OSA Publishing, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 17** Santiago Pindado Carrion; Javier Cubas Cano; Felix Sorribes Palmer. On the Analytical Approach to Present Engineering Problems: Photovoltaic Systems Behavior, Wind Speed Sensors Performance, and High-Speed Train Pressure Wave Effects in Tunnels. *Mathematical Problems in Engineering*. 73, pp. 1 - 17. Hindawi Publishing Corporation, 2015.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No



- 18** Javier Cubas Cano; Santiago Pindado Carrion; Carlos de Manuel. Explicit Expressions for Solar Panel Equivalent Circuit Parameters Based on Analytical Formulation and the Lambert W-Function. *Energies*. 7 - 7, pp. 4098 - 4115. Multidisciplinary Digital Publishing Institute, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 19** Javier Cubas Cano; Santiago Pindado Carrion; Marta Victoria. On the analytical approach for modeling photovoltaic systems behavior. *Journal of Power Sources*. 247, pp. 467 - 474. Elsevier, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** Yes
- 20** Santiago Pindado Carrion; Javier Cubas Cano; Felix Sorribes Palmer. On the harmonic analysis of cup anemometer rotation speed: A principle to monitor performance and maintenance status of rotating meteorological sensors. *Measurement*. 73, pp. 401 - 418. Elsevier, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 21** Santiago Pindado Carrion; Javier Cubas Cano. Some Developments on Cup Anemometer Aerodynamics. *Defect and Diffusion Forum*. 348, pp. 179 - 185. Scientific, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 22** Santiago Pindado Carrion; Javier Cubas Cano; Felix Sorribes Palmer. The Cup Anemometer, a Fundamental Meteorological Instrument for the Wind Energy Industry. *Research at the IDR/UPM Institute*. *Sensors*. 14 - 11, pp. 21418 - 21418. Multidisciplinary Digital Publishing Institute, 2014.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No
- 23** Santiago Pindado Carrion; Javier Cubas Cano; Angel Sanz Andres. Aerodynamic Analysis of Cup Anemometers Performance: The Stationary Harmonic Response. *Scientific World Journal*. 2013 - -, pp. 1 - 11. Hindawi Publishing Corporation, 2013.  
**Type of production:** Scientific paper **Format:** Journal  
**Corresponding author:** No

### Works submitted to national or international conferences

- 1** **Title of the work:** El vuelo en formación de CubeSats y sus aplicaciones en Defensa  
**Name of the conference:** DESEi+D VI Congreso Nacional de I+d en Defensa y Seguridad  
**Corresponding author:** Yes  
**City of event:** Valladolid, Castile and León, Spain  
**Date of event:** 20/10/2018  
**End date:** 22/10/2018  
**Organising entity:** Ministerio de Defensa **Type of entity:** Ministerio  
Javier Cubas; Gustavo Alonso; Isabel Perez-Grande; Angel Sanz-Andrés.
- 2** **Title of the work:** CDF as a tool for space engineering master's student collaboration and concurrent design learning  
**Name of the conference:** SECESA 8th International Systems & Concurrent Engineering for Space Applications Conference  
**Corresponding author:** No  
**City of event:** glasgow, United Kingdom



**Date of event:** 26/09/2018

**End date:** 28/09/2018

**Organising entity:** European Space Agency

**Type of entity:** Agencia Europea

Juan Bermejo Ballesteros; Jose Miguel Álvarez Romero; Pablo Arcenillas Hernández; Elena Roibás-Millan; Javier Cubas; Santiago Pindado.

- 3** **Title of the work:** The spanish contribution to the 1st ESA academy's concurrent engineering challenge : design of the moon explorer and observer of water-ice (meow) mission  
**Name of the conference:** SECESA 8th International Systems & Concurrent Engineering for Space Applications Conference  
**Corresponding author:** No  
**City of event:** Glasgow, United Kingdom  
**Date of event:** 26/09/2018  
**End date:** 28/09/2018  
**Organising entity:** European Space Agency **Type of entity:** Agencia Europea  
Elena Roibás-Millán; Felix Sorribes-Palmer; Marcos Chimeno Manguan; Javier Cubas; Santiago Pindado.
- 4** **Title of the work:** Formation Flying, an opportunity to enhance microwave cosmology with CubeSats  
**Name of the conference:** Open Source Cubesat Workshop  
**Corresponding author:** Yes  
**City of event:** Madrid, Community of Madrid, Spain  
**Date of event:** 24/09/2018  
**End date:** 25/09/2018  
**Organising entity:** European Space Astronomy Center (ESAC/ESA) **Type of entity:** Agencia europea  
Javier Cubas; Francisco Javier Casas Reinales; Enrique Martinez Gonzalez; Juan Bermejo Ballesteros; Belén Barreiro Barreiro Vilas; Angel Sanz-Andres.
- 5** **Title of the work:** Implementation of Concurrent Engineering approach in MUSE (Master in Space Systems) Master's degree in space engineering  
**Name of the conference:** AICEET 3rd Annual International Conference on Engineering Education & Teaching,  
**Corresponding author:** No  
**City of event:** Atenas, Sterea Ellada, Greece  
**Date of event:** 04/06/2018  
**End date:** 07/06/2018  
**Organising entity:** Athens Journal of Technology & Engineering **Type of entity:** Business  
**City organizing entity:** Atenas, Sterea Ellada, Greece  
Elena Roibás-Millan; Felix Sorribes-Palmer; Javier Cubas; Santiago Pindado; Marcos Chimeno; Gustavo Alonso; Angel Sanz-Andrés; Javier Perez-Álvarez; Sebastián Franchini; Isabel Perez-Grande.
- 6** **Title of the work:** Desarrollo de una batería de uso espacial a partir de células comerciales. Aplicación al UNION-Sat/Lian-Hé  
**Name of the conference:** II Congreso de Ingeniería Espacial  
**Corresponding author:** No  
**City of event:** Madrid, Community of Madrid, Spain  
**Date of event:** 22/11/2017  
**End date:** 24/11/2017  
**Organising entity:** Colegio Oficial de Ingenieros Aeronáuticos  
**City organizing entity:** Madrid, Community of Madrid, Spain  
Santiago Pindado; Elena Roibás; Javier Cubas.





- 7** **Title of the work:** El posible papel de los pequeños satélites universitarios en la estrategia de Defensa  
**Name of the conference:** DESEi+D IV Congreso Nacional de I+D en Defensa y Seguridad  
**City of event:** San Javier, Region of Murcia, Spain  
**Date of event:** 16/11/2016  
**End date:** 18/11/2016  
**Organising entity:** Ministerio de Defensa **Type of entity:** Ministerio
- 8** **Title of the work:** MUSE (Master in Space Systems), an Advanced Master's Degree in Space Engineering  
**Name of the conference:** AICEET Annual International Conference on Engineering Education & Teaching  
**Corresponding author:** No  
**City of event:** Atenas, Sterea Ellada, Greece  
**Date of event:** 06/06/2016  
**End date:** 09/06/2016  
**Organising entity:** Athens Journal of Technology & Engineering **Type of entity:** Business  
**City organizing entity:** Atenas, Sterea Ellada, Greece  
Santiago Pindado Carrión; Ángel Sanz Andrés; Sebastián Franchini; Isabel Perez Grande; Gustavo Alonso; Javier Perez; Felix Sorribes; Javier Cubas Cano; Andres Garcia; Elena Roibas.
- 9** **Title of the work:** On the simulation of the UPMSAT-2 microsatellite power  
**Name of the conference:** ESPC 10th European Space Power Conference  
**Corresponding author:** No  
**City of event:** Noordwijkerhout, Holland  
**Date of event:** 13/04/2014  
**Organising entity:** Azur Space Solar Power GmbH **Type of entity:** Business  
**City organizing entity:** madrid, Spain  
Carlos De Manuel; Javier Cubas Cano; Santiago Pindado Carrion.
- 10** **Title of the work:** New Method for Analytical Photovoltaic Parameter Extraction  
**Name of the conference:** ICRERA 2013 International Conference on Renewable Energy Research and Applications  
**Corresponding author:** Yes  
**City of event:** Madrid, Spain  
**Date of event:** 20/10/2013  
**Organising entity:** Universidad Pontificia Comillas **Type of entity:** University  
**City organizing entity:** Madrid, Spain  
Javier Cubas Cano; Santiago Pindado Carrion; Assal Farrahi.
- 11** **Title of the work:** New method for analytical photovoltaic parameters identification: meeting manufacturer's datasheet for different ambient conditions  
**Name of the conference:** ENEFM International Congress on Energy Efficiency and Energy Related Materials  
**Corresponding author:** Yes  
**City of event:** Antalya, Turkey  
**Date of event:** 12/10/2013  
**Organising entity:** Doga Nanobiotech Inc. **Type of entity:** Business  
**City organizing entity:** antalya, Turkey  
Javier Cubas Cano; Santiago Pindado Carrion; carlos de Manuel.



- 12 Title of the work:** Vibrations loads in the process of designing scientific spacecraft payloads  
**Name of the conference:** ICOVP 11th International Conference on Vibration Problems  
**Corresponding author:** No  
**City of event:** Lisboa, Portugal  
**Date of event:** 09/10/2013  
**Organising entity:** Universidade Nova de Lisboa      **Type of entity:** University  
**City organizing entity:** Madrid, Spain  
Alejandro Gomez San Juan; Fermin Navarro Medina; Javier Cubas Cano; Felix Sorribes Palmer; German Fernandez Rico; Gustavo Alonso.
- 13 Title of the work:** Passive Magnetic Attitude Stabilization System on Small Satellites  
**Name of the conference:** ICATT 5th International Conference on Astrodynamics Tools and Techniques  
**Corresponding author:** No  
**City of event:** Noordwijk, Holland  
**Date of event:** 29/05/2012  
**Organising entity:** European Space Astronomy Centre  
**City organizing entity:** Noordwijk, Holland  
Assal Farrahi; Javier Cubas Cano; Sebastian Franchini.
- 14 Title of the work:** Project Management and Cost Estimation of a University Class Microsatellite  
**Name of the conference:** CSSS The International Conference on Student Small satellites  
**Corresponding author:** No  
**City of event:** Estambul, Turkey  
**Date of event:** 25/04/2012  
**Organising entity:** Istanbul Ticaret Üniversitesi Eminonu Kampusu - Istanbul Commerce University  
**City organizing entity:** Estambul, Turkey  
Fatemeh Aminzadeh; Javier Cubas Cano; Gustavo Alonso.

## Other achievements

### Stays in public or private R&D centres

- 1 Entity:** Ryerson University      **Type of entity:** University  
**Faculty, institute or centre:** Mechanical Engineering  
**City of entity:** Toronto, Canada  
**Start-End date:** 13/07/2017 - 21/12/2017      **Duration:** 6 months  
**Goals of the stay:** Post-doctoral  
**Provable tasks:** Desarrollo de un control de actitud independiente del ordenador
- 2 Entity:** Yale Graduate School of Arts and Sciences  
**City of entity:** New Haven, United States of America  
**Start-End date:** 01/05/2015 - 01/09/2015      **Duration:** 4 months  
**Goals of the stay:** Doctorate  
**Provable tasks:** Visitant Assistant in Research
- 3 Entity:** Shandong University  
**City of entity:** Jinan, China  
**Start-End date:** 01/08/2010 - 28/08/2010      **Duration:** 1 month  
**Goals of the stay:** Estudio del lenguaje y la cultura china



## Obtained grants and scholarships

- 1** **Name of the grant:** Beca José Castillejo  
**Aims:** Post-doctoral  
**Awarding entity:** Ministerio de Educación **Type of entity:** State agency  
**Conferral date:** 13/07/2017 **Duration:** 6 months  
**End date:** 21/12/2017  
**Entity where activity was carried out:** Ryerson University
- 2** **Name of the grant:** Ayuda de investigación homologada para la realización del doctorado  
**Aims:** Pre-doctoral  
**Awarding entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**Conferral date:** 01/03/2012 **Duration:** 1 year  
**End date:** 28/02/2013  
**Entity where activity was carried out:** Universidad Politécnica de Madrid  
**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Aeronáuticos
- 3** **Name of the grant:** Beca de colaboración con la empresa SENER Ingeniería y Sistemas S.A.  
**Aims:** Pre-doctoral  
**Awarding entity:** Fundación General de la Universidad Politécnica De Madrid  
**Conferral date:** 01/07/2009 **Duration:** 1 year - 3 months  
**End date:** 31/10/2009  
**Entity where activity was carried out:** SENER Ingeniería y Sistemas S.A.
- 4** **Name of the grant:** Estudio del idioma inglés en el extranjero  
**Aims:** Estudio idiomas  
**Awarding entity:** Ministerio de Educación y Ciencia  
**Conferral date:** 07/07/2008 **Duration:** 1 month  
**End date:** 28/07/2008  
**Entity where activity was carried out:** Quality courses

## Prizes, mentions and distinctions

- 1** **Description:** Premio al artículo más citado con origen de una tesis doctoral  
**Awarding entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**City awarding entity:** Madrid, Community of Madrid, Spain  
**Conferral date:** 28/01/2019
- 2** **Description:** Premio extraordinario de doctorado Curso 2015-2016  
**Awarding entity:** Universidad Politécnica de Madrid **Type of entity:** University  
**City awarding entity:** Madrid, Community of Madrid, Spain  
**Conferral date:** 26/01/2018