MINISTERIO DE CIENCIA E INNOVACIÓN

Cofinanciado por la Unión Europea

AGENCIA ESTATAL DE INVESTIGACIÓN

CURRICULUM VITAE (CVA)

Parte A. DATOS PERSONALES

Nombre	Pascual		
Apellidos	Campoy Cervera		
Sexo (*)		Fecha de nacimiento (dd/mm/yyyy)	
DNI, NIE, pasaporte			
Dirección email	pascual.campoy@upm.es	URL Web:	
Open Researcher and Contributor ID (ORCID) (*)		0000-0002-9894-2009	

** datos obligatorios*

A.1. Situación profesional actual

Puesto	Catedrático de Universidad		
Fecha inicio	23/04/2008		
Organismo/ Institución	Universidad Politécnica de Madrid		
Departamento/ Centro	Dpto. de Automática, Ingeniería Eléctrica y Electrónica e Informática Industrial		
País	España	Teléfono	
Palabras clave			

A.2. Situación profesional anterior

Puesto	Institución / País	From	To
Profesor Visitante	TUDelft (The Nethernads)	01-09-14	22-02-15
Profesor Visitante	Tong Ji University (Shanghai-China)	01-11-13	15-12-13
Científico Visitante	A.R.C.A.A.-Q.U.T. (Australia)	21-06-11	18-10-11
Fundador	Spin-off “Innovacion Inspección Industrial Imágenes”	01-07-03	31-12-05
Profesor titular	U.P.M., ETSII	12-03-90	22-04-08
Profesor a tiempo completo	U.P.M., ETSII	17-10-89	11-03-90
Profesor a tiempo parcial	U.P.M., ETSII	29-03-89	16-10-89
Investigador Visitante	IPA-Fraunhofer G. Stuttgart (Germany)	01-04-86	31-03-87
Investigador Ministario de Ciencias	U.P.M., ETSII	01-01-85	31-12-88

A.3. Formación académica

Grado/Master/Tesis	Universidad/Pais	Año
Doctor Ingeniero Industrial	Universidad Politécnica Madrid	1988
Ingeniero Industrial	Universidad Politécnica Madrid	1983

Parte B. RESUMEN DEL CV *(max. 5000 caracteres, incluyendo espacios)*

Aportaciones científicas

Su investigación se centra en el campo de Drone Autonomy (investigación en la aplicación de *pose estimation* para el vuelo de UAVs publicada en 2005) y en el campo de *ML for Dimensionality Reduction in Images* (investigaciones desde 2009). Tiene reconocidos seis sexenios por el Ministerio de Ciencia. Su trabajo científico se ha publicado en más de 200 publicaciones, 17 de ellos referenciados más de 100 veces, y con más de 3000 citas en total. Tiene un **índice h de 29 en WoS, 36 en SCOPUS y 43 en Google Scholar**. Sus contribuciones han alcanzado relevancia internacional, alcanzando **1ª posicion en citas de Visual Control, 9ª posición en Aerial Robotics** y 23ª posición en UAV según Google Scholar.

Colaboraciones internacionales

- Visiting Professor at TUDelft for 5 years (6 months of them full time and the rest contributing from UPM), Visiting professor at Tong JI University in Shanghai (CHN) for 6 weeks and visiting researcher at ARCAA and QUT (Australia) for four months.
- Principal Investigator in eleven European Projects from UPM, two of them dedicated to researcher's mobility, as well as IP of the Spanish collaboration in one MISTI project with the Aerospace Control Lab at MIT.
- Host of around thirty international students for Summer Internship, Final Degree Project, Master Project, as well as director of nine PhD thesis by foreign students, coming from MIT (USA), TUDelft (NL), Northwestern Polytechnical U. (CHN), Beijing Institute of Technology (CHN), ARCAA (Australia), Drexel U. (USA), Politecnico de Torino (I), Beihan U. (CHN), University of Koblenz (D), Orleans University (F), U. Napoli Federico II (i) …

Contribuciones sociales

- Principal Investigator of around 40 Technological Transfer Projects, contracted by both MSE and large Corporations with U.P.M. Some of the known companies of these are: ARIBUS, SIEMENS, NATRUGY, UNIÓN FENOSA, ENCE, REE and INTA
- Co-inventor of three international patents and four different national patents, all of them are commercialized by private companies
- Founder of the spin-off company "Innovación en la Inspección Industrial de Imagenes S.L." (active for two years) and promoter of the start-up company "Dronomy" ruled by a former PhD student of mine.

Otras contribuciones relevantes

- "I+DRONE 2021" Prize for the best innovative work on drones by Fundación ENAIRE and AIRBUS given by the Spanish Secretary of State in Transport and Mobility. Nov2021
- 1st prize at the Competition in the International Congress on Unmanned Aerial Systems ICUAS23 in Warsaw. Jun 2023.
- 1st prize at the Competition in the International Congress on Unmanned Aerial Systems ICUAS22 in Drubovnik. Jun 2022.
- 3rd Place in Region Europe+Russia+Australasia "OpenCV AI Competition" sponsored by Intel and Microsoft Azure. Oct 2021
- 2nd Prize "RAMI: Robotics for Asset Maintenance and Inspection" at IROS 2021 (CZ),
- 1st Prize "Autonomous Drone Raicing Competition"at FUZZ-IEEE 2021 July 2021. (Lux.),.
- 3rd Position in the Grand Challenge at MBZIRC 2020 (United Arab Emirates). Coordinator of the intl. consortium SkyEye, UPM (E), UPO (E) & PUT (PL) & LAAS (F)
- 2nd Position IMAV 2017 Intnl Micro Air Vehicle Conference and Competition. Toulouse (F)
- 4th Position IMAV 2016. Beijing (CHN).
- IARC 2014 International Aerial Robotics Competition. Yantai (China). Two Special awards "Best Obstacle Avoidance" and "Best Trajectory Controller".
- 1st position in "Indoors Autonomy" IMAV 2013. Toulouse (F).
- IMAV 2012. Braunschweig (D). 2nd position in "Indoor Flight Dynamics -Rotary Wing MAV" and Special Prize for "Best Autonomy Performance"

Part C. LISTADO DE APORTACIONES

C.1. Publicaciones más importantes en libros y revistas con "peer review" y conferencias

- "Zenithal isotropic object counting by localization using adversarial training" in Neural Networks, Volume 145, Pages 155-163, ISSN 0893-6080, Authors: Javier Rodriguez-Vazquez, Adrian Alvarez-Fernandez, Martin Molina, Pascual Campoy. JCR: 8.050, Computer Science, Artificial Intelligence Q1, Neuroscience Q1; January 2022.

- "Adaptive Inattentional Framework for Video Object Detection with Reward-Conditional Training", Journal: IEEE Access, vol. 8, pp. 124451-124466, 2020
  Rodriguez-Ramos, J. Rodriguez-Vazquez, C. Sampedro and P. Campoy
  JCR (Clarivate): 4.098, Ranking: Computer Science, Information Systems Q1,
- "VPS-SLAM: Visual Planar Semantic SLAM for Aerial Robotic Systems", Journal IEEE Access, Volume: 8, Issue:1, Print ISSN: 2169-3536 Online ISSN: 2169-3536, March 2020. H. Bavle, P. De La Puente, J. How and P. Campoy
  JCR (Clarivate): 4.098, Ranking: Computer Science, Information Systems Q1
- “Onboard Detection and Localization of Drones Using Depth Maps”, Journal: IEEE Access, Volume: 8, Issue:1, Pages: 30480-30490 Print ISSN: 2169-3536. Feb. 2020
  Adrian Carrio, Sai Vemprala, Srikanth, Pascual Campoy and Jonathan P. How
  JCR (Clarivate) in 2018: 4.098, Ranking: Computer Science, Information Systems Q1,
- “Deep Learning-Based System for Automatic Recognition and Diagnosis of Electrical Insulator Strings”, IEEE Access (Volume: 7 , Pages: 101283–101308, July 2019,
  Carlos Sampedro, Javier Rodriguez-Vazquez, Alejandro Rodriguez-Ramos, Adrian Carrio, Pascual Campoy. JCR in2018: 4.098, Rank: Computer Science, Info. Systems Q1
- “Vision-Based Multirotor Following Using Synthetic Learning Techniques”, Journal: Sensors, volume 19, number: 21, article number: 4794, ISSN = 1424-8220, year: 2019
  Rodriguez-Ramos, Alejandro and Alvarez-Fernandez, Adrian and Bavle, Hriday, Campoy, Pascual and How, Jonathan P. JCR 2018: 3.031, Rank: Instments & Instion Q1
- “A Fully-Autonomous Aerial Robot for Search and Rescue Applications in Indoor Environments using Learning-Based Techniques”, Journal of Intelligent & Robotic Systems Springer Netherlands, Vol 95, pages: 601–627, ISSN 0921-0296, August 2019
  Carlos Sampedro, Alejandro Rodriguez-Ramos, Hriday Bavle, Adrian Carrio, Paloma de la Puente, Pascual Campoy. SiteScorein 2018: 2.83. Rank: Ind. & Manufacturing Eng Q1
- “A Deep Reinforcement Learning Strategy for UAV Autonomous Landing on a Moving Platform”, Journal of Intelligent & Robotic Systems, Springer Netherlands, Vol 93, pages: 351-366 Print ISSN 0921-0296 Feb 2019. Alejandro Rodriguez-Ramos, Carlos Sampedro, Hriday Bavle, Paloma de la Puente and Pascual Campoy. SiteScore in 2018: 2.83. Ranking: Ind. & Manufacturing Eng Q1

C.3. Proyectos o líneas de investigación en los que ha participado

- SHEREC: Safe, Healthy and Environmental Ship Recycling", HORIZON-CL4-2023-HUMAN-01-CNECT, Proposal number: 101136056, responsile for the UPM tasks.
- "AEROGENIA: Integral Wind Turbine Maintenance System Using Digital Twinning Supported by Autonomous Drones and Multispectral Imaging", funded by the Spanish Ministry of Science and Innovation under the program "Private-Public Collaboration", November 2023 - October 2026
- RATEC “Localization and planning of thetered aerial+ground robots for inspection and maintenance tasks” ref: PDC2022-133643-C22, funded by the Spanish Ministry of Science and Innovation under the program “Prove of Concept” to promote the Technical Research & Transfer. Starting date: 2023, Finish date: 2024
- INSERTION, "UAV Perception, Control and Operation in Harsh Environments” ref: PID2021-127648OB-C32 , Programa Estatal para Impulsar la Investigación Científico-Técnica y su Transferencia, del Plan Estatal de Investigación Científica, Técnica y de Innovación, Starting date: 2022, Finish date: 2025
- “COPILOT: Photovoltaic Power Plant Control, Supervision & Optimal Operation by means of Synergic Integration of Drones, IoT & Communication Advanced Technologies” Ref: Y2020/EMT6368. Funded by Madrid Government under the R&D Synergic Projects Program. P.I. of the second subproject done by UPM that is coordinated by the first subproject done by UAH. Duration: July 2021 to June 2024.

- “COMCISE: Complex Coordinated Inspection and Security missions by UAVs in cooperation with UGV”, ref: RTI2018-100847-B-C21. Funded by the Spanish Ministry of Science, Innovation & Universities, R&D Projects Program. P.I. of the first subproject and coordinator of the two subprojects. Duration: Jan. 2019 to Dec 2021.
- “Mohammed Bin Zayed International Robotics Challenge Sponsorship”, ref: 2020-MBZIRC-10. PI and international coordinator of a Consortium with Pablo Olavide University (E), Poznan Univ. of Technology (P) & LAAS (F), Funded by Khalifa University of Science and Technology, Duration: September 2018 – February 2020.
- “Drone Autonomy” join project with Aerospace Control Lab. at MIT. Funded by MISTI “MIT International Science and Technology Initiatives”. PIs: Jonathan How (MIT) & Pascual Campoy (UPM). Duration: January 1st 2018 to August 31st 2019

C.4. Participación en actividades de transferencia de tecnología/conocimiento y explotación de resultados

Contratos:

- "MINERVA: Environmental Risk Assessment Through Visual Assessment" contrated by ARQUIMEA, December 2023 - November 2024
- “UAS Advance Research in the Specific Category Framework”, within the Aeronautic Technological Program funded y CDTI. 2023-24
- “Real time full HD video transmission for sportive events” hired y DJI ARS Madrid, collaborating with Avistadrone S.L. Dates: September 2022
- “Visual Object Recognition using Multispectral Information”, contracted by ARQUIMIA RESEARCH CENTRE S.L.U. Duration: September 2022- December 2022.
- “Visual Detection for Autonomous Robotic Surveillance”, Contracted by Star Robotics (Statiun S.L.). PI of the UPM tasks. Duration: from Sept 2020 to May 2021.Funding: 20.000
- “Support on Computer Vision by Deep Learning”, Contracted by Sigma Rail S.L. PI of the UPM tasks. Three contracts in a row from Feb. 2019 to March 2020,
- “DAR System WP 1-A Drone platform definition for Outdoor and Indoor A/C Inspection”. Contracted by AIRBUS Defense & Space, Ref: CT1807377. PI of the tasks hired to UPM. Three contracts in a row from Sept 2018 to Sept 2019,
- “Tropical Plants Detection, Recognition and Analysis from UAV Aerial Images” Contracted by INDIGO Drones (CR). PI of the tasks hired to UPM. Duration: 2017-18 Funding: 53.040€
- “Indoors Visual Inspection of Power Plant Boilers using UAV”. Contracted by GASNATURAL-Union Fenosa, PI of the UPM tasks Duration: 2017-18

- ***Patentes recientes:***
  - “Remotely Operated Air Reconnaissance Device“ Intl publication nr: WO2011/144497. Intnl application nr: PCT/EP2011/057503, Priority nr: 201030729 (ES). Priority date: 17 May 2010 (17.05.2010). Applicant: ARIES INGENIERÍA Y SISTEMAS S.A.; Inventors: Tejada Esteban, Luis Felipe; Freire Bouillon, Ladislas Ghislain; Campoy Cervera, Pascual; Mondragón Bernal, Iván F.
  - "Método para la interpretación y análisis de pruebas de detección o diagnóstico”, ES 2452991 A1, ref: P 201331853(7), submitted 18 Dic 2013. Explotation: VinciLab Healthcare S.L. Inventors: Pimienta Escobar, Miguel; Campoy Cervera, Pascual; Sanchez Lopez, Jose Luis; Carrio, Adrian; Sampedro Perez, Carlos