David Morilla Cabello

Curriculum Vitae

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Current position: *PhD Candidate*, **RoPeRT group, University of Zaragoza, Spain.**
Research interests: planning and coordination based on perception in robot teams

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Education

2021–Currently **PhD Candidate**, *University of Zaragoza*, Spain.
Funded by a 4-year competitive grant from Spanish Government (FPU).
Topic: *Active Perception in Robot Teams for Semantic Scene Reconstruction.*

2020–2022 **Master in Robotics, Graphics and Computer Vision**, *University of Zaragoza*, Spain, *GPA – 9.69/10*.
○ Master's thesis: *Multi-robot active perception for fast and efficient scene reconstruction.*

2015–2020 **Bachelor of Electronics, Robotics and Mechatronics Engineering**, *University of Málaga*, Spain, *GPA – 8.67/10*.
○ Bachelor's thesis: Vision based control for industrial robots.

2018–2019 **Bachelor of Industrial Engineering**, *University of Skövde*, Sweden.
○ Erasmus programme. The title was acquired by transferring previous courses from the University of Málaga.

Publications

- D. Morilla-Cabello, L. Bartolomei, L. Teixeira, E. Montijano and M. Chli, "Sweep-Your-Map: Efficient Coverage Planning for Aerial Teams in Large-Scale Environments," in *IEEE Robotics and Automation Letters*, vol. 7, no. 4, pp. 10810-10817, Oct. 2022

- J. Morales, R. Vázquez-Martín, A. Mandow, D. Morilla-Cabello, & A. García-Cerezo "The UMA-SAR Dataset: Multimodal data collection from a ground vehicle during outdoor disaster response training exercises." *The International Journal of Robotics Research*, 40(6-7), 835-847. Oct 2021

Experience

Research

9/2021–2/2022 **Invited Visiting Student**, ETH Zürich,
Vision for Robotics Lab (V4RL), D-MAVT.
MSc Thesis resulting in an IEEE RAL 2022 Publication.

7/2021–8/2021 **Robotics Student Fellowship**, ETH Zürich,
Vision for Robotics Lab (V4RL), D-MAVT.
Competitive scholarship: $< 7\%$ acceptance *Collaborative Elevation Mapping with Depth Completion on drones.*

3/2021–6/2021 **Research Internship**, University of Zaragoza,
Robotics, Perception and Real-Time group, RoPeRT.
Study of multi-modal photo-realistic simulators for multi-robot systems.

10/2019–8/2020	**Research Collaboration Scholarship**, UNIVERSITY OF MÁLAGA, Systems Engineering and Automation department, ISA. Calibration of RGB-Thermal camera and implementation of a monocular depth estimation NN on a search-and-rescue vehicle.

Teaching

Autumn 2022	**Autonomous Robots**, *University of Zaragoza*. Lab Teaching Assistant in the MSc in Robotics, Graphics and Computer Vision. 30h total
Autumn 2022	**Control Automático**, *University of Zaragoza*. Lab Teaching Assitant in the BSc in Ingeniería Electrónica y Automática. 30h total

Work

6/2019–3/2020	**Programmer and automation engineer**, SIMUMATIK AB, Skövde, Sweden. Participate in the development of a Virtual Commissioning tool to create Digital Twins.

Volunteer

3/2019	**Digital photography workshop**, Skövde, Sweden. Teaching principles of digital photography to students at the University of Skövde.

Miscellaneous

Photography and video projects.
Both paid portrait sessions as well as personal creative work.

Mobile App development in Flutter.
Keep Talking: app for conversational engagement.
Keep in Touch: app for periodic contact reminder.

Languages

Spanish	Mother tongue
English	Cambridge C1 Advanced

Interests

- Photography & video
- Nature
- Video games
- Hiking

I have many interdisciplinary interests in fields such as Psychology, Economy, Politics and Philosophy.