

RAMÓN MARÍA GARCÍA ALARCIA

Space Systems Engineer. Research Associate at the Technical University of Munich (TUM).

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EDUCATION

PhD Student in Aerospace and Geodesy, TUM	2022 - present
Master's in Aerospace Engineering, ISAE-SUPAERO	2020 - 2022
Bachelor's in Aerospace Systems Engineering, UPC BarcelonaTech	2015 - 2020
Bachelor's in Telecommunication Systems Engineering, UPC BarcelonaTech	2015 - 2020

WORK EXPERIENCE

Research Associate <i>Technical University of Munich (TUM), Chair of Spacecraft Systems</i>	11/2022 - ongoing Munich, Germany
- Teaching, supervising students, and conducting research in generative design of spacecraft as a PhD candidate. - Leading the development of the Communications System in the EventSat 6U CubeSat mission.	
Orbitography Intern <i>Centre national d'études spatiales (CNES), Orbitography section</i>	05/2022 - 10/2022 Toulouse, France
Implemented and tested Vision-Based Navigation algorithms for autonomous spacecraft navigation around asteroids.	
Systems & Software Engineer Intern <i>GTD Sistemas de Información, Space Division</i>	06/2019 - 07/2020 Barcelona, Spain
Developed an internal avionics and flight SW simulator for launchers, focused on GNC algorithms in a defined avionics architecture.	

PROJECTS

Vice-Chair <i>4th and 5th Symposium on Space Educational Activities (SSEA)</i>	2020 - 2022, 2025 - 2026
Promoter of the organisation in Barcelona and in Munich of the European Space Agency-led 4th SSEA (held in 2022) and 5th SSEA (2026). Vice-Chair leading and overseeing different work areas of the project.	
Project Manager <i>Image Recording Instrument for Sunrise - 2 (IRIS-2)</i>	2020 - 2024
Project Manager and Responsible for Software in the team behind the IRIS-2 instrument, which flew with the Max Planck Institute-led Sunrise III solar observation mission in 2022 and 2024.	
Electronics & Software Leader <i>Cloud chamber for high Altitude Detection of muons Under Special relativity effects (CADMUS)</i>	2017 - 2018
Responsible for Electronics and Software for the CADMUS instrument, which flew to the near-space with the ESA's BEXUS Program in 2017.	
Research Participant <i>Institute for High Energy Physics (IFAE), International Astronomical Youth Camp (IAYC)</i>	2016 to 2018
- IFAE: Characterization of irradiated/non-irradiated Pixel Detectors for the High-Luminosity upgrade of the LHC (2016). - IAYC: Testing SimCADO simulator for the Extremely Large Telescope (2016), classification of galaxies using Machine Learning (2017), analysis of Earth-Moon-Earth spacecraft trajectories (2018).	

SKILLS & AWARDS

Languages	Spanish (Native), English (C2), French (C1), Italian (B2), German (B1), Catalan (Native).
Programming	C, C++, Java, C#, Rust, Python, Pytorch, Matlab, PHP, Javascript, CSS, Bash, AWK.
Design & Analysis	SolidWorks, Catia, Proteus, KiCad, CCS, Vitis/Vivado, Simulink, Wireshark.
Soft Skills	Teamwork, Leadership, Communication, Motivation, Curiosity, Commitment.
Other	Type B European Driving License. EASA Private Pilot License theoretical exam.
Awards	Caltech Space Challenge (2026), DefInSpace (2021), SCAVENGE Data Challenge (2019), START Hack (2018), CopenHacks (2017), Barcelona's City Council Youth Research Prize (2015), Extraordinary Baccalaureate Prize (2015), University Access Distinction (2015).