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 — 11/2022 - ongoing
Technical University of Munich (TUM), Chair of Spacecraft Systems — *Munich, Germany*
· Teaching, supervising students, and conducting research in generative design of spacecraft as a PhD candidate.

Orbitography Intern — 05/2022 - 10/2022
Centre national d'études spatiales (CNES), Orbitography section — *Toulouse, France*
· Implemented and tested Vision-Based Navigation algorithms for autonomous spacecraft navigation around asteroids.

Systems & Software Engineer Intern — 06/2019 - 07/2020
GTD Sistemas de Información, Space Division — *Barcelona, Spain*
· Developed an internal avionics and flight SW simulator for launchers, focused on GNC algorithms in a defined avionics architecture.

PROJECTS

Project Manager — 2020 - 2022
Image Recording Instrument for Sunrise (IRIS)
· Project Manager and Responsible of Software in the team behind the IRIS instrument, which flew with the Max Planck Institue-led Sunrise III solar observation mission in 2022 and 2024.

Vice-Chair — 2020 - 2022
4th Symposium on Space Educational Activities (SSEA)
· Promoter of the organisation in Barcelona of the European Space Agency-led 4th SSEA, held in 2022. Vice-Chair leading and overseeing different work areas of the project.

Electronics & Software Leader — 2017 - 2018
Cloud chamber for high Altitude Detection of muons Under Special relativity effects (CADMUS)
· Responsible of Electronics and Software for the CADMUS instrument, which flew to the near-space with the ESA's BEXUS Program in 2017.

Research Participant — 2016 to 2018
Institute for High Energy Physics (IFAE), International Astronomical Youth Camp (IAYC)
· 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	Team work, Leadership, Communication, Motivation, Curiosity, Commitment.
Other	Type B EUROPEAN Driving License. EASA Private Pilot License theoretical exam.
Awards	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).