

EDUCATION

ETH Zürich Zürich, Switzerland
M.Sc. in Medical Imaging 2023 – 2025

- Relevant courses: Introduction to Machine Learning, Deep Learning, Image Analysis & Computer Vision, Mobile Health & Activity Monitoring, Medical Image Analysis
- GPA: 5.2/6.00

Universidad Carlos III de Madrid Madrid, Spain
B.Sc. in Biomedical Engineering 2019 – 2023

- Relevant courses: Numerical Methods, Systems & Signals, Solid Mechanics, Control Engineering (Honors), Instrumentation and multimodality imaging (Honors)
- GPA 8.77/10.00

EXPERIENCE

AI Medical | Zürich 2025.12 - *present*

- Internship at AI startup in radiology, working with vision models
- Development of deep learning frameworks for the automatic lesion evolution detection in metastatic and multiple sclerosis MRI.
- Skills: Python, Pytorch, Automatic segmentation, Vision Transformers, Generative AI

Harvard Medical School | Boston, MA 2025.04 - 2025.10

- MSc thesis project conducted at LEMoN group, associated to Harvard Medical School and Massachusetts General Hospital, on the machine-learning based generation of 3D brains from 2D photographs of dissection
- Working on manuscript that will be sent for publication at eLife Science Advances
- Skills: Python, Pytorch, cluster computing, 3D rendering, Diffusion Models, UNet architectures, Neural Implicit Fields.

CVL | ETH Zürich 2024.09 - 2025.03

- Pushing the state of the art in MRI reconstruction, exploring deep learning strategies to recover under-sampled k-space data from accelerated MRI acquisitions
- Skills: Python, Pytorch, NERFs, cluster computing, MRI reconstruction.

PSI | Villigen, Switzerland 2024.03 - 2024.06

- Investigation and design of non-invasive techniques for eye tracking, with application in proton therapy of ocular tumors
- Skills: Python, 3D geometric models, algorithm optimization.

BioITACA | UPV, Valencia, Spain 2022.06 - 2023.09

- Development of novel biomarkers for the electrophysiological characterization and detection of arrhythmogenic tissue
- Journal Publication; Physical and Engineering Sciences in Medicine.
- Poster at IEEE EMBS Sydney 2023, and presentation at Annual Congress of the Biomedical Engineering Society, 2022.
- Skills: MATLAB, RStudio, signal processing.

BAM Lab | University of Maryland, College Park, MD 2022.02 - 2022.05

- Design, 3D printing and testing of a soft-robotic prototype of a marine turtle
- Skills: Soft robots, SolidWorks, fluid mechanics, CAD modelling, prototyping, 3D printing

PUBLICATIONS

- S Ruipérez-Campillo, M Crespo, A Tormos, A Guill, A Cebrián, A Alberola, J Heimer, F J Chorro, J Millet, F Castells. Evaluation and assessment of clique arrangements for the estimation of omnipolar electrograms in high density electrode arrays. *Phys Eng Sci Med*, 2023 Sep. 46(3):1193-1204 doi:10.1007/s13246-023-01287-8.
- M Crespo, S Ruiperez Campillo, R Casado-Arroyo, J Millet, F Castells. Assessment of the Interelectrode Distance Effect over the Omnipole with High Multielectrode Arrays. (IEEE EMBS) (Sydney, 2023).
- M Crespo, S. Ruiperez-Campillo, I. Segarra, A. Guill, A. Tormos, J Millet, F Castells. Estudio Comparativo con Señales Epicárdicas de las Limitaciones del Omnipolo con Electrodos de Alta Densidad. XL Congreso Anual de la Sociedad Española de Ingeniería Biomédica (CASEIB 2022) (Valladolid, España. 2022)

AWARDS AND HONORS

- **La Caixa Fellowship** 2023.06
International post-graduate scholarship awarded yearly to 100 graduate students (Spain & Portugal)
- **Fundacion Botin Scholarship** Undergraduate grant 2019.09 & 2022.09

SKILLS

Languages: Spanish, English, French, German.
Programming: Python, RStudio, MATLAB.