

FRANCISCO RAMIREZ SERRANO

✉ FrRamirezSerrano@gmail.com | [in LinkedIn](#) | 📍 Boston, MA (open to relocating to San Diego, CA)

SUMMARY

Robotics engineer and first author in *Science Robotics* who has taken robots from first prototype to working system, from insect-scale jumping robots to a humanoid running a vision-language-action (VLA) AI model. Strongest when testing, judging and explaining systems to the people who rely on them. Seeking an in-person San Diego role in robot evaluation, safety and compliance, integration or deployment.

EXPERIENCE

- Graduate Researcher – Humanoid Robots & Responsible AI** Sept. 2025 – Present
MIT Computer Science and Artificial Intelligence Laboratory (CSAIL), Living Lab
Cambridge, MA
- Brought up a Unitree G1 humanoid with dexterous hands from scratch: integrated and deployed NVIDIA's GR00T VLA foundation model, including teleoperation, camera streaming and robot networking ([featured in a CSAIL video](#)).
 - Diagnosed failures across networking, middleware and hardware (e.g. traced robot instability to wireless packet loss), and built an automated test rig (magnetic encoder, Python state machine) for repeatable manipulation trials.
 - Audited the deployed model's safety and ethics (stakeholder workshop, deployment audit, paper); demoed to MIT faculty; mentored an undergraduate researcher.
- Teaching Assistant – 6.UAR, Preparation for Undergraduate Research** Spring 2026, Fall 2026
MIT Department of Electrical Engineering and Computer Science
Cambridge, MA
- Evaluate research proposals and writing for 30+ MIT students per term and meet each four times to review project progress.
- Product Design Engineer (Consultant) – Consumer Electronics** June – Sept. 2024
Nothing Technology
London, UK
- Developed new test methods to evaluate the ergonomics of the [Headphone \(1\)](#) (launched 2025), and turned force-measurement data into design and manufacturing recommendations.
- Research Fellow – Impulsive Robotics & Surgical Devices** Nov. 2021 – Jan. 2024
Harvard Microrobotics Laboratory (Prof. Robert Wood)
Cambridge, MA
- Independently led a walking-jumping microrobot project that earlier attempts had not achieved, from concept through design, fabrication, high-speed testing and publication, resulting in first-author papers in *Science Robotics* and *Advanced Materials Technologies*.
 - At [Project 1985](#), a surgical-robotics start-up launched from the lab (2022–23): designed and prototyped hydraulically actuated millimeter-scale surgical tools; joined strategy discussions with venture investors.
- Research & Development Engineer – Drone Aerodynamics** May – Oct. 2021
Flybotix, indoor inspection drone start-up
Lausanne, Switzerland
- Led design and build of a [test bench](#) for co-axial propeller configurations, cutting bench costs by 75%.

EDUCATION

- PhD Student, Electrical Engineering and Computer Science** Sept. 2024 – Present
Massachusetts Institute of Technology (MIT)
Cambridge, MA
- Available for full-time roles from early 2027.
 - Coursework: Computer Vision; Ethical Machine Learning in Human Deployments; Program Synthesis; Quantitative and Clinical Physiology; [How to Make \(Almost\) Anything](#).
 - MIT SERC Scholar (Social and Ethical Responsibilities of Computing), 2025–26. Shenzhen Scalable HCI residency (Jan. 2025): [won a hardware hackathon](#), studied factory production flows.
- Master of Science, Robotics** Sept. 2019 – Oct. 2022
EPFL (Swiss Federal Institute of Technology Lausanne); thesis at Harvard University
Lausanne, Switzerland & Cambridge, MA
- Bachelor of Science, Microengineering** Sept. 2016 – July 2019
EPFL; exchange year at the Technical University of Munich (TUM)
Lausanne, Switzerland & Munich, Germany

PUBLICATIONS, PRESENTATIONS & PEER REVIEW

- F. Ramirez Serrano**, ..., R. J. Wood. "[A springtail-inspired multi-modal walking-jumping microrobot](#)." *Science Robotics*, 2025.
- F. Ramirez Serrano** et al. "[Considerations for the design and rapid manufacturing of pop-up MEMS devices](#)." *Adv. Mater. Technol.*, 2024.
- C. Vourtsis, V. C. Rochel, **F. Ramirez Serrano**, ..., D. Floreano. "[Insect inspired self-righting for fixed-wing drones](#)." *IEEE RA-L*, 2021.
- Presentations:** [ICRA 2022 workshop](#) (Philadelphia); posters at Scalable HCI Symposium, Shenzhen (2025) and MIT SERC Symposium (2026).
- Peer reviewer** for *IEEE Robotics and Automation Letters* (RA-L), 2023.

LEADERSHIP, TEACHING & ACTIVITIES

- Teaching:** robotics tutor, TechLabs Geneva (2024); children's AI workshop, Lithuania (2025); guest teacher, 'Iolani School, Hawaii (2023).
- Community:** Social Chair, Spain@MIT; volunteer wingfoil instructor, MIT Sailing; intramural soccer champion.

SKILLS

- Languages:** Spanish (native), English & French (fluent), German & Italian (proficient).
- Have lived in:** Costa Rica, Senegal, Benin, Italy, Germany, Switzerland, the UK and the US.
- Robotics & AI:** VLA deployment (NVIDIA GR00T), humanoid teleoperation, ROS, Python, C, MATLAB, Linux, GPU clusters, dynamics & simulation.
- Testing & hardware:** test-rig design, high-speed video, force/torque sensing, motion capture, wind tunnel, design for manufacturing.