Carlo Bosio

c.bosio@berkeley.edu | linkedin.com/in/carlo-bosio | carlobosio.github.io

Interests

Artificial Intelligence, Robotics, Optimization, Reinforcement Learning, Foundation Models, Embodied AI

Education

University of California, Berkeley — Berkeley, CA, USA
Ph.D. in Robotics and AI, Supervisor: Prof. M. W. Mueller — 2022 – Ongoing
Focus: Reinforcement Learning, Optimization, Large Language Models

University of Pisa - Stanford University — Pisa, IT - Stanford, CA
M.S. Robotics, 110/110 cum laude — 2020 – 2022
Supervisor: Prof. M. Cutkosky (Stanford University)

Robotics and AI Experience

Graduate Student Researcher - UC Berkeley — Aug. 2022 – Ongoing
High Performance Robotics Lab - Supervisor: Prof. M. W. Mueller — Berkeley, CA, USA

- Research on Robot Co-Design, LLMs for Reinforcement Learning (Google Scholar).
- Preference-Based Reinforcement Learning (RL) for Design (CS285 class project).
- Diffusion Models for Drone Motion Planning (CS282 class project).
- Fake Image Detection with Gram Matrices (CS280 class project)

Visiting Student Researcher - Stanford University — Mar. 2022 – Jul. 2022
Biomimetics and Dexterous Manipulation Lab - Supervisor: Prof. M. Cutkosky — Stanford, CA, USA

- Worked on ReachBot, project focused on a new concept for a space exploration robot. Developed a model and computational method to predict performances of a microspine gripper with stochastic grasps.
  Paper: Chen T. G., Newdick S., Di J., **Bosio C.**, et al., *Science Robotics*, 2024

Research Fellow (E3 Scholarship) - EPFL — Aug. 2021 – Oct. 2021
CREATE Lab - Supervisor: Prof. J. Hughes — Lausanne, CH

- Developed from scratch a flexible, fully 3D printed robotic hand. I took care of computational design, grasp planning and manipulation control of the device.
  Paper: **Bosio C.**, et al., *Frontiers in Robotics and AI*, 2022
- Co-design and optimal control of an underwater soft robot.
  Paper: Obayashi N., **Bosio C.**, et al., *RoboSoft*, 2022

Publications

For a full list of publications, check my Google Scholar page!

Selected Honors and Awards

KTH RPL Summer School 2024: Selected as fully funded attendee for the KTH Robotics, Perception, and Learning Summer School in Stockholm, Sweden (acceptance rate: 3%).
Powley Fund Research Grant: Awarded 30k research funding grant.
EPFL Excellence in Engineering 2021: Awarded the highly competitive E3 Summer Research Fellowship from the EPFL School of Engineering (acceptance rate: 2.3%).

Skills and Interests

Programming Languages/Frameworks: C/C++, Python, Bash, Matlab, ROS, Git, PyTorch, LaTeX

Spoken Languages: Italian (native), English (fluent), French (fluent), Chinese (basic)

Interests: Entrepreneurship, Politics, Finance, Half Marathon Training, Scuba Diving