Davide Allegro

Padova, IT davide.allegro97@gmail.com +39 340 9158921 Date of birth: 02/06/1997

Education

Ph.D. Candidate in Information Engineering *Oct 2022 – Present*
IAS-Lab, University of Padova, Department of Information Engineering

- **Topics:** Multi-Camera to Robot Calibration, 3D Reconstruction and Active Perception for Human-Robot Collaboration
- Supervisor: Prof. Stefano Ghidoni

Visiting PhD Researcher *Apr 2025 – Sep 2025*
IMAGINE Lab, Institut Polytechnique de Paris, Paris, France

- **Topics:** Active Mapping of Moving 3D Objects
- Supervisor: Prof. Vincent Lepetit

Master's Degree in Automation Engineering *Oct 2019 – Apr 2022*
University of Padova, Department of Information Engineering

- **Thesis:** Automatic Multi-Camera Hand-Eye Calibration for Robotic Workcells.
- Supervisor: Prof. Stefano Ghidoni
- Final Degree Mark: 106/110

Bachelor's Degree in Information Engineering *Sep 2016 – Sep 2019*
University of Padova, Department of Information Engineering

- **Thesis:** Neural Networks and Deep Learning
- Supervisor: Prof. Augusto Ferrante
- Final Degree Mark: 101/110

Awards

Manager Anch'io Competition 2024 *2024*
Awarded for the best thesis in Artificial Intelligence, Automation, and Robotics.

Klaus Fischer Degree Award 2023 *2023*
Awarded for the best thesis on innovations in processes for the digitalization and automation of industrial production.

ADAPT Field Campaign Competition 2022 *2022*
First prize in the Advanced Agile Production competition organized by Tampere University, Finland.

Work Experience

Teaching Assistant *Padova, IT*
University of Padova, Department of Information Engineering *Oct 2022 – Present*

- Teaching assistant for the Master's course in Computer Vision.
- Teaching assistant for the Bachelor's course in C++ Programming Laboratory.

AI & Robotics Trainer / Consultant *Udine, IT*
Danieli Automation *Nov 2025*

- Advanced course on multi-camera hand–eye calibration tailored to company-specific robotic systems.
- Practical course on ROS and Gazebo applied to industrial robotic systems.

Post-Graduate Research Fellow *Padova, IT*
University of Padova, Department of Information Engineering *Apr 2022 – Sep 2022*

- Research on Multi-Camera Hand-Eye Calibration for human-robot collaboration tasks.
- Contributed to the DrapeBot project on multi-camera calibration and human action recognition.

Publications

L. Barcellona, A. Zadaianchuk, **D. Allegro**, S. Papa, S. Ghidoni, E. Gavves, *"Dream to manipulate: Compositional world models empowering robot imitation learning with imagination"*, International Conference on Learning Representations (ICLR), 2025.

M. Terreran, L. Bragagnolo, **D. Allegro** and S. Ghidoni, *"A Lightweight Ensemble Framework for Online Skeleton-Based Human Action Recognition in Industrial Environments"*, European Conference on Mobile Robots (ECMR), 2025.

D. Allegro, M. Terreran and S. Ghidoni, *"MEMROC: Multi-Eye to Mobile RObot Calibration"*, International Conference on Intelligent Robots and Systems (IROS), 2024.

L. Bragagnolo, M. Terreran, **D. Allegro** and S. Ghidoni, *"Multi-view Pose Fusion for Occlusion-Aware 3D Human Pose Estimation"*, European Conference on Computer Vision (ECCV), 2024.

A. Bacchin, **D. Allegro**, S. Ghidoni and E. Menegatti, *"Sood-imagenet: a large-scale dataset for semantic out-of-distribution image classification and semantic segmentation"*, European Conference on Computer Vision (ECCV), 2024.

D. Allegro, M. Terreran and S. Ghidoni, *"Multi-camera hand-eye calibration for human-robot collaboration in industrial robotic workcells"*, IEEE Robotics and Automation Letters (RA-L), 2024.

D. Allegro, M. Terreran and S. Ghidoni, *"Metric—multi-eye to robot indoor calibration dataset"*, Information, 2023.

D. Evangelista, E. Olivastri, **D. Allegro**, E. Menegatti and A. Pretto, *"A graph-based optimization framework for hand-eye calibration for multi-camera setups"*, International Conference on Robotics and Automation (ICRA), 2023.

D. Evangelista, **D. Allegro**, M. Terreran, A. Pretto, and S. Ghidoni, *"An unified iterative hand-eye calibration method for eye-on-base and eye-in-hand setups"*, International Conference on Emerging Technologies and Factory Automation (ETFA), 2022.

Languages

English: Professional C1

Italian: Native

Technologies

Languages: Python, C++

Tools: Git, Pytorch, OpenCV, ROS, Gazebo