

Work Experiences

- Mar '24 - Now **Postdoctoral Researcher**, Department of Cybernetics, Czech Technical University in Prague, Czechia
○ **Lab:** Multi-robot systems group (MRS)
- May '22 - Nov '23 **Postdoctoral Researcher**, Cognitive Robotics Department, Delft University of Technology, The Netherlands
○ **Lab:** Reliable Robot Control Lab (R2C)
- Nov '18-May '22 **Doctoral Researcher**, Department of Industrial Engineering, University of Trento, Italy
○ **Lab:** The Interdepartmental Robotics Labs (IDRA)
- Sep '21-Feb '22 **Visiting Scholar**, University of California, Riverside, United States
○ **Research Activity:** Networked system control, Reinforcement learning
- Oct-Nov 2025 **Guest Lecturer**, Czech Technical University in Prague, Prague
○ **Department:** Cybernetics
○ **Course:** Multi-Robot Systems
- Oct '18-Sep '20 **Teaching Assistant**, University of Trento, Italy
○ **Department:** Information Engineering and Computer Science (DISI)
○ **Course:** Systems Theory
- Jun-Nov 2018 **Postgraduate Researcher**, held at University of Trento, Italy

Education

- Nov '18-May '22 **PhD in Mechatronics**, University of Trento, Italy
○ **PhD Thesis:** Distributed control algorithms for a team of service robots
○ **Research Interests:** Multi-robot systems, Distributed control, Mobile robotics
- Sep '15-Mar '18 **MSc in Mechatronics Engineering**, University of Trento, Italy
○ **Curriculum in Electronics and Robotics**
○ **Grade:** magna cum laude
○ **Master thesis:** “Control of a Synchrotron with LMI-based Techniques”
- Sep '12-Jul '15 **BSc in Industrial Engineering**, University of Trento, Italy
○ **Bachelor thesis:** “Study of Lateral Vibrations in a Beam”
- Sep '06-Jun '12 **Secondary Education Diploma**, Liceo Scientifico “L. Da Vinci”, Trento, Italy

Publications

Journal Articles

- [J10] **M. Boldrer, V. Krátký, V. Walter, M. Saska**, *Distributed Lloyd-Based Algorithm for Uncertainty-Aware Multi-Robot Under-Canopy Flocking*, In Robotics and Automation Letters, Under Review.
- [J9] **M. Boldrer, V. Krátký, M. Saska**, *Aerial Robots Persistent Monitoring and Target Detection: Deployment and Assessment in the Field*, Springer, Autonomous Robots, 2026
doi: 10.1007/s10514-025-10239-y.
- [J8] **M. Boldrer, A. Serra-Gomez, L. Lyons, V. Krátký, J. Alonso-Mora, L. Ferranti**, *Rule-Based Lloyd Algorithm for Multi-Robot Motion Planning and Control with Safety and Convergence Guarantees*, in International Journal of Robotics Research, Under Review.
- [J7] **L. Lyons, M. Boldrer, L. Ferranti**, *Distributed Attack-Resilient Platooning Against False Data Injection*, IEEE Transactions on Vehicular Technology, 2025
doi: 10.1109/TVT.2025.3614452.
- [J6] **M. Boldrer, L. Lyons, L. Palopoli, D. Fontanelli, L. Ferranti**, *Time-inverted Kuramoto Model Meets Lissajous Curves: Multi-Robot Persistent Monitoring and Target Detection*, in IEEE Robotics and Automation Letters, 2022
doi: 10.1109/LRA.2022.3224661.
- [J5] **M. Boldrer, L. Palopoli, D. Fontanelli**, *A Unified Lloyd-based Framework for Multi-Agent Collective Behaviours*, in Elsevier, Robotics and Autonomous Systems, 2022
doi: 10.1016/j.robot.2022.104207.
- [J4] **M. Boldrer, F. Pasqualetti, L. Palopoli, D. Fontanelli**, *Multi-Agent Persistent Monitoring via Time-Inverted Kuramoto Dynamics*, in IEEE, Control Systems Letters, 2022
doi: 10.1109/LCSYS.2022.3178294.

- [J3] **M. Boldrer, A. Antonucci, P. Bevilacqua, L. Palopoli, D. Fontanelli**, *Multi-Agent Navigation in Human-Shared Environments: a Safe and Socially-Aware Approach*, in Elsevier, Robotics and Autonomous Systems, 2021
doi: 10.1016/j.robot.2021.103979.
- [J2] **M. Boldrer, P. Bevilacqua, L. Palopoli, D. Fontanelli**, *Graph Connectivity Control of a Mobile Robot Network with Mixed Dynamic Multi-Tasks*, in IEEE Robotics and Automation Letters, 2021
doi: 10.1109/LRA.2021.3061072.
- [J1] **M. Boldrer, M. Andreetto, S. Divan, L. Palopoli, D. Fontanelli**, *Socially-aware Reactive Obstacle Avoidance Strategy based on Limit Cycle*, in IEEE Robotics and Automation Letters, 2020
doi: 10.1109/LRA.2020.2976302.

Language Skills

Italian Mother tongue
English Fluent

Computer Skills

Languages C++, Python
Software/Tools Vim/Neovim, Tmux, Tmuxinator, Bash, Latex, ROS, Git, Github, Docker, Docker hub, Apptainer, Ansible, Maple/Maplesim, Matlab/Simulink, Kdenlive.
OS Linux

Personal Information

Driving license B
Sports Table tennis, Tennis, Football, Basketball
Linkedin.com [Manuel Boldrer](#) - Professional profile.
Website <https://manuelboldrer.github.io>