


Manuel Boldrer




PhD Student

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Born in Trento (Italy) on 29.07.1992
CV Updated in April 2022

Work Experiences

- May '22-Present **Postdoctoral Scholar**, *Cognitive Robotics Department, Delft University of Technology, Netherlands.*

 - **Supervisor:** Laura Ferranti
 - **Title:** Secure and Private Robot Control.
- Oct '18-Sep '20 **Teaching support activity**, *held at University of Trento, Italy, (80 hours).*
 - **Department:** Information Engineering and Computer Science (DISI)
 - **Course:** Systems Theory
- Jun-Nov 2018 **Scholarship**, *held at University of Trento, Italy.*
 - **Title:** Distributed estimation and control algorithms for a team of service robots

Education

- Nov '18-Present **PhD Student in Mechatronics, 34th cycle**, *University of Trento, Italy.*
 - **Supervisors:** Daniele Fontanelli, Luigi Palopoli
 - **Title:** Distributed control algorithms for a team of service robots
 - **Research Interests:** Multi-agent systems, Distributed control, Robotics.
- Sep '21-Feb '22 **Visiting Scholar**, *University of California, Riverside, United States.*

 - **Supervisor:** Fabio Pasqualetti
 - **Research Activity:** Networked system control, Reinforcement learning
- Sep '15-Mar '18 **Master's degree 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".
 - *Advisor:* Luca Zaccarian
- Sep '12-Jul '15 **Bachelor's degree in Industrial Engineering**, *University of Trento, Italy.*

 - **Methodological Curriculum**
 - **Bachelor thesis:** "Study of Lateral Vibrations in a Beam".
 - *Advisor:* Daniele Bortoluzzi
- Sep '06-Jun '12 **Secondary Education Diploma**, *Liceo Scientifico "L. Da Vinci", Trento, Italy.*

Publications

Papers Under Review

- M. Boldrer, F. Pasqualetti, L. Palopoli, D. Fontanelli**, *Multi-Agent Persistent Monitoring via Time-Inverted Kuramoto Dynamics*, in IEEE, Control Systems Letters.
- M. Boldrer, L. Palopoli, D. Fontanelli**, *A Unified Lloyd-based Framework for Multi-Agent Collective Behaviours*, in Elsevier, Robotics and Autonomous Systems.

Journal Articles

- [3] **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, Dec. 2021.
- [2] **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, Feb. 2021.
- [1] **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, Feb. 2020.

Refereed Conference Publications

- [5] **M. Boldrer, F. Riz, F. Pasqualetti, L. Palopoli, D. Fontanelli**, *Time-Inverted Kuramoto Dynamics for κ -Clustered Circle Coverage*, In IEEE Conf. on Decision and Control (CDC), Dec. 2021.

- [4] **M. Boldrer, D. Fontanelli, A. Antonucci, L. Palopoli**, *A Novel Framework for Multi-Agent Navigation in Human-Shared Environments*, In Italian Institute of Robotics and Intelligent Machines Conference (I-RIM), Oct. 2021, (***Best Student Paper Finalist***).
- [3] **M. Boldrer, L. Palopoli, D. Fontanelli**, *Lloyd-based Approach for Robots Navigation in Human-shared Environments*, In IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Oct. 2020.
- [2] **M. Boldrer, L. Palopoli, D. Fontanelli**, *Socially-aware Multi-agent Velocity Obstacle based Navigation for Nonholonomic Vehicles*, In IEEE Computer Software and Applications Conference (COMPSAC), Jul. 2020.
- [1] **M. Boldrer, D. Fontanelli, L. Palopoli**, *Coverage control and distributed consensus-based estimation for mobile sensing networks in complex environments*, In IEEE Conf. on Decision and Control (CDC), Dec. 2019.

Language Skills

Italian Mother tongue

English **Understanding:** Listening (B2), Reading (B2). **Speaking:** Spoken interaction (B2), Spoken production (B2). **Writing:** (B2)

Computer Skills

Languages C++, \LaTeX , MatLab, Phyton

Other Software Ansys, Maple, Maplesim, Mathematica, NI LabVIEW, Blender, Microsoft Office Package

Links

Linkedin.com [Manuel Boldrer](#) - Professional profile.

Youtube [Intelligent Robots at UNITN](#) - Lab Channel.

Google Scholar [Google Scholar Profile.](#) Website [Personal website](#)