

# Europass Curriculum Vitae



## Personal information

Surname(s) / First name(s)  
Email(s)  
Nationality(-ies)  
Date of birth  
Gender

### Sabattini Lorenzo

lorenzo.sabattini@unimore.it  
Italian  
March 26th, 1983  
Male



## Short bio

Lorenzo Sabattini is an Associate Professor at the Department of Sciences and Methods for Engineering, University of Modena and Reggio Emilia, Italy. He received his B.Sc. and M.Sc. in Mechatronic Engineering from the University of Modena and Reggio Emilia (Italy) in 2005 and 2007 respectively, and his Ph.D. in Control Systems and Operational Research from the University of Bologna (Italy) in 2012. In 2010 he has been a Visiting Researcher at the University of Maryland, College Park, MD (USA). In 2012 he has been a Postdoctoral Researcher and, from 2012 to 2017, he has been an Assistant Professor, at the University of Modena and Reggio Emilia.

His main research interests include multi-robot systems, decentralized estimation and control, and human interaction with robots and multi-robot systems.

He is the leader of the multi-robot systems research group within the ARSControl lab.

He is one of the founding co-chairs of the IEEE RAS Technical Committee on Multi-Robot Systems: he has served as the corresponding co-chair from its foundation, in 2014, to 2021. He has served as a Guest Editor for the Special Issue on Networked Cooperative Autonomous Systems of the IEEE Transactions on Automation Science and Engineering (T-ASE), in 2014. From 2014 to 2016, he has been serving as Associate Editor for IJARS (Topic: Mobile Robots and Multi-Robot Systems). From 2015 to 2018, he has been serving as Associate Editor for the IEEE Robotics and Automation Letters (RA-L). From 2017 to 2019, he has been serving as Associate Editor for the IEEE Robotics and Automation Magazine (RA-M). Since 2023, he has been serving as Associate Editor for the International Journal of Robotics Research (IJRR). He has been a co-organizer of the International Symposium on Multi-Robot and Multi-Agent Systems (MRS): he has served as Program Chair and Area Chair for the 2017 edition, as Editor-in-chief for the 2019 edition, and as Program Chair for the 2023 edition. He has also served as Editor and Associate Editor for several editions of IEEE ICRA and IEEE/RSJ IROS.

He participated in several national and European projects and in research activities funded by industries. Among them, he is the coordinator of the Horizon Europe project SERMAS (Socially-acceptable Extended Reality Models and Systems), of the Italian PRIN 2020 project COWBOT (preCision livestock farming With collaBorative heterOgeneous roboT teams), and of the Italian PRIN 2022 project AI-DROW (Anti-Intruder multi-DRone system for Wild animals in smart farming environments).

## Position

Dates  
November 2018 – today

Position	<b>Associate Professor</b>
Main topics	Decentralized control of multi robot systems, and industrial applications of mobile robotics
Institution	<i>University of Modena and Reggio Emilia</i>
<b>Teaching</b>	
Dates	2020 – today
Course	<b>Control of Mechatronic Systems (Controllo di Sistemi Meccatronici)</b>
Program	Master's Degree course in Mechatronic Engineering
Istitution	<i>Department of Engineering Sciences and Methods – DISMI (Reggio Emilia). University of Modena and Reggio Emilia</i>
Dates	2020 – today
Course	<b>Automatic Control (Controlli Automatici)</b>
Program	Bachelor's Degree course in Mechatronic Engineering
Istitution	<i>Department of Engineering Sciences and Methods – DISMI (Reggio Emilia). University of Modena and Reggio Emilia</i>
Dates	2019 – today
Course	<b>Automatic Control (Controlli Automatici)</b>
Program	Bachelor's Degree course in Management Engineering
Istitution	<i>Department of Engineering Sciences and Methods – DISMI (Reggio Emilia). University of Modena and Reggio Emilia</i>
Dates	2011 – 2020
Course	<b>Digital Control</b>
Program	Master's Degree course in Mechatronic Engineering
Istitution	<i>Department of Engineering Sciences and Methods – DISMI (Reggio Emilia). University of Modena and Reggio Emilia</i>
Dates	2018 – 2020
Course	<b>Automatic Control (Controlli Automatici e Sistemi Elettrici Lineari)</b>
Program	Bachelor's Degree course in Mechatronic Engineering
Istitution	<i>Department of Engineering Sciences and Methods – DISMI (Reggio Emilia). University of Modena and Reggio Emilia</i>
<b>Education, previous positions and other appointments</b>	
Dates	November 2020
Certificate or diploma	Italian National Qualification (Abilitazione Scientifica Nazionale, ASN) for the position of Full Professor
Dates	December 2017 – November 2018
Position	<b>Research fellow (Assegnista di ricerca)</b>
Main topics	Decentralized control of multi robot systems, and industrial applications of mobile robotics
Institution	<i>University of Modena and Reggio Emilia</i>
Dates	July 2017 – today

Position	<b>Affiliated faculty advisor</b>
Main topics	Advisor for the Beeclust Multi-Robot Systems Lab
Institution	<i>SRM University, Chennai, India</i>
Dates	December 2012 – November 2017
Position	<b>Assistant Professor (Ricercatore)</b>
Main topics	Decentralized control of multi robot systems, and industrial applications of mobile robotics
Institution	<i>University of Modena and Reggio Emilia</i>
Dates	April 2017
Certificate or diploma	Italian National Qualification (Abilitazione Scientifica Nazionale, ASN) for the position of Associate Professor
Dates	January 2012 – November 2012
Position	<b>Post–doc research fellow</b>
Main topics	Developments of control algorithms for multi robot systems
Institution	<i>University of Modena and Reggio Emilia</i>
Dates	January 2009 – April 2012
Certificate or diploma	<b>PhD in Control Systems and Operational Research</b> , (financed with scholarship)
Thesis	Nonlinear Control Strategies for Cooperative Control of Multi–Robot Systems
Main topics	Automation, mobile robotics, multi robot systems
Institution	Alma Mater Studiorum – <i>University of Bologna</i>
Dates	March 2010 – September 2010
Position	<b>Visiting student</b>
Main topics	Control of multi robot systems, development of distributed coordination algorithms. Supervisor: Dr. Nikhil Chopra
Institution	<i>University of Maryland, College Park (MD), USA</i>
Dates	April 2008 – December 2008
Position	<b>Research fellow</b>
Main topics	Developments of control algorithms for multi robot systems
Institution	<i>University of Modena and Reggio Emilia</i>
Dates	December 2007
Certificate or diploma	Engineering professional degree
Dates	October 2005 – October 2007
Certificate or diploma	<b>Master’s Degree in Mechatronic Engineering</b>
Thesis	Development and experimental validation of algorithms for the formation control of mobile robots (in Italian: Sviluppo e verifica sperimentale di algoritmi di controllo di formazione per robot mobili)
Mark	110/110 summa cum laude
Institution	<i>University of Modena and Reggio Emilia</i>
Dates	October 2002 – October 2005
Certificate or diploma	<b>Bachelor’s Degree in Mechatronic Engineering</b>

Thesis	Development of early warning algorithms to identify the actual gear ratio on board and recognition of faults in the related sensors (in Italian: Implementazione di algoritmi early warning di identificazione dei reali rapporti di trasmissione a bordo veicolo e riconoscimento malfunzionamenti della sensoristica relativa)
Mark	110/110 summa cum laude
Institution	<i>University of Modena and Reggio Emilia</i>

## Editorial activity

### Journals

Date	2017 - 2019 Associate Editor for the IEEE Robotics and Automation Magazine (RA-M)
Date	2017 - 2019 Guest Editor for the Special Issue on Multi-Robot and Multi-Agent Systems of Autonomous Robots (Springer)
Date	2015 - 2018 Associate Editor for the IEEE Robotics and Automation Letters (RA-L)
Date	2015 - today Review Editor for Frontiers in Robotics and AI
Date	2014 - 2017 Associate Editor for the International Journal of Advanced Robotic Systems (IJARS. Topic: Mobile Robots and Multi-Robot Systems)
Date	2014 - 2015 Lead Guest Editor for the Special Issue on Networked Cooperative Autonomous System of the IEEE Transactions on Automation Science and Engineering (T-ASE)

### Conferences

Date	2020 - today Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
Date	2019 - today Editor for IEEE International Conference on Robotics and Automation (ICRA)
Date	2019 Editor-in-chief for International Symposium on Multi-Robot and Multi-Agent Systems (MRS) 2019
Date	2018 Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2018
Date	2017 Program Chair and Area Chair for International Symposium on Multi-Robot and Multi-Agent Systems (MRS) 2017
Date	2017 Member of the Technical Committee of the NATO Modelling and Simulation for Autonomous Systems Workshop (MESAS) 2017
Date	2017 Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2017
Date	2017 Member of the Program Committee of the Robotics Science and Systems (RSS) 2017
Date	2016 Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2016

Date	2016	Member of the Program Committee of the International Symposium on Distributed Autonomous Robotic Systems (DARS) 2016
Date	2016	Associate Editor for IEEE International Conference on Robotics and Automation (ICRA) 2016
Date	2015	Member of the Program Committee of the Intelligent Robotics and Multi-Agent Systems (IRMAS) track of ACM/SIGAPP Symposium on Applied Computing (SAC) 2016
Date	2015	Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2015
Date	2015	Associate Editor for IEEE International Conference on Robotics and Automation (ICRA) 2015
Date	2015	Member of the Program Committee of the Robotics Science and Systems (RSS) 2015
Date	2014	Member of the Program Committee of the Intelligent Robotics and Multi-Agent Systems (IRMAS) track of ACM/SIGAPP Symposium on Applied Computing (SAC) 2015
<b>Organization of scientific events</b>		
Date	2023	Program chair of the International Symposium on Multi-Robot and Multi-Agent Systems (MRS)
Date	2023	Co-organizer of the ICRA 2023 Workshop SOLAR: Socially-acceptable robots: concepts, techniques, and applications
Date	2019	Co-organizer and Editor-in-chief of the International Symposium on Multi-Robot and Multi-Agent Systems (MRS)
Date	2018	Co-organizer of the ICRA 2018 Workshop WORKMATE: the WORKplace is better with intelligent, collaborative, robot MATEs
Date	2017	Co-organizer and Program Chair of the International Symposium on Multi-Robot and Multi-Agent Systems (MRS)
Date	2017	Co-organizer of the ICRA 2017 Workshop Human Multi-Robot Systems Interaction
Date	2016	Co-organizer of the IEEE RAS Summer School on Multi-Robot Systems
Date	2016	Co-organizer of the ICRA 2016 Workshop Fielded multi-robot systems operating on land, sea, and air
Date	2016	Co-organizer of the IV 2016 Workshop Cooperative autonomous intelligent vehicles are advanced robotic systems of systems: current trends and challenges
Date	2015	Co-organizer of the IROS 2015 Workshop Cooperative vehicles and robotic systems for industrial applications

Date	2015
	Co-organizer of the RSS 2015 Workshop Principles of Multi-Robot Systems
Date	2014
	Co-organizer of the IROS 2014 Workshop The future of multiple-robot research and its multiple identities
Date	2014
	Co-organizer of the ICRA 2014 Workshop Crossing the Reality Gap: Control, Human Interaction and Cloud Technology for Multi- and Many- Robot Systems
Date	2014
	Co-organizer of the ERF 2014 Workshop Advanced Robotics for Industrial Logistics
Date	2013
	Co-organizer of the ICRA 2013 Workshop Crossing the Reality Gap - From Single to Multi- to Many Robot Systems

### Projects funded by public and institutions

Date	2023 - 2025
Project title	AI-DROW: Anti-Intruder multi-DROne system for Wild animals in smart farming environments
Role	Project coordinator
Funding	Ministry of University and Research, PRIN 2022 call, project id 2022BYS-BYX
Description	The project, with a total funding of € 199.999,00, includes a consortium composted by University of Modena and Reggio Emilia and University of Naples 'Federico Secondo'.
Date	2022 - 2025
Project title	SERMAS: Socially-acceptable Extended Reality Models and Systems
Role	Project coordinator
Funding	Horizon Europe, call HORIZON-CL4-2021-HUMAN-01-13, Grant Agreement 101070351
Description	The project, with a total funding of € 5 725 591,00, includes a consortium composted by University of Modena and Reggio Emilia (Italy), Technical University of Darmstadt (Germany), Deutsche Welle, F6S Network (Ireland), Poste Italiane (Italy), Spindox Labs (Italy), King's College London (UK), SUPSI (Switzerland).
Date	2022 - 2025
Project title	COWBOT: preCision livestOck farming With collaBorative heterOgeneous roboT teams
Role	Project coordinator
Funding	Ministry of University and Research, PRIN 2020 call, project id 2020NH7EAZ
Description	The project, with a total funding of € 644 043,00, includes a consortium composted by University of Modena and Reggio Emilia, University of Naples 'Federico Secondo', and University of Bari 'Aldo Moro'.
Date	2020 - 2023
Project title	Autonomous Robotics Research Center
Role	Scientific coordinator for the UNIMORE-ARSCoControl unity
Funding	Technology Innovation Institute (TII), UAE
Description	The project, with a total funding of € 3 170 000,00, includes a consortium composted by University of Modena and Reggio Emilia (with two research units: ARSCoControl, coordinator Prof. Lorenzo Sabattini, and Hipert, coordinator Prof. Marko Bertogna), University of Bologna & ETH Zurich (coordinator: Prof. Luca Benini), New York University (coordinator: Prof. Giuseppe Loianno), University of Perugia (coordinator: Prof. Paolo Valigi).

Date	2021 - 2023
Project title	COLLABORATION: COLLaborAtive moBile robOtic manipulatORs for industrial applicATIOns
Role	Project coordinator, and scientific coordinator for the Italian unit
Funding	Ministry of Foreign Affairs and International Cooperation (MAECI), Italy and Ministry of Science and Technology (MOST), Vietnam
Description	<p>The project COLLABORATION has been funded by the ministries of international relationships of Italy and Vietnam, as one of the Significant Research Projects.</p> <p>The project consortium is composed by the University of Modena and Reggio Emilia (coordinator: Prof. Lorenzo Sabattini) and by the Ho Chi Min City University of Technology and Education (coordinator: Prof. Nguyen Minh Tam).</p>
Date	2017 - 2019
Project title	Maintenance and Control of Distributed Robot and Sensor Networks
Role	Scientific coordinator for the Italian unit
Funding	Ministry of Foreign Affairs and International Cooperation (MAECI), Italy and Ministry of International Relations, Quebec, Canada
Description	<p>The project <i>Maintenance and Control of Distributed Robot and Sensor Networks</i> has been funded by the ministries of international relationships of Italy and Quebec, with the aim of developing methodologies in the field of decentralized control of multi-robot networks.</p> <p>The project consortium is composed by the University of Modena and Reggio Emilia (coordinator: Dr. Lorenzo Sabattini) and by the Polytechnic of Montreal (coordinator: Dr. Giovanni Beltrame).</p>
Date	2013 - 2015
Project title	Algorithms for keeping connectivity and communication efficiency in ad hoc networks of multi-robotic systems
Role	Scientific coordinator for the UNIMORE local unit
Funding	FAPESP, Brazil
Description	<p>The project <i>Algorithms for keeping connectivity and communication efficiency in ad hoc networks of multi-robotic systems</i> has been funded by the Brazilian institution FAPESP, to create a collaboration between the Instituto Tecnológico de Aeronáutica (Brazil) and the University of Modena and Reggio Emilia (Italy). The coordinator of the project is Prof. Carlos Henrique Costa Ribeiro.</p>

## Acknowledgements

Date	2022
	<p>My paper</p> <p>M. Cavorsi, B. Capelli, L. Sabattini and S. Gil <i>Multi-Robot Adversarial Resilience using Control Barrier Functions</i>. In <i>Robotics: Science and Systems (RSS)</i>, 2022. New York (NY), USA.</p> <p>has been selected as finalist for the best paper award.</p>
Date	2019
	<p>My paper</p> <p>F. Ferraguti, C. Talignani Landi, L. Sabattini, M. Bonfé, C. Fantuzzi, and C. Secchi. <i>Adaptive admittance control for a safe and efficient human-robot interaction</i>. In <i>I-RIM 3D, Italian Conference on Robotics and Intelligent Machines</i>, 2019. Rome, Italy</p> <p>has been selected as finalist for the best interactive presentation</p>
Date	2019

My paper

F. Bertoncelli, F. Ruggiero, and L. Sabattini. *Wheel slip avoidance through a nonlinear model predictive control for object pushing with a mobile robot*. In Proceedings of the 10th IFAC Symposium on Intelligent Autonomous Vehicles (IAV), Gdansk, Poland, jul. 2019

has been selected as finalist for the IAV 2019 Young Author Best Paper Award

Date

2018

I have been awarded with the "Fabrizio Flacco" Young Author Best Paper Award of the Italian Chapter of the IEEE Robotics and Automation Society for my paper

A. Gasparri, L. Sabattini, and G. Ulivi. *Bounded control law for global connectivity maintenance in cooperative multi-robot systems*. IEEE Transactions on Robotics, 33(3):700-717, June 2017

Date

2018

My paper

M. Minelli, M. Kaufmann, J. Panerati, C. Ghedini, G. Beltrame, and L. Sabattini. *Stop, think, and roll: Online gain optimization for resilient multi-robot topologies*. In Proceedings of the International Symposium on Distributed Autonomous Robotic Systems (DARS), Boulder, CO, USA, oct. 2018

has been selected as finalist for the DARS 2018 Best Paper Award

Date

2018

The technical committee on Multi-robot System, for which I am serving as the corresponding co-chair, has been awarded with the IEEE RAS most active technical committee award 2018

Date

2017

I have been recipient of the FFABR (Fondo per il finanziamento delle attività base di ricerca) fund, from the Italian Ministry of Education, University and Research, awarded based on the scientific production in the period 2012-2016

Date

2017

I have been elevated to the grade of Senior Member of the IEEE

## PhD and MSc evaluation committees

Date

2023

Candidate

Fabrizio Tavano

Affiliation

University of Naples, Italy

Thesis title

Multi-Robot Distributed Strategies for Priority-Based Sanitization of Railway Stations

Phd/MSc

PhD

Advisor(s)

Prof. Vincenzo Lippiello

Date

2021

Candidate

Wendwosen Bellele Bedada

Affiliation

University of Bologna, Italy

Thesis title

Safe and Collaborative Navigation and Interaction with Mobile Manipulators in Domestic Appliance Test Labs

Phd/MSc

PhD

Advisor(s)

Prof. Gianluca Palli

Date

2021

Candidate

Davide Bazzi

Affiliation

Politecnico di Milano, Italy

Thesis title

Physical human-robot interaction through goal-driven manual guidance

Phd/MSc

PhD



Advisor(s)	Prof. Paolo Rocco, Prof. Luca Bascetta
Date	2020
Candidate	Jayam Patel
Affiliation	Worcester Polytechnic Institute, USA
Thesis title	Improving Human Performance in Multi-Human Multi-Robot Interaction
Phd/MSc	PhD
Advisor(s)	Prof. Carlo Pincioli
Date	2020
Candidate	Matheus Berger Quemelli
Affiliation	Universidade Federal de Vicosa
Thesis title	Detecting and Transporting Objects by Pushing-Only Approach
Phd/MSc	MSc
Advisor(s)	Prof. Alexandre Santos Brandao
Date	2020
Candidate	Emiliano Di Marino
Affiliation	University of Salerno, Italy
Thesis title	An Auction-based Approach to Control Automated Warehouses using Smart Vehicles
Phd/MSc	PhD
Advisor(s)	Prof. Francesco Basile
Date	2020
Candidate	Anna Mannucci
Affiliation	University of Pisa, Italy
Thesis title	Intra-Logistics with Integrated Automatic Deployment: from one to multi-mobile robot systems
Phd/MSc	PhD
Advisor(s)	Prof. Lucia Pallottino
Date	2020
Candidate	Alicja Barbara Wasik
Affiliation	EPFL, Switzerland and IST, Portugal
Thesis title	Institutional Robotics for Socially Aware Navigation in Multi-Robot Systems
Phd/MSc	PhD
Advisor(s)	Prof. Alcherio Martinoli, Prof. Pedro U. Lima
Date	2018
Candidate	Francesco Wanderlingh
Affiliation	University of Genova, Italy
Thesis title	Cooperative Robotics for the Smart Factory
Phd/MSc	PhD
Advisor(s)	Prof. Giuseppe Casalino

### PhD students supervision

Date	2022 - today
PhD student	Mattia Catellani
Research topic	Multi-robot systems: control and coordination
Date	2022 - today

PhD student	Mehdi Belal
Research topic	Multi-robot systems: control and coordination
Date	2022 - today
PhD student	Andrea Ruo (co-tutor. Advisor: Prof. Valeria Villani)
Research topic	Modeling, control and interaction for multi-arm robots
Date	2022 - today
PhD student	Alessandro Bonetti
Research topic	Traffic control for industrial automated vehicles
Date	2019 - 2023
PhD student	Federico Pratissoli
Research topic	Multi-robot systems: from theory to real-world application
Date	2018 - 2022
PhD student	Beatrice Capelli
Research topic	Multi-robot systems: control and interaction
Date	2018 - 2022
PhD student	Filippo Bertonecelli
Research topic	Cooperative transportation with multi-robot systems

### Service for scientific societies

Date	2014 - 2021
	L. Sabattini is one of the founders, together with A. Franchi (LAAS-CNRS, France) and N. Ayanian (Univ. of Southern California, USA) of the Technical Committee on Multi-Robot Systems, within the IEEE Robotics and Automation Society. He has serving as the Corresponding Co-Chair from its foundation (in 2014) to 2021.

### Memberships of scientific societies

Date	2018
	Member of the Nomination Committee of the IEEE RAS Award for Most Active Technical Committee (2019)
Date	2017 - Today
	Senior Member, IEEE
Date	2014 - 2021
	Funding Co-Chair, and Corresponding Co-Chair, IEEE/RAS Technical Committee on Multi-Robot Systems
Date	2012 - 2017
	Member, IEEE/RAS Technical Committee on Networked Robots
Date	2008 - Today
	Member, IEEE
Date	2008 - Today
	Member, IEEE Robotics and Automation Society (RAS)
Date	2008 - Today
	Member, IEEE Control System Society (CSS)
Date	2014 - Today
	Member, IFAC Technical Committee 4.3 Robotics
Date	2016 - Today
	Member, IFAC Technical Committee 4.5 Human Machine Systems

**Scientific publications**

## International journals

- [1] B. Capelli, M. Santos, and L. Sabattini. Towards the legibility of multi-robot systems. *ACM Transactions on Human-Robot Interaction*, 2024
- [2] F. Bertoncelli, V. Radhakrishnan, M. Catellani, G. Loianno, and L. Sabattini. Directed graph topology preservation in multi-robot systems with limited field of view using control barrier functions. *IEEE Access*, 12:9682–9690, 2024
- [3] M. Cavorsi, L. Sabattini, and S. Gil. Multi-robot adversarial resilience using control barrier functions. *IEEE Transactions on Robotics*, 40:797–815, 2024
- [4] M. Catellani and L. Sabattini. Distributed control of a limited angular field-of-view multi-robot system in communication-denied scenarios: A probabilistic approach. *IEEE Robotics and Automation Letters*, 9(1):739–746, January 2024
- [5] F. Pratissoli, A. Reina, Y. Kaszubowski Lopes, C. Pinciroli, G. Miyauchi, L. Sabattini, and R. Gross. Coherent movement of error-prone individuals through mechanical coupling. *Nature Communications*, 14(4063), 2023
- [6] P. Ong, B. Capelli, L. Sabattini, and J. Cortes. Nonsmooth control barrier function design of continuous constraints for network connectivity maintenance. *Automatica*, 156:111209, October 2023
- [7] F. Pratissoli, R. Brugioni, N. Battilani, and L. Sabattini. Hierarchical traffic management of multi-agv systems with deadlock prevention applied to industrial environments. *IEEE Transactions on Automation Science and Engineering*, 2023
- [8] V. Villani, C. Secchi, M. Lippi, and L. Sabattini. A general pipeline for online gesture recognition in human-robot interaction. *IEEE Transactions on Human-Machine Systems*, 53(2):315–324, April 2023
- [9] B. Capelli, C. Secchi, and L. Sabattini. Passivity and control barrier functions: Optimizing the use of energy. *IEEE Robotics and Automation Letters*, 7(2):1356–1363, April 2022
- [10] E. Prati, V. Villani, M. Peruzzini, and L. Sabattini. An approach based on vr to design industrial human-robot collaborative workstations. *Applied Sciences*, 11(24), 2021
- [11] V. Villani, L. Sabattini, G. Zanelli, E. Callegati, B. Bezzi., P. Baranska, Z. Mockallo, D. Zolnierczyk-Zreda, J. Czerniak, V. Nitsch, A. Mertens, and C. Fantuzzi. A user study for the evaluation of adaptive interaction systems for inclusive industrial workplaces. *IEEE Transactions on Automation Science and Engineering*, 19(4):3300–3310, oct. 2022
- [12] E. Prati, V. Villani, F. Grandi, M. Peruzzini, and L. Sabattini. Use of interaction design methodologies for human-robot collaboration in industrial scenarios. *IEEE Transactions on Automation Science and Engineering*, 19(4):3126–3138, oct. 2022
- [13] J. Aleotti, A. Baldassarri, M. Bonfé, M. Carricato, D. Chiaravalli, R. Di Leva, C. Fantuzzi, S. Farsoni, G. Innero, D. Lodi Rizzini, C. Melchiorri, R. Monica, G. Palli, J. Rizzi, L. Sabattini, G. Sampietro, and F. Zaccaria. Toward future automatic warehouses: An autonomous depalletizing system based on mobile manipulation and 3d perception. *Applied Sciences*, 11(13), 2021

- [14] V. Villani, L. Sabattini, D. Zolnierczyk-Zreda, Z. Mockallo, P. Baranska, and C. Fantuzzi. Worker satisfaction with adaptive automation and working conditions: theoretical model and questionnaire as assessment tool. *International Journal of Occupational Safety and Ergonomics (JOSE)*, 0(0):1–16, 2021
- [15] J. N. Czerniak, N. Schierhorst, V. Villani, L. Sabattini, C. Brandl, A. Mertens, M. Schwalm, and V. Nitsch. The index of cognitive activity - eligibility for task-evoked informational strain and robustness towards visual influences. *Applied Ergonomics*, 92:103342, 2021
- [16] F. Fruggiero, A. Lambiase, S. Panagou, and S. Sabattini. Cognitive human modeling in collaborative robotics. *Procedia Manufacturing*, 51:584 – 591, 2020. 30th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM2021)
- [17] V. Villani, L. Sabattini, P. Baranska, E. Callegati, J. N. Czerniak, A. Debbache, M. Fahimipirehgalin, A. Gallasch, F. Loch, R. Maida, A. Mertens, Z. Mockallo, F. Monica, V. Nitsch, E. Talas, E. Toschi, J. Vogel-Heuser, B. Willems, D. Zolnierczyk-Zreda, and C. Fantuzzi. The INCLUSIVE system: A general framework for adaptive industrial automation. *IEEE Transactions on Automation Science and Engineering*, 18(4):1969–1982, October 2021
- [18] V. Villani, M. Righi, L. Sabattini, and C. Secchi. Wearable devices for the assessment of cognitive effort for human-robot interaction. *IEEE Sensors*, 20(21):13047–13056, November 2020
- [19] K. Khateri, M. Pourgholi, M. Montazeri, and L. Sabattini. A connectivity preserving node permutation local method in limited range robotic networks. *Robotics and Autonomous Systems*, 129:103540, July 2020
- [20] N. Ayanian, P. Robuffo Giordano, R. Fitch, A. Franchi, and L. Sabattini. Guest editorial: special issue on multi-robot and multi-agent systems. *Autonomous Robots*, 2020
- [21] J. J. Chung, D. Miklic, L. Sabattini, K. Tumer, and R. Siegwart. The impact of agent definitions and interactions on multiagent learning for coordination in traffic management domains. *Autonomous Agents and Multi-Agent Systems*, 34(21), 2020
- [22] M. Minelli, J. Panerati, M. Kaufmann, C. Ghedini, G. Beltrame, and L. Sabattini. Self-optimization of resilient topologies for fallible multi-robots. *Robotics and Autonomous Systems*, 124, February 2020
- [23] V. Villani, B. Capelli, C. Secchi, C. Fantuzzi, and L. Sabattini. Humans interacting with multi-robot systems: a natural affect-based approach. *Autonomous Robots*, 44:601–616, March 2020
- [24] V. Villani, L. Sabattini, F. Loch, B. Vogel-Heuser, and C. Fantuzzi. A general methodology for adapting industrial hmis to human operators. *IEEE Transactions on Automation Science and Engineering*, 18(1):164–175, January 2021
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