Curriculum Vitae

PERSONAL INFORMATION

Last name, first name:	Garabini, Manolo
ORCID:	0000-0002-5873-3173
Date of birth:	21-04-1984
Nationality:	Italian

EDUCATION

2014 PhD Robotics, Automation, and Bioengineering
Faculty of Engineering, Department of Information Engineering, Università di Pisa, Italy
PhD Supervisor: Antonio Bicchi

2010 Master Mechanical Engineering
Faculty of Engineering, Università di Pisa, Italy

CURRENT POSITION

2019 Assistant Professor (Ricercatore a Tempo Determinato b))
Faculty of Engineering, Department of Information Engineering, Università di Pisa, Italy

PREVIOUS POSITIONS

2014 – 2018 Research Fellow (Assegno di Ricerca)
Faculty of Engineering, Research Centre "E. Piaggio", Università di Pisa, Italy

2011 – 2014 PhD Student
Faculty of Engineering, Department of Information Engineering, Università di Pisa, Italy

FELLOWSHIPS AND AWARDS

2021 Researcher of the Month – Università di Pisa

2020 Best Paper on Planning and Control of Robotic Systems – Second Italian Conference of Robotics and Intelligent Machines – Istituto Italiano di Robotica e Macchine Intelligenti

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

Current group

PostDocs: Franco Angelini

PhD Students: Simone Monteleone, Alessandro Palleschi, Mathew Jose Pollayil, Michele Pierallini, Saroj Chhatoi, Alok Ranjan, Antonello Scaldaferri,

Research Fellows: Andrea Timperi, Giuseppe Alfonso, Matteo Fois, Giuliano Dami

Former group members

PostDocs: Gian Maria Gasparri, Alexandra Velasco Vivas, Riccardo Mengacci, Chiara Gabellieri,

Phd Students: Sariah Mghames, Tobia Marcucci, Antonio Di Lallo
Research Fellows: Marco Gugliotta

TEACHING ACTIVITIES

20018 – Present Lecturer – Foundations of Automatic Control, Engineering Faculty, Università di Pisa, Italy
20020 – Present Co-Lecturer – Automatic Control, Engineering Faculty, Università di Pisa, Italy

ORGANISATION OF SCIENTIFIC WORKSHOPS

2021 IROS21 Workshop – Robotics for Environmental Monitoring - Organizer / Virtual
2020 IROS20 Workshop - Learning impedance modulation for physical interaction: Insights from humans and advances in robotics - Organizer / Virtual
2019 ICRA19 Workshop - Optimal Planning and Control Fusing Offline and Online Algorithms - Organizer / Canada

INSTITUTIONAL RESPONSIBILITIES

2021 – Present Member of the Information Engineering Department board, Università di Pisa
2020 – Present Member of the Technical Patent Committee, Università di Pisa
2020 – Present Member of the PhD Student Committee, Department of Information Engineering, Università di Pisa

REVIEWING ACTIVITIES

2019 – Present Associate Editor, Frontiers in Bionics and Biomimetics, Frontiers
2019 – Present Reviewer, The International Journal of Robotics Research, SAGE
2015 – Present Reviewer, IEEE Robotics and Automation Letters, IEEE RAS
2015 – Present Reviewer, IEEE Robotics and Automation Magazine, IEEE RAS
2012 – Present Reviewer, IEEE Transactions on Robotics, IEEE RAS
2012 – Present Reviewer, ICRA, IEEE RAS
2012 – Present Reviewer, IROS, IEEE RAS

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2017 – Present Member (Id 95038528), IEEE Robotics and Automation Society

MAJOR COLLABORATIONS

Alessandro de Luca - Università la Sapienza di Roma, Italy. I was one of the team members of the University of Pisa in the FP7 project SAPHARI led by Alessandro, and we recently co-authored a publiaction (Palleschi et al. 2020)
Alin Albu-Schaeffer - DLR, Germany. I was one of the team members of the University of Pisa in the FP7 project VIACTORS led by Alin, and we recently co-authored two publications (Vanderborght et al. 2013, and Kashiri et al. 2018)
Nikolaos Tsagarakis – IIT, Italy, I was one of the team member of the University of Pisa in the FP7 WALK-MAN project led by Nikolaos, I was a member of the Italian team at the DRC 2015, and we co-authored several publications.
Diego Torricelli - CSIC, Spain. I am the coordinator of Dysturbance, a sub-project of the H2020 project EUROBENCH led by Diego, and Diego is a lcoal PI of the H2020 project NI that I am coordinating.
Achim Lilienthal - Orebro University, Sweden. I am one of the team members of the University of Pisa in the H2020 projects ILIAD and DARKO led by Achim.
Michael Mistry - University of Endimburgh, UK. I am local PI at University of Pisa in the H2020 project THING led by Michael, and we recently co-authored a publication (Angelini et al. 2019).
Sami Haddadin – TUM, Germany. Sami was one of the reviewers of my PhD thesis, and we are currently collaborating in the H2020 projects ILIAD and DARKO.
Marco Hutter – ETH-Z, Switzerland. We are currently collaborating in the H2020 THING project, and Marco is a local PI of the H2020 project NI that I am coordinating.

Achievements: Research

I co-authored more than 80 papers in peer-reviewed international journals and conference proceedings (citations > 2000, h-index 20, source Scholar). I have been involved in several international research projects (e.g. ILIAD, DARKO, SOFTPRO) as team member and currently I am coordinating the NI H2020 project and Dystaurbance (as subproject of the H2020 project EUROBENCH), and I am local principal investigator of the THING H2020 project. In total I raised more than 1,5 M Eur. I have been invited speaker in workshops at five international events (e.g. IROS). I co-organized 2 workshops in the flagship Robotics conferences (ICRA, IROS). I am a co-founder of qbrobotics s.r.l., a spin-off company of Università di Pisa.

SELECTED PUBLICATIONS

Optimality principles in variable stiffness control: The VSA hammer, **Manolo Garabini**, Andrea Passaglia, Felipe Belo, Paolo Salaris, Antonio Bicchi, 2011/9/25, 2011 Ieee/Rsj International Conference on Intelligent Robots and Systems, Pages 3770-3775 (Scholar cit. 125)

Walk-man: A high-performance humanoid platform for realistic environments, Nikolaos G Tsagarakis, Darwin G Caldwell, Francesca Negrello, Wooseok Choi, Lorenzo Baccelliere, Vo-Gia Loc, J Noorden, Luca Muratore, Alessio Margan, Alberto Cardellino, Lorenzo Natale, E Mingo Hoffman, Houman Dallali, Navvab Kashiri, Jörn Malzahn, Jinoh Lee, Przemyslaw Kryczka, Dimitrios Kanoulas, **Manolo Garabini**, M Catalano, Mirko Ferrati, Valerio Varricchio, Lucia Pallottino, Corrado Pavan, Antonio Bicchi, Alessandro Settimi, Alessio Rocchi, Arash Ajoudani, 2017/10, Journal of Field Robotics, Volume 34, Issue 7, Pages 1225-1259 (Scholar cit. 166)

Wrapp-up: A dual-arm robot for intralogistics, **Manolo Garabini**, Danilo Caporale, Vinicio Tincani, Alessandro Palleschi, Chiara Gabellieri, Marco Gugliotta, Alessandro Settimi, Manuel G Catalano, Giorgio Grioli, Lucia Pallottino, 2020/10/5, IEEE Robotics & Automation Magazine, IEEE (Scholar cit. 2)

On the motion/stiffness decoupling property of articulated soft robots with application to model-free torque iterative learning control, Riccardo Mengacci, Franco Angelini, Manuel G Catalano, Giorgio Grioli, Antonio Bicchi, **Manolo Garabini**, 2020/8/28, The International Journal of Robotics Research, SAGE (Scholar cit. 6)

Time-optimal trajectory planning for flexible joint robots, Alessandro Palleschi, Riccardo Mengacci, Franco Angelini, Danilo Caporale, Lucia Pallottino, Alessandro De Luca, **Manolo Garabini**, 2020/1/13, IEEE Robotics and Automation Letters, Volume 5, Issue 2, Pages 938-945, IEEE (Scholar cit. 4)

EUROPEAN PUBLIC-FUNDED RESEARCH GRANTS (ROLE COORDINATOR OR LOCAL PRINCIPAL INVESTIGATOR)

Natural Intelligence for Robotic Monitoring of Habitats (NI), H2020 Research and Innovation Programme Call: H2020-ICT-2020-2, Topic ICT-47-2020 - Research and Innovation boosting promising robotics applications, Id: 101016970, role: **Coordinator**, Total budget 3 053 428 Eur, Coordinator budget 992 500 Eur.

subTerranean Haptic INvestiGator (THING), H2020 Research and Innovation Programme Call: H2020-ICT-2017-1, Topic ICT-27-2017 - System abilities, SME & benchmarking actions, safety certification, Id: 780883, role: **local Principal Investigator** at Università di Pisa (UNIPI), Total budget 4 071 685 Eur, UNIPI budget 454 375 Eur

Dysturbance, EUROBENCH sub-project Call: FSTP-1 Developing the Framework, role: **Coordinator**, Total budget 200 000 Eur, Coordinator budget 100 000 Eur

INVITED PRESENTATIONS

Keynote Speaker 14th International Human-Friendly Robotics Workshop 28-29 Oct 2021

1st IEEE Soft Robotics Debate on Soft Robotics Control and Morphological Computation 4.0, Virtual Event, 13-07-2020

Workshop on Factory of the Future – How to digitalize the robot-aided manufacturing process in industry 4.0, IEEE/RSJ International Conference on Intelligent Robots and Systems - IROS19, Macau, 08-11-2019

Workshop on Benchmarking Wearable Robots from key enabling technologies to, experimental methods to final applications, International Exhibition and Conference for Exoskeleton & Human Augmentation Systems - ExoBerlin 2019, Berlin, 22-10-2019

Workshop on Locomotion and Manipulation: Unifying Solutions Across Aerial and Terrestrial Regimes, IEEE RAS International Conference on Humanoid Robots - Humanoids 2017, Birmingham, 15-11-2017

Workshop on the Energetic Economy of Robotics and Biological Systems: a challenging handicap to overcome, IEEE/RSJ International Conference on Intelligent Robots and Systems - IROS17, Vancouver, 24-09-2017

Achievements: Technology Transfer

GRANTED PATENTS

Artificial hand, Antonio Bicchi, Manuel Giuseppe Catalano, Giorgio Grioli, **Manolo Garabini**, Cristina Piazza, Cosimo Della Santina, Publication Date 2021/2/9, Patent office US, Patent number 10912661

Variable pliability actuator, Antonio Bicchi, Manuel Giuseppe Catalano, **Manolo Garabini**, Giorgio Grioli, Publication date 2016/1/5, Patent office US, Patent number 9227328

PRIVATE FUNDED RESEARCH PROJECTS (ROLE PRINCIPAL INVESTIGATOR)

E-SOFT 1, funded by Eurosft s.r.l., budget 36 KEur.

E-SOFT 2, funded by Eurosft s.r.l., budget 56 KEur.

CO-FOUNDED COMPANIES

qbrobotics s.r.l., founded in 2011, has the mission to foster the diffusion of soft robotics technology. It currently commercializes small-scale modular variable stiffness actuators and under-actuated artificial hands.

XStar Motion s.r.l., founded in 2021, has the mission to revolutionize the motion planning technology in automation and robotics industries.

Pisa, 30/12/2022

Manolo Garabini