University Academic Curriculum Vitae

| Personal | Andrea |
|-------------|--------|
| information | |

Education since leaving school

- 2010, Bachelor's degree in Telecommunications Engineering, University of Trento Italy
- 2013, Master's degree in Mechatronic Engineering (summa cum laude), University of Trento - Italy
- 2018, Doctorate (Dr.-Ing.) at the Chair of Robotics, AI and Real-time systems, Technical University of Munich (TUM) – Germany
- 2023, national scientific qualification (ASN) for the role of associate professor in the Italian higher education system for the disciplinary field of 09/A2 – Applied mechanics (ING-IND/13 Meccanica Applicata alle Macchine)

Present appointment

- Head of RISE "Robotics and Intelligent Systems Engineering"
- Since November 2020

Giusti

- Level of appointment: Head of unit / Principal investigator
- Research institute: Fraunhofer Italia Research s.c.a.r.l.

Professional experience

| From / | Job title | Name of | Main responsibilities |
|---|------------------------------|--|---|
| to | | Institution | |
| Nov. 2017/ Nov. 2020 | Researcher | Fraunhofer Italia Research | Execution, management and writing of researchprojects in the unit "Automation and Mechatronics Engineering" |
| 2020 | | | (since Jan. 2019) scientific coordination for the Fraunhofer Italia's application center ARENA - "Area for Research and Innovative Applications" |
| Feb. 2017 – Mar. 2017 and Apr. 2016 – Jul. 2016 | Visiting/guest researcher | Italian Institute of Technology - IIT | Research activity and development of model- based control methods for reconfigurable robots with elastic joints and tests with prototypes |
| Jul. 2014 / Oct. 2017 | EU- researcher | Technical University of Munich | Research and implementation of modelling and control methods for modular reconfigurable robot manipulators |
| | | (TUM) | Teaching assistant for "Fundamentals of Artificial Intelligence"; |
| | | | Organizer and lecturer of the lab course "Control of Modular Robots"; |
| | | | Tutor for the seminar "Cyber-Physical Systems |
| Jul. 2013 / May 2014 | Project engineer | Whirlpool R&D | Design and test of control methods for food preparation and processing systems, modelling and identification of thermal systems involving high frequency power electronics. |

Participation in exhibitions (where applicable)

- Invited speaker at the exhibition "A&T Automation and Testing", Vicenza, Italy, round table "La robotica collaborativa e Industria 5.0: la reinvenzione dell'artigianato?". Presentation title: "Cross-industry flexible automation with modular robots", held on 07/11/2024.
- Invited speaker at the workshop and open-lab event on Field Robotics, organized by the Free University of Bozen-Bolzano, Bolzano. Presentation title: "Advanced Mobile Robotics Applications", held on 01/07/2021.
- Invited speaker at the E-Edu 4.0 Webinar "Robotica Industriale Avanzata" organized by the Free University of Bozen-Bolzano, Bolzano. Held online on 04/03/2021.
- Invited speaker at SAVE Web Edition, Automazione, intelligenza artificiale e soluzioni 4.0 per l'industria del futuro. Ente Italiano Organizzazione Mostre (EIOM). Presentation title: "ROS e robotica avanzata in Fraunhofer Italia Arena: il progetto anti-covid Balto", held online on 27/10/2020.
- Invited speaker at SAVE Web Edition, Automazione, intelligenza artificiale e soluzioni 4.0 per l'industria del futuro. Ente Italiano Organizzazione Mostre (EIOM). Presentation title: "Automazione flessibile attraverso sistemi riconfigurabili", held online on 02/07/2020.
- Speaker at the event "Giornate del Tirolo Forum Europeo Alpbach" as a finalist for the Euregio young researchers award, Alpbach, Austria, 2019.
- Invited speaker at the congress "Automazione 5.0 L'uomo, l'intelligenza artificiale e il robot", Tecniche Nuove, Milano, Italy, held on 02/07/2019.
- Participation as a volunteer on 23-24 July 2016 to the outreach event organized by the European Commission: "Science is a revolution", museum of Science and Industry of Manchester, UK. The outreach event was a scientific exhibition including hands-on activities for children.
- Presenter of research-paper contributions at the following scientific conferences:
 - IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2015, Hamburg, Germany, with the contribution: "Automatic centralized controller design for modular and reconfigurable robot manipulators";
 - IEEE American Control Conference (ACC), 2016, Boston, Massachusetts, USA, with the contribution: "Ultimate robust performance control of rigid robot manipulators using interval arithmetic";
 - IEEE International Conference on Robotic Computing (IRC), 2017, Taichung, Taiwan, with the following contribution: "Efficient computation of interval-arithmetic-based robust controllers for rigid robots";
 - IEEE International Conference on Robotics and Automation (ICRA), 2017, Singapore, with the following contribution: "Combined inversedynamics/passivity-based control for robots with elastic joints";
 - International Conference on Robotics in the Alpe-Adria-Danube-Region (RAAD), 2019, Kaiserslautern, Germany, with the following contribution: "Collaborative robotics safety control application using dynamic safety zones based on the ISO/TS 15066: 2016";
 - International Conference of IFToMM Italy, 2022, Naples, Italy, with the following contribution: "Inverse Uncertain-Dynamics of Robot Manipulators Using Interval Arithmetic";
 - IEEE International Conference on Robotics and Automation (ICRA), 2023, London, with the following contribution: "Automatically Deployable Robust Control of Modular Reconfigurable Robot Manipulators".

Experience in academic teaching • Speaker for the "SME 5.0 Winter School", 2024, Free University of Bozen-Bolzano, Bruneck-Brunico, Italy. Title of the presentation: "New Trends in Intelligent Robotic Applications". Held on 18/12/2024. PhD level.

| | Design Bozen- "Mecca Bolzan robots" A.Y. 20 Free L degree hours I A.Y. 20 Bozen- mecha hours e A.Y. 20 Bozen- mecha hours e Summe Exister (weekly Summe course Münch Summe Summe Cyber Comm Winter Intellige | and Motion H Bolzano, Italy. anica Applicata o. Title of the ". Held on 31/01. 024-2025, lecture Iniversity of Bo ectures, 12 hour 023-2024, "AI Ap Bolzano, part of nical engineering exercises) 022-2023, "AI Ap Bolzano, part of nical engineering exercises) 022-2023, "AI Ap Bolzano, part of nical engineering exercises) er semester 201 "Control of Mod en. Commitment of 2 SWS Semesters 2014 enz" (fundament | Planning for Ro Organized by alle Macchine" presentation: "C /2020. PhD level er for the course zen-Bolzano, pa echanical enginer rs exercises). oplications in Ind f the program of g. Commitment of pplications in Ind f the program of g. Commitment of f the program of f the program of f the program of f the program of g. Commitment of f the program of g. Commitment of f the program of f | e "AI Applications art of the program ering. Commitmen ustry" at the Free the master's deg of 48 hours (24 hours) ustry" at the Free the master's deg of 40 hours (10 hours) se "Safe Human-F at München. Commi- ers 2015/16 and 2 the Technische Un kly hours per sem er semester 2016 ische Universität | ree Universit nd the grouversity of Ba ar & collabor in Industry" a m of the man of the man th of 24 hour University of ree in industr ours lectures, University of ree in industr ours lectures, Robot Co- mitment of 6 2016/17, prace niversität nester). i/17, seminar München. er Künstlicher Technische | ty of p of ozen- rative at the ster's rs (12 ial 24 ial 30 SWS ctical |
|------------------------------------|---|---|---|--|---|---|
| Other academic responsibilities | Guest Roboti Roboti Co-org Collabo Interna London Co-org Recont Advant Robots Superv collabo Univers | editor for the sp c and Mechatron cs and Automat anizer and spea prative Robot Te- tional Conference n, 29/05/2023. anizer and spea Figurable Robot cements", at the s and Systems (rision of students pration with univer- sity of Innsbruck | ecial issue "Traje nic Systems", MI ion, 2024. aker at the interna- echnologies in Co ce on Robotics a aker at the interna Mechatronics an IEEE/RSJ Intern IROS), 2021, held s for master/bac ersities (Free Uni c, and University | | r Intelligent nces, section "Configurable e IEEE CRA), 2023, "Modular and nges and Rec ce on Intellige /2021. Fraunhofer Ita | e cent ent |
| Research | | | | | • | 7 |
| grants (last 5 years | Date granted 2023 | Award Holder(s) Eurac Research, | Funding Body European | Title Robotica di campo | Amount received ~0.8M € | 4 |
| I \ | 2020 | | Laropodii | | 0.000 | 1 |

(last 5 years only)

| Date granted | Award Holder(s) | Funding Body | Title | Amount received |
|-----------------|-------------------|--------------|-------------------|--------------------|
| 2023 | Eurac Research, | European | Robotica di campo | ~0.8M € |
| | Fraunhofer Italia | Regional | e soluzioni | (whole |
| | Research scarl, | Development | autonome per il | project) |
| | SAIDEA SRL, | Fund | settore FV | |
| | Deltamax | (EFRE/FESR) | (ROBO&M), CUP | ~300k € (at |
| | Automazione, | Àutonomous | D53C23003080007 | Fraunhofer |
| | WATT SERVICE | province of | | Italia) |

| | SRL | Bozen/Bolzano - Investment for Growth and Jobs Programme 2021 – 2027 | | |
|----------------|---|--|---|--|
| 2020 | Fondazione Istituto Italiano di Tecnologia (IIT), Technische Universität München (TUM), Fraunhofer Italia Research scarl, Profactor GmbH, Centralny Instytut Ochrony Pracy - Państwowy Instytut Badawczy, Budimex Spolka Akcyjna | EU, H2020-ICT- 2020-2 | Configurable Collaborative Robot Technologies (CONCERT), ID 101016007 | ~3M€(whole project) ~0.5M€(at Fraunhofer Italia) |
| 2020 | Free University of Bozen-Bolzano, Fraunhofer Italia Research | The Autonomus Province of Bolzano/Bozen- South Tyrol | Reconfigurable Collaborative Agri- Robots (RECOARO), CUP I52F20000300005 | ~238k € (whole project) ~95k € (at Fraunhofer Italia) |
| 2020 | Fraunhofer Italia Research scarl | European Regional Development Fund (EFRE/FESR) Autonomous province of Bozen/Bolzano - Investment for Growth and Jobs Programme2014 - 2020 | Sustainable Manufacturing throughApplication of Reconfigurable and inTelligent systems in Production processes (SMART-Pro), CUP B52F20001530009 | ~400k € (at Fraunhofer Italia) |
| 2019 - 2024 | Fraunhofer Italia Research scarl | Multiple clients | Multiple contracts for research projects | Tot. ~0.8M € |

Publications

| Journ | al papers |
|-------|--|
| J18 | M. Todescato, D. T. Matt, and A. Giusti , "Application of Bayesian Optimization in Gripper Design for Effective Grasping," in IEEE Access, vol. 13, pp. 10215-10226, 2025. DOI: 10.1109/ACCESS.2025.3528643 |
| J17 | L. Scalera, F. Lozer, A. Giusti , A. Gasparetto, "An experimental evaluation of robot- stopping approaches for improving fluency in collaborative robotics," Robotica, 2024, 42(5):1386-1402. DOI: 10.1017/S0263574724000262 |
| J16 | M. Todescato, O. Braholli, D. Chaltsev, I. Di Blasio, D. Don, G. Egger, J. Emig, G. Pasetti Monizza, P. Sacco, D. Siegele, D. Steiner, M. Terzer, M. Riedl, A. Giusti , and D. Matt, "Sustainable manufacturing through application of reconfigurable and intelligent systems in production processes: a system perspective," Sci Rep 13, 22374 (2023). DOI: https://doi.org/10.1038/s41598-023-49727-5 |
| J15 | L. Scalera, C. Nainer, A. Giusti, A. Gasparetto, "Robust Safety Zones for Manipulators with Uncertain Dynamics in Collaborative Robotics," International Journal of Computer Integrated Manufacturing, 2023. DOI: https://doi.org/10.1080/0951192X.2023.2258111 |
| J14 | S. B. Liu, A. Giusti and M. Althoff, "Velocity Estimation of Robot Manipulators: An Experimental Comparison," IEEE Open Journal of Control Systems, vol. 2, pp. 1-11, 2023. DOI: 10.1109/OJCSYS.2022.3222753 |
| J13 | L. Scalera, A. Giusti , R. Vidoni, A. Gasparetto, "Enhancing fluency and productivity in human-robot collaboration through online scaling of dynamic safety zones," The International Journal of Advanced Manufacturing Technology, 121 (9-10), 2022. https://doi.org/10.1007/s00170-022-09781-1 |
| J12 | R.A. Rojas, A. Giusti , R. Vidoni, "Online Computation of Time-Optimization-Based, Smooth and Path-Consistent Stop Trajectories for Robots," Robotics, 2022, 11(4), 70. https://doi.org/10.3390/robotics11040070 |
| J11 | C. Nainer and A. Giusti , "Automatically Deployable Robust Control of Modular Reconfigurable Robot Manipulators," IEEE Robotics and Automation Letters, 2022, DOI: 10.1109/LRA.2022.3155826 |
| J10 | J. G. Adigun et al., "Collaborative Artificial Intelligence Needs Stronger Assurances |

| | Driven by Risks," in Computer, vol. 55, no. 3, pp. 52-63, March 2022. DOI: 10.1109/MC.2021.3131990. |
|------------|---|
| J 9 | A. Giusti, S. B. Liu and M. Althoff, "Interval-Arithmetic-Based Robust Control of Fully Actuated Mechanical Systems," IEEE Transactions on Control Systems Technology, 2021, DOI: 10.1109/TCST.2021.3118488 |
| J8 | C. Marcher, A. Giusti , D.T. Matt, "On the Design of a Decision Support System for Robotic Equipment Adoption in Construction Processes," Appl. Sci. 2021, 11, 11415. https://doi.org/10.3390/app112311415 |
| J7 | C. Follini, V. Magnago, K. Freitag, M. Terzer, C. Marcher, M. Riedl, A. Giusti, D.T. Matt, "BIM-Integrated Collaborative Robotics for Application in Building Construction |
| J6 | and Maintenance" Robotics, 2021, 10, 2. DOI: 10.3390/robotics10010002 C. Marcher, A. Giusti , D.T. Matt, "Decision Support in Building Construction: A Systematic Review of Methods and Application Areas," Buildings, 2020, 10(10):170. |
| J5 | DOI: https://doi.org/10.3390/buildings10100170 L. Scalera, A. Giusti , R. Vidoni, V. Di Cosmo, D.T. Matt, M. Riedl "Application of dynamically scaled safety zones based on the ISO/TS15066: 2016 for collaborative |
| J4 | robotics," International Journal of Mechanics and Control, 2020, 21, 41-49 M. Althoff, A. Giusti , S. B. Liu, A. Pereira, "Effortless creation of safe robots from modules through self-programming and self-verification", Science Robotics, Vol 4, |
| J3 | no. 31, eaaw1924, 2019. DOI: 10.1126/scirobotics.aaw1924 A. Giusti , J. Malzahn, N. Tsagarakis, and M. Althoff, "On the combined inverse- dynamics/passivity-based control of elastic-joint robots," IEEE Transactions on Robotics, vol 34, no. 6, 2018. DOI: 10.1109/TRO.2018.2861917 |
| J2 | A. Giusti, M.J.A. Zeestraten, E. Icer, A. Pereira, D.G Caldwell, S. Calinon, and M. Althoff, "Towards Flexible Automation Driven by Demonstration: Leveraging Strategies that Simplify Robotics," IEEE Robotics and Automation Magazine, vol. 25, no. 2, 2018. DOI: 10.1109/MRA.2018.2810543 |
| J1 | A. Giusti and M. Althoff, "On-the-fly control design of modular robot manipulators," IEEE Transactions on Control Systems Technology, vol. 26, no. 4, pp. 1484-1491, 2018. DOI: 10.1109/TCST.2017.2707336 |
| Confei | rence papers |
| C24 | S. Garbin, A. Gagliardo, M. Terzer, M. Todescato, D.T. Matt, and A. Giusti , "A Vision-Controlled Robotic System for Precision Agriculture and Its Application to an Artificial Vineyard," Advances in Italian Mechanism Science. IFToMM Italy 2024. Mechanisms and Machine Science, vol 163, pp. 308-316. Springer, Cham. DOI: 10.1007/978-3-031-64553-2_36 |
| C23 | M. Terzer, T. Flatscher, M. Magri, S. Garbin, J. Emig, and A. Giusti , "A Facilitated Construction Robot Programming Approach using Building Information Modelling," 10th International Conference on Control, Decision and Information Technologies (CoDIT), Vallette, Malta, 2024, pp. 2656-2661. DOI: 10.1109/CoDIT62066.2024.10708285 |
| C22 | L. Scalera, et al, "A Collaborative Robotics Application for the Assembly of Car Rear Lamps," Latest Advancements in Mechanical Engineering. ISIEA 2024. Lecture Notes in Networks and Systems, vol 1125, pp. 29-37. Springer, Cham. DOI: 10.1007/978-3-031-70465-9_4 |
| C21 | M. Todescato, A. Giusti , and D. Matt, "Gripper Design Optimization for Effective Grasping of Diverse Object Geometries," 2023 9th International Conference on Control, Decision and Information Technologies (CoDIT), Rome, Italy, 2023, pp. 01-06, DOI: 10.1109/CoDIT58514.2023.10284269 |
| C20 | A. Gagliardo, S. Garbin, M. Terzer, D.T. Matt, A.Giusti , "A BIM-Integrated Robotics Application for Color Spraying in Construction", International Conference on Construction Logistics, Equipment, and Robotics, Lecture Notes in Civil Engineering, vol. 390, pp. 194-200, 2023. |
| C19 | A. Giusti, C. Nainer, "Inverse Uncertain-Dynamics of Robot Manipulators Using Interval Arithmetic," Advances in Italian Mechanism Science. IFToMM Italy 2022. Mechanisms and Machine Science, vol 122. Springer, Cham. Doi: https://doi.org/10.1007/978-3-031-10776-4_76 |
| C18 | L. Scalera, A. Giusti , R. Vidoni, A. Gasparetto, "Online planning of path-consistent stop trajectories for collaborative robotics," Advances in Italian Mechanism Science. IFToMM Italy 2022. Mechanisms and Machine Science, vol 122. Springer, Cham. Doi: https://doi.org/10.1007/978-3-031-10776-4_80 |
| C17 | M. Feder, A. Giusti , R. Vidoni, "An approach for automatic generation of the URDF file of modular robots from modules designed using SolidWorks," Procedia Computer Science, Volume 200, 2022, Pages 858-864. DOI: https://doi.org/10.1016/j.procs.2022.01.283. |
| C16 | L. Scalera, R. Vidoni and A. Giusti , "Optimal scaling of dynamic safety zones for collaborative robotics," IEEE International Conference on Robotics and Automation (ICRA), 2021, pp. 3822-3828, doi: 10.1109/ICRA48506.2021.9561611 |

| C15 | C. Nainer, M. Feder and A. Giusti , "Automatic Generation of Kinematics and Dynamics Model Descriptions for Modular Reconfigurable Robot Manipulators," IEEE 17th International Conference on Automation Science and Engineering (CASE), 2021, pp. 45-52, doi: 10.1109/CASE49439.2021.9551680 |
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| C14 | A. Giusti <i>et al.</i> , "BALTO: A BIM-Integrated Mobile Robot Manipulator for Precise and Autonomous Disinfection in Buildings against COVID-19," IEEE 17th International Conference on Automation Science and Engineering (CASE), 2021, pp. 1730-1737, doi: 10.1109/CASE49439.2021.9551635 |
| C13 | D. Siegele, D. Steiner, A. Giusti , M. Riedl, D.T. Matt "Optimizing Collaborative Robotic Workspaces in Industry by Applying Mixed Reality". In: De Paolis L.T., Arpaia P., Bourdot P. (eds) Augmented Reality, Virtual Reality, and Computer Graphics. AVR 2021. Lecture Notes in Computer Science, vol 12980. Springer, Cham. https://doi.org/10.1007/978-3-030-87595-4_40 |
| C12 | W. Ainhauser, J. Gerstmayr, A. Giusti , "Multi-objective Trajectory Tracking Optimization for Robots with Elastic Joints". In: Zeghloul S., Laribi M.A., Sandoval J. (eds) Advances in Service and Industrial Robotics. RAAD 2021. Mechanisms and Machine Science, vol 102. Springer, Cham. DOI: 10.1007/978-3-030-75259-0_27 |
| C11 | C. Follini, M. Terzer, C. Marcher, A. Giusti , D.T. Matt, "Combining the Robot Operating Systemwith Building Information Modeling for Robotic Applications in Construction Logistics". In: Zeghloul S., Laribi M., Sandoval Arevalo J. (eds) Advances in Service and Industrial Robotics. RAAD 2020. Mechanisms and Machine Science, vol 84. Springer, Cham. DOI: 10.1007/978-3-030-48989-2_27 |
| C10 | G. Egger, D. Chaltsev, A. Giusti , D. T. Matt, "A deployment-friendly decentralized scheduling approach for cooperative multi-agent systems in production systems", Procedia Manufacturing, vol. 52, 2020, pp. 127-132. DOI: 10.1016/j.promfg.2020.11.023 |
| C9 | C. Marcher, A. Giusti , C.P. Schimanski, D.T. Matt, "Application of Decision Support Systems for Advanced Equipment Selection in Construction", Proc. of the Int. Conf. on Cooperative Design, Visualization and Engineering, Lecture Notes in Computer Science, 2019. DOI: 10.1007/978-3-030-30949-7_26 |
| C8 | V. Di Cosmo, A. Giusti , R. Vidoni, M. Riedl, D.T. Matt, "Collaborative Robotics Safety Control Application Using Dynamic Safety Zones Based on the ISO/TS 15066:2016", In: Berns K., Görges D. (eds) Advances in Service and Industrial Robotics.RAAD 2019. Advances in Intelligent Systems and Computing, vol 980. Springer, Cham. DOI: 10.1007/978-3-030-19648-6_49 |
| C7 | M. Wagner, S.B. Liu, A. Giusti , and M. Althoff, "Interval-arithmetic-based trajectory scaling and collision detection for robots with uncertain dynamics," Proc. of the Second IEEE International Conference on Robotic Computing (IRC), 2018, pp. 41-48. DOI: 10.1109/IRC.2018.00015 |
| C6 | W. Gasparetto, G. Egger, A. Giusti , E. Rauch, M. Riedl, D. T. Matt, "Intelligent workpiece carrier for distributed data collection and control in manufacturing environments," Procedia Manufacturing, vol. 24, 2018, pp. 190-195. DOI: 10.1016/j.promfg.2018.06.040 |
| C5 | A. Giusti , J. Malzahn, N. Tsagarakis, and M. Althoff, "Combined inverse- dynamics/passivity-based control for robots with elastic joints," Proc. of the IEEE International Conference on Robotics and Automation (ICRA), 2017, pp. 5281-5288. DOI: 10.1109/ICRA.2017.7989620 |
| C4 | F. Hisch, A. Giusti , and M. Althoff, "Robust control of continuum robots using interval arithmetic," Proc. of the 20th IFAC World Congress (IFAC-PapersOnLine), Vol. 50, Issue 1, 2017, pp. 5660-5665. DOI: 10.1016/j.ifacol.2017.08.1115 |
| C3 | A. Giusti and M. Althoff, "Efficient Computation of Interval-Arithmetic-Based Robust Controllers for Rigid Robots," Proc. of the First IEEE International Conference on Robotic Computing (IRC), 2017, pp. 129-135. DOI: 10.1109/IRC.2017.14 |
| C2 | A. Giusti and M. Althoff, "Ultimate robust performance control of rigid robot manipulators using interval arithmetic," Proc. of the American Control Conference |
| C1 | (ACC), 2016, pp. 2995-3001. DOI: 10.1109/ACC.2016.7525375 A. Giusti and M. Althoff, "Automatic centralized controller design for modular and |
| | reconfigurable robot manipulators," Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2015, pp. 3268-3275. DOI: 10.1109/IROS.2015.7353831 |

| (last 3 years) Project title, ID, status, project website Funding boo | ly Role in the project |
|---|---|
| province of B - Investment | Fund) Autonomous ozen/Bolzano |
| Configurable Collaborative Robot Technologies EU, H2020-IC (CONCERT), ID 101016007, completed, https://concertproject.eu/ | CT-2020-2 Principal investigator at Fraunhofer Italia and leader of a work-package |
| Reconfigurable Collaborative Agri-Robots Autonomous (RECOARO), CUP I52F20000300005, completed, Bozen/Bolzan https://www.fraunhofer.it/en/Research/advanced- Südtirol/Alto / robotics/recoaro.html funds | o, Research s.c.a.r.l. |
| Sustainable Manufacturing through Application of Reconfigurable and inTelligent systems in Production processes (SMART-Pro), CUP B52F20001530009, completed, https://www.fraunhofer.it/en/Research/sustainable innovation/SMARTpro.html European Re Development (EFRE/FESR province of Br - Investment i and Jobs Pro - 2020 | Fund at Fraunhofer Italia Research s.c.a.r.l.) Autonomous ozen/Bolzano |
| Autonomous disinfection of crucial areas based on BIM-integrated Robotics (BALTO), No. Anti- Corona 840241, completed, https://www.fraunhofer.it/en/Research/human- centered-technology/balto.html | |

Language competence

Italian: first language English: fluent (C1) German: basic (A2)

03/02/2025