Curriculum vitæ

Marco COSTANZO

(Mar. 2025)

Contents

1 Curriculum vitæ

1.1 Personal Data

Name	Marco
Surname	Costanzo
Birth Date	1994
Birth City	Napoli
Office Address	Dipartimento di Ingegneria Università degli Studi della Campania "Luigi Vanvitelli" Via Roma, 29 – 81031 Aversa (CE), Italy
E-mail	marco.costanzo@unicampania.it
Home page	roboticslab.unicampania.it – marco-costanzo.it
Google Scholar	scholar.google.com/citations?user=32g4jFAAAAAJ
Scopus	scopus.com/authid/detail.uri?authorId=57205142585

1.2 Biography

Marco Costanzo obtained the *Bachelor's Degree* cum laude in Computer and Electronic Engineering, the *Master's Degree* cum laude in Computer Engineering (curriculum Robotics and Automation), and the *Ph.D.* in Industrial and Computer Engineering at Università degli Studi della Campania "Luigi Vanvitelli", in November 2015, July 2017, and January 2021, respectively. Between May ad August 2019 he was *Visiting Research Student*, at the Institute for Artificial Intelligence (IAI) at University of Bremen (UniHB), Bremen, Germany. In September 2020 he won the prize IEEE RAS Italian Chapter "Fabrizio Flacco" Young Author Best Paper Award 2020. In July 2023 he won the Mechatronics Paper Prize. From December 2020 to December 2021 he was *Research Fellow* at Università degli Studi della Campania "Luigi Vanvitelli". From July 2022 to September 2024 he was *Researcher (RTD-A)* at Università degli Studi della Campania "Luigi Vanvitelli", where he currently holds a *Researcher (RTD-B)* position. From December 2023 he is Coordinator of the PRIN PNRR project "Dexterous Assistive Robots for improved human healthCare" (DARC). His main research interests concern in-hand robotic manipulation using tactile sensors, visual control, and safe human-robot interaction.

1.3 Current Position

- ▷ **From Oct. 2024** *Researcher* (RTD-B) at Università degli Studi della Campania "Luigi Vanvitelli", Dipartimento di Ingegneria.

1.4 Qualifications

- ▷ **06/06/2023** *National scientific qualification – Abilitazione Scientifica Nazionale alle funzioni di professore universitario di Seconda Fascia* (Settore concorsuale 09-G1 – Automatica).
- ▷ **Oct. 2020** *Professional Engineer Certificate – Abilitazione all'esercizio della professione di Ingegnere*, SEZ. A, *Ingegnere dell'Informazione*, at l'Università degli Studi

della Campania "Luigi Vanvitelli".

1.5 Bibliometric Indices (Scopus 10/03/2025)

- **H index:** *11*
- **Citations:** *385*
- **Journal Papers:** *19*

1.6 Research activities

- **01/07/2022–30/09/2024** *Researcher* (RTD-A) at Università degli Studi della Campania "Luigi Vanvitelli", Dipartimento di Ingegneria.
- **01/06/2022–30/06/2022** *Consultancy Contract*, "Developement of a dynamic Cartesian trajectory rescaling algorithm for the mechanical arm developed within the AerialCore project", at Consorzio di Ricerca per l'Energia, l'Automazione e le Tecnologie dell'Elettromagnetismo (CREATE).
- **16/03/2022–18/04/2022** *Research Assistant* "Architecture study for the automation of a waterless tanning plant", at Università degli Studi della Campania "Luigi Vanvitelli".
- **15/12/2021–15/01/2022** *Research Assistant* "Visual control software development for a robot manipulator", at Università degli Studi della Campania "Luigi Vanvitelli".
- **15/12/2020–14/12/2021** *Research Fellow* "Development of control algorithms for robotic manipulation using touch sensors", at Università degli Studi della Campania "Luigi Vanvitelli".
- **11/09/2020–11/10/2020** *Research Assistant* "Software development for the simulation of a robotic cell for the execution of pick&place tasks", at Università degli Studi della Campania "Luigi Vanvitelli".
- **07/04/2020–07/05/2020** *Research Assistant*, "Software development for the control of the Meca500 robot for automatic calibration of touch sensors", at Università degli Studi della Campania "Luigi Vanvitelli".
- **21/05/2019–21/06/2019** *Research Assistant*, "Manipulation capabilities and motion planning", at Università degli Studi della Campania "Luigi Vanvitelli".
- **03/05/2018–31/07/2018** *Consultancy Contract*, "Implementation of an 'obstacle avoidance' control algorithm, based on proximity sensors, for a robot manipulator that performs 'pick & place' tasks for objects in a typical supermarket scenario", at Consorzio di Ricerca per l'Energia, l'Automazione e le Tecnologie dell'Elettromagnetismo (CREATE).
- **03/05/2018–20/06/2018** *Research Assistant*, "Development of a ROS package to connect a tactile sensor with industrial robots", at Università degli Studi della Campania "Luigi Vanvitelli".

- ▷ **Nov. 2017–Jan. 2021** *Ph.D. in Industrial and Computer Engineering* at Università degli Studi della Campania "Luigi Vanvitelli".

- ▷ **13/10/2017–17/11/2017** *Research Assistant*, "Software development of ROS modules for the implementation of anti-slipping algorithms", at Università degli Studi della Campania "Luigi Vanvitelli".

1.7 Education

- ▷ **20/03/2023–24/03/2023** *Scuola IMT Alti Studi Lucca* "Reinforcement Learning". Prof. Mario Zanon.

- ▷ **03/07/2022–09/07/2022** *Summer School SIDRA 2022.*
"Nonlinear and Adaptive Control Techniques for Advanced Aerospace Systems", Prof. Andrea Serrani (Department of Electrical and Computer Engineering, The Ohio State University, Columbus, OH, USA).
"Network Systems in Science and Technology", Prof. Francesco Bullo (Department of Mechanical Engineering, College of Engineering, University of California, Santa Barbara, CA, USA)

- ▷ **13/01/2021** *Ph.D. in Industrial and Computer Engineering*
(XXXIII cycle–curriculum in Robotics), at Università degli Studi della Campania "Luigi Vanvitelli"with a thesis titled "Soft Contact Modeling for In-Hand Manipulation Control and Planning", Advisor: Prof. Giuseppe De Maria, Co-Advisor: Prof. Ciro Natale.

- ▷ **03/06/2020–10/06/2020** *Scuola IMT Alti Studi Lucca* "Model Predictive Control". Prof. Alberto Bemporad.

- ▷ **25/05/2020–29/05/2020** *Scuola IMT Alti Studi Lucca* "Numerical Methods for Optimal Control".
Dr. Mario Zanon.

- ▷ **May 2019–Aug. 2019** *Visiting Research Student*, at the Institute for Artificial Intelligence (IAI) at University of Bremen (UniHB), Bremen, Germany. In the framework of the REFILLS project funded by the European Commission under the H2020 programme, within Work Packages 3 and 4 with the research objective to develop an innovative control architecture of a service robot to be exploited in Scenario #3 of the project for autonomous shelf refilling.

- ▷ **23/04/2018–27/04/2018** *European Embedded Control Institute - EECI 2018* "Model Predictive Control", Paris, France.
Prof. Jan Maciejowski.

- ▷ **12/03/2018–16/03/2018** *European Embedded Control Institute - EECI 2018* "Computational Issues in Nonlinear Control", Padova, Italy.
Prof. Arthur J. Krener.

- ▷ **31/08/2017–10/09/2017** *NeaPolis Innovation Summer Campus 2017*, at STMicroelectronics, Arzano (NA), Italy.

- ▷ **Apr.–July 2017** *Course on Coursera by Stanford University* "Machine Learning". Prof. Andrew Ng.
  License number: WX2ABYVNFXPP.
  Verify at: www.coursera.org/verify/WX2ABYVNFXPP.

- ▷ **19/07/2017** *Master's Degree in Computer Science Engineering* Cum Laude, at Università degli Studi della Campania "Luigi Vanvitelli"with a thesis titled "In Hand Robotic Manipulation: A Force-Tactile Sensor Based Approach", Advisor: Prof. Giuseppe De Maria, Co-Advisor: Prof. Ciro Natale.

- ▷ **25/11/2015** *Bachelor's Degree in Electronic and Computer Science Engineering* Cum Laude, at Seconda Università degli Studi di Napoli (SUN) (currently Università degli Studi della Campania "Luigi Vanvitelli") with a thesis titled "Fast Prototyping of Control Algorithms in ROS Environment Using MATLAB Robotics System Toolbox", Advisor: Prof. Giuseppe De Maria.

1.8 Teaching activity

- ▷ **A.Y. 21/22–pres.** *Master's Degree Course* Industrial Automation and Robot Programming, Università degli Studi della Campania "Luigi Vanvitelli".

- ▷ **A.Y. 24/25–pres.** *Bachelor's Degree Course* Fondamenti di Automatica, Università degli Studi della Campania "Luigi Vanvitelli".

- ▷ **A.Y. 18/19-pres.** *Exercises* of MATLAB and ROS in the courses System Theory and Automatic Control, and Robotics.

- ▷ **A.Y. 18/19–pres.** *Co-Advisor* of 9 thesis and *Advisor* of 5 thesis in Robotics and Automatic Control.

- ▷ **A.Y. 20/21–pres.** *Member of the examination committee* of the courses System Theory, Automatic Control, Robotics, Robot Programming, Università degli Studi della Campania "Luigi Vanvitelli".

- ▷ **A.Y. 20/21–22/23** *Teaching assistant* in the scientific sector ING/INF04, appointed by Department Council N.7, 28/06/2021.

1.9 Research Groups

- ▷ **2017–pres.** *Component* of the research group of the Robotics Lab at Università degli Studi della Campania "Luigi Vanvitelli", Aversa, Italia, under the supervision of Prof. Ciro Natale.

- ▷ **Mag. 2019–Ago. 2019** *Visiting Research Student* at the Institute for Artificial Intelligence (IAI) at University of Bremen (UniHB), Bremen, Germany, under the supervision of Prof. Michael Beetz.

1.10 Research Project Activities

- ▷ **2023–pres.** *Coordinator* and *Principal Investigator* of the group at Dipartimento di Ingegneria at Università degli Studi della Campania "Luigi Vanvitelli", for the National Project "Dexterous Assistive Robots for Improved Human HealthCare (DARC)" funded by *European Union NextGenerationEU PRIN PNRR*.

- ▷ **2022–pres.** *Component* of the group at Dipartimento di Ingegneria at Università degli Studi della Campania "Luigi Vanvitelli", for the European Project "AI-Powered Manipulation System for Advanced Robotic Service, Manufacturing and Prosthetics (INTELLIMAN)" funded by *European Commission*.

- ▷ **2023–2024** *Principal Investigator* for the University Project "Robotic in-hand manipulation through a multi-fingered hand equipped with force/tactile sensors: design, modeling and control (TACMAN)" funded by *Università degli Studi della Campania "Luigi Vanvitelli"*.

- ▷ **2017–2023** *Component* of the group at Dipartimento di Ingegneria at Università degli Studi della Campania "Luigi Vanvitelli", for the European Project H2020 "Robotic technologies for the manipulation of complex deformable linear objects (REMODEL)" funded by *European Commission*.

- ▷ **2018–2021** *Component* of the group at Dipartimento di Ingegneria at Università degli Studi della Campania "Luigi Vanvitelli", for the European Project H2020 "Lean robotized AssemBly and cOntrol of composite aeRostructures (LABOR)" funded by *European Commission*.

- ▷ **2019–2020** *WP Leader* of Work Package no.4 "Reactive control algorithms and object perception" for the European Project H2020 "Robotics Enabling Fully-Integrated Logistics Lines for Supermarkets (REFILLS)" ID 731590 funded by *European Commission*.

1.11 Editorial Activity

- ▷ **2022-pres.** *Associate Editor* IEEE Robotics and Automation Letters (RA-L), Subject "Manipulation and Grasping".
  www.ieee-ras.org/publications/ra-l/ra-letters-editorial-board.

- ▷ **2024** *Associate Editor* of 33^{nd} IEEE International Conference on Robot and Human Interactive Communication (ROMAN 2024).

- ▷ **2023** *Associate Editor* of 32^{nd} IEEE International Conference on Robot and Human Interactive Communication (ROMAN 2023).

- ▷ **2021** *Associate Editor* 20^{th} International Conference on Advanced Robotics (ICAR).

- ▷ **2020–2022** *Guest Editor* for the Special Issue on Robotics (ISSN 2218-6581). "Control of Robots Physically Interacting with Humans and Environment".

1.12 Reviewer Activity

- ▷ International Journal of Robotics Research
- ▷ IEEE Transactions on Automation Science and Engineering (T-ASE)
- ▷ MDPI Sensors
- ▷ Journal of Field Robotics
- ▷ International Journal of Control (TCON)
- ▷ IEEE Transactions on Robotics
- ▷ IEEE Robotics and Automation Letters
- ▷ IEEE International Conference on Robotics and Automation (ICRA)
- ▷ Automatica
- ▷ Mechatronics
- ▷ IEEE Transactions on Control Systems Technology
- ▷ IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
- ▷ American Control Conference (ACC)
- ▷ International Conference on Advanced Robotics (ICAR)
- ▷ IEEE Conference on Decision and Control (CDC)
- ▷ IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)
- ▷ IEEE Transactions on Mechatronics
- ▷ Robotics and Autonomous Systems
- ▷ MDPI Remote Sensing
- ▷ MDPI Robotics

1.13 Organizing Activity for Conferences

- ▷ **21/10/2023** *Organizer* of the Workshop "Perception Unleashed: Achieving Safety, Efficiency, and Awareness in Human-Robot Collaboration" accepted at I-RIM 3D 2023. Co-Organizers: Andrea Pupa (University of Modena and Reggio Emilia) and Mario Selvaggio (University of Naples Federico II). Speakers: **Alessandro De Luca**, **Domenico Prattichizzo**, **Matteo Bianchi**, **Cristian Secchi**, **Francesca Cordella**. sites.google.com/view/i-rim2023-workshop-perception/home.

- ▷ **2023** Member of the *Program Committee* of the 20$^{\text{th}}$ International Conference on Informatics in Control, Automation and Robotics (ICINCO). icinco.scitevents.org/ProgramCommittee.aspx?y=2023.
- ▷ **2023** *Organizer* of the Organized Session "Visual and Haptic Cues for Physical Human-Robot Interaction and Co-Manipulation" at 32$^{\text{nd}}$ IEEE International Conference on Robot and Human Interactive Communication (RO-MAN). Co-Organizers: Mario Selvaggio (University of Naples Federico II), Marco Ferro (CNRS, Univ Rennes, Inria, IRISA), and Claudio Pacchierotti (CNRS, Univ Rennes, Inria, IRISA). sites.google.com/view/visual-haptic-roman-2023/home
- ▷ **09/12/2021** *Organizer* of the Organized Session "Planning, Modeling and Control of Collaborative Mobile Manipulators in Uncertain Environments" at 20$^{\text{th}}$ International Conference on Advanced Robotics (ICAR). Co-Organizers: Alessandro Marino (University of Cassino and Southern Lazio) and Francesco Pierri (University of Basilicata). icar-2021.org/technical-program-9.
- ▷ **30/09/2021** *Chair* of the Technical Session "Manipulation Planning I" at 2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

1.14 Speaker at Conferences

- ▷ **31/05/2023** *Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, C. Natale, and A. Russo, "Stability and convergence analysis of 3d feature-based visual servoing," *IEEE Robotics and Automation Letters*, vol. 7, no. 4, pp. 12 022–12 029, 2022, presented at 2023 IEEE International Conference on Robotics and Automation (ICRA), London, United Kingdom.
- ▷ **26/10/2022** *Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, and C. Natale, "Tactile feedback enabling in-hand pivoting and internal force control for dual-arm cooperative object carrying," *IEEE Robotics and Automation Letters*, vol. 7, no. 4, pp. 11 466–11 473, 2022, presented at 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Kyoto, Japan.
- ▷ **01/09/2022** *Speaker* "On the stability of a sampled-data Image-Based Visual Servoing Control Scheme", Authors: **Marco Costanzo**, Ciro Natale and Antonio Russo, at the national congress SIDRA Automatica.it 2022, 01-03 Sept. 2022 Cagliari, Italy.
- ▷ **10/12/2021** *Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, and C. Natale, "Dual-arm in-hand manipulation with parallel grippers using tactile feedback," in *2021 20th International Conference on Advanced Robotics (ICAR)*, 2021, pp. 942–947, Ljubljana, Slovenia.
- ▷ **09/09/2021** *Speaker* "Dual-Arm In-Hand Manipulation with Parallel Grippers Using Tactile Feedback", Authors: **Marco Costanzo**, Giuseppe De Maria and Ciro Natale, at the national congress SIDRA Automatica.it 2021 Virtual Edition, Catania, Italy.
- ▷ **13/07/2020** *Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, and C. Natale, "Control of sliding velocity in robotic object pivoting based on tactile sensing," 2, 21th IFAC World Congress, vol. 53, 2020, pp. 9950–9955, Germany.

- ▷ **01/06/2020** *Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, G. Lettera, and C. Natale, "Grasp control for enhancing dexterity of parallel grippers," in *2020 IEEE International Conference on Robotics and Automation (ICRA)*, 2020, pp. 524–530, Parigi, France.

- ▷ **12/09/2019** *Speaker* "Modeling and Slipping Control of a Planar Slider", Authors: Alberto Cavallo, **Marco Costanzo**, Giuseppe De Maria, Ciro Natale, Salvatore Pirozzi, at the national congress SIDRA Automatica.it 2019, Ancona, Italy.

- ▷ **24/05/2018** *Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, and C. Natale, "Slipping control algorithms for object manipulation with sensorized parallel grippers," in *2018 IEEE International Conference on Robotics and Automation (ICRA)*, May 2018, pp. 7455–7461, Brisbane, Australia.

1.15 Invited Talks

- ▷ **30/09/2021** *Invited Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, G. Lettera, and C. Natale, "Can robots refill a supermarket shelf?: Motion planning and grasp control," *IEEE Robotics & Automation Magazine*, vol. 28, no. 2, pp. 61–73, 2021, at the 2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Prague, Czech Republic.

- ▷ **31/05/2021** *Invited Speaker* for the paper presentation: **M. Costanzo**, G. De Maria, G. Lettera, and C. Natale, "Can robots refill a supermarket shelf?: Motion planning and grasp control," *IEEE Robotics & Automation Magazine*, vol. 28, no. 2, pp. 61–73, 2021, at the Virtual Workshop "Emerging paradigms for robotic manipulation: from the lab to the productive world" at the 2021 IEEE International Conference on Robotics and Automation (ICRA), Xi'an, China.

1.16 Honors & Awards

- ▷ **July 2023** Mechatronics Paper Prize Award 2023
  www.ifac-control.org/awards/journal-awards
  Presented at The 22nd IFAC World Congress, Yokohama, Japan, 9-14 July 2023 for the paper
  M. Costanzo, "Control of robotic object pivoting based on tactile sensing," *Mechatronics*, vol. 76, p. 102 545, 2021.

- ▷ **2022** *Accademia Ercolanese* Ph.D. Thesis Award.

- ▷ **Sept. 2020** IEEE RAS Italian Chapter "Fabrizio Flacco" Young Author Best Paper Award 2020. For the paper
  M. Costanzo, G. De Maria, and C. Natale, "Two-fingered in-hand object handling based on force/tactile feedback," *IEEE Transactions on Robotics*, vol. 36, no. 1, pp. 157–173, Feb. 2020.
  r8.ieee.org/italy-ras/fabrizio-flacco-yabp-award.

▷ **Oct. 2017** 1st Place at local venue (Napoli), *Hack.Developers Code-Sprint - National Digital Transformation Team.*
hack.developers.italia.it/premiazione-fast-rabbit [RF TEAM].

1.17 Collaborations

▷ **2022–pres.** Fondation de l'institut de Recherche IDIAP (CH)

▷ **2022–pres.** Eidgenössische Technische Hochschule (ETH) Zürich (CH)

▷ **2022–pres.** OCADO Innovation Limited (UK)

▷ **2022–pres.** Universitat Politècnica de Catalunya (ES)

▷ **2017–2020** Intel Corporation (IR)

▷ **2017–2020** Universität Bremen (D)

▷ **2017–pres.** Kuka Roboter GmbH (D)

▷ **2017–pres.** Università degli Studi di Napoli "Federico II" (IT)

2 Scientific Publications

Articles

[A1] S. Federico, **M. Costanzo**, M. De Simone, and C. Natale, "Nonlinear model predictive control for robotic pushing of planar objects with generic shape," *IEEE Robotics and Automation Letters*, vol. 10, no. 3, pp. 3006–3013, 2025.

[A2] A. B. Alterani, **M. Costanzo**, M. De Simone, S. Federico, and C. Natale, "Experimental comparison of two 6d pose estimation algorithms in robotic fruit-picking tasks," *Robotics*, vol. 13, no. 9, 2024.

[A3] **M. Costanzo**, G. De Maria, C. Natale, and A. Russo, "Modeling and control of sampled-data image-based visual servoing with three-dimensional features," *IEEE Transactions on Control Systems Technology*, vol. 32, no. 1, pp. 31–46, 2024.

[A4] **M. Costanzo**, G. D. Maria, and C. Natale, "Homography-based sampled-data visual servoing," *IEEE Control Systems Letters*, vol. 8, pp. 754–759, 2024.

[A5] **M. Costanzo**, G. De Maria, and C. Natale, "Detecting and controlling slip through estimation and control of the sliding velocity," *Applied Sciences*, vol. 13, no. 2, p. 921, Jan. 2023.

[A6] **M. Costanzo**, M. De Simone, S. Federico, and C. Natale, "Non-prehensile manipulation actions and visual 6d pose estimation for fruit grasping based on tactile sensing," *Robotics*, vol. 12, no. 4, p. 92, Jun. 2023.

[A7] **M. Costanzo**, G. De Maria, G. Lettera, and C. Natale, "A multimodal approach to human safety in collaborative robotic workcells," *IEEE Transactions on Automation Science and Engineering*, vol. 19, no. 2, pp. 1202–1216, 2022.

[A8] **M. Costanzo**, G. De Maria, and C. Natale, "Tactile feedback enabling in-hand pivoting and internal force control for dual-arm cooperative object carrying," *IEEE Robotics and Automation Letters*, vol. 7, no. 4, pp. 11 466–11 473, 2022.

[A9] **M. Costanzo**, G. De Maria, C. Natale, and A. Russo, "Stability and convergence analysis of 3d feature-based visual servoing," *IEEE Robotics and Automation Letters*, vol. 7, no. 4, pp. 12 022–12 029, 2022.

[A10] A. Cirillo, **M. Costanzo**, G. Laudante, and S. Pirozzi, "Tactile sensors for parallel grippers: Design and characterization," *Sensors*, vol. 21, no. 5, 2021.

[A11] **M. Costanzo**, "Control of robotic object pivoting based on tactile sensing," *Mechatronics*, vol. 76, p. 102 545, 2021.

[A12] **M. Costanzo**, G. De Maria, G. Lettera, and C. Natale, "Can robots refill a supermarket shelf?: Motion planning and grasp control," *IEEE Robotics & Automation Magazine*, vol. 28, no. 2, pp. 61–73, 2021.

[A13] **M. Costanzo**, G. De Maria, and C. Natale, "Handover control for human-robot and robot-robot collaboration," *Frontiers in Robotics and AI*, vol. 8, p. 132, 2021.

[A14] **M. Costanzo** and S. Pirozzi, "Optical force/tactile sensors for robotic applications," *IEEE Instrumentation Measurement Magazine*, vol. 24, no. 5, pp. 28–35, 2021.

[A15] A. Cavallo, **M. Costanzo**, G. D. Maria, and C. Natale, "Modeling and slipping control of a planar slider," *Automatica*, vol. 115, p. 108 875, 2020.

[A16] **M. Costanzo**, G. De Maria, and C. Natale, "Two-fingered in-hand object handling based on force/tactile feedback," *IEEE Transactions on Robotics*, vol. 36, no. 1, pp. 157–173, Feb. 2020.

[A17] **M. Costanzo**, S. Stelter, C. Natale, S. Pirozzi, G. Bartels, A. Maldonado, and M. Beetz, "Manipulation planning and control for shelf replenishment," *IEEE Robotics and Automation Letters*, vol. 5, no. 2, pp. 1595–1601, Apr. 2020.

[A18] **M. Costanzo**, G. De Maria, C. Natale, and S. Pirozzi, "Design and calibration of a force/tactile sensor for dexterous manipulation," *Sensors*, vol. 19, no. 4, p. 966, Feb. 2019.

[A19] **M. Costanzo**, G. De Maria, G. Lettera, C. Natale, and S. Pirozzi, "Motion planning and reactive control algorithms for object manipulation in uncertain conditions," *Robotics*, vol. 7, no. 4, p. 76, Nov. 2018.

Book chapters

[BC1] A. Cavallo, **M. Costanzo**, G. De Maria, C. Natale, S. Pirozzi, S. Stelter, G. Kazhoyan, S. Koralewski, and M. Beetz, "Robotic clerks: Autonomous shelf refilling," in *Robotics for Intralogistics in Supermarkets and Retail Stores*, L. Villani, C. Natale, M. Beetz, and B. Siciliano, Eds. Cham: Springer International Publishing, 2022, pp. 137–170.

Conference papers

[C1] **M. Costanzo**, G. De Maria, C. Natale, and A. Russo, "3d feature-based sampled-data visual tracking*," 2, 22nd IFAC World Congress, vol. 56, 2023, pp. 10 768–10 773.

[C2] **M. Costanzo**, M. De Simone, S. Federico, C. Natale, and S. Pirozzi, "Enhanced 6d pose estimation for robotic fruit picking," in *2023 9th International Conference on Control, Decision and Information Technologies (CoDIT)*, 2023, pp. 901–906.

[C3] **M. Costanzo**, C. Natale, and M. Selvaggio, "Visual and haptic cues for human-robot handover*," in *2023 32nd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)*, 2023, pp. 2677–2682.

[C4] F. Arcadio, **M. Costanzo**, G. Luongo, L. Pellegrino, N. Cennamo, and C. Natale, "Safe robotized polishing of plastic optical fibers for plasmonic sensors," in *Proceedings of the 19th International Conference on Informatics in Control, Automation and Robotics - ICINCO*, INSTICC, SciTePress, 2022, pp. 361–368.

[C5] A. Russo, **M. Costanzo**, and A. Cavallo, "Combined supercapacitor and battery sliding mode control for aeronautic application," in *2022 5th International Conference on Mechatronics, Robotics and Automation (ICMRA)*, 2022, pp. 64–68.

[C6] **M. Costanzo**, G. De Maria, and C. Natale, "Dual-arm in-hand manipulation with parallel grippers using tactile feedback," in *2021 20th International Conference on Advanced Robotics (ICAR)*, 2021, pp. 942–947.

[C7] **M. Costanzo**, G. De Maria, G. Lettera, and C. Natale, "Grasp control for enhancing dexterity of parallel grippers," in *2020 IEEE International Conference on Robotics and Automation (ICRA)*, 2020, pp. 524–530.

[C8] **M. Costanzo**, G. De Maria, and C. Natale, "Control of sliding velocity in robotic object pivoting based on tactile sensing," 2, 21th IFAC World Congress, vol. 53, 2020, pp. 9950–9955.

[C9] A. Campomaggiore, **M. Costanzo**, G. Lettera, and C. Natale, "A fuzzy inference approach to control robot speed in human-robot shared workspaces," in *Proceedings of the 16th International Conference on Informatics in Control, Automation and Robotics - Volume 2: ICINCO,*, INSTICC, SciTePress, 2019, pp. 78–87.

[C10] **M. Costanzo**, G. De Maria, G. Lettera, C. Natale, and D. Perrone, "A multimodal perception system for detection of human operators in robotic work cells," in *2019 IEEE International Conference on Systems, Man and Cybernetics (SMC)*, Oct. 2019, pp. 692–699.

[C11] **M. Costanzo**, G. D. Maria, C. Natale, and S. Pirozzi, "Design of a force/tactile sensor for robotic grippers," 1, vol. 15, MDPI AG, Jul. 2019, p. 31.

[C12] **M. Costanzo**, G. De Maria, and C. Natale, "Slipping control algorithms for object manipulation with sensorized parallel grippers," in *2018 IEEE International Conference on Robotics and Automation (ICRA)*, May 2018, pp. 7455–7461.

[C13] **M. Costanzo**, G. De Maria, G. Lettera, C. Natale, and S. Pirozzi, "Flexible motion planning for object manipulation in cluttered scenes," in *Proceedings of the 15th International Conference on Informatics in Control, Automation and Robotics - Volume 1: ICINCO*, INSTICC, SciTePress, 2018, pp. 110–121.

Aversa, March 10, 2025

Marco Costanzo