Domenico Prattichizzo Full Prof, PhD IEEE Fellow dprattichizzo@unisi.it

Professor of Robotics and Automation, <u>University of Siena</u> Senior Scientist, <u>Istituto Italiano di Tecnologia</u>, Genova

- Vice-Rector Technological Transfer, University of Siena
- Co-founder of <u>WEART</u>, startup on Wearable Haptics
- Co-founder of EXISTO, startup on Human SensoriMotor Enhancement
- Co-Founder of the Italian Institute of Robotics and Intelligent Machines
- Editor in Chief of <u>IEEE Transactions on Haptics</u>
- President of the Eurohaptics society

PERSONAL INFORMATION

Prattichizzo Domenico, Researcher unique identifier: ORCID 0000-0001-9051-9698 (<u>https://www3.diism.unisi.it/</u><u>prattichizzo/</u>)

CURRENT, PREVIOUS POSITIONS AND EDUCATION

- 2015-present Full Professor of Robotics, Dip. di Ingegneria dell'Inform. e Sc. Matem., Università degli Studi di Siena, Italy (2002-2015 Associate Professor, 1998-2002 Assistant Professor)
- 2009-present Senior Scientist, Istituto Italiano di Tecnologia (IIT), Genova, Italy
- 2016-present IEEE Fellow for contributions to haptics and multi-fingered robotic hands
- 2018-present President of the Eurohaptics Society
- 2019 Visiting Professor at LAAS-CNRS, Toulouse, France
- 2018-present Co-founder of WEART, startup on Wearable Haptics-Tactile Communication, Milan, Italy
- 1995 PhD in Robotics and Automation, Università di Pisa, Italy
- 1994–1995 Visiting Scientist, AI Lab. of MIT, Massachusetts, USA

RESEARCH GROUP AND SUPERVISION

I am the head of the Human Centered Robotics Group with 1 Associate Professor, 1 Assistant Professor, 3 PostDocs, 9 PhD students, and 4 Fellowship holders. Since 2001, I have been the advisor of 18 PostDocs, 38 PhD students and I supervised more than 150 Master students. I have been lucky enough to attract excellent students who got very prestigious positions in academic and industrial careers.

<u>Representative examples are:</u> [Academic career] C. Pacchierotti (Tenured Researcher CNRS; EuroHaptics PhD Award); F. Morbidi (Assistant Prof. Universite de Picardie Jules Verne); G. Salvietti (Assistant Prof. Univ. of Siena; F. Chinello (Associate Prof. Univ. of Aarhus), I. Hussan (Assistant Prof. Khalifa University). [Professional career] G. Mariottini (Senior Scientist at Draper); M. De Pascale (CTO at IO Interactive); J. Piazzi and S. Mulatto (Executive Manager and Senior Engineer at Philogen); A. Formaglio (Senior Engineer at GlaxoSmithKline); S. Scheggi (Senior Engineer at VisLab); A. Tirmizi (Engineer at FlandersMake; Awarded with the SIDRA PhD Award); L. Meli (Research Engineer at ART);

AWARDS

- "No Face-Touch: an Open Project to Limit the COVID-19 Outbreak", awarded by IEEE RAS-SIGHT 2020 Call for Humanitarian Projects;
- 2020 Finalist Best Technical Paper Award with "Hand Guidance Using Grasping Metaphor and Wearable Haptics", at IEEE Haptics Symposium, Washington, USA
- 2019 Winner of Cariplo Crew Call with "SIXTO The Sixth FInger" with e-Novia S.p.A., Milan, Italy
- 2019 Finalist Best Paper Award on HRI with "The Role of Closed-Loop Hand Control in Handshaking Interactions", IEEE International Conference on Robotics and Automation, Montreal, Canada
- 2017 Winner of the competition Start Cup Toscana 2017 with WEART
- 2017 Finalist KUKA Innovation Award with TeleMAGMAS robotic teleoperation, Hannover Messe
- 2017 Ranked 2nd at the Innovation Competition for the demo "The Sixth Finger for compensating hand functions", Wearable Robotics Association Conference, wearRAcon 17, Phoenix, AZ, USA
- 2016 Asia Haptics Silver Award for the demo "A novel 3RRS wearable fingertip cutaneous device for virtual interaction", AsiaHaptics, Kashiwanoha, Japan
- 2016 Best Demonstration Award for the demo "The hRing as a Wearable Haptic Interface for Extra Robotic Fingers", Haptics Symposium, Philadelphia, PA, USA
- 2014 Winner of the MathWorks Education Award for developing the Massive Open Online Course (MOOC) "Art of Grasping and Manipulation in Robotics."
- 2010 Coordinator of "RemoTouch" selected to represent Innovation Italy at Shanghai 2010 World Expo
- 2009 Chapter of the Year Award as Chair of Italian Chapter of IEEE Robotics & Automation Society
- 2008 Co-author of Chapter on "Grasping" of "Springer Handbook of Robotics", ed. Siciliano and Kathib, awarded with "PROSE Award for Excellence in Physical Sciences & Mathematics" and "PROSE Award in Engineering & Technology"
- 2007 Winner of the "RAS 2007 New Initiatives Grants" by IEEE with project "Robotics in Second Life"
- 2007 Vice-Chair of the IEEE Tech. Committee on Haptics winner of the award "RAS Most Active Technical Committee"
- 2005 Nominated to represent Italy with a Keynote on "Visuo-haptic interaction in medical applications" in the Israel– Italy Official Cooperation Meeting, organized by the Italian Ministero degli Esteri.

TEACHING ACTIVITIES

My official courses at University of Siena are Human-Centered Robotics and Robotics. Professor in many Int. PhD Schools (e.g. Ecole Doctorale Systemes, Toulouse, France; EU Winter School on Wearable Robots).

REVIEWING ACTIVITIES

- 2019-2020 Reviewer for the Japan Agency for Medical Research and Development (AMED) for the programs FY 2019 and 2020 Acceleration Transformative Research For Medical Innovation ACT-MS
- 2019-2020 Reviewer of Award Applications for the EU H2020 project COVR, Grant Agreement 779966
- 2013-2020 European Commission Evaluation Panel for FP7, H2020 and Remote Evaluator for ERC
- 2019 External Advisor of the EU H2020 FET project H-Reality, Grant Agreement 801413
- 2018 Reviewer for internal reorganization of research structure at CNRS, France
- 2015-2017 Reviewer of the EU FP7 project CADDY, Grant Agreement 611373
- 2016 Scientific Committee 2017 Kyoto Prize in Advanced Technology, Inamori Foundation, Japan
- 2013-2020 Member of Evaluation Panels for Central Finance and Contracting Agency (CFCA)boh

EDITORIAL ACTIVITIES

- 2020-present Editor in Chief of the IEEE Transactions on Haptics. 2007-2013 Co-Editor in Chief of the IEEE Transactions on Haptics. I participated in the foundation of the journal in 2007.
- 2018-present Member Editorial Advisory Board for 'Springer Series on Touch and Haptic Systems'
- Associate Editor: 2015-2016 IEEE Robotics and Automation Letters, 2014-present Frontiers in Robotics and AI, 2003-2007 IEEE Trans. on Robotics and the IEEE Trans. on Control Systems Technology

SCIENTIFIC AND INDUSTRIAL LEADERSHIP

- 2018-present President of the Eurohaptics Society. 2014-2018 Member of the Executive Committee
- 2019 Co-Founder of I-RIM, the Institute for Robotics and Intelligent Machines
- 2019-present Technical Board Member of ARTES 4.0, Advanced Robotics and enabling digital Technologies & Systems, one of the highest level tech hub in Italy to accelerate innovation
- 2013–2016 Consultant of the management team for the organization of competitive bids, Estra S.p.A.
- 2013 Chair of the IEEE RAS Early Career Awards Evaluation Panel, 2006-2010 Chair of Italian Chapter of IEEE RAS, 2006-2010 Vice-chair for Special Issues, IEEE Tech. Committee on Haptics

INTERNATIONAL GRANTS AS PROJECT OR RESEARCH UNIT COORDINATOR

Project Coordinator:

EU Horizon-RIA Project "HARIA: Human-robot sensorimotor augmentation." 2022-2026

EU FP7 IP project "WEARHAP-WEARable HAPtics for Humans and Robots", 2013-2017;

PRIN 2017 "TIGHT-Tactile InteGration for Humans and arTificial systems", 2020-2023.

Research Unit Coordinator: EU Horizon-RIA project "REGO - Cognitive robotic tools for human-centered small-scale multi-robot operations, 2022-2026; <u>H2020 RIA:</u> "SoftPro-Synergy-based Open-source Foundations and Technologies for Prosthetics and RehabilitatiOn", 2016-2020; "SoMa-Soft-bodied intelligence for Manipulation" 2015-2019; "ACANTO-A CyberphysicAl social NeTwOrk using robot friends", 2015-2018; <u>FP7 IP and STREP:</u> "ACTIVE-Active constraints technologies for Ill-defined or Volatile Environments", 2011-2015; "DALi-Devices for Assisted Living", 2011-2014; "THE-The Hand Embodied", 2010-2014,; "ECHORD-European Clearing House for Open Robotics Development", 2010-2012; "ROBOCAST-ROBot and SENSors INtegration as Guidance FOR Enhanced Computer Assisted Surgery and Therapy", 2008-2010; <u>International projects:</u> Technology Research Grant "Comparison of Cutaneous Feedback Methods for Pinching Palpation in Robotic Surgery" funded by Intuitive Surgical, Inc., 2015;

PATENTS and STARTUPS

I am the inventor of 12 accepted patents. I co-founded two startups on wearable haptics and wearable robotics. The two startups are based on previous patents and are WEART (<u>www.weart.it</u>) and EXISTO (<u>www.existo.tech</u>).

KEYNOTE and INVITED TALKS

I gave keynotes and invited talks at many conference and international events, among which by Facebook Meta Al Research, IEEE Int. Conf. Robotics and Automation, IEEE World Haptics, Asia Haptics, EU Community, Haptics Symposium, Intuitive Surgical, IEEE Computer Society Conference, ABB, EXPO 2015, Government of Japan, Government of India.