JACOPO ZENZERI

CURRICULUM VITAE

(last update: December 5, 2023)

Personal Information

- **Work Address**
- **Company** ReWing s.r.l.
- **Email** jacopo.zenzeri@rewingtech.com
- **Sex**
- **Nationality**
- **Date of birth**
- **Place of birth**
- **Mobile number**

Current Position

Co-founder & CEO (Chief Executive Officer) of the startup ReWing s.r.l., Genova, Italy. https://rewingtech.com/

Research Interests

Motor Skill Learning, Neural Control of Movements, Motor Control Mechanisms, Rehabilitation Robotics, Ergonomics, Robotic Assessment, Medical Devices

Education

10/2015-11/2016 Advanced Course on Health Technology Assessment. University Carlo Cattaneo (LIUC), Castellanza, Italy. Mark: 110/110 cum laude. Thesis Title: "Analisi HTA per l'introduzione di un nuovo software di treatment planning nell'ASST della Valle Olona" ("HTA analysis for the introduction of a new treatment planning software in the ASST of the Valle Olona"). Supervisor: Dr. Porazzi Emanuele. www.liuc.it

11/2014-6/2016 Master Degree (2nd Level) in ICT Management. University of Milano-Bicocca, Milano, Italy. Thesis Title: "Applicazione di tecniche di Project Management all'interno della proposal del progetto europeo SKART" ("Application of Project Management methodologies in the european project proposal SKART"). Supervisor: Dr. Roscini Alessandro. www.unimib.it

1/2010-4/2013 PhD on Robotics, Cognition and Interaction Technologies of the School on Life and Humanoid Technologies at the Istituto Italiano di Tecnologia and University of Genova, Genova, Italy. Thesis Title: "Coordination of redundant degrees of freedom in humans and humanoids: modeling and experiments". Supervisor: Prof. Morasso Pietro. www.iit.it

1/2010 Italian engineering professional license. University of Genova, Italy.

10/2006-7/2009 Master Degree in Bioengineering (curriculum Neuroengineering). University of Genova, Genova, Italy. Mark: 110/110 cum laude, 'dignità di stampa' (rights for publication) and Just-in-Time. Thesis Title: "Postural stabilization during whole body movements". Supervisor: Prof. Morasso Pietro. www.unige.it

10/2006-9/2007 Student of Istituto Superiore di Studi in Tecnologie dell'Informazione e della Comunicazione (ISICT), Genova, Italy. (Institute Superior in Information and Communication Technologies). www.isict.it

9/2003-9/2006 Bachelor Degree in Biomedical Engineering. University of Pavia, Pavia, Italy. Mark: 110/110 cum laude. Thesis Title: "Modellizzazione macroscopica di materiali a memoria di forma ferromagnetici" ("Macroscopic modeling of ferromagnetic shape memory alloys"). Supervisor: Prof. Auricchio Ferdinando. www.unipv.it

9/2003-9/2006 Student of Almo Collegio Borromeo, Pavia, Italy. www.collegioborromeo.it

9/1998-7/2003 Qualification of secondary school focusing on sciences. Liceo Scientifico G. Galilei, Perugia, Italy. Mark: 100/100 cum laude. www.galileipg.it

Professional Experiences

2/2022-present Co-founder and CEO (Chief Executive Officer) of ReWing s.r.l. (Robotics and AI to improve rehabilitation), Genova, Italy. www.rewingtech.com

1/2020-12/2022 Researcher and Head of the "Motor Learning, Assistive and Rehabilitation Robotics Lab" at Istituto Italiano di Tecnologia, Genova, Italy. www.iit.it

5/2020-12/2021 Co-founder and CTO (Chief Technology Officer) of KimeraLab S.r.l.s. (Services for high technological projects), Arezzo, Italy. www.kimera-lab.com

12/2019 Visiting Researcher at Heidelberg University, Heidelberg, Germany. Collaboration with Prof. Masia Lorenzo. www.uni-heidelberg.de

11/2019 Visiting Researcher at Manchester Metropolitan University, Manchester, UK. Collaboration with Prof. Loram Ian. www2.mmu.ac.uk

10/2019 Visiting Researcher at Brock University, St. Catharines, Canada. Collaboration with Prof. Holmes Michael W. R. http://www.brocku.ca funded by Canada-Italy innovation award 2019

6/2019-7/2019 Visiting Researcher at Brock University, St. Catharines, Canada. Collaboration with Prof. Holmes Michael W. R. http://www.brocku.ca

4/2019-5/2019 Visiting Researcher at Osaka University, Osaka, Japan. Collaboration with Prof. Nomura Taishin and Prof. Suzuki Yasuyuki. http://www.osaka-u.ac.jp

12/2018 Visiting Researcher at Manchester Metropolitan University, Manchester, UK. Collaboration with Prof. Loram Ian. www2.mmu.ac.uk

11/2018 Visiting Researcher at Brock University, St. Catharines, Canada. Collaboration with Prof. Holmes Michael W. R. http://www.brocku.ca

7/2018-8/2018 Visiting Researcher at Osaka University, Osaka, Japan. Collaboration with Prof. Nomura Taishin and Prof. Suzuki Yasuyuki. http://www.osaka-u.ac.jp

9/2017-10/2017 Visiting Researcher at Osaka University, Osaka, Japan. Collaboration with Prof. Nomura Taishin. http://www.osaka-u.ac.jp

1/2017-2/2017 Visiting Researcher at Manchester Metropolitan University, Manchester, UK. Collaboration with Prof. Loram Ian. www2.mmu.ac.uk

6/2016-7/2016 Visiting Researcher at Manchester Metropolitan University, Manchester, UK. Collaboration with Prof. Loram Ian. www2.mmu.ac.uk

1/2016-12/2019 Senior Post Doctoral Researcher and Head of the "Motor Learning, Assistive and Rehabilitation Robotics Lab" at Istituto Italiano di Tecnologia, Genova, Italy. www.iit.it

7/2013-12/2015 Junior Post-Doctoral Researcher at Istituto Italiano di Tecnologia, Robotics, Brain and Cognitive Sciences Department, Motor Learning and Robotic Rehabilitation Lab, Genova, Italy. Advisor: Prof. Morasso Pietro. www.iit.it

Awards

2020 Best Conference Paper at I-RIM 3D 2nd Conference: Belgiovine, G., Rea, F., **Zenzeri, J.** & Sciutti, A. (2020). Towards Effective Robot Tutoring for Skills Acquisition.

2020 Winner with the startup project ReWing of the Pre-Acceleration program of Bocconi4Innovation.

2020 Finalist with the startup project ReWing of the Web Marketing Festival startup competition.

2020 Best Conference Paper at International Conference on Social Robotics: Belgiovine, G., Rea, F., Barros, P., **Zenzeri, J.** & Sciutti, A. (2020). Sensing the partner: toward effective robot tutoring in motor skill learning.

2019 Recipient of the Canada-Italy Innovation Award 2019.

2019 Winner with the spin-off project WristBot of the High Tech Entrepreneurship (HTE) workshop competition.

2017 Finalist in the Life Science category at SMARTcup Liguria competition with the spin-off project WristBot and winner of the Social Hub Genova and Mamacrowd prizes.

2015 2015 Highly Commented Paper Award with the paper: De Santis, D., **Zenzeri, J.**, Casadio, M., Masia, L., Squeri, V. & Morasso, P. (2014). Characterizing the human-robot haptic dyad in robot therapy of stroke survivors. International Journal of Intelligent Computing and Cybernetics, Special issue on Robotic Rehabilitation and Assistive Technologies, 7(3), 267-288.

2010 Istituto Italiano di Tecnologia PhD Fellowship.

2009 Best master thesis award from the National Bioengineering Group.

2006 Institute Superior in Information and Communication Technologies (ISICT) Fellowship.
2003 Almo Collegio Borromeo Fellowship.

Memberships

2023-present Gruppo Giovani Imprenditori di Confindustria Genova member.
2019-present I-RIM member (Istituto di Robotica e Macchine Intelligenti).
2019-present ICORR consortium member (International Consortium on Rehabilitation Robotics).
2018-2020 NCM member (Neural Control of Movement Society).
2010-present GNB member (National Bioengineering Group; Board member: representative of the PhD Students and Post-doc 2011-2016, 2019-present GNB Association).
2010-2011 SfN Student Member (Society for Neuroscience).
2009-present IEEE RAS member (Robotics and Automation Society, Graduate Student Member 2009-2013).
2009-present IEEE EMBS member (Engineering in Medicine and Biology Society, Graduate Student Member 2009-2013).
2009-present IEEE CIS member (Computational Intelligence Society, Graduate Student Member 2009-2013).
2009-present IEEE member (Institute of Electrical and Electronic Engineering, Graduate Student Member 2009-2013).
2009 ISPGR Student member (International Society for Posture and Gait Research).

Review Activity

EU Projects reviewer: Expert Reviewer for COST (European Cooperation in Science and Technology) projects.
Journals reviewer: Biological Cybernetics, IEEE Sensors Journal, Journal of Rehabilitation and Assistive Technologies Engineering, IEEE Transactions on Neural Systems and Rehabilitation Engineering, Journal of NeuroEngineering and Rehabilitation, PLOS ONE, Journal of Field Robotics, IEEE Transactions on Haptics, Frontiers in Physiology, Computers in Biology and Medicine, ACM Transactions on Human-Robot Interaction, IEEE Robotics and Automation Magazine, Applied Sciences, IEEE Robotics and Automation Letters, Journal of Information Systems and Telecommunication, Frontiers in Robotics and AI, Frontiers in Bioengineering, Biocybernetics and Biomedical Engineering, Scientific Reports, Science Robotics, IEEE Access.
Conferences reviewer: IEEE International Conference on Development and Learning, IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics, IEEE/RSJ International Conference on Intelligent Robots and Systems, IEEE International Conference on Robotics and Automation, IEEE International Conference on Rehabilitation Robotics, IEEE World Haptics Conference, Annual International Conference of the IEEE Engineering in Medicine and Biology Society, International Conference on Human Haptic Sensing and Touch Enabled Computer Applications, IEEE International Conference on Robot and Human Interactive Communication, International Conference on NeuroRehabilitation, International Conference of the Association for the Advancement of Assistive Technology.
Technical Program Committee: IEEE International Conference on Development and Learning (ICDL, 2012-2014).
Associate Editor: IEEE International Conference on Rehabilitation Robotics (ICORR, 2015-2023), IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (BIOROB, 2016-2018), Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC, 2015-2016).
Review Editor: Frontiers in Motor Neuroscience and Cognitive Ergonomics.
Scientific Committee: IEEE International Conference on Rehabilitation Robotics (ICORR, 2015), International Conference of the Association for the Advancement of Assistive Technology (AAATE, 2019).

Editorial Activity

2019 Guest Editor for the special issue "Rehabilitation Robotics: Recent Advancements and New Perspectives about Training and Assessment of Sensorimotor Functions" of the Journal "Applied Sciences" (ISSN 2076-3417).

Evaluation Committees

2019 External examiner of the student Ashley Reece, Master of Science degree in Applied Health Sciences at Brock University, Canada.

2019 Member of the Consensus Conference CICERONE (Conferenza Italiana di ConsEnso RObotica in RiabilitazioNE), device classification panel.

2018 Member of the Selection Committee for the Admission Exam to the Doctoral Course in Bioengineering and Robotics, XXXIV Cycle, curriculum "Cognitive Robotics, Interaction and Rehabilitation Technologies" at the University of Genova.

Teaching Activity

2023 Contract Professor at University of Genova for the Doctoral Course "Functional quantitative assessment in sport, ergonomics and rehabilitation", PhD program in Bioengineering and Robotics, June, Genova, Italy (12 hours).

2022 Contract Professor at University of Genova for the Doctoral Course "Introduction to Physical Human – Robot Interaction", PhD program in Bioengineering and Robotics, March, Genova, Italy (12 hours).

2022 Contract Professor at University of Genova for the Doctoral Course "Robotic Technologies for Sensorimotor Rehabilitation", PhD program in Bioengineering and Robotics, September, Genova, Italy (16 hours).

2021 Contract Professor at University of Genova for the Doctoral Course "Introduction to Physical Human – Robot Interaction", PhD program in Bioengineering and Robotics, September, Genova, Italy (12 hours).

2021 Contract Professor at University of Genova for the Doctoral Course "Robotic Technologies for Sensorimotor Rehabilitation", PhD program in Bioengineering and Robotics, September, Genova, Italy (16 hours).

2020 Contract Professor at University of Genova for the Doctoral Course "Introduction to Physical Human – Robot Interaction", PhD program in Bioengineering and Robotics, October, Genova, Italy (12 hours).

2020 Contract Professor at University of Genova for the Doctoral Course "Robotic Technologies for Sensorimotor Rehabilitation", PhD program in Bioengineering and Robotics, October, Genova, Italy (16 hours).

2019 Seminar "WristBot: from the idea to the product", Rehabilitation Engineering course, University of Genova, November, Genova, Italy (2 hours).

2019 Lesson entitled "Tecnologie robotiche per la riabilitazione dell'arto superiore" at the course "Basic course: hand rehabilitation", 10th edition, March, Genova, Italy (2 hours).

2019 Contract Professor at University of Genova for the Doctoral Course "Introduction to Physical Human – Robot Interaction", PhD program in Bioengineering and Robotics, January, Genova, Italy (12 hours).

2019 Contract Professor at University of Genova for the Doctoral Course "Robotic Technologies for Sensorimotor Rehabilitation", PhD program in Bioengineering and Robotics, January, Genova, Italy (16 hours).

2018 Seminar "WristBot: from the idea to the product", Rehabilitation Engineering course, University of Genova, December 14, Genova, Italy (2 hours).

2018 Seminar "WristBot from the idea to the product", Biomedical Robotics course, University of Genova, November 13, Genova, Italy (2 hours).

2018 Contract Professor at University of Genova within the Master Degree (1st Level) in "Riabilitazione domiciliare e a distanza supportata dalle tecnologie", September 13, Genova, Italy (4 hours).

2018 Lesson entitled "Tecnologie robotiche per la riabilitazione dell'arto superiore" at the course "Basic course: hand rehabilitation", 9th edition, March, Genova, Italy (2 hours).

2018 Contract Professor at University of Genova for the Doctoral Course "Introduction to Physical Human – Robot Interaction", PhD program in Bioengineering and Robotics, April, Genova, Italy (12 hours).

2018 Contract Professor at University of Genova for the Doctoral Course "Robotic Technologies for Sensorimotor Rehabilitation", PhD program in Bioengineering and Robotics, May, Genova, Italy (16 hours).

2017 Seminar "WristBot: haptic device for the rehabilitation of the wrist", Biomedical Robotics course, University of Genova, December 12, Genova, Italy (2 hours).

2017 Contract Professor at University of Genova for the Doctoral Course "Introduction to Physical Human – Robot Interaction", PhD program in Bioengineering and Robotics, November, Genova, Italy (10 hours)

2017 Contract Professor at University of Genova for the Doctoral Course "Robotic Technologies for Sensorimotor Rehabilitation", PhD program in Bioengineering and Robotics, November, Genova, Italy (12 hours).

2017 Lesson entitled "Future Perspectives and Open Ideas" at the course, Specialista in progettazione e coordinamento di interventi di sostegno educativo a minori BES, DSA e ADHD, tramite software compensativi course, cooperativa Frontiera Lavoro, June 24, Perugia, Italy (4 hours).

2017 Module on "Robot-assisted Rehabilitation" for the doctoral course "Robotics" of the International Training Network PACE, Istituto Italiano di Tecnologia, June 14, Genova, Italy (2 hours).

2016 Module on "Robotic technologies for proximal upper limb rehabilitation" for the doctoral school "Medical and bioengineering aspects of upper limb rehabilitation", Istituto Italiano di Tecnologia, December 21, Genova, Italy (4 hours).

2016 Seminar "WristBot: haptic device for the rehabilitation of the wrist", Biomedical Robotics course, University of Genova, November 17, Genova, Italy (2 hours).

2016 "Riflessioni e possibili percorsi per un welfare sostenibile", Innovazione tecnologica per un welfare sostenibile: analisi e riflessioni. Scuola Umbra di Amministrazione Pubblica, Perugia, Italy, May 6. (1 hour).

2015 Seminar "La robotica: teorie, modelli ed applicazioni", ITCTS Vittorio Emanuele II, May 8, Bergamo, Italy (4 hours).

2015 Seminar "WristBot: haptic device for the rehabilitation of the wrist", Biomedical Robotics course, University of Genova, November 17, Genova, Italy (2 hours).

Events

2020 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at Web Marketing Festival, November 19, Rimini, Italy.

2020 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at the workshop "Robot Biomedici e Cyborg" within the Rome Videogame Lab Festival, November 6, Roma.

2019 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at Umbria Technology Forum, Confindustria Umbria, November 19, Perugia, Italy.

2019 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at ABILITANDO 2019, October 4-6, Bosco Marengo (AL), Italy.

2019 Organization of the Invited Session (with Suzuki Yasuyuki, Osaka University) with the title "Advances in understanding of human motor control mechanisms" at the 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), July 23-27, Berlin, Germany.

2018 Organization at Istituto Italiano di Tecnologia of the seminar "Intermittent Control in Gait", Prof. Suzuki Yasuyuki, Osaka University, Osaka, Japan, December 17.

2018 Organization at Istituto Italiano di Tecnologia of the seminar "Intermittent Control during Standing", Prof. Nomura, Osaka University, Osaka, Japan, December 17.

2018 Organization at Istituto Italiano di Tecnologia of the seminar "Muscle synergies in neurodegenerative diseases and rehabilitation", Prof. Palermo Eduardo, Department of Mechanical and Aerospace Engineering, University of Rome "La Sapienza", Roma, November 26.

2018 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at the Ericsson Innovation Day, October 24, Milano, Italy.

2018 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at the event L'assistenza di domani oggi, March 22, Genova, Italy.

2017 Participation with the project WristBot at SMARTcup Liguria, November 23, Genova, Italy [finalist of the competition, Social Hub Genova and Mamacrowd prizes].

2017 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at the 45th National Congress of the Italian Society of Physical and Rehabilitation Medicine (SIMFER), October 22-25, Genova, Italy.

2017 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at ABILITANDO 2017, October 6-7, Bosco Marengo (AL), Italy.

2017 Organization (with Francesca Marini, IIT) of the workshop "What do we want from technology-driven sensorimotor assessments? – a multi-stakeholder discussion" at the15th IEEE International Conference on Rehabilitation Robotics, July 17-20, London, UK.

2017 Organization at Istituto Italiano di Tecnologia of the seminar "A textile-based soft robotic exoskeleton to empower manipulation", Dr. Cappello Leonardo, Wyss Institute for Biologically Inspired Engineering at Harvard University, Harvard School of Engineering and Applied Sciences (SEAS), Boston, January 10.

2017 Organization at Istituto Italiano di Tecnologia of the seminar "Remapping upper-body coordination after Spinal Cord Injury: Co-adaptive learning for body machine interfaces", Dr. De Santis Dalia, Department of Physiology, Northwestern University, January 9.

2016 Organization (with Antonio Bicchi and Sasha Godfrey, IIT) of the Doctoral School "Medical and bioengineering aspects of upper limb rehabilitation", Istituto Italiano di Tecnologia, December 7-21, Genova, Italy.

2016 Organization of the Invited Session with the title "Strategies and Mechanisms in Human Motor Control" (with Nomura Taishin, Osaka University) at the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 17-20, Orlando, FL, USA.

2016 Organization at Istituto Italiano di Tecnologia of the seminar "Neuro-Mechanical Modelling, Bio-Inspiration, and Control", Dr. Sartori Massimo, Institute of Neurorehabilitation Systems, University Medical Center Göttingen, Germany, June 30.

2016 Organization at Istituto Italiano di Tecnologia of the seminar "Optimal Design of an Advanced Battery Management System Suitable for Hybrid Electric Vehicles", Prof. Raimondo Davide, University of Pavia, Pavia, Italy, February 2.

2016 Organization at Istituto Italiano di Tecnologia of the seminar "From pilot tele-rehabilitation trials toward person centered technology solutions: experiences and reflections", Dr. Magni Riccardo, Pragma Engineering S.r.l., Perugia, Italy, January 29.

2015 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at the XLVI National Congress of the Italian Society of Neurology (SIN), October 10-13, Genova, Italy.

2015 Organization of the Invited Session with the title "Motor Control Strategies in Complex Tasks" (with Suzuki Yasuyuki, Osaka University) at the 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 25-29, Milano, Italy.

2015 Organization at Istituto Italiano di Tecnologia of the seminar "Intermittent control in man and machine. Emerging evidence and implications for human and artificial motor function", Prof. Ian Loram, Manchester Metropolitan University, Manchester, UK, August 24.

2014 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at the XIV National Congress of the Italian Society of Neurological Rehabilitation (SIRN), May 8-10, Genova, Italy.

2014 Presentation of the WristBot (robotic device for the rehabilitation of the wrist) at the V European Robotics Forum (ERF), March 12-14, Rovereto, Italy.

Dissemination and TV interviews

2021 Robot, videogame e riabilitazione. Intervista a Jacopo Zenzeri, ricercatore in Robotica Riabilitativa presso l'Istituto Italiano di Tecnologia da Giacinto Barresi, July 6. www.tuttosuivideogiochi.it

2019 "Ecco WristBot il robot di IIT che aiuta la riabilitazione del polso", June 13. www.primocanale.it

2017 "Robot per la rieducazione del polso e una mano robotica dalle caratteristiche molto avanzate", November 2. www.simferweb.net

2016 "Tech –IIT, la riabilitazione si fa con i robot", September 8. www.ilsecoloxix.it

Scientific collaborations

- Istituto Italiano di Tecnologia, Genova, Italy: Dr. Sciutti Alessandra, Dr. Rea Francesco, (CONTACT), Dr. De Michieli Lorenzo, Dr. Laffranchi Matteo and Dr. Barresi Giacinto (REHAB).
- Manchester Metropolitan University, Manchester, UK, Prof. Loram Ian.
- Osaka University, Osaka, Japan, Prof. Nomura Taishin and Prof. Suzuki Yasuyuki.
- Brock Univesity, Canada, Prof. Holmes Michael W.R.
- Heidelberg University, Germany, Prof. Masia Lorenzo.
- University of Genova, Genova, Italy, Prof. Casadio Maura.
- University of Rome "La Sapienza", Roma, Italy, Prof. Palermo Eduardo.

Clinical collaborations

- Center for Motor Rehabilitation, INAIL, Volterra, Italy, Dr. Taglione Elisa.
- G. Gaslini Institute, Genova, Italy, Dr. Moretti Paolo.
- San Martino Hospital, Genova, Italy, Prof. Trompetto Carlo, Prof. Schenone Angelo.
- Centro Osservazionale Ausili Tecnologici Umbria, COAT, Trevi, Italy, Dr. Magni Riccardo.

Industrial collaborations

- Pragma Engineering S.r.l., Perugia, Italy, Dr. Magni Riccardo.
- BTS Design Innovation S.r.l., Milano, Italy, Mauri Duccio and Rosetti Marco.
- ELEMASTER spa, Lomagna, Italy, Cogliati Valentina and Magni Gualtiero.

Networks and Societies collaborations

- GLIC, Rete dei Centri italiani di riferimento nel settore degli ausili informatici ed elettronici per disabili, Dr. Guerreschi Massimo.
- Associazione Umbra per La Lotta alle Cardiopatie Infantili (AULCI), Perugia, Italy.

Fundings - Scientific Projects

- HUMOUR (2009-2012) (HUman behavioral Modeling for enhancing learning by Optimizing hUman-Robot interaction) FP7 ICT-231724, Coordinator: IIT, IIT funding: €550.820. Role in the project: PhD Student.
- DARWIN (2011-2014) (Dextrous Assembler Robot Working with embodied INtelligence) FP7 ICT-270138, Coordinator: PROFACTOR GMBH, IIT funding: €530.000. Role in the project: PhD Student.
- ACIRAS (2013-2015) (Ausili Cibernetici Riabilitativi per la diagnosi e la riabilitazione quantitativa della disabilità motoria dell'Arto Superiore nei bambini e negli adulti) Liguria Region, PAR-FAS 2012, Coordinator: BTP Tecno S.r.l., IIT funding: €114.604. Role in the project: Post Doc.
- Robot-Rehab (2014-2016) INAIL, Coordinator: IIT, IIT funding: €100.000. Role in the project: Leader in the WristBot clinical evaluation.
- Ericsson-IIT 5G Project (2018-2021). Role in the project: Leader in the 5G Security Area.
- APRIL (2020-2022) (multipurpose robotics for mAniPulation of defoRmable materIaLs in manufacturing processes), Partner: IIT, IIT funding: €508.312. Role in the project: Researcher.
- VOJEXT (2020-2022) (Value Of Joint EXperimentation in digital Technologies for manufacturing and construction), Partner IIT, IIT funding: €420.550. Role in the project: Researcher.

Fundings - Commercial Projects

- IIT Internal De-risking funding (2020-2021): €207.000: Development of the WristBot Product. Role in the project: Project Leader.
- Nanyang Technological University, Singapore: Development of 2 WristBot for stroke rehabilitation (2019). IIT contribution: €15.040. Role in the project: Project Leader.
- University of Minnesota, USA: Development of 1 WristBot for proprioceptive training (2019). IIT contribution: €20.640. Role in the project: Project Leader.

- Brock University, Canada: Development of 1 WristBot for wrist assessment (2019). IIT contribution: €26.640. Role in the project: Project Leader.
- San Francisco State University, USA: Development of 1 WristBot for proprioceptive assessment in children (2018). IIT contribution: €25.722. Role in the project: Project Leader.
- Nanyang Technological University, Singapore: Development of 1 WristBot for stroke rehabilitation in a clinical environment (2018). IIT contribution: €23.720. Role in the project: Project Leader.

Supervision of students

Post Doc:

- Marini Francesca (January 2018-August 2019) Research Theme: "Assessment and training of the sensorimotor function".

Fellow Senior:

- Mugnosso Maddalena (February 2020–June 2021) Research Theme: "Development of WristBot robot 2.0".
- Cherif Amel (February 2020–June 2021) Research Theme: "Development of WristBot robot 2.0".

PhD Student:

- Marco Guazzotti (November 2023-present, joint supervision with Prof. Casadio Maura)
- Irene Pippo (November 2023-present, joint supervision with Prof. Berselli Giovanni)
- Valentina Massone (November 2023-present, joint supervision with Prof. Casadio Maura)
- Albanese Giulia Aurora (November 2019-April 2023) Research Theme: "Robotic assessment and training".
- Belgiovine Giulia (November 2018-June 2022, joint supervision with Dr. Sciutti Alessandra and Dr. Rea Francesco) Research Theme: "Motor skill transfer in humans and humanoids".
- Falzarano Valeria (November 2018-July 2022) Research Theme: "Robot technologies for evaluation of sensorimotor impairments".
- Risso Gaia (November 2017- June 2021, joint supervision with Prof. Baud-Bovy Gabriel) Thesis Title: "A Psychophysical Approach to Touch: from Multi-sensory Processes to Body Representations".
- Mugnosso Maddalena (November 2016-February 2020) Thesis Title: "Coupling Robot-aided assessment and surface electromyography to evaluate wrist and forearm muscles activity, muscle fatigue and its effect on proprioception".
- Cherif Amel (November 2016-February 2020) Thesis Title: "Understanding motor control in humans to improve rehabilitation robots".
- Avila Mireles Edwin Johnatan (November 2014-February 2018, joint supervision with Prof. Morasso Pietro) Thesis Title: "Motor Learning and Motor Control Mechanisms in an Haptic Dyad".

Fellow Junior:

- Pippo Irene (July 2020 – August 2022) Research Theme: "Development of WristBot robot 2.0".
- Guazzotti Marco (February 2020 – October 2021) Research Theme: "Development of WristBot robot 2.0".
- Bellitto Amy (December 2018–May 2019, joint supervision with Prof. Baud-Bovy Gabriel) Research Theme: "Development and validation of a cable driven haptic device".
- Albanese Giulia Aurora (November 2018–July 2019) Research Theme: "Robot aided rehabilitation with orthopaedic patients".
- Ferrantino Martina (April 2017–June 2017) Research Theme: "Optimization of the WristBot software for experiments to evaluate proprioception".
- Mugnosso Maddalena (April 2016–July 2016) Research Theme: "Optimization of the WristBot software for experiments to evaluate fatigue".

Master Student:

- Basile Emanuele (joint supervision with Prof. De Momi Elena) Research Theme: "Adaptive training protocol for proprioceptive learning", Master Degree in Bioengineering, Polytechnic of Milan, March 2022.

- Petrella Giulia (joint supervision with Prof. Palermo Eduardo) Thesis Title: "Design, development and validation of a robot-based methodology for the clinical assessment of wrist joint stiffness", Master Degree in Bioengineering, University of Rome La Sapienza, July 2020.
- Pippo Irene (joint supervision with Prof. Berselli Giovanni and Dr. Torazza Diego) Thesis Title: "Design and development of a mechanical layout for integration of additional sensors on WristBot rehabilitation robot", Master Degree in Mechanical Engineering, University of Genova, July 2020.
- Guazzotti Marco (joint supervision with Prof. Casadio Maura) Thesis Title: "Design and development of a wrist robot for physical human-human interaction", Master Degree in Bioengineering, University of Genova, October 2019.
- Angius Alessandro (joint supervision with Prof. Casadio Maura and Prof. Baud-Bovy Gabriel) Thesis Title: "Calibration and testing of a force/torque sensor for the wrist rehabilitation", Master Degree in Bioengineering, University of Genova, March 2018.
- Ferrantino Martina (joint supervision with Prof. Casadio Maura) Thesis Title: "Design, development and test of a new haptic device for upper limb rehabilitation of fine movements", Master Degree in Bioengineering, University of Genova, March 2017.
- Gillardo Matteo (joint supervision with Prof. Casadio Maura and Dr. Marini Francesca) Thesis Title: "Electromyographic analysis of muscle fatigue: development of a new method for robot-based tracking tasks", Master Degree in Bioengineering, University of Genova, March 2017.
- Galofaro Elisa (joint supervision with Prof. Casadio Maura) Thesis Title: "Development of a novel algorithm to improve motor skill transfer between subjects during robotic training", Master Degree in Bioengineering, University of Genova, February 2017.

Bachelor Student:

- Merlo Elena (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring proprioception through vibro-tactile stimulation and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, September 2019.
- Rosi Emanuele (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring proprioception through vibro-tactile stimulation and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, September 2019.
- Frasca Miriam (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring fatigue through EMG and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, March 2019.
- Gava Luna (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring fatigue through EMG and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, July 2018.
- Pusceddu Giulia (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring fatigue through EMG and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, July 2018.
- Bozzo Elena (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring fatigue through EMG and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, July 2018.
- Garello Luca (joint supervision with Prof. Casadio Maura). Thesis Title: "Proprioceptive acuity under loading conditions", Bachelor Degree in Biomedical Engineering, University of Genova, October 2017.
- Focarelli Giulia (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring fatigue through EMG and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, October 2017.
- Morando Luca (joint supervision with Prof. Casadio Maura and Dr. Marini Francesca). Thesis Title: "Proprioceptive acuity under loading conditions", Bachelor Degree in Biomedical Engineering, University of Genova, September 2017.
- Folso Anna (joint supervision with Prof. Casadio Maura). Thesis Title: "Measuring fatigue through EMG and robotic devices", Bachelor Degree in Biomedical Engineering, University of Genova, September 2017.
- Pastore Aldo (joint supervision with Prof. Casadio Maura). Thesis Title: "Proprioceptive evaluation in an assisted reaching task", Bachelor Degree in Biomedical Engineering, University of Genova, October 2015.
- Rizzoglio Fabio (joint supervision with Prof. Casadio Maura). Thesis Title: "Proprioceptive training in assisted tracking tasks", Bachelor Degree in Biomedical Engineering, University of Genova, October 2015.

Languages

- Italian (mother language).
- English (oral: advanced, written: advanced).

Computer knowledge

C/C++, Java, Matlab/Simulink, Python, R, Linux, Real time kernels.

Invited Talks

[IT1] "Patients Engagement and Technologies For Rehabilitation" (2022) Workshop in Patients Engagement and Technologies For Rehabilitation And Prosthetics. RehabWeek2022, Rotterdam, Netherland, July 25. Invited by: Barresi Giacinto.

[IT2] Robot-Based Sensorimotor Assessment" (2021) Workshop in Ergonomics in human-robot systems. 3rd Italian Conference in Robotics and Intelligent Machines (I-RIM), Roma, Italy, October 9. Invited by: Barresi Giacinto.

[IT3] Barresi, G., **Zenzeri, J.,** Laffranchi, M., Semprini, M. "Robot Biomedici e Cyborg" (2020) Rome Videogame Lab, Roma, Italy November 6. Invited by: Rome Videogame Lab Festival.

[IT4] "Training and assessment of the sensorimotor function with robots" (2019) Heidelberg University, Heidelberg, Germany, December 13. Invited by: Prof. Masia Lorenzo.

[IT5] "Training and assessment of the sensorimotor function with robots" (2019) Brock University, St. Catharines, ON, Canada, October 28. Invited by: Prof. Holmes Michael W. R.

[IT6] "Robotic functional quantitative assessment in humans: protocols and perspectives" (2019) Osaka University, Osaka, Japan, May 1. Invited by: Prof. Nomura Taishin.

[IT7] "Motor skill learning through physical human-robot interaction" (2018), Brock University, St. Catharines, ON, Canada, November 20. Invited by: Prof. Holmes Michael W. R.

[IT8] "Computational neuroscience and robotics: a physical human-machine interaction perspective" (2018) Osaka University, Osaka, Japan, August 16. Invited by: Prof. Nomura Taishin.

[IT9] "Addestramento propriocettivo mediante tecnica robotica nell'emiparesi post-stroke" (2018), XVIII Congresso Nazionale della Società Italiana per lo Studio dello Stroke, Napoli, Italy, September 20. Invited by: Regesta Giovanni.

[IT10] "Riabilitazione robotica" (2018) Associazione Per La Famiglia, Genova, Italy, May 9. Invited by: Associazione Per La Famiglia.

[IT11] "WristBot" (2018) L'assistenza di domani oggi, March 22, Genova, Italy. Invited by: Basso Fosca.

[IT12] "Interfacce robotiche per la valutazione funzionale" (2017), 45th National Congress of the Italian Society of Physical and Rehabilitation Medicine (SIMFER), Genova, Italy, October 22. Invited by: SIMFER.

[IT13] "Motor control mechanisms in complex tasks" (2017), BioMecForum17, Osaka, Japan, October 14. Invited by: Prof. Nomura Taishin.

[IT14] "Motor control mechanisms in complex tasks" (2017), Osaka University, Osaka, Japan, September 20. Invited by: Prof. Nomura Taishin.

[IT15] "Motor control strategies in collaborative physical human-robot interaction" (2016), Manchester Metropolitan University, Manchester, UK, July 19. Invited by: Prof. Loram Ian.

[IT16] "Interfacce robotiche" (2016), Sport, Tecnologia e disabilità, GirlGeekDinner Event, Lugano, CH, May 20. Invited by: GirlGeekDinner Board.

[IT17] "Riflessioni e possibili percorsi per un welfare sostenibile" (2016), Innovazione tecnologica per un welfare sostenibile: analisi e riflessioni. Scuola Umbra di Amministrazione Pubblica, Perugia, Italy, May 6. Invited by: Dr. Magni Riccardo.

[IT18] "Emergence of different motor control strategies in complex tasks" (2015), RIC-IIT Workshop on Robotic and Interactive Technologies for Neuroscience and Neurorehabilitation, August 31-September 2, Arenzano, Italy. Invited by: Prof. Morasso Pietro.

Publications

Google Scholar Documents: 101 Citations: 1050 H-index: 16 (last update: December 5, 2023)

SCOPUS Documents: 73 Citations: 711 H-index: 15 (last update: December 5, 2023)

Journals

[J1] Albanese, G. A.*, Marini, F.*, Morasso, P., Campus, C. & **Zenzeri, J.** (2023). μ band desynchronization in the contralateral central and central-parietal areas predicts proprioceptive acuity. Frontiers in Human Neuroscience

[J2] Reece, A., Marini, F., Mugnosso, M., Frost, G., Sullivan, P., Zabihhosseinian, M., **Zenzeri, J**., Holmes, M. W. R. (2022). Influence of Neck Pain, Cervical Extensor Muscle Fatigue, and Manual Therapy on Wrist Proprioception. Journal of Manipulative and Physiological Therapeutics

[J3] Mannella, K., Forman, G. N., Mugnosso, M., **Zenzeri, J.**, Holmes, M. W. R. (2022). The effects of isometric hand grip force on wrist kinematics and forearm muscle activity during radial and ulnar wrist joint perturbations. PeerJ

[J4] Cherif, A., **Zenzeri, J**. & Loram, I. (2022). What is the contribution of voluntary and reflex processes to sensorimotor control of balance? Frontiers in Bioengineering and Biotechnology.

[J5] Albanese, G. A.*, Falzarano, V.*, Holmes, M. W. R., Morasso, P. & **Zenzeri, J.** (2022). A Dynamic Submaximal Fatigue Protocol Alters Wrist Biomechanical Properties and Proprioception. Frontiers in Human Neuroscience.

[J6] Valè, N., Gandolfi, M., Vignoli, L., Botticelli, A., Posteraro, F., Morone, G., Dell'orco, A., Botticelli, A., Dimitrova, E., Gervasoni, E., Goffredo, M., **Zenzeri, J.**, Antonini, A., Daniele, C., Benanti, P., Boldrini, P., Bonaiuti, D., Castelli, E., Draicchio, F., Falabella, V., Galeri, S., Gimigliano, F., Grigioni, M., Mazzon, S., Molteni, F., Petrarca, M., Picelli, A., Senatore, M., Turchetti, G., Guglielmelli, E., Petrone, N., Pignolo, L., Sgubin, G., Smania, N., Zollo, L., Mazzoleni, S., on behalf of the Italian Consensus Conference on Robotic in Neurorehabilitation CICERONE (2021) Electromechanical and robotic devices for gait and balance rehabilitation of children with neurological disability: a scoping review. Applied Sciences.

[J7] Mannella, K., Albanese, G. A., Ditor, D., **Zenzeri, J.** & Holmes, M. W. R. (2021) preliminary evaluation of an adaptive robotic training program of the hand and wrist for persons with multiple sclerosis. Applied Sciences.

[J8] Albanese, G. A., Taglione, E., Gasparini, C., Grandi, S., Pettinelli, F., Sardelli, C., Catitti, P., Sandini, G., Masia, L. & **Zenzeri, J.** (2021). Efficacy of wrist robot-aided orthopedic rehabilitation: a randomized controlled trial. Journal of NeuroEngineering and Rehabilitation, 18, 130 (2021). doi:10.1186/s12984-021-00925-0.

[J9] Falzarano, V., Holmes, M. W. R., Masia, L., Morasso, P. & **Zenzeri, J.** (2021). Evaluating viscoelastic properties of the wrist joint during external perturbations: influence of velocity, grip and handedness. Frontiers in Human Neuroscience. 15, 588. doi:10.3389/fnhum.2021.726841.

[J10] D'Antonio, E.*, Galofaro, E.*, **Zenzeri, J.,** Patane, F., Konczak, J., Casadio, M. & Masia, L. (2021). Robotic assessment of wrist proprioception during kinaesthetic perturbations: a neuroergonomic approach. Frontiers in Neurorobotics.

[J11] Gandolfi, M., Valè, N., Posteraro, F., Morone, G., Dell'orco, A., Botticelli, A., Dimitrova, E., Gervasoni, E., Goffredo, M., **Zenzeri, J.,** Antonini, A., Daniele, C., Benanti, P., Boldrini, P., Bonaiuti, D., Castelli, E., Draicchio, F., Falabella, V., Galeri, S., Gimigliano, F., Grigioni, M., Mazzon, S., Molteni, F., Petrarca, M., Picelli, A., Senatore, M., Turchetti, G., Giansanti, D. & Mazzoleni, S., on behalf of the Italian Consensus Conference on Robotic in Neurorehabilitation CICERONE (2021). State of the art and challenges for the classification of studies on electromechanical and robotic devices in neurorehabilitation: a scoping review. European Journal of Physical and Rehabilitation Medicine.

[J12] Albanese, G. A., Holmes, M. W. R., Marini, F., Morasso, P. & **Zenzeri, J**. (2021). Wrist position sense in two dimensions: between-hand symmetry and anisotropic accuracy across the space. Frontiers in Human Neuroscience, 15:662768. doi:10.3389/fnhum.2021.662768.

[J13] Kumar, R.; Forman, G. N., Forman, D. A., Mugnosso, M., **Zenzeri, J**., Button, D. & Holmes, M. W. R. (2020). Dynamic wrist flexion and extension fatigue induced via submaximal contractions similarly impairs hand tracking accuracy in young adult males and females, Frontiers in Sports and Active Living, 2, 135.

[J14] Forman, D. A., Forman, G. N., Avila Mireles, E. J., Mugnosso, M., **Zenzeri, J**., Murphy, B. & Holmes, M. W. R. (2020). Characterizing forearm muscle activity in young adults during dynamic wrist flexion-extension movement using a wrist robot, Journal of Biomechanics,108, 109908.

[J15] Forman, D. A., Forman, G. N., Avila Mireles E. J., Mugnosso, M., **Zenzeri, J**., Murphy, B. & Holmes, M. W. R. (2020). Characterizing forearm muscle activity in university-aged males during dynamic radial-ulnar deviation of the wrist using a wrist robot, Journal of Biomechanics, 109897.

[J16] Forman, D. A., Forman, G. N., Mugnosso, M., **Zenzeri, J**., Murphy, B. & Holmes, M. W. R. (2020). Sustained isometric wrist flexion and extension maximal voluntary contractions similarly impair hand-tracking accuracy in young adults using a wrist robot, Frontiers in Sports and Active Living section Biomechanics and Control of Human Movement, 2, 53.

[J17] Morasso, P., Cherif, A. & **Zenzeri, J**. (2020). State-space intermittent feedback stabilization of a dual balancing task. Scientific Reports.

[J18] Forman, G. N., Forman, D. A., Avila Mireles, E. J., **Zenzeri, J.** & Holmes, M. W. R. (2020). Investigating the muscular and kinematic responses to sudden wrist perturbations during a dynamic tracking task. Scientific Reports 10, 4161.

[J19] Cherif, A., Loram, I. & **Zenzeri, J**. (2020). Force accuracy rather than high stiffness is associated with faster learning and reduced falls in human balance. Scientific Reports 10, 4953.

[J20] Avanzino, L., Cherif, A., Crisafulli, O., Carbone, F., **Zenzeri, J**., Morasso, P., Abbruzzese, G., Pelosin, E. & Konczak, J. (2020). Tactile and proprioceptive dysfunction differentiates cervical dystonia with and without tremor. Neurology, 94(6), e639-e650.

[J21] Avanzino, L., Cherif, A., Crisafulli, O., Carbone, F., Ravaschio, A., Morasso, P., **Zenzeri, J**., Marchese, R., Abbruzzese, G., Pelosin, E. & Konczak, J. (2019). Tactile and proprioceptive dysfunction differentiates between cervical dystonia with and without tremor: 1250. Movement Disorders, 34.

[J22] Mugnosso, M., **Zenzeri, J.**, Hughes, C. & Marini, F. (2019) Coupling robot-aided assessment and surface electromyography (sEMG) to evaluate the effect of muscle fatigue on wrist position sense in the flexion-extension plane. Frontiers in Human Neuroscience. 13:396. doi:10.3389/fnhum.2019.00396.

[J23] Iandolo, R., Marini, F., Semprini, M., Laffranchi, M., Mugnosso, M., Cherif, A., De Michieli, L., Chiappalone, M. & **Zenzeri, J**. (2019). Perspectives and challenges in robotic neurorehabilitation. Applied Sciences 9(15):3183.

[J24] Marini, F., **Zenzeri, J.**, Pippo, V., Morasso, P. & Campus, C. Neural correlates of proprioception in upper limb position matching. Human Brain Mapping, doi:10.1002/hbm.24739.

[J25] Falzarano, V., Marini, F., Morasso, P. & **Zenzeri, J.** (2019). Devices and protocols for upper limb robot-assisted rehabilitation of children with neuromotor disorders. Applied Sciences 9(13):2689, doi:10.3390/app9132689.

[J26] Morasso, P., Cherif, A. & **Zenzeri, J.** (2019). Quiet standing: The single inverted pendulum model is not so bad after all, PLOS ONE, vol. 14, (no. 3), doi:10.1371/journal.pone.0213870.

[J27] Morasso, P., Nomura, T., Suzuki, Y. & **Zenzeri, J**. (2019). Stabilization of a cart inverted pendulum: Improving the intermittent feedback strategy to match the limits of human performance, Frontiers in Computational Neuroscience, vol. 13, 2019, doi:10.3389/fncom.2019.00016.

[J28] Mugnosso, M., Marini, F., Holmes, M. W. R., Morasso, P. & **Zenzeri, J**. (2018). Muscle fatigue assessment during robot-mediated movements. Journal of NeuroEngineering and Rehabilitation.

[J29] Marini, F., Ferrantino, M. & **Zenzeri, J**. (2018). Proprioceptive identification of joint position versus kinaesthetic movement reproduction. Human Movement Science, vol. 62, pp. 1-13, 2018, doi:10.1016/j.humov.2018.08.006.

[J30] Avila Mireles, E. J., **Zenzeri, J**., Squeri, V., Morasso, P. & De Santis, D. (2017). Skill learning and skill transfer mediated by cooperative haptic interaction. IEEE Transactions on neural Systems and Rehabilitation Engineering, 1-12. doi:10.1109/TNSRE.2017.2700839.

[J31] De Santis, D., **Zenzeri, J.**, Casadio, M., Masia, L., Riva, A., Morasso, P. & Squeri, V. (2015). Robot-assisted training of the kinesthetic sense: enhancing proprioception after stroke. Frontiers in Human Neuroscience, 8:1037. doi:10.3389/fnhum.2014.01037.

[J32] Morasso, P., Casadio, M., Mohan, V., Rea, F. & **Zenzeri, J**. (2015). Revisiting the body-schema concept in the context of Whole-Body Postural-Focal Dynamics. Frontiers in Human Neuroscience 9:83. doi:10.3389/fnhum.2015.00083.

[J33] Morasso, P., Casadio, M., De Santis, D., Nomura, T., Rea, F. & **Zenzeri, J**. (2014). Stabilization strategies for unstable dynamics. Journal of Electromyography and Kinesiology, 24(6):803-814.

[J34] **Zenzeri, J.**, De Santis, D. & Morasso, P. (2014). Strategy switching in the stabilization of unstable dynamics. PLOS ONE 9(6): e99087. doi:10.1371/journal.pone.0099087.

[J35] De Santis, D., **Zenzeri, J.,** Casadio, M., Masia, L., Morasso, P. & Squeri, V. (2014). A new method for evaluating kinesthetic acuity during haptic interaction. Robotica, available on CJO2014. doi:10.1017/S0263574714002252.

[J36] De Santis, D., **Zenzeri, J.,** Casadio, M., Masia, L., Squeri, V. & Morasso, P. (2014). Characterizing the human-robot haptic dyad in robot therapy of stroke survivors. International Journal of Intelligent Computing and Cybernetics, Special issue on Robotic Rehabilitation and Assistive Technologies, 7(3), 267-288. ***Highly Commented Paper Award**.

[J37] **Zenzeri, J.**, De Santis, D., Mohan, V., Casadio, M. & Morasso, P. (2013). Using the Functional Reach Test for probing the static stability of bipedal standing in humanoid robots based on the Passive Motion Paradigm. Journal of Robotics, Volume 2013, Article ID 126570, 8 pages.

[J38] **Zenzeri, J**., Basteris, A., Kostic, M., Popovic, D. B., Sanguineti, V., Mohan, V. & Morasso, P. (2011). Transferring complex motor skills from an expert to a novice through robotics platforms: a new methodology to approach neuromotor rehabilitation. Abstracts/Gait and Posture, 33(1), S51-S52.

[J39] Mohan, V., Morasso, P., **Zenzeri, J**., Metta, G., Chakravarthy, V. S. & Sandini, G. (2011). Teaching a humanoid robot to draw 'Shapes'. Autonomous Robots. 31(1), 21-53.

[J40] Morasso, P., Casadio, M., Mohan, V. & **Zenzeri, J**. (2010). A neural mechanism of synergy formation for whole body reaching. Biological Cybernetics, 102, 45-55.

Book Chapters

[B1] Barresi, G., **Zenzeri, J.**, Tessadori, J., Laffranchi, M., Semprini, M., De Michieli, L. (2022). Neuro-Gerontechnologies: Applications and Opportunities. Studies in Computational Intelligence.

[B2] Cherif, A., Loram, I. & **Zenzeri, J.** (2019). Effect of motor and sensory noise in the control of upright standing, Progress in Brain Research, 10.1016/bs.pbr.2019.04.031.

[B3] Masia, L., Casadio, M., Squeri, V., Cappello, L., De Santis, D., **Zenzeri J.** & Morasso, P. (2014). Enhancing recovery of sensorimotor functions: the role of robot generated haptic feedback in the re-learning process. Artemiadis eds.: Neuro-Robotics: From Brain Machine Interfaces to Rehabilitation Robotics. Series: Trends in Augmentation of Human Performance, Vol. 2, Springer, pp. 285-316.

[B4] Mohan, V., **Zenzeri, J.,** Metta, G. & Morasso, P. (2013). In humanoid robots, as in humans, bipedal standing should come before bipedal walking: implementing the Functional Reach Test. K. Mombaur, K. Berns eds.: Modeling, Simulation and Optimization of Bipedal Walking (COSMOS 18), Springer Verlag Berlin Heidelberg, pp. 145-153.

Conference Proceedings

[C1] Albanese, G. A.*, Basile, E.*, De Momi, E. & **Zenzeri, J** (2022). A new robot-based proprioceptive training algorithm to induce sensorimotor enhancement in the human wrist. IEEE International Conference on Rehabilitation Robotics (ICORR), Rotterdam.

[C2] Pippo, I., **Zenzeri, J.,** Berselli, G. & Torazza, D. (2022). An innovative mechanical solution to better understand human-robot interaction forces. Italian Association of Design Methods and Tools for Industrial Engineering International Conference, Roma, Italy, Lecture Notes in Mechanical Engineering.

[C3] Albanese, G. A.*, Falzarano, V.*, Holmes, M. W. R., Morasso, P. & **Zenzeri, J** (2021). Exploiting robotics to assess the effects of fatigue on the human wrist joint. 3rd Italian Conference in Robotics and Intelligent Machines (I-RIM).

[C4] Albanese, G. A.*, Falzarano, V.*, Holmes, M. W. R., Morasso, P. & **Zenzeri, J.** (2021). Implementing a robust dynamic fatigue task: repeatability and investigation of the features involved. 43rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC).

[C5] Belgiovine, G., Rea, F., **Zenzeri, J.** & Sciutti, A. (2020). Towards effective robot tutoring for skills acquisition. 2nd Italian Conference in Robotics and Intelligent machines (I-RIM). ***Winner – Best Paper Award.**

[C6] Albanese, G. A., Falzarano, V., Morasso, P. & **Zenzeri, J.** (2020). Assessment of human sensorimotor functions with robotic interfaces. 2nd Italian Conference in Robotics and Intelligent machines (I-RIM).

[C7] Belgiovine, G., Rea, F., Barros, P., **Zenzeri, J.** & Sciutti, A. (2020). Sensing the partner: toward effective robot tutoring in motor skill learning. International Conference on Social Robotics (ICSR). ***Winner – Best Paper Award.**

[C8] Belgiovine, G., Rea, F., **Zenzeri, J**. & Sciutti, A. (2020). A humanoid social agent embodying physical assistance enhances training experience. The 29th IEEE International Conference on Robot and Human Interactive Communication (ROMAN).

[C9] Falzarano, V., Petrella, G., Marini, F., Holmes, M. W. R., Masia, L., Morasso, P. & **Zenzeri, J**. (2020). Preliminary evaluation of a robotic measurement system for the assessment of wrist joint spasticity. Proceedings of the 8th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (BIOROB).

[C10] Albanese, G. A., Marini, F., Taglione, E., Gasparini, C., Grandi, S., Pettinelli, F., Sardelli, C., Catitti, P., Sandini, G., Masia, L. & **Zenzeri, J**. (2019). Assessment of human wrist rigidity and pain in post-traumatic patients, IEEE International Conference on Rehabilitation Robotics (ICORR), Toronto, CA.

[C11] Marini, F., Gordon-Murer, C., Sera, M., Tanha, T., Licudo, F., **Zenzeri, J**. & Hughes, C. (2019). Age-related declines in sensorimotor proficiency are specific to the tested motor skill component, IEEE International Conference on Rehabilitation Robotics (ICORR), Toronto, CA.

[C12] Marini, F., **Zenzeri, J**., Pippo, V., Morasso, P. & Campus C. (2019). Movement related activity in the mu band of the human EEG during a robot-based proprioceptive task, IEEE International Conference on Rehabilitation Robotics (ICORR), Toronto, CA.

[C13] Cherif, A., **Zenzeri, J**. & Morasso, P. (2019). Preliminary results of a dual balancing task, 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC).

[C14] **Zenzeri, J.,** Cherif, A., Belgiovine, G. & Morasso, P. (2019). Motor control mechanisms in multi strategies and multi goals tasks, 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC).

[C15] Belgiovine, G., Morasso, P. & **Zenzeri, J.** (2019). Strategy preference in complex dynamical tasks: preliminary results, 41st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC).

[C16] Mugnosso, M., Marini, F., Doglio, L., Panicucci, C., Bruno, C., Moretti, P., Morasso, P. & **Zenzeri, J.** (2018). Quantitative muscle fatigue assessment in neuromuscular disorders: A pilot study on duchenne pediatric subjects. Proceedings of the International Conference on NeuroRehabilitation, Pisa, Italy. Published as book chapter in Biosystems and Biorobotics, 2019, 10.1007/978-3-030-01845-0_92.

[C17] Galofaro, E., Morasso, P. & **Zenzeri, J.** (2017). Improving motor skill transfer during dyadic robot training through the modulation of the expert role. Proceedings of the 15th International Conference on Rehabilitation Robotics (ICORR), July 17-20, London, UK.

[C18] Mugnosso, M., Marini, F., Gillardo, M., Morasso, P. & **Zenzeri, J**. (2017). A novel method for muscle fatigue assessment during robot-based tracking tasks. Proceedings of the 15th International Conference on Rehabilitation Robotics (ICORR), July 17-20, London, UK.

[C19] Marini, F., Contu, S., Morasso, P., Masia, L. & **Zenzeri, J**. (2017). Codification mechanisms of wrist position sense. Proceedings of the 15th International Conference on Rehabilitation Robotics (ICORR), July 17-20, London, UK.

[C20] Avila Mireles, E. J., De Santis, D., Squeri, V., Morasso P. & **Zenzeri, J.** (2016). Skill transfer and generalization after robot-mediated dyadic training. Proceedings of the 9th International Workshop on Human-Friendly Robotics, September 29-30, Genova, Italy.

[C21] Morasso, P., Nomura, T., Suzuki, Y. & **Zenzeri, J.** (2016). The brain can mix different control strategies in a task-oriented and multi-referential manner: a simulation study. Proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 16-20, Orlando, FL, USA.

[C22] Loram, I. D., Cunningham, R. J., Gawthrop, P., **Zenzeri, J.** & Gollee, H. (2016) Intermittent control of unstable multivariate systems with uncertain system parameters. Proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 16-20, Orlando, FL, USA.

[C23] Avila Mireles, E. J., De Santis, D., Morasso, P. & **Zenzeri, J.** (2016). Transferring knowledge during dyadic interaction: the role of the expert in the learning process. Proceedings of the 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 16-20, Orlando, FL, USA.

[C24] De Santis, D., Avila Mireles, E. J., Squeri, V., Morasso, P. & **Zenzeri, J.** (2015). Dealing with instability in bimanual and collaborative tasks. Proceedings of the 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 25-29, Milan, Italy.

[C25] Avila Mireles, E. J., De Santis, D., Squeri, V., Morasso, P. & **Zenzeri, J**. (2015). Motor control strategies in the bimanual stabilization of an unstable virtual tool. Proceedings of the 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 25-29, Milan, Italy.

[C26] De Santis, D., **Zenzeri, J**., Masia, L., Squeri, V. & Morasso, P. (2014). Human-human physical interaction in the joint control of an underactuated virtual object. Proceedings of the 36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 26-30, Chicago, USA.

[C27] De Santis, D., **Zenzeri, J**., Masia, L., Squeri, V. & Morasso, P. (2014). Exploiting the link between action and perception: minimally assisted robotic training of the kinesthetic sense. Proceedings of the 5th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechatronics (BIOROB), August 12-15, São Paulo, Brazil.

[C28] De Santis, D., **Zenzeri, J**. & Morasso, P. (2013). Haptic Reaching: Continuous vs. Pulsed Paradigm. Proceedings of the 5th IMEKO TC 18 Symposium: Measurement, Analysis and Modelling of Human Functions, June 27-29, Vancouver, Canada.

[C29] De Santis, D., **Zenzeri, J**. & Morasso, P. (2013). Haptic Assessment of volitional effort. Proceedings of the 5th IMEKO TC 18 Symposium: Measurement, Analysis and Modelling of Human Functions, June 27-29, Vancouver, Canada.

[C30] De Santis, D., Masia, L., Morasso, P., Squeri, V., **Zenzeri, J.**, Casadio, M., Giannoni, P. & Riva, A. (2013). Pulsed assistance: a new paradigm of robot training. Proceedings of the 13th International Conference on Rehabilitation Robotics (ICORR), June 24-26, Seattle, WA, USA.

[C31] De Santis, D., Mohan, V., Morasso, P. & **Zenzeri, J.** (2012). Do humanoid robots need a body schema? A. Chella et al. (Eds): Biologically Inspired Cognitive Architectures, AISC 196, pp. 109-115.

[C32] Squeri, V., Basteris, A., **Zenzeri, J**., Giannoni, P. & Morasso, P. (2011). Quantitative evaluation of the deficit of the hand position sense in stroke patients. Proceedings of the 1st European NeuroRehabilitation Congress, October 20-22, The Kurhaus Meran, Merano, Italy.

[C33] **Zenzeri, J**., Morasso, P. & Saha, D. J. (2011). Expert strategy switching in the control of a bimanual manipulandum with an unstable task. Proceedings of the 33rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), August 30-September 3, Boston, MA, USA.

[C34] Squeri, V., Basteris, A., **Zenzeri, J**., Giannoni, P. & Morasso, P. (2011). Integrating proprioceptive assessment with proprioceptive training of stroke patients. Proceedings of the 12th International Conference on Rehabilitation Robotics (ICORR), June 29-July 1, Zurich, Switzerland.

[C35] Mohan, V., **Zenzeri, J**., Metta, G. & Morasso, P. (2010). Teaching humanoids to imitate 'shapes' of movements. Proceedings of the 20th International Conference on Artificial Neural Networks, September 15-18, Thessaloniki, Greece. Lecture Notes in Computer Science (LNCS), Springer Berlin Heidelberg.

[C36] **Zenzeri, J**., Mohan, V. & Morasso, P. (2010). Modeling handwriting: from critical points to shapes. Proceedings of the 4th IMEKO TC 18 Symposium: Measurement, Analysis and Modelling of Human Functions, June 14-16, Prague, Czech Republic.

[C37] Metta, G., Mohan, V., Morasso, P. & **Zenzeri, J**. (2009). In humanoid robots, as in humans, bipedal standing should come before bipedal walking. Proceedings of the 9th IEEE-RAS International Conference on Humanoid Robots (HUMANOIDS), December 7-10, Paris, France.

[C38] Mohan, V., **Zenzeri, J**., Morasso, P. & Metta, G. (2009). Composing and coordinating body models of arbitrary connectivity and redundancy: a biomimetic, field computing approach. Proceedings of the IEEE/RSJ International Conference on Intelligent RObots and Systems (IROS), October 11-15, St. Louis, MO, USA.

[C39] **Zenzeri, J**., Mohan, V. & Morasso, P. (2009). Coordination of focal arm movements and postural stabilization in whole body reaching: a computational model. Proceedings of the XIX IMEKO World Congress. Fundamental and Applied Metrology, September 6-11, Lisbon, Portugal.

Abstracts

[AB1] Falzarano, V.*, Albanese, G. A.*, Holmes, M. W. R., Morasso, P. & **Zenzeri, J.** (2021). Implications of fatigue on wrist stiffness and position sense. IEEE International Conference on Rehabilitation Robotics (ICORR).

[AB2] Mannella, K., Albanese, G. A., Ditor, D., **Zenzeri, J**. & Holmes, M. W. R. (2021). Preliminary validation of an adaptive robotic training program of the hand and wrist for persons with multiple sclerosis. International NeuroRehabilitation Symposium.

[AB3] Albanese, G. A., **Zenzeri, J.** & De Santis, D. (2021). The effect of feedback modality on learning a novel wrist visuomotor transformation. IEEE International Conference on Rehabilitation Robotics (ICORR). ***Podium paper.**

[AB4] Cousins, D. J. E., Kumar, R., Forman, G. A., Forman, D. N., Mugnosso, M., **Zenzeri, J**. & Holmes, M. W. R. (2021). Familiarization of a hand tracking task with a haptic wrist robot. Canadian Society for Biomechanics (CSB), Montreal, QC, Canada.

[AB5] Reece, A., Marini, F., Mugnosso, M., **Zenzeri, J**. & Holmes, M. W. R. (2020). Neck muscle fatigue impacts wrist joint position sense. Proceedings of the XXII Congress of the International Society of Electrophysiology and Kinesiology (ISEK).

[AB6] Forman, G. N., Kumar R, Forman, D. A., Mugnosso, M., Button, D., **Zenzeri, J**. & Holmes, M. W. R (2020). The impact of dynamic wrist flexor and extensor fatigue on hand tracking performance. Proceedings of the XXII Congress of the International Society of Electrophysiology and Kinesiology (ISEK).

[AB7] Kumar, R., Forman, G. N., Forman, D. A., Mugnosso, M., Button, D., **Zenzeri, J**. & Holmes, M. W. R. (2020). Sex differences in dynamic wrist flexion and extension fatigue on hand tracking performance using a wrist robot. Canadian Society for Biomechanics (CSB), Montreal, QC, Canada.

[AB8] Forman, G. N., Kumar, R., Forman, D. A., Mugnosso, M., Button, D., **Zenzeri, J**. & Holmes, M. W. R. (2020). Dynamic wrist flexor and extensor fatigue equally impacts hand tracking performance. Canadian Society for Biomechanics (CSB), Montreal, QC, Canada.

[AB9] Mugnosso, M., Marini, F., Doglio, L., Panicucci, C., Bruno, C., Moretti, P., Morasso, P. & **Zenzeri, J.** (2019). Feasibility study of a robot-based test for muscle fatigue assessment on subjects with Duchenne and Becker muscular Dystrophy, XX Congress of the Italian Society of Movement Analysis in Clinics (SIAMOC), October 9-12, Bologna, Italy.

[AB10] Holmes, M. W. R., Forman, D. A., Forman, G. N., Mugnosso, M., **Zenzeri, J**. & Murphy, B. (2019). Isometric wrist flexor and extensor muscle fatigue similarly impairs hand tracking performance using a haptic wrist robot, 50th Association of Canadian Ergonomists National Conference.

[AB11] Forman, G. N., Forman, D. A., Avila Mireles, E. J., **Zenzeri, J**., & Holmes, M. W. R. (2019). Investigating the effects of sudden wrist perturbations on forearm co-contraction, XXVII Congress of the International Society of Biomechanics.

[AB12] Forman, D. A., Forman, G. N., Mugnosso, M., **Zenzeri, J**., Murphy, B. & Holmes, M. W. R. (2019). The influence of isometric wrist flexor/extensor fatigue on hand tracking performance using a haptic wrist robot, XXVII Congress of the International Society of Biomechanics.

[AB13] Mannella, K., Forman, G. N., Mugnosso, M., **Zenzeri, J**. & Holmes, M. W. R. (2019). The effects of grip force on wrist kinematics in response to sudden perturbations, XXVII Congress of the International Society of Biomechanics.

[AB14] Cherif, A., **Zenzeri, J.** & Morasso, P. (2019). Stick balancing while standing: an example of dual unstable task control, Society for Neural Control of Movement, Toyama, Japan.

[AB15] **Zenzeri, J.,** Belgiovine, G. & Morasso, P. (2019). Triggering the switching between motor control strategies in complex unstable tasks, Society for Neural Control of Movement, Toyama, Japan.

[AB16] Marini, F., Campus, C., Pippo, V., Morasso, P. & **Zenzeri, J.** (2019). Modulation of event-related spectral perturbations in the mu band during a position matching task: a study about neural correlates of upper limb sense. Society for Neural Control of Movement, Toyama, Japan.

[AB17] Trompetto, C., Marinelli, L., Mori, L., Puce, L., Ciullo, A., **Zenzeri, J.**, Felici, F., Ajoudani, A., Catalano, M. G. & Bicchi, A. (2019). An Active Supernumerary hand for grasping Assistance and Rehabilitation. Workshop Innovation in Rehabilitation Technologies, Genova, Italy.

[AB18] Marini, F., Campus, C., Pippo, P., Morasso, P. & **Zenzeri, J.** (2019). Neural correlates of upper limb position matching, Workshop Innovation in Rehabilitation Technologies. Genova, Italy.

[AB19] Cherif, A., Carbone, F., Crisafulli, O., Ravaschio, A., Abbruzzese, G., Morasso, P., Konczak, J., **Zenzeri, J**., Pelosin, E. & Avanzino, L. (2019). Robot-based proprioceptive assessment in cervical dystonia patients. Workshop Innovation in Rehabilitation Technologies, Genova, Italy.

[AB20] Mugnosso, M., Marini, F., Doglio, L., Panicucci, C., Bruno, C., Moretti, P., Morasso, P. & **Zenzeri, J**. (2019). Coupling a robotic task and sEMG to assess muscle fatigue in children with neuromuscular disorders. Workshop Innovation in Rehabilitation Technologies, Genova, Italy.

[AB21] Falzarano, V., Marini, F., Morasso, P. & **Zenzeri, J**. (2019). A critical perspective on robotic protocols for upper limbs rehabilitation in children with neurological disorder. Workshop Innovation in Rehabilitation Technologies, Genova, Italy.

[AB22] Mugnosso, M., Marini, F., Doglio, L., Panicucci, C., Bruno, C., Moretti, P., Morasso, P. & **Zenzeri, J.** (2018). Robot-aided assessment of peripheral muscular fatigue in children with neuromuscular disorders. Proceedings of the XVIII Congresso Nazionale Associazione Italiana Miologia, Genova, Italy.

[AB23] Forman, D. A., Forman, G. N., Avila Mireles, E. J., **Zenzeri, J**. & Holmes, M. W. R. (2018). Characterizing forearm muscle recruitment patterns during radial and ulnar rotation of the wrist using a haptic wrist robot. Proceedings of the XXI Congress of the International Society of Electrophysiology and Kinesiology (ISEK), Dublin, Ireland.

[AB24] Forman, G. N., Forman, D. A., Avila Mireles, E. J., **Zenzeri, J.** & Holmes, M. W. R. (2018). Characterizing forearm muscle recruitment patterns during dynamic wrist flexion and extension contractions using a haptic wrist robot. Proceedings of the XXI Congress of the International Society of Electrophysiology and Kinesiology (ISEK), Dublin, Ireland.

[AB25] Forman, G. N., Forman, D. A., Avila Mireles, E. J., **Zenzeri, J**. & Holmes, M. W. R. (2018). Investigating the effects of sudden wrist perturbations on forearm musculature. Proceedings of the XXI Congress of the International Society of Electrophysiology and Kinesiology (ISEK), Dublin, Ireland. ***Winner – Best Student Poster Award.**

[AB26] Mugnosso, M., Marini, F., Doglio, L., Panicucci, C., Bruno, C., Moretti, P., Morasso, P. & **Zenzeri, J**. (2018). Coupling robotic tasks and surface electromyography to assess muscle fatigue in children with neuromuscular diseases. Proceedings of the XXI Congress of the International Society of Electrophysiology and Kinesiology (ISEK), Dublin, Ireland.

[AB27] Forman, D. A., Forman, G. N., Avila Mireles, E. J., **Zenzeri, J**. & Holmes, M. W. R. (2018). Wrist flexor-extensor co-contraction during dynamic wrist movements using a haptic wrist robot. Proceedings of the Canadian Society of Biomechanics.

[AB28] Forman, G. N., Forman, D. A., Avila Mireles, E. J., **Zenzeri, J**. & Holmes, M. W. R. (2018). Investigating the effects of sudden wrist perturbation on forearm musculature. Proceedings of the Canadian Society of Biomechanics.

[AB29] Avila Mireles, E. J., Reece, A., Parkinson, J., **Zenzeri, J**. & Holmes, M. W. R. (2018). Changes in forearm muscle activity and wrist kinematics during learning of a novel wrist tracking task, Proceedings of the Ontario Biomechanics Conference.

[AB30] **Zenzeri, J**. & Avila Mireles, E. J. (2018). Knowledge transfer during dyadic physical interaction: learning and generalization, Proceedings of the MeeTo: From moving bodies to interactive minds conference, Turin, Italy.

[AB31] Cherif, A., Loram, I., Gollee, H. & **Zenzeri, J.** (2018). Emergence of multiple postural control strategies in destabilizing environments. Proceedings of the Mathematical modeling in motor neuroscience conference, Pavia, Italy.

[AB32] Cherif, A., Loram, I., Gollee, H. & **Zenzeri, J**. (2017). Learning postural balancing in a dynamic destabilizing environment. Proceedings of the 47th annual meeting of the Society for Neuroscience, November 11-15, Washington, DC, USA.

[AB33] Taglione, E., Catitti, P., Gasparini, C., Grandi, S., Pettinelli, F., Sardelli, C., Sandini, G., Masia, L. & **Zenzeri, J**. (2017). Riabilitazione robot-assistita del polso con deficit funzionale post-traumatico: risultati preliminari di uno studio pilota, randomizzato, controllato. Proceedings of the 45th National Congress of the Italian Society of Physical and Rehabilitation Medicine (SIMFER), October 22-25, Genova, Italy.

[AB34] Cherif, A., Cuppone, A., Morasso, P., Abbruzzese, G., Konczak, J., **Zenzeri, J.,** Pelosin, E. & Avanzino, L. (2017). Wrist proprioception acuity evaluation in patients with cervical dystonia. Proceedings of the 45th National Congress of the Italian Society of Physical and Rehabilitation Medicine (SIMFER), October 22-25, Genova, Italy.

[AB35] Mugnosso, M., Marini, F., Doglio, L., Bruno, C., Moretti, P., Morasso, P. & **Zenzeri, J.** (2017). A new method for muscle fatigue evaluation for children with neuromuscular disease. Proceedings of the 45th National Congress of the Italian Society of Physical and Rehabilitation Medicine (SIMFER), October 22-25, Genova, Italy.

[AB36] **Zenzeri, J.,** Avila Mireles, E. J., Morasso, P. & De Santis, D. (2016). Dyadic learning of motor control strategies in complex tasks. Proceedings of the 5th Congress of the national group of bioengineering, June 20-22, Napoli, Italy.

[AB37] De Santis, D., Avila Mireles, E. J., Squeri, V., Morasso, P. & **Zenzeri, J.** (2016). Joint learning during dyadic haptic interaction. Proceedings of the XX Congress of the International Society of Electrophysiology and Kinesiology (ISEK), July 5-8, Chicago, IL, USA.

[AB38] Avila Mireles, E. J., De Santis, D., Squeri, V., Morasso, P. & **Zenzeri, J.** (2015). Differences between kinematic and muscular strategies in bimanual and collaborative tasks. Proceedings of the CODEFROR workshop, December 3-5, Genova, Italy.

[AB39] Avila Mireles, E. J., De Santis, D., Squeri, V., Morasso, P. & **Zenzeri, J.** (2015). Motor control efficiency in bimanual and collaborative tasks. Proceedings of the 45th annual meeting of the Society for Neuroscience, October 17-21, Chicago, USA.

[AB40] **Zenzeri, J**., De Santis, D., Casadio, M., Masia, L., Squeri, V. & Morasso, P. (2014). Integrating minimal assistance with the assessment of volitional effort. Proceedings of the 4th National Congress of Bioengineering, June 25-27, Pavia, Italy.

[AB41] De Santis, D., **Zenzeri, J**., Squeri, V., Masia, L. & Morasso, P. (2014). Un nuovo protocollo per integrare valutazione e training robotico dei deficit propriocettivi dell'arto superiore. Proceedings of the XIV National Congress of the Italian Society of Neurological Rehabilitation (SIRN), May 8-10, Genova, Italy.

[AB42] **Zenzeri, J.**, & Morasso, P. (2012). Modelling intermittent assistance in a multi strategy unstable task. Proceedings of the 3rd National Congress of Bioengineering, June 26-29, Roma, Italy.

[AB43] De Santis, D., **Zenzeri, J.**, Mohan, V., & Morasso, P. (2012). Solving motor redundancy in the brain: a biomimetic model for action generation and mental simulation. Proceedings of the 3rd National Congress of Bioengineering, June 26-29, Roma, Italy.

[AB44] **Zenzeri, J.**, Mohan, V., De Santis, D. & Morasso, P. (2012). The essence of being alive is having the freedom to choose ones 'Compliance': a humanoid perspective to understand 'tool use' in humans. Proceedings of the 5th International Conference on Cognitive Sciences, June 18-24, Kaliningrad, Russia.

[AB45] **Zenzeri, J.** & Morasso, P. (2011). Expert performance and generalization in bimanual unstable tasks. Proceedings of the 41st annual meeting of the Society for Neuroscience, November 12-16, Washington, DC, USA.

[AB46] Mohan, V., **Zenzeri, J**., Metta, G., Morasso, P. & Sandini, G. (2010). Learning to draw after observing a teacher: iCub's scribbles and shapes. Proceedings of the 9th Annual Symposium on Advances in Computational Motor Control at the Society for Neuroscience Meeting, November 12-17, San Diego, CA, USA.

[AB47] **Zenzeri, J**., Mohan, V. & Morasso, P. (2010). From posture to movement: a computational approach to Whole Body Reaching. Proceedings of the 2nd National Congress of Bioengineering, July 8-10, Torino, Italy.

[AB48] Mohan, V., Morasso, P., Metta, G., **Zenzeri, J**. & Sandini, G. (2010). Teaching baby humanoid iCub to write 'iCub' and beyond. Proceedings of the 4th International Conference on Cognitive Sciences, June 22-26, Tomsk, Russia.

[AB49] Mohan, V., Morasso, P., Metta, G. & **Zenzeri, J**. (2009). Equilibrium point hypothesis revisited: advances in the computational framework of Passive Motion Paradigm. Proceedings of the 8th Annual Symposium on Advances in Computational Motor Control at the Society for Neuroscience Meeting, October 14-16, Chicago, IL, USA.

[AB50] **Zenzeri, J.,** Mohan, V. & Morasso, P. (2009). Preserving postural stability while reaching beyond arm's length. Proceedings of the XIX Conference of the International Society for Posture & Gait Research (ISPGR), June 21-25, Bologna, Italy.

Theses

[T1] **Zenzeri, J.** (2013). Coordination of redundant degrees of freedom in humans and humanoids: modeling and experiments. PhD Thesis, Istituto Italiano di Tecnologia and University of Genova, Genova, Italy.

[T2] **Zenzeri, J.** (2009). Postural stabilization during whole body movements. Master Thesis, University of Genova, Genova, Italy.

[T3] **Zenzeri, J.** (2006). Modellizzazione macroscopica di materiali a memoria di forma ferromagnetici (Macroscopic modelization of ferromagnetic shape memory alloys). Bachelor Thesis (in Italian), University of Pavia, Pavia, Italy.

References:

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