Tommaso Lisini Baldi

Curriculum Vitae

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Education

2014–2018 PhD, Department of Information Engineering, University of Siena, Siena (Italy). Department of Advanced Robotics, IIT - Istituto Italiano di Tencologia, Genova (Italy) Thesis title: "Human Guidance: Methods, Technologies, and Experiments" Advisor: Prof. Domenico Prattichizzo, Co-Advisor Prof. Darwing Caldwell 2011–2014 Master of Science in Computer Engineering (LM-32 D.M. 270/2004), University of Siena, Siena (Italy), M.S. degree in Computer Engineering 110/110 cum laude curriculum Robotics and Automation Advisor: Prof. Domenico Prattichizzo 2012 Visiting Student, Karlstad University Karlstad (Sweden)

Karlstad University, Karlstad (Sweden), Faculty of Economic Sciences, Communication and IT Field of study: Computer Science

2007–2011 Bachelor of Science in Information Engineering (L-9 D.M. 509/1999),

University of Siena, Siena (Italy), B.S. degree in Information Engineering curriculum Systems and Automation Advisor: Prof. Marco Casini

Qualifications

National Scientific qualification as associate professor, disciplinary field 09/G1 - Systems and control engineering (Academic Recruitment Field 09/G - Systems engineering and bioengineering, according to the national classification). From 06/02/2023 to 06/02/2034

National professional qualification to the profession of engineer. September 2020

Languages

Italian Mothertongue English Fluent

Idoneità C1 - Issued by: University of Siena - Level C1 FIRST - Issued by: University of Cambridge - Level B2 PET - Issued by: University of Cambridge - Level B1

Research Experience

2022–present **Temporary Assistant Professor (RTD-A)**, DIPARTIMENTO INGEGNERIA DELL'INFORMAZIONE E SCIENZE MATEMATICHE, Universita' degli Studi di Siena, Siena, (Italia)

2023–present Affiliated Researcher, HUMANOIDS AND HUMAN CENTERED MECHATRONICS, Istituto Italiano di Tecnologia (IIT), Genova, (Italia)

2019–2021 Postdoctoral Researcher,

DEPARTMENT OF INFORMATION ENGINEERING, University of Siena, Siena, (Italy)

 $\odot\,$ Robotics, Tracking, Haptics, Human-Robot Interaction, Assistive Robotics.

2018–2019 Research Fellow,

DEPARTMENT OF INFORMATION ENGINEERING, University of Siena, Siena, (Italy)

O Robotics, Tracking, Haptics, Human-Robot Interaction, Assistive Robotics.

2014–2017 **PhD fellow**,

DEPARTMENT OF ADVANCED ROBOTICS (ADVR), IIT - Istituto Italiano di Tencologia, Genova (Italy). Advisor Prof. Darwin Caldwell

 Human - Robot Interaction, Haptics, Wearable Tracking, Robotics for Health and Wellbeing

$2014–2018 \quad \textbf{PhD student},$

DEPARTMENT OF INFORMATION ENGINEERING, University of Siena, Siena (Italy). Advisor Prof. Domenico Prattichizzo

 Human - Robot Interaction, Haptics, Wearable Tracking, Robotics for Health and Wellbeing

Awards and Honors

- Best Poster Award at the IEEE ICRA 2024 Workshop on "Human-Centric Multilateral Teleoperation Augmentation", for the paper entitled "Reducing Cognitive Load through a Data-Driven Shared Control Approach for Teleoperating Robot Swarms" by E. Turco, C. Castellani, V. Bo, C. Pacchierotti, D. Prattichizzo and T. Lisini Baldi
- Co-Author of the paper "Design, Development, and Control of a Hand/Wrist Exoskeleton for Rehabilitation and Training", IEEE Transactions on Robotics, vol. 38, n. 3, June 2022, awarded with the Fabrizio Flacco Young Author Best Paper Award 2023.
- Finalist Best Technical Paper award at IEEE Haptics Symposium 2022 "Design and Comparison of Haptic Policies for Human Guidance".
- Finalist Best Technical Paper award at IEEE Haptics Symposium 2020 "Hand Guidance Using Grasping Metaphor and Wearable Haptics".
- MDPI 2020 Travel Awards sponsored by Machines to support attendance at the academic conference related to Machines and sensing topics in 2020
- $_{\odot}$ Best interactive presentation award at Automatica. it, Ancona 2019
- \odot Best interactive presentation award at Automatica. it, Milano 2017

Editorial Services

2024 - Associate Editor

 \odot EuroHaptics Conference

2022 - Guest Associate Editor

 IEEE Transactions on Haptics, Special Issue "IEEE Transactions on Haptics Haptic Symposium Short Papers Track

2022 - Review Editor

- Frontiers in Virtual Reality, section Haptics
- Frontiers in Robotics and AI section Biomedical Robotics
- Frontiers in Robotics and AI section Haptics:

2023 - Committee Member

• Member of the selection committee for Italian national Phd DRIM

Teaching

2024 Lecturer of the following PhD Courses

- INTRODUCTION TO PSYCHOPHYSICS AND CONCEPT OF THRESHOLD, TOAST Doctoral Network Training School on Touch-enabled Tactile Internet
- WEARABLE HAPTICS FOR HUMAN GUIDANCE, DIISM (University of Siena) and DRIM (National PhD programme) joint PhD School
- 2022-2024 **Co-Teacher for the course "Robotics I"**, DIISM, University of Siena, Siena (Italia)
- 2023-2024 **Professor of "Robotica applicata alla protesizzazione acustica**", DSMCN, University of Siena, Siena (Italia)
 - 2024 **Professor of "Sistemi di elaborazione delle informazioni"**, DMMS, University of Siena, Siena (Italia)
 - 2019 Teacher of "Sensors and Embedded Systems", Project "I4.0x360", UNIVERSITY OF SIENA, Siena (Italy)
- 2018-2019 **Teacher of "Tecnologie Informatiche", CDC A41**, ISTITUTO DI ISTRUZIONE SUPERIORE BETTINO RICASOLI, Siena (Italia)
 - 2018 **Teacher of "Robotics and Foundations of Computer Science"**, IFTS Worker 4.0 Tecnico dell'Automazione dei Processi Produttivi, Siena, Grosseto (Italia)
 - 2017 Teaching assistant for the course "Robotics I", DIISM, University of Siena, Siena (Italia)
 - 2015 Teaching assistant for the course "Robotics I", DIISM, University of Siena, Siena (Italia)

Supervisor Activity

PhD Students Co-Advisor

- Ivan Semenzi, PhD student in Information Engineering and Science at University of Siena (XXXIX Cycle)
- Michele Guerri, PhD student in Information Engineering and Science at University of Siena (XXXIX Cycle)

Research Fellows Advisor

 Elena Bastianelli, Research Fellow, Department of Information Engineering and Mathematical Sciences, Siena (2023)

Master Thesis Co-Advisor

- Elena Bastianelli (Politecnico di Milano), "Exploiting Kinematic Redundancy of Surgeons for Motor Augmentation to Control the Da Vinci Camera", AA 2022/2023
- Ivan Semenzi, "Tactile Stimulation For Upper Limb Rehabilitation In Stroke Patients", AA 2022/2023
- Michele Guerri, "A Novel Haptic-Based Guidance System For Visually Impaired Climbers", AA 2022/2023
- Bernardo Brogi, "Metaverse: Strategies For Masking Robots In Manipulation Scenarios", AA 2021/2022
- Giovanni Cortigiani, "Metaverse: Robotic Teleoperation Method For Object Digital Twin Overlapping", AA 2021/2022
- Luca Grande, "A Neural Network-Based Approach For Discriminating Human Skin Through Vibrations Propagation", AA 2020/2021
- Federico Toscano, "A Novel System To Identify Different Materials By Generating Vibrations And Studying Their Propagation", AA 2020/2021
- Alberto Villani (Università degli Studi di Napoli Federico II), "Tecniche e tecnologie per il controllo, supporto e apprendimento all'uso della Multifunctional Soft Hand attraverso mapping nello spazio degli oggetti e feedback aptico", AA 2019/2020
- Enrico Festa, "Scaling Human Hand Motion In Virtual Reality: Perception Evaluation", AA 2019/2020
- Marco Salvi, "Interfacce Aptiche Indossabili Per La Guida Di Persone, AA 2015/2016

Bachelor Thesis Advisor

 Niccolo' Petrilli, "Ricostruzione ed interazione con un modellotermico tridimensionale", AA 2022/2023

Research Projects and Scientific Collaborations

I am currenlty leading the following project:

 "BRIOCHE: wearaBle sensoRImOtor interfaCes for Human augmentation", funded by the F-CUR programme of the University of Siena, CUP B65F21002780001

I am currently involved in the following projects:

- "THE TUSCANY HEALTH ECOSYSTEM", Spoke 9 (funded by the European Union with the Next Generation EU programme, project n. ECS00000017) I was involved in the proposal writing, carrying out research on the topic, and managing the administrative procedures;
- "Fit4MedRob Fit for Medical Robotics" (funded by the Italian Ministero dell'Università e della Ricerca, project n. PNC0000007) I was involved in the proposal writing, carrying out research on the topic, and managing the administrative procedures;
- "REGO Cognitive robotic tools for human-centered small-scale multi-robot operations" (funded by the European Commission under the Horizon Europe programme, GA: 101070066). I was involved in the proposal writing and I am carrying out research on the project's topics.
- TOAST: Touch-enabled Tactile Internet Training Network and Open Source Testbed" (funded by the Union of Europe program Marie Skłodowska-Curie grant agreement No. 101073465.).
- HARIA Augmentation Wearable Sensorimotor Interfaces and Supernumerary Robotic Limbs for Humans with Upper-limb Disabilities" (funded by the European Union's Horizon Europe programme under grant agreement No. 101070292.5). I have been actively involved in writing the project and am carrying out research on the topic and contributing to the writing of periodic reports.

I was actively involved in the following projects as co-coordinator:

- "No Face-Touch: an Open Project to Limit the COVID-19 Outbreak", (funded by the IEEE Robotics and Automation Society Special Interest Group on Humanitarian Technology (RAS-SIGHT)).
- "CAROL: Cavigliere Aptiche per la RegOLazione della cadenza di passo" (funded by Ministero dello Sviluppo Economico "POC MISE ARNO 2020 -POCARNO).

I was actively involved in the following projects:

- "TIGHT Tactile InteGration for Humans and artTificial systems" (funded by the Italian Ministry of Universities and Research (MIUR), PRIN2017 2020-2023). I was actively involved in the project in proposal writing and carrying out research on the topic.
- "SoftPro Synergy-based Open-source Foundations and Technologies for Prosthetics and RehabilitatiOn" (funded by the European Union H2020 Programme G.A. 688857).
- "WEARHAP WEARable HAPtics for humans and robots" (funded by the European Union Seventh Framework Programme FP7/2007-2013 G.A. 601165). Sono stato attivamente coinvolto nel progetto europeo svolgendo ricerca sul tema, presentando le attività di ricerca a revisori internazionali durante i "review meeting" e contribuendo alla scrittura dei report periodici.
- "ACANTO A CyberphysicAl social NeTwOrk using robot friends" (funded by the European Union H2020 Programme under G.A. 643644). I was actively involved in the European project carrying out research on the topic and contributing to the writing of periodic reports.

Active Scientific Collaborations

- Research affiliate at the Istituto Italiano di Tencologia, Humanoids and Human Centered Mechatronics group, under the supervision of Prof. Nikos Tsagarakis
- Some examples of scientific collaborations that have led to the publication of scientific works are: with the group of Prof. Andrea D'Avella (University of Roma Tor Vergata, Italy) in the study of augmentative robotics; with the group of Prof. Fanny Ficuciello (University of Naples Federico II, Italy) in the field of robotic surgery; with Prof. Emiliano Santarnecchi (Harvard Medical School, Boston, MA, United States) in the field of augmentative and assistive robotics; with Prof. Gijs Huisman (University of Delft, Holland) in the field of haptics; with the group of Prof. Bert Jan Van Beijnum (University of Twente, Holland) in the development of tracking algorithms; with the group of Dr. Claudio Pacchierotti (CNRS, Univ Rennes, Inria, France) in the development of wearable haptic interfaces; with the group of Prof. Kouta Minamizawa (Keio University, Japan) in the field of wearable haptics; with Prof. Yoshihiro Tanaka (Nagoya Institute of Technology, Japan) in the field of wearable haptics; with Prof. Irfan Hussain (Khalifa University, United Arab Emirates) in the field of augmentative robotics.

Patents

- Sistema per guidare il passo di un soggetto Italian Patent Number 102016000050153 (UA2016A003488) - Category: Invention
- A haptic system for providing a gait cadence to a subject International Patent Number EP3458011C0
- Sistema e procedimento di interazione fisica tra due utenti in una realtà aumentata Italian application Number 102022000021405

Conferences, Workshops, and Invited Talks

Session Chair

- 2024 **IEEE Haptics Symposium**, Long Beach, CA, US Chair of Session 4: "Wearable and Hand-held Devices"
- 2021 **29thIEEE Mediterranean Conference on Control and Automation** (MED), Virtual Co-Chair ThB01 "Wearables and Assistive Technologies" della conferenza"
- 2020 Seconda Conferenza di Robotica e Macchine Intelligenti, Virtual, Co-Chair of the following sessions
 "Humanoids, Exoskeletons, and Rehab Robots I", "Grasping, Haptics and End-effectors II", "Humanoids, Exoskeletons, and Rehab Robots IV-V"
- 2020 Seconda Conferenza di Robotica e Macchine Intelligenti, Virtual Co-Chair of the plenary talk at Maker Faire "L'era della collaborazione tra uomo e robot", Antonio Bicchi, Tommaso Lisini Baldi, Oussama Khatib

Invited Talks

- 2024 "Nuovi sensory cues aptici per la risoluzione del FOG", VII Meeting Rete Toscana Disordini del Movimento, Siena, Italy
- 2022 "Design and comparison of haptic policies for human guidance", Eurohaptics Conference, Hamburg, Germany
- 2020 "No Face-Touch: An open project to limit the COVID-19 outbreak", Workshop on Humanitarian Robotics, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Virtual

Organized Workshops

- 2024 **"Enabling artificial agents to communicate with humans through touch"**, *EuroHaptics Conference*, Lille, France Organziers: Nicole D'Aurizio, Tommaso Lisini Baldi, Maria Pozzi, Claudio Pacchierotti
- 2022 **"TIGHT: Tactile InteGration between Human and arTificial systems 3rd Edition"**, 31st IEEE International Conference on Robot and Human Interactive Communication (RO-MAN), Naples, Italy Organziers: Maria Pozzi, Tommaso Lisini Baldi, Gionata Salvietti, Monica Malvezzi, Domenico Prattichizzo, Matteo Bianchi
- 2020 **"TIGHT: Tactile InteGration between Human and arTificial systems 2nd Edition"**, 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN), Virtual Organziers: Maria Pozzi, Tommaso Lisini Baldi, Domenico Prattichizzo, Matteo Bianchi
- 2019 **"TIGHT: Tactile InteGration between Human and arTificial systems"**, Conferenza Italiana di Robotica e Macchine Intelligent, Rome, Italy Organziers: Maria Pozzi, Tommaso Lisini Baldi, Domenico Prattichizzo, Matteo Bianchi

Paper Presentations

2024 IEEE Haptics Symposium, Long Beach, CA, USA
"A Wearable Pick-to-haptics System to Improve Manual-picking Tasks in Warehouses", L. Franco, T. Lisini Baldi, D. Prattichizzo, G. Salvietti

2023 ICRA, IEEE International Conference on Robotics and Automation (ICRA), London, UK -"Exploiting Intrinsic Kinematic Null Space for Supernumerary Robotic Limbs Control", T. Lizini Baldi, N. D'Aurinia, S. Currana, D. Barralli, A. D'Aurila e D. Brattiching,

T. Lisini Baldi, N. D'Aurizio, S. Gurgone, D. Borzelli, A. D'Avella e D. Prattichizzo -"Avatarm: An Avatar with Manipulation Capabilities for the Physical Metaverse", A. Villani, G. Cortigiani, B. Brogi, N. D'Aurizio, T. Lisini Baldi, e D. Prattichizzo

2021 I-RIM, Terza Conferenza Italiana di Robotica e Macchine Intelligenti, Rome, Italy

"Kinematic Intrinsic Null-Space Motor Control for Human Bodily Augmentation", T.Lisini Baldi, N. D'Aurizio, D. Prattichizzo

2021 29th IEEE Mediterranean Conference on Control and Automation (MED), Virtual
 "Mobile Augmented Reality Integrating Fingertip Haptic Devices and Wrist-Worn Visual

"Mobile Augmented Reality Integrating Fingertip Haptic Devices and Wrist-Worn Visual Displays", T. Lisini Baldi, G. Paolocci, D. Barcelli, D. Prattichizzo

- 2021 IEEE World Haptics Conference (WHC), Virtual
 "Generating Kinesthetic Feedback Using Self Contact and Velocity Scaling", T. Lisini Baldi, N. D'Aurizio, A. Villani, D. Prattichizzo
- 2020 IEEE Haptics Symposium Conference (HAPTICS), Virtual
 "Hand Guidance Using Grasping Metaphor and Wearable Haptics", Tl Lisini Baldi, N. D'Aurizio, D. Prattichizzo
 "Wearable Haptics for Remote Social Walking", T.Lisini Baldi, G. Paolocci, D. Barcelli,
- D. Prattichizzo 2020 IEEE International Conference on Human Machine Systems (ICHM), Virtual

"Development of a Low-cost Glove for Thumb Rehabilitation: Design and Evaluation", G. Pompili, T. Lisini, D. Barcelli, D. Prattichizzo

- 2020 Seconda Conferenza di Robotica e Macchine Intelligenti, Virtual "Solutions to Deal With COVID-19 Pandemic", T. Lisini Baldi, N. D'Aurizio, G. Paolocci, S. Marullo e D. Prattichizzo
- 2019 Conferenza Italiana di Robotica e Macchine Intelligenti, Rome, Italy
 "Wearable Haptics for Human Guidance in Structured and Unstructured Environments", T. Lisini Baldi, G. Paolocci, D. Barcelli, M. Aggravi, e D. Prattichizzo
- 2018 Workshop on Reshaping Touch Communication: An Interdisciplinary Research Agenda", IEEE Conference on Human Factors in Computing System (CHI), Montreal, Canada
 "Human Guidance Using Vibrotactile Haptic Interfaces", T. Lisini Baldi, G. Paolocci, M. Aggravi, D. Barcelli, S. Scheggi e D. Prattichizzo
- 2018 Eurohaptics Conference, Pisa, Italy
 "Human Guidance: Suggesting Walking Pace Under Manual and Cognitive Load", T. Lisini Baldi, G. Paolocci e D. Prattichizzo

- 2017 IEEE International Conference on Rehabilitation Robotics (ICORR), London, UK
 "Design of a Wearable Interface for Lightweight Robotic Arm for People with Mobility Impairments", T. Lisini Baldi, G. Spagnoletti, M. Dragusanu e D. Prattichizzo
- 2017 IEEE International Conference on Intelligent Robots and Systems (IROS), Vancouver, Canada
 "Haptic Guidance in Dynamic Environments Using Optimal Reciprocal Collision Avoidance" di T. Lisini Baldi, S. Scheggi, M. Aggravi e D. Prattichizzo
- 2015 IEEE World Haptics Conference (WHC), Evanston, IL, USA
 "Using inertial and magnetic sensors for hand tracking and rendering in wearable haptics"
 T. Lisini Baldi, M. Mohammadi, S. Scheggi e D. Prattichizzo

Organized Webinars and Seminars

- 2024 "La robotica indossabile per il miglioramento della qualità della vita", *AEIT - Sezione Toscana e Umbria*, 3 CFP, Siena Organizers: T. Lisini Baldi, S. Paoletti, D. Prattichizzo
- 2022 "Muscoli, arti e sensi artificiali: robotica e interfacce sensorimotorie al servizio dell'uomo", *THE Talk*, THE Tuscany Health Ecosystem Project, Online

Organizers and Speakers: M. Malvezzi (Univ. Siena), G. Gioioso (WEART srl), M. Bianchi (Univ. Pisa), T. Lisini Baldi (Univ. Siena), F. Bonomo (QBrobotics srl)

Personal Skills and Competences

- Good experience in projects and teamwork.
- Open-minded, ability to work individually and as a team member, strong communication and analytical skills
- Good ability to adapt to multicultural environments.

Additional Information and Skills

Driving A, B Licence

Certifications o Certificate of "First Aider"

- Certificate of "Health and safety in a high risk workplaces"
- Certificate ECDL IT-Security (n. IT2313149)

Memberships o Member IEEE, RAS

Publications

Michele Pompilio, Nicole D'Aurizio, Tommaso Lisini Baldi, Leonardo Franco, Guido Gabriele, and Domenico Prattichizzo. A novel wearable sensing device enabling remote palpation. In 2024 IEEE Haptics Symposium (HAPTICS), pages 149–156. IEEE, 2024.

T. Lisini Baldi, N. D'Aurizio, S. Gurgone, D. Borzelli, A. D'Avella, and D. Prattichizzo. Exploiting intrinsic kinematic null space for supernumerary robotic limbs control. *Proceedings - IEEE International Conference on Robotics and Automation*, 2023-May:11957 – 11963, 2023.

Nicole D'aurizio, Teresa Ramundo, Tommaso Lisini Baldi, Alessandro Moscatelli, and Domenico Prattichizzo. On the correlation between tactile stimulation and pleasantness. *IEEE Transactions on Haptics*, 16(4):861 – 867, 2023.

A. Villani, G. Cortigiani, B. Brogi, N. D'Aurizio, T. Lisini Baldi, and D. Prattichizzo. Avatarm: An avatar with manipulation capabilities for the physical metaverse. *Proceedings - IEEE International Conference on Robotics and Au*tomation, 2023-May:11626 – 11632, 2023.

Mihai Dragusanu, Muhammad Zubair Iqbal, Tommaso Lisini Baldi, Domenico Prattichizzo, and Monica Malvezzi. Design, development, and control of a hand/wrist exoskeleton for rehabilitation and training. *IEEE Transactions on Robotics*, 38(3):1472 – 1488, 2022.

Sergio Gurgone, Daniele Borzelli, Paolo De Pasquale, Denise J. Berger, Tommaso Lisini Baldi, Nicole D'Aurizio, Domenico Prattichizzo, and Andrea D'Avella. Simultaneous control of natural and extra degrees-of-freedom by isometric force and emg null space activation. *Biosystems and Biorobotics*, 28:863 – 868, 2022.

Sergio Gurgone, Daniele Borzelli, Paolo De Pasquale, Denise Jennifer Berger, Tommaso Lisini Baldi, Nicole D'Aurizio, Domenico Prattichizzo, and Andrea D'Avella. Simultaneous control of natural and extra degrees of freedom by isometric force and electromyographic activity in the muscle-to-force null space. *Journal of Neural Engineering*, 19(1), 2022.

Gianluca Paolocci, Tommaso Lisini Baldi, Ludovico Sampieri, and Domenico Prattichizzo. Design and comparison of haptic policies for human guidance. *IEEE Haptics Symposium, HAPTICS*, 2022-March, 2022.

Tommaso Lisini Baldi, Nicole D'Aurizio, Alberto Villani, and Domenico Prattichizzo. Generating kinesthetic feedback using self contact and velocity scaling. 2021 IEEE World Haptics Conference, WHC 2021, page 619 – 624, 2021.

Tommaso Lisini Baldi, Gianluca Paolocci, Davide Barcelli, and Domenico Prattichizzo. Mobile augmented reality integrating fingertip haptic devices and wrist-worn visual displays. 2021 29th Mediterranean Conference on Control and Automation, MED 2021, page 578 – 583, 2021. N. D'Aurizio, T. Lisini Baldi, A. Villani, K. Minamizawa, Y. Tanaka, and Domenico Prattichizzo. Wearable haptics for object compliance discrimination through passive touch. 2021 IEEE World Haptics Conference, WHC 2021, page 894 – 899, 2021.

Nicole D'Aurizio, Tommaso Lisini Baldi, Sara Marullo, Gianluca Paolocci, and Domenico Prattichizzo. Reducing face-touches to limit covid-19 outbreak: An overview of solutions. 2021 29th Mediterranean Conference on Control and Automation, MED 2021, page 645 – 650, 2021.

Fanny Ficuciello, Alberto Villani, Tommaso Lisini Baldi, and Domenico Prattichizzo. A human gesture mapping method to control a multi-functional hand for robot-assisted laparoscopic surgery: The musha case. *Frontiers in Robotics* and AI, 8, 2021.

Marco Mandalà, Tommaso Lisini Baldi, Francesco Neri, Lucia Mencarelli, Sara Romanella, Monica Ulivelli, Domenico Prattichizzo, Emiliano Santarnecchi, and Simone Rossi. Feasibility of tms in patients with new generation cochlear implants. *Clinical Neurophysiology*, 132(3):723 – 729, 2021.

S. Marullo, T. Lisini Baldi, G. Paolocci, N. D'Aurizio, and D. Prattichizzo. No face-touch: Exploiting wearable devices and machine learning for gesture detection. *Proceedings - IEEE International Conference on Robotics and Automation*, 2021-May:4187 – 4193, 2021.

Domenico Prattichizzo, Maria Pozzi, Tommaso Lisini Baldi, Monica Malvezzi, Irfan Hussain, Simone Rossi, and Gionata Salvietti. Human augmentation by wearable supernumerary robotic limbs: Review and perspectives. *Progress in Biomedical Engineering*, 3(4), 2021.

Simone Rossi, Gionata Salvietti, Francesco Neri, Sara M. Romanella, Alessandra Cinti, Corrado Sinigaglia, Monica Ulivelli, Tommaso Lisini Baldi, Emiliano Santarnecchi, and Domenico Prattichizzo. Emerging of new bioartificial corticospinal motor synergies using a robotic additional thumb. *Scientific Reports*, 11(1), 2021.

Tommaso Lisini Baldi, Nicole D'Aurizio, and Domenico Prattichizzo. Hand guidance using grasping metaphor and wearable haptics. *IEEE Haptics Symposium*, *HAPTICS*, 2020-March:961 – 967, 2020.

Tommaso Lisini Baldi, Gianluca Paolocci, Davide Barcelli, and Domenico Prattichizzo. Wearable haptics for remote social walking. *IEEE Transactions on Haptics*, 13(4):761 – 776, 2020.

Nicole D'Aurizio, Tommaso Lisini Baldi, Gianluca Paolocci, and Domenico Prattichizzo. Preventing undesired face-touches with wearable devices and haptic feedback. *IEEE Access*, 8:139033 – 139043, 2020.

Mihai Dragusanu, Tommaso Lisini Baldi, Zubair Iqbal, Domenico Prattichizzo, and Monica Malvezzi. Design, development, and control of a tendon-actuated ex-

oskeleton for wrist rehabilitation and training. Proceedings - IEEE International Conference on Robotics and Automation, page 1749 – 1754, 2020.

Chiara Gaudeni, Tommaso Lisini Baldi, Gabriele M. Achilli, Marco Mandalà, and Domenico Prattichizzo. Instrumenting hand-held surgical drills with a pneumatic sensing cover for haptic feedback. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 12272 LNCS:398 – 406, 2020.

Gijs Huisman, Tommaso Lisini Baldi, Nicole D'Aurizio, and Domenico Prattichizzo. Feedback of head gestures in audio-haptic remote communication. *Proceedings - International Symposium on Wearable Computers, ISWC*, page 135 – 137, 2020.

Tommaso Lisini Baldi, Francesco Farina, Andrea Garulli, Antonio Giannitrapani, and Domenico Prattichizzo. Upper body pose estimation using wearable inertial sensors and multiplicative kalman filter. *IEEE Sensors Journal*, 20(1):492 – 500, 2020.

Monica Malvezzi, Tommaso Lisini Baldi, Alberto Villani, Federico Ciccarese, and Domenico Prattichizzo. Design, development, and preliminary evaluation of a highly wearable exoskeleton. 29th IEEE International Conference on Robot and Human Interactive Communication, RO-MAN 2020, page 1055 – 1062, 2020.

Gianluca Paolocci, Tommaso Lisini Baldi, Davide Barcelli, and Domenico Prattichizzo. Combining wristband display and wearable haptics for augmented reality. *Proceedings - 2020 IEEE Conference on Virtual Reality and 3D User Interfaces, VRW 2020*, page 633 – 634, 2020.

Giulia Pompili, Tommaso Lisini Baldi, Davide Barcelli, and Domenico Prattichizzo. Development of a low-cost glove for thumb rehabilitation: Design and evaluation. *Proceedings of the 2020 IEEE International Conference on Human-Machine Systems, ICHMS 2020*, 2020.

Simone Rossi, Tommaso Lisini Baldi, Marco Aggravi, Monica Ulivelli, David Cioncoloni, Viola Niccolini, Lorenzo Donati, and Domenico Prattichizzo. Wearable haptic anklets for gait and freezing improvement in parkinson's disease: a proof-of-concept study. *Neurological Sciences*, 41(12):3643 – 3651, 2020.

Gianluca Paolocci, Tommaso Lisini Baldi, and Domenico Prattichizzo. Human rendezvous via haptic suggestion. Lecture Notes in Electrical Engineering, 535:262 – 267, 2019.

P.J. Kieliba, P.H. Veltink, T. Lisini Baldi, D. Prattichizzo, G. Santaera, A. Bicchi, M. Bianchi, and B.J.F. Van Beijnum. Comparison of three hand pose reconstruction algorithms using inertial and magnetic measurement units. *IEEE-RAS International Conference on Humanoid Robots*, 2018-November:676 – 683, 2018.

Tommaso Lisini Baldi, Gianluca Paolocci, and Domenico Prattichizzo. Human guidance: Suggesting walking pace under workload. *Lecture Notes in Computer*

Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10894 LNCS:416 – 427, 2018.

Tommaso Lisini Baldi, Stefano Scheggi, Marco Aggravi, and Domenico Prattichizzo. Haptic guidance in dynamic environments using optimal reciprocal collision avoidance. *IEEE Robotics and Automation Letters*, 3(1):265 – 272, 2018.

Giovanni Spagnoletti, Leonardo Meli, Tommaso Lisini Baldi, Guido Gioioso, Claudio Pacchierotti, and Domenico Prattichizzo. Rendering of pressure and textures using wearable haptics in immersive vr environments. 25th IEEE Conference on Virtual Reality and 3D User Interfaces, VR 2018 - Proceedings, page 691 – 692, 2018.

Tommaso Lisini Baldi, Stefano Scheggi, Leonardo Meli, Mostafa Mohammadi, and Domenico Prattichizzo. Gesto: A glove for enhanced sensing and touching based on inertial and magnetic sensors for hand tracking and cutaneous feedback. *IEEE Transactions on Human-Machine Systems*, 47(6):1066 – 1076, 2017.

Tommaso Lisini Baldi, Giovanni Spagnoletti, Mihai Dragusanu, and Domenico Prattichizzo. Design of a wearable interface for lightweight robotic arm for people with mobility impairments. *IEEE International Conference on Rehabilitation Robotics*, page 1567 – 1573, 2017.

Leonardo Meli, Davide Barcelli, Tommaso Lisini Baldi, and Domenico Prattichizzo. Hand in air tapping: A wearable input technology to type wireless. *RO-MAN 2017 - 26th IEEE International Symposium on Robot and Human Interactive Communication*, 2017-January:936 – 941, 2017.

Mostafa Mohammadi, Tommaso Lisini Baldi, Stefano Scheggi, and Domenico Prattichizzo. Fingertip force estimation via inertial and magnetic sensors in deformable object manipulation. *IEEE Haptics Symposium, HAPTICS*, 2016-April:284 – 289, 2016.

Tommaso Lisini Baldi, Mostafa Mohammadi, Stefano Scheggi, and Domenico Prattichizzo. Using inertial and magnetic sensors for hand tracking and rendering in wearable haptics. *IEEE World Haptics Conference, WHC 2015*, page 381–387, 2015.

Dichiaro che quanto riportato nel presente curriculum corrisponde a verità ai sensi del D.P.R. 445/2000.

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