CURRICULUM VITAE

[PROF DR LORENZO MASIA
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GENERAL INFORMATION

Lorenzo Masia PhD
Italian Nationality
Born in Rome (Italy) the 19th of April 1977.
Resident in Germany, 8 Steubenstraße, 60121, Heidelberg.

Prof Dr @HEIDELBERG UNIVERSITY
Head of "Medizintechnik" Group
Institut für Technische Informatik (ZITI)
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EDUCATION

PhD, Mechanical Measurement for Engineering, April 2007
University of Padua, School of Mechanical Engineering, Padua, Italy
I spent two years (from January 2005 to December 2006) at the Newman Lab for Biomechanics and Human Rehabilitation at *Massachusetts Institute of Technology (MIT)*, Mechanical Engineering Department, Cambridge, MA, USA where I was Researcher under the supervision of Dr Hermano Igo Krebs and Prof Neville Hogan.

M.Sc. in Mechanical Engineering, March 2003
"Sapienza" University of Rome, School of Mechanical Engineering, Rome, Italy
• Master Thesis Title: "Experimental study of dissipative effects induced by breathing circuit in high frequency ventilation for newborns"
• Thesis Topic: Mechanical Measurement and Analysis of Biomedical Signals
• Advisor: Prof Paolo Cappa
• Area of Study: Biomedical Engineering

WORKING EXPERIENCE

Full Professor (Technical Medicine and Biorobotics)
Heidelberg University, Germany April 2019- present
Institut für Technische Informatik (ZITI)

Associate Professor (BioDesign)
University of Twente, The Netherlands June 2018-April 2019
Department of Engineering and Technology

Assistant Professor (Mechanical Engineering)
Nanyang Technological University, Singapore August 2013 to May 2018
School of Mechanical and Aerospace Engineering

Post Doc and Team Leader (Senior Researcher) January 2007 - July 2013
Italian Institute of Technology, Genoa, Italy
Department of Robotics Brain and Cognitive Sciences

Visiting Researcher January 2005 - December 2006
Massachusetts Institute of Technology, Cambridge, MA, USA
Department of Mechanical Engineering

INTERNATIONAL AWARDS

• ***Best Paper Award***
IEEE International Conference on Robotic Rehabilitation 2011 (ICORR), Zurich, Switzerland, 28th June -1st July 2011.
Masia L., Sandini G. and Morasso P.
'*A novel mechatronic system for measuring end-point stiffness: Mechanical design and preliminary tests*'.
• ***Best Student Paper Award***
IEEE International Conference on Robotic Rehabilitation 2015 (ICORR), Singapore 11th-14th August 2015.
Cappello L, Pirrera A, Weaver P, Masia L.
'A Series Elastic Composite Actuator for Soft Arm Exosuits Design and Preliminary Test'
• ***Best Student Paper Award***
IEEE International Conference on Biorobotics and Biomechatronics 2016 (BIOROB), Singapore 26th-29th June 2016.
Xiloyannis M, Cappello L, Dinh BK and Masia L.
'Towards the Design of an Underactuated Soft Exoskeleton for Grasp Assistance".
•***Finalists of "Best Human-Robot Interaction (HRI) Paper Award"***
IEEE International Conference of Robotics and Automation (ICRA 2017), Singapore, May 29 to June 3, 2017.
Dinh BK, Xiloyannis M, Antuvan CW, Cappello C, and Masia L
"Hierarchical Cascade Controller for Assistance Modulation in a Soft Wearable Arm Exoskeleton"

PUBLICATIONS

In the last ten years I have been publishing extensively on Tier1 international indexed journals with 47 published contributions, and I have been extremely present on the international scene by presenting my results in more than 70 international conferences sponsored by the most important biomedical engineering (EMBS) and robotic (RAS/IEEE) societies. My scientific production has been mainly focused on biomedical engineering topics with special emphasis on haptics, rehabilitation engineering and assistive/assistive technology. Several contributions report clinical trials using the rehabilitation and biomedical technology conceived and developed by me and my team over the course of my career.
For a complete List of my publications please refer to my personal Website, Research Gate or Google Scholar.

SELECTED PUBLICATIONS (over the last 3 years)

1. L. Masia and N. Vitiello, "The Long and Winding Road to Symbiotic Wearable Robotics" in IEEE Robotics & Automation Magazine, vol. 27, no. 1, pp. 9-9, March 2020.

2. Lotti N, Xiloyannis M, Durandauy G, Galofaro E, Sanguineti V, Masia L* and Sartori M*. "Adaptive Model-based Myoelectric control for a soft wearable arm exosuit". in IEEE Robotics & Automation Magazine, vol. 27, no. 1, pp. 43-53, March 2020.

3. Xiloyannis L, Annese E, Canesi M, Kodian A, Bicchi A, Micera S, Ajoudani A, Masia L. "Design and Validation of a Modular One-To-Many Actuator for a Soft Wearable Exosuit". Frontiers on Neurobotics, May 2019, 13.

4. Cappello L, Xiloyannis M, Dinh BK, Pirrera A, Mattioni F and Masia L. "Multistable Series Elastic Actuators: Design and Control". Robotics and Autonomous Systems (RAS), Volume 118, August 2019, Pages 167-178.

5. Xiloyannis M, Chiaradia D, Frisoli A and Masia L. "Physiological and kinematic effects of a soft exosuit on arm movements". Journal of NeuroEngineering and Rehabilitation 2019, 16:29.

6. Antuvan CW and Masia L. "An LDA-based Approach for Real-Time Simultaneous Classification of Movements using Surface Electromyography". IEEE Transaction on Neural System and Rehabilitation Engineering, 2019 Mar; 27(3):552-561.

7. Marini F, Contu S, Antuvan CW, Morasso P and Masia L. "The influence of external forces on wrist proprioception". Front. Hum. Neurosci., 31 August 2017.

8. Dinh BK, Xiloyannis M, Cappello C, Antuvan CW, Yen SC, Masia L. "Adaptive Backlash Compensation in Upper Limb Soft Wearable Exoskeletons ", Robotics and Autonomous Systems (Volume 92, June 2017, Pages 173–186)

9. Dinh BK, Xiloyannis M, Antuvan CW, Cappello L, Masia L. "Hierarchical Cascade Controller for Assistance Modulation in a Soft Wearable Arm Exoskeleton ". IEEE Robotics and Automation Letters (Volume: PP, Issue: 99) (finalist for best paper award at IEEE ICRA2017)

10. Marini F, Squeri V, Morasso P, Campus C, Konczak J, Masia L. "Robot-aided developmental assessment of wrist proprioception in children". Journal of NeuroEngineering and Rehabilitation 2017, 14:3.