Europass Curriculum Vitae

Personal information

Surname / First name	**Mannini Andrea, PhD**
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Nationality	
Date of birth	
Researcher IDs	ScopusID: 55971103000, ResearchID: AAU-9901-2020,ORCID: 0000-0003-0760-052X

Occupational field	**Researcher in biomedical engineering, data science, signal processing, machine learning**

Current positions

from 17/05/2021	Researcher, Area Territoriale Centro, *IRCCS Fondazione Don Carlo Gnocchi* Coordinator of the Research Unit on Artificial Intelligence and Bioengineering for Rehabilitation, *IRCCS Fondazione Don Carlo Gnocchi*. Responsible for the Biostatistics and Data Science Office, *IRCCS Fondazione Don Carlo Gnocchi*
from 27/09/2021	Adjunct Lecturer, M.Sc. Program in Bionics Engineering, *Università di Pisa*,
from 25/06/2021	Expert affiliate at the Biorobotics Institute, *Scuola Superiore di Studi Universitari e Perfezionamento Sant'Anna*, Pisa.

Previous positions

from 23/10/2019 to 16/05/2021	Affiliate member of the MAReLab, a joint lab of Scuola Superiore Sant'Anna and IRCCS Fondazione Don Carlo Gnocchi, Florence. Research activities concern biostatistics and machine learning methods for rehabilitation outcome prediction.
from 01/10/2017 to 16/05/2021	Assistant professor (Ricercatore tempo determinato ex art. 24 c. 3 lett. A della legge 240/2010) at the Biorobotics Istitute *Scuola Superiore di Studi Universitari e Perfezionamento Sant'Anna*, Pisa. Research activity concerns machine learning methods applied to human movement analysis using wearable sensors and prosthesis control. Current projects: TRAINED (PRIN project funded by Italian Ministry of Education, University and Research, PI: Dr. Mannini), WAVE (PNRM project funded by Italian Ministry of Defense, PI: Dr. Mannini), ARLEM (MIUR-FARE action, PI: Prof. Cipriani) and DeTOP (H2020-RIA, PI: Prof. Cipriani).
from 01/11/2012 to 30/09/2017	PostDoc researcher at the Biorobotics Insitute *Scuola Superiore Sant'Anna*, Pisa. Research activities on EU-funded projects iSupport (2015-2018) ed IDONTFALL (2012-2015) and by the Italian Ministry of Education, University and Research (MIUR) PRIN program, 2011.
from 07/01/2015 to 29/09/2017	External collaborator for WinMedical S.R.L. (Navacchio, Pisa) as an expert in design and development of signal processing algorithms.
from 01/11/2009 to 15/07/2013	PhD student in Innovative Technologies at the Biorobotics Institute *Scuola Superiore Sant'Anna*, Pisa, with the research project *Study and development of machine learning methods for human movement recognition and analysis* - Supervisor Prof. Angelo Maria Sabatini
from 01/03/2012 to 31/08/2012	Visiting scholar at the mHealth lab Northeastern University, Boston, MA (USA). Research activity titled: *Activity classification from wrist worn accelerometer with subject specific calibration strategies* - Advisor Prof. Stephen S. Intille
from 01/12/2006 to 01/06/2008	Research activity at the Interdepartmental center E. Piaggio (Università di Pisa) during master studies, to continue and publish the work done during the Bachelor thesis stage. Supervisors: Dr. F. Carpi.

Education and training

16/10/2018 National Scientific habilitation for the role of Associate Professor, Sector 09/G2 (Bioengineering).

15/07/2013 PhD in Innovative Technologies, curriculum Biorobotics, *Scuola Superiore Sant'Anna*, thesis titled *Study and development of machine learning methods for human movement recognition and analysis* - Supervisor: Prof. A.M. Sabatini, - Final mark: 100/100 *cum laude*.

26/02/2010 Professional habilitation in Information Engineering - Score 220/240).

19/06/2009 Master degree in Biomedical Engineering, l'Università di Pisa, thesis title: *Study and development of methods for automatic human movements and postures classification, from accelerometers data* Supervisors: Prof. A. M. Sabatini, Prof. L. Landini. Final mark: 110/110 *cum laude*.

30/11/2006 Bachelor degree in Biomedical Engineering, thesis title *Dynamic splint-like hand orthosis for finger rehabilitation* Supervisors: Prof. D. De Rossi, Dr. F. Di Puccio, Dr. F.Carpi. Final mark: 110/110 *cum laude*.

Internship

BTS-SIAMOC internship award for young researchers, Alder Hey Children NHS Foundation Trust, Liverpool (UK), 6-10/02/2012.

Summer schools

Machine Learning Summer School, Australian National Univ., Canberra, Australia, 26 Sept – 6 Oct, 2010.
XXVIII Bioengineering summer school: *Bioengineering for Cognitive Sciences*, Brixen, Italy 7-11 Sept 2009.

Research

Research projects and grants with PI or Unit PI role

TUNE-BEAM "TUscany NEtwork for BioElectronic Approaches in Medicine: AI-based predictive algorithms for fine- tuning of electroceutics treatments in neurological, cardiovascular and endocrinological diseases"2020–2023, funded by Regione Toscana. Role: Participant (09/2020-08/2021), Project Coordinator (from 09/2021).
RIN "Rete Italiana Neuroscienze, progetto di rete per l'implementazione degli istituti virtuali nazionali: Demenze, Malattia di Parkinson e Disordini del Movimento, Sclerosi Multipla e Disordini Neuroimmunologici", 2020–2021, funded by Italian Ministry of Health, PI: Prof. Tagliavini. Role: WP leader (WP4) for PD and SM institutes. Unit funding 135 k€, (WP4 = 36k€).
TRAINED, "mulTifeature analysis of heaRt rate variability and galt features in cliNical Evaluation of Depression"; PRIN 2017 project (linea b, panel SH-3, funded by Italian Ministry of Education, University and Research (MIUR). Start date 29/12/2019, three years. Role: Unit PI. Grant for the unit: 111 k€.
WAVE "Wearable Assistant for VEterans in sport"; PNRM 2018 project (Funded by Italian Ministry of Defense). Start date 03/02/2020, three years. Role: Unit PI. Grant for the unit: 453 k€.
TS-EUlab Company-funded PhD Scholarship for the development of advanced methods for signal processing applied to wearable sensors in monitoring sport gestures. Grant 79 k€. Role: Grant responsible, student supervisor.

Participation in funded projects

ARLEM "Activity Recognition and Limb position Effect compensation for Myokinetic hand prostheses"2017–2022, funded by Ministero dell'Istruzione dell'Università e della ricerca, PI: Prof. Cipriani. Participation in the proposal writing and participation in the project activities as an assistant professor.
MyKI,"A bidirectional myokinetic implanted interface for natural control of artificial limbs", finanziato dall'European Research Council (ERC Starting Grant GA 679820) - 2016–2020, Prof. Cipriani. Participation in the project activities as an assistant professor.
DeTOP, "Dexterous transradial osseointegrated prosthesis with neural control and sensory feedback", Horizon 2020 framework programme for Research and Innovation (LEIT-ICT-24-2015, GA 687905) - March 2016–May 2020, PI: Prof. Cipriani. Participation in the project activities as an assistant professor.
iSupport, "A service robotics system for bathing tasks", Horizon 2020 research and innovation programme - Societal Challenge 1, GA 643666 - February 2015–January 2018, PI: Prof.ssa Laschi. Participation in the proposal writing and participation in the project activities as a post doc researcher.
IDONTFALL "Integrated prevention and detection solutions tailored to the population and risk factors associated with falls", CIP-ICT-PSP-2011-5 Grant 297225, April 2012–April 2015, funded by EU, PI: Prof. Sabatini. Participation in the proposal writing and participation in the project activities as a post doc researcher.
PRIN2011, A quantitative multifactorial approach for the estimate and prevention of fall risk in elderly, February 2013–January 2016, funded by Ministero dell'Istruzione dell'Università e della ricerca, PI: Prof. Sabatini. Participation in the proposal writing and participation in the project activities as a post doc researcher.

Awards

10/10/2022	Young researcher award, Fondazione Don Carlo Gnocchi.
10/01/2019	Exceptional reviewer award 2018 for the IEEE Journal of Translational Engineering in Health and Medicine.
01/07/2014	Highlight in the July 2014 issue, IEEE Journal on Biomedical and Health Informatics for the paper: Mannini et al. *IEEE JBHI*, vol. 18, no. 4, pp. 1122-1130, 2014.
20/01/2014	Sensors Best Papers Award 2014, 4th Prize. Paper published in 2010 titled: *Machine Learning Methods for Classifying Human Physical Activity from On-Body Accelerometers*.
18/09/2013	PhD thesis award from Gruppo Nazionale Bioingegneria (GNB) and Patron Edition 15th edition.
01/10/2011	SIAMOC-Elsevier award for the best methodological paper at the "XII Conferenza della Società italiana per l'analisi del movimento in clinica (SIAMOC)", for the work titled: *Automatic gait phase segmentation method using a Hidden Markov Model*;
01/10/2011	SIAMOC-BTS internship award for the best student paper presented at "XII Conferenza della Società italiana per l'analisi del movimento in clinica (SIAMOC)", for the work titled: *Automatic gait phase segmentation method using a Hidden Markov Model*;
09/09/2009	Master thesis award from Gruppo Nazionale Bioingegneria (GNB), 9th edition.

Other collaborations

Mar 2019 – present	*Settore tecnico,* ***Federazione Italiana Giuoco Calcio*** Coverciano, FI e ***Università di Roma Tor Vergata***. Collaboration aimed at study and development of computational methods for the estimation of fatigue level in athletes using wearable sensors. Role: Coordinator of experimental and research activities with Prof. C. Castagna from University of Rome Tor Vergata.
Mar 2012–Sep 2017	*College of Computer and Information Science* ***Northeastern University*** Boston, MA, USA, *Stanford Center on Longevity* e *Stanford Prevention Research Center* ***Stanford University*** Stanford, CA, USA. Collaboration with the groups of Prof. S. Intille and Prof. W.H. Haskell aimed at study and development of algorithms for automatic recognition of movements in adult and youth using accelerometers. Role: algorithms study, design and development.
Oct 2015–Sep 2017	***Università degli Studi di Roma Foro Italico***. Collaboration aimed at the study and development of algorithms for inertial sensors orientation estimation and for position/velocity estimation of body center of mass using accelerometers. Role: collaboration in data acquisition, design and development of algorithms.
Oct 2013–Sep 2017	***Università di Sassari, Università di Genova, University Medical Center Groningen NL*** e ***Centro Interuniversitario di Bioingegneria del Sistema Neuromuscoloscheletrico***. Collaboration aimed at the testing on pathological gait of algorithms for automatic gait segmentation based on hidden Markov models using wearable inertial sensors. Role: algorithms study, design and development.
May 2013 – Dec 2014	***IRCCS Fondazione Santa Lucia***, Roma. Experimental data acquisition using wearable sensors in clinical settings on patients with altered gait in collaboration with la Dr R. Annicchiarico and her staff. Role: experimental setup developer and technical coordinator of the experimental session with patients (17/02/2014).

Editorial activity

Associate Editor for the *Journal of Biomedical and Health Informatics IEEE-JBHI* from 01/03/2023.
Editorial Board Member for the journal *Sensors* for the section "Physical Sensors"from 24/03/2020.
Review Editor for the journal *Frontiers in Neurology* from 29/08/2017, section "Movement Disorders".
Review Editor for the journal *Frontiers in Sports and Active Living* from 31/10/2018, section "Sports Science, Technology and Engineering".
Guest Editor for the special issue *Wearables and Computer Vision for Sports Motion Analysis* of the journal *Sensors* from 25/08/2020
Guest Editor for the special issue *Wearable Sensors for Risk Assessment and Injury Prevention* of the journal *Sensors* from 21/04/2020
Guest Editor for the special issue *Multi-Sensor Fusion in Body Sensor Networks* of the journal *Sensors* from 31/10/2018
Guest Editor for the special issue *Human Activity Recognition and Movement Analysis on Smartphones and Personal Devices* of the journal *Information* from 12/11/2018
Guest Editor for the special issue *Inertial Sensors for Activity Recognition and Classification* of the journal *Sensors* from 13/11/2018

Reviewer activity

Acting as a reviewer for funding agencies, awards, journal and international conferences since 2009: received the "Exceptional reviewer 2019"award by IEEE Journal of Translational Engineering in Health and Medicine in 2019.

Type	Title	Period
Funding body	Swiss National Science Foundation (Sinergia projects)	2018
Funding body	UK Medical Research Council	2019
Funding body	Terrinet Project applications for researchers mobility	2019–2020
Awards	GNB master and PhD thesis awards	2018–2019
ISI Journal	Scientific Reports	2020
ISI Journal	Journal of Biomechanics	2017–2018
ISI Journal	Frontiers in Neurology	2017–2022
ISI Journal	Gait & Posture	2014–2017
ISI Journal	Journal of Science and Medicine in Sport	2014
ISI Journal	Sensors	2013-2022
ISI Journal	Biomedical Signal Processing and Control	2014
ISI Journal	Journal of NeuroEngineering and Rehabilitation	2015–2018
ISI Journal	Medicine & Science in Sports & Exercise	2013–2018
ISI Journal	Medical & Biological Engineering & Computing	2017
ISI Journal	Journal of Sport Science	2018
ISI Journal	Electronic Journal of Statistics	2012
ISI Journal	IEEE Journal on Biomedical and Health Informatics	2014–2023
ISI Journal	IEEE Internet of Things Journal	2017
ISI Journal	IEEE Trans. on Multimedia	2016
ISI Journal	IEEE Trans. on Human-Machine Systems	2018
ISI Journal	Plos One	2017 –2019
ISI Journal	IEEE Trans. on Biomedical Engineering	2013–2014
ISI Journal	IEEE Trans. on Neural Systems and Rehabilitation Engineering	2012–2020
ISI Journal	IEEE Robotics and Automation Letters	2018
ISI Journal	IEEE Journal of Translational Engineering in Health and Medicine	2017–2018
nonISI Journal	Medical Devices: Evidence and Research	2009
Internat. Conf.	ACM Conf. on Interact., Mobile, Wearable and Ubiq. Technol. (IMWUT)	2018
Internat. Conf.	IEEE Conf. on Rehabilitation Robotics (ICORR)	2018–2019
Internat. Conf.	The Internat. Symposium on Wearable Robotics (WeRob)	2018
Internat. Conf.	IEEE Internat. Conf. on Robotics and Automation (ICRA)	2018
Internat. Conf.	IEEE Internat. Conf. on Intelligent Robots and Systems (IROS)	2016
Internat. Conf.	IEEE Internat. Conf. on Biomed. Robotics and Biomechat. (Biorob)	2018–2020
Internat. Conf.	31st ACM Symposium on Applied Computing SAC	2015
Internat. Conf.	Bodynets, Internat. Conf. on body area networks	2016
PhD Board	Sapienza University, Rome.	2018
PhD Board	Monash University, AUS.	2022

Organization of meetings and international conferences

- 16–19/10/2018, Organizer and co-chair of the special track “Wearable Sensors for Robotic Exoskeletons and Prostheses”, The International Symposium on Wearable Robotics, WeRob2018, Pisa, Italy.
- 15-16/12/2016, Bodynets 2016 (Torino), member of the technical program committee for the section *Sensors and Algorithms for Human Motion Analysis and Classification (SAHM)*.
- 16–18/10/2012, IDONTFALL project meeting organization, Scuola Superiore Sant’Anna, Pisa.

Teaching

Courses

From Sep. 2020 to 2021 — Course co-holder *Robot companions for assisted living* (30 out of 60h) for master students in Bionics Engineering a joint UniPi-Scuola Superiore Sant’Anna degree.

From Sep. 2020 to present — Course co-holder *Artificial Limbs* (7 out of 60h) for master students in Bionics Engineering a joint UniPi-Scuola Superiore Sant’Anna degree.

From 04/2018 to 06/2021 — Course holder *Introduction to Machine Learning* (20 h) for PhD students and Master students at Scuola Superiore Sant’Anna.

12/2016–12/2019 "Cultore della Materia" qualification for the course *Materials and Instrumentation for Bionics engineering-modulo Instrumentation and measurement for bionic systems* Approval n. 253 del 15/12/2016 valid from 15/12/2016 to 14/12/2019.

Tutoring

05/2022 – 04/2023 Member of Board of the PhD course in Biorobotics, Scuola Superiore Sant'Anna, cycle 38.

05/2021 – 04/2022 Member of Board of the PhD course in Biorobotics, Scuola Superiore Sant'Anna, cycle 37.

From 01/10/2020 Supervisor of a PhD student in Biorobotics funded by Fondazione don Gnocchi (P. Liuzzi).

From 01/10/2020 Tutor of a PhD student in Biorobotics (S. Ballanti).

From 01/10/2019 Tutor of a PhD student in Biorobotics funded by Fondazione don Gnocchi (S. Campagnini).

05/2019 – 04/2020 Member of Board of the PhD course in Biorobotics, Scuola Superiore Sant'Anna, cycle 35.

From 01/10/2018 Supervisor of a PhD student in Biorobotics funded by a company (TuringSense, L. Truppa).

From 01/10/2017 Tutor of a PhD student in Biorobotics (M. Guaitolini).

From 01/11/2009 Tutor for sudents during their master thesis stage (Biomedical/bionics Engineering: G. Guzzo, P. Bernini, G. Ligorio, L. Pinna, C. Mugnai, A. Capuccio, T. Minuti, L.Nuti; Computer science: A. Tsegaye), lab training (Bionics Eng.: D. D'Accolti, A. Capuccio) and visiting students (Erasmus+: M. Bhaughbai, M. Mesonero, J. Franke, P. Liuzzi; Khalifa University Internship: N.N. Aljaafari).

Seminars and invited lectures

21/06/2022 Invited lecture titled "Machine learning in Rehabilitation", (2 h) master in Advanced Technologies in Rehabilitation Organized by *Humanitas, Politecnico di Milano, Politecnico di Torino e Fondazione Don Carlo Gnocchi*, Milano, Italy.

05/12/2019 Invited lecture titled "Wearing sensors: why is it worth integrating devices and computational intelligence in clothes", (2 hours) for master student at the *Istituto ModArTech*, Pontedera PI, Italy.

06/10/2016 Invited lecture titled: "Screening e classification of motor disorders by means of wearable sensors", (1 h) for the pre-conference course on "Clinical movement analysis using inertial and magnetic sensors", *Congresso SIAMOC 2016*, Milano, Italy.

15/07/2014 Invited lecture titled: "Advanced methods for the activity detection and analysis by means of wearable inertial sensors", (1 h) for the workshop titled "Movement analysis with wearable inertial sensors: stepping into clinics and sports", *ISEK Conference 2014*, Roma, Italy.

Seminars abroad

05/07/2012 Seminar for the PhD students seminar cycle at Northeastern University titled: "Automatic gait phase segmentation method using a Hidden Markov Model"(1 h). *College of Computer and Information Science*, Northeastern University, Boston, MA (USA).

07/02/2012 Seminar titled: "Automatic gait phase segmentation method using a Hidden Markov Model"(1 h). North West Movement Analysis Centre, *Alder Hey Children NHS Foundation Trust*, Liverpool (UK).

Third Mission

Economical knowledge promotion

from 01/10/2018 Industrial collaboration with Turingsense EU lab s.r.l. that funded a PhD scholarship to study and deploy innovative methods for human movement analysis using wearables in sports.

from 7/01/2015 to 29/09/2017 Consultant for a spin-off company, Winmedical s.r.l. (Navacchio, Pisa). The algorithms that I developed in this collaboration were integrated in a commercial device for vital parameter monitoring, certified as a medical device and currently being used in hospitals.

Culture and Society

18/04/2019 Experimental session at the Federation Center of the Italian Soccer National Team in Coverciano. Dissemination of activities by a press interview to promote the potentiality of the research on computational methods and wearable sensors in sport assessment.

22/11/2018	Participation as the senior tutor for students creativity workout at the event: "Creactivity 2018 ricerca & Innovazione nel Design". (www.progettocreactivity.com).
24-30/07/2018	In field tests with wearable sensors during the summer retreat of Società Sportiva Calcio Napoli, Dimaro (TN). This collaboration received mediatic coverage on national sport newspapers such as *Gazzetta dello Sport*.
03/2017	Collaboration with Dr. Denise Amram for the development of an online course on the topic: "biomechanics in the damage assessment to prevent malingering" within the framework of the Erasmis+ project "Areyoufine?".

Selection boards

27/08/2020	Member of the selection board for Bachelor students in Engineering at the Scuola Superiore Sant'Anna
16/06/2020	Member of the selection board for PhD students in biorobotics, cycle 36, Scuola Superiore Sant'Anna.
16-18/03/2020	Member of the selection board for master students in Bionics Engineering a joint UniPi-Scuola Superiore Sant'Anna degree.
09/03/2020	member of the selection board for a research fellow on the project: "TRAINED: mulTifeature analysis of heaRt rate variability and galt features in cliNical Evaluation of Depression ".
28/08/2019	Member of the selection board for Bachelor students in Engineering at the Scuola Superiore Sant'Anna
12/06/2019	Member of the selection board for PhD students in biorobotics, cycle 35, Scuola Superiore Sant'Anna.
18/04/2019	Member of the selection board for master students in Bionics Engineering a joint UniPi-Scuola Superiore Sant'Anna degree.
16/11/2018	Member of the selection board for a research fellow on the projects: "CECA 2020 Protesi funzionale di arto superiore con mano multiarticolata sensorizzata a controllo bio-mimetico non invasivo - DeTOP Dexterous Transradial Osseointegrated Prosthesis with neural control and sensory feedback H2020 ICT 2015 - MYKI -A Bidirectional MyoKinetic Implanted Interface for Natural Control of Artificial Limbs ERC 2015".
16/11/2018	Member of the selection board for a research fellow on the project: "CECA 2020 Protesi funzionale di arto superiore con mano multiarticolata sensorizzata a controllo bio-mimetico non invasivo".
04/05/2018	Member of the PhD in Biorobotics graduation committee at Scuola Superiore Sant'Anna: "Assessment of motor function in Parkinson desease: study and development of algorithms and mobile solutions", candidate: Laura Pinna.
07–08/06/2018	Member of the selection board for PhD students in biorobotics, cycle 34, Scuola Superiore Sant'Anna.
18-19/09/2018	Member of the selection board for Bachelor students in Engineering at the Scuola Superiore Sant'Anna.
04/2018–09/2018	Member of the selection board for master students in Bionics Engineering a joint UniPi-Scuola Superiore Sant'Anna degree.
20/11/2017	Member of the selection board for a research fellow on the projects: "MYKI -A Bidirectional MyoKinetic Implanted Interface for Natural Control of Artificial Limbs ERC 2015 - DeTOP Dexterous Transradial Osseointegrated Prosthesis with neural control and sensory feedback H2020 ICT 2015".
20/11/2017	Member of the selection board for a research fellow on the projects: "CECA 2020 Protesi funzionale di arto superiore con mano multiarticolata sensorizzata a controllo bio-mimetico non invasivo – DeTOP Dexterous Transradial Osseointegrated Prosthesis with neural control and sensory feedback H2020 ICT 2015".
24/10/2017	Member of the selection board for a research fellow on the projects: "MYKI -A Bidirectional MyoKinetic Implanted Interface for Natural Control of Artificial Limbs ERC 2015 - DeTOP Dexterous Transradial Osseointegrated Prosthesis with neural control and sensory feedback H2020 ICT 2015 - CECA 2020 Protesi funzionale di arto superiore con mano multiarticolata sensorizzata a controllo bio-mimetico non invasivo".
09/10/2015	Member of the selection board for a research fellow on the project: "Prin 2010-11 - Progettazione, sviluppo e validazione di sistemi sensoriali indossabili basati su sensori inerziali/magnetici per l'analisi del movimento umano e di piattaforme meccatroniche per la prevenzione del rischio di caduta".

Publications

Author of 2 book chapters and 79 international indexed publications (59 journal papers, 20 indexed conference proceedings).
Bibliometric indicators (last update 05/06/2023) :
Scopus: 1959 citations, h-index: 20
GoogleScholar: 3038 citations, h-index: 21.

International journal [IF: impact factor, NC: number of citations (source Scopus)]

1. C. Castagnoli, S. Pancani, T. Barretta, L. Pellicciari, S. Campagnini, B. Basagni, C. Gucci, A. Sodero, E. Guolo, B. Hakiki, A. Grippo, A. Mannini, C. Macchi, and F. Cecchi "Correlates of participation six months after stroke in an Italian population: results from the RIPS Study",*Eur J Phys Rehabil Med*, 2023, Online ahead of print. [DOI: 10.23736/S1973-9087.23.07639-6; IF 5.313]

2. Liuzzi, P., Grippo, A., Draghi, F., Hakiki, B., Macchi, C., Cecchi, F., Mannini, A., "Can Respiration Complexity Help the Diagnosis of Disorders of Consciousness in Rehabilitation?", *Diagnostics*, 2023, 13(3): 507. [DOI: 10.3390/diagnostics13030507; IF 3.992]

3. D'Accolti, D., Clemente, F., Mannini, A., Mastinu, E., Ortiz-Catalan, M., Cipriani, C., "Online Classification of Transient EMG Patterns for the Control of the Wrist and Hand in a Transradial Prosthesis", *IEEE Robotics and Automation Letters*, 2023, 8 (2):1045–1052. [DOI: 10.1109/LRA.2023.3235680; IF 4.321]

4. Truppa, L., Bergamini, E., Garofalo, P., Vannozzi, G., Sabatini, A.M., Mannini, A., "Magnetic-Free Quaternion-Based Robust Unscented Kalman Filter for Upper Limb Kinematic Analysis", *IEEE Sensors Journal*, 2023, 23 (3): 3212–3219. [DOI:10.1109/JSEN.2022.3225931; IF 4.325]

5. Masiero, F., Fagioli, I., Truppa, L., Mannini, A., Cappello, L., Controzzi, M., "Looking for Synergies in Healthy Upper Limb Motion: A Focus on the Wrist",*IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 2023, 31: 1248–1257.[DOI: 10.1109/TNSRE.2023.3243785; IF 4.528]

6. Magliacano A, Liuzzi P, Formisano R, Grippo A, Angelakis E, Thibaut A, Gosseries O, Lamberti G, Noé E, Bagnato S, Edlow BL, Lejeune N, Veeramuthu V, Trojano L, Zasler N, Schnakers C, Bartolo M, A. Mannini, Estraneo A on behalf of IBIA DoC-SIG. Predicting Long-Term Recovery of Consciousness in Prolonged Disorders of Consciousness Based on Coma Recovery Scale-Revised Subscores: Validation of a Machine Learning-Based Prognostic Index. Brain Sciences. 2023; 13(1):51. [DOI:https://doi.org/10.3390/brainsci13010051; IF 3.333]

7. Basagni, B., Marignani, S., Pancani, S., Mannini, A., Hakiki, B., Grippo, A., Macchi, C., Cecchi, F., "Cognitive Profile in Patients Admitted to Intensive Rehabilitation after Stroke Is Associated with the Recovery of Dysphagia: Preliminary Results from the RIPS (Intensive Post-Stroke Rehabilitation) Study", *Seminars in Speech and Language*, 2023, 44 (1):15–25. [DOI: 10.1055/s-0042-1759612 ; IF 1.734]

8. F. Gigliotti, S. Campagnini, C. Arienti, I Banfi, A. Mannini, NC Bianchi; COVID-FDG Research Group, "Functional and Clinical Characteristics of Individuals Attending Pulmonary Rehabilitation After Severe COVID-19", *Respiratory Care*, 2023, 68(1):60–66. [DOI: 10.4187/respcare.10128; IF 2.339]

9. L. Corsi, P. Liuzzi, S. Ballanti, M. Scarpino, A. Maiorelli, R. Sterpu, C. Macchi, F. Cecchi, B. Hakiki, A. Grippo, A. Lanatà, M. C. Carrozza, L.Bocchi, A. Mannini, "EEG asymmetry detection in patients with severe acquired brain injuries via machine learning methods", *Biomedical Signal Processing and Control*, 2023, 79, 104260. [DOI: 10.1016/j.bspc.2022.104260; IF: 5.076; NC: 1]

10. Pellicciari, L., Sodero, A., Campagnini, S., Guolo, E., Basagni, B., Castagnoli, C., Hochleitner, I., Paperini, A., Gnetti, B., Avila, L., Romano, E., Grippo, A., Hakiki, B., Carrozza, M.C., Mannini, A., Macchi, C., Cecchi, F., "Factors influencing trunk control recovery after intensive rehabilitation in post-stroke patients: a multicentre prospective study", *Topics in Stroke Rehabilitation*, 2023, 30(2):109–118.[DOI:10.1080/10749357.2021.2016099, IF 2.119; NC: 1]

11. Basagni, B., Pancani, S., Pellicciari, L., Gemignani, P., Salvadori, E., Marignani, S., Grippo, A., Hakiki, B., Mannini, A., Bardi, D., Pellegrini, I., Viggiano, M.P., Giovannelli, F., Macchi, C., Cecchi, F., "Extra-Linguistic Cognitive Functions Involved in the Token Test: Results from a Cohort of Non-Aphasic Stroke Patients with Right Hemisphere Lesion",*Behavioral Sciences*, 2022, 12(12):494. [DOI: 10.3390/bs12120494; IF 2.286]

12. S. Ballanti, S. Campagnini, P. Liuzzi, B. Hakiki, M. Scarpino, C. Macchi, C. M. Oddo, M. C. Carrozza, A. Grippo, and A. Mannini "EEG-based methods for recovery prognosis of patients with disorder of consciousness: A systematic review.", *Clinical Neurophysiology*, 2022, 144:98–114. [DOI:10.1016/j.clinph.2022.09.017; IF:4.871; NC: 1]

13. S. Campagnini, P. Liuzzi, A. Mannini, B. Basagni, C. Macchi, M. C. Carrozza, and F. Cecchi. "Cross-validation of predictive models for functional recovery after post-stroke rehabilitation." *Journal of Neuro-Engineering and Rehabilitation* 2022, 19, 96. (Sept. 7, 2022). [DOI: 10.1186/s12984-022-01075-7; IF 4.476; NC: 4]

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2. G. Fransvea, E. Patron, F. Mura, C. Cipriani, C. Gentili and A. Mannini. Machine Learning-based Instrumental Gait Analysis for the Diagnosis of Patients with Major Depressive Disorder, *IEEE BHI-BSN 2022*, 27 – 30/09 2022, Ioannina, Greece;

3. V. Belluscio, L. Rum, E. Vendrame, L. Truppa, G. Vannozzi, V. Camomilla, A. Lazich, A. Mannini, E. Bergamini, The WAVE project: towards a wearable technological solution for para-sports, VISTA conference 2021 (International Paralympic Committee), 29 NOv 2021.

4. L. Rum, V. Belluscio, E. Vendrame, L. Truppa, V. Camomilla, A. Lazich, A. Mannini, E. Bergamini, An inertial sensors-based method for phases and events identification in para-rowing: towards an on-water performance assessment, International Conference Of Biomechanics In Sports (Isbs) Annual Conference 2021, 3-–7 Settembre 2021.

5. L. Simoni, L. Truppa, P.Garofalo, G. Pasquini, A. Mannini, Influence of a maximal running incremental test on jumping performances, XXI congresso SIAMOC Ottobre 2021, virtuale.

6. P. Liuzzi, I. Carpinella, D. Anastasi, E. Gervasoni, T. Lencioni, R. Bertoni, M.C. Carrozza, A. Mannini, D. Cattaneo, M. Ferrarin, Wearables and machine learning for the modified Dynamic Gait Index score estimation in Multiple Sclerosis patients from 6-minutes walk test data, XXI congresso SIAMOC Ottobre 2021, virtuale.

7. L.Truppa, E.Vendrame, L.Rum, V.Belluscio, E.Bergamini, A. Mannini, Validation of a inertial body sensor network for upper limb kinematic assessment in archery, XXI congresso SIAMOC Ottobre 2021, virtuale.

8. V. Belluscio, E. Vendrame, L. Rum, L. Truppa, A. Lazich, A. Mannini, E. Bergamini, Joint kinematics and EMG characterization of para-archery shooting technique: an explorative study, XXI congresso SIAMOC Ottobre 2021, virtuale.

9. B. Basagni, B. Hakiki, S. Campagnini, A. Sodero, A. Paperini, C. Castagnoli, I. Hochleitner, L. Pellicciari, S. Pancani, A. Mannini, C. Falsini, M. Martini, P. Polcaro, F. Casamorata, C. Barbato, S. Verdesca, A. Grippo, A. Maiorelli, I. Mosca, P. Gemignani, B. Gnetti, E. Bacci Bonotti, A.Franceschini, C. Tramonti, P. Mainardi, T. Barretta, E. Salvadori, A. Poggesi, C. Macchi, M. C. Carrozza, F. Cecchi, Candidate predictors of reponse to post-acute stroke intensive inpatient rehabilitation: preliminary results of a prospective study on 217 patients, 7th European Stroke Conference, 1 - 3 Settembre 2021.

10. O. Sten, E. Bergamini, F. Mari, V. Camomilla, A. Mannini, "A machine learning approach for error detection in rowing", *The XXVIII Congress of the International Society of Biomechanics, ISB 2021*, virtual conference, 25–29 Luglio 2021.

11. E. Vendrame, L. Rum, L. Truppa, V. Belluscio, G. Vannozzi, A. Lazich, E. Bergamini, A. Mannini, "Archery gesture segmentation with wearables in both able-bodied and Paralympic athletes", *The XXVIII Congress of the International Society of Biomechanics, ISB 2021*, virtual conference, 25–29 Luglio 2021.

12. L. Truppa, L. Nuti, S. Mazzoleni, P. Garofalo, A. Mannini, "Ballistic skills assessment in semi-professional football players through inertial sensors: the effects of COVID-19 forced rest period", *2021 IEEE Internat. Workshop on Metrology for Industry 4.0 and IoT*, virtual conference, 7–9 Giugno 2021.

13. B. Basagni, S. Campagnini, A. Sodero, B. Hakiki, A. Paperini, C. Castagnoli, I. Hochleitner, L. Avila, M. Barilli, L. Larducci Pellegrini, E. Romano, L. Pellicciari, S. Pancani, A. Mannini, F. Sensoli, E. Salvadori, A. Poggesi, C. Macchi, M.C. Carrozza, F. Cecchi, "Predictors of response to post-acute stroke intensive inpatient rehabilitation: a retrospective analysis of a cohort of 278 patients", virtual ISPRM 2021 Congress, 12-15 Giugno 2021, held remotely.

14. B. Hakiki, P. Liuzzi, G. Pansini, A. Romoli, F. Draghi, S. Orlandini, A. Mannini, A. Della Puppa, C. Macchi, F. Cecchi, "Impact of decompressive craniectomy on functional outcome in severe acquired brain injuries patients at discharge from intensive rehabilitation after severe brain injury", virtual ISPRM 2021 Congress, 12-15 Giugno 2021, held remotely.

15. S. Campagnini, P. Liuzzi, A. Mannini, R. Riener, Senior Member IEEE, M.C. Carrozza, "Effects of different feedback control strategies on gait in robot-aided post-stroke rehabilitation: a systematic review", *10th Internat. IEEE EMBS conference on Neural Engineering*, 4-6 Maggio 2021, held remotely.

16. S. Ballanti, S. Campagnini, P. Liuzzi, B. Hakiki, M. Scarpino, A. Grippo, C.M. Oddo, Member IEEE, A. Mannini, M.C. Carrozza, "EEG-based rehabilitation outcome prognosis on patients with disorder of consciousness: a systematic review", *10th International IEEE EMBS conference on Neural Engineering*, 4-6 Maggio 2021, held remotely.

17. A. Pazzaglia, G. Di Salvo, S. Ballanti, G. D'Alesio, G. Terruso, D. Camboni, M. C. Carrozza, A. Mannini, A. Mazzoni, L. Massari, C. M. Oddo, "A mechatronic platform for investigating active tactile perception", *10th International IEEE EMBS conference on Neural Engineering*, 4-6 Maggio 2021, held remotely.

18. T. Minuti, P. Cigni, A. Mannini, M. Costagli, A. Cucini, S. Melotto, S. Rapetti, and L. Ricotti. "An innovative exoskeleton to measure the isometric strength of lower limbs: retrospective study to investigate the correlation with injuries on professional soccer players". *Costa Blanca Sports Science Events*, December 18-19, 2020, held remotely.

19. E. Chellini, B. Lanini, I. Romagnoli, B. Binazzi, L. Bianchi, E. Lippi, A. Lazzeri, S. Campagnini, A. Mannini, F. Gigliotti, The "chronically critical ill" patient: characteristics of a population of patients admitted to a pulmonary rehabilitation unit, *European Respiratory Journal* ; ERS International Congress abstracts, Volume 56, pag. 396, 2020. [DOI: 10.1183/13993003.congress-2020.396];

20. A. Mannini, Campagnini S, Arienti C, Patrini M, Negrini S, Carrozza MC. Machine learning methods for motor recovery prediction and prognosis in post-stroke rehabilitation: a systematic review. *Advances in Evidence Synthesis: special issue Cochrane Database of Systematic Reviews* 2020;(9 Suppl 1). [DOI: 10.1002/14651858.CD202001]

21. A. Mannini, S. Campagnini, P. Taverna, B. Binazzi, B. Campana, V. Carli, G. Devalle, B. Hakiki, J. Navarro, F. Noro, E. Pasqualone, C. Macchi, M. C. Carrozza, Decannulation probability and timing in patients with acquired severe brain injury: study and development of a predictive model, *1st RIN meeting 2020*, 8-9 July 2020 [CA];

22. D. D'Accolti, A. Mannini, F. Clemente, I. J. Rodriguez Martinez, C. Cipriani, Classification of transient myoelectric signals for the control of multi-grasp wrist-hand prosthesis, *Myoelectric Controls Symposium*, 10-13 August 2020;

23. M. Guaitolini, L. Truppa, A. M. Sabatini, A. Mannini and C.Castagna, Sport-induced fatigue assessment through gait parameters variations, *Gait & Posture*, Vol. 74(Supplement 1), pp. S20–21, XX congresso SIAMOC October 2019, Bologna, Italy. published by Elsevier, Amsterdam NL. [DOI: http://doi.org/10.1016/j.gaitpost.2019.07.472];

24. G. Ligorio, E. Bergamini, M. Guaitolini, A. Mannini, P. Garofalo, A.M. Sabatini, G. Vannozzi, A full-body 3D reconstruction of yoga poses through inertial sensing, Gait & Posture, Vol. 66(Supplement 1), p. S24, XIX congresso SIAMOC October 2018, Firenze, Italy. published by Elsevier, Amsterdam NL. [DOI: https://doi.org/10.1016/j.gaitpost.2018.07.137];

25. M. Guaitolini, A. Mannini, and A. M. Sabatini, Influence of Calibrating Magnetic Sensors on Heading Estimation Using Magneto-Inertial Measurement Units, GNB2018, June 25th-27nd 2018, Milan, Italy;

26. A. Mannini, O. Martinez-Manzanera, D.A. Sival, U. Della Croce, N.M. Maurits and A. M. Sabatini, Is it possible to apply an existing gait recognition method to pathological subjects without any adaptation? *Gait & Posture*, Vol. 57(Supplement 1), pp. S10, XVIII congr. SIAMOC 2017, Torino, October 2017. published by Elsevier, Amsterdam NL. [DOI:http://dx.doi.org/10.1016/j.gaitpost.2017.07.059, CA];

27. L. Pinna, A. Mannini, A. M. Sabatini,C. Dolciotti, P. Bongioanni, M.C. Carboncini, G. De Petris, Automatically recognized postural transitions in TUG test using machine learning methods *Gait & Posture*, Vol. 57(Suppl 1), pp. S13, XVIII congr SIAMOC 2017, Torino, October 2017. published by Elsevier, Amsterdam NL. [DOI: http://dx.doi.org/10.1016/j.gaitpost.2017.07.064];

28. E. Angione, N. Taccini, G. Macrì, A. Mannini, M. Proença, F. Braun, C. Pellaton, M. Lemay and J. Solà, A novel system for continuous non-invasive blood pressure monitoring, *Conference of the European Medical and Biological Engineering Conference* EMBEC, 11-15 June 2017, Tampere, Finland;

29. L. Pinna, A. Mannini, A.M. Sabatini, C. Dolciotti, P. Bongioanni, F. Saponara e G. De Petris, Comparison between methods for gait events detection in Parkinson's Disease, *Congresso nazionale di bioingegneria, Atti*, published by Patron Editore, Bologna, June 2016;

30. A. Mannini, D. Trojaniello, U. Della Croce and A. M. Sabatini, Automatic recognition of altered gait using wearable inertial sensors *Gait & Posture*, Vol. 49(Supplement 1), pp. S9, XVI congresso SIAMOC 2015, Milano, October 2016. published by Elsevier, Amsterdam NL. [DOI: http://dx.doi.org/10.1016/j.gaitpost.2016.07.035, CA];

31. D. Trojaniello, A. Mannini, T. Lawerman, D. Sival, A. M. Sabatini and U. Della Croce, Does tandem walking discriminate better than normal walking among children with DCD, ataxia and healthy controls? A preliminary analysis performed with IMUs on the trunk, *Gait & Posture*, Vol. 42(Supplement 1), pp. S10, XV congresso SIAMOC October 2015, Padova, Italy. published by Elsevier, Amsterdam NL. [DOI: http://dx.doi.org/10.1016/j.gaitpost.2015.07.028].

32. A. Mannini e A.M. Sabatini, The Activity Advisor: online activity recognition using smartphone embedded sensors, *XV congresso SIAMOC* Padova, Italy, October 2015 [CA];

33. A. Mannini, D. Trojaniello, U. Della Croce e A.M. Sabatini, Gait phases determination using Markov models applied to the recordings of a shank-worn gyroscope, ESMAC-SIAMOC conference 2014, Rome, Italy, 1–4 October [CA];

34. G. Ligorio, A. Mannini e A.M. Sabatini, Application of an IMU simulator in human motion analysis, *Congresso nazionale di bioingegneria, Atti*, Patron Editore, Bologna, June 2014;

35. A. Mannini, A. M. Sabatini, Stephen S. Intille, Human gait detection from wrist-worn accelerometer data, *Gait & Posture*, Vol. 37(Supplement 1), pp. S26–27, 2013, XIII congresso SIAMOC 2012, Bellaria RN, Italy, 3–6 October; published by Elsevier, Amsterdam NL. [DOI: http://dx.doi.org/10.1016/j.gaitpost.2012.12.055, CA];

36. A. Mannini e A.M. Sabatini, Single stride speed estimation using support vector regression, *Gait & Posture*, Vol. 37(Supplement 1), pp. S25–26, 2013, XIII congresso SIAMOC 2012, Bellaria RN, Italy, 3–6 October; published by Elsevier, Amsterdam NL. [DOI: http://dx.doi.org/10.1016/j.gaitpost.2012.12.054, CA].

37. A. Mannini e A.M. Sabatini, Automatic gait phase segmentation method using a Hidden Markov Model, *Gait & Posture*, Vol. 35, pp. S17–18, 2012, XII congresso SIAMOC 2011, 28 September – 1 October, Bosisio Parini LC, Italy; published by Elsevier, Amsterdam NL. [DOI: http://dx.doi.org/10.1016/j.gaitpost.2011.09.046, CA].

38. A. Mannini e A.M. Sabatini, Automatic machine learning methods for analysis of signals from accelerometers: classification of human activity and walking-running speed estimation, *Gait & Posture*, Vol. 33, pp. S24, 2011, XI congresso SIAMOC 2010, 4–7 October, Ferrara, Italy; published by Elsevier, Amsterdam NL. [DOI: http://dx.doi.org/10.1016/j.gaitpost.2010.10.031, CA];

39. S. Micera, A. M. Sabatini, V. Genovese, J. Carpaneto, L. Bacci, A. Mannini, V. Monaco, L. Odetti, W. Poppendieck, K. P. Hoffmann, Assessment technologies for the analysis of the efficacy of a Vestibular Neural Prosthesis, *BMT 2010*, Rostok (Germany), 4–8 October 2010; publicato da De Gruyter, Berlino, Germania. [DOI: 10.1515/BMT.2010.491];

40. P. Bernini, A. Mannini, V. Genovese e A.M. Sabatini, The ActiNav system for classification of human activity and pedestrian navigation, *Secondo Congresso nazionale di bioingegneria, Atti*, Patron Editore, Bologna, July 2010 [CA];

41. A. Mannini e A.M. Sabatini, Computational methods for the automatic classification of postures and movements from acceleration data, *Gait & Posture*, Vol. 30, pp. S68–S69, 2009, X congresso SIAMOC 2009, 30 September – 3 October, Alghero SS, Italy; published by Elsevier, Amsterdam NL [DOI: http://dx.doi.org/10.1016/j.gaitpost.2009.07.068, CA];

42. A. Mannini, A. Gaglianese, S. Perondi, G. Ciofani and A. Landi, Transcytosis Processes through the Blood Brain Barrier, an Analytical Model, *Congresso nazionale di bioingegneria 2008 Atti*, Patron Editore, Bologna, pp.173–174, July 2008 [CA];

43. A. Mannini, A. Gaglianese, S. Perondi, G. Ciofani e A. Landi, A Model of Transcytosis Processes across the Blood Brain Barrier, *Communications of SIWN*, Vol. 3, pp. 88–94, July 2008; published by SIWN, Glasgow, Scozia [CA].

44. F. Carpi, G. Frediani, A. Mannini, G. Gallone, F. Galantini, D. De Rossi, Artificial muscles based on dielectric elastomer actuators: Achievements and Challenges, *Congresso nazionale di bioingegneria 2008 Atti*, Patron Editore, Bologna, pp.727–728, July 2008.

Book chapters

1. A. Mannini e A. M. Sabatini, *Healthcare and accelerometry: applications for activity monitoring, recognition and functional assessment*, as part of the book *Healthcare Sensor Networks Challenges Toward Practical Implementation.* Editors: D. Lai, R. Begg, M. Palaniswami, Taylor & Francis CRC Press, Milton (Oxford), ISBN:978-1-439-82181-7, October 2011 [NC: 2];

2. F. Carpi, A. Mannini e D. De Rossi, *Dynamic splint-like hand orthosis for finger rehabilitation*, as part of the book *Biomedical applications of electroactive polymer actuators*, Editors: F. Carpi and E. Smela, John Wiley & Sons LTD, Chichester (United Kingdom), ISBN:978-0-470-77305-5, April 2009 [DOI: 10.1002/9780470744697.ch24, NC: 7];

National journal

1. D. Amram e A. Mannini, Valutazione del danno e ruolo della biomeccanica, *Rivista Italiana di Medicina Legale*, Anno XXXIX, fascicolo3, 2017, pagine 991-997. published by Giuffré Editore Spa, Italia. ISSN: 1124-3376

Presentations

Presenter at EU-project review meetings (2), conferences (17 oral + 8 poster). Among them 9 conferences were international and 7 presentation were held upon invitation.

Invited talks

26/052022 "Sistemi di supporto alla decisione basati su intelligenza artificiale", keynote del Congresso Nazionale Società Italiana di Otorinolaringoiatria e Chirurgia Cervico Facciale (SiO 108), Convention Center "La Nuvola", Rome, Italy

10/112021 "Out-of-the-lab assessment of modified Dynamic Gait Index using machine learning and wearables "online event "Unsupervised analysis of movements in daily life"organized by International Society of Posture & Gait Research

15/04/2021 "L'intelligenza artificiale nello screening di massa e nello sviluppo di strumenti di supporto alla decisione in riabilitazione", Webinar *AI for rehabilitation and assistance* , organized by ARTES 4.0 Advanced Robotics and enabling digital TEchnologies & Systems 4.0

26/09/2019 "AI potential as a mass screening tool: the application to human movement assessment", *Statistics for Health and Well-being 2019*, Brescia, Italy.

6/10/2016 "Screening and classification of motor disorders using wearable sensors", for the pre-conference seminar session "Movement analysis in clinics using inertial and magnetic sensors", *Congresso SIAMOC 2016*, Milano.

12/07/2016 "The role of biomechanics in personal injury damages compensation ", round table for the event "Personal injury damages compensation and biomechanics. Erasmus+ Project Areyoufine? (Multiplier Event)", *Scuola Superiore Sant'Anna*, Pisa.

15/07/2014 "Advanced methods for the activity detection and analysis by means of wearable inertial sensors", (1 h), for the workshop "Movement analysis with wearable inertial sensors: stepping into clinics and sports", *ISEK Conference 2014*, Roma.

Oral presentations

08/07/2020 A. Mannini, S. Campagnini, P. Taverna, B. Binazzi, B. Campana, V. Carli, G. Devalle, B. Hakiki, J. Navarro, F. Noro, E. Pasqualone, C. Macchi, M. C. Carrozza, Decannulation probability and timing in patients with acquired severe brain injury: study and development of a predictive model, *1st RIN meeting 2020*;

16/11/2018 *DeTOP project* "WP4: Decoding user intent", Month 30 review meeting, Euroforum, Lussemburgo

12/04/2018 A. Mannini, Machine learning for movement recognition and assessment *IIT-SSSA day*, Pontedera PI;

04–07/10/2017 A. Mannini, O. Martinez-Manzanera, D. Sival, U. Della Croce, N.M. Maurits and A.M. Sabatini, Is it possible to apply an existing gait recognition method to pathological subjects without any adaptation? *XVII congresso SIAMOC 2017*, Torino;

19/05/2017 *iSupport project* "WP5: Context awareness, perception & cognition for user intention and activity recognition", Month 24 review meeting, Fondazione S. Lucia, Roma

15–16/12/2016 V. Genovese, A. Mannini e A.M. Sabatini, Step counting for slow and intermittent ambulation based on a smartwatch accelerometer, *BodyNets '16: 11th International Conference on Body Area Networks*, Torino;

05 – 08/10/2015 A. Mannini, D. Trojaniello, U. Della Croce and A.M. Sabatini, Automatic recognition of altered gait using wearable inertial sensors, XVI congresso SIAMOC, Milano ;

30/09 – 03/10 2015 D. Trojaniello, A. Mannini, T. Lawerman, D. Sival, A.M. Sabatini and U. Della Croce, Does tandem walking discriminate better than normal walking among children with DCD, ataxia and healthy controls? A preliminary analysis performed with IMUs on the trunk, XV congresso SIAMOC 2015, Padova, Italy;

25–29/08/2015 A. Mannini, D. Trojaniello, U. Della Croce e A.M. Sabatini, Hidden Markov Model-Based Strategy for Gait Segmentation using Inertial Sensors: Application to Elderly, Hemiparetic Patients and Huntington's Disease Patients, *Proc. of the 37th Annual IEEE-EMBC conference*, pp. 5179–5182, Milano, Italy;

03–06/10/2012 A. Mannini, A.M. Sabatini, S.S. Intille, Human gait detection from wrist-worn accelerometer data, XIII congresso SIAMOC 2012, Bellaria RN, Italy;

03–06/10/2012 A. Mannini e A.M. Sabatini, Single stride speed estimation using support vector regression, XIII congresso SIAMOC 2012, Bellaria RN, Italy;

28/07 – 01/10 2011 A. Mannini e A.M. Sabatini, Automatic gait phase segmentation method using a Hidden Markov Model, XII congresso SIAMOC 2011, Bosisio Parini LC, Italy;

30/08 – 03/09 2011 A. Mannini e A.M. Sabatini, On-line Classification of Human Activity and Estimation of Walk-Run Speed from Acceleration Data using Support Vector Machines, *Internat. Conf. of the IEEE Engineering in Medicine and Biology Society*, Boston MA, USA;

30/08 – 03/09 2011 A. Mannini e A.M. Sabatini, A Hidden Markov Model-Based Technique for Gait Segmentation Using a Foot-Mounted Gyroscope, *Internat. Conf. of the IEEE Engineering in Medicine and Biology Society*, Boston MA, USA;

26–29/01/2011 A. Mannini e A.M. Sabatini, Classification of human physical activities from on-body accelerometers: a Markov modeling approach, *Internat. Conf. on Bio-inspired Systems and Signal Processing*, INSTICC-SciTe Press, pp. 201–208, Roma, Italy;

04–07/10/2010 A. Mannini e A.M. Sabatini, Automatic machine learning methods for analysis of signals from accelerometers: classification of human activity and walking-running speed estimation, XI congresso SIAMOC 2010, Ferrara, Italy;

07/2008 A. Mannini, A. Gaglianese, S. Perondi, G. Ciofani e A. Landi, A Model of Transcytosis Processes across the Blood Brain Barrier, Proc. 1st International Conference on Bioinformatics, Systems Biology and Artificial Life, Glasgow, Scotland;

Poster presentations

27 – 30/09 2022 S. Campagnini, P. Liuzzi, B. Hakiki, A. Sodero, C. Macchi, F. Cecchi and A. Mannini. A machine learning-based prognostic solution for post-stroke functional outcome prediction after rehabilitation, *IEEE BHI-BSN 2022*, Ioannina, Greece, 2022;

27 – 30/09 2022 G. Fransvea, E. Patron, F. Mura, C. Cipriani, C. Gentili and A. Mannini. Machine Learning-based Instrumental Gait Analysis for the Diagnosis of Patients with Major Depressive Disorder, *IEEE BHI-BSN 2022*, Ioannina, Greece, 2022;

30/09 – 03/10 2015 A. Mannini and A.M. Sabatini, The Activity Advisor: online activity recognition using smartphone embedded sensors, *XV congresso SIAMOC*, Padova, Italy, 2015;

01–04/10/2014 A. Mannini, D. Trojaniello, U. Della Croce and A.M. Sabatini, Gait phases determination using Markov models applied to the recordings of a shank-worn gyroscope, ESMAC-SIAMOC conference 2014, Rome, Italy;

07/2010 P. Bernini, A. Mannini, V. Genovese and A.M. Sabatini, The ActiNav system for classification of human activity and pedestrian navigation, *Secondo Congresso nazionale di bioingegneria, Atti*, Torino;

30/09 – 03/10 2009 A. Mannini and A.M. Sabatini, Computational methods for the automatic classification of postures and movements from acceleration data, X congresso SIAMOC 2009, Alghero SS, Italy;

07/2008 A. Mannini, A. Gaglianese, S. Perondi, G. Ciofani and A. Landi, Transcytosis Processes through the Blood Brain Barrier, an Analytical Model, *Congresso nazionale di bioingegneria 2008*, Pisa;

07/2008 F. Carpi, G. Frediani, A. Mannini, G. Gallone, F. Galantini, D. De Rossi, Artificial muscles based on dielectric elastomer actuators: Achievements and Challenges, *Congresso nazionale di bioingegneria 2008*, Pisa;

Personal skills

Mother tongue **Italiano**

Other languages

Self-assessment
European level(*)

	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
English	C1 Proficient	C1 Proficient	C1 Proficient	C1 Proficient	B2 Independent
French	B1 Independent	B1 Independent	A2 Basic	A2 Basic	A2 Basic

(*) *Common European Framework of Reference (CEF) level*

Empoli, 5/6/2023

The undersigned Andrea Mannini (born in Empoli (FI, Italy) on 14/10/1984 declares that the content of this Curriculum Vitae corresponds to the truth, in accordance to the art. 46 a and following articles of the Italian D.P.R. 445/2000. The treatment of the personal data here included is authorized in accordance to the Italian law on privacy and EU rules on GDPR (30/06/2003, n.196/2003; EU2016/679)