

# Roberto Di Marco

## Curriculum Vitae

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**Keywords:**  
biomechanics; motion capture; wearable devices;  
inertial sensors; rehabilitation engineering;  
sports biomechanics



### Education

Nov 2012–Jun 2017 **PhD in co-tutelle between Sapienza University of Rome & The University of Sheffield:**  
o **PhD in Industrial Production Engineering** – CUM LAUDE  
Department of Mechanical and Aerospace Engineering, Sapienza University of Rome, IT  
o **PhD in Mechanical Engineering**  
Department of Mechanical Engineering, The University of Sheffield, Sheffield, UK  
*Thesis title: Kinematic modelling of the foot-ankle complex for gait analysis*

Feb 10–Mar 12 **MSc in Biomedical Engineering** – 110 CUM LAUDE  
Engineering School, Sapienza University of Rome, IT  
*Thesis title: Evaluation of the effects of magnetic field variations on measurements conducted with Inertial Measurement Units*

Sept 06–Dec 09 **BSc in Clinical Engineering** – 110/110  
Engineering School, Sapienza University of Rome, IT  
*Thesis title: Analysis of a bone marrow model with pharmacokinetics: study the optimal dose of a chemotherapy drug*

### Other certifications

May 2013 PhD course in *Advanced Musculoskeletal modeling techniques*, Aalborg University, Aalborg, DK – 4 ECTS

Mar 2013 Engineering License, Engineering School, Sapienza University of Rome, IT – Industrial Engineer Registry, section A (n.34287)

### Professional Experience

#### Current position

Apr 22–Mar 25 **Assistant Professor**, (RTD-a, Italian L. 240/2010)  
DEPARTMENT OF ENGINEERING FOR INNOVATION MEDICINE, UNIVERSITY OF VERONA, Verona, IT  
Former: *Department of Computer Science, University of Verona*, Verona, IT  
SSD: IINF-05/A (ex ING-INF/05)

#### Past positions

Feb 22–Mar 22 **Post-doctoral Researcher**, (1.5 month)  
DEPARTMENT OF INDUSTRIAL ENGINEERING, UNIVERSITY OF PADOVA, Padova, IT  
*Olimpia "New technologies for the paralimpic athlete"*  
SSD: IIND-03/A (ex ING-IND/14)

Feb 19–Jan 22 **Post-doctoral Researcher**, (36 months)  
DEPARTMENT OF NEUROSCIENCE, UNIVERSITY OF PADOVA, Padova, IT  
*Online monitoring of movement impairment as clinical outcome prediction in people with advanced Parkinson's disease*  
SSD: IBIO-01/A (ex ING-INF/06)

Feb 17–Jan 2019 **Bioengineer, Technical Manager**  
LABORATORY OF CLINICAL ANALYSIS AND BIOMECHANICS OF MOVEMENT AND POSTURE, University Hospital of Padova - Section of Rehabilitation, Padova, IT

Nov 15– Oct 16 **Research Assistant, (12 months)**  
DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING, SAPIENZA UNIVERSITY OF ROME, Rome, IT  
*Sensorization of the exoskeleton WAKE-up! (Wearable Ankle Knee Exoskeleton) for gait detection in children with neurological diseases*  
SSD: IMIS-01/A (ex ING-IND/12)

Feb 12–Feb 18 **Biomedical Engineer**  
MOVEMENT ANALYSIS AND ROBOTICS LABORATORY (MARLAB), Children Hospital Bambino Gesù, Rome, IT

**Other research contract**

Jul 18–Oct 18 **Research contract**  
DEPARTMENT OF NEUROSCIENCE, UNIVERSITY OF PADOVA, Padova, IT – *Definition of the temporal and pressure parameters characterizing Dravet's Syndrome via baropodometric examination of gait*

Mar 17–Jul 17 **Research contract**  
DEPARTMENT OF NEUROSCIENCE, UNIVERSITY OF PADOVA, Padova, IT – *Improve residual neuromuscular capacity in disabled athletes in the practice of wheelchair rugby*

## Research abroad

Jul 2018 **Visiting Post-doctoral Researcher**  
Department of Information and Communication Technologies, Universitat Pompeu Fabra, Barcellona (ES). Host researcher: Dr Simone Tassani.  
**Funding:** BTS Bioengineering - Best Young Researcher SIAMOC 2017.

Feb-Sept 2015 **PhD Student** - co-tutelle  
INSIGNEO Institute for *in silico* medicine, Department of Mechanical Engineering, The University of Sheffield, Sheffield (UK). Supervisor: Prof Claudia Mazzà.

Mar-Aug 2014 **PhD Student** - co-tutelle  
INSIGNEO Institute for *in silico* medicine, Department of Mechanical Engineering, The University of Sheffield, Sheffield (UK). Supervisor: Prof Claudia Mazzà.

## Involvement in Research Projects

### Current

Jun-2024–today **ECLYPSE-HF – L'Esercizio Aerobico Eccentrico: Analisi di Efficacia, Fattibilità ed Impatto nello Stile di Vita nella popolazione Cardiopatica Sarcopenica, UNIVR - iNEST, Interconnected Nord-Est Innovation Ecosystem,**  
ROLE: PRINCIPAL INVESTIGATOR.  
€ 48 022.35 – Duration: 1 year

2024–today **Pro-Olympia – Sistemi di produzione e prodotti per le paralimpiadi, INAIL, PI: N Petrone,**  
ROLE: RESEARCHER.  
€ 2 M – Duration: 3 year

### Past

2022–2023 **Olimpia, INAIL, PI: N Petrone,**  
ROLE: RESEARCHER.  
€ 1,2 M – Duration: 2 year

2021–2022 **Sensorimotor integration in scoliosis**, *Project "Dipartimento di Eccellenza" - University of Padova*, PI: S Masiero,  
ROLE: RESEARCHER.  
€ 50 000 – Duration: 2 years

2019–2022 **PD\_Pal: Palliative care in Parkinson's Disease**, *EU H2020, Grant Agreement n.825785*,  
Coordinator: A Antonini, University of Padova, IT - PI: B Bloem, Radboud University Medical Center, NL,  
ROLE: QUALITY MANAGER & CLINICAL TRIAL COORDINATOR @ UNIPD.  
€ 3 995 437,50 – Duration: 3,5 years

2019–Present **Soft-Act: Prevention of falls: a synergic soft exoskeleton with integrated muscle and brain biosignals to minimize gait instability in the elderly**, *Ministry of "Affari Esteri e della Cooperazione Internazionale", N. PGR-00807*, PI: A Del Felice, University of Padova, IT,  
ROLE: RESEARCHER.  
€ 150 000 – Duration: 3 years

2018–Present **Pro Gait: Physiological and Rehabilitation Outcomes Gains from Automated Interventions in Stroke Therapy**, *EU H2020, Grant Agreement n.778043*, PI: O Lennon, University College Dublin, IE,  
ROLE: RESEARCHER.  
€ 144 000 – Duration: 4 years

2018–2020 **A Standardized Thermal Protocol for Parkinson's Disease: a longitudinal, randomized, controlled, blinded study**, *FoRST – Foundation for Thermal scientific research*, PI: S Masiero, University of Padova, IT,  
ROLE: PROJECT MANAGER & RESEARCHER.  
€ 90 000 – Duration: 2 years

2013–2017 **MD-PAEDIGREE: Model-Driven European Paediatric Digital Repository**, *EU Seventh Framework Programme, Grant Agreement n.600932*, PI: B Dalla Piccola, Children Hospital "Bambino Gesù", Rome, IT,  
ROLE: RESEARCHER of the WP5,10 and WP6,11: protocol preparation, data collection and analysis of people with Juvenile Idiopathic Arthritis and Neurological and Neuromuscular Diseases.  
€ 11 869 000 – Duration: 4 years 3 months

2013–2016 **Mechanical measurements for the musculoskeletal apparatus: novel and standardizable methodologies for metrological assessment of measurement system**, *MIUR - PRIN 2012, n.20127XJX57*, PI: Paolo Cappa, Sapienza University of Rome, Rome, IT,  
ROLE: RESEARCHER.  
€ 120 050 – Duration: 3 years

**PI**

2014 **Analysis of the metrological quality of measurements conducted to develop a musculoskeletal model of the ankle for studying the robot-patient interaction**, *"Avvio alla Ricerca" Grant 2014*, Sapienza University of Rome, Rome, IT.  
€ 1500 – Duration: 1 year

2013 **Sensorization of a novel X-Y robot for dynamic posturography: on-line compensation of the acceleration effects on the load-cell outputs**, *"Avvio alla Ricerca" Grant 2013*, Sapienza University of Rome, Rome, IT.  
€ 2000 – Duration: 1 year

## Third Parties Research Contracts

### Past

Nov 2023–Dec 2023 **Department of Industrial Engineering - University of Padova (Prof Nicola Petrone, Project Olimpia)**,  
ROLE: CONSULTANT & SCIENTIFIC COORDINATOR, €12300,00.  
Duration: 2 months

## Editorial Activities

2023–Present ACADEMIC EDITOR  
PLOS ONE ([link](#)) – ISSN: 1932-6203

2023–Present GUEST EDITOR  
ENTROPY ([link](#)) – ISSN: 1099-4300  
*Special Issue Title:* Nonlinear Methods for Biomedical Engineering ([link](#))

2022–Present REVIEWER BOARD  
INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH ([link](#))  
– ISSN: 1660-4601

2021–Present REVIEWER BOARD  
BIOSENSORS ([link](#)) – ISSN: 2079-6374

2020–Present REVIEW EDITOR  
FRONTIERS IN REHABILITATION SCIENCE (SECTION: INTERVENTIONS FOR REHABILITATION) ([link](#))

2020–Present REVIEWER BOARD  
SENSORS ([link](#)) – ISSN: 1424-8220

2020–Present REVIEW EDITOR  
FRONTIERS IN SPORTS AND ACTIVE LIVING (SECTION: SPORTS SCIENCE, TECHNOLOGY AND ENGINEERING) ([link](#)) – ISSN: 2624-9367

## Roles in Scientific events

2024 **XXIV National Congress SIAMOC**, Lago Maggiore - Stresa (VB) - Italy,  
ROLE: SCIENTIFIC COMMITTEE MEMBER.  
2-5 October 2024

2021 **Webinar "Robotics in Rehabilitation"**, University of Padova, Harvard Medical School (US),  
Ulster University (UK) & University College Dublin (IE),  
ROLE: CO-ORGANIZER.  
2 December 2021

2020 **Webinar "EEG, EMG & robotics for enhancing mobility"**, University of Padova &  
Harvard Medical School,  
ROLE: CO-ORGANIZER.  
3 December 2020

2019 **XX National Congress SIAMOC**, University of Bologna, Bologna, IT,  
ROLE: SESSION CHAIR.  
9-12 October 2019

2019 **Soft-Act kick-off meeting**, Bo Palace, University of Padova, Padova, IT,  
ROLE: CO-ORGANIZER.  
8 June 2019

2019 **PD\_Pal Project kick-off meeting**, Bo Palace, University of Padova, Padova, IT,  
ROLE: CO-ORGANIZER.  
13-14 February 2019

## Awards

2017 Best Young Reasercher BTS - SIAMOC 2017, 1st place

2016 Best Young Reasercher BTS - SIAMOC 2016, 2nd place

## Scientific Society Memberships

Member GNB: National Group of Bioengineering

Member IEEE: Institute of Electrical and Electronics Engineers

Member IEEE EMBS: IEEE Engineering in Medicine and Biology Society

Member SIAMOC: Italian Society of Clinical Movement Analysis  
 Member ESMAC: European Society for Movement Analysis in Adults and Children  
 Member ESB: European Society of Biomechanics

## Invited talks

Dec 2021 **Walking features before and after Exoskeleton Training**, Webinar "Robotics in Rehabilitation", University of Padova & Harvard Medical School, University of Padova, Harvard Medical School (US), Ulster University (UK) & University College Dublin (IE).

Dec 2020 **Preliminary results on the investigation of EEG and EMG patterns during the performance of balance tasks**, *M Rubega & R Di Marco*, Webinar "EEG, EMG & Robotics for enhancing mobility", University of Padova & Harvard Medical School (US).

Feb 2020 **Sensors for motion monitoring**, MOVE ON - Movement and Control in Parkinson's Disease, Zambon Italia srl, Rome - IT.

Mar 2018 **Static and Dynamic Posturography: instrumental evaluation of balance**, School of Physical and Rehabilitation Medicine, Department of Neuroscience, University of Padova, Padova - IT.

Sept 2016 **"Misure cinematiche nella Biomeccanica - con contributi impostati e coordinati da Paolo Cappa"**, XV Congress of Mechanical and Thermal Measurement (MMT), 2016, Benevento - IT.

## Institutional Roles

Apr 23–Today **"Referente per l'Internazionalizzazione"**, COLLEGIO DIDATTICO INTERATENEO DI INGEGNERIA DELL'INFORMAZIONE, Department of Engineering for Innovation Medicine, University of Verona, Verona - IT.  
 17th April, 2023

Apr 23–Today **"Commissione Pratiche Studenti" (member)**, COLLEGIO DIDATTICO INTERATENEO DI INGEGNERIA DELL'INFORMAZIONE, Department of Engineering for Innovation Medicine, University of Verona, Verona - IT.  
 17th April, 2023

Jan 23–Today **Internship Commission (member)**, COLLEGIO DIDATTICO INTERATENEO DI INGEGNERIA DELL'INFORMAZIONE, Department of Engineering for Innovation Medicine, University of Verona, Verona - IT.  
 23rd January, 2023

## Teaching

Sept 24–Today **Lecturer**,  
 TECHNIQUES AND ALGORITHMS FOR BIOMECHANICS OF MOVEMENT, (2.5 CFU)  
 PhD in Dottorato in Ingegneria dei Sistemi Intelligenti, Department of Engineering for Innovation Medicine Science, University of Verona, Verona - IT.  
 SSD: n.d.

Sept 24–Today **Lecturer**,  
 BASIS OF MOTION ANALYSIS, (3 CFU)  
 BSc in Human Centered Medical System Engineering, Department of Engineering for Innovation Medicine Science, University of Verona, Verona - IT.  
 SSD: n.d.

Sept 22–Today **Lecturer**,  
 PROGRAMMING LANGUAGES AND PROGRAMMING TOOLS WITH LABORATORY – LAB 1 AND LAB 2, (2 + 2 CFU - 48 academic hours/year)  
 BSc in Human Centered Medical System Engineering, Department of Engineering for Innovation Medicine Science, University of Verona, Verona - IT.  
 SSD: INF/01

Apr 22–Sept 22	<b>Lecturer</b> , PROGRAMMING LANGUAGES AND PROGRAMMING TOOLS WITH LABORATORY – LAB 2, (2 CFU - 28 academic hours) BSc in Human Centered Medical System Engineering, Department of Computer Science, University of Verona, Verona - IT. SSD: INF/01
Oct 21–Sept 22	<b>Lecturer ("Professore a Contratto")</b> , MATLAB AND COMPUTATIONAL COGNITION, (4 CFU - 28 academic hours) Cognitive Neuroscience and Clinical Neuropsychology, Department of General Psychology, University of Padova, Padova - IT. SSD: n.d.
2021	<b>Invited Lecturer</b> CLINICAL GAIT ANALYSIS, (2 academic hours) Physical and Rehabilitation medicine, L/SNT-2 School of Medicine and Surgery, University of Padova, Padova - IT.
Jun 20–Dec 20	<b>Lecturer ("Professore a Contratto")</b> , NEW TECHNOLOGIES FOR REHABILITATION, (2 CFU - 14 academic hours) School of Physical and Rehabilitation Medicine, Department of Neuroscience, University of Padova, Padova - IT. SSD: MED/34
2019–2020	<b>Invited Lecturer</b> CLINICAL GAIT ANALYSIS, (2 academic hours) Physical and Rehabilitation medicine, L/SNT-2 School of Medicine and Surgery, University of Padova, Padova - IT.
2019	<b>Lecturer</b> KINEMATIC ANALYSIS OF THE FOOT-ANKLE COMPLEX (2 academic hours) Professional Course "Clinical Anatomy of the musculoskeletal system" University of Padova, Padova - IT.
2017	<b>Invited Lecturer, Examination board member</b> CLINICAL GAIT ANALYSIS, (1 hour) Laboratory Medicine, LM-41 School of Medicine and Surgery, University of Padova, Padova - IT.
2015–2017	<b>Teaching Assistant ("Cultore della Materia")</b> <ul style="list-style-type: none"> <li>○ BIOMECHANICS, LM-21, LM-33 Lectures on Human Movement Analysis and Data Processing (20 academic hours/year), Lab Tutor (20 academic hours/year), Examination board member</li> <li>○ MECHANICAL AND THERMAL MEASUREMENTS, LM-21, LM-33 Lab Tutor, Examination board member</li> <li>○ INDUSTRIAL MEASUREMENTS, LM-33 Lab Tutor (10 academic hours), Examination board member</li> </ul> Engineering School, Sapienza University of Rome, Rome - IT, SSD: ING-IND/12, ING-IND/34
2014–2015	<b>Teaching Tutor</b> <ul style="list-style-type: none"> <li>○ BIOMECHANICS, LM-21, LM-33, &amp; LABORATORY OF MEASUREMENTS FOR BIOMECHANICS, LM-33 Lectures on Human Movement Analysis and Data Processing (20 academic hours), Lab Tutor (40 academic hours), Examination board member</li> <li>○ LABORATORY OF MEASUREMENTS FOR BIOMECHANICS, LM-33 Lab Tutor, Examination board member</li> <li>○ INDUSTRIAL MEASUREMENTS, LM-33 Lab Tutor, Examination board member</li> </ul> Engineering School, Sapienza University of Rome, Rome - IT, SSD: ING-IND/12, ING-IND/34

## 2012–2014 **Teaching Tutor**

- BIOMECHANICS, LM-21, LM-33, & LABORATORY OF MEASUREMENTS FOR BIOMECHANICS, LM-33  
Lab Tutor (40 hours/academic year), Examination board member
- INDUSTRIAL MEASUREMENTS, LM-33  
Lab Tutor (6 hours), Examination board member

Engineering School, Sapienza University of Rome, Rome - IT,  
SSD: ING-IND/12, ING-IND/34

## Teaching events

Oct 2023 **Mirandola Summer Camp 2023 - 2nd Edition**, Organizing Committee, University of Verona, University of Trento & University of Modena-Reggio Emilia, 2-4 October, 2023; Mirandola (MO) & Modena - IT.  
website: [event.unitn.it/mirandola-summer-camp](http://event.unitn.it/mirandola-summer-camp)

Sept 2022 **Mirandola Summer Camp 2022 - 1st Edition**, Organizing Committee, University of Verona, University of Trento & University of Modena-Reggio Emilia, 27-29 September, 2022; Mirandola (MO) - IT.  
website: [event.unitn.it/2022/mirandola-summer-camp](http://event.unitn.it/2022/mirandola-summer-camp)

## Software Skills

Advanced MATLAB, C, L<sup>A</sup>T<sub>E</sub>X, Vicon Nexus, Microsoft Office

Intermediate Python, R, Vicon Polygon, Adobe Illustrator, HTML, SPSS Statistics, LABView

Basic AnyBody Modelling System, SolidWorks

## Languages

Italian **Mothertongue**

English **Advanced** *C2: listening, reading, writing, interaction, speaking*

## Publications

	<b>Author IDs:</b>	<b>H-index</b>	<b>Citations</b>
	0000-0002-3644-352X	–	–
	SkQFhQgAAAAJ&hl	15	520
	56524248800	13	343
	AAL-1586-2020	11	276

## Scientific production summary

<b>Author type</b> →	<b>1st</b>	<b>2nd</b>	<b>Other</b>	<b>Corresp</b>
<b>Research Papers</b>	10	4	8	10
<b>Conference Proceedings</b>	4	–	6	4
<b>Conference Abstracts</b>	9	2	7	9

## Research Papers

Di Marco R: bold text — Corresponding author: ✉ — Equal contribution: \*

2024 Boldo M, **Di Marco R** ✉, Martini E, Nardon M, Bertucco M, Bombieri N – *On the reliability of single-camera markerless systems for overground gait monitoring*, Computers in Biology and Medicine 171:108101  
doi: [10.1016/j.combiomed.2024.108101](https://doi.org/10.1016/j.combiomed.2024.108101)

2023 Paramento M, Rubega M, **Di Marco R**, Agostini M, Cantele F, Masiero S, Formaggio E – *Experimental protocol to investigate cortical, muscular and body representation alterations in Adolescent Idiopathic Scoliosis*, PLOS One 18(10): e0292864  
doi: 10.1371/journal.pone.0292864

2023 **Di Marco R\***, Rubega M\* , Lennon O, Vianello A, Masiero S, Formaggio E, Del Felice A, on behalf of the PRO GAIT Consortium & Local collaborators – *Exoskeleton training modulates complexity in movement patterns and cortical activity in able-bodied volunteers*, IEEE Transactions on Neural Systems and Rehabilitation Engineering 31:2381-2390  
doi: 10.1109/TNSRE.2023.3273819

2023 Aldegheri S, Artusi CA, Camozzi S, **Di Marco R** , Geroin C, Imbalzano G, Lopiano L, Tinazzi M, Bombieri N – *Camera- and Viewpoint-agnostic evaluation of axial postural abnormalities in people with Parkinson's Disease through augmented Human Pose Estimation*, Sensors 23(6):3193  
doi: 10.3390/s23063193

2022 Formaggio E, Bertuccelli M, Rubega M , **Di Marco R**, Cantele F, Gottardello F, De Giuseppe M, Masiero S – *Brain oscillatory activity in adolescent idiopathic scoliosis*, Scientific Reports 12:17266  
doi: 10.1038/s41598-022-19449-1

2022 Bisi MC, **Di Marco R**, Ragona F, Darra F, Vecchi M, Masiero S, Del Felice A , Stagni A – *Quantitative characterization of motor control during gait in Dravet Syndrome using wearable sensors: a preliminary study*, Sensors 22(6):2140  
doi: 10.3390/s22062140

2022 **Di Marco R** , Pistonesi F, Cianci V, Weis L, Biundo R, Baba A, Rubega M, Gentile G, Carecchio M, Tedesco C, Antonini A, Masiero A – *Effect of thermal aquatic exercise on a group of people with Parkinson's Disease: a longitudinal study*, Healthcare 10(2):368  
doi: 10.3390/healthcare10020368

2021 Luis R, **Di Marco R**, Weis L, Cianci V, Pistonesi F, Baba A, Carecchio M, Biundo R, Tedesco C, Masiero S, Antonini A  – *Impact of mobility restrictions in Parkinson's disease during COVID-19 lockdown*, BMC Neurology 21:332  
doi: 10.1186/s12883-021-02364-9

2021 **Di Marco R\*** , *Rubega M\** , Lennon O, Formaggio E, Sutaj N, Dazzi G, Venturin C, Bonini I, Ortner R, Cerrel Bazo H A, Tonin L, Tortora S, Masiero S, Del Felice A on behalf of the PRO GAIT Consortium – *Experimental protocol to assess neuromuscular plasticity induced by an exoskeleton training session*, Methods and Protocols 4(3):48  
doi: 10.3390/mps4030048

2021 Rubega M, Formaggio E, **Di Marco R**, Bertuccelli M, Tortora S, Menegatti E, Cattelan M, Bonato P, Masiero S, Del Felice A  – *Cortical analysis in upright dynamic and static balance in the elderly*, Scientific report 11:14132  
doi: 10.1038/s41598-021-93556-3

2021 Rubega M , Formaggio E, Molteni F, Guanziroli E, **Di Marco R**, Baracchini C, Ermani M, Ward NS, Masiero S, Del Felice A – *EEG fractal analysis reflects brain impairment after stroke*, Entropy 23(5):592  
doi: 10.3390/e23050592

2021 Rubega M\*, **Di Marco R\***, Zampini M, Formaggio E, Masiero S, Bonato P, Del Felice A  – *Muscular and cortical activation during walking and upright stance in the elderly: A Scoping Review*, Aging Brain 1:100013  
doi: 10.1016/j.nbas.2021.100013

2021 Wyers L\* , **Di Marco R\***, Zambelli S, Masiero S, Hallemans A, Van de Walle P, Desloovere K, Del Felice A – *Foot-floor contact pattern in children and adults with Dravet Syndrome*, Gait Posture 84:315-320  
doi: 10.1016/j.gaitpost.2020.12.030

2021 Marcante A\*, **Di Marco R\*** , Gentile G , Pellicano C, Assogna F, Pontieri FE, Spalletta G, Macchiusi L, Gatsios D, Giannakis A, Chondrogiorgi M, Konitsiotis S, Fotiadis DI, Antonini A – *Foot pressure wearable sensors for freezing of gait detection in Parkinson's disease*, Sensors 21(1):128  
doi: 10.3390/s21010128

2020 Lennon O , Tonellato M, Del Felice A, **Di Marco R**, Fingleton C, Korik A, Guanziroli E, Molteni F, Guger C, Otner R, Coyle D – *A Systematic Review Establishing the Current State-of-the-Art, the Limitations, and the DESIRED Checklist in Studies of Direct Neural Interfacing With Robotic Gait Devices in Stroke Rehabilitation*, Front Neurosci  
doi: 10.3389/fnins.2020.00578

2019 Montefiori E , Modenese L, **Di Marco R**, Magni-Manzoni S, Malattia C, Petrarca M, Ronchetti A, Tanturri de Horatio L, van Dijkhuizen P, Wang A, Wesarg S, Viceconti M, Mazzà C and for the MD-PAEDIGREE Consortium – *Linking Joint Impairment and Gait Biomechanics in Patients with Juvenile Idiopathic Arthritis*, Ann Biomed Eng 47(11):2155-2167  
doi: 10.1007/s10439-019-02287-0

2019 **Di Marco R** , Hallemans A, Bellon G, Ragona F, Piazza E, Granata T, Ceulemans B, Schoonjans AS, van de Walle P, Darra F, Dalla Bernardina B, Vecchi M, Sawacha Z, Scarpa B, Masiero S, Benedetti MG, Del Felice A – *Gait abnormalities in people with Dravet syndrome: A cross-sectional multi-center study*, Eur J Paediatr Neuro 23(6):808-818  
doi: 10.1016/j.ejpn.2019.09.010

2019 Montefiori E , Modenese L, **Di Marco R**, Magni-Manzoni S, Malattia C, Petrarca M, Ronchetti A, Tanturri de Horatio L, van Dijkhuizen P, Wang A, Wesarg S, Viceconti M, Mazzà C and for the MD-PAEDIGREE Consortium – *An image-based kinematic model of the tibiotalar and subtalar joints and its application to gait analysis in children with Juvenile Idiopathic Arthritis*, J Biomech 85(6):27-36  
doi: 10.1016/j.jbiomech.2018.12.041

2019 Scalona E , **Di Marco R**, Castelli E, Desloovere K, Van Der Krog M, Cappa P, Rossi S – *Inter-laboratory and inter-operator reproducibility in gait analysis measurements in pediatric subjects*, International Biomech 6(1):19-33  
doi: 10.1080/23335432.2019.1621205

2018 **Di Marco R\*** , Scalona E\*, Pacilli A, Cappa P, Mazzà C, Rossi S – *How to choose and interpret similarity indices to quantify the variability in gait joint kinematics*, International Biomech 5(1):1-8  
doi: 10.1080/23335432.2018.1426496

2017 **Di Marco R** , Rossi S, Castelli E, Patanè F, Mazzà C, Cappa P – *Effects of the calibration procedure on the metrological performances of stereophotogrammetric systems for human movement analysis*, Measurement 101:265-271  
doi: 10.1016/j.measurement.2016.01.008

2016 **Di Marco R** , Rossi S, Racic V, Cappa P, Mazzà C – *Concurrent repeatability and reproducibility analyses of four marker placement protocols for the foot-ankle complex*, J Biomech 49(14):3168-3176  
doi: 10.1016/j.jbiomech.2016.07.041

2016 Prinold JAI, Mazzà C , **Di Marco R**, Hannah I, Malattia C, Magni-Manzoni S, Petrarca M, Ronchetti A, Tanturri de Horatio L, van Dijkhuizen P, Wesarg S, Viceconti M and MD-PAEDIGREE Consortium – 1, Ann Biomed Eng 44(1):247-257  
doi: 10.1007/s10439-015-1451-z

[PhD Thesis](#)

2016 **Di Marco R** – *Kinematic modelling of the foot-ankle complex for gait analysis*, Supervisors: Mazzà C, Palermo E

## Conference presentations summary (abstracts & proceedings)

Presentation type →	Oral (presenter)	Poster (presenter)
N.	21 (10)	13 (6)

### Conference Proceedings

Presenting Authors are underlined.

2024 Breban SG, Toniutto A, **Di Marco R**, Migliore GL, Cutti AG, Petrone N – *Comparison of long jump GRFs and ROS curves from able-bodied and paralympic amputee athletes*, 15th International Conference on the Engineering of Sport (ISEA 2024), Loughborough - UK, July 8-11, 2024

2024 Aldegheri S, Boldo M, Bozzini C, De Marchi M, **Di Marco R**, Martini E, Bombieri N – *A Verification Platform for Human Pose Estimation Models*, 25th IEEE Latin American Test Symposium (LATS 2024), Maceio - BR, April 9-12, 2024

2023 Barbacane S, Breban S, Fabris G, Scapinello M, **Di Marco R**, Marcolin G, Migliore GL, Cutti AG, Petrone N – *Analysis of an Elite Amputee Paralympic Sprinter in Track Running Pilot Tests*, 8th Congress of the National Group of Bioengineering (GNB 2023), Padova - IT, June 21-23, 2023

2023 Breban SG, Barbacane S, Pelusi V, **Di Marco R**, Marcolin G, Migliore GL, Cutti AG, Petrone N – *Comparative Analysis of Steady and Resisted Accelerated Treadmill Running of an Elite Amputee Paralympic Sprinter*, 8th Congress of the National Group of Bioengineering (GNB 2023), Padova - IT, June 21-23, 2023

2022 Breban SG, Bettella F, **Di Marco R**, Migliore GL, Cutti AG, Petrone N – *GRF analysis of two elite paralympic sprinters in steady and resisted accelerated treadmill running*, 40th International Society of Biomechanics in Sports Conference (ISBS 2022), Liverpool - UK, July 19-23, 2022

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Presenting Authors are underlined.

2024 **Di Marco R**, Boldo M, Aldegheri S, Martini E, Cosma M, Baricich A, Gasperini G, Picelli A, Smania N, Bombieri N – *A markerless platform for automatic assessment of gait*, XXIV SIAMOC Congress, Stresa, IT, 2-5 October 2024

2022 **Cantele F**, Bertuccelli M, Rubega M, **Di Marco R**, Gottardello F, De Giuseppe M, Formaggio E, Masiero S – *Altered EEG activity in adolescent idiopathic scoliosis*, 16th World Congress of the International Society Congress (ISPRM), Lisbon, Portugal, 3-7 Jul 2022

2022 **Tognolo L**, **Di Marco R**, Pistonesi F, Cianci V, Biundo R, Weis L, Baba A, Gentile G, Tedesco C, Carecchio M, Antonini A, Masiero S – *Effect of intensive rehabilitation program in thermal water on a group of people with Parkinson's Disease: a longitudinal study*, 16th World Congress of the International Society Congress (ISPRM), Lisbon, Portugal, 3-7 Jul 2022

2021 **Cantele F**, Bertuccelli M, **Di Marco R**, Rubega M, Gottardello F, De Giuseppe M, Formaggio E, Masiero S – *Sensory-motor integration in adolescents with idiopathic scoliosis*, 49 SIMFER Congress, Milano, Italy, 28-31 Oct 2021

2021 **Di Marco R**, Rubega M, Antonini A, Del Felice A, Masiero S, Formaggio E – *Higuchi's fractal dimension of lumbar acceleration during static tasks in Parkinson's Disease*, XXI SIAMOC Congress 30 Sept-01 Oct 2021

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2015 **Di Marco R**, Rossi S, Racic V, Cappa P, MAzzà C – *A comparison between four foot model protocols: the effect of walking on a treadmill*, XXV Congress of the International Society of Biomechanics, Glasgow, UK, 12-16 July 2015

2015 **Prinold JAI**, Mazzà C, Wesarg S, **Di Marco R**, van Dijkhuizen P, Tanturri de Horatio L, Malattia C, Viceconti M and MD-PAEDIGREE Consortium – *A patient-specific musculoskeletal modelling pipeline applied to phalangeal loading conditions in gait*, XXV Congress of the International Society of Biomechanics, Glasgow, UK, 12-16 July 2015

**Conference Abstract: poster presentation**

Presenting Authors are underlined.

2024 **Di Marco R**, Breban SG, Zullo G, Migliore GL, Gariboldi F, Scapinello M, Marcolin G, Cutti AG, Petrone N – *A motion capture protocol for the in-vivo assessment of running and long-jumping biomechanics in transfemoral and transtibial running elite para-athletes*, XXIV SIAMOC Congress, Stresa, IT, 2-5 October 2024

2024 **Di Marco R**, Zullo G, Breban SG, Cutti AG, Petrone N – *A method for mechanical crosstalk rejection and running event detection on a 9-force plates instrumented track*, XXIV SIAMOC Congress, Stresa, IT, 2-5 October 2024

2022 **Di Marco R\***, Rubega M\*, Lennon O, Dazzi G, Venturin C, Masiero S, Formaggio E, Del Felice A – *Walking and Cortical modifications before and after exoskeleton training*, 16th World Congress of the International Society Congress (ISPRM), Lisbon, Portugal, 3-7 Jul 2022,  
\* Equal contribution

2020 Wyers L\*, **Di Marco R\***, Zambelli S, Hallemans A, van de Walle P, Desloovere K, Del Felice A, Masiero S – *Foot-floor roll-over process in Dravet Syndrome*, 48th National Congress of the Italian Society of Physical and Rehabilitation Medicine (SIMFER)  
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2020 Rubega M, **Di Marco R**, Formaggio E, Bertuccelli M, Del Felice A, Masiero S – *Muscle activation analysis during dynamic and static balance in the elderly*, 48<sup>o</sup> National Congress of the Italian Society of Physical and Rehabilitation Medicine (SIMFER)

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## Personal data

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