

PERSONAL INFORMATION	
Surname, Name:	Guiotto Annamaria
Researcher unique identifier (ORCID, Research ID, Scopus author ID):	https://orcid.org/0000-0002-0635-098X , Author ID: 32867638200
Date of birth:	20 th June 1983
Status:	Married, 1 kid (kid's date of birth: 2015)
Nationality:	Italian
Languages:	Italian mother tongue, English good.
Web site:	http://www.dei.unipd.it/~guiotto/
Career Breaks:	Maternity leave: 15 th May 2015 – 15 th January 2016

EDUCATION	
2013	PhD in Information Engineering, section Bioengineering (University of Padova, Italy) Title: "Development of a gait analysis driven finite element model of the diabetic foot" Supervisor: Prof. C. Cobelli
2010	Esame di Stato (@University of Padova)
2008	Laurea specialistica (University of Padova, Italy) Title: "Il ruolo delle variabili biomeccaniche nell'analisi morfologica del piede diabetico a fini diagnostici" Supervisor: Prof. Z. Sawacha Best thesis award at SIAMOC 2009
2005	Laurea triennale (University of Padova, Italy) Title: "Sviluppo di un controllore a rete neurale per l'ottimizzazione del bicarbonato in dialisi". Supervisor: Prof. A. Ruggeri.

CURRENT POSITION	
1 st December 2018 – ongoing	Post Doc (Dept. of Information Engineering, University of Padova, Italy) Title: Translation into the clinic of a dynamic 3D finite element model of the diabetic foot driven by gait analysis data. Supervisor: Z. Sawacha

PREVIOUS ACADEMIC POSITIONS	
1 st June 2018 – 30 th November 2018	Post Doc (Dept. of Information Engineering, University of Padova, Italy) Title: Sviluppo di modelli per la prevenzione della patologia del piede diabetico. Supervisor: Z. Sawacha
1 st March 2018 – 31 st May 2018	Scholarship (Dept. of Information Engineering, University of Padova, Italy) Title: Applicazione dell'analisi del movimento alla progettazione di safety shoes Supervisor: Prof. G. Toffolo
1 st January 2018 – 28 th February 2018	Scholarship (Dept. of Information Engineering, University of Padova, Italy) Title: Applicazione dell'analisi del movimento alla progettazione di safety shoes Supervisor: Prof. G. Toffolo

1 st September 2017 – 31 st October 2018	Co.Co.Co. (Dept. of Information Engineering, University of Padova, Italy) Title: “Analisi di dati di bioingegneria del movimento” Supervisor: Prof. G. Toffolo
29 th May 2017 – 28 th July 2017	Prestazione occasionale (Dept. of Information Engineering, University of Padova, Italy) Title: “Analisi della variabilità glicemica con tecniche mutuete dalla posturografia” Supervisor: S. Del Favero
15 th March 2017 – 15 th May 2017	Scholarship (Dept. of Information Engineering, University of Padova, Italy) Title: Valutazione degli effetti sul cammino di soggetti affetti da Morbo di Parkinson del dispositivo Equistasi nella riabilitazione neurologica Supervisor: Prof. G. Toffolo
1 st March 2016 – 28 th February 2017	Post Doc (Dept. of Information Engineering, University of Padova, Italy) Title: Sviluppo di un modello agli elementi finiti per la pianificazione di ortesi plantari Supervisor: Prof. C. Cobelli
1 st June 2014 – 31 st January 2016 (incl. maternity leave)	Post Doc (Dept. of Information Engineering, University of Padova, Italy) Title: Sviluppo di un multifisico agli elementi finiti del piede diabetico: livello tessutale Supervisor: Prof. C. Cobelli
1 st March 2013 – 28 th February 2014	Post Doc (Dept. of Information Engineering, University of Padova, Italy) Title: Sviluppo di un modello multiscala per la prevenzione del piede diabetico Supervisor: Prof. C. Cobelli
1 st February 2013 – 28 th February 2013	Prestazione occasionale (Dept. of Information Engineering, University of Padova, Italy) Title: “Preparazione della strumentazione necessaria all’esecuzione dell’acquisizione di dati di analisi del movimento, preprocessing di dati relativi all’analisi del movimento e preparazione di referti a partire dagli stessi dati di pazienti affetti da neuropatia diabetica” Supervisor: Prof. C. Cobelli
May 2011 – October 2011	Exchange visitor at the University of Salford, Manchester (GB). (Prof. Chris Nester)
1 st September 2010 – 31 st August 2012 (PhD scholarship)	Scholarship (Dept. of Information Engineering, University of Padova, Italy) Title: “Applicazione dell’analisi del movimento nella prevenzione della neuropatia diabetica tramite pianificazione di ortesi plantari al calcolatore” Supervisor: Prof. C. Cobelli

SCIENTIFIC PRODUCTION SUMMARY	
Academic Age	10 (10.5 – 0.5 years corresponding to 1 maternity leave)
Peered Review Journals	17 (4 first author, 2 second author, all peer reviewed, none proceedings)
Other Publications	59 abstracts on Proceedings of National and International Conferences published on Peered Review Journals, 77 abstracts on National and International Conferences Book of Abstract.
Book Chapter	1 Book Chapter- National Editor.
Patent	1 patent
Citation	274 (scopus) – 531 (google scholar)
H-index	8 (scopus) - 9 (google scholar)
RESEARCH ACTIVITY: MAIN TOPICS	
Musculoskeletal Modelling applied to Diabetic Foot	Development of a methodology to improve the prediction of Finite element models (FEMs) derived internal stresses. With this purpose in vivo gait analysis data and foot MRI scan are needed. Both a subject-specific foot FEM (Guiotto

Biomechanics	and Sawacha et al 2014) and a musculoskeletal model were combined (Scarton A et al 2017). Muscle forces, based on experimentally measured ground reaction forces (GRFs) and kinematics were used as boundary conditions for the FEM by applying: GRFs and OpenSim derived extrinsic muscles forces estimated with the standard OpenSim musculoskeletal model. Simulated peak pressures were extracted and compared with the experimentally measured ones. The more accurate estimate of the peak pressures when muscle forces were included confirmed the important role played by the new methodology. This workflow received the Best Paper Prize at the European Society of Motion Analysis in Clinic in 2016 at Siviglia and has been published in Gait and Posture (Scarton A et al 2017-2018).
Foot Finite Element Modelling	Development of 3D (Guiotto and Sawacha et al 2014, Scarton et al 2016) and 2D (Guiotto et al 2016) foot FEMs. Both diabetic neuropathic and healthy subject specific foot FEMs were developed whose subject specificity can be found in term of foot geometry and boundary conditions. Kinematics, kinetics and plantar pressure data were extracted from the subjects' gait analysis trials with this purpose. The FEMs were developed segmenting bones, cartilage and skin from MRI and drawing a horizontal plate as ground support. Materials properties were adopted from previous literature. Generic diabetic and healthy subjects FEMs have been also developed driven by experimentally measured group gait data of both diabetic and healthy subjects. In both cases (subject specific and generic) models validation was carried on by verifying the match between models derived and experimentally measured plantar pressure. (Guiotto A et al 2014-2016, Aerts W et al 2017)
Multisegment 3D Foot Kinematics	A new four segments foot and ankle model for assessing the kinematics of the diabetic foot was developed (Sawacha et al 2009a, Sawacha et al 2012a, Hannah et al 2016). It was tested on normal and diabetics subjects in order to determine their foot subsegments and ankle 3D motion during gait and major sources of variability were tested. Repeatability analysis was performed both on normal and on diabetic subjects. Direct skin marker placement was chosen in correspondence of 13 anatomical landmarks and an optoelectronic system was used to collect the data. Joint rotation normative bands were generated using the data of the control group. The repeatability analysis on normal and pathological subjects results have been compared with literature and found comparable. The new kinematic protocol enabled evaluating diabetic subjects gait deviations in term of 3D foot subsegments and ankle motion (Sawacha et al 2009 a, Sawacha e al 2012a, Guiotto et al 2013). Comparison between normal and pathological kinematics analysis confirmed the validity of a similar approach in order to assess neuropathics biomechanics impairments. The Best Paper Prize at MEIbioeng15 Conference (Leeds, 7/8 September 2015) was awarded for an application of this methodology.
Motion Analysis Applied to Diabetic Foot Prevention	Application of 3D foot kinematics, kinetics, surface electromyography and plantar pressure analysis in order to investigate the role played by the foot biomechanics in the aetiopathogenesis of the diabetic foot. Different algorithms and both kinematics and kinetics protocols were developed in order to identify the impact of diabetes related pathologies on subjects gait and posture. This research activity allowed demonstrating the crucial role played by abnormal lower limb joints kinematics, together with altered plantar pressure and ground reaction forces as well as muscles alterations in modifying the gait of diabetic subjects with and without peripheral neuropathy, and their relationship with plantar ulcers formation (Sawacha et al 2009a,b, Sawacha et al 2010, Sawacha et al 2012a, Sawacha and Spolaor et al 2012, Guiotto et al 2013, Guiotto and Sawacha et al 2014, Guiotto et al 2016, Sawacha and Spolaor et al 2016, Scarton

	et al 2016). Best thesis award in 2009.
Plantar pressure sensors analysis	Development of tools, protocols and algorithms for the technical assessment of plantar pressure measurements devices hardware performance, and for extracting meaningful information from plantar pressure measures (Sawacha et al 2012a, Sawacha 2013, Guiotto et al 2013, Guiotto and Sawacha et al 2014, Guiotto et al 2016). With this respect Annamaria Guiotto is a member of the Pedobarographic Group of the Italian Society of Movement analysis in clinic (SIAMOC).
Gait analysis in Parkinson's' disease patients	Processing of kinematic, kinetic and emg data of Parkinson's' disease patients acquired during gait in both underwater and out-of-water conditions. The former were compared to control subjects' data in order to highlight alterations and improvements thanks to physiotherapy or hydrotherapy. A study on the effects of a wearable device based on focal mechanical vibration was also performed and won the Best Papers Awards at the International Conference on Smart Portable, Wearable, Implantable and Disability-oriented Devices and Systems 2018.
Balance and Posture	Development of algorithms for assessing subjects' performance during balance tasks through the analysis of: the centre of pressure trajectory, joints segments kinematics and clinical scales. These algorithms allow either estimating posturographic and kinematics variables or evaluating the relationship between these measurements and the most common clinical scales (Tinetti Balance test, Berg Balance test, Time up and go test, Fugl-Meyer, Motricity Index, Trunk Control Test, Functional Independence Measure). A dedicated kinematics protocol was developed with this purpose together with a specific set of tests for assessing subjects balance in static condition (Sawacha et al 2012c, Sawacha et al 2013). This methodology was successfully applied to different pathologies: stroke survivals (Sawacha et al 2013), ankylosing spondylitis subjects (Sawacha et al 2012), diabetic subjects with and without neuropathy (Sawacha and Spolaor et al 2016).
MOST SIGNIFICANT SCIENTIFIC RESULTS ACHIEVED	
Diabetic Foot Biomechanics (gait analysis and FEM)	The development of both a 3D multisegment foot kinematics model (Sawacha et al 2009a, Sawacha et al 2012a, Guiotto et al 2013) and a 3D FEM foot model (Guiotto and Sawacha et al 2014, Scarton et al 2016) had an important impact on diabetic foot prevention current state of the art techniques. Nevertheless the development of a combined approach to define diabetic subjects biomechanics alterations lead to the definition of novel workflow that has been tested on a sample of 120 subjects (Protocol N° 1001P 21/11/2005 approved by Azienda Ospedaliera di Padova Ethic Committee, 2005-2013, includes: 20 healthy subjects, 50 diabetic non neuropathic and 50 neuropathic subjects). This workflow includes the adoption of 3D multisegment foot kinematics acquired during gait combined with the acquisition of ground reaction forces, electromyography and plantar pressure ([3-6, 8, 13, 18-19, 22-24). These data are currently used to feed the FEMs models developed in Guiotto and Sawacha et al 2014 and allowed to successfully identify subjects at risk for plantar ulcer formations (see section <i>Abstract Peered Reviewed Journals/Extended Abstract Indexed in Scopus</i> Guiotto and Sawacha et al 2014). Results of this analysis were presented as oral communication at both international and international conferences.

TEACHING ACTIVITIES	
a.a. 2019-20	Cours of “Bioingegneria del Movimento e Riabilitazione” (Ingegneria biomedica e Bioingegneria, DEI), University of Padova, Italy. 3 CFU. (Number of hours taught: 24).
a.a. 2018-19	Cours of “Laboratorio di Biomeccanica – modulo di Laboratorio di analisi del movimento” (Scienze Motorie, DSB), University of Padova, Italy. 3 CFU. (Number of hours taught: 24).
Various Teaching Activities (“Didattica di Supporto”)	
a.a 2016-2017 – a.a. 2017-2018	Teaching classes of Laboratory of Biomechanics, Bachelor degree in Kinesiology (Scienze Motorie), University of Padova, Italy. 3 CFU. (Number of hours taught ranges between 12 and 24). Prof. S. Del Favero.
Final Project (Thesis)	
2013-2019	Supervisor of 1 thesis in Bioengineering (ongoing). Co-supervisor of 31 Thesis in: Master degree in Biomedical Engineering, Master degree in Kinesiology, Bachelor degree in Kinesiology, Bachelor degree In Biomedical Engineering (University of Padova).
2013 - Co-Supervisor of the Best Master Thesis in Motion analysis in clinics 2013 awarded by the SIAMOC: Candidate Alessandra Scarton	

RESEARCH PROJECTS	
2018-2019	Progetto SID 2018 (UNIPD-DEI): “Trajectory analytics for gait characterization” proposed by Silvestri, Sawacha, Laurenti. Role: Research Collaborator
2014-2016	Progetto di Ateneo (UNIPD): “Development of a multi-physics diabetic foot model for plantar ulcers prevention in diabetic subjects”, University of Padova, Italy Role: Research Collaborator

ORGANISATION OF SCIENTIFIC MEETINGS	
2014-2015	Member of organizing committee of the Conference of the Italian Society of Motion Analysis in Clinics, SIAMOC 2015/Padova/Italy

MEMBERSHIPS OF SCIENTIFIC SOCIETIES	
2009-ongoing	Member of Italian Society of movement analysis in clinic (SIAMOC) Since 2019: elected member of the board of the society
2012-ongoing	Member of the Interuniversity Center of Bioengineering of the Human Neuromusculoskeletal System (IUC-BOHNES) (2018-2019 elected junior fellow representative)
2013-ongoing	Member of European Society of Biomechanics (ESB) and its Italian chapter (ESB-ITA)
2008-ongoing	Member of International Foot & Ankle Biomechanics Community “iFAB”
2010-2015	Member of Italian National Bioengineering Group “GNB”

PODIUM PRESENTATION	
ORAL	<ol style="list-style-type: none"> 1. <u>A. Guiotto</u>, T. Malaquias, A. Ciniglio, M. Acquaviva, H. Hoang, G. Guarneri, A. Avogaro, I. Jonkers, Z. Sawacha. Foot intrinsic muscle forces impact on internal stresses and strain on diabetic foot subjects. <i>Gait & Posture</i>, 73 (S1), Sept 2019, Pages 173-174. (ESMAC 2019, Amsterdam, 23-28 Sept 2019) 2. <u>A. Guiotto</u>, T. Malaquias, A. Ciniglio, M. Acquaviva, H. Hoang, G. Guarneri, A. Avogaro, I. Jonkers, Z. Sawacha. Foot intrinsic muscle forces impact on internal

	<p>stresses and strain on diabetic foot subjects. ESB-ita, Bologna, 30 Set-1 Ott 2019</p> <ol style="list-style-type: none"> 3. F. Spolaor, <u>A. Guiotto</u>, D. Pavan, L. Arab Yaghoubi, A. Peppe, P. Paone, Z. Sawacha, D.Volpe. The neurorehabilitation device Equistasi® impacts positively on the gait of Parkinson's disease subjects. <i>Gait & Posture</i>. 66 S1 (2018) s37–s38. (SIAMOC 2018, Firenze). 4. R. Ricci, A. Sona, Z. Sawacha, <u>A. Guiotto</u>, C. Cobelli. <i>Classification of gait patterns through an ultrasound-doppler motion analysis system</i> <i>Gait & Posture</i> 2015, 42 (Suppl 3): S22-S23 (ESMAC-SIAMOC 2014, Roma) 5. Scarton A., <u>Guiotto A.</u>, Sawacha Z., Guarneri G., Avogaro A., Cobelli C. <i>2-Dimensional foot FE models for clinical application in gait analysis</i>. GNB, Pavia, Italy, 25-27 Giu 2014. 6. <u>Guiotto A.</u>, Sawacha Z., Scarton A., Guarneri G., Avogaro A., Cobelli C. <i>Finite element modeling and cluster analysis: a combined approach for identification of diabetic foot patients at risk of plantar ulcers</i>, ICMMB, Bologna, 3-5 Sept 2014. 7. <u>Guiotto A.</u>, Sawacha Z., Scarton A., Guarneri G., Avogaro A., Cobelli C. <i>Gait analysis driven 3D finite element model of the diabetic neuropathic foot</i>. ESB, Patras, Greece, 25-28 Ago 2013. 8. Scarton A., <u>Guiotto A.</u>, Sawacha Z., Guarneri G., Avogaro A., Cobelli C. <i>Gait analysis driven 2D finite element model of the neuropathic hindfoot</i>. ESB, Patras, Greece, 25-28 Ago 2013. 9. Sawacha Z., <u>Guiotto A.</u>, Guarneri G., Avogaro A., Cobelli C. <i>Foot type biomechanics in diabetic and not diabetic subjects</i>. iFAB, Sydney, 11-13 Apr 2012.
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AWARDS	
2018	- Best Paper Award “Proprioceptive Focal Stimulation (Equistasi®) May Improve Motor Symptoms in Moderate Parkinson’s Disease Patients. Italian Multicentric Preliminary Open Study”, International Conference on Smart Portable, Wearable, Implantable and Disability-oriented Devices and Systems 2018.
2016	- Best paper award “A methodological framework for detecting ulcers’ risk in diabetic foot subjects by combining gait analysis, a new musculoskeletal foot model and a foot finite element model.”, ESMAC conference 2016.
2015	- Best methodological abstract “Under water gait analysis in Parkinson's disease”, SIAMOC congress 2015.
2010	- BTS-Bioengineering/SIMFER Award 2010 “Abnormal activation of knee and ankle flexors-extensors is related to altered gait in ankylosing spondylitis?”, ESPRM congress 2010.
2009	- Best thesis award SIAMOC 2009 (Società Italiana per l’Analisi del Movimento in clinica).

MAJOR COLLABORATIONS	
	<p>A Avogaro, PhD/ A Ermolao, PhD Dept of Medicine, University of Padova/Padova/Italy; S Fantozzi, PhD, Dept of Kinesiology/ R Stagni, PhD, Dept of Electric, Electronic and Information Engineering University of Bologna/Italy; dott. S Peharec, PhD, Policlinika Peharec/Pola/Croatia; I Jonkers, Department of Kinesiology/ KU Leuven/ Belgium; Prof. C Mazzà, PhD, Dept. of Mechanical Engineering/ University of Sheffield/Sheffield/UK; Prof C Nester/ Centre for Health Sciences Research/University of Salford, Salford/UK; A Cappozzo, PhD G Vannozzi, PhD, U della Croce, PhD/ Interuniversity Centre of Bioengineering of the Human Neuromusculoskeletal System/ Rome/Italy; Isabel Sacco, PhD/</p>

	Department of Physical Therapy, Speech and Occupational Therapy, School of Medicine, University of São Paulo, São Paulo, Brazil; D. Volpe, MD, Dipartimento di Medicina Riabilitativa, Fresko Parkinson Institute, Casa di Cura Villa Margherita, Vicenza; F. Silvestri, Dept. of Information Engineering, University of Padova/Padova/Italy. A.L.T. Gracco, Dept of Neurosciences, University of Padova/Padova/Italy.
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PUBLICATION PEERED REVIEWED JOURNALS	
	<ol style="list-style-type: none"> 1. Volpe D., Spolaor F, Sawacha Z., <u>Guiotto A.</u>, Pavan D., Bakdounes L., Urbani V., Frazzitta G., Iansek R.. Muscular activation changes in lower limbs after hydrotherapy underwater gait training in Parkinson's disease: a surface emg pilot study. <i>Gait Posture</i>. 2020 Jul;80:185-191. 2. Sawacha Z, Sartor CD, Yi LC, <u>Guiotto A</u>, Spolaor F, Sacco ICN. Clustering classification of diabetic walking abnormalities: a new approach taking into account intralimb coordination patterns. <i>Gait Posture</i>. 2020 Apr 17;79:33-40. 3. Peppe A., Paravati S., Baldassarre M.G., Bakdounes L., Spolaor F., <u>Guiotto A.</u>, Pavan D., Sawacha Z., S. Bottino, D. Clerici, N. Cau, A. Mauro, G. Albani, M. Avenali, G. Sandrini, C. Tassorelli, D. Volpe, Proprioceptive Focal Stimulation (Equistasi®) May Improve the Quality of Gait in Middle-Moderate Parkinson's Disease Patients. Double-Blind, Double-Dummy, Randomized, Crossover, Italian Multicentric Study, <i>Front Neurol</i>. 10 (2019) 998. https://doi.org/10.3389/fneur.2019.00998. 4. Mason M., Spolaor F., <u>Guiotto A.</u>, De Stefani A., Gracco A., Sawacha Z. <i>Gait and posture analysis in patient with unilateral posterior crossbite, before and after RPE</i>. <i>International Orthodontics</i>, 2018; 16(1):158-173. 5. Scarton A., <u>Guiotto A.</u>, Malaquias T., Sinigaglia G., Jonkers I., Cobelli C., Sawacha Z. <i>A methodological framework for evaluating plantar pressure and stresses in the internal foot structures by combining gait analysis, a new musculoskeletal foot model and a foot finite element model</i>. <i>Gait and Posture</i>, 2018; 60:279-285. (Best paper award ESMAC 2016). 6. Aerts W. , Scarton A., De Groote F., <u>Guiotto A.</u>, Sawacha S., Cobelli C., Vander Sloten J. and Jonkers I. Validation of plantar pressure simulations using finite and discrete element modelling in healthy and diabetic subjects. <i>Computer Methods in Biomechanics and Biomedical Engineering</i>, 2017 Oct;20(13):1442-1452. 7. Scarton A., Jonkers I., <u>Guiotto A.</u>, Spolaor F., Guarneri G., Avogaro A., Cobelli C., Sawacha Z. <i>Comparison of lower limb muscle strength between diabetic neuropathic and healthy subjects using opensim</i>. <i>Gait & Posture</i>, 2017;58:194-200. 8. Volpe D., Pavan D., Morris M., <u>Guiotto A.</u>, Iansek R., Fortuna S., Frazzitta G., Sawacha Z.. <i>Underwater gait analysis in Parkinson's disease</i>. <i>Gait & Posture</i>. 2017;52:87-94. 9. <u>Guiotto A.</u>, Scarton A., Sawacha Z., Guarneri G., Avogaro A., Cobelli C., <i>Gait analysis driven 2D finite element model of the neuropathic hindfoot</i>. <i>Journal of Mechanics in Medicine and Biology</i> 2016;16(1). 10. Hannah I. Sawacha Z., <u>Guiotto A.</u>, Mazzà C. <i>Relationship between sagittal plane kinematics, foot morphology and vertical forces applied to three regions of the foot</i>. <i>International Biomechanics</i>. 2016;3(1):50-56. 11. <u>Guiotto A.*</u>, Sawacha Z.*, Scarton A., Guarneri G., Avogaro A., Cobelli C., <i>3D finite element model of the diabetic neuropathic foot: a gait analysis driven approach</i>. <i>Journal of Biomechanics</i>. 2014; 47:3064-3071. * Equal contributors 12. <u>Guiotto A.</u>, Sawacha Z., Guarneri G., Cristoferi G., Avogaro A., Cobelli C., <i>The role of foot morphology on foot function in diabetic subjects with or without neuropathy</i>. <i>Gait & Posture</i> 37 (2013) 603–610. 13. Sawacha, Z., Carraro, E., Contessa, P., <u>Guiotto, A.</u>, Masiero, S., Cobelli, C., 2013.

	<p>Relationship between clinical and instrumental balance assessments in chronic post-stroke hemiparesis subjects. <i>Journal of NeuroEngineering and Rehabilitation</i> 10, 95.</p> <p>14. Sawacha Z.*, Carraro E.*, Del Din S.*, <u>Guiotto A.*</u>, Bonaldo L., Punzi L., Cobelli C., Masiero S., Biomechanical assessment of balance and posture in subjects with ankylosing spondylitis. <i>J Neuroeng Rehabil.</i> 2012;9(1):63. *Equal contributors</p> <p>15. Sawacha Z., Guarneri G., Cristoferi G., <u>Guiotto A.</u>, Avogaro A., Cobelli A., <i>Integrated kinematics-kinetics-plantar pressure data analysis: a useful tool for characterizing diabetic foot biomechanics.</i> <i>Gait Posture.</i> 2012; 36(1): 20-6.</p> <p>16. Del Din S., Carraro E., Sawacha Z., <u>Guiotto A.</u>, Bonaldo L., Masiero S., Cobelli C., (2011) Impaired gait in ankylosing spondylitis. <i>Medical & Biological Engineering & Computing.</i> 2011 Jul;49(7):801-9.</p> <p>17. Sawacha Z., Guarneri G., Cristoferi G., <u>Guiotto A.</u>, Avogaro A., Cobelli C., (2009) <i>Diabetic gait and posture abnormalities: A biomechanical investigation through three dimensional gait analysis,</i> <i>Clin. Biomech.,</i> Nov 2009, Volume 24 – Issue 9, pag. 722-728.</p>
ABSTRACT PEERED REVIEWED JOURNALS	
Extended Abstract Indexed in Scopus (Full paper)	<ol style="list-style-type: none"> 1. <u>Guiotto A*</u>, Sawacha Z*, Scarton A, Guarneri G, Avogaro A, Cobelli C. Finite element modeling and cluster analysis: a combined approach for identification of diabetic foot patients at risk of plantar ulcers. <i>Proceeding ICMMB 2014.</i> ISBN: 9788890167515 2. Sciumè G, <u>Guiotto A</u>, Sawacha Z, Boso D, Cobelli C and Schrefler B. A porous media approach for foot biomechanics. <i>XII International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS XII) Proceedings, 2013.</i>
Abstract Indexed in Scopus	<ol style="list-style-type: none"> 1. F. Spolaor, <u>A. Guiotto</u>, D. Pavan, L. Arab Yaghoubi, A. Peppe, P. Paone, Z. Sawacha, D. Volpe (2018). Effects of the Equistasi® device treatment in gait parameters of patient with Parkinson's disease. <i>Gait and Posture.</i> <i>Gait & Posture.</i> 65 S1 (2018) 309–310. (ESMAC 2018, Praga) In press, 10.1016/j.gaitpost.2018.06.199 2. <u>Guiotto A.</u>, Bellè F., Rao G., Jacques A., Sawacha Z. The impact of dynamic simulation on diabetic foot prevention: two different approaches combining gait analysis and finite element modeling. <i>Gait and Posture.</i> <i>Gait & Posture.</i> 65 S1 (2018) 131–133. (ESMAC 2018, Praga), 10.1016/j.gaitpost.2018.06.101 3. Cibir, F., Pavan, D., <u>Guiotto, A.</u>, Spolaor, F., Colangelo, A., Pavanello, A., Sawacha, Z. (2017). Pre-ACL surgery drop-jump test as assessment of injury related biomechanics alterations. <i>Gait & Posture.</i> 57 S1 (2017) 317–318. (ESMAC 2017, Trondheim), 10.1016/j.gaitpost.2017.06.440 4. <u>Guiotto, A.</u>, Sawacha, Z., Urru, F., Spolaor, F., Tonello, F., Marotti, L., & Volpe, D. (2017). Assessment of the effect of hydrotherapy on postural alterations in parkinson disease patients. <i>Gait and Posture,</i> 10.1016/j.gaitpost.2017.06.331 5. Spolaor, F., Volpe, D., Pavan, D., <u>Guiotto, A.</u>, Fichera, F., Torresin, P., Sawacha, Z. (2017). Surface emg analysis in parkinson disease patients before and after underwater gait training. <i>Gait and Posture,</i> 10.1016/j.gaitpost.2017.06.285
Abstracts in peered reviewed journals	<ol style="list-style-type: none"> 1. <u>A. Guiotto</u>, F. Spolaor, M. Romanato, D. Pavan, A. Peppe, D. Volpe, Z. Sawacha, The neurorehabilitation device Equistasi® can induce changes in parkinson's disease patients' ankle joints kinematics and kinetics. <i>Gait & Posture,</i> 74 (S1), Sept 2019, Page 21. (SIAMOC 2019, Bologna, 9-12 Ott 2019) 2. A. Ciniglio, F. Cibir, D. Pavan, <u>A. Guiotto</u>, F. Spolaor, M. Iozzino, E. Furlan, Z. Sawacha. Can laboratory based acl screening efficiently portray on the field knee loading? A pilot study. <i>Gait & Posture,</i> 74 (S1), Sept 2019, Page 10. (SIAMOC 2019, Bologna, 9-12 Ott 2019) 3. F. Cibir, D. Pavan, <u>A. Guiotto</u>, F. Spolaor, M. Iozzino, F. Soldo, M. Cesana, E. Furlan, G. Sanguin, G. Biondi, Z. Sawacha. Quantitative testing after ACL surgery: a biomechanical assessment tool before elite athletes return to competition. <i>Gait & Posture,</i> 74 (S1), Sept 2019, Page 10. (SIAMOC 2019, Bologna, 9-12 Ott 2019)

4. A. Guiotto, M. Soldan, F. Silvestri, F. Spolaor, G. Guarneri, A. Avogaro, Z. Sawacha. Novel subgroups of diabetic patients with and without neuropathy and their association with clinical outcomes: a 15 years follow up study based on gait analysis driven cluster analysis. *Gait & Posture*, 74 (S1), Sept 2019, Pages 21-22. (SIAMOC 2019, Bologna, 9-12 Ott 2019)
5. W. Slasko, F. Spolaor, Z. Sawacha, A. Guiotto, G. Guarneri, A. Avogaro. How do different activities impact on the detection of muscle's alterations in diabetes subjects with and without neuropathy? *Gait & Posture*, 73 (S1), Sept 2019, Pages 418-419. (ESMAC 2019, Amsterdam, 23-28 Sett 2019)
6. Pavan, D.; Guiotto, A.; Spolaor, F.; Cibir, F.; Giovannini, D.; Cesana, M.; Sawacha, Z. Figure skating axel jump: relationship between performance and injury risk assessment. *Gait & Posture*, 73(S1), Sept 2019. Pages 110-111. (ESMAC 2019, Amsterdam, 23-28 Sett 2019)
7. F. Cibir, D. Pavan, A. Guiotto, F. Spolaor, M. Cesana, E. Furlan, G. Sanguin, Z. Sawacha. A biomechanical screening tool for élite athletes after acl surgery. *Gait & Posture*, 73 (S1), Sept 2019, Pages 118-119. (ESMAC 2019, Amsterdam, 23-28 Sett 2019)
8. A. Guiotto, F. Spolaor, M. Romanato, M. Durante, D. Pavan, A. Peppe, Z. Sawacha, D. Volpe. Can a rehabilitation treatment with the device Equistasi® impact on motor control of Parkinson's Disease patients? *Gait & Posture*, 73 (S1), Sept 2019, Pages 59-60. (ESMAC 2019, Amsterdam, 23-28 Sett 2019)
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Ai sensi degli art. 46, 47 e 49 D.P.R. n.445/2000, la sottoscritta ANNAMARIA GUIOTTO, nata a CAMPOSAMPIERO (PD) il giorno 20/06/1983, residente a CAMPODARSEGO (PD) in Via Lovati 6A, Codice Fiscale GTTNMR83H60B563N, consapevole che le dichiarazioni mendaci sono punite ai sensi dell'art.76 del Codice Penale e delle leggi speciali in materia dichiara che tutto quanto dichiarato nel presente curriculum e allegati corrisponde a verità. Ai sensi dell'art.38 del T.U.445/2000, tale dichiarazione è unita alla copia fotostatica di un documento di identità.

Padova, 28 Luglio, 2020

Annamaria Guiotto