

SUPSI

Curriculum Vitae

First Name and Surname:	Marco Barbero
Title:	Professor
Accreditation:	PhD, PT, OMT
Organization:	University of Applied Sciences and Arts of Southern Switzerland
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Nationality:	Italian and Swiss (since May 2016)
Marital status:	
Sons:	
Present job	Professor in Physiotherapy and Head of the of the Rehabilitation Research Laboratory at Department of Business Economics, Health and Social Care at SUPSI.

SHORT BIOGRAPHY

Marco Barbero PT, PhD received his Physical Therapy degree in 1999 from the University of Milan, Italy. He obtained a master's degree in musculoskeletal rehabilitation at University of Genoa in 2005, and in 2016 earned his PhD at the at Queen Margaret University in Edinburgh. Since 2012 He is Associate Professor in Physiotherapy and Head of the Rehabilitation Research Laboratory (2rLab) at the University of Applied Sciences of Southern Switzerland. His research involves the integration of neurophysiological and clinical research to improve the treatment of musculoskeletal pain. He focused much of his research on the study of myofascial trigger points. He has published several papers in peer-reviewed journals including Physical Therapy, Journal of Orthopaedic & Sports Physical Therapy, Manual Therapy, European Journal of Pain and Clinical Journal Pain. In 2012, He won the JOSPT Excellence in Research Award for the paper titled "Efficacy of Trunk Balance Exercises for Individuals with Chronic Low Back Pain: A Randomized Clinical Trial". Prof. Barbero is co-author of "Atlas of Muscle Innervation Zones. Understanding Surface Electromyography and Its Applications" He is Assistant Editors of the Archives of Physiotherapy, a recent open access peer-reviewed journal edited by BioMed Central. He is a guest lecturer at several courses in musculoskeletal rehabilitation and evidence based physiotherapy at different universities in Italy and Switzerland. In 2017, He was Visiting Professor at the University of Turin.

EDUCATION

2016	Doctor of Philosophy at Queen Margaret University, Edinburgh (UK). Title: Myofascial trigger points and innervation zone locations in upper trapezius muscles.
2004	Master in Manual Therapy and Rehabilitation of Musculoskeletal Disorder at the University of Genoa (Italy).
1999	Bachelor in Physiotherapy at the University of Milan (Italy).

POSITIONS AND APPOINTMENTS

2014 - present	Head of the Rehabilitation Research Laboratory at Department of Business Economics, Health and Social Care at University of Applied Sciences and Arts of Southern Switzerland (SUPSI).
2016	Visiting Professor at Department of Surgical Sciences of the University of Turin, title of the course "Diseases of the Musculoskeletal System and Rehabilitation".

- 2012 - present Professor in Physiotherapy at Department of Business Economics, Health and Social Care of University of Applied Sciences and Arts of Southern Switzerland.
- 2008 - 2012 Researcher and lecturer at the Department of Health sciences of the University of Applied Sciences and Arts of Southern Switzerland.
- 2006 - 2008 Lecturer at the Department of Health sciences at the University of Applied Sciences and Arts of Southern Switzerland.

TEACHING ACTIVITIES IN SUPSI

- 2010 - 2018 Lecturer in Evidence Based Practice at Physiotherapy degree course
- 2006 - 2009 Lecturer in Physiotherapy and head of the following courses: Fundamentals of the Physiotherapy Practice, Rehabilitation of the Spinal Conditions Module 1, Rehabilitation of the Spinal Conditions Module 2.

TEACHING ACTIVITIES IN OTHER UNIMVERISTIES

- 2017 – present Lecturer in Rehabilitation of Myofascial Pain at Bachelor of Physiotherapy of the Humanitas University (Italy)
- 2017 – present Second PhD supervisor of three candidates: Alessandro Schneebeli (University of Birmingham), Li Lihui (University of Shanghai), Cinzia Cruder (Queen Margaret Univeristy).
- 2017- present Lecturer in Surface Electromyography at the Master of Science in Rehabilitation of the University Vita-Salute San Raffaele (Italy)
- 2016 - present Lecturer in Manual Therapy of the Thoracic Spine at the Master in Manual Therapy of the University of Bologna (Italy)
- 2009 - 2012 Lecturer in Manual Therapy at the Master of Science in Evidence Based Manual Therapy of the Akademie Physiotherapie Thim van der Laan (Landquart, Switzerland).
- 2008-2012 Lecturer in Manual Therapy at the Bachelor of Physiotherapy of the University Vita-Salute San Raffaele (Italy).
- 2003-2010 Lecturer in Manual Therapy at the Master in Musculoskeletal Rehabilitation of the University of Genoa (Italy).

- 2003-2006 Clinical tutor for the physiotherapy master's students at the Santa Corona Hospital (Pietra Ligure, Italy).
- 2002-2003 Lecturer in Biomechanics at the Bachelor of Physiotherapy of the University of Genoa (Italy)

GRANTS

- 2018 SNF project (division I), title: A longitudinal investigation of the factors associated with increased risk of playing-related musculoskeletal disorders among music students. Principal investigator: Prof. Marco Barbero (SUPSI). Funds received: 159.884 CHF.
- 2018 SNF project (division III), title: On-site multi-component intervention to improve productivity and reduce the economic and personal burden of neck pain in Swiss office-workers. Principal investigator: Prof. Markus Melloh (ZHAW). Funds received 496'909 CHF, funds allocated to SUPSI 20.800 CHF
- 2016 Swiss Multiple Sclerosis Society, title of the project: Development and feasibility study of a three-week inpatient fatigue management education (IFME) protocol for persons with MS-related fatigue. Principal investigator: Andrea Weise (Rehabilitation Centre Valens). Funds received 30.000 CHF, Funds allocated to SUPSI 15.000 CHF.

EDITORIAL BOARD

- 2018 Member of the International Advisory Board of Musculoskeletal Science & Practice, edited by Elsevier.
- 2015 Assistant Editor for the Archives of Physiotherapy, edited by Biomed Central.
- 2015 Review Editor for Frontiers in Psychology, Performance Science specialty sections.

AWARDS

- 2011 JOSPT Excellence in Research Award for "Efficacy of trunk balance exercises for individuals with chronic low back pain: a randomized clinical trial. Gatti R, Faccendini S, Tettamanti A, Barbero M, Balestri A, Calori G. J Orthop Sports Phys Ther. 2011 Aug;41(8):542-52.

BOOKS

Barbero M, Merletti Roberto, Rainoldi Alberto. Atlas of the Innervation Zones. Understanding Surface Electromyography and Its Applications. ISBN 978-88-470-2462-5. Edited by Springer, 2012.

PUBLICATIONS IN INTERNATIONAL PEER-REVIEW JOURNALS

Li LH, Huang QM, Barbero M, Liu L, Nguyen TT, Beretta-Piccoli M, Xu AL, Ji LJ. Quantitative proteomics analysis to identify biomarkers of chronic myofascial pain and therapeutic targets of dry needling in a rat model of myofascial trigger points. *J Pain Res.* 2019 Jan 7;12:283-298.

Fernández-de-Las-Peñas C, Falla D, Palacios-Ceña M, De-la-Llave-Rincón AI, Schneebeli A, Barbero M. Perceived Pain Extent Is Not Associated with Physical, Psychological, or Psychophysical Outcomes in Women with Carpal Tunnel Syndrome. *Pain Med.* 2018 Dec 17. [Epub ahead of print]

Negro M, Segreto V, Barbero M, Cescon C, Castelli L, Calanni L, D'Antona G. Essential Amino Acids (EAA) Mixture Supplementation: Effects of an Acute Administration Protocol on Myoelectric Manifestations of Fatigue in the Biceps Brachii After Resistance Exercise. *Front Physiol.* 2018 Aug 17;9:1140.

Barbero M, Falla D, Larsen MH, Kraft MN, Søgaard K, Juul-Kristensen B. Pain extent is more strongly associated with disability, psychological factors, and neck muscle function in people with non-traumatic versus traumatic chronic neck pain: a cross sectional study. *Eur J Phys Rehabil Med.* 2018 Aug 27.

Beretta-Piccoli M, Boccia G, Ponti T, Clijsen R, Barbero M, Cescon C. Relationship between Isometric Muscle Force and Fractal Dimension of Surface Electromyogram. *Biomed Res Int.* 2018 Mar 15;2018:5373846

Fernández-de-Las-Peñas C, Falla D, Palacios-Ceña M, Fuensalida-Novo S, Arias-Burúa JL, Schneebeli A, Arend-Nielsen L, Barbero M. Perceived Pain Extent is Not Associated With Widespread Pressure Pain Sensitivity, Clinical Features, Related Disability, Anxiety, or Depression in Women With Episodic Migraine. *The Clinical journal of pain.* 2018; 34(3):217-221.

Sremakaew M, Jull G, Treleaven J, Barbero M, Falla D, Uthairakul S. Effects of local treatment with and without sensorimotor and balance exercise in individuals with neck pain: protocol for a randomized controlled trial. *BMC musculoskeletal disorders.* 2018; 19(1):48.

Cruder C, Falla D, Mangili F, Azzimonti L, Araújo LS, Williamon A, Barbero M. Profiling the Location and Extent of Musicians' Pain Using Digital Pain Drawings. *Pain practice : the official journal of World Institute of Pain*. 2018; 18(1):53-66.

Falla D, Cescon C, Lindstroem R, Barbero M. Muscle Pain Induces a Shift of the Spatial Distribution of Upper Trapezius Muscle Activity During a Repetitive Task: A Mechanism for Perpetuation of Pain With Repetitive Activity? *The Clinical journal of pain*. 2017; 33(11):1006-1013.

Palacios-Ceña M, Barbero M, Falla D, Ghirlanda F, Arend-Nielsen L, Fernández-de-Las-Peñas C. Pain Extent Is Associated with the Emotional and Physical Burdens of Chronic Tension-Type Headache, but Not with Depression or Anxiety. *Pain medicine (Malden, Mass.)*. 2017; 18(10):2033-2039.

Stoop R, Clijsen R, Leoni D, Soldini E, Castellini G, Redaelli V, Barbero M. Evolution of the methodological quality of controlled clinical trials for myofascial trigger point treatments for the period 1978-2015: A systematic review. *Musculoskeletal science & practice*. 2017; 30:1-9.

Clijsen R, Brunner A, Barbero M, Clarys P, Taeymans J. Effects of low-level laser therapy on pain in patients with musculoskeletal disorders: a systematic review and meta-analysis. *European journal of physical and rehabilitation medicine*. 2017; 53(4):603-610.

Barbero M, Fernández-de-Las-Peñas C, Palacios-Ceña M, Cescon C, Falla D. Pain extent is associated with pain intensity but not with widespread pressure or thermal pain sensitivity in women with fibromyalgia syndrome. *Clinical rheumatology*. 2017; 36(6):1427-1432.

Barbero M, Falla D, Cescon C. Topographical Distribution of EMG Activity in the Upper Trapezius Muscle in People with Myofascial Trigger Points. *The Clinical journal of pain*. 2017; 33(5):473-474.

Beretta-Piccoli M, D'Antona G, Zampella C, Barbero M, Clijsen R, Cescon C. Test-retest reliability of muscle fiber conduction velocity and fractal dimension of surface EMG during isometric contractions. *Physiological measurement*. 2017; 38(4):616-630.

Leoni D, Falla D, Heitz C, Capra G, Clijsen R, Egloff M, Cescon C, Baeyens JP, Barbero M. Test-retest Reliability in Reporting the Pain Induced by a Pain Provocation Test: Further Validation of a Novel Approach for Pain Drawing Acquisition and Analysis. *Pain practice: the official journal of World Institute of Pain*. 2017; 17(2):176-184.

Barbero M, Falla D, Clijsen R, Ghirlanda F, Schneebeli A, Ernst MJ, Cescon C. Can parameters of the helical axis be measured reliably during active cervical movements? *Musculoskeletal science & practice*. 2017; 27:150-154.

Barbero M, Falla D, Mafodda L, Cescon C, Gatti R. The Location of Peak Upper Trapezius Muscle Activity During Submaximal Contractions is not Associated With the Location of Myofascial Trigger Points: New Insights Revealed by High-density Surface EMG. *The Clinical journal of pain*. 2016; 32(12):1044-1052.

Nast I, Tal A, Schmid S, Schoeb V, Rau B, Barbero M, Kool J. Physiotherapy Research Priorities in Switzerland: Views of the Various Stakeholders. *Physiotherapy research international: the journal for researchers and clinicians in physical therapy*. 2016; 21(3):137-46.

Lluch Girbés E, Dueñas L, Barbero M, Falla D, Baert IA, Meeus M, Sánchez-Frutos J, Aguilera L, Nijs J. Expanded Distribution of Pain as a Sign of Central Sensitization in Individuals With Symptomatic Knee Osteoarthritis. *Physical Therapy*. 2016; 96(8):1196-207.

Schneebeli A, Del Grande F, Vincenzo G, Cescon C, Clijsen R, Biordi F, Barbero M. Real-time sonoelastography using an external reference material: test-retest reliability of healthy Achilles tendons. *Skeletal radiology*. 2016; 45(8):1045-52.

Maffioletti NA, Barbero M, Cescon C, Clijsen R, Beretta-Piccoli M, Schneebeli A, Preiss S, Togninalli D. Validity of the twitch interpolation technique for the assessment of quadriceps neuromuscular asymmetries. *Journal of electromyography and kinesiology : official journal of the International Society of Electrophysiological Kinesiology*. 2016; 28:31-6.

Chiarotto A, Clijsen R, Fernandez-de-Las-Penas C, Barbero M. Prevalence of Myofascial Trigger Points in Spinal Disorders: A Systematic Review and Meta-Analysis. *Archives of physical medicine and rehabilitation*. 2016; 97(2):316-37.

Boccia G, Dardanillo D, Beretta-Piccoli M, Cescon C, Coratella G, Rinaldo N, Barbero M, Lanza M, Schena F, Rainoldi A. Muscle fiber conduction velocity and fractal dimension of EMG during fatiguing contraction of young and elderly active men. *Physiological measurement*. 2016; 37(1):162-74.

Leoni D, Storer D, Gatti R, Egloff M, Barbero M. Upper Limb Neurodynamic Test 1 on Healthy Individuals: Intra- and Intersession Reliability of the Angle between Pain Onset and Submaximal Pain. *Pain research & management*. 2016; 2016:9607262.

Meduri F, Beretta-Piccoli M, Calanni L, Segreto V, Giovanetti G, Barbero M, Cescon C, D'Antona G. Inter-Gender sEMG Evaluation of Central and Peripheral Fatigue in Biceps Brachii of Young Healthy Subjects. *PloS one*. 2016;11(12):e0168443.

Barbero M, Moresi F, Leoni D, Gatti R, Egloff M, Falla D. Test-retest reliability of pain extent and pain location using a novel method for pain drawing analysis. *European journal of pain (London, England)*. 2015; 19(8):1129-38.

Ernst MJ, Crawford RJ, Schelldorfer S, Rausch-Osthoff AK, Barbero M, Kool J, Bauer CM. Extension and flexion in the upper cervical spine in neck pain patients. *Manual therapy*. 2015; 20(4):547-52.

Beretta-Piccoli M, D'Antona G, Barbero M, Fisher B, Dieli-Conwright CM, Clijsen R, Cescon C. Evaluation of central and peripheral fatigue in the quadriceps using fractal dimension and conduction velocity in young females. *PloS one*. 2015;10(4):e0123921.

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Schoeb V, Rau B, Nast I, Schmid S, Barbero M, Tal A, Kool J. How do patients, politicians, physiotherapists and other health professionals view physiotherapy research in Switzerland? A qualitative study. *Physiotherapy research international: the journal for researchers and clinicians in physical therapy*. 2014; 19(2):79-92. PubMed [journal]

Schneebeli A, Egloff M, Giampietro A, Clijsen R, Barbero M. Rehabilitative ultrasound imaging of the supraspinatus muscle: Intra- and interrater reliability of thickness and cross-sectional area. *Journal of bodywork and movement therapies*. 2014; 18(2):266-72.

Beretta Piccoli M, Rainoldi A, Heitz C, Wüthrich M, Boccia G, Tomasoni E, Spirolazzi C, Egloff M, Barbero M. Innervation zone locations in 43 superficial muscles: toward a standardization of electrode positioning. *Muscle & nerve*. 2014; 49(3):413-21.

Barbero M, Cescon C, Tettamanti A, Leggero V, Macmillan F, Coutts F, Gatti R. Myofascial trigger points and innervation zone locations in upper trapezius muscles. *BMC musculoskeletal disorders*. 2013; 14:179.

Dunning J, Mourad F, Barbero M, Leoni D, Cescon C, Butts R. Bilateral and multiple cavitation sounds during upper cervical thrust manipulation. *BMC musculoskeletal disorders*. 2013; 14:24.

Boscherini D, Barbero M, Duc S, Chalaron M. Congenital absence of L4-L5 articular face joint. *The spine journal: official journal of the North American Spine Society*. 2012; 12(12):1163-4.

Barbero M, Bertoli P, Cescon C, Macmillan F, Coutts F, Gatti R. Intra-rater reliability of an experienced physiotherapist in locating myofascial trigger points in upper trapezius muscle. *The Journal of manual & manipulative therapy*. 2012; 20(4):171-7.

Barbero M, Gatti R, Lo Conte L, Macmillan F, Coutts F, Merletti R. Reliability of surface EMG matrix in locating the innervation zone of upper trapezius muscle. *Journal of electromyography and kinesiology: official journal of the International Society of Electrophysiological Kinesiology*. 2011; 21(5):827-33.

Gatti R, Faccendini S, Tettamanti A, Barbero M, Balestri A, Calori G. Efficacy of trunk balance exercises for individuals with chronic low back pain: a randomized clinical trial. *The Journal of orthopaedic and sports physical therapy*. 2011; 41(8):542-52.

Barbero M, Boscherini D. Lumbar synovial cyst. *The Journal of orthopaedic and sports physical therapy*. 2011; 41(7):533.

Cattrysse E, Barbero M, Kool P, Gagey O, Clarys JP, Van Roy P. 3D morphometry of the transverse and alar ligaments in the occipito-atlanto-axial complex: an in vitro analysis. *Clinical anatomy (New York, N.Y.)*. 2007; 20(8):892-8.

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