

CURRICULUM VITAE

Roberto GATTI, fisioterapista – nato a Milano il 06-06-1962

Indirizzo:

Tel:

email:

IMPIEGO

Attualmente

- Professore associato presso Humanitas University di Pieve Emanuele (MI)
- Presidente del Corso di Laurea in Fisioterapia di Humanitas University
- Responsabile del Servizio di Fisioterapia dell'IRCCS Ospedale Humanitas di Rozzano (MI)

Giugno 1987 - agosto 2016

- Fisioterapista presso il Servizio di Medicina Fisica e Riabilitazione dell'IRCCS Ospedale San Raffaele di Milano (1987-1992),
- Fisioterapista coordinatore presso il Servizio di Medicina Fisica e Riabilitazione dell'IRCCS Ospedale San Raffaele di Milano (1992-2000),
- Fisioterapista dirigente presso il Servizio di Medicina Fisica e Riabilitazione dell'IRCCS Ospedale San Raffaele di Milano (2000-2016),
- Coordinatore del Corso di Laurea in Fisioterapia dell'Università Vita-Salute San Raffaele di Milano (2000-2016)
- Group leader of the Clinical Research Group: "Analysis and rehabilitation of motor function". Neuroscience Division, IRCCS Ospedale San Raffaele di Milano (2012-2016)

TITOLI DI STUDIO

- 2009 Laurea Magistrale in Scienze delle Professioni Sanitarie della Riabilitazione presso la Facoltà di Medicina e Chirurgia dell'Università degli Studi di Firenze
- 1996 Laurea in Réadaptation presso il Département Physique et de Réadaptation del l'Université Catholique de Louvain la Neuve – Belgio,
- 1985 Diploma di Terapista della Riabilitazione presso la Scuola Diretta a Fini Speciali dell'Università di Milano, Facoltà di Medicina e Chirurgia,
- 1982 Diploma di maturità scientifica presso il Liceo Scientifico Salvator Allende di Milano

INCARICHI IN SOCIETA' SCIENTIFICHE

- 2013/2016 Presidente della Società Italiana di Fisioterapia (S.I.F.)
- 2010/2013 Socio fondatore e Vicepresidente della Società Italiana di Fisioterapia (S.I.F.)

PREMI INTERNAZIONALI

- Journal of Physiotherapy: Paper of the year 2015 award for the publication: *Corbetta D, Imeri F, Gatti R. Rehabilitation that incorporated virtual reality is more effective for improving walking speed, balance and mobility after stroke: a systematic review. J Physiother 2015; 61: 117-124*
- National Institute for Health Research (NIHR): Cochrane Review Incentive Award 2014 for the Cochrane review: *Corbetta D, Sirtori V, Castellini G, Moja L, Gatti R. Constraint-induced*

movement therapy for upper extremities in people with stroke. Cochrane Database Syst Rev. 2015 Oct 8;10

- JOSPT Excellence in research award 2011 for the publication: **Gatti R, Faccendini S, Tetramanti A, Barbero M, Balestri A, Calori G. Efficacy of trunk balance exercises for individuals with chronic low back pain. J Orthop Sports Phys Ther. 2011 Jun 7. 2011 Aug;41(8):542-52**

ATTIVITÀ SCIENTIFICO EDITORIALE

Attualmente

- Associate Editor of the Archives of Physiotherapy (scientific journal of the Italian Society of Physiotherapy, SIF)
- Associate Editor di Scienza Riabilitativa (giornale scientifico dell'Associazione Italiana di Fisioterapia, AIFI)

2011/2014

Editor in Chief of the Italian Journal of Physiotherapy (scientific journal of the Italian Society of Physiotherapy), edito da Minerva Medica di Torino

2000/2004

Direttore scientifico del periodico SCIENZA DELLA RIABILITAZIONE edito dalla Società Editrice Universo di Roma

1999/2000

Direttore scientifico del periodico SCIENZA RIABILITATIVA, rivista a carattere scientifico della Associazione Italiana Fisioterapisti

1996/1998

Vicedirettore scientifico del periodico SCIENZA RIABILITATIVA, rivista a carattere scientifico della Associazione Italiana Fisioterapisti (direttore FT Piergiorgio Benaglia)

1993/1996

caporedattore del periodico RICERCA in RIABILITAZIONE, rivista a carattere scientifico (direttore prof. Luigi Tesio)

PUBBLICAZIONI INDICIZZATE SU PUBMED

- 1) Rizzolatti G, Fabbri-Destro M, Nuara A, Gatti R, Avanzini P. The role of mirror mechanism in the recovery, maintenance, and acquisition of motor abilities. *Neurosci Behav Rev* 2021; 127: 404-423
- 2) Natali F, Difranco C, Gatti R. Enriched environment or enriched therapy? Time for clarification. *Physiother Theory and Practice*. Volume 36, Issue 11, Pages 1175 - 11781 November 2020
- 3) Adamo P, Temporiti F., Natali F., Trombin S, Cescon C, Barbero M, Gatti R. Dispersion of shoulder helical axes during upper limb movements after muscle fatigue. *Journal of Biomechanics*, 2020, 113, 110075
- 4) Temporiti F, Adamo P, Cavalli E, Gatti R. Efficacy and Characteristics of the Stimuli of Action Observation Therapy in Subjects with Parkinson's Disease: A Systematic Review. *Frontiers in Neurology Open Access*, Volume 1113 August 2020 Article number 808
- 5) Temporiti F, Cescon C, Adamo P, Natali F, Barbero M, De Capitani F, Gatti R. Dispersion of knee helical axes during walking in young and elderly healthy subjects. *J Biomech*, 2020;109, 109944

- 6) Guerzoni V, Lanzoni Aa, Pozzi C, Paci MM, Gatti R, Benedetti MG, Gentile S, Trabucchi M, Bellelli G, Morandi A. A two year multicenter point prevalence study of older patients with hip fractures admitted to rehabilitation units in Italy. *Eur Ger Med* doi.org/10.1007/s41999-020-00363-6
- 7) Robertson SC, Zileli M, Anania CD, Ferreira A, Ferrari S, Gatti R, Costa F. Conservative Treatment and Percutaneous Pain Relief Techniques in Patients with Lumbar Spinal Stenosis: WFNS Spine Committee Recommendations. *World Neurosurgery: Open Access*, Volume 7, July 2020, Article number 100079
- 8) Ruggiero G, Temporiti F, Zanotti G, Borroni M, Delle rose G, Castagna A, Gatti R. Association among patient satisfaction, functional outcomes, and physiotherapy approaches after arthroscopic rotator cuff repair. *J Arthro Joint Surg* 2020. In Press
- 9) Giuffrida A, Di Bari A, Falzone E, Iacono F, Kon E, Marcacci M, Gatti R, Di Matteo B Conservative vs. surgical approach for degenerative meniscal injuries: a systematic review of clinical evidence. *Eur Rev Med Pharmacol Sci*. 2020 Mar;24(6):2874-2885
- 10) Temporiti F, Draghici I, Fusi S, Traverso F, Ruggeri R, Grappiolo G, Gatti R. Does walking the day of total hip arthroplasty speed up functional independence? A non-randomized controlled study. *Arch Physiother*. 2020 Apr 24;10:8
- 11) Loppini M, Temporiti F, Furone R, Galli M, Grappiolo G, Gatti R. Static and dynamic pelvic kinematics after one-stage bilateral or unilateral total hip arthroplasty. *Hip Int*. 2020 May 4: [Epub ahead of print]
- 12) Sarasso E, Agosta F, Piramide N, Bianchi F, Butera C, Gatti R, Amadio S, Del Carro U, Filippi M Sensory trick phenomenon in cervical dystonia: a functional MRI study. *J Neurol* 2020
- 13) Ometti M, Brambilla L, Gatti R, Tettamanti A, La Cava T, Pironti P, Frascini GG, Salini V. Capsulectomy versus capsulotomy in total hip arthroplasty. Clinical outcomes and proprioceptive evaluation: study protocol for a randomized, controlled, double blinded trial (letter). *J Orthopaedics* 2019, 16:526-533
- 14) Temporiti F, Zanotti G, Furone R, Loppini M, Molinari S, Zago M, Galli M, Grappiolo G, Gatti R. Functional and postural recovery after bilateral or unilateral total hip arthroplasty. *J Electromyogr Kinesiol*. 2019 Oct;48:205-211.
- 15) Temporiti F, Zanotti G, Furone R, Molinari S, Zago M, Loppini M, Galli M, Grappiolo G, Gatti R. Gait analysis in patients after bilateral versus unilateral total hip arthroplasty. *Gait & Posture* 2019, 72: 46-50
- 16) Dalla Vecchia LA, Barbic F, De Maria B, Cozzolino D, Gatti R, Dipaola F, Brunetta E, Zamuner AR, Porta A, Furlan R. Can strenuous exercise harm the heart? Insights from a study of cardiovascular neural regulation in amateur triathletes. *PLoS One*. 2019 May 7;14(5):e0216567.
- 17) Barbic F, Minonzio M, Cairo B, Shiffer D, Dipasquale A, Cerina L, Vatteroni A, Urechie V, Verzelletti P, Badilini F, Vaglio M, Iatrino R, Porta A, Santambrogio M, Gatti R, Furlan R. Effects of different classroom temperatures on cardiac autonomic control and cognitive performances in undergraduate students. *Physiol Meas*. 2019 Apr 10.
- 18) Temporiti F, Furone R, Cescon C, Barbero M, Gatti R. Dispersion of helical axes during shoulder movements in young and elderly subjects. *J Biomech*. 2019, May 9;88:72-77.
- 19) Gatti R, Sarasso E, Pelachin M, Agosta F, Filippi M, Tettamanti A. Can action observation modulate balance performance in healthy subjects? *Arch Physiother*. 2019 Jan 22;9:1.
- 20) Rocca MA, Meani A, Fumagalli S, Pagani E, Gatti R, Martinelli-Boneschi F, Esposito F, Preziosa P, Cordani C, Comi G, Filippi M. Functional and structural plasticity following action observation training in multiple sclerosis. *Mult Scler*. 2019, 25(11):1472-1487

- 21) Sarasso E, Agosta F, Temporiti F, Adamo P, Piccolo F, Copetti M, Gatti R, Filippi M. Brain motor functional changes after somatosensory discrimination training. *Brain Imaging Behav.* 2018 Aug;12(4):1011-1021.
- 22) Ghio M, Locatelli M, Tettamanti A, Perani D, Gatti R, Tettamanti M. Cognitive training with action-related verbs induces neural plasticity in the action representation system as assessed by gray matter brain morphometry. *Neuropsychologia* 2018 Apr 30;114:186-194.
- 23) Corbetta D, Sarasso E, Agosta F, Filippi M, Gatti R. Mirror therapy for an adult with central post-stroke pain: a case report. *Arch Physiother* 2018; 8:4
- 24) Rocca MA, Fumagalli S, Pagani E, Gatti R, Riccitelli GC, Preziosa P, Comi G, Falini A, Filippi M. Action observation training modifies brain gray matter structure in healthy adults individuals. *Brain Imaging Behav*; 2017 Oct;11(5):1343-1352.
- 25) Morghen S, Morandi A, Guccione A, Bozini M, Guerini F, Gatti R, Del Santo F, Gentile S, Trabucchi M, Bellelli G. The association between patients participation and functional gain following inpatient rehabilitation. *Ag Clin Exp Res* 2017 Aug; 29(4):729-736.
- 26) Agosta F, Gatti R, Sarasso E, Volonté MA, Canu E, Meani A, Sarro L, Copetti M, Cattrysse E, Kerckhofs E, Comi G, Falini A, Filippi M. Brain plasticity in Parkinson's disease with freezing of gait induced by action observation training. *J Neurol* 2016; 264(1):88-101.
- 27) 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 Res Manag; Epub* 2016 Sep 22; 9607262.
- 28) Godi C, Ambrosi A, Nicastro F, Previtali SC, Santarosa C, Napolitano S, Iadanza A, Scarlato M, Natali Sora MG, Tettamanti A, Gerevini S, Cicalese MP, Sitzia C, Venturini M, Falini A, Gatti R, Ciceri F, Cossu G, Torrente Y, Politi L. Longitudinal MRI quantification of muscle degeneration in Duchenne muscular dystrophy. *Ann Clin Transl* 2016; 3(8): 607-22
- 29) Corbetta D, Sirtori V, Castellini G, Moja L, Gatti R. Constraint-induced movement therapy for upper extremities in people with stroke. *Stroke* 2016; 47 (8): e205-e206
- 30) Houdayer E, Cursi M, Nuara A, Zanini S, Gatti R, Comi G, Leocani L. Cortical motor circuit after piano training in adulthood: neurophysiologic evidence. *PloS One* 2016, Jun 16; 11 (6): e0157526
- 31) Gatti R, Rocca MA, Fumagalli S, Cattrysse E, Kerckhofs E, Falini A, Filippi M, The effect of action observation/execution on mirror neuron system: an fMRI study in healthy subjects individuals. *Imag Brain Behav* 2016, 2017 Apr;11(2):565-576.
- 32) Barbero M, Mafodda L, Cescon C, Falla D, Gatti R. The location of peak upper trapezius muscle activity during submaximal contractions is not associated with the location of myofascial trigger point: new insights revealed by high density surface EMG. *Clin J Pain* 2016, Dec;32(12):1044-1052.
- 33) Cossu G, Previtali SC, Napolitano S, Cicalese MP, Tedesco FS, Nicastro F, Noviello M, Roostalu U, Natali Sora MG, Scarlato M, De Pellegrin M, Godi C, Giuliani S, Ciotti F, Tonlorenzi R, Lorenzetti I, Rivellini C, Benedetti S, Gatti R, Marktel S, Mazzi B, Tettamanti A, Ragazzi M, Imro MA, Marano G,

Ambrosi A, Fiori R, Sormani MP, Bonini C, Venturini M, Politi LS, Torrente Y, Ciceri F. Intra-arterial transplantation of HLA-matched donor mesoangioblasts in Duchenne muscular dystrophy. *EMBO Mol Med.* 2015 Nov 5; 7(12): 1513-28.

- 34) Corbetta D, Sirtori V, Castellini G, Moja L, Gatti R. Constraint-induced movement therapy for upper extremities in people with stroke. *Cochrane Database Syst Rev.* 2015 Oct 8;10: CD004433.
- 35) Canu E, Agosta F, Sarasso S, Volonte MA, Basaia S, Stojkovic T, Stefanova E, Comi G, Falini, Kostic VA, Gatti R, Filippi M. Brain Structural and Functional Connectivity in Parkinson's Disease With Freezing of Gait. *Hum Brain Mapp* 2015;36 (12): 5064-78
- 36) Cescon C, Tettamanti A, Barbero M, Gatti R. Finite elical axis for the analysis of joint kinematics: comparison of an electromagnetic and an optical motion capture system. *Arch of Physiother* 2015; 5: 8
- 37) Corbetta D, Imeri F, Gatti R. Rehabilitation that incorporated virtual reality is more effective for improving walking speed, balance and mobility after stroke: a systematic review. *J Physiother* 2015; 61 (3): 117-124
- 38) Gonzalez-Rosa J, Natali F, Tettamanti A, Cursi M, Velikova S, Comi G, Gatti R, Leocani L. Action Observation and Motor Imagery in performance of complex movements: evidence from EEG and kinematics analysis. *Behav Brain Res* 2015; 281: 290-300
- 39) Barbero M, Moresi F, Leoni D, Falla D, Gatti R. Test-retest reliability of pain extent and pain location using a novel method for pain drawing analysis. *Eur J Pain* 2015; 19 (8): 1129-38
- 40) Gatti R, Paci M, Vercelli S, Baccini M. Teaching how to improve activities and participation of elderly subjects: the carelessness of the Italian Academia shown by the national qualification for physiotherapists. *Ag Clin Exp Res* 2015; 27 (2): 243-244
- 41) Sarasso E, Gemma G, Agosta F, Filippi M, Gatti R. Action observation training to improve motor function recovery: a systematic review. *Arch of Physiother* 2015; 5:14
- 42) Baccini M, Barbero M, Gatti R. From a national to an international journal: a new opportunity for the physiotherapy community. *Arch Physiother.* 2015 Jul 8;5:1.
- 43) Castellini G, Gianola S, Banzi R, Corbetta D, Gatti R, Sirtori V, Glud C, Moja L. Constraint-induced movement therapy: trial sequential analysis applied to Cochrane Collaboration systematic review results. *Trials* 2014; 15: 512
- 44) Gatti R, Paci M, Vercelli S, Baccini M. Has the Italian academia missed an opportunity? *Phys Ther* 2014; 94:1358-60
- 45) Gatti R, Tettamanti A, Lambiase S, Rossi P, Comola M. Improving hand functional use in subjects with multiple sclerosis using a musical keyboard: a randomized controlled trial. *Physiother Res Int* 2015; 20 (2): 100-107
- 46) Riva N, Faccendini S, Lopez ID, Fratelli A, Velardo D, Quattrini A, Gatti R, Comi G, Comola M, Fazio R. Balance exercise in patients with chronic sensory ataxic neuropathy: a pilot study. *J Peripher Nerv Syst* 2014; 19 (2): 145-151

- 47) Liberatore G, Clarelli F, Nuara A, Ungaro D, Gatti R, Rovaris M, Martinelli V, Comi G, Comola M, Rossi P, Martinelli Boneschi F. Predictors of efficacy of multidisciplinary rehabilitation treatment on motor dysfunction in Multiple Sclerosis. *Multiple Sclerosis* 2014; 20 (7): 862-70.
- 48) Tettamanti A, Martino G, Gatti R. Effect of coupled upper limbs movements on postural stabilisation. *J Elect Kinesiol* 2013; 23: 1222–1228
- 49) 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 Musculosk Dis* 2013; 14: 179
- 50) Gianola S, Pecoraro V, Lambiase S, Gatti R, Banfi G, Moja L. Efficacy of muscle exercise in patients with muscular dystrophy: a systematic review showing a missed opportunity to improve outcomes. *PLoS ONE* 2013; 8 (6): e65414
- 51) Bartoli E, Tettamanti A, Farronato P, Caporizzo A, Moro A, Gatti R, Perani D, Tettamanti M. The disembodiment effect of negation: negating action-related sentences attenuates their interferences on congruent upper limb movement. *J Neurophysiol* 2013; 109:1782-1792
- 52) Gatti R, Tettamanti A, Gough PM, Riboldi E, Marinonin L, Buccino G. Action observation versus motor imagery in learning a complex motor task: A short review of literature and a kinematics study. *Neurosci Lett* 2013; 540: 37-42
- 53) Locatelli M, Gatti R, Tettamanti M. Training of manual action improve manual understanding of semantically related action *Front Psychol.* 2012; Dec 10, 3:547.
- 54) Lerario A, Bonfiglio S, Sormani M, Tettamanti A, Markteli S, Napolitano S, Previtali S, Scarlato M, Natali-Sora M, Mercuri E, Bresolin N, Mongini T, Comi G, Gatti R, Ciceri F, Cossu G, Torrente Y. Quantitative muscle strength assessment in Duchenne muscular dystrophy: longitudinal study and correlation with functional measure. *BMC Neurol.* 2012 Sep 13; 12:91.
- 55) 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 *J Manip Man Ther* 2012; 20 (4): 171-177.
- 56) Lucotti P, Monti LD, Setola E, Galluccio E, Gatti R, Bosi E, Piatti P. Aerobic and resistance training effects compared to aerobic training alone in obese type 2 diabetic patients on diet treatment. *Diabetes Res Clin Pract.* 2011 Dec;94(3):395-403
- 57) Barbero M, Gatti R, Conte LL, Merletti R. Reliability of surface EMG matrix in locating the innervation zone of upper trapezius muscle. *J Electromyogr Kinesiol* 2011; Oct;21(5):827-33
- 58) Gatti R, Faccendini S, Tettamanti A, Barbero M, Balestri A, Calori G. Efficacy of trunk balance exercises for individuals with chronic low back pain. *J Orthop Sports Phys Ther.* 2011 Jun 7. 2011 Aug;41(8):542-52
- 59) Buccino G, Gatti R, Giusti MC, Negrotti A, Rossi A, Calzetti S, Cappa SF. Action observation treatment improves autonomy in daily activities in Parkinson's disease patients: Results from a pilot study. *Mov Disord.* 2011 Aug 15;26(10):1963-4

- 60) Judica E, Martinelli Boneschi F, Ungaro D, Comola M, Gatti R; Comi G, Rossi P. Impact of fatigue on the efficacy of rehabilitation in multiple sclerosis. *J Neurol*. 2011 May;258(5):835-9.
- 61) Olper L, Cervi P, Meloni C, De Santi F, Gatti R. Validation of a Treadmill Six-Minute Walk Test in Individuals Who Underwent Cardiac Surgery. *Phys Ther*. 2011 Apr;91(4):566-76.
- 62) Gatti R, Rocca M, Tettamanti A, Filippi M. Evaluation and training of hands and feet movement performed with different strategies: A kinematic study. *Clin Neurol Neurosurg*. 2011 Apr;113 (3): 218-23.
- 63) Corbetta D, Sirtori V, Moja L, Gatti R. Constraint-induced movement therapy in stroke patients: a systematic review and meta-analysis. *Eur J Phys Rehabil Med* 2010; 46 (4): 537-544
- 64) Filippi M, Ceccarelli A, Pagani E, Gatti R, Rossi A, Stefanelli L, Falini A, Comi G, Rocca M, Motor Learning in Healthy Humans Is Associated to Gray Matter Changes: A Tensor-Based Morphometry Study. *PLoS One* 15 April 2010
- 65) Sirtori V, Corbetta D, Moia L, Gatti R. Constraint-induced movement therapy for upper extremities in stroke patients. *Stroke* 2009; Nov 12
- 66) Sirtori V, Corbetta D, Moia L, Gatti R. Constraint-induced movement therapy for upper extremities in stroke patients. *Cochrane Database of Systematic Reviews* 2009; Oct 7;(4): CD004433.
- 67) Rocca MA, Gatti R, Agosta F, Brogna P, Rossi P, Riboldi E, Corti M, Comi G, Filippi M. Influence of task complexity during coordinated hand and foot movements in MS patients with and without fatigue: A kinematic and functional MRI study. *J Neurol* 2009; 256(3):470-82
- 68) Gatti R, Corti M, Govetto S, Bonzani K, Boccardi S. Electromyographic activity to keep a lower limb in a raised position in healthy subjects and subjects with multiple sclerosis. *Multiple Sclerosis* 2008; 14: 691-693
- 69) Rocca M, Gatti R, Agosta F, Tortorella P, Ribaldi E, Brogna P, Filippi M. The influence of body segment position during in-phase and anti-phase hand and foot movements: a kinematic and functional MRI study. *Hum Brain Mapp*. 2007 Mar;28(3):218-27.
- 70) Lucotti P, Setola S, Monti LD, Galluccio E, Costa S, Sandoli EP, Fermo I, Rabaiotti G, Gatti R, Piatti PM. Beneficial effect of oral-Larginine treatment added to a hypocaloric diet and exercise training program in obese, insulin resistant type 2 diabetic patients. *Am J Physiol Endocrinol Metab* 2006; 13: E906-13
- 71) Gatti R, Corti M, Cervi P, Pulici L, Boccardi S. Biomechanics of lower limb raising from the supine position *Eur Med Phys* 2006; 42: 185-193
- 72) Rocca MA, Mezzapesa D, Comola M, Leocani L, Falini A, Gatti R, Mammi S, Comi G, Filippi M. Persistence of congenital mirror movements after hemiplegic stroke. *Am J Neuroradiol* 2005; 26: 831-834
- 73) Bonaiuti D, Gatti R, Raschi A, Cantarelli L, Sirtori V. Manual autotrraction: preliminary study of effectiveness of a new device for back pain treatment. *Eur Medicophys* 2004; 40:75-81

- 74) Tesio L, Gatti R, Monzani M, Franchignoni F. EMG-feedback from two muscles in postural reaction: a new pocket device for the patient-therapist pair. *J Electrom Kinesiol* 1996; 4: 277-279
- 75) Tesio L, Monzani M, Gatti R, Franchignoni F. Flexible electrogoniometers: kinesiological advantages with respect to potentiometric goniometers. *Clin Biomech*, 1995; 10, (5): 275-277