

Candidatura di Mirta Fiorio al Consiglio Direttivo della SIPF per il biennio 2023-2025

Care colleghe e colleghi,

Sono docente di Psicobiologia e psicologia fisiologica (M-PSI/02) al Dipartimento di Neuroscienze, Biomedicina e Movimento dell'Università di Verona. I miei interessi di ricerca si collocano nell'ambito delle Neuroscienze cognitive.

Mi occupo principalmente di indagare i meccanismi neurocognitivi e neurofisiologici alla base degli effetti delle aspettative sulla percezione sensoriale e sulla prestazione motoria, utilizzando tecniche di stimolazione (TMS e tDCS) e di registrazione (EEG, SCR, EMG). Sono stata membro del consiglio direttivo della SIPF per due mandati, occupandomi dell'organizzazione degli Snack SIPF e contribuendo ad altre iniziative della Società, come l'organizzazione dei congressi annuali. Con la mia candidatura nel ruolo di Revisore dei conti per il biennio 2023-2025 vorrei mettermi ancora una volta al servizio della nostra Società, impegnandomi come in passato in modo attivo e con entusiasmo per favorirne la crescita.

Mirta Fiorio, PhD
Professor of Psychobiology
Department of Neurosciences,
Biomedicine and Movement Sciences
University of Verona
Via Casorati, 43 - 37131 Verona
Tel. +390458425133

mirta.fiorio@univr.it

<http://www.dsnm.univr.it/?ent=persona&id=1469>

https://www.researchgate.net/profile/Mirta_Fiorio

<http://www.mdpi.com/2076-3425/11/11/1526>

Curriculum vitae Mirta Fiorio

Personal data

Name and surname: **Mirta Fiorio**

Date of birth: **31-05-1975**

Nationality: **Italian**

Marital status: **married**

Institutional website: <http://www.dsnm.univr.it/?ent=persona&id=1469>

Research gate: https://www.researchgate.net/profile/Mirta_Fiorio

Current position

Full Professor (starting from 01/04/2022), of Psychobiology and Physiological psychology (M-PSI/02), Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona, Verona, Italy.

Education

2005 **PhD in Psychological and Psychiatric sciences**, University of Verona. Thesis Title: “The body in the brain: Investigating the cortical representation of the body. Evidence from transcranial magnetic stimulation and patients with movement disorder”.

2000 **Degree in Psychology**, University of Padua. Graduated With Highest Honors (110/110 cum laude). Thesis Title: “Temporal analysis of tactile, visual and cross-modal visuo-tactile stimuli in normal subjects and in patients affected by idiopathic dystonia”.

Positions and scientific appointments

2014-2022 Associate Professor of Psychobiology and Physiological psychology (M-PSI/02), Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona, Verona, Italy.

2017 National scientific qualification as Full professor in Psychobiology and physiological psychology (M-PSI/02).

2015 Visiting researcher at the Department of Neurology, University of Leipzig (Germany).

2011–2014 Assistant professor of Psychobiology and physiological psychology (M-PSI/02) University of Verona.

2005–2011 Postdoctoral fellow at the Department of Neuroscience, Biomedicine and Movement Sciences, University of Verona.

2008 Visiting researcher at the Neurophysiology laboratory, University of Würzburg (Germany).

2003–2004 Visiting student at the Institute of Cognitive Neuroscience, University College of London (UK).

Personal statement and Research interests

Over the last two decades, I have established a unified research program on the cognitive and neurophysiological mechanisms underlying the effects of expectations on sensory perception and motor performance. The ultimate goal is

to develop new cognitive-motor strategies that leverage positive expectations in order to strengthen patients' response to traditional rehabilitation approaches. I have secured necessary support to perform cutting-edge research at the University of Verona where we are a team of passionate undergraduate and graduate students, and scientists that conduct innovative, creative, and pioneering mechanistic studies.

We have shown that positive expectations, induced by the placebo effect, can lead to an improvement in tactile perception and, using the EEG technique, we have also found that this perceptual gain is associated with an increase in amplitude of the late somatosensory evoked potentials. By applying transcranial magnetic stimulation to the primary motor area, we have also shown that a placebo procedure increases not only the production of force, but also the activation of the corticospinal system. This research paves the way for the potential clinical application of the placebo effect in pathological conditions affecting movement execution. For this reason, our work has received an important international acknowledgment, the Susanne Klein-Vogelbach Prize, which is awarded to researchers interested in the study of human movement and rehabilitation of movement after traumatic injuries or neurological diseases. We addressed our investigation also to the negative counterpart of the placebo effect, the so-called nocebo effect, demonstrating that the neurophysiological correlates of nocebo and placebo are different. We have also noticed that not all individuals show the same nocebo effect. By investigating this aspect more deeply, we were able to distinguish two categories of individuals: those characterized by high levels of anxiety and pessimism have more evident nocebo effects on motor performance than those with low anxiety and pessimism. This work opens the way to new investigations on the cognitive factors and personality traits that modulate the nocebo effect in the motor domain. More recently, we have expanded our investigation by demonstrating the role of another brain area in these effects, like the dorsolateral prefrontal cortex, and by unveiling the power of positive expectations on different motor functions, from balance control to visuo-motor learning. Now, we would like to characterize the functional connectivity of the brain network involved in the placebo effect in the motor domain thanks to a combined TMS-EEG approach.

Currently my research group in the Action-perception lab is made up of a junior researcher with background in Psychology, a biomedical engineer, expert in computational neuroscience and neurophysiology, a post-doc research fellow, four PhD students in Neuroscience, and Master's degree students in Motor Sciences. The skills of my research group concern non-invasive brain stimulation, electroencephalographic and electromyographic recording, as well as psychophysical and behavioral methods for the assessment of cognitive and motor abilities.

Awards and honours

- 2015 Susanne Klein-Vogelbach prize for research of human movement.
- 2013 Young investigator award Italian Association for Research in Dystonia.
- 2012 Best poster award Italian Society of Neurology.
- 2010 Best poster award DISOMV-SIN.
- 2007 David Marsden award to young scientist European Dystonia Federation.
- 2006 Best poster award Italian Society of Neurology.
- 2006 Cover presentation in the journal *Brain* 2006; volume 129 (Issue 1).
- 2004 Best poster award Touch-Temperature-Pain-Pleasure Meeting.

National and international collaborations (past and present)

Faculté des Sciences et de Médecine, Université de Fribourg, Suisse.
 Department of Neurology, Otto von Guericke University Magdeburg, Germany.
 School of Nursing and School of Medicine, University of Maryland, USA.
 Department of Neurology, University of Leipzig, Germany.
 Neuroscience Centre, University of Lyon, France.
 Department of Neurology, University of Würzburg, Germany.
 Swiss Federal Institute of Technology (ETHZ), Zurich, Switzerland.
 Institute of Cognitive Neuroscience, University College of London, UK.
 Institute of Neurology, University College of London, UK.
 Department of Psychology, University La Sapienza Rome.
 Department of Neurology, University of Genova.
 Department of Neurology, University La Sapienza Rome.
 National Neurologic Institute C. Besta, Milan.
 Mendel Institute IRCCS CSS, Rome.
 Department of Neurology, University of Milan.

Department of Neurology, University of Bari.

Grants and fellowships

- 2023 **Italian Ministry for University and Research (PRIN 2022)** (€247.015) as principal investigator for the project: “Ergogenic words. Characterizing the cognitive and neural mechanisms of the placebo effect in the motor domain”.
- 2019 **Basic research grant University of Verona** (€55.926) as principal investigator for the project: “Behavioral and neural correlates of perceived effort during willed actions”.
- 2019 **Brain Research Foundation Verona** (€12.500) as principal investigator for renewal of the project: “Improving balance control in Parkinson’s disease patients by combining visual feedback and non-invasive electrical stimulation of the cerebellum”.
- 2018 **Brain Research Foundation Verona** (€12.000) as principal investigator for the project: “Improving balance control in Parkinson’s disease patients by combining visual feedback and non-invasive electrical stimulation of the cerebellum”.
- 2015 **Basic research grant University of Verona** (€63.184) as principal investigator for the project: “The sense of agency and the sense of body ownership: Which is the role of the cerebellum?”.
- 2014 **Italian Ministry of Health** (€177.949) as principal investigator for the project: “How does the cerebellum contribute to the pathophysiology of dystonia? A multidisciplinary approach with ad-hoc behavioral tasks and cerebellar stimulation with transcranial Direct Current Stimulation (tDCS)”.
- 2014 **Cooperint University of Verona** (€3.150) as principal investigator for a 3-months research period at the Department of Neurology, Leipzig, Germany.
- 2009 **Compagnia San Paolo di Torino** (€58.000) as principal investigator for the project: “Enhancing motor performance by action observation. Neurophysiological mechanisms and implications for patients with motor deficits”.
- 2008 **Deutscher Akademischer Austausch Dienst** (German Academic Exchange Service) (€2.000) as principal investigator for the project “Sense of body ownership in focal-hand dystonia” at the University of Würzburg, Department of Neurology (Prof. Joseph Classen).
- 2007 **Cariverona Foundation** (€260.000), as collaborator for the project: “The role of motivation in behavioral control: a multidisciplinary approach from neurobiology to clinical applicability”.
- 2007 **Italian Ministry for University and Research** (€15.700) as collaborator for the project: “Endophenotypic traits in adult-onset dystonia: a study on movement representation”.
- 2005 **Telethon Foundation** (€29.700) as collaborator for the project: “Genetics of primary late-onset dystonia”.

Membership

- 2019–2023 Member of the steering committee of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF).
- 2016–present Member of the Society for Interdisciplinary Placebo Studies (SIPS).
- 2015–present Member of the Italian Society of Psychophysiology and Cognitive Neuroscience.
- 2010–present Member of the Italian Association of Movement Disorders and Parkinson’s Disease.
- 2009 Member of the Cognitive Neuroscience Society and Federation of European Neuroscience (FENS).

Editorial activity

- 2020–present Review Editor of *Frontiers in Human Neuroscience*, Section Cognitive Neuroscience.
- 2019–present Associate Editor of *Scientific Reports*.

- 2017–present Associate Editor of *Frontiers in Neurology*, Section Movement Disorders.
 2016 Recognized Reviewer Status Elsevier Publisher for the Journal *Cognition*.
 2015–2017 Review Editor of *Frontiers in Neurology*, Section Movement Disorders.
 2015 Outstanding Reviewer Status Elsevier Publisher for the Journal *Neuropsychologia*.

Referee for the Journals: *Nature Review Neurology*, *Brain*, *Proceedings of the National Academy of Science*, *NeuroImage*, *Journal of Neuroscience*, *Cerebral Cortex*, *Neurology*, *Movement Disorders*, *Cortex*, *Neuroscience and Biobehavioral Review*, *Journal of Cognitive Neuroscience*, *Journal of Experimental Psychology*, *European Journal of Neuroscience*, *PlosOne*, *Neuropsychologia*, *Neuroscience*, *Brain Sciences*, *Brain and Cognition*, *Cognitive Affective and Behavioral Neuroscience*, *Cognitive Neuropsychology*, *European Journal of Neurology*, *Experimental Brain Research*, *Frontiers in Neurology*, *Frontiers in Psychology*, *Frontiers in Psychiatry*, *Journal of Autism Developmental Disorders*, *Neuroscience Letters*, *Psychiatry Research*, *Scientific Reports*, *Journal of Motor Behavior*, *Journal of Pain*.

Events organization, Selected talks, and Dissemination

- 2023 Speaker at the Congress of the Italian Society of Neurology, Naples (Italy). Talk: “Terapia non farmacologica ed effetto placebo”.
- 2023 Speaker at the Congress of the Italian Association of Psychology, Lucca (Italy). Talk: “Improving motor performance with the placebo effect: neurophysiological evidence and cognitive mechanisms”.
- 2023 Speaker at the Congress of the Italian Society of Neurorehabilitation, Riva del Garda (Italy). Talk: “Effetto placebo/nocebo e disturbo neurologico funzionale”.
- 2023 Talk for the Corso di perfezionamento in Psichiatria e Psicologia di consultazione in contesto ospedaliero. Talk: “Effetto placebo e nocebo nel disturbo neurologico funzionale”. University of Verona.
- 2023 Seminar for the PhD program in Neuroscience at the University of Turin. Talk: “Placebo and nocebo effect Neurophysiological evidence and implications for functional neurological disorder”
- 2023 Seminar for the PhD program in Neuroscience at the University of Verona. Talk: “Predictive coding: a model of brain functioning in healthy and pathological conditions”.
- 2023 Seminar for the Italian association of functional neurological disorder (AIDINEF). Talk: “Come e perché si manifestano i disturbi del movimento funzionale”. Verona.
- 2022 Organization of the symposium: “Pain and physical activity”, for the PhD Program in Neuroscience, Psychological and psychiatric sciences, and Movement sciences, University of Verona. Talk: “Cognitive influence on pain and motor performance in Parkinson’s disease and healthy individuals”.
- 2021 Organization of the international symposium: “The placebo effect in the motor domain: from pathology to sport”, for the online Congress of the Society for Interdisciplinary Placebo Studies (SIPS), Baltimore (USA). Talk: “Modulation of motor functions by placebo effects”.
- 2019 Speaker at the Congress of the Italian Society of Psychophysiology and Cognitive Neuroscience, Ferrara. Talk: “Physiological bases of placebo and nocebo effects”.
- 2019 Speaker at the Opening ceremony for the Master in Clinical Neurosciences, Brescia. Talk: “Effetto placebo nella prestazione motoria e sportiva”.
- 2019 Speaker at the 10th National conference on Youth, Sport and Mountain, Predazzo (TN). Talk: “Effetto placebo e prestazione motoria e sportiva”.
- 2019 Speaker at the Graduation day, Master in Riabilitazione dei Disordini Muscoloscheletrici, University of Genova. Talk: “Effetti Placebo e Nocebo nella Modulazione del Sistema Motorio”.
- 2018 Speaker at the Congress of the Italian Society of Neurology, Rome. Talk: “Non-invasive brain stimulation and cognition”.

- 2018 Organization of the conference “New advances in Neuromodulation. A window on cognitive and motor functions in the healthy and pathological brain” Verona
- 2017 Speaker at the International course on Movement Disorders, Verona. Talk: “Motor and behavior response to dopaminergic therapy and placebo”
- 2017 Speaker at the European Congress of Psychology, Amsterdam (The Netherland). Talk: “Placebo and nocebo effects outside pain”.
- 2017 Speaker at the Congress of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF), Rome. Talk: “Placebo effect and focus of attention as a new strategy to modulate motor performance”.
- 2016 Speaker at the Congress of the Italian Association for the study of Pain (AISD), Rome. Talk: “Cognitive modulation of somatosensory perception”.
- 2016 Speaker at the Congress of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF), Milan. Talk: “The nocebo effect in motor performance. The role of treatment perception and personality traits”.
- 2016 Speaker at the Liguria Parkinson, Genova. Talk: “Neuromodulation (rTMS-tDCS)”.
- 2014 Speaker at the Italian Society of Neurorehabilitation, Genova. Talk: “Cognitive aspects in dystonia”.
- 2013 Member of the organizing committee of the Congress of the Italian Association of Sport Psychology, Verona.
- 2013 Speaker at the Congress of LIMPE/DISMOV, Rome. Talk: “Executive functions and attention: which role in motor deficits?”.
- 2013 Speaker at the International Workshop on Proprioception, Proprioceptive Dysfunction and Robotic Rehabilitation, Genova. Talk: “Proprioceptive dysfunction and the basal ganglia: Focal dystonia”.
- 2012 Speaker at the teaching course “Update in Parkinson’s Disease”, Verona. Talk: “Endophenotypes in genetic forms of Parkinson’s Disease”.
- 2012 Speaker at the Congress of the Italian Society of Neurology, Rimini. Talk: “Enhancing motor performance by suggestion: A behavioural and neurophysiological study on force production”.
- 2011 Speaker at the Congress of the Italian Society of Neurology, Torino. Talk: “The sense of body ownership in dystonia and cerebellar ataxia”.
- 2007 Speaker at the European Federation of Neurological Societies, Brussels (Belgium). Talk: “Sensory deficits associated to DYT1 gene mutation: endophenotype of dystonia?”.
- 2007 Speaker at the Annual meeting of the European Dystonia Federation, Vienna (Austria). Talk: “Involvement of the sensory system in dystonia”.
- 2007 Speaker at the Congress of the Italian Society of Neurology, Firenze. Talk: “Impaired movement representation in manifesting and non-manifesting DYT1 carriers. Highlights from mental rotation”.
- 2007 Organization of the symposium “New Advances on Movement Disorders: from genetics to cognitive functions”, Italian Society of Neuroscience, Verona.
- 2006 Speaker at the Congress of the Italian Society of Neurology, Bari. Talk: “Sensory deficits associated to DYT1 gene mutation: endophenotype of dystonia?”.
- 2004 Speaker at the Congress of the Italian Association of Psychology, Agrigento. Talk: “TMS over S1 and visuo-tactile interactions”.
- 2004 Organization of the Symposium “The Body in the Brain” at the conference of the British Psychological Society, Manchester, UK.
- 2003 Speaker at the Congress of the Italian Society of Neuropsychology, Bologna. Talk: “Mental rotation of body parts in writer’s cramp”.

Bibliometrics (Scopus 2023)

Number of published papers: 91
 Number of received citations: 2427
 H-index: 27
 Scopus Author ID: 6603838408
 ORCID ID: 0000-0002-6356-0211

Publications peer-reviewed

1. Marotta A, Braga M, **Fiorio M**. Trait-related neural basis of attentional bias to emotions: a tDCS study. *Cogn Affect Behav Neurosci*. 2023. Online ahead of print.
2. Marotta A, Lasalvia A, **Fiorio M**, Zanalda E, Di Sciascio G, Palumbo C, Papola D, Barbui C, Tinazzi M. Psychiatrists' attitudes towards functional neurological disorders: results from a national survey. *Front Psychiatry*. 2023;14:1216756..
3. Di Vico IA, Stone J, Mcwhirter L, Riello M, Zanolin ME, Colombari M, **Fiorio M***, Tinazzi M*. Performance validity tests in nonlitigant patients with functional motor disorder. *Eur J Neurol*. 2023;30(4):806-812. *Co-last author.
4. Villa-Sánchez B, Gandolfi M, Emadi Andani M, Valè N, Rossettini G, Polesana F, Menaspà Z, Smania N, Tinazzi M, **Fiorio M**. Placebo effect on gait: a way to reduce the dual-task cost in older adults. *Exp Brain Res*. 2023;241(6):1501-1511.
5. Gandolfi M*, **Fiorio M***, Geroin C, Torneri P, Menaspà Z, Smania N, Giladi N, Tinazzi M. Dual tasking affects gait performance but not automaticity in functional gait disorders: A new diagnostic biomarker. *Parkinsonism Relat Disord*. 2023;108:105291. *Co-first author.
6. **Fiorio M**, Braga M, Marotta A, Villa-Sánchez B, Edwards MJ, Tinazzi M, Barbiani D. Functional neurological disorder and placebo and nocebo effects: shared mechanisms. *Nature Rev Neurol*. 2022;18(10):624-635.
7. **Fiorio M**, Villa-Sánchez B, Rossignati F, Emadi Andani M. The placebo effect shortens movement time in goal-directed movements. *Sci Rep*. 2022;12(1):19567.
8. Sandri A, Cecchini MP, Zanini A, Nocini R, Boschi F, Zanette G, Marcon A, **Fiorio M***, Tinazzi M*. Unpleasant olfactory and gustatory stimuli increase pain unpleasantness in patients with chronic oral burning pain: An exploratory study. *Eur J Pain*. 2022. *Co-last author.
9. Braga M, Barbiani D, Emadi Andani M, Villa-Sánchez B, Tinazzi M, **Fiorio M**. The Role of Expectation and Beliefs on the Effects of Non-Invasive Brain Stimulation. *Brain Sci*. 2021;11(11):1526.
10. Marotta A, Braga M, Tarperi C, Skroce K, **Fiorio M**. Attentional bias to emotions after prolonged endurance exercise is modulated by age. *Cogn Emot*. 2021:1-11.
11. Villa-Sánchez B, Emadi Andani M, Cesari P, **Fiorio M**. The effect of motor and cognitive placebos on the serial reaction time task. *Eur J Neurosci*. 2021;53(8):2655-2668.
12. Marotta A, Re A, Zampini M, **Fiorio M**. Bodily self-perception during voluntary actions: The causal contribution of premotor cortex and cerebellum. *Cortex*. 2021;142:1-14.
13. Sandri A, Cecchini MP, Riello M, Zanini A, Nocini R, **Fiorio M***, Tinazzi M*. Pain, smell, and taste in adults: a narrative review of multisensory perception and interaction. *Pain and Therapy* 2021;10(1):245-268. *Co-last author.
14. Marotta A, **Fiorio M**, Fracasso I, Franchini CA, Defazio G, Tinazzi M. Functional Neurological Disorders as Seen by a Cohort of General Practitioners in Northern Italy: Evidence From an Online Survey. *Front Neurol*. 2021;12:583672.
15. Tinazzi M, Marotta A, Zenorini M, Riello M, Antonini A, **Fiorio M**. Movement perception of the tonic vibration reflex is abnormal in functional limb weakness. *Parkinsonism Relat Disord*. 2021;87:1-6.

16. Gandolfi M*, **Fiorio M***, Geroin C, Prior M, De Marchi S, Amboni M, Smania N, Tinazzi M. Motor dual task with eyes closed improves postural control in patients with functional motor disorders: A posturographic study. *Gait Posture*. 2021;88:286-291. *Co-first author.
17. Tinazzi M, **Fiorio M**, Berardelli A, Bonetti B, Bonifati DM, Burlina A, Cagnin A, Calabria F, Corbetta M, Cortelli P, Giometto B, Guidoni SV, Lopiano L, Mancardi G, Marchioretto F, Pellegrini M, Teatini F, Tedeschi G, Tesolin L, Turinese E, Zappia M, Marotta A. Opinion, knowledge, and clinical experience with functional neurological disorders among Italian neurologists: results from an online survey. *J Neurol*. 2022;269(5):2549-2559.
18. Invitto S, Romano D, Garbarini F, Bruno V, Urgesi C, Curcio G, Grasso A, Pellicciari MC, Kock G, Betti V, **Fiorio M**, Ricciardi E, de Tommaso M, Valeriani M. Major Stress-Related Symptoms During the Lockdown: A Study by the Italian Society of Psychophysiology and Cognitive Neuroscience. *Front Public Health*. 2021;9:636089.
19. Calgaro M, Pandolfo M, Salvetti E, Marotta A, Larini I, Pane M, Amoruso A, Del Casale A, Vitulo N, **Fiorio M**, Felis GE. Metabarcoding analysis of gut microbiota of healthy individuals reveals impact of probiotic and maltodextrin consumption. *Benef Microbes*. 2021;12(2):121-136.
20. Rossetini G, Geri T, Palese A, Marzaro C, Mirandola M, Colloca L, **Fiorio M**, Turolla A, Manoni M, Testa M. What Physiotherapists Specialized in Orthopedic Manual Therapy Know About Nocebo-Related Effects and Contextual Factors: Findings From a National Survey. *Front Psychol*. 2020;11:582174.
21. Cesari P, Modenese M, Benedetti S, Emadi Andani M, **Fiorio M**. Hypnosis-induced modulation of corticospinal excitability during motor imagery. *Sci Rep*. 2020;10(1):16882.
22. Erro R, Marotta A, **Fiorio M**. Proprioceptive drift is affected by the intermanual distance rather than the distance from the body's midline in the rubber hand illusion. *Atten Percept Psychophys*. 2020;82(8):4084-4095.
23. Emadi Andani M, Villa-Sánchez B, Raneri F, Dametto S, Tinazzi M, **Fiorio M**. Cathodal Cerebellar tDCS Combined with Visual Feedback Improves Balance Control. *Cerebellum*. 2020;19(6):812-823.
24. Cecchini MP, Tamburin S, Zanini A, Boschi F, Demartini B, Goeta D, Dallochio C, Marotta A, **Fiorio M**, Tinazzi M. Hedonicity in functional motor disorders: a chemosensory study assessing taste. *J Neural Transm (Vienna)*. 2020;127(10):1399-1407.
25. Cecchini MP, Riello M, Sandri A, Zanini A, **Fiorio M***, Tinazzi M*. Smell and taste dissociations in the modulation of tonic pain perception induced by a capsaicin cream application. *Eur J Pain*. 2020; 24(10):1946-1955. *Co-last author.
26. **Fiorio M**, Modenese M, Cesari P. The rubber hand illusion in hypnosis provides new insights into the sense of body ownership. *Sci Rep*. 2020;10(1):5706.
27. Marotta A*, **Fiorio M***, Riello M, Demartini B, Tecilla G, Dallochio C, Tinazzi M. Attentional avoidance of emotions in functional movement disorders. *J Psychosom Res*. 2020;133:110100. *Co-first author.
28. Riello M, Cecchini MP, Zanini A, Di Chiappari M, Tinazzi M, **Fiorio M**. Perception of phasic pain is modulated by smell and taste. *Eur J Pain*. 2019;23(10):1790-1800.
29. Corsi N, Emadi Andani M, Sometti D, Tinazzi M, **Fiorio M**. When words hurt: Verbal suggestion prevails over conditioning in inducing the motor nocebo effect. *Eur J Neurosci*. 2019;50(8):3311-3326.
30. Villa-Sánchez B, Emadi Andani M, Menegaldo G, Tinazzi M, **Fiorio M**. Positive verbal suggestion optimizes postural control. *Sci Rep*. 2019;9(1):6408.
31. Marotta A, Sarno E, Del Casale A, Pane M, Mogna L, Amoruso A, Felis GE, **Fiorio M**. Effects of Probiotics on Cognitive Reactivity, Mood, and Sleep Quality. *Front Psychiatry*. 2019;10:164.
32. Marotta A, Zampini M, Tinazzi M, **Fiorio M**. Age-related changes in the sense of body ownership: new insights from the rubber hand illusion. *PLoS One*. 2018;13(11):e0207528.

33. Rossettini G, Palese A, Geri T, **Fiorio M**, Colloca L, Testa M. Physical therapist's perspective towards contextual factors: findings from an Italian national survey. *PLoS One*. 2018;13(11):e0208159.
34. Villa-Sánchez B, Emadi Andani M, **Fiorio M**. The role of the dorsolateral prefrontal cortex in the motor placebo effect. *Eur J Neurosci* 2018;48(11):3410-3425.
35. Colloca L, Corsi N, **Fiorio M**. The interplay of exercise, placebo and nocebo effects on experimental pain. *Sci Rep*. 2018;8(1):14758.
36. **Fiorio M**. Modulation of the Motor System by Placebo and Nocebo Effects. *Int Rev Neurobiol*. 2018;139:297-319.
37. **Fiorio M**, Emadi Andani M, Recchia S, Tinazzi M. Somatosensory temporal discrimination threshold improves after a placebo procedure. *Exp Brain Res* 2018;236(11):2983-2990.
38. Rossettini G, Emadi Andani M, Dalla Negra F, Testa M, Tinazzi M, **Fiorio M**. The placebo effect in the motor domain is differently modulated by the external and internal focus of attention. *Sci Rep*. 2018; 8(1):12296.
39. Avanzino L, **Fiorio M***, Conte A. Actual and illusory perception in Parkinson's disease and dystonia: a narrative review. *Frontiers in Neurology* 2018; 9:584. *Corresponding author.
40. Erro R, Marotta A, Tinazzi M, Frera E, **Fiorio M**. Judging the position of the artificial hand induces a "visual" drift towards the real one during the rubber hand illusion. *Sci Rep* 2018;8(1):2531.
41. Perruchoud D, **Fiorio M**, Cesari P, Ionta S. Beyond variability: Subjective timing and the neurophysiology of motor cognition. *Brain Stimul*. 2018;11(1):175-180.
42. Marotta A, Bombieri F, Zampini M, Schena F, Dallochio C, **Fiorio M***, Tinazzi M*. The Moving Rubber Hand Illusion Reveals that Explicit Sense of Agency for Tapping Movements Is Preserved in Functional Movement Disorders. *Front Hum Neurosci*. 2017;11:291. *Co-last author.
43. Kägi G, Ruge D, Brugger F, Katschnig P, Sauter R, **Fiorio M**, Tinazzi M, Rothwell J, Bhatia KP. Endophenotyping in idiopathic adult onset cervical dystonia. *Clin Neurophysiol*. 2017;128(7):1142-1147.
44. Marotta A, Tinazzi M, Cavedini C, Zampini M, **Fiorio M**. Individual Differences in the Rubber Hand Illusion Are Related to Sensory Suggestibility. *PLoS One*. 2016;11(12):e0168489.
45. Corsi N, Emadi Andani M, Tinazzi M, **Fiorio M**. Changes in perception of treatment efficacy are associated to the magnitude of the nocebo effect and to personality traits. *Sci Rep*. 2016;6:30671.
46. Premi E, Diano M, Gazzina S, Cauda F, Gualeni V, Tinazzi M, **Fiorio M**, Liberini P, Lazzarini C, Archetti S, Biasiotto G, Turla M, Bertasi V, Cotelli M, Gasparotti R, Padovani A, Borroni B. Functional Connectivity Networks in Asymptomatic and Symptomatic DYT1 Carriers. *Mov Disord*. 2016;31(11):1739-1743.
47. Avanzino L, Tinazzi M, Ionta S, **Fiorio M**. Sensory-motor integration in focal dystonia. *Neuropsychologia*. 2015;79:288-300. Review.
48. Emadi Andani M, Tinazzi M, Corsi N, **Fiorio M**. Modulation of inhibitory corticospinal circuits induced by a nocebo procedure in motor performance. *Plos One* 2015;10(4):e0125223.
49. Avanzino L, **Fiorio M**. Proprioceptive dysfunction in focal dystonia: from experimental evidence to rehabilitation strategies. *Front Hum Neurosci*. 2014;8:1000. Review.
50. Tommasi G, **Fiorio M**, Yelnik J, Krack P, Sala F, Schmitt E, Fraix V, Bertolasi L, Le Bas JF, Ricciardi GK, Fiaschi A, Theeuwes J, Pollak P, Chelazzi L. Disentangling the Role of Cortico-Basal Ganglia Loops in Top-Down and Bottom-Up Visual Attention: An Investigation of Attention Deficits in Parkinson Disease. *J Cogn Neurosci*. 2015;27(6):1215-37.

51. Tinazzi M, Fasano A, Peretti A, Bove F, Conte A, Dall'Occhio C, Arbasino C, Defazio G, **Fiorio M**, Berardelli A. Tactile and Proprioceptive Temporal Discrimination Are Impaired in Functional Tremor. *PLoS One* 2014;9(7):e102328.
52. **Fiorio M**, Emadi Andani M, Marotta A, Classen J, Tinazzi M. Placebo-induced changes in excitatory and inhibitory corticospinal circuits during motor performance. *Journal of Neuroscience* 2014;34:3993-4005.
53. **Fiorio M**, Marotta A, Ottaviani S, Pozzer L, Tinazzi M. Aristotle's illusion in Parkinson's disease: evidence for normal interdigit tactile perception. *PLoS One* 2014;9(2):e88686.
54. **Fiorio M**, Recchia S, Corrà F, Tinazzi M. Behavioral and neurophysiological investigation of the influence of verbal suggestion on tactile perception. *Neuroscience* 2014;258:332-9.
55. **Fiorio M**, Mariotti C, Panzeri M, Antonello E, Classen J, Tinazzi M. The role of the cerebellum in dynamic changes of the sense of body ownership: A study in patients with cerebellar degeneration. *J Cogn Neurosci* 2014;26(4):712-21.
56. Tinazzi M, Morgante F, Peretti A, Mariotti C, Panzeri M, **Fiorio M**, Fasano A. Impaired temporal processing of tactile and proprioceptive stimuli in cerebellar degeneration. *PLoS One* 2013;8(11): e78628.
57. Van Ulzen NR, **Fiorio M**, Cesari P. Motor resonance evoked by observation of subtle nonverbal behavior. *Social Neuroscience* 2013; 8(4):347-55.
58. Tinazzi M, Marotta A, Fasano A, Bove F, Bentivoglio AR, Squintani G, Pozzer L, **Fiorio M**. Aristotle's illusion reveals inter-digit functional somatosensory alterations in focal hand dystonia. *Brain* 2013; 136(Pt 3):782-9.
59. Tinazzi M, Fasano A, Di Matteo A, Conte A, Bove F, Bovi T, Peretti A, Defazio G, **Fiorio M**, Berardelli A. Temporal discrimination in patients with dystonia and tremor and patients with essential tremor. *Neurology* 2013;80:76-84.
60. Kägi G, Katschnig P, **Fiorio M**, Tinazzi M, Ruge D, Rothwell J, Bhatia KP. Sensory tricks in primary cervical dystonia depend on visuo-tactile temporal discrimination. *Mov Disord* 2013;28(3):356-61.
61. Martino D, Gajos A, Gallo V, Cif L, Coubes P, Tinazzi M, Schneider SA, **Fiorio M**, Nardocci N, Edwards MJ, Bhatia KP. Extra-genetic factors and clinical penetrance of DYT1 dystonia: an exploratory study. *J Neurol* 2013;260(4):1081-6.
62. Pizzolato F, **Fiorio M**, Cesari P. Motor system modulation for movement direction and rotation angle during motor imagery. *Neuroscience* 2012;218:154-160.
63. **Fiorio M**, Recchia S, Corrà F, Simonetto S, Garcia-Larrea L, Tinazzi M. Enhancing non-noxious perception: behavioural and neurophysiological correlates of a placebo-like manipulation. *Neuroscience* 2012;217:96-104.
64. Önal-Hartmann C, **Fiorio M**, Gentner R, Zeller D, Pauli P, Classen J. After-training emotional interference may modulate sequence awareness in a serial reaction time task. *Exp Brain Res* 2012;219(1):75-84.
65. Morgante F, Tinazzi M, Squintani G, Martino D, Defazio G, Romito L, Albanese A, Di Matteo A, Quartarone A, Girlanda P, **Fiorio M**, Berardelli A. Abnormal tactile temporal discrimination in psychogenic dystonia. *Neurology* 2011;77(12):1191-7.
66. Cesari P, Pizzolato F, **Fiorio M**. Grip-dependent cortico-spinal excitability during grasping imagination and execution. *Neuropsychologia* 2011;49(7):2121-30.
67. **Fiorio M**, Weise D, Onal-Hartmann C, Zeller D, Tinazzi M, Classen J. Impairment of the rubber hand illusion in focal hand dystonia. *Brain*. 2011;134(Pt 5):1428-37.
68. **Fiorio M**, Zhang W, Bresciani MC, Rodi G, Bertolasi L, Gambarin M, Tinazzi M. Corticospinal excitability during action observation in task-specific dystonia: a transcranial magnetic stimulation study. *Neuroscience* 2010;171(1):117-24.
69. **Fiorio M**, Cesari P, Bresciani MC, Tinazzi M. Expertise with pathological actions modulates a viewer's motor system. *Neuroscience* 2010;167(3):691-9.

70. Tinazzi M*, **Fiorio M***, Fiaschi A, Bhatia KP. Sensory functions in dystonia: insights from behavioral studies. *Mov Disord* 2009;24(10):1427-36. *Co-first author.
71. Draganski B, Schneider SA, **Fiorio M**, Kloppel S, Gambarin M, Tinazzi M, Ashburner J, Bhatia KP, Frackowiak RSJ. Genotype-phenotype interactions in primary dystonia revealed by differential changes in brain structure. *Neuroimage* 2009;47(4):1141-7.
72. Marceglia S*, **Fiorio M***, Foffani G, Mrakic-Sposta S, Tiriticco M, Locatelli M, Caputo E, Tinazzi M, Priori A. Context-related dynamics of subthalamic beta oscillations in patients with Parkinson's disease. *Neuroscience* 2009;161(4):1027-36. *Co-first author.
73. Scontrini A, Conte A, Defazio G, **Fiorio M**, Fabbrini G, Suppa A, Tinazzi M, Berardelli A. Somatosensory temporal discrimination in patients with primary focal dystonia. *J Neurol Neurosurg Psychiatry* 2009;80(12):1315-9.
74. **Fiorio M**, Valente EM, Gambarin M, Bentivoglio AR, Ialongo T, Albanese A, Barone P, Pellecchia MT, Moretto G, Fiaschi A, Tinazzi M. Subclinical sensory abnormalities in unaffected PINK1 heterozygotes. *J Neurol* 2008;255(9):1372-7.
75. **Fiorio M**, Gambarin M, Defazio G, Valente EM, Stanzani C, Moretto G, Loi M, Soliveri P, Nardocci N, Albanese A, Fiaschi A, Tinazzi M. Impaired movement representation in manifesting and non-manifesting DYT1 carriers. Highlights from the mental rotation task. *Clinical Neurophysiology* 2008;119:1864-9.
76. **Fiorio M**, Tinazzi M, Scontrini A, Stanzani C, Gambarin M, Fiaschi A, Moretto G, Fabbrini G, Berardelli A. Tactile temporal discrimination in patients with blepharospasm. *J Neurol Neurosurg Psychiatry* 2008;79:796-8.
77. **Fiorio M**, Gambarin M, Valente EM, Liberini P, Loi M, Cossu G, Moretto G, Bhatia KP, Defazio G, Aglioti SM, Fiaschi A, Tinazzi M. Defective temporal processing of sensory stimuli in DYT1 mutation carriers: a new endophenotype of dystonia? *Brain* 2007;130:134-42.
78. **Fiorio M**, Stanzani C, Rothwell JC, Bhatia KP, Moretto G, Fiaschi A, Tinazzi M. Defective temporal discrimination of passive movements in Parkinson's disease. *Neuroscience Letters* 2007;417:312-5.
79. **Fiorio M**, Tinazzi M, Ionta S, Fiaschi A, Moretto G, Edwards MJ, Bhatia KP, Aglioti SM. Mental rotation of body parts and non-corporeal objects in patients with idiopathic cervical dystonia. *Neuropsychologia* 2007;45:2346-54.
80. Ionta S, Fourkas AD, **Fiorio M**, Aglioti SM. The influence of hands posture on mental rotation of hands and feet. *Exp Brain Res* 2007;183:1-7.
81. **Fiorio M**, Tinazzi M, Aglioti SM. Selective impairment of hand mental rotation in patients with focal hand dystonia. *Brain* 2006;129:47-54.
82. Tinazzi M, **Fiorio M***, Stanzani C, Moretto G, Smania N, Fiaschi A, Bhatia KP, Rothwell JC. Temporal discrimination of two passive movements in writer's cramp. *Mov Disord* 2006;21:1131-5. *Corresponding author.
83. Gambarin M, Valente EM, Liberini P, Barrano G, Bonizzato A, Padovani A, Moretto G, **Fiorio M**, Dallapiccola B, Smania N, Fiaschi A, Tinazzi M. Atypical phenotypes and clinical variability in a large Italian family with DYT1-primary torsion dystonia. *Mov Disord* 2006;21:1782-4.
84. Tinazzi M, Stanzani C, **Fiorio M**, Smania N, Moretto G, Fiaschi A, Edwards MJ, Bhatia KP, Rothwell JC. Temporal discrimination of two passive movements in humans: a new psychophysical approach to assessing kinaesthesia. *Exp Brain Res* 2005;166:184-9.
85. **Fiorio M**, Haggard P. Viewing the body prepares the brain for touch: effects of TMS over somatosensory cortex. *Eur J Neurosci* 2005;22:773-7.
86. Tinazzi M, **Fiorio M**, Bertolasi L, Aglioti SM. Timing of tactile and visuo-tactile events is impaired in patients with cervical dystonia. *J Neurol* 2004;251:85-90.
87. Aglioti SM, **Fiorio M**, Forster B, Tinazzi M. Temporal discrimination of cross-modal and unimodal stimuli in generalized dystonia. *Neurology* 2003;60:782-5.

88. **Fiorio M**, Tinazzi M, Bertolasi L, Aglioti SM. Temporal processing of visuotactile and tactile stimuli in writer's cramp. *Annals of Neurology* 2003;53:630-5.
89. Tinazzi M, Fiaschi A, Frasson E, **Fiorio M**, Cortese F, Aglioti SM. Deficits of temporal discrimination in dystonia are independent from the spatial distance between the loci of tactile stimulation. *Mov Disord* 2002;17:333-8.

Institutional roles at the University of Verona

- 2021-present Voting Member of the Committee for research approval in humans (CARP).
- 2019-present Member of the didactic commission of the Bachelor in Sport and Movement sciences.
- 2016-2020 Member of the didactic commission of the Bachelor in Physiotherapy.
- 2016-2018 Member of the quality check commission of the Bachelor in Psychological sciences.
- 2015-present Faculty member of the PhD program in Neuroscience, Psychological and psychiatric sciences, and Movement sciences.
- 2014-2021 Member of the Erasmus commission of the Bachelor in Sport and Movement sciences.
- 2013-2020 Member of the Research commission of the Department of Neuroscience, Biomedicine and Movement Sciences.
- 2013-present Faculty member of the Bachelor in Sport and Movement sciences.
- 2013-present Faculty member of the Bachelor in Psychological sciences.
- 2011-2015 Faculty member of the PhD program in Human movement science.

Commissions of trust

- 2023 Commission member of the PhD thesis evaluation in Neuroscience University of Bochum (Germany).
- 2023 Commission member of evaluation of two PhD theses in Neuroscience University of Turin.
- 2023 Commission member of the PhD thesis evaluation in Neuroscience, Movement and Sport Sciences University of Genoa.
- 2021 Commission member of the PhD thesis evaluation in Neuroscience University of Turin.
- 2021 Commission member of the PhD thesis evaluation in Neuroscience, Movement and Sport Sciences University of Genoa.
- 2017 Commission member of the PhD in Motor Activity and Sport Sciences University of Genoa.
- 2014 Grant review panel member, Austrian Science Fund, Austria.
- 2014 Grant review panel member, Italian Ministry of Research, Italy.
- 2014 Commission member of the PhD in Motor Activity and Sport Sciences University of Genoa.
- 2012 Commission member of the PhD in Neuroscience Université de Provence Marseille, France.
- 2008 Grant review panel member, Health Research Board, Ireland.

Main teaching activity at the University of Verona

- 2020-present Bachelor in Sport and Movement Sciences, School of Medicine. Teaching: General and Sport Psychology – group A, 48 hours.
- 2020-present Bachelor in Sport and Movement Sciences, School of Medicine. Teaching: General and Sport Psychology – group B, 48 hours.
- 2014-2020 Master's course in Sport Sciences, School of Medicine. Teaching: Research methods in Sport Psychology, 24 hours.
- 2014-2019 Bachelor in Sport and Movement Sciences, School of Medicine. Teaching: General and Sport Psychology, 48 hours.
- 2013-present Bachelor in Psychological Sciences. Teaching: Psychobiology, 36 hours.

- 2012-2019 Master's course in Adaptive Movement Sciences, School of Medicine. Teaching: Adaptive motor learning, 24 hours.
- 2008-present Bachelor in Physiotherapy, School of Medicine. Teaching: General Psychology, 10 hours.
- 2008-2020 Master's course in Adaptive Movement Sciences, School of Medicine. Teaching: Developmental psychology, 24 hours.

Languages

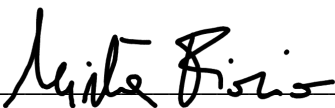
Italian, native speaker.

English, fluent verbal skills, proficient writing and reading skills.

German (DSH), fluent verbal skills, independent writing and reading skills.

Dichiaro che tutte le informazioni incluse nel curriculum corrispondono a verità e sono rilasciate ai sensi degli articoli 46 e 47 del D.P.R. 445/2000.

Verona, 08/09/2023



Mirta Fiorio