

Mirta Fiorio – Curriculum vitae

27/11/2017 – 27/11/2026 National scientific habilitation as full professor of Psychobiology and physiological psychology (11/E1).

PROFESSIONAL EXPERIENCE

2014 – ongoing **Associate Professor** of Psychobiology and physiological psychology Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona
 2015 **Visiting researcher** Department of Neurology, University of Leipzig (Germany)
 2011 – 2014 **Assistant Professor** of Psychobiology University of Verona
 2009 – 2011 **Research fellow** University of Verona
 2005 – 2008 **Post-doc fellow** University of Verona

EDUCATION

2008 **Visiting researcher** with a *DAAD* fellowship at the Neurophysiology lab, University of Würzburg (Germany) with Prof. Joseph Classen.
 2005 **Ph.D. in Psychological and Psychiatric Sciences**, University of Verona, Italy. Thesis title: *“The body in the brain: Investigating the cortical representation of the body. Evidence from transcranial magnetic stimulation and patients with movement disorder”*. Supervisor: Prof. Salvatore M. Aglioti.
 2004 **Visiting student** with a *Marie-Curie training fellowship*, at the University College of London, UK. Supervisor: Prof. Patrick Haggard, Institute of Cognitive Neuroscience e Department of Psychology, London.
 2002 **License** to practice Psychology, University of Padua, Italy.
 2000 - 2001 **Postgraduate training**, University of Verona, Italy.
 2000 **Degree in Psychology (cum laude)**, University of Padua, Italy. Thesis title: *“Temporal analysis of tactile, visual and cross-modal visuo-tactile stimuli in normal subjects and in patients affected by idiopathic dystonia”*. Supervisor: Prof. Salvatore M. Aglioti.
 1997 **Erasmus Program Scholarship**, University of Würzburg, Germany.

RESEARCH GROUP

Currently my research group includes four post-doc research fellows, one PhD student in Neuroscience, Psychological and Psychiatric Sciences and 5 master students. These persons work at two main lines of research regarding Psychology, Neurology and Sports Science:

- ☞ **Placebo and nocebo effects** on motor performance, investigated with neurophysiology instrumental techniques (EMG, TMS and tDCS).
- ☞ **The sense of the body** and the sense of agency investigated with behavioral approaches and stimulation techniques (tDCS).

AWARDS AND HONORS

2015 Susanne Klein-Vogelbach Prize for research of human movement (CHF 10000)
 2013 Young Investigator award from the Italian Association for Research in Dystonia (€2.000)
 2012 Best Poster Italian Society of Neurology, Rimini, Italy (€500)
 2010 Best poster at the DISOMV-SIN Congress, Verona, Italy (€500)
 2007 David Marsden Award from the European Dystonia Federation to young scientist (€2.500)
 2006 Best poster at the Congress of the Italian Neurology Society, Bari, Italy (€500)
 2006 Cover in *Brain* 2006;129(Pt1)

2004 Best poster at the Touch-Temperature-Pain-Pleasure Meeting, Manchester, UK

SCIENTIFIC COLLABORATIONS – PAST AND PRESENT

University of Maryland School of Nursing and School of Medicine, USA

Department of Neurology, University of Leipzig, Germany

Neuroscience Centre, University of Lyon, France

Department of Neurology, University of Würzburg, Germany

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

FUNDING ID

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 – present member of the committee of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF)

- 2016 – present Society for Interdisciplinary Placebo Studies (SIPS)
- 2015 – present Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF)
- 2010 – present Italian Association of Movement Disorders and Parkinson’s Disease
- 2009 – present Cognitive Neuroscience Society and Federation of European Neuroscience (FENS)
- 2008 – present Italian Neuroscience Society (SINS)

EDITORIAL ACTIVITY

- 2020 – ongoing Review Editor of Cognitive Neuroscience (specialty section of Frontiers in Human Neuroscience)
- 2019 – ongoing Associate Editor of Scientific Reports
- 2017 – ongoing Associate Editor of Movement Disorders (specialty section of Frontiers in Neurology)
- 2016 Recognized Reviewer Status Elsevier Publisher for the Journal Cognition
- 2015 – ongoing Review Editor of Movement Disorders (specialty section of Frontiers in Neurology)
- 2015 Outstanding Reviewer Status Elsevier Publisher for the Journal Neuropsychologia

AD-HOC REFEREE

Brain, Proceedings of the National Academy of Science, NeuroImage, Journal of Neuroscience, Nature Review Neurology, Cerebral Cortex, Neurology, Movement Disorders, Cortex, European Journal of Neuroscience, PlosOne, Neuropsychologia, Neuroscience, Brain and Cognition, Cognitive Affective and Behavioral Neuroscience, Cognitive Neuropsychology, European Journal of Neurology, Experimental Brain Research, Frontiers in Neurology, Journal of Autism Developmental Disorders, Journal of Experimental Psychology: General, Journal of Pain; Neuroscience Letters, Psychiatry Research, Scientific Reports, Current Psychology.

INSTITUTIONAL RESPONSIBILITIES AT THE UNIVERSITY OF VERONA

- 2019-present Member of the teaching commission of the Bachelor in Sport and Exercise Science
- 2016-present Member of the teaching commission of the Bachelor in Physiotherapy
- 2016-2018 Member of the quality commission di Psychological Science for Training and Professional Development
- 2014-present Member of the Erasmus commission of the Bachelor in Sport and Exercise Science
- 2013-present Member of the Department Research commission
- 2013-present Faculty member of the Bachelor in Psychological Science for Training and Professional Development
- 2015-present Faculty member of the PhD program in Neurosciences
- 2011-2015 Faculty member of the PhD program in Human Movement sciences

COMMISSIONS OF TRUST

- 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 Neurosciences Université de Provence Marseille, France
- 2008 Grant review panel member, Health Research Board, Ireland

EVENTS ORGANIZATION AND DISSEMINATION ACTIVITY

- 2019 Member of the scientific committee of the conference: "Functional Motor Disorders: New Advances". Verona.
- 2018 Organizer of the conference: "New advances in Neuromodulation. A window on cognitive and motor functions in the healthy and pathological brain". Verona
- 2018 Speaker at GoTo Science with the talk: "The power of the mind. The placebo effect on the brain and behaviour".
- 2017 Lesson at Kidsuniveristy for the children of the primary school.
- 2016 Lesson at Kidsuniveristy for the children of the primary school.
- 2014 Talk at "*Infinitamente*", a festival of science, Verona.
- 2013 Member of the organizing committee of the Italian Association of Sport Psychology Congress, Verona.
- 2008 Member of the organizing committee of "*CerebralMente*", a cultural event to promote knowledge about Neuroscience in Verona.
- 2007 Organization of the Symposium: "New Advances on Movement Disorders: from genetics to cognitive functions" at the conference of the Italian Neuroscience Society in Verona.
- 2006 Member of the organizing committee. "*CerebralMente 2007*".
- 2004 Organization of the Symposium: "The Body in the Brain" at the conference of the British Psychological Society, Manchester, UK.

ORAL COMMUNICATIONS

- 2019 Talk "*Effetto placebo nella prestazione motoria e sportiva*" at the Opening ceremony for the Master in Clinical Neurosciences, Brescia.
- 2019 Talk "*Effetto placebo e prestazione motoria e sportiva*" at the 10th National conference on Youth, Sport and Mountain, Predazzo (TN).
- 2019 Talk "*Effetti Placebo e Nocebo nella Modulazione del Sistema Motorio*" for the Graduation day, Master in Riabilitazione dei Disordini Muscoloscheletrici, University of Genoa.
- 2019 Congress of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF), "*Physiological bases of placebo and nocebo effects*", Ferrara.
- 2018 Congress of the Italian Society of Neurology, "*Non-invasive brain stimulation and cognition*", Rome.
- 2017 International course on Movement Disorders. "*Motor and behavior response to dopaminergic therapy and placebo*", Verona.
- 2017 European Congress of Psychology, "*Placebo and nocebo effects outside pain*", Amsterdam.
- 2017 Congress of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF), "*Placebo effect and focus of attention as a new strategy to modulate motor performance*", Rome.
- 2016 Congress of the Italian Association for the study of Pain (AISD), "*Cognitive modulation of somatosensory perception*", Rome.
- 2016 Congress of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF), "*The nocebo effect in motor performance. The role of treatment perception and personality traits*", Milan.
- 2016 Liguria Parkinson, "*Neuromodulation (rTMS-tDCS)*", Genova.

- 2014 Italian Society of Neuro-rehabilitation, *“Cognitive aspects in dystonia”*, Genova.
- 2013 Congress of LIMPE/DISMOV, *“Executive functions and attention: which role in motor deficits?”*, Rome.
- 2013 International Workshop on Proprioception, Proprioceptive Dysfunction and Robotic Rehabilitation, *“Proprioceptive dysfunction and the basal ganglia: Focal dystonia”*, Genova.
- 2012 Teaching Course – Update in Parkinson’s Disease, *“Endophenotypes in genetic forms of Parkinson’s Disease”*, Verona.
- 2012 Italian Society of Neurology, *“Enhancing motor performance by suggestion: A behavioural and neurophysiological study on force production”*, Rimini.
- 2011 Italian Society of Neurology, *“The sense of body ownership in dystonia and cerebellar ataxia”*, Torino.
- 2007 European Federation of Neurological Societies, *“Sensory deficits associated to DYT1 gene mutation: endophenotype of dystonia?”*, Bruxelles.
- 2007 Annual meeting of the European Dystonia Federation, *“Involvement of the sensory system in dystonia”*, Vienna.
- 2007 Italian Society of Neurology, *“Impaired movement representation in manifesting and non-manifesting DYT1 carriers. Highlights from mental rotation”*, Firenze.
- 2007 Italian Society of Neuroscience, *“New Advances on Movement Disorders: from genetics to cognitive functions”*, Verona.
- 2006 Italian Society of Neurology, *“Sensory deficits associated to DYT1 gene mutation: endophenotype of dystonia?”*, Bari.
- 2004 Italian Association of Psychology, *“TMS over S1 and visuo-tactile interactions”*, Agrigento.
- 2004 British Psychological Society, *“How does vision of the body modulate tactile perception?”*, Manchester (UK).
- 2003 Italian Society of Neuropsychology, *“Mental rotation of body parts in writer’s cramp”*, Bologna.

LIST OF PUBLICATIONS PEER-REVIEWED

1. **Fiorio M**, Modenese M, Cesari P. The rubber hand illusion in hypnosis provides new insights into the sense of body ownership. *Sci Rep.* 2020 Mar 31;10(1):5706.
2. 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 Nov;23(10):1790-1800.
3. 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 Oct;50(8):3311-3326.
4. Villa-Sánchez B, Emadi Andani M, Menegaldo G, Tinazzi M, **Fiorio M**. Positive verbal suggestion optimizes postural control. *Sci Rep.* 2019 Apr 23;9(1):6408.
5. 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 Mar 27;10:164.
6. 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 Nov 15;13(11):e0207528.

7. 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 Nov 30;13(11):e0208159.
8. Villa-Sánchez B, Emadi Andani M, **Fiorio M**. The role of the dorsolateral prefrontal cortex in the motor placebo effect. *Eur J Neurosci* 2018 Dec;48(11):3410-3425.
9. Colloca L, Corsi N, **Fiorio M**. The interplay of exercise, placebo and nocebo effects on experimental pain. *Sci Rep*. 2018 Oct 3;8(1):14758.
10. **Fiorio M**. Modulation of the Motor System by Placebo and Nocebo Effects. *Int Rev Neurobiol*. 2018;139:297-319.
11. **Fiorio M**, Emadi Andani M, Recchia S, Tinazzi M. Somatosensory temporal discrimination threshold improves after a placebo procedure. *Exp Brain Res* 2018.
12. 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.
13. 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.
14. 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. 2018;8(1):2531.
15. 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.
16. 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.
17. 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 Jul;128(7):1142-1147.
18. 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.
19. 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.
20. 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.
21. Avanzino L, Tinazzi M, Ionta S, **Fiorio M**. Sensory-motor integration in focal dystonia. *Neuropsychologia*. 2015. 79(Pt B):288-300. Review.
22. 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.
23. Avanzino L, **Fiorio M**. Proprioceptive dysfunction in focal dystonia: from experimental evidence to rehabilitation strategies. *Front Hum Neurosci*. 2014;8:1000. Review.
24. 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.

25. 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.
26. **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.
27. **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.
28. **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.
29. **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. *Journal of Cognitive Neuroscience* 2014;26(4):712-21.
30. 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.
31. Van Ulzen NR, **Fiorio M**, Cesari P. Motor resonance evoked by observation of subtle nonverbal behavior. *Social Neuroscience* 2013; 8(4):347-55.
32. 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.
33. 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.
34. 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. *Movement Disorders* 2013;28(3):356-61.
35. 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. *Journal of Neurology* 2013;260(4):1081-6.
36. Pizzolato F, **Fiorio M**, Cesari P. Motor system modulation for movement direction and rotation angle during motor imagery. *Neuroscience* 2012;218:154-160.
37. **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.
38. 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. *Experimental Brain Research* 2012 May;219(1):75-84.
39. Morgante F, Tinazzi M, Squintani G, Martino D, Defazio G, Romito L, Albanese A, Di Matteo A, Quartarone A, Giralda P, **Fiorio M**, Berardelli A. Abnormal tactile temporal discrimination in psychogenic dystonia. *Neurology* 2011;77(12):1191-7.
40. Cesari P, Pizzolato F, **Fiorio M**. Grip-dependent cortico-spinal excitability during grasping imagination and execution. *Neuropsychologia* 2011;49(7):2121-30.
41. **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.

42. **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.
43. **Fiorio M**, Cesari P, Bresciani MC, Tinazzi M. Expertise with pathological actions modulates a viewer's motor system. *Neuroscience* 2010;167(3):691-9.
44. Tinazzi M, **Fiorio M**, Fiaschi A, Bhatia KP. Sensory functions in dystonia: insights from behavioral studies. *Movement Disorders*. 2009;24(10):1427-36.
45. 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.
46. Marceglia S*, **Fiorio M***, Foffani G, Mrakic-Spota 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. *Authorship equivalente.
47. 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.
48. **Fiorio M**, Valente EM, Gambarin M, Bentivoglio AR, Ialongo T, Albanese A, Barone P, Pellicchia MT, Moretto G, Fiaschi A, Tinazzi M. Subclinical sensory abnormalities in unaffected PINK1 heterozygotes. *Journal of Neurology* 2008;255(9):1372-7.
49. **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.
50. **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. *Journal of Neurology Neurosurgery and Psychiatry* 2008;79:796-8.
51. **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.
52. **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.
53. **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.
54. Ionta S, Fourkas AD, **Fiorio M**, Aglioti SM. The influence of hands posture on mental rotation of hands and feet. *Experimental Brain Research* 2007;183:1-7.
55. **Fiorio M**, Tinazzi M, Aglioti SM. Selective impairment of hand mental rotation in patients with focal hand dystonia. *Brain* 2006;129:47-54.
56. 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. *Movement Disorders* 2006;21:1131-5.
57. 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. *Movement Disorders* 2006;21:1782-4.

58. 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. *Experimental Brain Research* 2005;166:184-9.
59. **Fiorio M**, Haggard P. Viewing the body prepares the brain for touch: effects of TMS over somatosensory cortex. *European Journal of Neuroscience* 2005;22:773-7.
60. Tinazzi M, **Fiorio M**, Bertolasi L, Aglioti SM. Timing of tactile and visuo-tactile events is impaired in patients with cervical dystonia. *Journal of Neurology* 2004;251:85-90.
61. Aglioti SM, **Fiorio M**, Forster B, Tinazzi M. Temporal discrimination of cross-modal and unimodal stimuli in generalized dystonia. *Neurology* 2003;60:782-5.
62. **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.
63. 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. *Movement Disorders* 2002;17:333-8.

PUBLICATIONS IN NATIONAL JOURNALS PEER-REVIEWED

1. **Fiorio M**, Tinazzi M. Funzioni sensoriali e cognitive nella distonia idiopatica. *Journal of Neurodegenerative Disorders* 2006;4:15-22.
2. **Fiorio M**, Tinazzi M, Prior M, Aglioti SM. Discriminazione temporale ed integrazione cross-modale visuo-tattile in pazienti distonici. *Giornale Italiano di Psicologia* 2002;2:437-444.

BOOK CHAPTER

1. **Fiorio M**. Modulation of the motor system by placebo and nocebo effects. *Int Rev Neurobiol* 2018. Accepted.
2. Tinazzi M, Gambarin M, **Fiorio M**. Sistema extrapiramidale: funzioni cognitive e comportamento. In: Gambina G, Pasetti C. Introduzione alla malattia di Alzheimer e alle altre demenze. Dalla clinica alla bioetica. Edizioni Cortina (Verona) 2008.

CONFERENCE PROCEEDINGS

1. Peretti A, Fasano A, Bove F, Conte A, Dall'Occhio C, Arbasino C, Defazio G, Fiorio M, Berardelli A, Tinazzi M. Abnormal tactile and proprioceptive temporal discrimination in psychogenic tremor. *European Journal of Neurology* 2014;21:55-55. Supplement: 1. Special Issue: SI. Meeting Abstract: OS2116. ISSN: 1351-5101.
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