Candidatura di Luca Turella al Consiglio Direttivo della SIPF per il biennio 2023-2025

Vedo la mia candidatura per il Direttivo come la volontà di partecipare più attivamente all'organizzazione delle attività della Società. Il mio background come neuroscienzato cognitivo è comune a molti membri della SIPF e quindi penso di poter rappresentare le idee e le proposte di molti miei colleghi al meglio. In questo senso, porterò avanti proposte che rafforzino la presenza di questi aspetti nelle attività che verranno portate avanti dalla Società.

Cordiali saluti.

Luca

Luca Turella

CURRICULUM VITAE

WORKING EXPERIENCE

2022- Present	**Associate Professor,** Center for Mind/Brain Sciences (CIMeC), University of Trento, Italy.
2019 - 2022	**Tenured Assistant Professor (Researcher type B)**, CIMeC, University of Trento, Italy.
2014 - 2019	**Assistant Professor (funded by FIRB 2013 grant)**, CIMeC, University of Trento, Italy.
2014 - Present	**PI of Motor Control Group**, CIMeC, University of Trento, Italy.
2012 - 2014	**Post-doc**, CIMeC, University of Trento, Italy.
2011 - 2012	**Post-doc,** Department of Robotics, Brain and Cognitive Sciences, Italian Institute of Technology (IIT), Italy.
2010 - 2011	**Post-doc,** Department of Biomedical Sciences, University of Ferrara, Italy.
2006	**Research Assistant,** Department of Psychology, University of Padova, Italy.

EDUCATION

2007 - 2010	**PhD student (funded by Fondazione Cariparo),** University of Padova, Italy.
2007 - 2008	**Visiting PhD Student,** Department of Neuroradiology, University of Tübingen, Germany.
2005	**MSc in Experimental Psychology,** Department of Psychology, University of Padova, Italy.
2003	**BA in Psychological Sciences,** Department of Psychology, University of Padova, Italy.

Group webpage: Link **Researchgate webpage:** Link

ORCID ID: 0000-0003-1096-2150 **Scopus ID:** 15520235500 **Researcher ID:** AAB-2327-2019

PERSONAL STATEMENT

Throughout my academic career, my core interest has been the understanding of **the functioning of the fronto-parietal "motor" system in healthy participants and in patients** (multiple sclerosis, stroke, brain tumour, Parkinson). During my PhD, I focused my interest on investigating the possible role of action representations in understanding other people's intentions. I realised that we know more about how our brain encodes other people's actions than about how we decide and choose our interactions with the environment. Therefore, understanding the neural basis of our own and others' action representations has been my research path as a postdoctoral researcher and as Principal Investigator (PI). I became a PI at CIMeC and started my "Motor Control" group in 2014, when I was awarded the FIRB 2013 grant. Moreover, I was the local coordinator of the research unit based at the University of Trento within the "Perceptual Awareness" ERC Advanced Grant 2013 (PI: Carlo Marzi).

Two main ideas have guided my research experience to this point. I am convinced that cognition can be fully understood only by considering its aim, i.e. producing intelligent and adaptive behaviour. Moreover, the only way to understand the neural substrates of higher cognitive functions is through a multi-method approach (behaviour, EMG, kinematics, fMRI, MEG/EEG, neurostimulation) exploiting advanced analytical methods (MVPA, RSA, connectivity).

My scientific aim has been to obtain crucial insights (i) on the normal organization of the motor system, (ii) on its role in high order cognitive functions and (iii) on the reorganization mechanisms which may occur after brain damage, paving the way for new treatments of motor deficits, as a basis for the development of novel neuro-prosthetics and rehabilitation systems.

RESEARCH INTERESTS

Action, Perception, Motor control, Action Observation, Imagery, Motor Learning, Neuroimaging, Neurostimulation, Neuroplasticity, Neurophysiology, Brain Tumour, Parkinson, Physical Activity, Ageing.

BIBLIOMETRIC INDICES (August 2023)

Source: Google Scholar. Total citations: >2100. h-index: 18 (Link).
Source: Scopus. Total citations: >1300. h-index: 16 (Link).

PUBLICATIONS (*Joint first authorship)

Accepted for publication.

37) Rabini, G., Funghi, G., Meli, C., Pierotti, E., Saviola, F., Jovicich, J., Dodich, A., Papagno, C. **Turella, L.** (in press). Functional alterations in resting-state networks for Theory of Mind in Parkinson's Disease. *European Journal of Neuroscience.*

36) Rabini, G., Pierotti, E., Meli, C., Dodich, A., Papagno, C. **Turella, L.** (in press). Connectome-based fingerprint of motor impairment is stable along the course of Parkinson's disease. *Cerebral Cortex.*

35) Dodich, A., Funghi, G., Meli, C., Pennacchio, M., Longo, C., Malaguti, M.C., Di Giacopo, R., Zappini, F., **Turella, L.**, Papagno, C. (2022). Deficits in emotion recognition and theory of mind in Parkinson's Disease patients with and without cognitive impairments. *Frontiers in Psychology.*

34) Falla, M., Dodich, A., Papagno, C., Gober, A. Narduzzi, P., Pierotti, E., Falk, M., Zappini, F., Colosimo, C., **Turella, L.** (2021). Lockdown effects on Parkinson's disease during COVID-19 pandemic: a pilot study (2021). *Acta Neurologica Belgica* 121(5):1191-1198.

33) Charroud, C. & **Turella, L.** (2021). Subcortical grey matter changes associated with motor symptoms evaluated by the Unified Parkinson's Disease Rating Scale III Score: a longitudinal study in Parkinson's Disease. *Neuroimage Clinical* 31, 102745.

32) Ragni, F., Lingnau A., & **Turella, L.** (2021). Decoding category and familiarity information during visual imagery. *Neuroimage* 241, 118428.

31) Malfatti, G. & **Turella, L.** (2021). Neural encoding and functional interactions underlying pantomimed movements. *Brain Structure and Function.*

30) Dodich, A., Papagno, C., **Turella, L.**, Meli, C., Zappini, F., Narduzzi, P., Gober, A., Pierotti, E., & Falla, M. (2021). The role of social cognition abilities in Parkinson's Disease in the era of COVID-19 emergency: an exploratory study. *Frontiers in Psychology.*

29) Monaco, S., Malfatti, G., Cattaneo, L., Culham, J.C., & **Turella, L.** (2020). Decoding motor imagery and action planning in the early visual cortex: overlapping but distinct neural mechanisms. *Neuroimage* 218, 116981.

28) Botvinik-Nezer, R., ..., **Turella, L.**, ..., Nichols, T., Poldrack, R. & Schonberg, T. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature.* DOI: 10.1038/s41586-020-2314-9

27) **Turella, L.**, Rumiati, R., & Lingnau, A. (2020). Hierarchical action encoding within the human brain. *Cerebral Cortex* 30, 2924-2938.

26) Monaco, S., Malfatti G., Zendron, A., Pellencin, E., & **Turella, L.** (2019). Predictive coding of action intentions in dorsal and ventral visual stream is based on visual anticipations, memory-based information and motor preparation. *Brain Structure and Function,* 224(9):3291-3308.

25) Bilalić, M., Lindig, T., **Turella, L.** (2019). Parsing Rooms – The Role of the PPA and RSC in Perceiving Object Relations and Spatial Layout. *Brain Structure and Function,* 224: 2505-2524.

24) Papale, P., Betta, M., Handjaras, G., Malfatti, G., Rampinini, A.C., Cecchetti, L., Pietrini, P., Ricciardi, E., **Turella, L.**, Leo, A. (2019). Common spatiotemporal processing of visual features shapes object representation. *Scientific Reports, 9: 7601.*

23)Cattaneo, L., Veroni, V., Boria, S., Tassinari, G., **Turella, L.** (2018). Sex differences in rapid facial reactions to affective displays in 7-10 years old typically-developing children. *Frontiers in Integrative Neuroscience,* 12: 19.

22)Ius, T., **Turella, L.**, Pauletto, G., Maieron, M., D'Agostini, S., Isola, M., Sciacca, G., Budai, R., Eleopra, R., & Skrap, M. (2017). Quantitative Diffusion Tensor Imaging Analysis in Low Grade Gliomas: from pre-clinical application to patient care. *World Neurosurgery, 97:* 333-343.

21)Rembado, I., Castagnola, E., **Turella, L.**, Ius, T., Budai, R., Ansaldo, A., Angotzi, G.N., de Bertoldi, F., Ricci, D., Skrap, M., & Fadiga, L. (2017). Independent component decomposition of human micro-ecog somatosensory evoked potentials. *International Journal of Neural Systems,* 27: 1650052. *http://dx.doi.org/10.1142/S0129065716500520*

20)**Turella, L.**, Tucciarelli, R., Oosterhof, N.N., Weisz, N., Rumiati, R., & Lingnau, A. (2016). Beta band modulations underlie action representations for movement planning. *Neuroimage*, 136: 197-207.

19)Tucciarelli, R., **Turella, L.**, Oosterhof, N.N., Weisz, N., & Lingnau, A. (2015). MEG multivariate analysis reveals early abstract action representations in lateral occipitotemporal cortex. *Journal of Neuroscience,* 35:16034 –16045.

18)Bilalić, M., Langner, R., Campitelli, G., **Turella, L.**, & Grodd, W. (2015). Neural Implementation of Expertise. *Frontiers in Human Neuroscience,* 9: 545.

17)Garbarini, F.*, **Turella, L.***, Rabuffetti, M., Cantagallo, A., Piedimonte, A., Fainardi, E., Berti, A., & Fadiga, L. (2015). Bimanual non-congruent actions in motor neglect syndrome: a combined behavioural/fMRI study. *Frontiers in Human Neuroscience*, 9:541.

16)Ius, T., Pauletto, G., Cesselli, D., Isola, M., **Turella, L.**, Budai, R., De Maglio, G., Eleopra, R., Fadiga, L., Lettieri, C., Pizzolitto, S., Beltrami, C.A, & Skrap, M. (2015). Second Surgery in Insular Low Grade Gliomas. *BioMed Research International,* 2015:497610.

15)**Turella, L.**, & Lingnau, A. (2014). Neural correlates of grasping. *Frontiers in Human Neuroscience* 8, 686.

14)**Turella, L.,** Wurm, M.F., Tucciarelli, R., & Lingnau, A. (2013). Expertise in action observation: recent neuroimaging findings and future perspectives. *Frontiers in Human Neuroscience* 7, 637.

13)Franca, M.*, **Turella, L.***, Canto, R., Brunelli, N., Allione, L., Andreasi, N.G., Desantis, M., Marzoli, D., & Fadiga L. (2012). Corticospinal facilitation during observation of graspable objects: a transcranial magnetic stimulation study. *PLoS One* 7, e49025.

12)Bilalić, M., **Turella, L.**, Campitelli, G., Erb, M., & Grodd, W. (2012). Expertise modulates the neural basis of context dependent recognition of objects and their relations. *Human Brain Mapping* 33, 2728-40.

11)**Turella, L.**, Tubaldi, F., Erb, M., Grodd, W., & Castiello, U. (2012). Object presence modulates activity within the somatosensory component of the action observation network. *Cerebral Cortex* 22, 668-79.

10)Tubaldi, F., **Turella, L.**, Pierno, A.C., Grodd, W., Tirindelli, R., & Castiello, U. (2011). Smelling odors, understanding actions. *Social Neuroscience* 6, 31-47.

9)**Turella, L.**, Erb, M., Grodd, W., & Castiello, U. (2009). Visual features of an observed agent do not modulate human brain activity during action observation. *NeuroImage* 46, 844-53.

8)Pierno, A.C., **Turella, L.**, Grossi, P., Tubaldi, F., Calabrese, M., Perini, P., Barachino, L., Morra, A., Gallo, P., & Castiello, U. (2009). Investigation of the neural correlates underlying action observation in multiple sclerosis patients. *Experimental Neurology* 217, 252-7.

7)**Turella, L.**, Pierno, A.C., Tubaldi, F., & Castiello, U. (2009). Mirror neurons in humans: Consisting or confounding evidence? *Brain & Language* 108, 10-21.

6)Pierno, A.C., Tubaldi, F., **Turella, L.**, Grossi, P., Barachino, L., Gallo, P., & Castiello, U. (2009). Neurofunctional modulation of brain regions by the observation of pointing and grasping actions. *Cerebral Cortex* 19, 367-374.

5)Pierno, A.C., Becchio, C., **Turella, L.**, Tubaldi, F., & Castiello, U. (2008). Observing social interactions: The effect of gaze. *Social Neuroscience* 3, 51-59.

4)Pierno, A.C., Becchio, C., Tubaldi, F., **Turella, L.**, & Castiello, U. (2008). Motor ontology in representing gaze-object relations. *Neuroscience Letters* 430, 246-251.

3)Ansuini, C., Giosa, L., **Turella, L.**, Altoè, G. & Castiello, U. (2008). An object for an action, the same object for other actions: effects on hand shaping. *Experimental Brain Research* 185, 111-119.

2)Ansuini, C., Tognin, V., **Turella, L.,** & Castiello, U. (2007). Distractor objects affect fingers' distances but not fingers' shaping during grasping. *Experimental Brain Research* 178, 194-205.

1)Pierno, A.C., Becchio, C., Wall, M.B., Smith, A.T., **Turella, L.**, & Castiello, U. (2006). When gaze turns into grasp. *Journal of Cognitive Neuroscience* 18, 2130-2137.

EDITORIAL AND REVIEWING ACTIVITIES

Review Editor for the Editorial Board of Frontiers in Integrative Neuroscience.

Associate Guest Editor for the special Research Topic of "Neural Implementations of Expertise" in Frontiers in Human Neuroscience (ResearchTopicLink). More than 250k views.

Ad hoc reviewer with more than 75 certified reviews for the following Journals (see my profile on Web of Science, https://www.webofscience.com/wos/author/record/1875754): Brain & Cognition, Brain Structure & Function, Cerebral Cortex, Communications Biology, eLife, European Journal of Neuroscience, Experimental Brain Research, Frontiers in Aging Neuroscience, Frontiers in Behavioural Neuroscience, Frontiers in Human Neuroscience, Frontiers in Integrative Neuroscience, Frontiers in Psychology, Journal of Neuroscience, Journal of Neurophysiology, Human Movement Science, NeuroImage, Neuropsychologia, Neuroscience, Neuroscience Letters, Plos One, Proceedings of the National Academy of Sciences (PNAS), Psychophysiology, Science Advances, Scientific Reports, Social and Cognitive Neuroscience (SCAN), Social Neuroscience.

Ad hoc reviewer for book publication: Cambridge University Press.

Ad hoc reviewer for funding agencies: Austrian Central Bank (OeNB Anniversary Fund), Italian Ministry of Research (MIUR), Dutch Research Council (NWO).

Ad hoc reviewer for PhD Thesis evaluation: University of Ferrara, University of Padua, Italian Institute of Technology, University of Milan (Statale), University of Verona, IMT Alti Studi Lucca.

Ad hoc reviewer for abstract evaluation: World Congress of Psychophysiology, Organization of Human Brain Mapping (OHBM).