

## *CURRICULUMVITAE ET STUDIORUM*

# GAETANO TIERI

**Gaetano Tieri**, Phd in Cognitive and Social Neuroscience; Department of Psychology, University of Rome La Sapienza, Italy. He is an expert in exploring behavioral, physiological and neurophysiological activities by means of Immersive Virtual Reality and conducts research at 1) Virtual reality Lab at Unitelma Sapienza of Rome; 2) at the IRCCS Santa Lucia Foundation, Rome and 3) Social Cognitive and Affective Neuroscience Laboratory at the Department of Psychology, Sapienza University of Rome, head Prof. S.M. Aglioti. He is also expert in developing and programming virtual environments for educational proposal in the fields of Psychology and Neuroscience. Since 2019, He is the head of the Virtual Reality Lab at Unitelma Sapienza of Rome.

### **Bibliometric Indexes**

Scholar Google: <https://scholar.google.com/citations?user=Kid3Z08AAAAJ&hl=it>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=37035246500>

ORCID: <https://orcid.org/0000-0002-3037-0526>

### **EDUCATION**

<b>2011 – 2014</b>	PhD in Cognitive Social and Affective Neuroscience, SCN; Department of Psychology, University of Rome La Sapienza, Italy.
<b>2010</b>	Master Degree in “Cognitive Psychology”. Faculty of Psychology, University “G. d’Annunzio”, Chieti.
<b>2008</b>	Bachelor Degree in “Science and Psychological techniques”. Faculty of Psychology, University “G. d’Annunzio”, Chieti.
<b>2003</b>	High school specializing in a technical education: Electronics and automatic systems. Istituto tecnico industriale statale ITIS “Leonardo Da Vinci”, Lanciano (CH)

### **PROFESSIONAL EXPERIENCE**

<b>From 2019</b>	Head of Virtual Reality Laboratory at Unitelma Sapienza of Rome.
<b>From 2018</b>	Assistant Professor (SDD M-PSI/01) at Unitelma Sapienza of Rome.
<b>2016 – 2018</b>	Senior Postdoc Fellow at Unitelma Sapienza of Rome.
<b>2014 – 2016</b>	Senior Postdoc Fellow at Santa Lucia Foundation, IRCCS, Rome.
<b>Sept 2017 from April 2010</b>	Research Activity with immersive virtual reality in applied neuroscience at Braintrends I.t.d. Rome, Italy.
<b>Oct 2011</b>	Brain Computer Interface Training in g.Tec laboratory, Sierningstrass, Austria.
<b>Aprile 2011 from Dic 2010</b>	Training in Immersive Virtual Reality and devices. PERCRO laboratory, Scuola Superiore Sant’Anna, Pisa, Italy.
<b>Dic 2010 from Sept 2008</b>	Research Activity on Space and Action in Virtual Reality, Neuropsychology laboratory ITAB, Chieti, Italy

**Jun 2007** | Research internship on Effect of senuclein in Parkinson. Consortium Mario  
**from Jan 2007** | Negri Sud, Lanciano, Italy.

## NATIONAL QUALIFICATION (“abilitazione scientifica nazionale”)

- Associate Professor – SC: 11/E1 – Bando D.D. 153/2016 – from Nov. 2018 to Nov. 2024

## PUBLICATIONS

- 2020** Fossataro, C., Sebastiano, A. R., Tieri, G., Poles, K., Galigani, M., Pyasik, M., ... & Garbarini, F. (2020). Immersive virtual reality reveals that visuo-proprioceptive discrepancy enlarges the hand-centred peripersonal space. *Neuropsychologia*, 146, 107540. <https://doi.org/10.1016/j.neuropsychologia.2020.107540>
- 2020** Fusco, G., **Tieri, G.**, & Aglioti, S. M. (2020). Visual feedback from a virtual body modulates motor illusion induced by tendon vibration. *Psychological Research*. <https://doi.org/10.1007/s00426-020-01366-5> \*First Co-author
- 2020** Pyasik, M., **Tieri, G.**, & Pia, L. (2020). Visual appearance of the virtual hand affects embodiment in the virtual hand illusion. *Scientific Reports*, 10(1), 5412. <https://doi.org/10.1038/s41598-020-62394-0>
- 2020** Moreau, Q., Candidi, M., Era, V., **Tieri, G.**, & Aglioti, S. M. (2020). Midline frontal and occipito-temporal activity during error monitoring in dyadic motor interactions. *Cortex*, 127, 131–149. <https://doi.org/10.1016/j.cortex.2020.01.020>
- 2020** Monti, A., Porciello, G., **Tieri, G.**, & Aglioti, S. M. (2020). The “embreathment” illusion highlights the role of breathing in corporeal awareness. *Journal of Neurophysiology*, 123(1), 420–427. <https://doi.org/10.1152/jn.00617.2019>
- 2020** D’Antonio, E., **Tieri, G.**, Patané, F., Morone, G., & Iosa, M. (2020). Stable or able? Effect of virtual reality stimulation on static balance of post-stroke patients and healthy subjects. *Human Movement Science*, 70(January), 102569. <https://doi.org/10.1016/j.humov.2020.102569>
- 2020** Provenzano, Porciello, Ciccarone, Lenggenhager, **Tieri**, Marucci, ... Bufalari. (2020). Characterizing Body Image Distortion and Bodily Self-Plasticity in Anorexia Nervosa via Visuo-Tactile Stimulation in Virtual Reality. *Journal of Clinical Medicine*, 9(1), 98. <https://doi.org/10.3390/jcm9010098>
- 2019** Fossataro, C., **Tieri, G.\***, Grollero, D., Bruno, V., & Garbarini, F. (2019). Hand blink reflex in virtual reality: the role of vision and proprioception in modulating defensive responses. *European Journal of Neuroscience*. <http://publons.com/publon/10.1111/EJN.14601>. \*First Co-author
- 2019** Scandola, M., Togni, R., **Tieri, G.**, Avesani, R., Brambilla, M., Aglioti, S. M., & Moro, V. (2019). Embodying their own wheelchair modifies extrapersonal space perception in people with spinal cord injury. <https://doi.org/10.1007/s00221-019-05618-8>
- 2019** Gandolfo, M., Era, V., **Tieri, G.**, Maria, L., & Candidi, M. (2019). Interactor’s body shape does not affect visuo-motor interference effects during motor coordination. *Acta Psychologica*, 196(April), 42–50. <https://doi.org/10.1016/j.actpsy.2019.04.003>
- 2019** Castellano, R., Mancinelli, M., Ponsi, G., & **Tieri, G.** (2019). What if versus probabilistic scenarios: a neuroscientific analysis. *Annals of Operations Research*, (0123456789). <https://doi.org/10.1007/s10479-019-03272-5>
- 2019** Fusaro, M., **Tieri, G.\***, & Aglioti, S. M. (2019). Influence of cognitive stance and physical perspective on subjective and autonomic reactivity to observed pain and pleasure: An immersive virtual reality study. *Consciousness and Cognition*, 67(November 2018), 86–97. <https://doi.org/10.1016/j.concog.2018.11.010>. \*First Co-author
- 2018** **Tieri, G.**, Morone, G., Paolucci, S., & Iosa, M. (2018). Virtual reality in cognitive and motor rehabilitation: facts, fiction and fallacies. *Expert Review of Medical Devices*, 15(2), 107–117. <https://doi.org/10.1080/17434440.2018.1425613>

- 2018 Sacheli, L. M., **Tieri, G.**, Aglioti, S. M., & Candidi, M. (2018). Transitory Inhibition of the Left Anterior Intraparietal Sulcus Impairs Joint Actions: A Continuous Theta-Burst Stimulation Study. *Journal of Cognitive Neuroscience*, 26(3), 1–16. [https://doi.org/10.1162/jocn\\_a\\_01227](https://doi.org/10.1162/jocn_a_01227)
- 2018 D'Antonio E., **Tieri G.**, Paolucci S., Patanè F., Iosa M. (2019) Postural Sway Responses to 3D Virtual Dynamic Visual Stimulation in Post-stroke patients. In: Masia L., Micera S., Akay M., Pons J. (eds) *Converging Clinical and Engineering Research on Neurorehabilitation III. ICNR 2018. Biosystems & Biorobotics*, vol 21. Springer, Cham
- 2017 Spinelli, G., **Tieri, G.**, Pavone, E. F., & Aglioti, S. M. (2017). Wronger than wrong: Graded mapping of the errors of an avatar in the performance monitoring system of the onlooker. *NeuroImage*, 167(August 2017), 1–10. <https://doi.org/10.1016/j.neuroimage.2017.11.019>
- 2017 Candidi, M., Sacheli, L., Era, V., Canzano, L., **Tieri, G.**, Aglioti, S.M. (2017) Come together: human-avatar on-line interactions boost joint-action performance in apraxic patients. *Social Cognitive and Affective Neuroscience*, nsx114, <https://doi.org/10.1093/scan/nsx114>
- 2017 **Tieri, G.**, Gioia, A., Scandola, M., Pavone, E. F., & Aglioti, S. M. (2017). Visual appearance of a virtual upper limb modulates the temperature of the real hand: a thermal imaging study in Immersive Virtual Reality. *European Journal of Neuroscience*, 1–11. <https://doi.org/10.1111/ejn.13545>
- 2016 Fusaro, M., **Tieri, G.\***, & Aglioti, S. M. (2016). Seeing pain and pleasure on self and others: behavioral and psychophysiological reactivity in immersive virtual reality. *Journal of Neurophysiology*, 116(6), 2656–2662. <https://doi.org/10.1152/jn.00489.2016>. \*First Co-author
- 2016 Pavone, E. F., **Tieri, G.**, Rizza, G., Tidoni, E., Grisoni, L., & Aglioti, S. M. (2016). Embodying Others in Immersive Virtual Reality: Electro-Cortical Signatures of Monitoring the Errors in the Actions of an Avatar Seen from a First-Person Perspective. *Journal of Neuroscience*, 36(2), 268–279. <http://doi.org/10.1523/JNEUROSCI.0494-15.2016>
- 2016 Jelić, A., **Tieri, G.**, De Matteis, F., Babiloni, F., & Vecchiato, G. (2016). The Enactive Approach to Architectural Experience: A Neurophysiological Perspective on Embodiment, Motivation, and Affordances. *Frontiers in Psychology*, 7(March), 1–20. <http://doi.org/10.3389/fpsyg.2016.00481>
- 2015 **Tieri, G.**, Tidoni, E., Pavone, E. F., & Aglioti, S. M. (2015). Body visual discontinuity affects feeling of ownership and skin conductance responses. *Scientific Reports*, 5, 17139. <http://doi.org/10.1038/srep17139>
- 2015 Vecchiato, G., Jelic, A., **Tieri, G.**, Maglione, A. G., De Matteis, F., & Babiloni, F. (2015). Neurophysiological correlates of embodiment and motivational factors during the perception of virtual architectural environments. *Cognitive Processing*, 3–7. <http://doi.org/10.1007/s10339-015-0725-6>
- 2015 Tidoni, E., **Tieri, G.**, & Aglioti, S. M. (2015). Re-establishing the disrupted sensorimotor loop in deafferented and deafferented people. The case of spinal cord injuries. *Neuropsychologia*, 1–9. <http://doi.org/10.1016/j.neuropsychologia.2015.06.029>
- 2015 **Tieri, G.**, Tidoni, E., Pavone, E. F., & Aglioti, S. M. (2015). Mere observation of body discontinuity affects perceived ownership and vicarious agency over a virtual hand. *Experimental Brain Research*. <http://doi.org/10.1007/s00221-015-4202-3>
- 2015 Vecchiato, G., **Tieri, G.**, Jelic, A., Maglione, A. G., De Matteis, F., & Babiloni, F. (2015). Electroencephalographic Correlates of Sensorimotor Integration and Embodiment during the Appreciation of Virtual Architectural Environments. *Frontiers in Neuroscience*, 16(S1), 425–429. <http://doi.org/10.3389/fpsyg.2015.01944>
- 2010 Costantini, M., Ambrosini, E., **Tieri, G.**, Sinigaglia C., Committeri, G. (2010). Where does an object trigger an action? An investigation about affordances in space. *Experimental Brain Research*, 95–103. <http://doi.org/10.1007/s00221-010-2435-8>

## MANUSCRITP UNDER REVIEW/IN PRESS

- 2020 Casula E., **Tieri G.**, Pezzetta R., Maiella M., Pavone E.F., Aglioti S.M., Koch G. Feeling of ownership of an embodied avatar' limb brings about fast changes of fronto-parietal cortical dynamics
- 2020 Fusaro M., Lisi M., **Tieri G.**, Aglioti S.M., Heterosexual, gay, and lesbian people's reactivity to virtual caresses on their embodied avatars' taboo zones

## INVITED TALKS

- 2019 Cervello reale e corpo virtuale: la realtà virtuale come nuovo strumento per la neuro-riabilitazione e le neuroscienze, *Conference "Quale tecnologia per quale riabilitazione 2th edition"*. Ospedale Pediatrico Bambino Gesù, Rome, Italy.

- 2019** Cervelli Reali in Corpi Virtuali: nuove frontiere per lo studio del nostro cervello attraverso la realtà virtuale. *Spazio Roma Fotografia. Sguardi umani dal cosmo alla realtà virtuale, 2019*, Roma, Italy.
- 2019** Comprendere il cervello attraverso la realtà virtuale: nuove frontiere per la ricerca in psicologia e neuroscienza. *Virtual Reality Experience VRE Fest 2019*, Roma, Italy.
- 2019** Immersive learning for financial literacy: new virtual reality based approach for children. *International Workshop on Higher Education Learning Methodologies and Technologies Online*, Novedrate (CO), Italy.
- 2019** Embodying virtual body through passive observation: behavioural and physiological evidence. *International symposium: Virtual and Robotic Embodiment – from neuroscience to virtual reality and robotics*, Barcelona University, Spain.
- 2019** Vicarious experience of Social and Intimate touch in virtual reality: behavioural and physiological evidence. *Seminar*, Verona University, Italy.
- 2018** Wearing my virtual body: Immersive virtual reality studies of embodiment and their implications for rehabilitation. *XXVI Congresso Nazionale della Società Italiana di Psicofisiologia*, Turin, Italy.
- 2018** Investigating Social Motor behaviours through Virtual Reality: from human's to avatar's kinematics. *International Conference of Spatial Cognition 2018*, Sapienza University, Rome.
- 2018** Wearing my virtual body: behavioural, physiological and neural reactivities elicited by an embodied virtual avatar, *First Joint Congress of the SEPEX, SEPNECA and AIP experimental*, Madrid, Spain.
- 2018** Risposte reali a carenze virtuali: Indagine neuroscientifica attraverso la realtà virtuale immersiva, *1th edition of "NeuroSpritz"*, Roma, Italy.
- 2017** Behavioural and physiological reactivity to the observation of Pain and Pleasure in virtual reality, *6TH Scientific Meeting of the Federation of the European Societies of Neuropsychology (FESN)*, Maastricht, The Netherlands.
- 2016** Cervello reale e corpo virtuale: la realtà virtuale come strumento per le neuroscienze, *Conference "Quale tecnologia per quale riabilitazione"*. Ospedale Pediatrico Bambino Gesù, Rome, Italy.
- 2016** Controllo corporeo e cerebrale delle azioni di un avatar: studi di EEG e realtà virtuale immersiva. *2th Conference of SCI-Research Group*. IRCCS Fondazione Santa Lucia, Rome, Italy.
- 2015** Wearing my virtual body: behavioral, physiological and neural reactivity to the physical appearance and to the actions of an embodied avatar. *7th Conference of Lithuanian Neuroscience Association*. Vilnius University, Vilnius, Lituania.
- 2015** Skin temperature modulations underlying the feeling of ownership over a virtual hand, *XXIII Congresso Nazionale della Società Italiana di Psicofisiologia*, Lucca, Italy.
- 2015** Il cervello reale e il suo corpo virtuale, *1th edition of Pint of Science Italy*, Rome, Italy.
- 2014** Neuroscienze e Realtà Virtuale, *Conference*, La Sapienza University, Roma, Italy.
- 2014** Realtà Virtuale Immersiva: un nuovo strumento di indagine per le Neuroscienze, *Conference*, La Sapienza University, Roma, Italy.
- 2014** Body visual discontinuity affects feeling of ownership and skin conductance responses. *International VERE Phd symposium*, Barcelona University, Spain.
- 2012** Off-line EEG and BCI studies of motor imagery and real grasps in a tetraplegic patient and healthy controls, *International VERE meeting*, IDC institute Herzliya, Israel.

## POSTER PRESENTATION

- 2016** Active control of a virtual arm as a proxy to embodiment and action monitoring in people with spinal cord injury: An EEG study in immersive virtual reality. *XXIV Congresso Nazionale della Società Italiana di Psicofisiologia*, Milano, Italy.
- 2016** Visual perspective changes subjective and psychophysiological reactivity to the virtual pain and pleasure on self and others. *XXIV Congresso Nazionale della Società Italiana di Psicofisiologia*, Milano, Italy.
- 2014** Body visual discontinuity affects feeling of ownership and skin conductance responses. *VERE Phd symposium*, Barcelona University, Spain.

- 2014 Combination of EEG and immersive virtual reality to explore the embodiment of avatars and of their errors". *London Virtual Social Interaction Workshop*, institute of Cognitive Neuroscience, UCL, London, UK.
- 2013 Fast-Muscle contraction as a proxy to embodiment and BCI-control in Tetraplegia: An EEG study in Immersive Virtual Reality. *International VERE Meeting 2013*, Scuola Superiore Sant'Anna, Pisa, Italy.
- 2012 Brain Monitoring of erroneous actions performed by an avatar: EEG study in Immersive Virtual Reality" *International Conference of Spatial Cognition 2012*, Sapienza University, Rome.
- 2012 Brain Monitoring of erroneous actions performed by an avatar: EEG study in Immersive Virtual Reality. *International VERE Meeting 2012*, Barcelona University, Spain.

## TEACHING

- 2019 Course "Psicologia delle relazioni in ambito lavorativo" (20 hours), Master Organizzazione e Gestione delle risorse umane. Università degli Studi di Roma Unitelma Sapienza.
- 2019 Course "Psicologia Sociale e Forense" (32 hours), Corso di laurea triennale Organizzazione, Sicurezza e Investigazioni, Curriculum B. Università degli Studi di Roma Unitelma Sapienza.
- 2019 Seminar: "Realtà Virtuale Immersiva: strumento innovativo per la ricerca psicologica e neuroscientifica", G. d'Annunzio University, Chieti, Italy.
- 2019 Course: "II° edizione corso di Realtà Virtuale Immersiva: uno strumento innovativo per la ricerca psicologica, economica, sociale, educativa e neuroscientifica" (40 hours), Unitelma Sapienza di Roma, Rome, Italy.
- 2019 Realtà Virtuale Immersiva: nuove prospettive per le riabilitazioni delle alterazione del sistema visivo, *Lecture*, IRCCS Santa Lucia Foundation, Rome, Italy.
- 2019 Workshop: "Scoprire come funziona il nostro cervello attraverso la realtà virtuale immersiva": nuove frontiere per la ricerca scientifica (2 days), Roma Video Game Lab, Studi di Cinecittà, Rome, Italy.
- 2019 Course: "Realtà Virtuale Immersiva: uno strumento innovativo per la ricerca psicologica, economica, sociale, educativa e neuroscientifica" (40 hours), Unitelma Sapienza di Roma, Rome, Italy.
- 2019 Course: "Psicologia delle relazioni in ambito lavorativo" (6 hours), Unitelma Sapienza di Roma, Rome, Italy.
- 2019 New Methods for psychological and neuroscientific research: the case of Virtual Reality, *Lecture*, La Sapienza University, Rome, Italy.
- 2018 Course: "Realtà Virtuale Immersiva: uno strumento innovativo per la ricerca psicologica, economica, sociale, educativa e neuroscientifica" (40 hours), Unitelma Sapienza di Roma, Rome, Italy.
- 2018 Virtual Reality as a new tool for Neuroscientists, *Lecture*, La Sapienza University, Rome, Italy.
- 2017 Alternanza-Scuola Lavoro: Virtual Reality for Psychology and Neuroscience. La Sapienza University, Rome, Italy.
- 2017 Virtual Reality, bodily control and brain computer interface, *Lecture*, La Sapienza University, Rome, Italy.
- 2016 Virtual Reality and Body Awareness, *Lecture*, La Sapienza University, Rome, Italy.
- 2015 Virtual Reality as a new tool for Neuroscientists, *Lecture*, La Sapienza University, Rome, Italy.
- 2015 Realtà Virtuale Immersiva: nuove frontiere della Neuroscienza, *Lecture*, G. d'Annunzio University, Chieti, Italy.
- 2013 Neuroscienze e Realtà Virtuale, *Lecture*, G. d'Annunzio University, Chieti, Italy.

## AWARDS

- 2018 **Bando di Ricerca di Ateneo 2018 Unitelma Sapienza**– "Scavo archeologico a Gortina (Creta, Grecia), area a nord del Pretorio. Studio per l'elaborazione di un nuovo modello di didattica interattiva" Member of the Reserch Unit (PI: Rita Sassu).

- 2018** **Bando di Ricerca di Ateneo 2018 Unitelma Sapienza**– “Financial Literacy and Neuroscientific Investigation.” Member of the Reserch Unit (PI: Rosella Castellano).
- 2017** **Young Researcher** – “Promoting the recovery of higher-order motor functions in brain damaged patients. A novel approach based on the combination of virtual reality and non-invasive brain stimulation.” Role Co-PI (GR-2016-02361008; PI: CANDIDI Matteo).
- 2016** **BIAL Foundation Research Grant** (2016-2017) - "Virtual bodies, real empathy: behavioural, bodily, and neural reactivity to the observation of Pain and Pleasure on self and others in immersive virtual reality", Role PI (Num. 218/16)
- 2015** **MOTO, the embodied reMOte Tower** (2016-2018) - "High Performing Airport Operations - Improved Visualisation and Awareness". Member of the Reserch Unit (ER-06-2015; PI: POZZI Simone).
- 2014** **Best Abstract Award** - Body visual discontinuity affects feeling of ownership and skin conductance responses. *International VERE Phd symposium*, Barcelona University, Spain.
- 2014** **BIAL Foundation Research Grant** (2015-2016) - "Measuring the Self: behavioural and neural correlates of bodily awareness" Member of the Reserch Unit (Num. 2014/150; PI: TIDONI Emmanuele).

## PEER-REVIEW ACTIVITY

Cortex; Experimental Brain Research; International Journal of Visualized Experiment; Journal of Neuroengineering; Neuropsychologia; Scientific Reports; Symmetry; Royal Society Open Science; Conscious & Cognition; PeerJ.

## EDITORIAL ACTIVITY

Editorial Board, Scientific Reports.

AUTORIZZO IL TRATTAMENTO DEI MIEI DATI PERSONALI AI SENSI DELLA LEGGE 196/03  
AI SENSI DELL'ART. 46 DEL DPR 445/2000 DICHIARO CHE TUTTE LE INFORMAZIONI CONTENUTE NEL PRESENTE CURRICULUM VITAE  
CORRISPONDONO A VERITÀ

Roma, 10/09/2020

Gaetano Tieri

