

LUCIA MARIA SACHELI, PhD

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Last CV update October 2017

CURRENT POSITION (from 1st Jan 2016)

Postdoctoral Research Fellow at the Department of Psychology and Milan Center for Neuroscience (NeuroMi), University of Milano-Bicocca, Milan, Italy (Supervisor: Prof E. Paulesu).

PAST POSITIONS AND EDUCATION

Nov 2014 - Dec 2015. Postdoctoral Research Fellow (MIUR- PRIN Project 2010-2011) at the Psychology Department, University of Milano-Bicocca, Milan, Italy (Supervisor: Prof E. Paulesu).

Jan – Oct 2014. Postdoctoral research fellow at IRCCS Fondazione Santa Lucia, Rome, and Sapienza University of Rome, in the Social and Cognitive Neuroscience Laboratory (Supervisor: Prof S. M. Aglioti).

Dec 2013. International PhD in Cognitive Social and Affective Neuroscience, at Sapienza University of Rome, Italy. Dissertation: "*You are in my plans: neuro-cognitive and social components of dyadic motor interactions revealed by the kinematics of a joint-grasping task*". (Supervisor: Prof S. M. Aglioti).

Sept - Dec 2013. Visiting Researcher at the Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen (The Netherlands), in the Action and Neurocognition group (Prof H. Bekkering) and the Baby Research on Action, Interaction & Neurocognition group (Prof S. Hunnius). Funded by a NENS Exchange Grant, Federation of European Neuroscience Societies (FENS).

Sept - Oct 2011. Visiting Researcher at University of Tübingen, Germany, Department of Cognitive Neurology, Section for Computational Sensomotorics (Prof M. Giese). Funded by TANGO European Project FP7.

March-Sept 2010. Post-Lauream Internship at Social and Cognitive Neuroscience Laboratory, Sapienza University of Rome, Italy. Supervisors: Prof S. M. Aglioti, Dr M. Candidi.

Nov 2009. MSc in Clinical Psychology and Neuropsychology, at University of Milano-Bicocca, Milan, Italy. Supervisor: Prof E. Paulesu. Mark: 110/110 cum laude.

July 2007. Bachelor degree in Psychology at University of Milano-Bicocca. Supervisor: Prof F. Madeddu. Mark: 110/110 cum laude.

Sept 2005 - Apr 2006. Erasmus student at the University of Aberdeen, Aberdeen, UK.

June 2004. Baccalaureate diploma in classical studies, at Liceo Classico Collegio San Carlo, Milan, Italy. Mark 100/100 cum laude.

AWARDS AND GRANTS

2016. Award for the best article on psychophysiology published in 2015 by a scientist under 35 (300€), supported by the Italian Association of Psychophysiology (Premio Junior, Società Italiana Psicofisiologia, SIPF). <http://www.sipf.it/index.php/premi-sipf>

2014. Award for the best 2013 Italian PhD Thesis (1000€), supported by the Italian Association of Psychology (AIP), Experimental Psychology Session.

2014. Travel Award (500€) to attend the 2014 Perspectives and Future Directions in Social Neuroscience, Marburg, Germany, June 4th - 6th 2014.

2013. NENS Exchange Grant (2000€), funded by the Federation of European Neuroscience Societies (FENS) to support the visit at the Donders Institute for Brain, Cognition and Behaviour, Radboud University Nijmegen, The Netherlands. <http://www.fens.org/Training/NENS/NENS-Alumni/Lucia-Sacheli/>

2013. ESCON2 Short Visit Grant (2000€), funded by the European Social Cognition Network, European Science Foundation (Ref. Num. 5945).

2013. International Cultural Neuroscience Consortium (ICNC) Student Travel Award (500€) to attend the 2013 Social and Affective Neuroscience Society (SCAN) Meeting in San Francisco, CA, USA.

2012. Principal investigator of the nationally funded project (2000€) "*Synchronizing to achieve a common goal: Kinematics and TMS studies on motor interactions*". Progetto per Avvio alla Ricerca 2012, Funded by Sapienza University of Rome (Prot. Num. C26N12SRA7).

2010. Three-year PhD scholarship, Sapienza University of Rome [ranked first].

PUBLICATIONS

I am co-author of 15 peer-reviewed articles (1st author in 8 papers) and two book chapters (1st author in one chapter).

Bibliometric indexes: H-index: 8. Citations: 202. (source: *GoogleScholar*).

From 2009 on, I also presented my work more than 20 times in national and international conferences as first author.

PAPERS IN PEER-REVIEWED SCIENTIFIC JOURNALS

1. **Sacheli LM**, Meyer M, Hartstra E, Bekkering H, Hunnius S (2017). How preschoolers and adults represent their joint action partner's behavior. *Psychological Research*, doi: 10.1007/s00426-017-0929-8. [Epub ahead of print]
2. Candidi M, **Sacheli LM**, Era V, Canzano L, Tieri G, Aglioti SM (2017). Come together: human–avatar on-line interactions boost joint-action performance in apraxic patients. Accepted in *Social Affective and Cognitive Neuroscience*, nsx114, <https://doi.org/10.1093/scan/nsx114>. [Epub ahead of print].
3. **Sacheli LM**, Zapparoli L, De Santis C, Preti M, Pelosi C, Ursino N, Zerbi A, Banfi G, Paulesu E (2017). Mental steps: Differential activation of internal pacemakers in motor imagery and in mental imitation of gait. *Hum Brain Mapp*. doi: 10.1002/hbm.23725. [Epub ahead of print]
4. Curioni A, Minio-Pauluello I, **Sacheli LM**, Candidi M, Aglioti SM (2017). Autistic traits affect interpersonal motor coordination by modulating strategic use of role-based behaviour. *Mol Autism*, 8 (1), 23.
5. Van Schiack J*, **Sacheli LM***, Bekkering H, Toni I, Aglioti SM (2017). Measuring Mimicry: General Corticospinal Facilitation During Observation of Naturalistic Behaviour. *Eur J Neurosci* 46(2), 1828-1836 (*shared first authorship)
6. **Sacheli LM**, Candidi M, Era V, Aglioti SM (2015). Causative role of left aIPS in coding shared goals during human–avatar complementary joint actions. *Nat Comm* 6, 7544.
7. Candidi M, Curioni A, Donnarumma F, **Sacheli LM**, Pezzulo G (2015). Interactional Leader-Follower sensorimotor communication strategies during repetitive joint actions. *J R Soc Interface* 12(110), 1-12.
8. **Sacheli LM**, Aglioti SM and Candidi M (2015). Social cues to joint actions: the role of shared goals. *Front Psychol* 6, 1034.
9. Candidi M, **Sacheli LM**, Aglioti SM (2015). From Muscles Synergies and Individual Goals to Interpersonal Synergies and Shared Goals: mirror neurons and interpersonal action hierarchies: comment on Grasping synergies: A motor-control approach to the mirror neuron mechanism by A. D'Ausilio et al. *Phys Life Rev.* 12, 126-8.
10. **Sacheli LM**, Christensen A, Giese MA, Taubert N, Pavone EF, Aglioti SM, Candidi M (2015). Prejudiced interactions: implicit racial bias reduces predictive simulation during joint action with an outgroup avatar. *Sci Rep* 5, 8507.
11. Candidi M, **Sacheli LM**, Mega I, Aglioti SM (2014). Somatotopic mapping of piano fingering errors in sensorimotor experts: TMS studies in pianists and visually trained musically naïves. *Cer Cortex* 24(2), 435-43.
12. **Sacheli LM**, Tidoni E, Pavone EF, Aglioti SM, Candidi M (2013). Kinematics fingerprints of leader and follower role-taking during cooperative joint actions. *Exp Brain Res* 226(4), 473-86.
13. **Sacheli LM**, Candidi M, Pavone EF, Tidoni E, Aglioti SM (2012). And yet they act together: interpersonal perception modulates visuo-motor interference and mutual adjustments during a joint-grasping task. *PLoS One* 7(11), e50223.
14. Berlinger M, **Sacheli L**, et al. (2010). Neurofunctional and neuromorphological evidence of the lack of compensation in pathological aging. *Behav Neurol* 23(4), 185-7.
15. Berlinger M, Bottini G, Danelli L, Ferri F, Traficante D, **Sacheli L**, Colombo N, Sberna M, Sterzi R, Scialfa G, Paulesu E (2010). With time on our side. Task-dependent compensatory processes in graceful aging". *Exp Brain Res* 205(3), 307-24.

BOOK CHAPTERS

1. **Sacheli LM**, Aglioti SM, Candidi M (2015). Neural underpinnings of anticipatory action perception in expert brains. In Ferrari PF and Rizzolatti G, *New Frontiers in Mirror Neuron Research*, Oxford University Press.
2. Aglioti SM, Candidi M, **Sacheli LM** (2015). La stimolazione cerebrale non-invasiva nelle neuroscienze cognitive e sociali. In Bolognini N and Vallar G, *Stimolare il cervello*, Il Mulino, Bologna.

INVITED TALKS

Sacheli LM. “Causative role of left aIPS in coding shared goals during human–avatar complementary joint actions”. Invited talk at the *Annual Meeting of the Italian Society for Psychophysiology (SIPF)*, Milan (Italy), Oct 27th – 28th 2016.

Sacheli LM. “Social grasps along development: a joint-action study on preschooler and adults”. Invited talk at the *FENS Regional Meeting 2015, Thessaloniki (Greece)*, Oct 7th – 10th 2015.

Sacheli LM. “Shared goals during complementary motor interactions”. Invited talk at the *Italian Institute of Technology* organized by Prof Cristina Becchio, Genova (Italy), Nov the 21st 2014.

Sacheli LM. You are in my (motor) plans: the role of shared goals revealed by the kinematics of a joint-grasping task. Invited talk at the *XX Congress of Experimental Psychology, Italian Association of Psychology (XX Congresso di Psicologia Sperimentale, Associazione Italiana di Psicologia, AIP)*. Pavia (Italy), Sep the 17th 2014.

ORAL PRESENTATIONS AND POSTERS

Sacheli LM, Arcangeli E, Paulesu E. “Two agents, one melody: dual-person motor plans and interpersonal coordination in JA”. Oral presentation at the *VII Joint Action Meeting (JAM VII)*, London, UK, Jul 22nd-26th 2017.

Sacheli LM, Arcangeli E, Paulesu E. “The Dual-Person Motor Plan: a Cognitive Basis for Interpersonal Coordination in Joint Actions”. Poster presentation at the *International Convention of Psychological Science (ICPS)*, Vienna, Austria, Mar 23rd-25th 2017.

Sacheli LM, De Santis C, Zapparoli L, Preti M, Pelosi C, Ursino N, Zerbi A, Banfi G, Paulesu E. “Mental Steps: functional limitation to the lower limbs affects the neural bases of motor imagery for gait”. Oral presentation at the *European Workshop on Cognitive Neuropsychology 2017*, Brixen, Italy, Jan 22nd-27th 2017.

Sacheli LM, De Santis C, Zapparoli L, Preti M, Pelosi C, Ursino N, Zerbi A, Banfi G, Paulesu E. “Mental Steps: functional limitation to the lower limbs affects the neural bases of motor imagery for gait”. Oral presentation at *V Congress of the Italian Association for Neuropsychology (SINP)*, Milan, Italy, Dec 2nd-3rd 2016.

Sacheli LM, De Santis C, Zapparoli L, Preti M, Pelosi C, Ursino N, Zerbi A, Banfi G, Paulesu E. “Steps in Mind: Neural Signatures of Motor Imagery and Imitation of Gait in Healthy Elderly”. Poster presentation at the *Organization for Human Brain Mapping 2016 (OHBM 2016)*, Geneve, Switzerland, Jun 26th-30th 2016.

Sacheli LM, Era V, Tieri G, Aglioti SM, Candidi M. “Causative role of left aIPS in coding shared goals during complementary joint actions: studies combining motion capture and TMS”. Oral presentation at the *6th Joint Action Meeting (JAM-VI)*, Budapest, Hungary, Jul 1st-4th 2015.

Sacheli LM, Meyer M, Hartstra E, Bekkering H, Hunnius S. “Shared goals influence performance in joint action: a study with preschoolers and adults”. Poster presentation at the *6th Joint Action Meeting (JAM-VI)*, Budapest, Hungary, July 1st-4th 2015.

Sacheli LM, Tieri G, Aglioti SM, Candidi M. “Visuo-motor interference and interpersonal coordination: the role of (broken) shared goals revealed by the kinematics of human-avatar on-line interactions”. Poster presentation at the *London Virtual Social Interaction Workshop*, London, UK, Sep 4th-5th 2014.

Sacheli LM, Era V, Aglioti SM, Candidi M. “Imitative and complementary joint actions: coding of shared goals in left aIPS”. Poster presentation at *Perspectives and Future Directions in Social Neuroscience*, Marburg, Germany, June 4th-6th 2014.

Sacheli LM, Era V, Aglioti SM, Candidi M. “Imitative and complementary joint actions: coding of shared goals in left aIPS”. Poster presentation at *Rovereto Workshop on Concept, Actions and Objects (CAOs)*, functional and neural perspectives, Rovereto (TN), Italy, May 8th-11th 2014.

Sacheli LM, Era V, Gandolfo M, Aglioti SM, Candidi M. “Dissociazione fra interazioni imitative e complementari nel solco intra-parietale anteriore: studi rTMS sulle joint actions”. Oral presentation at the *Annual Meeting of the Italian Society of Neuropsychology (SINP)*, Milan, Italy, Nov 15th-16th 2013.

Sacheli LM, Era V, Gandolfo M, Aglioti SM, Candidi M. “Ruolo del solco intraparietale anteriore nelle interazioni motorie: uno studio di stimolazione magnetica transcranica”. Poster presentation at the *XIX Congress of Experimental Psychology, Italian Association of Psychology (XIX Congresso di Psicologia Sperimentale, Associazione Italiana di Psicologia, AIP)*. Rome, Italy, Sep 16th-18th 2013.

Sacheli LM, Chirstensen A, Giese MA, Taubert N, Pavone E, Aglioti SM, Candidi M. “Racial bias modulates joint-actions with ingroup vs outgroup avatars”. Poster presentation at the *5th Joint Action Meeting (JAM-V)*, Berlin, Germany, July 26th-29th 2013.

Sacheli LM, Era V, Gandolfo M, Pavone EF, Candidi M. “Integration of partners’ movement goal in aIPS during social interaction”. Poster presentation at *Magstim Neuroenhancement Conference and Workshop 2013*, Oxford, UK, May 4th-5th 2013.

Sacheli LM, Candidi M, Pavone E, Tidoni E, Aglioti SM. “Kinematic fingerprints of social interaction: a TMS study”. Poster presentation at *Social and Affective Neuroscience Society (SANS) Annual Meeting*, San Francisco, CA, USA, April 11th-3th 2013.

Sacheli LM, Candidi M, Pavone E, Tidoni E, Aglioti SM. “Social grasp: interpersonal perception modulates predictive simulation and mutual adjustment during a joint-grasping task”. Poster presentation at *Mirror neurons: new frontiers 20 years after their discovery*, Erice (TP), Italy, Aug 31st-Sep 6th 2012.

Sacheli LM, Candidi M, Pavone EF, Tidoni E, Aglioti SM. “You are in my (motor) plans: Shared representations and predictive simulation reflected in the kinematics of a joint-grasping task”. Oral presentation at *Collective Intentionality VIII*, Manchester (UK), Aug 28th-31st 2012.

Sacheli LM, Candidi M, Mega I, Aglioti SM. “Catch it early: anticipatory mapping of a piano player’s fingering errors in the cortico-spinal system of onlooker expert pianists”. Oral presentation at *Autumn Meeting of Italian Society of Neuropsychology (SINP)*, Bologna, Italy, Nov 18th 2011.

Sacheli LM, Candidi M, Pavone E, Tidoni E, Aglioti SM. “Impact of social variables on the kinematics of on-line cooperative-competitive interactions”. Poster presentation at the *4th Joint Action Meeting (JAM-IV)*, Wien, Austria. July 7th-9th 2011.

Sacheli L, Candidi M, Mega I, Aglioti SM. Corti-cospinal signatures of visually detected fingering errors in expert pianists. Oral presentation at the *XXIX European Workshop on Cognitive Neuropsychology (EWCN)*, Brixten, Italy, Jan 23rd-28th 2011.

De Fabritiis P, Albè E, Sacheli L, Surian L, Daini R. “Lo sviluppo comunicativo in un bambino con agenesia totale del corpo calloso”. Oral presentation at *I giornata CLASTA*, Milan, Italy. Sep 18th 2009 (Presented by Sacheli L).

EDITORIAL ACTIVITY.

I served as ad-hoc reviewer for the following journals: Brain and Cognition, Brain Research, Cognition, Cognitive Science, Cortex, European Journal Neuroscience, Frontiers in Human Neuroscience, Frontiers in Psychology, Journal of Neurophysiology, Neuroimage, Neuropsychologia, Neuroscience and Biobehavioural Reviews, Plos One, Scientific Reports.

SPOKEN LANGUAGES

Italian (Native language), English (level C2, Cambridge Certificate of Proficiency in English CPE).

IT SKILLS

Advanced: Experiment editor E-Prime, Statistical software SPSS, STATISTICA and JASP, Kinematic analysis software package BTS SMART-D, Softaxic Neuronavigation System, Electrophysiological data acquisition system Spike2, Microsoft Office applications, Adobe Photoshop.

Intermediate: Neuroimaging software SPM, MRICron, MATLAB.

MEMBER OF THE ORGANIZING COMMITTEE OF THE SCIENTIFIC EVENTS

Outreach Event “Meet Me Tonight 2016 – Faccia a Faccia con la Ricerca”; organization of the stand “Punti di Vista” (*Points of view*) 30th of September – 1st of October 2016, Milan.

“Brain Awareness Week 2013 - Neuroscienze in Società”, 11th-13th of March 2013, Rome. In partnership with Fondazione Santa Lucia and Sapienza University of Rome.