

Rachele Pezzetta

Address: Via San Floreano, 153 Buja (Udine)

E-mails: rachele.pezzetta@gmail.com; rachele.pezzetta@ospedalesancamillo.net

Female | 05/01/1990

Website: <https://sites.google.com/site/meglabs/people/rachele-pezzetta-2>

WORK EXPERIENCE

Current position

July 2019 – ongoing **Researcher at IRCCS San Camillo Hospital (Lido, Venice)**
Clinical Neurophysiology Laboratory

Previous positions

January 2019 – June 2019 **Post-doctoral research fellow at La Sapienza University**
La Sapienza University and IRCCS Fondazione Santa Lucia, Rome
Supervisor: Prof. Salvatore Maria Aglioti

July 2018 – February 2019 **Visiting researcher at the University of Amsterdam, Action Science Lab**
Supervisor: Prof. Richard Ridderinkhof

November 2015 – November 2018 **Phd student in Cognitive, Social and Affective Neuroscience, AgliotiLab**
La Sapienza University and IRCCS Fondazione Santa Lucia, Rome
Supervisor: Prof. Salvatore Maria Aglioti

January 2015 – November 2015 **Post lauream research internship**
IRCCS Hospital San Camillo, Lido of Venice; University of Padua
Supervisor: Prof. Carlo Semenza

September 2013 – July 2014 **Research internship (Master degree)**
Radboud University Medical Centre (Department of Geriatrics);
Donders Institute for Brain, Cognition & Behaviour. Nijmegen, the Netherlands
Supervisors: Dr. Jurgen Claassen, Dr. Anouk Vermeij

November 2011- September 2012 **Research internship (Bachelor degree)**
Azienda Servizi Sanitari Medio Friuli & Department of Human Science, Uni of Udine
Supervisor: Prof. Cosimo Urgesi

EDUCATION AND TRAINING

- December 2019 State Certification Exam for the profession of Psychologist
- November 2015 - November 2018 **Ph.D. In Cognitive, Social and Affective Neuroscience – CoSAN Program**
La Sapienza University, Rome (Graduated: 14.02.2019)
Title thesis: “Electrocortical underpinnings of error monitoring in health and pathology”
 - Final Mark: Excellent
- October 2012 – December 2014 **Master Degree in Neuroscience and Neuropsychological Rehabilitation**
University of Padua, Italy
Title thesis: “Effects of aging on the prefrontal oxygenation during a working memory task: a Functional Near-Infrared Spectroscopy (fNIRS) study”
 - Final Mark: 110 cum laude
- August 2013 – July 2014 **Erasmus Program (exams and internship)**
Radboud University, Nijmegen, the Netherlands
- September 2009 - September 2012 **Bachelor Degree in Psychological Cognitive Science**
University of Padua, Italy
Title thesis: “Neurophysiological dissertation on self-transcendence and human spirituality”
 - Final Mark: 110 cum laude
- September 2005- June 2009 **Science High School on natural science and languages**
“International Youth Exchange Program” in Turkey (July 2007)
“International Youth Exchange Program” in Finland (July 2008)

PERSONAL SKILLS

Mother tongue	Italian	
English	C1	English Test at ‘Centro Diffusione Lingue Portello (Padova)’
German	A1	Deutsch Test at Alpe Adria Universitat Klagenfurt (Austria)

Additional courses

- Theory and Practice: Multivariate pattern analyses (MVPA) in EEG/MEG, University of Amsterdam by J.Fahrenfort
- Immersive Virtual Reality, Unitelma Sapienza, Rome by Gateano Tieri
- Cognitive rehabilitation and sensorimotor rehabilitation, SIPF, Rome
- Math and Matlab for Neuroscientist, by Mike X. Cohen, Radboud University, Nijmegen
- Statistical analysis for event-related potentials (advanced course for scientific research, 30 hours; University of Padua); R introduction (6 hours; University of Rome).

Laboratory skills

- Electroencephalography (EEG), 64 and 256 channel system (Neuroscan, Biosemi, EGI Geodesic)
- Magnetoencephalography (MEG - CTF), 275-channel system (CTF)
- Functional near-infrared Spectroscopy (fNIRS)
- Transcranial Doppler (TCD)
- Basic Transcranial Magnetic Stimulation (TMS)
- Virtual reality (CAVE system)

Technical skills and research competence	<ul style="list-style-type: none"> - EEG, MEG: Independent data acquisition. Technical skills: ERPs, time-frequency analyses, source reconstruction, connectivity; beginner in Multivariate Pattern Analyses (MVPA; brain decoding); Brainstorm software, Matlab, Brain Vision Analyzer, EEGlab, Fieldtrip, ADAM; - Virtual reality: Independent data acquisition. Technical skills: basic knowledge of 3ds Max, XVR and Maya - Experience with data acquisition with TMS, Transcranial Doppler - Programming and Statistical analyses: Matlab, R, R studio - Lesion analysis: basic knowledge of MRICron - Audio and Images editing: Audacity, GIMP, Virtualdub, Mokka
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PUBLICATIONS

Published papers	<p>Ozkan, D.G., Pezzetta, R., Moreau, Q., Abreu, A., Aglioti, S.M., (2019) Predicting the fate of basketball throws: an EEG study in healthy and paraplegics athletes. <i>Experimental Brain Research</i>, 1-11</p> <p>Pezzetta R., Nicolardi V., Tidoni E., Aglioti, S.M. (2018) Error, rather than its probability, elicits specific electro-cortical signatures: a combined EEG-immersive virtual reality study of action observation. <i>Journal of Neurophysiology</i>. https://doi.org/10.1152/jn.00130.2018</p> <p>Ozkan, D.G., & Pezzetta, R.* (2018). Predictive monitoring of actions, EEG recordings in virtual reality. <i>Journal of Neurophysiology</i>. https://doi.org/10.1152/jn.00825.2017</p> <p>Pezzetta R.*, Crescentini, C.*, Urgesi C., Fabbro, F., (2015) review “Contributions of neuroscience to the study of meditation and spirituality”, <i>GIORNALE ITALIANO DI PSICOLOGIA</i>, vol 42, ISSN: 0390-5349, doi: 10.1421/81939</p>
Submitted papers or in prep.	<p>Arcara G., Pezzetta R., Rizzi G., Formica F., Benavides-Varela S., Turco C., Piccione F. Semenza C. “How and where is simple multiplication solved? The interaction of the two hemispheres revealed by MEG” (<i>under revision</i>)</p> <p>Spinelli G., Pezzetta, R., Canzano L., Tidoni E., Aglioti, S.M. “Altered EEG dynamics of action monitoring in limb Apraxia” (<i>under revision</i>)</p> <p>Casula E., Tieri G., Pezzetta R., Maiella M., Pavone E.F, Aglioti S.M.A., Koch G. “Real-time assessment of brain dynamics during embodiment: a TMS-EEG-IVR study” (<i>in prep</i>)</p> <p>Pezzetta R., Ozkan, D., Era, V., Tieri, G., Zabberoni, S., Peppe, A., Costa, A., Carlesimo, A., Caltagirone, C., Aglioti, SMA. “Embodyng action errors in virtual reality: EEG data on Parkinson’s Disease” (<i>in prep</i>)</p> <p>Pezzetta R., Ozkan, D., Era, V., Tieri, G., Zabberoni, S., Peppe, A., Costa, A., Carlesimo, A., Caltagirone, C., Aglioti, SMA. “Resting state activity before and after action observation in Parkinson’s Disease” (<i>in prep</i>)</p>
Ongoing Projects	<ul style="list-style-type: none"> -Parkinson’s Disease and rewarding mechanisms in Joint Action (in collaboration with Dr. Vanessa Era from AgliotiLab) -Electrocortical dynamics of Sense of Agency and Error Monitoring during action observation (in collaboration with Dr. Riccardo Villa from AgliotiLab) -Mismatch Negativity and source localization with Magnetoencephalography (IRCCS San Camillo) -Brain Decoding (Multivariate Pattern Analyses, MVPA) during motor imagery and motor attention in sport actions (in collaboration with R. Ridderinkhof, Action Science Lab, Amsterdam)

PRESENTATIONS

- Invited talks **Pezzetta R.** (2020) Workshop on “Psychophysiology of Error Processing”, Giessen, Germany
- Pezzetta R.** (2018) EEG indices of error monitoring in virtual reality and its implications in the study of affordances. Symposium of affordances (organizer: Giovanni Pezzullo, CNR), Rome
- Oral presentation **Pezzetta R.**, Vermeij, A., Katelaars, K., Kessels, R.C., Classen J., (2015) “A functional near-infrared spectroscopy (fNIRS) study to investigate the prefrontal activity during a working memory task in normal aging and Mild Cognitive Impairment”. *European Workshop of Cognitive Neuropsychology, Brixen*.
- Poster presentation **Pezzetta R.**, Ozkan, D., Tieri, G., Zabberoni, S., Peppe, A., Costa, A., Era, V. (2018) Embodying action errors in virtual reality: preliminary EEG data on Parkinson’s Disease in Società Italiana di Psicofisiologia (SIPF), Torino
- Casula E., Tieri G., Maiella M., **Pezzetta R.**, Pavone E.F, Aglioti S.M.A., Koch G. (2018) “Real-time assessment of brain dynamics during embodiment: a TMS-EEG- IVR study” in Società Italiana di Psicofisiologia (SIPF), Torino (oral presentation given by Casula)
- Era, V., **Pezzetta, R.**, D’Antonio, S., Pulcini, C., Zabberoni, S., Peppe, A., Costa, A., Candidi, M. (2018) Ruolo del sistema dopaminergico nella coordinazione interpersonale in pazienti con Malattia di Parkinson. In SINP Società Italiana di Neuropsicologia, Rome
- Özkan D., **Pezzetta R.** (2018). Predicting the fate of basketball throws: A psychophysics and electroencephalography study in healthy and paraplegics athletes. In: MeeTo2018: From moving bodies to interactive minds (Torino, Italy).
- Pezzetta R.**, Nicolardi V, Tidoni E (2018). EEG indices of error monitoring in immersive virtual reality. European Society of Cognitive Affective Neuroscience (ESCAN). 19-22 July 2018.
- Pezzetta R.**, Nicolardi V, Tidoni E (2017). EEG indices of performance monitoring activity and error predictability: embodying the actions of an avatar in immersive virtual reality. In: *Società Italiana di Psicofisiologia (SIPF)*. Rome (Italy), 15-18 November 2017 and *CuttingEEG*, Paris 1-4 July 2018
- Arcara, G., **Pezzetta, R.**, Rizzi, G., Formica, S., Benavides-Varela, S., Turco, C., Piccione, F., Semenza, C. (2017). “The role of the right and left hemispheres in performing simple calculations: a MEG study”. In: *Società Italiana di Psicofisiologia (SIPF)*. Rome (Italy), 15-18 November 2017

Poster Presentation	<p>Pezzetta R., Nicolardi V, Tidoni E (2017). "Electro-cortical markers of performance monitoring code observed errors rather than their proportion: a combined EEG and VR study". International Conference Cognitive Neuroscience of Executive Functions (CNEF). Padova (Italy), September 2017; <i>Salzburg Mind-Brain Annual Meeting Salzburg (SAMBA)</i>. Austria, July 2017</p> <p>Arcara G, Paggiaro A, Turco C, Pezzetta R., d'Avella D, Semenza C, Venneri A, Piccione F (2015). Presurgical mapping of language before neurosurgery with Magnetoencephalography: a preliminary study. In: <i>Società Italiana di Psicofisiologia (SIPF)</i>. Lucca, Italy, 2015.</p>
Teaching activities	<p>Pezzetta R. (2019) Lezione alla Sapienza, Corso di Laurea triennale di Neuroscienze Sociali, Università di Psicologia. Titolo: "Error in motor behavior with EEG".</p> <p>Pezzetta R. (2018) Lezione alla Sapienza, Corso di Laurea triennale di Neuroscienze Sociali, Università di Psicologia. Titolo: "EEG activity and error monitoring. Theory and application".</p>
Organization of events	<p>27 September 2019, Researcher's VenetoNight 2019 (Venice, 'ca Foscari) "Il cervello in azione: abile stratega o apparente ingannatore"</p> <p>Part of the organizational committee of VRAIMA 2019 (Valencia)</p> <p>5 July 2018 Seminar 'A predictive processing theory of action affordances and intention reading: Turning goalkeepers into penalty killers'. Speaker: Richard Ridderinkhof, Department of Psychology, La Sapienza, Rome</p>
Reviewer	NeuroImage, Neuropsychologia, Psychophysiology, Acta Psychiatrica
Awards & Fellowships	<p>-IBRO grant award. IBRO-PERC InEurope Short Stay grants program (08/06/2018): Grant for research activity abroad at the Universiteit van Amsterdam with R.Ridderinkhof.</p> <p>-Boehringer Ingelheim Fonds travel grant (24/07/2018): Grant for research activity abroad at the Universiteit van Amsterdam with R.Ridderinkhof [declined because of overlapping with IBRO grant]</p> <p>-Best student Poster Award (3rd place) at the European Society of Cognitive and Affective Neuroscience (ESCAN) conference, Leiden (2018)</p> <p>-Starting research grant awarded by University "Sapienza", Rome (24/07/2017): project titled 'Motor error in Parkinson Disease: neural correlates of observed actions in virtual reality'.</p> <p>-Erasmus fellowship: by University of Padua for a study and research period abroad, 10 months at the Radboudumc Hospital and Donders Institute for Brain, Cognition and Behavior (Nijmegen, September 2013).</p>

Venice, 19.12.2019

