

## Curriculum Vitae

### PERSONAL INFORMATION

Name: Caterina Annalaura

Surname: Pedersini

Place and date of birth: Milano (MI), 23/03/1986

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### CURRENT POSITION

January 2016 - Present	<p><i>Post-Doctoral Research Fellow</i></p> <p>Department of Neurosciences, Biomedicine and Movement Sciences University of Verona.</p> <p>Project: Consapevolezza Percettiva e Riorganizzazione Cerebrale [Perceptual Awareness in the Reorganizing Brain - <i>ERC-2013-ADG "Perceptual Awareness" Grant</i>].</p> <p>Tutor: prof. Carlo Alberto Marzi</p>
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### EDUCATION

January 2013 – December 2015	<p><i>Ph.D. student in Psychological and Psychiatric Sciences</i></p> <p>Ph.D. School of Sciences, Engineering and Medicine.</p> <p>Department of Neurological, Biomedical and Movement Sciences Section of Human Physiology University of Verona, Italy</p> <p>Thesis Title: “The neural basis of residual vision and attention in the blind field of hemianopic patients: behavioural, electrophysiological and neuroimaging evidence”.</p> <p>Tutors: prof. Carlo Alberto Marzi and prof.ssa Silvia Savazzi</p> <p>id neuropsychological evaluation of hemianopic patients, programming and development of behavioural experiments, recording of EEG signal through Steady-State Evoked Potentials, programming and development of fMRI experiment, fMRI data analysis.</p>
June- July 2013	Italian state examination qualifying to the profession of psychologist (University of Milano-Bicocca , first session 2013)
October 2011	<p><i>MSc in Psicologia Clinica, dello Sviluppo e Neuropsicologia.</i></p> <p>University Bicocca, Milano.</p> <p>Final mark 110/100 cum laude.</p>

	Thesis title : "The modulation of visuo-spatial attention's orientation resulting from the use of tDCS: a study on eyes movements". <i>Supervisors: Prof. Giuseppe Vallar and Prof. Emanuela Bricolo</i>
October 2008	<i>BSc in Scienze Psicologiche e Psichiatriche</i> University Bicocca, Milano. Final mark 110/110. Thesis title: " The role of caregiver of patients affected by Alzheimer Disease". <i>Supervisor: Prof. Claudio Luzzatti.</i>
Academic year 2004-2005	<i>High School Diploma</i> Liceo Linguistico S.M. Legnani, Saronno. Final mark: 89/100

## VISITING POSITIONS, COURSES AND RESEARCH INTERNSHIPS

January 2019 - present	<b>Visiting Position as Post-Doctoral Researcher</b> Visiting period at the University of Regensburg, Fakultät für Psychologie, Pedagogik und Sportwissenschaft. Professor Lingnau Angelika
September – December 2018	<b>Visiting Position as Post-Doctoral Researcher</b> Visiting period at the University Pompeu Fabra of Barcelona, Departamento de tecnologies de la informaciò i les comunicacions. Professor Salvador Soto Faraco
June – August 2018	<b>Visiting Position as Post-Doctoral Researcher</b> Visiting period at the University of Barcelona, Departamento de Psicologia Social y Psicologia Cuantitativa. Professor Guardia Olmos
October – December 2017	<b>Visiting Position as Post-Doctoral Researcher</b> Visiting period at the Royal Holloway University of London, Egham, Department of Psychology, Perception, Action and Decision Making Researcher Angelika Lingnau
October 2016 – April 2017	<b>Course</b> "Técnicas de Neuroimagen Avanzada" in Sant Boi (Barcellona), organized by FIDMAG Germanes Hospitalàries. This course was focused on learning how to perform functional and structural fMRI data analysis using SPM12, FSL and FreeSurfer, through theoretical lessons and practical activities.
10-12 October 2016	<b>Course</b> "XVIII Neuroanatomy & Tractography Workshop" at Gordon Museum of Pathology Guy's Campus, King's College London.

	This course aimed to give basic knowledge on TrackVis and StarTrack to analyze DTI data, through theoretical lessons and practical activity.
12-22 September 2016	<i>Course</i> <b><i>"School of Brain Connectomics"</i></b> , University of Verona.
28- 31 October 2013	<i>Course</i> <b><i>"fMRI Data Analysis"</i></b> class, organized by the CimeC, University of Trento
October 2010-	<i>Internship</i>
October 2011	<b><i>Post-lauream internship (1000 hours)</i></b> Pediatric Neuropsychiatry of Lissone, territorial center of San Gerardo Hospital, in Monza (MB). <i>Supervisor:</i> Luisa Meroni.
Academic Year 2007-2008	<i>Internship</i> <b><i>Pre-lauream internship (250 hours)</i></b> AIMA, in Milano, the centre of Counseling and Assistance for relatives of patients affected by Alzheimer disease.
Academic Year 2009-2010	Participation in the <b><i>Erasmus program</i></b> , attending the foreign University of Santiago de Compostela, in Spain.

## SUMMER SCHOOL

26-30 May 2014	Attendance to the Summer School "Metodologia delle Neuroscienze e Imaging". Chieti, Associazione italiana di Psicologia, Sezione di Psicologia Sperimentale. This course aimed to give use basic knowledge on TMS, tDCS, fNIRS, fMRI and EEG, through theoretical lessons and practical activity.
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## SCIENTIFIC PRODUCTIONS:

### - PER-REVIEWED PAPERS

Sanchez-Lopez, J., **Pedersini, C.A.**, Di Russo, F., Cardobi, N., Fonte, C., Varalta, V., Prior, M., Smania, N., Savazzi, S. & Marzi, C.A. (2017) Visually evoked responses from the blind field of hemianopic patients. *Neuropsychologia*. Doi: 10.1016/j.neuropsychologia.2017.10.008

Sanchez-Lopez, J., Savazzi, S., **Pedersini, C.A.**, Cardobi, N. & Marzi C.A. (2019). Neural correlated of visuo-spatial attention to unseen stimuli in hemianopic patients. A steady-state visual evoked potential study. *Front. Psychol.* <https://doi.org/10.3389/fpsyg.2019.00198>

**MANUSCRIPTS IN PREPARATION**

**Pedersini, C.A.**, Guàrdia-Olmos, J., Montalà-Flaquer, M., Sanchez-Lopez, J., Cardobi, N., Parisi, G., Savazzi, S. & Marzi C.A. Functional interactions in patients with hemianopia: a node-based connectivity study of resting fMRI signal.

**Pedersini, C.A.**, Lingnau, A., Cardobi, N., Sanchez-Lopez, J., Savazzi, S. & Marzi C.A. Neural basis of unconscious visual motion perception in hemianopia.

**CONFERENCE ABSTRACTS (TALKS)**

**Pedersini, CA**, Sanchez-Lopez, J, Lingnau, A, Bollini, A, Zoccatelli G, Savazzi, S & Marzi, CA. (February 2016) The role of area hMT in residual vision: behavioural, electrophysiological and neuroimaging evidence. Fourth edition of “Cognitive Science Arena for Beginners”, University of Bressanone, Italy

**Pedersini, CA**, Zoccatelli G., Lingnau, A., Moro, S., Sanchez-Lopez, J, , Bollini, A, , Savazzi, S & Marzi, C.A. (27-28 November 2015). Activation of motion area V5 is sufficient for discrimination of the orientation of moving stimuli but not for their conscious perception. Annual congress organized by the Italian Society of Neuropsychology (SINP), Padova, Italy.

**Pedersini, CA**, Zoccatelli G., Lingnau, A., Moro, S., Sanchez-Lopez, J, , Bollini, A, , Savazzi, S & Marzi, C.A. (2015). Activation of motion area V5 is sufficient for discrimination of the orientation of moving stimuli but not for their conscious perception. Annual congress organized by the Italian Society of Psychophysiology (SINP), Lucca, Italy.

Sanchez-Lopez, J., Savazzi, S., Di Russo, F., **Pedersini, C.A.** & Marzi, C.A. Spatiotemporal analysis of the visual cortical response during passive stimulation and spatial attention: a SSVEP and ERP study for testing residual vision in hemianopic patients (September 2015). EBBS-EBPS Joint Meeting, Verona, Italy.

**Pedersini, C.A.** & Marzi C.A. (February 2014). Recovery of sight in the blindfield of hemianopic sas a result of visual imagery. Second edition of “Cognitive Science Arena for Beginners”, University of Bressanone, Italy.

**CONFERENCE ABSTRACT (POSTERS)**

**Pedersini, C.A.**, Lingnau, A., Cardobi, N., Sanchez-Lopez, J., Savazzi, S. & Marzi, C.A. (November 2018). Bilateral activation of area hMT in hemianopic patients in an orientation discrimination task with moving and static stimuli. Society for Neuroscience Congress (SfN), San Diego, USA

Sanchez-Lopez, J., **Pedersini, C.A.**, Savazzi, S. & Marzi, C.A. (November 2018). Endogenous attention selectively modulates reaction time and N1 components to unseen stimuli in hemianopic patients. Society for Neuroscience Congress 2018, San Diego USA

**Pedersini, C.A.**, Lingnau, A., Cardobi, N., Sanchez-Lopez, J., Savazzi, S. & Marzi, C.A. (July 2018). Bilateral activation of area hMT in hemianopic patients in an orientation discrimination task with moving and static stimuli. Forum of Neuroscience (FENS), Berlin, Germany.

**Pedersini, C.A.**, Lingnau, A., Cardobi, N., Sanchez-Lopez, J., Savazzi, S. & Marzi, C.A. (July 2018). Bilateral activation of area hMT in hemianopic patients in an orientation discrimination task with moving and static stimuli. First Joint Congress of the SEPEX, SEPNECA and AIP experimental, Madrid, Spain.

Sanchez-Lopez, J., **Pedersini, C.A.**, Savazzi, S. & Marzi, C.A. (July 2018). Can sustained attention enhance visual processing of unseen stimuli in hemianopia? First Joint Congress of the SEPEX, SEPNECA and AIP experimental, Madrid, Spain.

**Pedersini, C.A.**, Lingnau, A., Cardobi, N., Sanchez-Lopez, J., Savazzi S., Marzi, C.A. (June 2018). Activation of area hMT following stimulus presentation to the blind field of hemianopic patients: Can it predict the level of perceptual awareness and behavioral performance? *Frontiers in Computational Neuroscience*. HBP international conference: Understanding consciousness, a scientific question of the 21st century, Barcelona, Spain.

Sanchez-Lopez, J., **Pedersini, C.A.**, Savazzi, S. & Marzi, C.A. (June 2018). Intra and Inter-individual Consistency of the Electroencephalographic Correlates of Perceptual Awareness in the Blind Field of Hemianopic Patients. *Frontiers in Computational Neuroscience*. HBP international conference: Understanding consciousness, a scientific question of the 21st century, Barcelona, Spain.

**Pedersini, C.A.**, Lingnau, A., Cardobi, N., Sanchez-Lopez, J., Savazzi, S. & Marzi, C.A. (May 2018). Bilateral activation of area hMT in hemianopic patients in an orientation discrimination task with moving and static stimuli presented to the blind (and intact) hemifield. Concepts, Actions and Objects, Rovereto, Italy

Sanchez-Lopez, J., **Pedersini, C.A.**, Savazzi, S. & Marzi, C.A. (May 2018). Electroencephalographic correlates of perceptual awareness in the blind field of a hemianopic patient. Concepts, Actions and Objects, Rovereto, Italy

**Pedersini, C.A.**, Sanchez-Lopez, J., Cardobi, N., Savazzi, S. & Marzi, C.A. (February 2018). Spatial attention and hemianopia: an EEG and fMRI study. Bringing attention & prediction – Workshop at the Institut d'Estudi Catalans, Barcelona, Spain.

**Pedersini, C.A.**, Sanchez-Lopez, J., Cardobi, N., Savazzi, S. & Marzi, C.A. (January 2018). Spatial attention and hemianopia: an EEG and fMRI study. Thirty-sixth european workshop on cognitive neuropsychology: An interdisciplinary approach; Bressanone, Italy.

**Pedersini, C.A.**, Sanchez-Lopez, J., Cardobi, N., Savazzi, S. & Marzi, C.A. (November 2017). Attenzione spaziale ed emianopsia: uno studio EEG e fMRI. VI Congresso della Società Italiana di Neuropsicologia (SINP) Palermo, Italy.

Sanchez-Lopez, J., **Pedersini, C.A.**, Di Russo, F., Cardoni, N., Savazzi, S. & Marzi, C.A. (November 2017). SSVEP responses from the blind field of hemianopic patients. A role of prefrontal cortex in conscious perception? XXV congresso della società italiana di psicofisiologia e neuroscienze cognitive, Roma, Italy

Sanchez-Lopez, J., **Pedersini, C.A.**, Savazzi, S., Di Russo, F., Joue, G. & Marzi, C.A. (January 2017). Steady-state visual evoked responses to blind field stimulation in hemianopic patients: A possible neural correlate of blindsight? European Workshop o Cognitive Neuropsychology, University of Bressanone, Italy.

Bollini, A., Sanchez-Lopez, J., **Pedersini, C.A.**, Moro, S., Savazzi, S., Marzi, C.A. (November 2015). Brain dynamics of visual awareness in the affected field of a Hemianopic patient." Congresso Annuale Società Italiano di Neuropsicologia (SINP), Padova, Italy

Sanchez-Lopez, J., Savazzi, S., Di Russo, F., **Pedersini, C.A.** & Marzi, C.A. (November 2015). Evaluation of the visual cortical response during passive stimulation and attentional manipulation in a hemianopic patient. Effectiveness of Steady State visual evoked potentials to evaluate visual disorders. Annual Conference of the Italian Society for Neuropsychology (SINP), Padova, Italy

Sanchez-Lopez, J., Savazzi, S., Di Russo, F., **Pedersini, C.A.** & Marzi, C.A. (November 2015). Can Attention Enhance the Visually Evoked Neural Response in the Blind Visual Field of Hemianopic Patients? Rovereto Attention Workshop (RAW), Rovereto, Italy.

Sanchez-Lopez, J., Savazzi, S., Di Russo, F., **Pedersini, C.A.** & Marzi, C.A. (November 2015). Visual spatial attention modulates brain electrical response in hemianopic patients with left and right brain lesions: a SSVEP study. XXIII National Congress of the Italian Society of Psychophysiology (SIPF). Lucca, Italy

**Pedersini, CA**, Zoccatelli G., Lingnau, A., Moro, S., Sanchez-Lopez, J, , Bollini, A, , Savazzi, S & Marzi, C.A. (September 2015). Motion area V5 is sufficient for the discrimination of the orientation of moving stimuli but not for conscious perception. EBBS-EBPS Joint Meeting, Verona, Italy

Bollini, A., Sanchez-Lopez, J., **Pedersini, C.A.**, Moro, S., Savazzi, S., Marzi C.A. (September 2015) "Brain dynamics of visual awareness in the affected field of a Hemianopic patient." EBBS-EBPS Joint Meeting, Verona, Italy

Sanchez-Lopez, J., Savazzi, S., Di Russo, F., **Pedersini, C.A.** & Marzi, C.A. (September 2015). Attenzione Spaziale nel Blindsight: Uso dei Potenziali Evocati Visivi Steady State. XXI Congresso Nazionale della Sezione di Psicologia Sperimentale, Rovereto, Italy.

**Pedersini, CA**, Zoccatelli G., Lingnau, A., Moro, S., Sanchez-Lopez, J, , Bollini, A, , Savazzi, S & Marzi, C.A. (September 2015). Motion area V5 is sufficient for the discrimination of the orientation of moving stimuli but not for conscious perception. XXI Congresso Nazionale della Sezione di Psicologia Sperimentale, Rovereto, Italy

**Pedersini, C.A., Zoccatelli, G., Lingnau, A., Moro, S., Sanchez-Lopez, J., Bollini, A., Savazzi, S. & Marzi, C.A.** (April 2015). Diffusion Tensor Imaging and Hemianopic Mapping in Hemianopic Patients with and without Blindsight. Images of the Mind conference, Milan, Italy

#### LANGUAGES:

**Mother language:** Italian

**Other languages:**

- English: Excellent Skills in reading, speaking and writing.
- Spanish: Excellent Skills in reading, speaking and writing

#### TECHNICAL SKILLS

NEUROPSYCHOLOGICAL SKILLS	Neuropsychological batteries commonly used in the assessment of cognitive framework and disorders
COMPUTER SKILLS	ECDL (European Computer Driving Licence). Windows Operating System and package OFFICE, SPSS, MRICro, CorelDraw, EPrime, Matlab.
EEG	Recording and Analyzing EEG Data: BrainVision
tDCS	Basic knowledge on recording and analyzing tDCS data.
fMRI	fMRI Data Preprocessing and Analysis: <ul style="list-style-type: none"> <li>- BrainVoyager</li> <li>- FMRIB Software Library (<a href="https://fsl.fmrib.ox.ac.uk/fsl/fslwiki/">https://fsl.fmrib.ox.ac.uk/fsl/fslwiki/</a>);</li> <li>- SPM for fMRI Data Analysis;</li> </ul> Segmentation and extraction of brain grey matter: <ul style="list-style-type: none"> <li>- FreeSurfer (<a href="https://surfer.nmr.mgh.harvard.edu">https://surfer.nmr.mgh.harvard.edu</a>)</li> </ul> DTI Data Analysis: <ul style="list-style-type: none"> <li>- TrackVis;</li> <li>- StarTrack.</li> </ul>

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Regensburg, 27th February 2019

Caterina Annalaura Pedersini