Valeria Di Caro

Curriculum vitae

Dept. of Neuroscience, Biomedicine
and Movement Sciences
Section of Physiology and Psychology
University of Verona
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MAIN SCIENTIFIC INTERESTS

- Cognitive mechanisms of visual selective attention
- Adaptive features of inhibitory processes in attentional and oculomotor control
- Experience-based attentional learning

CURRENT POSITION

March 2019 – Present

Visiting Ph.D student
Psychology Department
Ludwig-Maximilians-Universität of Munich, Munich, Germany.
Supervisor: Prof. Hermann Müller

October 2016 – Present

Ph.D student in Neuroscience, Psychological and Psychiatric Science
Department of Neuroscience, Biomedicine and Movement Sciences
Section of Physiology and Psychology - University of Verona, Verona, Italy
Supervisor: Dr. Chiara Della Libera

Research project: Learning to ignore – New adaptive features of selective attention.
My research focuses on adaptive features of inhibitory processes in attentional control, explored by employing experimental paradigms tapping attentional inhibition of salient distractors and its lasting effects on attentional and oculomotor performance in healthy human observers.

EDUCATION

January 2016

License to practice Psychology
University of Padua, Italy

October 2012 – October 2014

MSc in Neuroscience and Neuropsychological Rehabilitation
University of Padua, Italy
Thesis title "**Low-cost electrophysiological assessment: Emotiv EPOC for the diagnosis and staging of Hepatic Encephalopathy**".

Supervisors: Prof. Daniela Mapelli & Dr. Sami Schiff
Final grade: 110/110 *cum laude*

October 2009 – October 2012 **BSc in Psychological, Cognitive and Psychobiological Sciences**
University of Padua, Italy
Thesis title: "Learning to drive: training and psychophysiological correlates"
Supervisor: Prof. Mariaelena Tagliabue
Final grade: 104/110

September 2000 – July 2005 **High School Degree**
Classical studies, Agrigento, Italy
Final grade:100/100

---------- RESEARCH EXPERIENCES AND PROFESSIONAL TRAINING ----------

May 2016 – September 2016 **Volunteer Psychologist**
Department of Clinical and Experimental Medicine and Interdepartmental Center CIRMANMEC.
University Hospital of Padua

- Research activity focused on psychological, cognitive and neurophysiological changes associated with eating behaviour with particular interest on cognitive control alterations in obese individuals.
- Study of cerebral hemodynamic responses (Near-Infrared Spectroscopy - NIRS) and non-invasive brain stimulation (tDCS) in individuals with obesity and in normal weight individuals.

Supervisor: Dr. Sami Schiff

November 2014 – November 2015 **Post-lauream Internship**
Department of Clinical and Experimental Medicine and Interdepartmental Center CIRMANMEC.
University Hospital of Padua

- Clinical and research activity on cognitive alterations related to neurological and internal diseases with particular focus on Hepatic Encephalopathy.
- Research activity on cognitive alterations in eating behaviour.

Supervisor: Dr. Sami Schiff

October 2013 – July 2014 **Pre-lauream Internship**
Department of Clinical and Experimental Medicine and Interdepartmental Center CIRMANMEC.
University Hospital of Padua

- Neuropsychological and electrophysiological evaluation in patients with cognitive alterations due to internal medicine disorders.
- Research activity in the evaluation and diagnosis of Hepatic Encephalopathy by using a low-cost wireless electroencephalograph (EEG Emotiv EPOC).

Supervisor: Dr. Sami Schiff

October 2012 – March 2013 **Voluntary Internships**
Department of General Psychology
University of Padua

- Research activity on emotional factors and related somatic states (SCR, Skin Conductance Response) involved in learning processes of risk perception, by using the HRT (Honda Riding Trainer) driving simulator.

Supervisor: Prof. Mariaelena Tagliabue

October 2011 – June 2012 **Pre-lauream Internship**
Department of General Psychology
University of Padua

- Research activity on emotional factors and related somatic states (SCR, Skin Conductance Response) involved in learning processes of risk perception, by using the HRT (Honda Riding Trainer) driving simulator.

Supervisor: Prof. Mariaelena Tagliabue

PUBLICATIONS

Di Caro, V., Theeuwes, J., & Della Libera, C. (2019) Suppression history of distractor location biases attentional and oculomotor control, Visual Cognition, DOI: 10.1080/13506285.2019.1617376.

Di Caro, V., Theeuwes, J., & Della Libera, C. (2018). Suppression history of spatial locations biases attentional and oculomotor control. *Journal of Vision*, 18(10), 477-477. doi: 10.1167/18.10.477.

Ferrante, O., Patacca, A., **Di Caro, V**., Della Libera, C., Santandrea, E., & Chelazzi, L. (2018). Altering spatial priority maps via statistical learning of target selection and distractor filtering. *Cortex*, 102, 67-95. https://doi.org/10.1016/j.cortex.2017.09.027.

Schiff, S., Casa, M., **Di Caro, V**., Aprile, D., Spinelli, G., De Rui, M., Angeli, P., Amodio, P., & Montagnese, S. (2016). A low-cost, user-friendly electroencephalographic recording system for the assessment of hepatic encephalopathy. *Hepatology*, 63, 1651-1659. doi:10.1002/hep.28477.

AWARDS

AISF (Italian association for the study of the liver) prize for the best Italian paper in 2016 (Clinical field).
Paper: Schiff, S., Casa, M., Di Caro, V., Aprile, D., Spinelli, G., De Rui, M., Angeli, P., Amodio, P. and Montagnese, S. (2016), A low-cost, user-friendly electroencephalographic recording system for the assessment of hepatic encephalopathy. Hepatology, 63: 1651–1659. doi:10.1002/hep.28477 .
51st AISF Annual Meeting, Rome, February 22nd -23rt, 2018.

CONFERENCE PRESENTATIONS

Di Caro, V., & Della Libera, C. (2019). Distractor filtering via Suppression History: transient, short or long term plasticity?. 19th Annual Meeting of the Vision Sciences Society (VSS). St. Pete Beach, Florida (USA). May 2019.
Poster presentation

Di Caro, V., Theeuwes, J., Della Libera, C. (2018). Distractor Suppression History biases oculomotor behaviour by shaping spatial attentional priority. 26th National Conference of Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Torino, Italy. November 2018. Poster presentation

Di Caro, V., Theeuwes, J., Della Libera, C. (2018). Habituation of oculomotor capture by irrelevant visual onsets hinges on a topographic map of the visual space. 69th SIF National Congress (Italian Physiological Society). Florence, Italy. September 2018.

Di Caro, V., Theeuwes, J., Della Libera, C. (2018). Suppression history of spatial locations biases attentional and oculomotor control. 18th Annual Meeting of the Vision Sciences Society (VSS). St. Pete Beach, Florida (USA). May 2018. Poster presentation

Ferrante, O., Patacca, A., **Di Caro, V**., Della Libera, C., Santandrea, E., Chelazzi, L. (2018). Altering spatial priority maps via statistical learning of target selection and distractor filtering. International Meeting of the Psychonomic Society, Amsterdam. May 2018.

Ferrante, O., Patacca, A., **Di Caro, V**., Della Libera, C., Santandrea, E., Chelazzi, L. (2017). Altering spatial priority maps via statistical learning of target selection and distractor filtering. Cognitive Neuroscience of Executive Function International Conference. September 2017, Padua, Italy.

Massella, F., Tezza, G., Morari, B., **Di Caro, V.**, Paiola, G., Gandolfi, ML., Smania, N., Banzato, C., Zoccante, L., Della Libera, C. (2017). You need guts to reject a distractor! Attentional filtering is impaired in children with a functional gastrointestinal disease. Gordon Research Conference on Eye Movements, Lewiston MA, US. July 2017.

Ferrante, O., Patacca, A., **Di Caro, V**., Santandrea, E., Della Libera, C., Chelazzi, L. (2017). Statistical learning of distractor suppression. 17th Annual Meeting of the Vision Sciences Society. May 2017 St. Pete Beach (USA).

Ferrante, O., Patacca, A., **Di Caro, V**., Santandrea, E., Della Libera, C., Chelazzi, L. (2017). Cross- talk between target selection and distractor suppression mechanisms in statistical learning. Cognitive Science Arena, February 2017, Bressanone, Italy.

Di Caro V., Gottini J., Dinoi G., Scoppettone A., Caregaro L., Mapelli D., Amodio P., Schiff S. (2016). Combining DC stimulation and cognitive training to modulate food-craving and subjective values of unhealthy food: a tDCS/NIRS Study. XXIV SIPF Conference. October 2016, Milan, Italy. Poster presentation

Di Caro, V., Gottini, J., Dinoi, G., Scoppettone, A., Mapelli, D., Amodio, P., Schiff, S. Ridurre il craving e modulare la valutazione soggettiva di specifici cibi non salutari combinando la neuromodulazione e il training cognitivo: uno studio tDCS/fNIRS. (2016). XXII Conference AIP (Experimental Psychology Section). September 2016, Roma, Italy. Short oral presentation.

Schiff, S., Dinoi, G., **Di Caro, V.**, Tonon, G., Caregaro, L., Mapelli, D., Amodio, P. Effetti della neuromodulazione e del training cognitivo sul controllo del craving e nella modificazione delle preferenze alimentari. (2015). SINP Annual Conference, November 2015, Padua, Italy.

Schiff, S., Casa, M., **Di Caro, V**., Aprile, D., Spinelli, G., De Rui, M., Angeli, P., Amodio, P. and Montagnese, S. (2014). A low-cost, user-friendly EEG recording set for Hepatic Encephalopathy assessment: a proof of concept. 65th Annual Meeting of the American Association for the study of Liver Disease (AASLD). November 2014. Boston (USA).

Schiff, S., Casa, M., **Di Caro, V**., Aprile, D., Spinelli, G., De Rui, M., Amodio, P. and Montagnese, S. (2014). A low-cost, user-friendly EEG recording set for Hepatic Encephalopathy assessment: a proof of concept. 16th ISHEN Symposium, September 2014, DeVere Sunningdale Park, Ascot, UK.

SKILLS

Technical skills

Advanced knowledge of eye movements recording and analysis (Eyelink 1000 - SR Research)

Good knowledge of electroencephalographic signals recording (EEG – Micromed System Plus, Emotiv epoc, Enobio)

Basic knowledge of transcranial direct current stimulation (tDCS)

Basic knowledge of Functional Near Infrared Spectroscopy (fNIRS)

Basic knowledge of electrodermal activity measurement (SCR)

Theoretical-practical knowledge of neuropsychological (MMSE, ENB-2, MoCA, PHES, WCST, FAB), and psychodiagnostic (SCL-90, MMPI-II, BIS-11, BIS/BAS, BES, EAT-26, DEBQ) tests.

Computer skills

Data-analysis software:

- R programming language (Advanced knowledge for behavioural and eye-movements data analysis)
- DataViewer (Advanced knowledge for eye-movements data viewing)
- Statistica (Basic knowledge for behavioural data analysis)

Experiments building software:

- Opensesame (Intermediate knowledge for cognitive and eye-tracking experiments design)
- Matlab (Basic knowledge for eye-tracking experiments design)
- E-Prime (Basic knowledge for cognitive experiments design)

General software:

- Office (Word, Excel, PowerPoint)
- Vector graphics design (Inkscape)

RESEARCH GROUPS

Member of Adaptive Attention & Cognition Lab (http://www.adaptivecognition.com/)

Member of NEXUS, Emergent Attention Lab (http://www.attention-lab.net/)

RESEARCH PROJECTS

Research project "Learning to ignore – New adaptive features of selective attention", funding from "Basic Research Grant 2015", n. B32F15000670001", University of Verona, to Dr. Chiara Della Libera.

MEMBERSHIP

- Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF)
- Vision Sciences Society (VSS)
- European Society for Cognitive Psychology (ESCoP)
- Italian Association for Psychology (AIP), branch of Experimental Psychology
- Association of Italian Practitioner Psychologists (n° 9757) – Veneto Region, Verona, Italy