PERSONAL INFORMATION

Name: Expósito de Mäki-Marttunen, Verónica
Date of birth: *05.01.1985*
Sex: F
Nationality: Argentina
Researcher unique identifier, ORCID: 0000-0002-8527-091X

EDUCATION

2015 PhD in Biological Sciences: **Disputation date:** *13.04.2015.*
Faculty of Natural and Exact Sciences, University of Buenos Aires, Argentina
Supervisor: Ramón L. Leiguarda, Mirta F. Villarreal
Title: Study of neuronal networks related to spontaneous brain processes, attention and motor planning in healthy subjects and neurological patients using functional magnetic resonance imaging

2011 Specialist in Data Mining and Knowledge Discovery
Department of Informatics, Faculty of Natural Sciences, University of Buenos Aires, Argentina

2009 Eq. Master in Biological Sciences with orientation Animal Morphology and Physiology
Faculty of Natural Sciences, University of Buenos Aires, Argentina

CURRENT AND PREVIOUS POSITIONS

2020- Post-doc Position
Department of Psychology, Leiden University, Netherlands
PI: Dr. Sander Nieuwenhuis
Project: **The impact of arousal on cognitive function and cortical state**

2019 University Lecturer
Department of Psychology, University of Oslo, Norway

2015-2018 Post-doc Position
Department of Psychology, University of Oslo, Norway
PI: Prof. Thomas Espeseth
Project: **Polygenetics of attention and effort: Uncovering brain circuit pathologies in schizophrenia**
In this project I participated in the design and conducted three full experiments in the MRI scanner, one including concurrent eye-tracking, and one pilot experiment with pupillometry. I helped implement a MRI sequence for localization of brainstem nuclei and applied classical as well as more advanced techniques for the measurement of activity in the cortex and subcortical areas.

2009-2015 Ph.D. Position
FLENI, Buenos Aires, Argentina
Supervisors: Dr. Ramón Leiguarda, Dr. Mirta Villarreal
Projects:
-fMRI study of brain lateralization of praxis functions in normal subjects.
In this project I collected and analyzed functional imaging data from healthy subjects applying techniques of task-based univariate and functional connectivity analysis.
-Evaluation of default mode neural network in patients in vegetative state or minimum consciousness with functional MRI.
In this project I acquired and analyzed fMRI data from healthy subjects and patients applying techniques of task-based univariate and resting state functional connectivity analysis.

2006-2009 Laboratory assistant
Faculty of Agronomy, Department of Biochemistry, University of Buenos Aires,

Argentina.

2005-2006 Laboratory assistant
Environmental Laboratory LAIA S.A., Buenos Aires, Argentina.

2003-2005 Administrative assistant
Cooperative of Credits Premium Ltda, Buenos Aires, Argentina.

LIST OF PUBLICATIONS

Mäki-Marttunen, V., Diez, I., Cortes, J. M., Villarreal, M. F., & Chialvo, D. R. (2013). Disruption of transfer entropy and inter-hemispheric brain functional connectivity in patients with disorder of consciousness. **Front Neuroinform**, 13;7:24.

Mäki-Marttunen, V., Pickard, N., Solbakk, A-K., Ogawa, K., Knight, R, Hartikainen, K. (2014) Low attentional engagement makes attention network activity susceptible to emotional interference. **NeuroReport** 25 (13), 1038.

Mäki-Marttunen, V., Villarreal, M, Leiguarda, R. Lateralization of brain activity during motor planning of proximal and distal gestures. **Behavioral Brain Research** (2014) 272, 226-237.

Mäki-Marttunen, V., Kuusinen, V., Brause, M., Polvivaara, M., Ribeiro, R., Öhman, J., Hartikainen, K. Enhanced Attention Capture by Emotional Stimuli in Mild Traumatic Brain Injury. **Journal of Neurotrauma** (2015) 32 (4), 272-279

Mäki-Marttunen, V., Castro, M., Olmos, L., Leiguarda, M., Villarreal, M. Modulation of the default-mode network and the attentional network by self-referential processes in patients with disorder of consciousness. **Neuropsycologia** (2016) 82:149-160.

Mäki-Marttunen, V., Kuusinen, V., Peräkylä, J., Ogawa, K., Brause, M., Brander, A., Hartikainen, K. Greater attention to task-relevant threat due to orbitofrontal lesion. **Journal of Neurotrauma** (2017) 34(2), 400-413.

Mäki-Marttunen, V., Hagen, T., Aminihajibashi, S., Foldal, M., Stavrinou, M., Halvorsen, JH., Laeng, B., Espeseth, T. Ocular signatures of proactive versus reactive cognitive control in young adults. **Cogn Affect Behav Neurosci** (2018) 18(5), 1049-1063.

Mäki-Marttunen, V., Hagen, T., Espeseth, T. Task context load induces reactive cognitive control: an fMRI study on cortical and brainstem activity. **Cogn Affect Behav Neurosci** (2019). https://doi.org/10.3758/s13415-019-00691-6

Mäki-Marttunen, V., Hagen, T., Laeng, B., Espeseth, T. Distinct neural mechanisms meet challenges in visual attention due to load and spatial interference. **Journal of Cognitive Neuroscience** (2019)

Mäki-Marttunen, V., Hagen, T., Espeseth, T. Proactive and reactive modes of cognitive control can operate independently and simultaneously. **Acta Psychologica** (2019).

MOBILITY

2018 Short visit (4 days) to Tobias Donner's lab (Hamburg, Germany) to learn concurrent fMRI-pupillometry analysis.

2012-2013 Behavioral Neurology Research Unit led by Kaisa Hartikainen, Tampere University Hospital, Tampere, Finland
Research collaboration project: "Emotion-attention interaction and hemispheric specialization assessed by functional imaging and EEG".
In this 6 months research visit, I did fMRI and EEG preprocessing and analysis of data from healthy subjects as well as patients with mild brain trauma. Funding from CIMO, Finland (TM-12-8552)

SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

2017-2018 Master thesis advisor of Michelle Antal, Department of Psychology, University of Oslo. Thesis title: Locus coeruleus-Norepinephrine neuromodulation influences brain integration during attentional effort: An fMRI study. 2017-2018.
I supervised the master student in experimental design, imaging technique, data preprocessing and analysis and interpretation of results.

TEACHING ACTIVITIES

2019 University Lecturer
Department of Psychology, University of Oslo
Teaching courses in the bachelor and master programs. Lectures and seminars on Cognitive Neuroscience: PSI4310, PSI4308, PSYC2230.

2015-2017 Teaching: two lectures per semester in the course Cognitive Neuroscience I (PSYC 2206) for students following the professional program on clinical Psychology– Topic: Introduction to Neurobiology. Department of Psychology, University of Oslo, Norway

2016 Teaching: lecture in the course Genetics of Cognitive Neuroscience (PSY4305) for students following the master program on Cognitive Neuroscience– Topic: Neurobiology of Schizophrenia. Department of Psychology, University of Oslo, Norway

2017 Course on Pedagogics: *Teaching and Learning in Higher Education*, Faculty of Educational Sciences, University of Oslo, Norway (150 hours course credit)

2017 Internal reviewer for master thesis: Mari Messel, Department of Psychology, University of Oslo, Norway

ORAL PRESENTATIONS

2017 *"*Cognitive control and the locus coeruleus-norepinephrine system". NORMENT retreat annual meeting. Oslo, Norway.

2016 "Pronounced Influence of Relevant Threat on Attention Allocation Due to Orbitofrontal Lesion". Eleventh World Congress on Brain Injury, International Brain Injury Association (IBIA), San Francisco, CA

2013 "Brain functional connectivity in patients with disorders of consciousness: towards novel dynamical approaches". XXVIII Annual meeting of the Argentine Society for Neuroscience (SAN), Argentina

FELLOWSHIPS AND AWARDS

2010-2015 Scholarship for PhD granted by National Scientific and Technical Research Council (CONICET), Argentina

2011 Scholarship for attending the ACNS Summer School on Computational Neuroscience held in Poland, 2011.

2013 Best Poster Award received from Computational Neuroscience Society in the Annual Meeting of the Society, 2013, Paris, France

COMMISSION OF TRUST

2019 Evaluation committee for PhD position at the Cognitive Section of the Department of Psychology, University of Oslo.

LANGUAGES

Spanish: mother tongue.
English: fluent.
Norwegian: good written and oral knowledge.