

CV - Agustin Petroni

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Educational background

2007-2012 PhD Cognitive Neuroscience. University of Buenos Aires, Argentina.

2001-2007 B Sc in Biological Sciences. University of Buenos Aires, Argentina.

Work experience.

2019 Researcher, Department of Psychology, NTNU, Trondheim, Norway.

2016 Researcher, Full time permanent position, National Research Council, Argentina (Leave of absence from 04/2019).

2015 Postdoc, Department of Biomedical Engineering. The City University of New York.

2014 Research Fellow, Dept. of Neurosciences, Univ. of California at San Diego. ERP Lab.

2013 International Fellowship to visit ERP Lab at UCSD. National Research Council, Argentina.

2012 Postdoctoral Fellowship. Integrative Neuroscience Laboratory, UBA. Argentina.

2010 Société Française des Neurosciences . IBRO. Fellowship to visit French Laboratories.

2007 Doctoral fellowship, National Research Council, Argentina. Integrative Neuroscience Laboratory, UBA. Supervisor: Prof Mariano Sigman.

2006 Graduate student. Motor Control Lab, University of Buenos Aires, Argentina.

2005 Research Assistant. Molecular Devices Laboratory, University of Buenos Aires, Argentina.

Consulting

2016-2018. Eye tracking technology + behavioral methods for software usability. Consulting for marketing and consumer research companies in Buenos Aires, Argentina, helping to develop methodologies to test new products and brands. In particular, developing packages to measure emotional and attentional responses to products.

Teaching

2021 Assistant Professor. PSY2900 Bacheloroppgave i psykologi (2021 VÅR). NTNU, Norway.

2020 Assistant Professor. PSY8005 Human Psykofysiologi (2020 Autumn). NTNU, Norway.

2015 Invited Lecturer. Biostatistics and Research Methods. City College of New York.

2011 Teaching assistant. Psychophysiological Methods. Department of Psychology. University of Buenos Aires, Argentina.

Grants

2018. Mental programs: integration of local and global processing in complex visual tasks. The National Scientific and Technical Research Council, Argentina.

2017 University Policy Agency (SPU), Argentina. Grant: Adding technological value.

2016 University Policy Agency (SPU), Argentina. Grant: Adding technological value.

Students

2019 Jeremías Albano, master thesis, Computer Science. Buenos Aires University.

2018 Ignacio Linari, master thesis, Cognitive Sciences. Buenos Aires University.

2017-present Lucila Balduzzi, PhD student, Psychology, Maimónides University.

Management and organizational positions or activities.

2011-2013. Representative of the Committee on Budgets, Government Council, Faculty of Sciences, University of Buenos Aires.

2009-2011. Part of the Directing Board of the Representative Members Assembly (graduates). Government Council, Faculty of Sciences, University of Buenos Aires, Argentina.

2008-2011. Chaired neuroscience monthly seminars at the Department of Physiology, Buenos Aires University, Argentina.

Technical skills

Matlab for data analysis (advanced). Unix based systems (Linux, BASH). Administration of linux servers for data analysis. Data storage (Brain Imaging Data Standards).

Stimuli presentation: Matlab Psychtoolbox, Python, and JavaScript for online experiments (JsPsych + JATOS).

EEG. ERPs, time-frequency analysis, connectivity (weighted symbolic mutual information, synchronization likelihood), inter-subject correlation analysis for naturalistic stimuli.

MRI. Structural, surface, volumetric, functional and diffusion analysis.

Eye-Tracking data acquisition in Python. High resolution and portable eye-tracking technology.

TMS + electrical nerve stimulation + Neuronavigation.

EKG, heart rate variability.

Neuropsychology. Executive functions and social cognition neuropsychological tests.

Languages

English, fluent.

Spanish, native.

Portuguese, fluent.

French, reading skills, basic conversational and writing commands.

Publications

23) Gonzalez Gadea ML, Dominguez A and **Petroni A**. Children's Group Biases In Third-Party Punishment Are Guided By Norms-Focused Behaviors (preprint). <https://psyarxiv.com/pxyw4/>

22) Cervetto S, Díaz-Rivera M, **Petroni A**, Birba A, Martorell Caro M, Sedeño L, Ibáñez A, García A. The Neural Blending of Words and Movement: Event-Related Potential Signatures of Semantic and Action Processes during Motor–Language Coupling. **Journal of Cognitive Neuroscience**. 2021.

21) García AM, Hesse E, Birba A, Adolfi F, Mikulan E, Martorell Caro M, **Petroni A**, Bekinschtein T, García M, Silva W, Ciraolo C, Vaucheret E, Sedeño L, Ibáñez A. Time to face language: Embodied mechanisms underpin the inception of face-related meanings in the human brain. **Cerebral Cortex**. 2020; 30(11). <https://doi.org/10.1093/cercor/bhaa178>

20) Olsen et al. Toward a Global and Reproducible Science for Brain Imaging in Neurotrauma: The ENIGMA Adult Moderate/Severe Traumatic Brain Injury Working Group. **Brain Imaging and Behavior**. 2020; 10.1007/s11682-020-00313-7

19) Hesse E, Mikulan E, Sitt J, Garcia MC, Silva W, Ciraolo C, Vaucheret E, Raimondo F, Baglivo F, Adolfi F, Bekinschtein TA, **Petroni A**, Lew S, Sedeño L, García AM, Ibáñez A. Consistent gradient of performance and decoding of stimulus type and valence from local and network activity. **IEEE Transactions on Neural Systems and Rehabilitation Engineering**. 2019; 27(4).

18) **Petroni A**, Cohen S., Langer N, Henin S, Vanderwal T, Milham MP, Parra, LC. The variability of neural responses to naturalistic videos change with age and sex. **eNeuro**, 2018; 5(1).

17) Kaczer L, Bavassi L. **Petroni A**, Fernández RS, Laurino J, Degiorgi S, Hochman E, Forcato C, Pedreira ME. Contrasting dynamics of memory consolidation for novel word forms and meanings revealed by neurophysiological and behavioral markers. **Neuropsychologia**, 2018; 117: 472-482.

16) Yoris A, Abrevaya S, Esteves S, Salamone P, Lori N, Martorell M, Legaz A, Alifano F, **Petroni A**, Sánchez R, Sedeño L, García AM and Ibáñez A. Multilevel convergence of interoceptive impairments in hypertension: New evidence of disrupted body–brain interactions. **Human Brain Mapping**, 2018; 39 (4), 1563-1581.

- 15) Salamone P, Esteves S, Sinay V, García Cordero I, Abrevaya, S, Couto, B, Adolphi, F, Martorell M, **Petroni A**, Yoris A, Torquati K, Alifano F, Legaz A, Pagani Cassará F, Bruno D, Kemp A, Herrera E, García A, Ibanez A, Sedeño L. Altered neural signatures of interoception in multiple sclerosis. **Human Brain Mapping**. 2018;1-12.
- 14) Iotzov I, Fidali BC, **Petroni A**, Conte MM, Schiff ND, Parra LC. Divergent neural responses to narrative speech in disorders of consciousness. **Annals of clinical and translational neurology** 2017; 4 (11), 784-792
- 13) Langer N, Ho EJ, Alexander LM, Xu HY, Jozanovic RK, Henin S, **Petroni A**, Cohen S, Marcelle ET, Parra LC, Milham MP, Kelly SP. A resource for assessing information processing in the developing brain using EEG and eye tracking. **Scientific Data**, 2017; (4)170040.
- 12) **Petroni A**, Carbajal J, Sigman M. Proprioceptive body illusions modulate the visual perception of reaching distance. **PlosOne**, 2015; 10(6): e0131087
- 11) Barttfeld P*, **Petroni A***, Baez S, Urquina H, Sigman M, Cetkovich M, Torralva T, Torrente F, Lischinsky A, Castellanos X, Manes F, Ibañez A. Functional Connectivity and Temporal Variability of Brain Connections in Adults with ADHD or Bipolar Disorder. **Neuropsychobiology**. 2014; 69(2): 65-75
- 10) Leone MJ, **Petroni A.**, Fernandez Slezak DF, Sigman M. The Tell-Tale Heart: Heart rate fluctuations index objective and subjective events during a game of chess. **Front Hum Neurosci**. 2012; (6)273.
- 9) Ibanez A, Urquina H, **Petroni A**, Baez S, Lopez V, do Nascimento M, Herrera E, Guex R, Hurtado E, Blenkman A, Beltrachini L, Gelormini C, Sigman M, Lischinsky A, Torralva T, Torrente F, Cetkovich M, Manes F. Neural Processing of Emotional Facial and Semantic Expressions in Euthymic Bipolar Disorder and Its Association with Theory of Mind. **PlosOne**. 2012;7(10)
- 8) Ibanez A, Cetkovich M, **Petroni A**, Urquina H, Baez S, Gonzalez Gadea ML, Kamienkowski JE, Torralva T, Torrente F, Strejilevich S, Teitelbaum J, Hurtado E, Guex R, Melloni M, Lischinsky A, Sigman M, Manes F. The neural basis of decision making and reward processing in adults with euthymic bipolar disorder or attention deficit/hyperactivity disorder. **PlosOne**. 2012;7(5)
- 7) **Petroni A***, Canales Johnson A*, Urquina H, Guex R, Hurtado E, Blenkman A, von Ellenrieder N, Manes F, Sigman M, Ibanez A. The cortical processing of facial emotional

expression is associated with social cognition skills and executive functioning: A preliminary study. **Neuroscience Letters**. 2011; 505(1):416.

6) Ibáñez A*. **Petroni A***, Urquina H, Torralba T, Torrente F, Hurtado E, Guex R, Bekinschtein T, Sigman M, Lischinsky A, Manes, F. Cortical deficits in emotion processing for faces in adults with ADHD: Its relation to social cognition and executive functioning. **Social Neuroscience**. 2011, 6(56): 46481.

5) Beltrachini L, Blenkmann A, Von Ellenrieder N, **Petroni A**, Urquina H, Manes F, Ibáñez A, Muravchik C.H. Impact of head models in N170 component source imaging: Results in control subjects and ADHD patients. **Journal of Physics: Conference Series**, 2011; 332 (1).

4) Ibáñez A, Riveros R, Hurtado E, Urquina H, Cardona J, **Petroni A**, Barutta J, Lobos A, Manes F. Facial and semantic emotional interference: Behavioral and cortical responses to the dual valence association task. **Behavioral and Brain Functions**. 2011, 7(1):8.

3) **Petroni A**, Baguear F, Della Maggiore V. Motor Resonance May Originate From Sensorimotor Experience. **J Neurophysiol**. 2010; 104 18671871.

2) **Petroni A**, Urquina H, Sigman M, Manes F, Ibañez A. Early ERPs (N170) measures of valence, interference and stimulus type discrimination: Association to executive function and social cognition. **International Journal of Psychophysiology**. 2010; 77 (3), 336

1) **Petroni A**, Slep LD and Etchenique R. Ruthenium(II) 2,2'Bipyridyl Tetrakis Acetonitrile Undergoes Selective Axial Photocleavage. **Inorg. Chem**. 2008, 47 (3), 951 956.

(*) Equal contributions