## Pablo Barttfeld

Información Grupo de Ciencias Cognitivas. Instituto de Investigaciones Psicológicas, CONICET. DE CONTACTO Email: cabalangofeld@gmail.com Posiciones Investigador Adjunto 2016 -ACADÉMICAS CONICET, Argentina Ayudante de primera, dedicacion simple 2005 - 2018 Facultad de Ingeniería, Universidad de Buenos Aires (UBA) EDUCACIÓN Universidad de Buenos Aires, Argentina Doctorado en Ingeniería 2004 - 2010 Universidad Nacional de Córdoba (UNC), Argentina 1997 - 2002 Licenciatura en Biología 2019 EXPERIENCIA Investigador visitante (3 meses) Institut du Cerveau et de la Moelle Épinière (París, Francia) INVESTIGACIÓN 2013 - 2015 Estudiante postdoctoral Inserm's Cognitive Neuroimaging Unit Neurospin Center, CEA-Saclay, Francia Directores: Stanislas Dehaene y Ghislaine Dehaene-Lambertz Investigador visitante 2012 Addenbrooke's Hospital Cambridge University, Reino Unido 2011 - 2013 Estudiante postdoctoral Laboratorio de Neurociencia Integrativa Departamento de Física, UBA, Argentina Director: Mariano Sigman Investigador visitante 2009 Institut de Neurosciences Cognitives de la Méditerranée, Marsella, Francia Director: Bruno Wicker Estudiante de Doctorado 2008 - 2010 Laboratorio de Neurociencia Integrativa Departamento de Física, UBA, Argentina Director: Mariano Sigman

Publicaciones en revistas

Legaz A, Moguilner S, Báez S, Santamaría-García H, Birba A, Barttfeld,
 P, García A, Fittipaldi S, Ibañez A. Social and non-social working memory in neurodegeneration. Neurobiology of Disease. (2023).

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- 2. Luna F, Aguirre J, Martín-Arévalo E, Lupiáñez J, **Barttfeld, P.**. Different oscillatory rhythms anticipate failures in executive and arousal vigilance. *Frontiers in Cognition*. (2023).
- 3. Embon I, Cukier S, Iorio A, **Barttfeld, P.\***, Solovey, G\*. Is visual metacognition associated with ASD traits? A regression analysis shows no link between visual metacognition and AQ scores. *Consciousness and Cognition*. (2023). \* igual contribución.
- Luna, F., Aguirre, J., Ibañez, A., Martín-Arévalo, E. Lupiáñez, J., Barttfeld, P.\*. Event-related potentials associated with attentional networks evidence changes in executive and arousal vigilance. *Psychophysiology*. (2023).
- Comay, N., Della Bella, G., Lamberti, W., Sigman, M., Solovey, G\*., Barttfeld, P.\*. The presence of irrelevant alternatives paradoxically increases confidence in perceptual decisions. Cognition. (2023). \* igual contribución.
- 6. Della Bella G\*, Zang D\*, Gui P\*, Mateos D, Sitt J, Bekinschtein T, Manasova D, Sarton B, Ferre F, Silva S, Lamberti W. Wu X, Mao Y, Wang L\*, Barttfeld, P.\*. EEG brain states for real-time detection of covert cognition in disorders of consciousness. Preprint, psyarxiv. (2022). \* igual contribución.
- 7. Luna, F., **Barttfeld, P.**, Martín-Arévalo, E., Lupiáñez, J. Cognitive load mitigates the executive but not the arousal vigilance decrement. *Consciousness and Cognition*. (2021).
- 8. Alcaide, S., Sitt, J., Horikawa T., Romano, A., Maldonado, A., Ibanez, A., Sigman M., Kamitani, Y., **Barttfeld, P.** fMRI lag structure during waking up from early sleep stages. *Cortex.* (2021).
- 9. Luna, F., **Barttfeld, P.**, Martín-Arévalo, Lupiáñez, J. The ANTI-Vea task: analyzing the executive and arousal vigilance decrements while measuring the three attentional networks. *Psicologica* (2021).
- Luna, F., Román-Caballero, R., Lupiáñez, J., Barttfeld, P., Martín-Arévalo, E. Online High-Definition tDCS over the right fronto-parietal network improves phasic alertness and reduces the executive vigilance decrement. Neuropsychologia (2020).
- Demertzi, A., Tagliazucchi, E., Dehaene, S., Deco, G., Barttfeld, P., Raimondo, F., Rohaut, B., Schiff, N., Owen, A., Laureys, S., Naccache, L., Sitt, J. Human consciousness is supported by dynamic complex patterns of brain signal coordination. *Science Advances* (2019).
- 12. Uhrig L., Sitt J., Jacob A., Tasserie J., **Barttfeld, P.**, Dupont M., Dehaene S., Jarraya B. Resting-state dynamics as a cortical signature of anesthesia in monkeys. *Anesthesiology* (2018). Comentario en "Highways of the Brain, Traffic of the Mind".
- 13. Barttfeld\*, P., Abboud\* S, Lagercrantz H, Adén U, Padilla N, Edwards AD, Cohen L, Sigman M, Dehaene S, Dehaene-Lambertz G. A lateral-to-mesial organization of human ventral visual cortex at birth. *Brain Structure and Function* (2018).\* igual contribución.

- 14. Ais, J., Zylberberg, A., **Barttfeld**, **P.**, Sigman, M. Individual differences in the shape, bias and precision of confidence distributions across perceptual decisions. *Cognition* (2016).
- 15. **Barttfeld, P.**, Bekinschtein, T., Salles, A., Stamatakis, A., Adapa, R., Menon, T., Sigman, M. Frontoparietal connectivity predicts anaesthetic concentration but thalamic networks index conscious report. *Neuroimage Clinical* (2015).
- Barttfeld\*, P., Uhrig\*, L., Sitt\*, J., Sigman, M., Jarraya, B., Dehaene,
   S. A signature of consciousness in the dynamics of resting-state brain activity. Proceedings of the National Academy of Sciences (2015).\* igual contribución.
- 17. Sedeño, L., Couto, B., Melloni, M., Canales-Johnson, A., Yoris, A., Baez, S., Estevez, S., Velasquez, M., **Barttfeld, P.**, Sigman, M., Kichic, R., Chialvo, D., Manes, F., Bekinschtein, T., Ibañez, A. How do you feel when you can't feel your body?: Interoception, functional, connectivity and emotional processing in Depersonalization Derealization Disorder. *PLoS One* (2014).
- 18. Barttfeld\*, P., Petroni\*, P., Baez, S., Urquina, H., Sigman, M., Cetkovich, M., Torralva, T., Torrente, F., Lischinsky, A., Manes, F., Ibañez, A. Functional Connectivity and Temporal Variability of Brain Connections in Adults with ADHD or Bipolar Disorder: A Default Mode Network Analysis Neuropsychobiology (2014). \* igual contribución.
- Couto, B., Salles, A., Sedeño, L., Pederajordi, M., Barttfeld, P., Canales-Johnson, A., Vidal Dos Santos, Y., Huepe, D., Bekinschtein, T., Sigman, M., Favaloro, R., Manes, F., Ibañez, A. The man who feels two hearts: The different pathways of interoception. Social Cognitive and Affective Neuroscience 2013.
- 20. **Barttfeld, P.**, Amoruso, L., Ais, J., Cukier, S., Bavassi, L., Tomio, A., Manes, F., Ibañez, A. Organization of brain networks governed by long-range connections index autistic traits in the general population. *Journal of Neurodevelopmental Disorders* (2013).
- 21. Barttfeld, P., Wicker, B., Graziano, M., Leiguarda, R., Sigman, M., Distinct patterns of functional brain connectivity correlate with objective performance and subjective beliefs. *Proceedings of the National Academy of Sciences* (2013). Commentario en el blog de PNAS.
- 22. Gallos, L., **Barttfeld**, **P.**, Havlin, S., Sigman, M., Makse, H. Collective behavior and critical fluctuations in the spatial spreading of obesity, diabetes and cancer. *Scientific Reports* (2012).
- 23. Zylberberg, A., **Barttfeld, P.**, Sigman, M. The construction of confidence in a perceptual decision. *Frontiers in Integrative Neuroscience* (2012).
- 24. **Barttfeld, P.**, Wicker, B., Cukier, S., Navarta, S., Leiguarda, R., Sigman, M. State-dependent changes of connectivity patterns and functional brain network topology in Autism Spectrum Disorder. *Neuropsychologia* (2012).

- 25. **Barttfeld, P.**, Wicker, B., Cukier, S., Navarta, S., Lew, S., Sigman, M. A big world network in ASD: Dynamical connectivity analysis reflects a deficit in long-range connections and an excess of short-range connections. *Neuropsychologia* (2011). Commentario en el blog de autismo "Cracking the enigma".
- 26. Jourdan, I., **Barttfeld**, **P.**, Zanuto, BS. A Theory about a Role of the Hyperdirect Pathway in Pattern Expression by the Basal Ganglia. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society. Buenos Aires*, Argentina (2010).
- 27. Yorio, A., Tabullo, A., Wainselboim, A., **Barttfeld, P.**, Segura, E. Event-related potential correlates of perceptual and functional categories: Comparison between stimuli matching by identity and equivalence. *Neuroscience Letters* (2008).
- 28. Abril, A., **Barttfeld**, **P.**, Bucher, E. The effect of fire and overgrazing disturbes on soil carbon balance in the Dry Chaco forest. *Forest Ecology and Management* (2005).

## POSTERS Y PRESENTACIONES SELECCIONADAS

- Event-related potentials associated with attentional and vigilance components.
   Luna F, Aguirre, M, Martín-Arévalo, E., Lupiáñez, J.Barttfeld P,.
   Presentación en Congreso Jornadas virtuales SEPEX, España (2021).
- 2. Presentación en los seminarios del Instituto de Matemática Aplicada del Litoral, Santa Fe, Argentina (2019).
- 3. Mola D, **Barttfeld P,** Ibanez A, Godoy J, Reyna C. The effect of self and other social status in behavior and neural responses during Ultimatum Game. Second Latin-American Workshop on Experimental and Behavioural Social Sciences, Santiago, Chile (2018).
- 4. Presentación en la conferencia *Mente Sociedad y Conducta*. Lanzamiento de la Plataforma de Neurociencias Cognitivas y Ciencias de la Conducta (PENCO). Buenos Aires, Argentina (2018).
- Luna F, Barttfeld, P., Roca J, Lupiáñez J. Measuring attentional networks together with executive and arousal vigilance: the ANTI-Vea task. Poster en el XII Congreso de la Sociedad Española de Psicología Experimental, Madrid, España (2018).
- 6. Demertzi A, Tagliazucchi E, Dehaene S, Deco G, Barttfeld, P., Raimondo F, Rohaut B, Schiff N, Owen A, Laureys S, Naccache L, SittJ. Human consciousness is supported by specific dynamic coordination patterns. Poster en la conferencia internacional de Human Brain Project, Barcelona, España (2018).
- 7. Demertzi A, Tagliazucchi E, Dehaene S, Deco G, **Barttfeld**, **P.**, Raimondo F, Rohaut B, Schiff N, Owen A, Laureys S, Naccache L, SittJ . Human consciousness is supported by temporally evolving brain processes. ePresentation en 4th EAN Congress in Lisbon, Portugal (2018).
- 8. Presentación en el 2nd Latin American Brain Mapping Network Meeting. Buenos Aires, Argentina (2016).

- Presentación en el Simposio Internacional de la Fundación INECO "Nuevas Tendencias en Neurodesarrollo y Cognición", Buenos Aires, Argentina (2015).
- 10. Presentación en la conferencia "Brain dynamics in the primate brain", Neurospin, Saclay, Francia (2015).
- 11. Vidal Dos Santos, Y., **Barttfeld, P.**, Marno, H., Sigman, M., Mehler, J., Dehaene, S., Dehaene-Lambertz, G. Metacognition in 15-month-old infants. *Budapest Conference on Cognitive Development* (2015).
- 12. Presentación en "First Theory-Cognitive workshop", European Institute for Theoretical Neuroscience, Paris, Francia (2014).
- 13. **Barttfeld, P.**, Calvar, J., Cukier, S, Deriche, R., Leiguarda, R., Navarta, S., Sigman, M., Wassermann, D., Wicker, B. Large-scale network analysis reflects big-world characteristics in Autism Spectrum Disorders. 17th Annual Meeting of the Organization for Human Brain Mapping, Quebec (2011).
- 14. **Barttfeld, P.**, Petroni, A., Urquina, H., Sigman, M., Cetkovich, M., Torralva, T., Torrente, F., Báez, S., Lischinsky, A., Manes, F., Ibañez, A. Default mode network (DMN) impairments in adults with ADHD and Bipolar Disorder: Connectivity and Variability. *3rd International Congress on ADHD, Berlin* (2011).
- Barttfeld, P., Sigman, M., Cukier, S., Navarta, S., Calvar, J., Leiguarda, R., Wicker, B. Intrinsic brain connectivity in Autism Spectrum Disorders. 16th Annual Meeting of the Organization for Human Brain Mapping, Barcelona (2010).
- 16. **Barttfeld, P.**, Jourdan, I., Yorio, A., Zanutto, B., Seitz, A. Reward driven learning of associative rules in the absence of awareness. *Society For Neuroscience* 38° Annual Meeting, USA (2007).

| Subsidios y | Programa STIC-AmSud. Director                                  | 2023 |
|-------------|--|------|
| BECAS       | Center for Open Science - Fundación Templeton. Director        | 2023 |
|             | PICT-03614 Argentina innovadora 2020. Director                 | 2021 |
|             | PICT-02980 Investigador  | 2018 |
|             | Proyectos de grupos de reciente formación. Director            | 2018 |
|             | Beca externa postdoctoral para Jóvenes Investigadores, CONICET | 2018 |
|             | Subsidio PRIMAR. Co-director                                   | 2018 |
|             | PICT investigador joven. Director                              | 2015 |
|             | Subsidio de retorno RAÍCES                                     | 2015 |
|             | INSERM postdoctoral grant                                      | 2013 |
|             | James S. McDonnell Foundation. II Latin American               | 2012 |
|             | School for Education, Cognitive and Neural Sciences            |      |
|             | Beca de viaje CONICET para viajar a Cambridge, UK              | 2012 |
|             | Beca postdoctoral, CONICET                                     | 2011 |
|             | Beca Raul Carrea de postgrado                                  | 2010 |
|             | Beca de viaje de CNRS a Marsella, Francia (proyecto ECOS)      | 2009 |
|             | Beca de doctorado, Universidad de Buenos Aires                 | 2004 |
|             | Escuela de Verano del Santa Fe Institute Oingdao China         | 2004 |

| Experiencia<br>docente   | Sistemas Biológicos<br>Ayudante de primera, Facultad de Ingeniería, UBA                                  | 2005 - 20   | 18  |  |  |
|--|--|-------------|-----|--|--|
| DOCENTE  | Prácticas de investigación para estudiantes Facultad de Psicología, UNC                                  | 2019 - 20   | 20  |  |  |
| Formación de   | Tesis de Grado   |             |     |  |  |
| RECURSOS   | Florencia López. Psicología, UNC   | 2023  (est) | ,   |  |  |
| HUMANOS  | Florencia Pereyra. Psicología, UNC   | 2023  (est) | ,   |  |  |
|  | María Victoria Bidondo. Psicología, UNC  | 2023 (est   | ,   |  |  |
|  | Betina Testa. Ingeniería Biomédica, UNC  | 2023 (est   | ,   |  |  |
|  | Sebastián Galván Rial. Psicología, UNC   | 2023 (est   | ,   |  |  |
|  | María Florencia Molina. Física, UNC  | 2023 (est   | ,   |  |  |
|  | Federico Teitelbaum (con Beca CIN). Psicología, UNC  | 20          |     |  |  |
|  | Rocío Rodríguez. Psicología, UNC<br>Nicolás Comay. Psicología, UNC                                       | 20<br>20    |     |  |  |
|  | Julieta Aguirre (con beca CIN). Psicología, UNC  | 20          |     |  |  |
|  | Santiago Alcaide. Ingeniería Biomédica, UNC  | 20          |     |  |  |
|  | Alvaro Romano. Ingeniería Biomédica, UNC   | 20          |     |  |  |
|  | Marcos Grillo. Licenciatura en Psicología, Universidad Faval   |             |     |  |  |
|  | Joaquín Ais (codirección). Licenciatura en Biología. UBA Tesis de Doctorado                              | 20          |     |  |  |
|  | Julieta Aguirre. Dirección. Doctorado en Psicología, UNC   | 2025 (es    | e+) |  |  |
|  | Iair Embon. Codirección. Doct. en Neurociencia, UNC  | 2025 (est   |     |  |  |
|  | Nicolás Comay. Dirección. Doctorado en Neurociencia, UNC   | 2025 (est   | ,   |  |  |
|  | Gabriel Della Bella. Codirección. Doct. en Física, UNC   | 2025 (est   | ,   |  |  |
|  | Renato Paredes. Codirección. Doct. en Neurociencia, UNC  | 20:         | ,   |  |  |
|  | Matías Palmucci. Codirección. Doct. en Neurociencia, UNC   | 20:         |     |  |  |
|  | Leticia Sarli. Codirección. Doct. en Neurociencia, UNC   | 20          |     |  |  |
|  | Federico Cavana. Codirección. Doct. en Neurociencia, UNC   | 20          | 23  |  |  |
|  | Fernando Luna. Codirección. Doct. en Psicología, finalizado.   | UNC 20      | 19  |  |  |
| Experiencia  | Jurado de Tesis  |             |     |  |  |
| COMO REVISOR   | Marcos Pietto. Doctorado en Psicología, UNC  | 20          |     |  |  |
|  | Noelia Calvo. Doctorado en Psicología, UNC   | 20          |     |  |  |
|  | Débora Mola. Doctorado en Psicología, UNC  | 20          |     |  |  |
|  | Soledad Picco. Licenciatura en Biología, UBA   | 20          |     |  |  |
|  | Santiago Redondo. Doctorado en Psicología, UNC   | 20          |     |  |  |
|  | Lucas Sedeño. Doctorado en Medicina, Univ. Favaloro  | 20          |     |  |  |
|  | Rocío Alvarez Mence. Licenciatura en Física, UBA<br>María González Gadea. Doctorado en Neurociencia, UNC | 20<br>20    |     |  |  |
|  | Federico Santa Coloma. Ingeniería Electrónica, UBA   | 20          |     |  |  |
|  | Revisor para revistas científicas  | 20          | 11  |  |  |
|  | Nature Communications, Journal of Neuroscience, Frontiers in Human                                       |             |     |  |  |
| Neuroscience, Frontiers in Aging Neuroscience, Neuroimage, Cereb |  |             |     |  |  |
|  | Cognitive Affective and Behavioral Neuroscience, Human Bra   |             |     |  |  |
|  | Journal of Psychiatry Research, Autonomic Neuroscience, Translational                                    |             |     |  |  |
|  | Psychiatry, Journal of Neurophysiology, Learning and Individu  |             |     |  |  |

## Editor para revistas científicas

Neuroimage, Brain Sciences.

## Revisión de Proyectos

Eye and Vision, Journal of Biological Physics.

| Evaluador de proyectos, Agencia Nacional de Promoción | 2017 |
|---|------|
| Par especialista de promociones, CONICET              | 2019 |
| Evaluador en Concursos de Ingreso a la Carrera del    |      |
| Profesional y Técnico de Apoyo - CONICET              | 2020 |