

Pablo Barttfeld

Investigador Independiente, CONICET
Instituto de Investigaciones Psicológicas
Universidad Nacional de Córdoba, Argentina

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PERFIL DE INVESTIGACIÓN

Neurocientífico cognitivo que trabaja en la intersección de **conciencia, metacognición y dinámica cerebral**. Mi investigación combina neuroimágenes (fMRI, EEG), modelado computacional y paradigmas comportamentales para estudiar cómo el cerebro sostiene la conciencia y la toma de decisiones bajo incertidumbre. Dirijo el **Grupo de Ciencias Cognitivas** en CONICET-UNC.

CARGO ACTUAL

Investigador Independiente, CONICET

2016–presente

Instituto de Investigaciones Psicológicas · Universidad Nacional de Córdoba, Argentina

El cargo de *Investigador Independiente* de CONICET es equivalente a Profesor Asociado con cargo en la carrera nacional de investigación científica (CIC). Sigue a *Adjunto* y precede a *Principal*.

FORMACIÓN ACADÉMICA

Diploma en Ciencia de Datos y Machine Learning

2024

Universidad Nacional de Córdoba, Argentina

Posdoctorado

2013–2015

Unidad de Neuroimagen Cognitiva Inserm, NeuroSpin / CEA-Saclay, Francia

Directores: Stanislas Dehaene & Ghislaine Dehaene-Lambertz

Posdoctorado

2011–2013

Laboratorio de Neurociencia Integrativa, Dto. de Física, UBA, Argentina

Director: Mariano Sigman

Doctorado en Ingeniería

2004–2010

Universidad de Buenos Aires (UBA), Argentina

Director: Mariano Sigman

Licenciatura en Biología

1997–2002

Universidad Nacional de Córdoba (UNC), Argentina

PUBLICACIONES

* igual contribución. **Negrilla:** Pablo Barttfeld. Los preprints se listan por separado.

Artículos con referato

1. Della Bella G, Vélez Picatto A, Galván Rial S, Cukier S, Foa Torres G, Catanzariti M, Mateos D, Lamberti P, Cardeña E*, **Barttfeld P***. The Neurophenomenology of a Self-Induced Transcendental Visionary State: A Case Study. *NeuroImage*. 2026.
2. Legaz A, Moguilner S, **Barttfeld P***, et al., Hernández H, Ibañez A. Global compound physical and social exposome and brain clocks in aging and dementia. *Nature Medicine*. 2026.
3. Della Bella G, Sarton B, Mattia G, Peran P, Lamberti W, **Barttfeld P***, Silva S*. Brain dynamic organization at the acute stage of severe brain injury. *NeuroImage*. 2025.
4. Comay N, Solovey G*, **Barttfeld P***. Decisions are based on less information than metacognitive judgments in multi-alternative contexts. *Journal of Experimental Psychology: LMC*. 2025.
5. Comay N, Della Bella G, **Barttfeld P**. Iconic vs. working memory metacognition to evaluate the richness of perception: a registered report. *Royal Society Open Science*. 2025.
6. **Barttfeld P**, Comay N, Embon I, Solovey G. Pre- and post-decision signals of certainty in changing minds. *Trends in Neurosciences*. 2025.

7. Aguirre J, **Barttfeld P**, Martín-Arévalo E, Lupiáñez J, Luna F. Testing thought-probe frequency for measuring mind-wandering along with vigilance and cognitive control loss. *Behavioral Research Methods*. 2025.
8. Hazelton J, Migeot J, Gonzalez-Gomez R, et al., **Barttfeld P**, Ibanez A. Cardiovascular risk factors and the allostatic interoceptive network in dementia. *Cardiovascular Research*. 2025.
9. Della Bella G*, Zang D*, Gui P*, Mateos D, Sitt J, Bekinschtein T, et al., **Barttfeld P***. Detection of EEG dynamic complex patterns in disorders of consciousness. *Communications Biology*. 2025.
10. Cardeña E, Berkovich-Ohana A, Valli K, **Barttfeld P**, et al. Bringing Order to Disarray: A Consensus Taxonomy of Altered States of Consciousness. *Psychology of Consciousness*. 2025.
11. Gonzalez-Gomez R, Cruzat J, Hernández H, et al., **Barttfeld P**, Ibañez A. Qualitative and quantitative educational disparities and brain signatures in aging and dementia. *eClinicalMedicine*. 2025.
12. Hazelton J*, Della Bella G*, **Barttfeld P**, et al. Altered spatiotemporal brain dynamics of interoception in behavioural-variant frontotemporal dementia. *eBioMedicine*. 2025.
13. Zapata J, Comay N, **Barttfeld P**, Solovey G, Saal A, Ahumada J. Metacognitive sensitivity on the Iowa Gambling Task reveals awareness as a necessary condition for advantageous performance. *Experimental Psychology*. 2025.
14. Legaz A, Altschuler F, Gonzalez-Gomez R, et al., **Barttfeld P**, Ibañez A. Structural inequality linked to brain volume and network dynamics in aging and dementia across the Americas. *Nature Aging*. 2024.
15. Embon I, Gerbaudo MA, Ramos Usaj A, Iorio A, **Barttfeld P***, Solovey G*. Exploring the Relationship between Dysfunctional Personality Traits with Metacognition and Confidence. *Current Psychology*. 2024.
16. Ibanez A, Moguilner S, Baez S, et al., **Barttfeld P**, Miller B. Brain clocks capture diversity and disparities in aging and dementia across geographically diverse populations. *Nature Medicine*. 2024.
17. Teitelbaum Dorfman F, Kogan B, **Barttfeld P**, García A. Bilinguals on the footbridge: The role of foreign-language proficiency in moral decision making. *Bilingualism: Language and Cognition*. 2024.
18. Legaz A, Prado P, Moguilner S, et al., **Barttfeld P**, Ibañez A. Social and non-social working memory in neurodegeneration. *Neurobiology of Disease*. 2023.
19. 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.
20. Embon I, Cukier S, Iorio A, **Barttfeld P***, Solovey G*. Is visual metacognition associated with ASD traits? *Consciousness and Cognition*. 2023.
21. 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.
22. 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.
23. Luna F, **Barttfeld P**, Martín-Arévalo E, Lupiáñez J. Cognitive load mitigates the executive but not the arousal vigilance decrement. *Consciousness and Cognition*. 2021.
24. Alcaide S, Sitt J, Horikawa T, Romano A, Maldonado A, Ibañez A, Sigman M, Kamitani Y, **Barttfeld P**. fMRI lag structure during waking up from early sleep stages. *Cortex*. 2021.

25. Luna F, **Barttfeld P**, Martín-Arévalo E, Lupiáñez J. The ANTI-Vea task: analyzing the executive and arousal vigilance decrements while measuring the three attentional networks. *Psicológica*. 2021.
26. 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.
27. 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.
28. 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.
29. **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.
30. Ais J, Zylberberg A, **Barttfeld P**, Sigman M. Individual differences in the shape, bias and precision of confidence distributions across perceptual decisions. *Cognition*. 2016.
31. **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.
32. **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.
33. Sedeño L, Couto B, Melloni M, et al., **Barttfeld P**, 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.
34. **Barttfeld P***, Petroni A*, Baez S, et al. Functional Connectivity and Temporal Variability of Brain Connections in Adults with ADHD or Bipolar Disorder: A Default Mode Network Analysis. *Neuropsychobiology*. 2014.
35. Couto B, Salles A, Sedeño L, et al., **Barttfeld P**, Ibañez A. The man who feels two hearts: The different pathways of interoception. *Social Cognitive and Affective Neuroscience*. 2013.
36. **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.
37. **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.
38. 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.
39. Zylberberg A, **Barttfeld P**, Sigman M. The construction of confidence in a perceptual decision. *Frontiers in Integrative Neuroscience*. 2012.
40. **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.
41. **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.
42. Yorio A, Tabullo A, Wainselboim A, **Barttfeld P**, Segura E. Event-related potential correlates of perceptual and functional categories. *Neuroscience Letters*. 2008.

43. Abril A, **Barttfeld P**, Bucher E. The effect of fire and overgrazing disturbances on soil carbon balance in the Dry Chaco forest. *Forest Ecology and Management*. 2005.

Preprints

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1. Comay N, Solovey G*, **Barttfeld P***. Confidence phenotypes: A unified computational account of value and decision certainty in reinforcement learning. *PsyArXiv*. 2026.

Capítulos de libros

-
1. Fogliatti E, Galván Rial S, Della Bella G, **Barttfeld P**. Del ritual al protocolo: el conflicto en torno a los psicodélicos. En: A. Pamela Paz García (Ed.), *Drogas y bien público*. Instituto de Investigaciones Psicológicas, Córdoba. 2025. ISBN 978-987-47803-5-5.

DIRECCIÓN DE
RECURSOS HUMANOS

Investigadores Posdoctorales

-
- Santiago Redondo (Psicología, UNC) 2024–2026

Estudiantes de Doctorado

-
- | | |
|---|-----------------|
| • Sebastián Galván Rial (Neurociencia, UNC) | est. 2029 |
| • Julieta Zapata (Psicología, UNC) | est. 2025 |
| • Julieta Aguirre (Psicología, UNC) | est. 2026 |
| • Iair Embon (Neurociencia, UNC) | est. 2026 |
| • Nicolás Comay (Neurociencia, UNC) | est. 2026 |
| • Gabriel Della Bella (Física, UNC) | finalizado 2025 |
| • Renato Paredes (Neurociencia, UNC) | finalizado 2025 |
| • Matías Palmucci (Neurociencia, UNC) | finalizado 2025 |
| • Leticia Sarli (Neurociencia, UNC) | finalizado 2025 |
| • Federico Cavana (Neurociencia, UNC) | finalizado 2025 |
| • Fernando Luna (Psicología, UNC) | finalizado 2019 |

Estudiantes de Maestría

-
- | | |
|--|------|
| • Julieta Irazuzta, Vera Candusso, Sebastián Galván Rial (Psicología, UNC) | 2025 |
| • Federico Teitelbaum Dorfman (Psicología, UNC) | 2022 |
| • Rocío Rodríguez (Psicología, UNC) | 2021 |
| • Nicolás Comay (Psicología, UNC) | 2020 |
| • Julieta Aguirre (Psicología, UNC) | 2019 |
| • Santiago Alcaide, Álvaro Romano (Ingeniería Biomédica, UNC) | 2018 |
| • Marcos Grillo (Psicología, Universidad Favaloro) | 2018 |
| • Joaquín Ais — codirección (Biología, UBA) | 2016 |

SUBSIDIOS Y
FINANCIAMIENTO

-
- | | |
|--|-----------|
| • PICT 2022 (Director) — ANPCyT, Argentina | 2024–2026 |
| • Programa STIC-AmSud (Director) — ANID, Chile | 2023–2024 |
| • Center for Open Science / Templeton Foundation (Director) — Investigación en conciencia | 2023 |
| • PICT 2021 Argentina Innovadora 2020 (Director) — ANPCyT | 2021–2024 |
| • PICT 2018 (Investigador) — ANPCyT | 2018–2021 |
| • Grupos de Reciente Formación (Director) — MinCyT Córdoba | 2018 |
| • Beca CONICET para estadías cortas de investigadores jóvenes | 2018 |
| • Subsidio Primar (Codirector) — UNC | 2018 |
| • PICT Jóvenes Investigadores (Director) — ANPCyT | 2015–2018 |
| • Beca de retorno Raíces — MinCyT Argentina | 2015 |

- **Beca posdoctoral INSERM** — INSERM, Francia 2013–2015
- **James S. McDonnell Foundation** — II Escuela Latinoamericana de Ciencias Cognitivas y Neurales 2012
- **Beca de viaje CONICET** — Universidad de Cambridge, Reino Unido 2012
- **Beca posdoctoral** — CONICET 2011–2013
- **Beca Raúl Carrea** — posgrado 2010
- **Beca de viaje CNRS** (proyecto ECOS) — Francia 2009
- **Beca doctoral** — Universidad de Buenos Aires 2004–2010
- **Escuela de Verano del Santa Fe Institute** — Qingdao, China 2004

ESTADÍAS DE INVESTIGACIÓN

- **Institut du Cerveau et de la Moelle Épinière**, París, Francia 2019 · 3 meses
- **Addenbrooke's Hospital**, Universidad de Cambridge, Reino Unido 2012 · 2 meses
- **Institut de Neurosciences Cognitives de la Méditerranée**, Marsella, Francia 2009 · 2 meses

ACTIVIDAD EDITORIAL Y REVISIÓN

Roles Editoriales

- **Editor Asociado**, *Imaging Neuroscience* 2023–presente
- **Editor Asociado**, *NeuroImage: Reports* 2024–presente

Revisor Ad hoc

Nature Communications, Communications Psychology, Communications Biology, Cerebral Cortex, Communications Medicine, Journal of Neuroscience, NeuroImage, Human Brain Mapping, Frontiers in Human Neuroscience, Frontiers in Aging Neuroscience, Brain and Cognition, CABN, Translational Psychiatry, Journal of Neurophysiology, Journal of Psychiatric Research, Developmental Psychology, entre otras.

Revisión Experta Invitada

- Metascience Novelty Indicators Challenge, Universidad de Sussex 2026

EVALUACIÓN DE SUBSIDIOS Y TESIS

Paneles de Evaluación de Subsidios

- **NWO Talent Programme Vici**, Consejo de Investigación de Holanda 2025
- **Fédération pour la Recherche sur le Cerveau**, Francia 2024
- **CONICET**, Argentina 2017, 2019–2024

Tesis Doctorales Evaluadas (jurado externo)

- María Laura Noguera — Medicina, Universidad Católica de Cuyo 2025
- Raúl González Gómez — Neurociencia, Universidad Adolfo Ibáñez, Chile 2024
- Agustina Legaz — Psicología, UNC 2024
- Fabricio Baglivo — Ingeniería, UBA 2024
- Marcos Pietto — Psicología, UNC 2020
- Noelia Calvo — Psicología, UNC 2019
- Débora Mola — Psicología, UNC 2019
- Soledad Picco — Biología, UBA 2018
- Santiago Redondo — Psicología, UNC 2018
- Lucas Sedeño — Medicina, Universidad Favaloro 2018
- María González Gadea — Neurociencia, UNC 2015

También evaluó >20 tesis de Maestría en UNC, UBA y Universidad Favaloro.

DOCENCIA

Introducción a las Prácticas en Ciencias Cognitivas Facultad de Psicología, UNC, Argentina

2019–2024

Introducción Práctica a las Ciencias Cognitivas (Posgrado)
Facultad de Psicología, UNC, Argentina

2023

Sistemas Biológicos (Profesor Asistente, Carrera de Ingeniería Electrónica) 2005–2018
Facultad de Ingeniería, Universidad de Buenos Aires

PRESENTACIONES SELECCIONADAS

- **Charla invitada**, Escuela de Neurociencia y Trastornos del Comportamiento, Montevideo, Uruguay 2024
- **Charla invitada**, Workshop de Sueño, Ensueños y Conciencia, Buenos Aires, Argentina 2023
- **Charla invitada**, Instituto de Matemática Aplicada (IMAL), Santa Fe, Argentina 2019
- **Charla invitada**, Conferencia *Mind, Society and Behavior*, CONICET, Buenos Aires 2018
- **Charla invitada**, 2da Reunión de la Red Latinoamericana de Mapeo Cerebral, Buenos Aires 2017
- **Charla invitada**, Simposio Internacional INECO “Nuevas tendencias en neurodesarrollo y cognición”, Buenos Aires 2015
- **Charla invitada**, Conferencia “Brain Dynamics in the Primate Brain”, NeuroSpin, Saclay, Francia 2015
- **Charla invitada**, Primer Workshop Teoría-Cognitiva, Instituto Europeo de Neurociencia Teórica, París 2014

GESTIÓN Y SERVICIO

- **Miembro del Comité Científico**, 29na Reunión Anual de la Association for the Scientific Study of Consciousness (ASSC), Chile 2025–2026
- **Miembro del Consejo Directivo**, Instituto de Investigaciones Psicológicas – CONICET 2025
- **Miembro del Comité de Ética**, Instituto de Investigaciones Psicológicas – CONICET 2021–2024