

Nicolás Alejandro Comay

PhD student

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Education

National University of Córdoba (UNC-Argentina), PhD in Neurosciences. Supervisor: Dr. Pablo Barttfeld. Co-supervisor: Dr. Guillermo Solovey. **2021-present**

National University of Córdoba (UNC-Argentina), Degree in Psychology. Recipient of the Premio Universidad for academic excellence (highest GPA among on-time graduates). **2016-2020**

Publications

JOURNAL ARTICLES

Comay, N.A.; Solovey, G.; Barttfeld, P. Iconic vs. working memory metacognition to evaluate the richness of perception: a registered report. *Royal Society Open Science*. 12(11), 231805. **2025**

Comay, N.A.; Solovey, G.; Barttfeld, P. Decisions are based on less information than metacognitive judgments in multialternative contexts. *Journal of Experimental Psychology: Learning, Memory and Cognition*. Advance online publication. **2025**

Barttfeld, P.; **Comay, N.A.**; Embon, I.; Solovey, G. Pre- and post-decision signals of certainty in changing minds. *Trends in Neurosciences*. **2025**

Zapata, J. M.⁺, **Comay, N. A.**⁺, Taricco, G., Barttfeld, P., Solovey, G., Saal, A., & Ahumada, J. V. Metacognitive sensitivity on the Iowa Gambling Task reveals awareness as a necessary condition for advantageous performance. *Experimental Psychology*, 71(6), 343–351.⁺joint first authors. **2025**

Comay, N. A., Della Bella, G., Lamberti, P., Sigman, M., Solovey, G., & Barttfeld, P. The presence of irrelevant alternatives paradoxically increases confidence in perceptual decisions. *Cognition*, 234, 105377. **2023**

Scholarships and distinctions

ACADEMIC SCHOLARSHIPS & AWARDS

Dr. Pedro Pavesi award for best presentation at the conference “The future of decision-making sciences” (Center of Rationality, Action and Decision – Economics School – University of Buenos Aires). **2022**

Incubator project prize at the First Annual Summer School on Consciousness and Metacognition (University College London and Université de recherche Paris Sciences et Lettres). **2021**

Five years PhD fellowship. National Scientific and Technical Research Council of Argentina (CONICET). **2021**

University Award from the National University of Córdoba for academic excellence (highest GPA among on-time graduates). **2021**

Stimuli to Scientific Vocations scholarship. Undergraduate scholarship from the National Interuniversity Council of Argentina. **2020**

TRAVEL GRANTS FOR ACADEMIC EVENTS

Travel grant to assist to the 2025 Multi-disciplinary Conference on Reinforcement Learning and Decision Making (Trinity College Dublin, Ireland) **2025**

Travel grant to assist to the Neuroscience of Consciousness Winter School (Canadian Institute for Advanced Research, CIFAR). **2024**

Travel grant to assist to the RIKEN Center for Brain Science Summer School (Tokyo, Japan) **2023**

EMBO travel grant to assist to the Barcelona Summer School for Advanced Modeling of Behavior (Centre de Recerca Matemàtica – Barcelona, Spain). **2022**

Research experience

AS GRADUATE STUDENT

Three months research internship at the Laboratory for Imagination and Executive Functions lead by Dr. Kentaro Miyamoto (*RIKEN Center for Brain Science* – Hirosawa, Wako, Saitama 351-0106, Japan). **2024**

Two months research internship at the Laboratory for Imagination and Executive Functions lead by Dr. Kentaro Miyamoto as part of the *RIKEN Center for Brain Science Summer School Program* (Hirosawa, Wako, Saitama 351-0106, Japan). **2022**

Ph.D. student in Neurosciences at the Psychological Research Institute (National Scientific and Technical Research Council – National University of Córdoba, Argentina). **2021-present**

AS UNDERGRADUATE STUDENT

Undergraduate research assistant as part of the *Stimuli to Scientific Vocations scholarship* from the National Interuniversity Council (Argentina). Project: *Effects of pre and/or postnatal ethanol exposure on the modulation of the opioid system in neonatal rats.* **2020-2021**

Thesis in Psychology (Psychological Research Institute, UNC-CONICET). Title: *Confidence in perceptual decisions with multiple alternatives.* Qualification: 10/10. Supervisor: Dr. Pablo Barttfeld. Co-supervisor: Dr. Guillermo Solovey. **2020**

Undergraduate research assistant. Project: *Neuroprotection facilitated by Omega 3 in two cognitive impairment models.* Psychological Research Institute (UNC-CONICET, Argentina). **2019**

Presentations

ORAL COMMUNICATIONS & TALKS

Bayesian approach to perceptual decision making and confidence (**Comay, N.A.; Solovey, G.; Barttfeld, P.**). Bayesian Plurinational Congress. **2023**

Computational modeling of behavior (**Comay, N.A.; Solovey, G.; Barttfeld, P.**). V International Psychology Congress and VIII National Psychology Congress “Science and Profession” (UNC, Argentina). **2023**

Deviations from Bayesian optimality in the evaluation of perceptual decisions (**Comay, N.A.**; Della Bella, G.; Lamberti, P.; Sigman, M.; Solovey, G.; Barttfeld, P). The future of decision-making sciences conference (Center of Rationality, Action and Decision - Economics School – University of Buenos Aires).

2022

Implausible alternatives paradoxically increase confidence in a perceptual decision. (**Comay, N.A.**; Della Bella, G.; Lamberti, P.; Sigman, M.; Solovey, G.; Barttfeld, P. XXXVI Annual Meeting of the Argentinian Society for Neuroscience Research.

2021

WORKSHOPS & SYMPOSIA

Thinking how we think: actual controversies in metacognition and experiment designs. (Embon, I.⁺; Lillo, M.⁺; **Comay, N.A.**⁺; Aguirre, J.⁺). II International Meeting "Frontiers in Neurosciences" (Universidad Nacional Autónoma de México, UNAM). ⁺equal contribution.

2023

Reflecting upon our own thoughts: recent studies on metacognition in vigilance, personality and decision making (**Comay, N.A.**⁺; Aguirre, J.; Embon, I.; Gerbaudo, M.A.; Lillo, M.). XIX National Meeting and VIII International Meeting of the Argentinean Association for Behavioral Sciences. ⁺symposium coordinator

2023

POSTER PRESENTATIONS

Bayesian-like computations explain human confidence in values and decisions during learning (**Comay, N.A.**, Solovey, G.; Barttfeld, P). 2025 Multi-disciplinary Conference on Reinforcement Learning and Decision Making. Trinity College Dublin, Ireland.

2025

Computational modeling of uncertainty in reinforcement learning (**Comay, N.A.**, Solovey, G.; Barttfeld, P.). I Congreso Argentino de Ciencias Cognitivas. Universidad Torcuato Di Tella, Buenos Aires.

2024

Implausible alternatives paradoxically increase confidence in a perceptual decision. (Comay, N.A.; Della Bella, G.; Lamberti, P.; Sigman, M.; Solovey, G.; Barttfeld, P.) Computational Cognition Workshop (Osnabrück, Germany).

2021

Effect of subliminal feedback on metacognition in a visual perception task. (Zapata, J.M.⁺; **Comay, N.A.**⁺; Della Bella, G.⁺). XXXV Annual Meeting of the Argentinian Society for Neuroscience Research. ⁺equal contribution.

2020

Deterioration of grid cells and loss of spatial orientation in Alzheimer's Disease (Cabrera, V.⁺; **Comay, N.A.**⁺; Maza, P.⁺; Vietéz Salvá, E.⁺; Macchione, A.F.⁺). V International Psychology Congress and VII National Psychology Congress "Science and Profession". ⁺equal contribution.

2020

Teaching experience

Teaching assistant of the postgraduate course *A practical introduction to cognitive science* (National University of Córdoba, Argentina).

2023

Teaching assistant of the research practice *Tools for data analysis in cognitive neuroscience* (National University of Córdoba, Argentina).

2023

Student assistant of the subject *Neurophysiology and Psychophysiology* (National University of Córdoba, Argentina).

2020-2022

Student assistant of the subject *Experimental Psychobiology* (National University of Córdoba, Argentina).

2019-2021

Human resources training

STUDENTS SUPERVISED FOR THE PSYCHOLOGY DEGREE

Gaspar Taricco (UNC, Argentina). <i>Co-supervision.</i>	2024-2025
Bautista Squire (UNC, Argentina). <i>Co-supervision.</i>	2024-2025
Agostina Presuttari & Camila Abud (UNC, Argentina).	2024-2025
Vera Candusso & Julieta Irazuzta (UNC, Argentina).	2024-2025
Benjamin Sanchez (UNC, Argentina). <i>Co-supervision.</i>	2023-2024
Camila Inés Amado (UNC, Argentina).	2023-2024
Candelaria Nicolas & Florencia Ledesma (UNC, Argentina). <i>Co-supervision.</i>	2023-2024

Experience as reviewer and advisor

PEER REVIEW FOR JOURNALS

Nature communications; NeuroImage: Reports; Scientific Reports.

UNDERGRADUATE THESES EVALUATED

Five theses evaluated for the Degree in Psychology at the National University of Córdoba.

Administrative positions

Member of the ethics committee for the Use and Care of Laboratory Animals at the Psychological Research Institute (UNC-CONICET) **2022-present**

Skills

Programming (R, MATLAB)

Computational modelling

FSL (FMRIB Software Library)

EEGLAB

Selected summerschools & courses

Neuroscience of Consciousness Winter School (Canadian Institute for Advanced Research) **2024**

RIKEN Center for Brain Science Summer School (RIKEN CBS, Japan) **2023**

Barcelona Summer School for Advanced Modeling of Behavior (Centre de Recerca Matemàtica, Spain) **2022**

Statistics applied to health sciences (UNC, Argentina) **2022**

First Annual Summer School on Consciousness and Metacognition (University College London & Paris Sciences et Letters) **2021**

Computational Neuroscience (UNSAM, Argentina) **2021**

Python programming (UNSAM, Argentina)	2021
Decision making (UBA, Argentina)	2020
Behavioral economics (UBA, Argentina)	2020