

# Francisco Garre-Frutos

POSTDOCTORAL RESEARCHER · EXPERIMENTAL PSYCHOLOGY

Madrid, Spain

✉ fgfrutos@gmail.com · 🌐 franfrutos.github.io · 📄 Scholar · 🆔 ORCID · 🌀 OSF · 🦋 Bluesky

## EDUCATION

### PhD in Psychology

Granada, Spain

UNIVERSITY OF GRANADA

2021 – 2025

**Thesis:** *Awareness, Control, and Automaticity in Value-Modulated Attentional Capture.*

**Supervisors:** Juan Lupiáñez and Miguel A. Vadillo.

**Distinction:** International Doctorate; cum laude.

### MSc in Cognitive and Behavioral Neuroscience

Granada, Spain

UNIVERSITY OF GRANADA

2020 – 2021

**Thesis:** *Inhibition of return and learned value.*

**Supervisor:** Juan Lupiáñez.

### BSc in Psychology

Murcia, Spain

UNIVERSITY OF MURCIA

2016 – 2020

**Distinction:** Outstanding Undergraduate Award.

## RESEARCH EXPERIENCE

### Postdoctoral Researcher

Madrid, Spain

AUTONOMOUS UNIVERSITY OF MADRID · COGNITION, ATTENTION & LEARNING LAB  
(CALL)

Since 2026

### Postdoctoral Researcher

Granada, Spain

UNIVERSITY OF GRANADA · MIND, BRAIN & BEHAVIOR RESEARCH CENTER (CIMCYC)

2026

### Predocctoral Researcher (FPU Fellow)

Granada, Spain

UNIVERSITY OF GRANADA · MINISTRY OF SCIENCE AND INNOVATION

Nov. 2021 – Dec. 2025

### Visiting Researcher

Amsterdam, the Netherlands

VRIJE UNIVERSITEIT AMSTERDAM · JAN THEEUWES LAB

Sept. 2024 – Dec. 2024

### Research Scholarship

Granada, Spain

UNIVERSITY OF GRANADA

Sept. 2020 – Jul. 2021

### Research Scholarship

Murcia, Spain

UNIVERSITY OF MURCIA

Sept. 2019 – Jul. 2020

---

## METHODS & TECHNICAL EXPERTISE

<b>Quantitative</b>	Multilevel modelling, psychometrics, reliability analysis, meta-analysis, signal detection theory, computational modelling, reinforcement learning, multiverse inference.
<b>Programming</b>	R, Python, JavaScript, Julia, Stan.
<b>Experimental Tools</b>	PsychoPy, E-Prime, OpenSesame, jsPsych, online behavioural testing, JASP, Jamovi.
<b>Reproducibility</b>	OSF, preregistration, Quarto/Markdown, Git/GitHub workflows, open materials and data sharing.

---

## SPECIALIZED TRAINING

### Tenth Summer School on Statistical Methods for Linguistics and Psychology (SMLP): Advanced Methods in Frequentist Statistics with Julia

Aug. 2026

UNIVERSITY OF POTSDAM, GERMANY · 40 HOURS

### Barcelona Summer School on Advanced Modeling of Behavior (BAMB 2026)

Jul. 2026

CENTRE DE RECERCA MATEMÀTICA (CRM), BARCELONA · 92.5 HOURS

### Electroencephalography (EEG): Preprocessing and Introduction to Univariate and Multivariate Analyses

Mar. 2025

ESCUELA DE DOCTORADO DE CIENCIAS DE LA SALUD, UNIVERSITY OF GRANADA · 21 HOURS

### Annual JAGS Workshop: Bayesian Modeling for Cognitive Science

Jul. 2024

PSYCHOLOGICAL METHODS GROUP, UNIVERSITY OF AMSTERDAM · 140 HOURS

### Seventh Summer School on Statistical Methods for Linguistics and Psychology (SMLP): Advanced Bayesian Data Analysis

Sept. 2023

UNIVERSITY OF POTSDAM, GERMANY · 40 HOURS

### CIMCYC Workshop on Computational Modelling of Behavioral Data

Jun. 2022

MIND, BRAIN, AND BEHAVIOR RESEARCH CENTER (CIMCYC), UNIVERSITY OF GRANADA · 9 HOURS

---

## PUBLICATIONS

- Garre-Frutos, F., Vadillo, M. A., Theeuwes, J., van Moorselaar, D., & Lupiáñez, J. (in press). *The role of selective attention in value-modulated attentional capture*. *Psychonomic Bulletin & Review*.



- Theeuwes, J., Manini, G., Garre-Frutos, F., Lupiáñez, J., & van Moorselaar, D. (in press). *The capture debate revisited: Proactive or reactive suppression – that is the question*. *Visual Cognition*.



- Franco-Martínez, A., Rey-Sáez, R., Adrián-Ventura, J., ... Garre-Frutos, F., et al. (2026). *Replicating the unconscious working memory effect: A multisite Registered Report*. *Neuroscience of Consciousness*, 2026(1), niaf046.



- Martínez-López, P., Vázquez-Millán, A., **Garre-Frutos, F.**, & Luque, D. (2026). *Assessing the validity evidence for habit measures based on time pressure. Behavior Research Methods*, 58(1), Article 7.



- **Garre-Frutos, F.**, Lupiáñez, J., & Vadillo, M. A. (2025). *Value-modulated attentional capture depends on awareness. Psychonomic Bulletin & Review*, 32(6), 3025–3040.



- **Garre-Frutos, F.**, Ariza, A., & González, F. (2025). *The effect of reward and punishment on the extinction of attentional capture elicited by value-related stimuli. Psychological Research*, 89(3), Article 89.



- González, F., **Garre-Frutos, F.**, Hinojosa-Aguayo, I., & Hall, G. (2025). *Extinction of outcome-specific Pavlovian-to-instrumental transfer (PIT), instrumental outcome devaluation, and reward-related attentional capture are predicted by affect-driven impulsivity. Learning & Behavior*, 53(4), 335–354.



- **Garre-Frutos, F.**, Vadillo, M. A., González, F., & Lupiáñez, J. (2024). *On the reliability of value-modulated attentional capture: An online replication and multiverse analysis. Behavior Research Methods*, 56(6), 5986–6003.



#### OUTREACH PUBLICATION

- **Garre-Frutos, F.** (2025). *Is wanting enough? Control and automaticity in learned attentional biases. Ciencia Cognitiva*, 19(1), 8–10.

---

#### ONGOING WORK

- **Garre-Frutos, F.**<sup>†</sup>, Martínez-López, P.<sup>†</sup>, Ariza, A., Rey-Sáez, R., Luque, D., Vadillo, M. A., & González, F. (2026). *Explicit knowledge modulates Pavlovian attentional biases. PsyArXiv*.



- Manini, G., **Garre-Frutos, F.**, Botta, F., Martín-Arévalo, E., & Lupiáñez, J. (2026). *Handling fully irrelevant vs. potentially relevant distractors as a function of perceptual load. PsyArXiv*.



- Manini, G.<sup>†</sup>, **Garre-Frutos, F.**<sup>†</sup>, Martín-Arévalo, E., Botta, F., & Lupiáñez, J. (2026). *Facilitation by irrelevant distractors under high perceptual load: Suppression or controlled distractor prioritization?. PsyArXiv*.



- Franco-Martínez, A., Ferrer-Mendieta, A., Peiró Lanchares, C., Vadillo, M. A., & Garre-Frutos, F. (2026). *Choose your own PAS? Quantitative and qualitative validity evidence for the Perceptual Awareness Scale*. PsyArXiv manuscript resubmitted to Behavior Research Methods.



- Martínez-López, P., Garre-Frutos, F., Vadillo, M. A., & Luque, D. (2026). *The experimental study of habitual behavior in humans: A review of the validity of current protocols*. PsyArXiv.



- Franco-Martínez, A., Garre-Frutos, F., & Tomás, G. (2026). *Measuring creativity process and product with a digitized Invented Alien Creatures Task*. PsyArXiv.



- Garre-Frutos, F., & Lupiáñez, J. (2024). *Inhibition of Return and Learned Value*. PsyArXiv manuscript submitted to Psicológica.



## FUNDED PROJECTS

### Understanding the Learning and Unlearning Dynamics of Myths about (Cyber)Violence Against Women

EUR 2,000

MARÍA DE MAEZTU UNIT OF EXCELLENCE - CIMCYC · UNLEARN-CVAW

Since 2026

**Role:** Co-PI with Rocío Vizcaíno-Cuenca.

**Scheme:** Support Program for New Collaborative Projects for Early-Career Researchers.

### Visiting Scholars Programme

EUR 12,000

UNIVERSITY OF GRANADA VISITING SCHOLARS PROGRAMME · PPVS2025-01

2025 - 2027

**Visiting scholar:** Jan Theeuwes.

**Responsible researcher:** María Ruz Cámara.

**Team:** Juan Lupiáñez, David Richter, and Francisco Garre-Frutos.

### Let's ROC: A generalization of Signal Detection Theory for the study of unconscious mental processes

EUR 150,000

AGENCIA ESTATAL DE INVESTIGACIÓN (MCIN/AEI) · PID2023-150830NB-I00

Since 2024

**Role:** Research team.

**PI:** Miguel A. Vadillo, Universidad Autónoma de Madrid.

### Conceptual Analysis of Vigilance Decrement: Attentional Resources, Cognitive Control, and Mind-Wandering

EUR 177,250

AGENCIA ESTATAL DE INVESTIGACIÓN (MCIN/AEI) · PID2023-148421NB-I00

Since 2024

**Role:** Research team.

**PI:** Juan Lupiáñez, University of Granada.

## Experimentally investigating the formation of new habits in humans

EUR 109,868

AGENCIA ESTATAL DE INVESTIGACIÓN (MCIN/AEI) · PID2021-126767NB-I00

2022 – 2025

**Role:** Research team.

**PI:** David Luque, University of Málaga.

## Incentive salience and resistance to extinction in action control and selection

EUR 50,009

AGENCIA ESTATAL DE INVESTIGACIÓN (MCIN/AEI) · PID2021-127985NB-I00

2021 – 2025

**Role:** Research team.

**PI:** Felisa González, University of Granada.

## Theoretical, behavioral, and functional analysis of executive and vigilance and its implementation in neural networks

EUR 157,300

AGENCIA ESTATAL DE INVESTIGACIÓN (MCIN/AEI) · PID2020-114790GB-I00

2021 – 2024

**Role:** Research team.

**PI:** Juan Lupiáñez, University of Granada.

---

### CONFERENCE PRESENTATIONS

#### ORAL PRESENTATIONS

- **Garre-Frutos, F.**, López-Martínez, P., Rey-Sáez, R., Luque, D., Vadillo, M. A., & González, F. (2026). *Explicit knowledge modulates Pavlovian attentional biases*. APS Annual Convention, Barcelona, Spain, May 28–30.
- Martínez-López, P., **Garre-Frutos, F.**, León, J. J., Vázquez-Millán, A., Molinero, S., Pérez-Velasco, N., Vadillo, M. A., & Luque, D. (2025). *Lingering habits: Testing the temporal stability of habits*. XXXV International Congress of the Spanish Society for Comparative Psychology, Donostia / San Sebastián, Spain, October 1–3.
- **Garre-Frutos, F.**, Solana, P., López-Martínez, P., Lupiáñez, J., & Vadillo, M. A. (2025). *Reliability and validity of experimental measures of value-driven attention: A meta-analysis on individual differences studies*. XI Conference of the European Association of Methodology, Tenerife, Spain, July 23–25.
- Franco-Martínez, A., Ferrer-Mendieta, A., Peiró-Lanchares, C., **Garre-Frutos, F.**, & Vadillo, M. A. (2025). *Choose your own PAS? Studying the validity of the Perceptual Awareness Scale*. XI Conference of the European Association of Methodology, Tenerife, Spain, July 23–25.
- Martínez-López, P., **Garre-Frutos, F.**, Luque, D., & Vadillo, M. A. (2025). *A systematic review and an internal consistency analysis of behavioral habit measures*. XI Conference of the European Association of Methodology, Tenerife, Spain, July 23–25.
- **Garre-Frutos, F.**, Luque, D., Martínez-López, P., Lupiáñez, J., & Vadillo, M. A. (2025). *Modelling Pavlovian attentional biases through reinforcement learning*. 14th Reunión Científica sobre Atención, Madrid, Spain, April 3–4.
- Rey-Sáez, R., **Garre-Frutos, F.**, & Vadillo, M. A. (2024). *What psychometrics can offer to experimental psychology: The multilevel model as an heir of the factorial approach*. XVIII Conference on Methodology of Social and Health Sciences, Seville, Spain, September 3–6.

- **Garre-Frutos, F.,** Vadillo, M. A., & Lupiáñez, J. (2024). *An online replication and multiverse reliability analysis of value-modulated attentional capture*. XIV SEPEX Conference, Almería, Spain, October 23–25.
- Martínez-López, P., **Garre-Frutos, F.,** Vadillo, M. A., & Luque, D. (2024). *Evaluation of the permutation-based split-half reliability in experimental paradigms for habit induction in humans*. XIV SEPEX Conference, Almería, Spain, October 23–25.

#### POSTER PRESENTATIONS

- **Garre-Frutos, F.,** Vadillo, M. A., Theeuwes, J., Van Moorselaar, D., & Lupiáñez, J. (2025). *Selective attention and explicit awareness independently contribute to the learning process of reward-related attentional biases*. 28th Annual Meeting of the Association for the Scientific Study of Consciousness, Heraklion, Greece, July 6–9.
- Rey-Sáez, R., **Garre-Frutos, F.,** Franco-Martínez, A., & Vadillo, M. A. (2025). *Addressing methodological challenges in unconscious process research: A hierarchical modeling approach*. 28th Annual Meeting of the Association for the Scientific Study of Consciousness, Heraklion, Greece, July 6–9.
- Rey-Sáez, R., **Garre-Frutos, F.,** Franco-Martínez, A., Castillejo, I., & Vadillo, M. A. (2025). *Hierarchical models in experimental psychology: A solution for measuring unconscious psychological processes*. 14th Reunión Científica sobre Atención, Madrid, Spain, April 3–4.
- **Garre-Frutos, F.** (2025). *The role of selective attention and explicit awareness in reward-related attentional biases*. Meetings of the Alhambra: The Cognitive Neuroscience of Consciousness, Granada, Spain, April 25–26.
- **Garre-Frutos, F.** (2025). *Modelling Pavlovian attentional biases through reinforcement learning*. Reinforcement Learning and Decision-Making Conference, Dublin, Ireland, June 11–14.
- **Garre-Frutos, F.,** & Ariza, A. (2025). *Persistence of incentive salience: Devaluation of Pavlovian-to-instrumental transfer (PIT) and reversal of value-modulated attentional capture (VMAC)*. XXXV International Congress of the Spanish Society for Comparative Psychology, Donostia / San Sebastián, Spain, October 1–3.
- Ariza, A., **Garre-Frutos, F.,** & González, F. (2024). *Persistence of the value-modulated attentional capture (VMAC) effect using a reward-only variant task and specific extinction of the increase-signal in reward magnitude*. XXXIV International Conference of the Spanish Society for Comparative Psychology, Baeza, Spain, September 25–27.
- **Garre-Frutos, F.,** Vadillo, M. A., Botta, F., & Lupiáñez, J. (2024). *The role of informational value on value-modulated attentional capture*. 27th Annual Meeting of the Association for the Scientific Study of Consciousness, Tokyo, Japan, July 2–5.
- **Garre-Frutos, F.,** Lupiáñez, J., & Vadillo, M. A. (2024). *Is there value in value-driven distraction? A meta-analysis of studies on individual differences*. XIV SEPEX Conference, Almería, Spain, October 23–25.
- **Garre-Frutos, F.,** Lupiáñez, J., & Vadillo, M. A. (2024). *Value-modulated attentional capture depends on explicit awareness*. XIV SEPEX Conference, Almería, Spain, October 23–25.
- Ariza, A., Martínez-López, P., **Garre-Frutos, F.,** Luque, D., Vadillo, M. A., & González, F. (2024). *Explicit knowledge modulates reversal learning in value-modulated attentional capture*. XIV SEPEX Conference, Almería, Spain, October 23–25.

- Martínez-López, P., Vázquez-Millán, A., **Garre-Frutos, F.**, & Luque, D. (2024). *Using a forced-response task to measure habit formation in humans*. XIV SEPEX Conference, Almería, Spain, October 23–25.
- **Garre-Frutos, F.**, & Lupiáñez, J. (2023). *Inhibition of return and learned value*. 22nd Conference of the European Society for Cognitive Psychology, Porto, Portugal, August 24–27.
- Manini, G., **Garre-Frutos, F.**, Botta, F., Martín-Arévalo, E., & Lupiáñez, J. (2023). *Interference vs. distraction: Qualitatively different attentional capture effects depending on distractor relevance*. 22nd Conference of the European Society for Cognitive Psychology, Porto, Portugal, August 24–27.
- **Garre-Frutos, F.**, Hinojosa-Aguayo, I., González, F., Vellido, M. A., & Lupiáñez, J. (2022). *A VMAC online replication and multiverse reliability analysis*. International APPE-SEPEX Meeting, Faro, Portugal, May 5–7.

## TEACHING

### Attention and Memory

6 ECTS

UNIVERSITAT OBERTA DE CATALUNYA

2025 – 2026

**Degree:** BSc Psychology.

### Behavioural Analysis and Motor Development in Physical Activity

4 ECTS

UNIVERSITY OF GRANADA

2024 – 2025

**Degree:** BSc in Physical Activity and Sport Sciences.

### Perception and Attention

3 ECTS/year

UNIVERSITY OF GRANADA

2022/23 – 2023/24

**Degree:** BSc Psychology.

## STUDENT SUPERVISION

### María López Machuca

University of Granada

BSC STUDENT MENTORING

2026

**Project:** *On the Nature of Conscious Experience: A Comparison of Subjective Report Methods.*

**Supervisors:** Daniel Sanabria Lucena and Francisco Garre-Frutos.

### Pablo Martínez-López

University of Granada

MSC THESIS SUPERVISION

2023

**Project:** *Within-Subjects Experimental Study of Individual Differences in Value-Modulated Attentional Capture (VMAC) and its Reversal.*

**Supervisors:** Felisa González and Francisco Garre-Frutos.

### Adriana Ariza

University of Granada

MSC THESIS SUPERVISION

2023

**Project:** *Pavlovian-to-Instrumental Transfer and Implicit Emotion Regulation.*

**Supervisors:** Felisa González and Francisco Garre-Frutos.

---

## ACADEMIC EVENTS ORGANIZED

---

### II CIMCYC Workshop on computational modelling of behavioral data

Granada, Spain

WORKSHOP · MIND, BRAIN, AND BEHAVIOR RESEARCH CENTER

2025

### CIMCYC Workshop on Learning and Attention

Granada, Spain

WORKSHOP · MIND, BRAIN, AND BEHAVIOR RESEARCH CENTER

2025

### Measuring individual differences with experimental tasks: current pitfalls and future directions

Almería, Spain

SYMPOSIUM · XIV CONGRESO DE LA SOCIEDAD ESPAÑOLA DE PSICOLOGÍA EXPERIMENTAL

2024

---

## ACADEMIC SERVICE & PROFESSIONAL MEMBERSHIPS

---

### Junior Editor, *Psicológica*

*Psicológica*

EDITORIAL SERVICE

Since 2025

**Journal:** *Psicológica*.

**Role:** Junior editorial role supporting the journal's peer-review and editorial workflow.

### Ad hoc reviewer

3 journals

PEER REVIEW

Since 2025

**Journals:** *Journal of Experimental Psychology: Human Perception and Performance*, *Psychological Research*, and *Behavior Research Methods*.

### Professional Societies

PROFESSIONAL MEMBERSHIPS

**Memberships:** Association for Psychological Science; Sociedad Española de Psicología Experimental; Association for the Scientific Study of Consciousness.

---

## OUTREACH ACTIVITIES

---

### Psychobeers

PUBLIC ENGAGEMENT

**Role:** Organizing committee member for public engagement events connecting cognitive science and psychology with general audiences.

### European Night of the Researchers

SCIENCE COMMUNICATION

**Activity:** Participant in *así funciona tu atención (y así te engaña)*, focused on communicating attention research to the public.