

# Filippo Gambarota



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*Last Update: March 31, 2024*

I am a **postdoctoral researcher** at the University of Padova, department of Developmental Psychology and Socialization (DPSS) and **licensed psychologist**. I am interested in meta-analysis, Monte Carlo simulations for power and design analysis and multiverse analysis.

## CURRENT POSITION

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**Post-doctoral researcher (2 year research grant - type B)** *2024 - ongoing*  
*Department of Developmental Psychology and Socialization, University of Padova, Italy*  
Project: Multiverse meta-analysis (M-PSI/03) Supervisor: Prof. Gianmarco Altoè

## ACADEMIC ROLES

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**Cultore della Materia (Teaching Assistant) of Psychometrics (M-PSI/03)** *2023 - ongoing*  
📍 University of Padova

## RESEARCH

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**Post-doctoral researcher (1 year research grant - type B)** *2023 - 2024*  
*Department of Developmental Psychology and Socialization, University of Padova, Italy*  
Project: Multiverse meta-analysis (M-PSI/03) Supervisor: Prof. Gianmarco Altoè

## EDUCATION

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**PhD in Psychological Sciences** *2019 - 2023*  
*University of Padova, Italy*  
Project: The relationship between visual working memory and consciousness. Supervisor: Professor Paola Sessa, Co-supervisor: Professor Massimiliano Pastore

**Visiting PhD student** *2021*  
*University of Tel-Aviv, Israel*  
Research project about the relationship between Working Memory and Consciousness Supervisor: Professor Roy Luria

**Licensed Psychologist (Esame di Stato)** *2020*  
*University of Padova, Italy*

<b>Internship</b>	2018 - 2019
<i>Department of Developmental Psychology and Socialization - University of Padova</i>	
Research project about visual consciousness and sensorimotor simulation Research project about social cognition during pregnancy Supervision of internship students in EEG laboratory	
<b>M.S. in Clinical Developmental Psychology - 110 cum laude</b>	2018
<i>University of Padova, Italy</i>	
Thesis: Visual Working Memory representations of infant faces during pregnancy as an adaptive mechanism. An EEG study. Supervisor: Professor Paola Sessa	
<b>Internship</b>	2018
<i>Department of Developmental Psychology and Socialization - University of Padova</i>	
Research project about social cognition during pregnancy with EEG data collection	
<b>B.S. in Psychology - 110 cum laude</b>	2016
<i>University of Padova, Italy</i>	
Thesis: Psychosocial well-being of adolescents with oncoemathological disease. Supervisor: Professor Ughetta Moscardino	
<b>Internship</b>	2016
<i>Hospital of Padova - Pediatrics Oncology</i>	
Educational activities with in-patients children and their families Research about the psychosocial well-being of in-patients adolescents Discussing about clinical cases in regular supervisions	

## AWARDS

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<b>Reproducibility Award - Italian Reproducibility Network (ITRN)</b>	2024
The paper " <i>Understanding meta-analysis through data simulation with applications to power analysis</i> " won the 2023 Reproducibility Award from the Italian Reproducibility Network (ITRN) DOI <a href="https://doi.org/10.5281/zenodo.10277050">10.5281/zenodo.10277050</a>	
<b>Mission Award to Psicostat by the Society for the Improvement of Psychological Science (SIPS)</b>	2023
As an active member of the Psicostat research group ( <a href="https://improvingpsych.org/mission/awards/">https://improvingpsych.org/mission/awards/</a> )	

## TRAINING

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<b>Meta-Analysis with Metafor</b>	2021
<i>Maastricht University</i>	
Intensive course about meta-analysis with the <a href="#">metafor</a> package held by Professor Wolfgang Viechtbauer	
<b>Bayesian Regression Modeling with BRMS</b>	2020
<i>Potsdam University</i>	
Summer School in Bayesian Statistics for Cognitive Psychology	
<b>Bayesian Statistical Analyses for the Human, Social and Cognitive Sciences</b>	2019
<i>University of Verona</i>	

## TEACHING

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<b>Introduction to R (20 hrs.)</b>	2024
<i>University of Padova</i>	
I held an intensive course about programming in R as part of the <a href="#">ARCA</a> courses, Department of Developmental Psychology and Socialization, University of Padova <a href="#">[Materials]</a>	
<b>Meta-analysis Workshop - Cognitive Science Arena (3 hrs.)</b>	2023
<i>Free University of Bozen-Bolzano</i>	

I held a workshop introducing meta-analysis with Monte Carlo simulations

**Generalized Linear Models - PhD Course in Psychological Sciences (15 hrs.)** 2023

*University of Padova*

I held the Generalized Linear Models course (Part A and B) within the PhD program in Psychological Sciences, University of Padova

**Replicability Crisis in Science? (5 hrs.)** 2023

*University of Padova*

I held a series of workshops about statistical methods to assess replicability during the summer school [Replicability Crisis in Science?](#) organized at the Department of Statistics (University of Padova)

**Statistical Methods and Data Analysis in Developmental Psychology (21 hrs., 3 CFU)** 2023

*University of Padova*

Lecturer (*Docente a contratto*) for the Master's degree in Developmental and Educational Psychology, University of Padova [[Materials](#)]

**Introduction to R (20 hrs.)** 2023

*University of Padova*

I held an intensive course about programming in R as part of the [ARCA](#) courses, Department of Developmental Psychology and Socialization, University of Padova [[Materials](#)]

**Data Analysis in Developmental Psychology [*didattica integrativa*] (15 hrs.)** 2023

*University of Padova*

Lectures about R programming and data analysis (*Didattica Integrativa*) of the course "Data Analysis in Developmental Psychology" (Prof. Massimiliano Pastore), Master's degree in Psychology of Community, Wellness Promotion, and Social Change, University of Padova

**Introduction to R (20 hrs.)** 2022

*University of Padova*

I held an intensive course about programming in R as part of the [ARCA](#) courses, Department of Developmental Psychology and Socialization, University of Padova [[Materials](#)]

**Psychological Testing [*didattica integrativa*] (14 hrs.)** 2022

*University of Padova*

Lectures about R programming and data analysis (*Didattica Integrativa*) of the course "Psychological Testing" (Prof. Gianmarco Altoè), Bachelor's degree in Developmental, Personality and Interpersonal Relationships Psychology, University of Padova

**Data Analysis in Developmental Psychology [*didattica integrativa*] (20 hrs.)** 2022

*University of Padova*

Lectures about R programming and data analysis (*Didattica Integrativa*) of the course "Data Analysis in Developmental Psychology" (Prof. Massimiliano Pastore), Master's degree in Psychology of Community, Wellness Promotion, and Social Change, University of Padova

**Introduction to R (20 hrs.)** 2021

*University of Padova*

I held an intensive course about programming in R as part of the [ARCA](#) courses, Department of Developmental Psychology and Socialization, University of Padova [[Materials](#)]

**Introduction to Visual Consciousness (2 hrs.)** 2021

*University of Padova*

Lecture during the course "General Psychology" (Prof. Roberto Dell'Acqua), Bachelor's degree in Developmental, Personality and Interpersonal Relationships Psychology, University of Padova [[Materials](#)]

**Visual Working Memory in Social Cognition (2 hrs.)** 2021

*University of Padova*

Lecture during the course "General Psychology" (Prof. Paola Sessa), Bachelor's degree in Techniques and Methods in Psychological Science, University of Padova [[Materials](#)]

## Neural Correlates of Consciousness (2 hrs.)

2020 - ongoing

University of Padova

I regularly held a two hours lecture during the course "Mechanism of Consciousness" (Prof. Roberto Dell'Acqua), Master's degree in Applied Cognitive Psychology, University of Padova [[Materials](#)]

## EEG laboratory training

2017-2019

University of Padova

Supervision and coordinations of students during the training in the EEG laboratory

# DISSERTATIONS

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I have co-supervised **5 Master's degree** dissertations and **2 Bachelor's degree** dissertations.

# PUBLICATIONS

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## GOOGLE SCHOLAR

- H-index: **4**
- Citations: **76**

## PUBLISHED (12)

Del Popolo Cristaldi, F., G. Buodo, F. **Gambarota**, S. Oosterwijk, and G. Mento (2024). "How previous experience shapes future affective subjective ratings: A follow-up study investigating implicit learning and cue ambiguity". En. In: *PloS one* 19 (2), p. e0297954.

Di Rosa, E., F. Masina, A. Pastorino, E. Galletti, F. **Gambarota**, G. Altoè, N. Edelstyn, and D. Mapelli (2024). "Mood moderates the effects of prefrontal tDCS on executive functions: A meta-analysis testing the affective state-dependency hypothesis". En. In: *Journal of affective disorders* 351, pp. 920-930. ISSN: 0165-0327,1573-2517. DOI: 10.1016/j.jad.2024.02.009. <http://dx.doi.org/10.1016/j.jad.2024.02.009>.

**Gambarota**, F. and G. Altoè (2024). "Understanding meta-analysis through data simulation with applications to power analysis". En. In: *Advances in methods and practices in psychological science* 7 (1). ISSN: 2515-2459,2515-2467. DOI: 10.1177/25152459231209330. <http://dx.doi.org/10.1177/25152459231209330>.

Maffei, A., F. **Gambarota**, M. Liotti, R. Dell'Acqua, N. Tsuchiya, and P. Sessa (2024). "Conscious perception of fear in faces: Insights from high-density EEG and Perceptual Awareness Scale with threshold stimuli". In: *Cortex*. ISSN: 0010-9452,1973-8102. DOI: 10.1016/j.cortex.2024.02.010. <http://dx.doi.org/10.1016/j.cortex.2024.02.010>.

Del Popolo Cristaldi, F., F. **Gambarota**, and S. Oosterwijk (2023). "Does your past define you? The role of previous visual experience in subjective reactions to new affective pictures and sounds". En. In: *Emotion (Washington, D.C.)* 23 (5), pp. 1317-1333. ISSN: 1528-3542,1931-1516. DOI: 10.1037/emo0001168. <http://dx.doi.org/10.1037/emo0001168>.

Montuori, C., F. **Gambarota**, G. Altoè, and B. Arfé (2023). "The cognitive effects of computational thinking: A systematic review and meta-analytic study". En. In: *Computers & education* 210 (104961), p. 104961. ISSN: 0360-1315,1873-782X. DOI: 10.1016/j.compedu.2023.104961. <http://dx.doi.org/10.1016/j.compedu.2023.104961> (visited on Dec. 03, 2023).

Pezzetta, R., F. **Gambarota**, V. Tarantino, M. Devita, Z. Cattaneo, G. Arcara, D. Mapelli, and F. Masina (2023). "A meta-analysis of non-invasive brain stimulation (NIBS) effects on cerebellar-associated cognitive processes". En. In: *Neuroscience and biobehavioral reviews* 157 (105509), p. 105509. ISSN: 0149-7634,1873-7528. DOI: 10.1016/j.neubiorev.2023.105509. <http://dx.doi.org/10.1016/j.neubiorev.2023.105509>.

Quettier, T., A. Maffei, F. **Gambarota**, P. F. Ferrari, and P. Sessa (2023). "Testing EEG functional connectivity between sensorimotor and face processing visual regions in individuals with congenital facial palsy". En. In: *Frontiers in systems neuroscience* 17, p. 1123221. ISSN: 1662-5137. DOI: 10.3389/fnsys.2023.1123221. <http://dx.doi.org/10.3389/fnsys.2023.1123221>.

**Gambarota**, F., N. Tsuchiya, M. Pastore, N. Di Polito, and P. Sessa (2022). "Unconscious Visual Working Memory: A critical review and Bayesian meta-analysis". En. In: *Neuroscience and biobehavioral reviews* 136 (104618), p. 104618. ISSN: 0149-7634,1873-7528. DOI: 10.1016/j.neubiorev.2022.104618. <http://dx.doi.org/10.1016/j.neubiorev.2022.104618>.

Verroca, A., C. M. de Rienzo, F. **Gambarota**, and P. Sessa (2022). "Mapping the perception-space of facial expressions in the era of face masks". En. In: *Frontiers in psychology* 13, p. 956832. ISSN: 1664-1078. DOI: 10.3389/fpsyg.2022.956832. <https://www.frontiersin.org/articles/10.3389/fpsyg.2022.956832>.

Quettier, T., F. **Gambarota**, N. Tsuchiya, and P. Sessa (2021). "Blocking facial mimicry during binocular rivalry modulates visual awareness of faces with a neutral expression". En. In: *Scientific reports* 11 (1), p. 9972. ISSN: 2045-2322. DOI: 10.1038/s41598-021-89355-5. <http://dx.doi.org/10.1038/s41598-021-89355-5>.

**Gambarota**, F. and P. Sessa (2019). "Visual working memory for faces and facial expressions as a useful"tool" for understanding social and affective cognition". En. In: *Frontiers in psychology* 10 (OCT), p. 2392. ISSN: 1664-1078. DOI: 10.3389/fpsyg.2019.02392. <http://dx.doi.org/10.3389/fpsyg.2019.02392>.

## ACCEPTED (1)

Grassi, Altoè, Brattico, [...] **Gambarota**, [...] Zentner - Do musicians have better short-term memory than nonmusicians? A multi-lab study - *Advances in Methods and Practices in Psychological Science* [Registered Replication Report - Provisional Acceptance]

## UNDER REVIEW (1)

**Gambarota** & Altoè - Ordinal regression models made easy. A tutorial on parameter interpretation, data simulation, and power analysis [[Preprint](#)]

## CONFERENCES

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### INVITED TALKS (1)

**Gambarota** [presenter] & Altoè 2024  
**Understanding meta-analysis through data simulation with applications to power analysis** [*Invited*] - [[Material](#)]  
*Cognitive Science Arena (CSA) - Bressanone, Italy*

### TALKS (7)

**Gambarota** [presenter] 2024  
**Cosa accade al di fuori della consapevolezza visiva?** [Italian] [*Talk*] - [[Slides](#)]  
*Brain Awareness Week - Padova, Italy*

- Gambarota** [presenter], Luria and Sessa 2022  
**Conscious and unconscious information processing in visual working memory [Talk] - [Slides]**  
*Italian Psychological Association (AIP) - Padova, Italy*
- del Popolo Cristaldi, **Gambarota** and Oosterwijk 2022  
**The role of past visual experience in subjective reactions to new affective pictures and sounds [Talk]**  
*Annual Conference of the Society for Affective Science (SAS) - Virtual*
- del Popolo Cristaldi, **Gambarota** and Oosterwijk 2022  
**The role of past experience in subjective ratings to affective predictions: cross-modality effects [Talk]**  
*Cognitive Science Arena (CSA) - Bressanone, Italy*
- Gambarota** [presenter], Tsuchiya, Pastore, Di Politico and Sessa 2021  
**Meta-analysis in Consciousness Research [Talk]**  
*Conscious Brain Concepts Workshop - University of Oslo - Virtual*
- Gambarota** [presenter], Zandonella Callegher, Linkersdörfer, Ling and Kothe 2021  
**trackdown - Collaborative writing through literate programming in R [Talk] - [Slides]**  
*Towards Advanced Scientific Knowledge (TASK4) - Virtual*
- del Popolo Cristaldi, **Gambarota** and Oosterwijk 2021  
**The role of previous probabilistic learning on the subjective affective experience [Talk]**  
*Italian Psychological Association (AIP) - Lecce, Italy*
- ## POSTERS (7)
- Gambarota** [presenter], Vesely, Finos, Altoè 2023  
**Joinmeta - An Inferential approach to multiverse meta-analysis [Poster] - [Poster]**  
*Society for the Improvement of Psychological Science (SIPS) - Padova, Italy*
- del Popolo Cristaldi, **Gambarota** and Oosterwijk 2022  
**Cross-modality effects in affective prediction construction: the role of past visual experience in subjective reactions to new affective pictures and sounds [Poster]**  
*Annual Conference of the European Society for Cognitive and Affective Neuroscience (ESCAN) - Virtual*
- Pezzetta, **Gambarota**, Tarantino, Devita, Cattaneo, Arcara, Mapelli and Masina 2022  
**Probing cerebellar involvement in cognition through neuromodulation: A meta-analysis on the effectiveness of non-invasive cerebellar stimulation [Poster]**  
*Transcranial Brain Stimulation in Cognitive Neuroscience Workshop - Rovereto, Italy*
- Gambarota** [presenter], Zandonella Callegher, Linkersdörfer, Ling and Kothe 2021  
**trackdown - An R package for collaborative writing and editing [Poster] - [Video], [Slides]**  
*Society for the Improvement of Psychological Science (SIPS) - Virtual*
- Gambarota** [presenter], Zandonella Callegher, Linkersdörfer, Ling and Kothe 2021  
**trackdown - A simple framework for collaboration in a literate programming workflow [Poster] - [Video], [Slides]**  
*useR - Virtual*
- Gambarota** [presenter], Pastore, Luria, Ferrari and Sessa 2020  
**Visual Working Memory Precision for Emotional Faces in Moebius Patients [Poster]**  
*Cognitive Science Arena - Bressanone, Italy*

**Look at others' smile: Sensorimotor modulation of visual awareness [Poster]**

*Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF) - Ferrara, Italy*

## PEER REVIEWS

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See my Publons profile <https://www.webofscience.com/wos/author/record/G-9799-2015>

Ad-hoc reviewer for:

- International Journal of Psychology
- PLoS ONE
- Consciousness and Cognition

## PROFESSIONAL MEMBERSHIPS

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<b>Italian Reproducibility Network (ITRN)</b>	<i>from: 2023 - ongoing</i>
<b>The Society for the Improvement of Psychological Science (SIPS)</b>	<i>from: 2023 - ongoing</i>
<b>Associazione Italiana di Psicologia, Sezione Sperimentale (AIP)</b>	<i>from: 2022 - ongoing</i>

## ORGANIZATION

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**Italian Association of Psychology (AIP)** 2022

*University of Padova*

I was part of the organizing committee of the **XXX edition** of the Italian Association of Psychology (AIP) conference and editor of the Book of Abstract <https://www.padovauniversitypress.it/it/publications/9788869383168>

**MRInference Winter School** 2021

*University of Padova*

I was part of the organizing committee of the "MRInference: from data to knowledge" winter school organized by the University of Padova

## THIRD MISSION (TERZA MISSIONE)

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**Sito web <https://psicostat.dpss.psy.unipd.it/> del gruppo di ricerca multidisciplinare "Psicostat".** 2023 - ongoing

*Online*

Il sito raccoglie e condivide in modo open le attività del gruppo a favore degli utenti interessati [Iris ID: PEN-3397]

**Sostenibilità umana: superare la società della performance e immaginare nuovi modelli - by TLON** 2023

*Padova*

Sensibilizzazione di tutto il personale del DPSS relativamente alle tematiche sulla società performante. Si è trattato di un workshop interattivo all'interno del retreat del dipartimento. La parte teorica è stata aperta alla cittadinanza attraverso la diretta fb, mentre la parte pratica è stata rivolta solo al personale dpss [Iris ID: PEN-2435]

## RESEARCH GROUPS

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We are an interdisciplinary research group working in areas related to quantitative psychology, psychometrics, psychological testing and statistics.

The CoLab, established at the Department of Developmental Psychology of the University of Padova in the 2000, hosts a variety of research projects, which focus primarily on exploring the functional and neural mechanisms subserving attention and language abilities in human adults.

## RESEARCH SKILLS

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### OS

- Linux, Windows, MacOS

### PROGRAMMING LANGUAGES

- R (advanced)
- MATLAB (good)
- Python (good)
- Javascript (basic)

### WRITING

- LaTeX
- HTML, CSS
- Pandoc
- (R)Markdown
- Quarto

### EXPERIMENTS

- Psychopy (advanced)
- Eprime
- Presentation
- Psychtoolbox

### EEG/ERP

- EEGlab
- ERPlab
- Brainstorm
- Brainvision Analyzer

*Filippo Gambarota*