Filippo Gambarota

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Last Update: October 2, 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

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

Expert (Cultore della Materia) of Psychometrics (M-PSI/03) *2023 - ongoing*
Department of Developmental Psychology and Socialization, University of Padova, Italy

RESEARCH

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

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

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

Internship *2018 - 2019*
Department of Developmental Psychology and Socialization - University of Padova
Research project about visual consciousness and sensorimotor simulation
Research project about social cognition during pregnancy Supervision of internship students in EEG laboratory

M.S. in Clinical Developmental Psychology - 110 cum laude *2018*

University of Padova, Italy

Thesis: Visual Working Memory representations of infant faces during pregnancy as an adaptive mechanism. An EEG study.

Supervisor: Professor Paola Sessa

Internship *2018*

Department of Developmental Psychology and Socialization - University of Padova

Research project about social cognition during pregnancy with EEG data collection

B.S. in Psychology - 110 cum laude *2016*

University of Padova, Italy

Thesis: Psychosocial well-being of adolescents with oncoemathological disease.

Supervisor: Professor Ughetta Moscardino

Internship *2016*

Hospital of Padova - Pediatrics Oncology

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

Award for the best scientific article of 2024 - Italian Psychological Association (AIP), Developmental and Educational Psychology *2024*

The paper Montuori, C., Gambarota, F., Altoé, G., & Arfé, B. (2023). The cognitive effects of computational thinking: A systematic review and meta-analytic study. Computers & Education, 210(104961), 104961. https://doi.org/10.1016/j.compedu.2023.104961 won the award for the best scientific article of 2024, by the Italian Psychological Association (AIP), Developmental and Educational Psychology

Reproducibility Award - Italian Reproducibility Network (ITRN) *2024*

I won the **Reproducibility Award** from the Italian Reproducibility Network (ITRN) for the paper: Gambarota, F., & Altoè, G. (2024). Understanding meta-analysis through data simulation with applications to power analysis. Adv. Methods Pract. Psychol. Sci., 7(1). https://doi.org/10.1177/25152459231209330

Mission Award to Psicostat by the Society for the Improvement of Psychological Science (SIPS) *2023*

As an active member of the Psicostat research group (https://improvingpsych.org/mission/awards/)

TRAINING

Meta-Analysis with Metafor (3 days) *2021*

Maastricht University

Intensive course about meta-analysis with the `metafor` package held by Professor Wolfgang Viechtbauer

Bayesian Regression Modeling with BRMS (5 days) *2020*

Potsdam University

Summer School in Bayesian Statistics for Cognitive Psychology

Bayesian Statistical Analyses for the Human, Social and Cognitive Sciences (5 days) *2019*

University of Verona

TEACHING

[planned] means that the course has been officially scheduled but not delivered yet

> PHD

Replicability crisis in science? (5 hrs.) *2024*

University of Padova

Specialist Course for the XXXIX Cycle of the PhD course in Statistics, Department of Statistical Sciences, University of Padova

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

> LECTURES ON CONTRACT (DOCENZE A CONTRATTO)

Psicometria per le Neuroscienze Cognitive [planned] (44 hrs., 6 CFU) *2025*

University of Padova

Professor (titolare del corso) for the Master's degree in Statistical Sciences, Department of Statistical Sciences, University of Padova

Statistical Methods and Data Analysis in Developmental Psychology [M-PSI/03] (21 hrs., 3 CFU) *2023*

University of Padova

Lecturer (titolare di modulo) for the Master's degree in Developmental and Educational Psychology, University of Padova [**Materials**]

> SEMINARS

Introduction to R *2021 - ongoing*

University of Padova

Intensive course about programming in R as part of the **ARCA** courses, Department of Developmental Psychology and Socialization, University of Padova [**Materials**]

- March 2024 (20 hrs.)
- March 2023 (20 hrs.)
- November 2022 (20 hrs.)
- October 2021 (20 hrs.)

> INTEGRATIVE TEACHING (DIDATTICA INTEGRATIVA)

Data Analysis in Developmental Psychology [M-PSI/03] *2022 - 2023*

University of Padova

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

- March 2023 (15 hrs.)
- March 2022 (20 hrs.)

Psychological Testing [M-PSI/03] (14 hrs.) *2022*

University of Padova

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

> METHODOLOGICAL SCHOOLS

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 Statistical Sciences (University of Padova)

> LECTURES

Introduction to Visual Consciousness [M-PSI/01] (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 [M-PSI/01] (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 [M-PSI/01] (2 hrs.) *2020 - 2023*

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**]

SUPERVISION

- I have co-supervised **7 Master’s degree** dissertations and **2 Bachelor’s degree** dissertations (Department of Developmental Psychology and Socialization, University of Padova, Italy).
- From 2017 to 2019 I supervised and coordinated the students during EEG training in the laboratory (Department of Developmental Psychology and Socialization, University of Padova, Italy)

PUBLICATIONS

Journal impact factors and quartiles are taken from **Journal Citation Reports** considering the last available data

I published **14 papers** on journals with an **average impact factor of 5.75**. In terms of quartiles, I published **10 papers in Q1 journals**, **3 papers in Q2 journals**, **1 paper in Q3 journals**.

Google Scholar

Last Update: 2024-10-02

- H-index: **6**
- Citations: **115**

Scopus

Last Update: 2024-10-02

- H-index: **5**
- Citations: **50**

> PUBLISHED (14)

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. [IF: 3.7, Quartile: Q1]

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**. [IF: 6.6, Quartile: Q1]

Gambarota, F. and G. Altoè (2024a). “Ordinal regression models made easy: A tutorial on parameter interpretation, data simulation and power analysis”. En. In: *International journal of psychology: Journal international de psychologie*. ISSN: 1464-066X,0020-7594. DOI: 10.1002/ijop.13243. **https://onlinelibrary.wiley.com/doi/abs/10.1002/ijop.13243** (visited on Oct. 02, 2024). [IF: 2.6, Quartile: Q2]

Gambarota, F. and G. Altoè (2024b). “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**. [IF: 13.6, Quartile: Q1]

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**. [IF: 3.6, Quartile: Q1]

Toffalini, E., F. **Gambarota**, A. Perugini, P. Girardi, V. Tobia, G. Altoè, D. Giofrè, Psicostat Core Team, and T. Feraco (2024). “Clusters that are not there: An R tutorial and a Shiny app to quantify a priori inferential risks when using clustering methods”. En. In: *International journal of psychology: Journal international de psychologie*. ISSN: 0020-7594,1464-066X. DOI: 10.1002/ijop.13246. **https://pubmed.ncbi.nlm.nih.gov/39300789/**. [IF: 2.6, Quartile: Q2]

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**. [IF: 4.2, Quartile: Q1]

Montuori, C., F. **Gambarota**, G. Altoé, 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). [IF: 12, Quartile: Q1]

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**. [IF: 8.2, Quartile: Q1]

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**. [IF: 3, Quartile: Q3]

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**. [IF: 8.2, Quartile: Q1]

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**. [IF: 3.8, Quartile: Q1]

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**. [IF: 4.6, Quartile: Q2]

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. **https://www.frontiersin.org/article/10.3389/fpsyg.2019.02392/full**. [IF: 3.8, Quartile: Q1]

> ACCEPTED (2)

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]

Gambarota & Altoè - Ordinal regression models made easy. A tutorial on parameter interpretation, data simulation, and power analysis - *International Journal of Psychology* [In press]

CONFERENCES

> INVITED TALKS (1)

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

> TALKS (12)

[P] means that I was the presenting author
[accepted] means that the talk has been accepted but not delivered yet

Gambarota [P], Vesely, Finos, Altoè *2024*
Inference on multiverse meta-analysis. [accepted]
META-REP - Munich, Germany

Gambarota [P], Toffalini *2024*
Are most interactions false? The importance of the appropriate distribution and link function with non-normal data. - [Slides]
Italian Psychological Association (AIP), Developmental Psychology - Cagliari, Italy

Perugini, **Gambarota**, Toffalini, Sità, Lakens, Pastore, Finos, Psicostat, Altoè *2024*
Critical effect size values and why to report them.
Italian Psychological Association (AIP), Developmental Psychology - Noto, Italy

Girardi, Vesely, **Gambarota**, Altoè, Pastore, Finos *2024*
Exploring the Dark Side of the Multiverse: Pitfalls and Possibilities in Applications
Association for Applied Statistics (ASA) - Rome, Italy

Gambarota [P] *2024*
Inferenza nella meta-analisi multiverse. Un approccio multivariato basato sulle permutazioni
La Psicometria tra Oggi e Domani: Sfide E Nuovi Orizzonti - Firenze, Italy

Gambarota [P] *2024*

Cosa accade al di fuori della consapevolezza visiva? [Italian] - [Slides]
Brain Awareness Week - Padova, Italy

Gambarota [P], Luria and Sessa *2022*
Conscious and unconscious information processing in visual working memory - [Slides]
Italian Psychological Association (AIP) - Padova, Italy

del Popolo Cristaldi, **Gambarota** and Oosterwijk *2022*
The role of past experience in subjective ratings to affective predictions: cross-modality effects
Cognitive Science Arena (CSA) - Bressanone, Italy

del Popolo Cristaldi, **Gambarota** and Oosterwijk *2022*
The role of past visual experience in subjective reactions to new affective pictures and sounds
Annual Conference of the Society for Affective Science (SAS) - Virtual

Gambarota [P], Tsuchiya, Pastore, Di Polito and Sessa *2021*
Meta-analysis in Consciousness Research
Conscious Brain Concepts Workshop - University of Oslo - Virtual

del Popolo Cristaldi, **Gambarota** and Oosterwijk *2021*
The role of previous probabilistic learning on the subjective affective experience
Italian Psychological Association (AIP) - Lecce, Italy

Gambarota [P], Zandonella Callegher, Linkersdörfer, Ling and Kothe *2021*
trackdown - Collaborative writing through literate programming in R - [Slides]
Towards Advanced Scientific Knowledge (TASK4) - Virtual

> POSTERS (8)

[P] means that I was the presenting authors
[accepted] means that poster has been accepted but has not taken place yet

Brosche, **Gambarota**, Altoè, Rugani *2024*
Effects of Domestication and Selection for Productivity on Numerical Cognition in Chicks [planned]
European Conference on Behavioural Biology (ECBB) - Zurich, Switzerland

Gambarota [P], Vesely, Finos, Altoè *2023*
Joinmeta - An Inferential approach to multiverse meta-analysis - [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
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
Transcranical Brain Stimulation in Cognitive Neuroscience Workshop - Rovereto, Italy

Gambarota [P], Zandonella Callegher, Linkersdörfer, Ling and Kothe *2021*
trackdown - An R package for collaborative writing and editing - [Video], [Slides]
Society for the Improvement of Psychological Science (SIPS) - Virtual

Gambarota [P], Zandonella Callegher, Linkersdörfer, Ling and Kothe *2021*
trackdown - A simple framework for collaboration in a literate programming workflow - [Video], [Slides]
useR - Virtual

Gambarota [P], Pastore, Luria, Ferrari and Sessa *2020*
Visual Working Memory Precision for Emotional Faces in Moebius Patients
Cognitive Science Arena - Bressanone, Italy

Quettier, **Gambarota** and Sessa *2019*
Look at others' smile: Sensorimotor modulation of visual awareness
Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF) - Ferrara, Italy

> SYMPOSIA (1)

[P] means that I was the proponent
[accepted] means that symposium has been accepted but has not taken place yet.

Gambarota [P], Crepaldi, Liuzza, Calignano, Finos, Scandola *2024*
The Multiverse of Multi-labs. Methodological and Statistical Aspects of Multi-Lab and Multiverse Studies. - [Material]
Italian Psychological Association (AIP), Experimental Psychology - Noto, Italy

PEER REVIEWS

See my **Publons Profile**

Ad-hoc reviewer for:

- International Journal of Psychology
- PLoS ONE
- Neuroscience of Consciousness

PROFESSIONAL MEMBERSHIPS

Italian Reproducibility Network (ITRN) *from: 2024 - ongoing*

The Society for the Improvement of Psychological Science (SIPS) *from: 2023 - ongoing*

Associazione Italiana di Psicologia, Sezione Sperimentale (AIP) *from: 2022 - ongoing*

Associazione Italiana di Psicologia, Sezione Sviluppo (AIP) *from: 2024 - ongoing*

ORGANIZATION

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)

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

Online

Il sito **https://psicostat.dpss.psy.unipd.it/** 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 i 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

Psicostat - psicostat.dpss.psy.unipd.it *2019 - ongoing*

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

Colab colab.psy.unipd.it *2019 - ongoing*

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

Rated as ●◦◦◦◦ (basic knowledge) to ●●●●● (advanced knowledge).

> OS

- Linux ●●●●◦
- Windows ●●●●◦
- MacOS ●●●◦◦

> PROGRAMMING LANGUAGES

- R ●●●●●
- MATLAB ●●●◦◦
- Python ●●●◦◦
- Javascript ●●◦◦◦

> WRITING

- LaTeX ●●●●◦
- HTML ●●●◦◦
- CSS ●●●◦◦
- Pandoc ●●●◦◦
- (R)Markdown ●●●●●
- Quarto ●●●●●

> EXPERIMENTS

- Psychopy ●●●●●
- Eprime ●●●○○
- Presentation ●●●●○
- Psychtoolbox ●●●○○

> EEG/ERP

- EEGlab ●●●○○
- ERPlab ●●●○○
- Brainstorm ●○○○○
- Brainvision Analyzer ●●○○○