

Filippo Gambarota, PhD

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Last Update: March 9, 2025

I am a **postdoctoral researcher** in Psychometrics (SSD: PSIC-01/C, ex M-PSI/03) at the University of Padova, Department of Developmental Psychology and Socialization (DPSS) and **licensed clinical psychologist**.

Research interests:

- Meta-analysis
- Monte Carlo simulations for power and design analysis
- Multiverse analysis
- Statistical methods for replicability assessment

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 (PSIC-01/C ex M-PSI/03)

Supervisor: Prof. Gianmarco Altoè

ACADEMIC ROLES

Expert (Cultore della Materia) of Psychometrics (PSIC-01/C ex 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 (PSIC-01/C ex M-PSI/03) Supervisor: Prof. Gianmarco Altoè

ABROAD

Visiting Scholar (1 month, November-December) 2024

Dana Farber Cancer Institute, Harvard University, Boston, United States 

Research project about replicability in Psychology and Biomedical sciences.

Supervisor: Professor Giovanni Parmigiani

Visiting PhD student (6 months, June-December) 2021

University of Tel-Aviv, Israel 

Research project about the relationship between Working Memory and Consciousness

Supervisor: Professor Roy Luria

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

Title obtained on the second session

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

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

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/>)

TEACHING

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

> PHD

Generalized Linear Models - PhD Course in Psychological Sciences (15 hrs., 3 CFU) 2025

University of Padova

Professor for the course within the PhD program in Psychological Sciences, University of Padova



Crafting effective scientific presentations [planned] (5 hrs., 1 CFU) 2025

University of Padova

Professor for the course within the PhD program in Psychological Sciences, University of Padova

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 2023

in Developmental Psychology

[PSIC-01/C ex M-PSI/03] (21 hrs., 3 CFU)

University of Padova

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



> SEMINARS

Introduction to R 2021 - 2024

University of Padova

Intensive course about programming in R as part of the **ARCA (Applied Research Course Academy)** courses, Department of Developmental Psychology and Socialization, University of Padova



- 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 [PSIC-01/C ex M-PSI/03] 2022 - 2023

University of Padova

Lectures about R programming and data analysis 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

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

Psychological Testing [PSIC-01/C ex 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

Statistical and Clinical Significance [italian] (4 hrs.)

2024

University of Padova

Professor for the Master (2nd level) in Psicologia delle Micro e Maxi Emergenze

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



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



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



SUPERVISION

- I have co-supervised **8 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 5.2**. In terms of quartiles, I published **11 papers in Q1 journals (78.57%)**, **3 papers in Q2 journals (21.43%)**.

Google Scholar

Last Update: 2025-03-09

contains preprints, conference proceedings and redundant articles

- H-index: **7**
- Citations: **161**
- Number of articles: **33**

Scopus

Last Update: 2025-02-24

- H-index: **6**
- Citations: **71**
- Number of articles: **14**

Web of Science

Last Update: 2025-02-25

- H-index: **6**
- Citations: **72**
- Number of articles: **14**

> PUBLISHED (14)

° means that I am the corresponding author

Among the 14 publications, I have **4** first-author papers and **3** papers with the role of corresponding author.

1. Del Popolo Cristaldi, F., Buodo, G., **Gambarota** F., Oosterwijk, S., & Mento, G. (2024). How previous experience shapes future affective subjective ratings: A follow-up study investigating implicit learning and cue ambiguity. *PloS One*, 19, e0297954.
<https://doi.org/10.1371/journal.pone.0297954>
[IF: 2.9, Quartile: Q1] 🌐 🌐
2. Di Rosa, E., Masina, F., Pastorino, A., Galletti, E., **Gambarota** F., Altoè, G., Edelstyn, N., & Mapelli, D. (2024). Mood moderates the effects of prefrontal tDCS on executive functions: A meta-analysis testing the affective state-dependency hypothesis. *Journal of Affective Disorders*, 351, 920-930.
<https://doi.org/10.1016/j.jad.2024.02.009>
[IF: 4.9, Quartile: Q1] 🌐
3. ° **Gambarota** F., & Altoè, G. (2024). Ordinal regression models made easy: A tutorial on parameter interpretation, data simulation and power analysis. *International Journal of Psychology*.
<https://doi.org/10.1002/ijop.13243>
[IF: 3.3, Quartile: Q1] 🌐 🌐

4. ^c **Gambarota** F., & Altoè, G. (2024). Understanding meta-analysis through data simulation with applications to power analysis. *Advances in Methods and Practices in Psychological Science*, 7. <https://doi.org/10.1177/25152459231209330>
[IF: 15.6, Quartile: Q1]  
5. Maffei, A., **Gambarota** F., Liotti, M., Dell'Acqua, R., Tsuchiya, N., & Sessa, P. (2024). Conscious perception of fear in faces: Insights from high-density EEG and perceptual awareness scale with threshold stimuli. *Cortex*, 174, 93–109. <https://doi.org/10.1016/j.cortex.2024.02.010>
[IF: 3.3, Quartile: Q1] 
6. Pezzetta, R., **Gambarota** F., Tarantino, V., Devita, M., Cattaneo, Z., Arcara, G., Mapelli, D., & Masina, F. (2024). A meta-analysis of non-invasive brain stimulation (NIBS) effects on cerebellar-associated cognitive processes. *Neuroscience and Biobehavioral Reviews*, 157, 105509. <https://doi.org/10.1016/j.neubiorev.2023.105509>
[IF: 7.6, Quartile: Q1] 
7. Toffalini, E., **Gambarota** F., Perugini, A., Girardi, P., Tobia, V., Altoè, G., Giofrè, D., Psicostat Core Team, & Feraco, T. (2024). Clusters that are not there: An r tutorial and a shiny app to quantify a priori inferential risks when using clustering methods. *International Journal of Psychology*. <https://doi.org/10.1002/ijop.13246>
[IF: 3.3, Quartile: Q1] 
8. Del Popolo Cristaldi, F., **Gambarota** F., & Oosterwijk, S. (2023). Does your past define you? The role of previous visual experience in subjective reactions to new affective pictures and sounds. *Emotion*, 23, 1317–1333. <https://doi.org/10.1037/emo0001168>
[IF: 3.4, Quartile: Q1]  
9. 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. <https://doi.org/10.1016/j.compedu.2023.104961>
[IF: 8.9, Quartile: Q1]  
10. Quettier, T., Maffei, A., **Gambarota** F., Ferrari, P. F., & Sessa, P. (2023). Testing EEG functional connectivity between sensorimotor and face processing visual regions in individuals with congenital facial palsy. *Frontiers in Systems Neuroscience*, 17, 1123221. <https://doi.org/10.3389/fnsys.2023.1123221>
[IF: 3.1, Quartile: Q2]
11. ^c **Gambarota** F., Tsuchiya, N., Pastore, M., Di Polito, N., & Sessa, P. (2022). Unconscious visual working memory: A critical review and bayesian meta-analysis. *Neuroscience and Biobehavioral Reviews*, 136, 104618. <https://doi.org/10.1016/j.neubiorev.2022.104618>
[IF: 7.6, Quartile: Q1]  
12. Verroca, A., Rienzo, C. M. de, **Gambarota** F., & Sessa, P. (2022). Mapping the perception-space of facial expressions in the era of face masks. *Frontiers in Psychology*, 13, 956832. <https://doi.org/10.3389/fpsyg.2022.956832>
[IF: 2.6, Quartile: Q2]  
13. Quettier, T., **Gambarota** F., Tsuchiya, N., & Sessa, P. (2021). Blocking facial mimicry during binocular rivalry modulates visual awareness of faces with a neutral expression. *Scientific Reports*, 11, 9972. <https://doi.org/10.1038/s41598-021-89355-5>
[IF: 3.8, Quartile: Q1] 

14. **Gambarota** F., & Sessa, P. (2019). Visual working memory for faces and facial expressions as a useful "tool" for understanding social and affective cognition. *Frontiers in Psychology*, 10, 2392. <https://doi.org/10.3389/fpsyg.2019.02392>
[IF: 2.6, Quartile: Q2]

> **ACCEPTED/IN PRESS (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]
- Dimitru, E., [...] **Gambarota**, F., [...] - The Pain of Death. A Meta-Analysis of the Association of Death Anxiety with Psychological Distress And Psychopathology - *Nature Human Behaviour* [In press]

CONFERENCES

> INVITED TALKS (4)

Gambarota [P], F. 2025
Open Science Starter Pack



International Winter School 4M - Padova, Italy

Grassi, M., **Gambarota**, F. 2025
Music Ensemble: An Example of Multi-lab Investigating a Rare Population (Expert Musicians)



International Winter School 4M - Padova, Italy

Gambarota [P], F., Calignano, G. 2025
Multiverse analysis in R: Exploratory and Inferential Approaches



Cognitive Science Arena (CSA) - Bressanone, Italy

Gambarota [P], F. and Altoè, G. 2024
Understanding meta-analysis through data simulation with applications to power analysis



Cognitive Science Arena (CSA) - Bressanone, Italy

> TALKS (14)

[P] means that I was the presenting author

[accepted] means that the talk has been accepted but not delivered yet

Gambarota [P], F., Vesely, A., Finos, L., Altoè, G. 2024
Inference on multiverse meta-analysis
META-REP - Munich, Germany

Gambarota [P], F., Toffalini, E. 2024
Are most interactions false? The importance of the appropriate distribution and link function with non-normal data



Italian Psychological Association (AIP), Developmental Psychology - Cagliari, Italy

Perugini, A., **Gambarota**, F., Toffalini, E., Sità, L., Lakens, D., Pastore, M., Finos, L. Psicostat, Altoè, 2024
G.

Critical effect size values and why to report them

Italian Psychological Association (AIP), Developmental Psychology - Noto, Italy

Perugini, A., Toffalini, A., Feraco, T., **Gambarota**, F., Pastore, M., Altoè, G. 2024
Is that a cluster? A practical guide on how to avoid Type I and Type II error

Italian Psychological Association (AIP), Experimental Psychology - Noto, Italy

Calignano, G., Ceccon, C., **Gambarota**, F., F., Pacheco, S., Russo, S., Altoé, G., Pastore, M., Valenza, 2024
E., Moscardino, U.

Communicative development on the move between Minority and Majority worlds

Girardi, P., Vesely, A., **Gambarota**, F., Altoè, G., Pastore, M., Finos, L. 2024

Exploring the Dark Side of the Multiverse: Pitfalls and Possibilities in Applications

Association for Applied Statistics (ASA) - Rome, Italy

Gambarota [P], F. 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], F. 2024

Cosa accade al di fuori della consapevolezza visiva? [Italian]



Brain Awareness Week - Padova, Italy

Gambarota [P], F., Luria, R., Sessa, P. 2022

Conscious and unconscious information processing in visual working memory



Italian Psychological Association (AIP) - Padova, Italy

del Popolo Cristaldi, F., **Gambarota**, F., Oosterwijk, S. 2022

The role of past experience in subjective ratings to affective predictions: cross-modality effects

Cognitive Science Arena (CSA) - Bressanone, Italy

del Popolo Cristaldi, F., **Gambarota**, F., Oosterwijk, S. 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], F., Tsuchiya, N., Pastore, M. Di Polito, N., Sessa, P. 2021

Meta-analysis in Consciousness Research

Conscious Brain Concepts Workshop - University of Oslo - Virtual

del Popolo Cristaldi, F., **Gambarota**, F., Oosterwijk, S. 2021

The role of previous probabilistic learning on the subjective affective experience

Italian Psychological Association (AIP) - Lecce, Italy

Gambarota [P], F., Zandonella Callegger, C., Linkersdörfer, J., Ling, M., Kothe, E. 2021

trackdown - Collaborative writing through literate programming in R



Towards Advanced Scientific Knowledge (TASK4) - Virtual

> POSTERS (9)

[P] means that I was the presenting authors

[accepted] means that poster has been accepted but has not taken place yet

Brosche, K., **Gambarota**, F., Altoè, G., Rugani, R. 2024

Effects of Domestication and Selection for Productivity on Numerical Cognition in Chicks

European Conference on Behavioural Biology (ECBB) - Zurich, Switzerland

- Gambarota** [P], F., Vesely, A., Finos, L., Altoè, G. 2023
Joinmeta - An Inferential approach to multiverse meta-analysis

Society for the Improvement of Psychological Science (SIPS) - Padova, Italy
- Rasti, S., **Gambarota**, F., Altoè, G. 2023
Multiverse Meta-Analysis: Proposing an Exploratory Framework
Society for the Improvement of Psychological Science - Padova, Italy
- del Popolo Cristaldi, F., **Gambarota**, F., Oosterwijk, S. 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, R., **Gambarota**, F., Tarantino, V., Devita, M., Cattaneo, Z., Arcara, G., Mapelli, D., Masina, F. 2022
Probing cerebellar involvement in cognition through neuromodulation: A meta-analysis on the effectiveness of non-invasive cerebellar stimulation
Transcranial Brain Stimulation in Cognitive Neuroscience Workshop - Rovereto, Italy
- Gambarota** [P], F., Zandonella Callegher, C., Linkersdörfer, J., Ling, M., Kothe, E. 2021
trackdown - An R package for collaborative writing and editing

Society for the Improvement of Psychological Science (SIPS) - Virtual
- Gambarota** [P], F., Zandonella Callegher, C., Linkersdörfer, J., Ling, M., Kothe, E. 2021
trackdown - A simple framework for collaboration in a literate programming workflow

useR - Virtual
- Gambarota** [P], F., Pastore, Luria, Ferrari, Sessa, P. 2020
Visual Working Memory Precision for Emotional Faces in Moebius Patients

Cognitive Science Arena - Bressanone, Italy
- Quettier, T., **Gambarota**, F., Sessa, P. 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], F., Crepaldi, D., Calignano, G., Finos, L., Scandola, M. 2024
The Multiverse of Multi-labs. Methodological and Statistical Aspects of Multi-Lab and Multiverse Studies

Italian Psychological Association (AIP), Experimental Psychology - Noto, Italy

PEER REVIEWS

Ad-hoc reviewer for:

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

ACADEMIC MEMBERSHIPS

Italian Reproducibility Network (ITRN)	from: 2024.0
The Society for the Improvement of Psychological Science (SIPS)	from: 2023 - 2024
Associazione Italiana di Psicologia, Sezione Sperimentale (AIP)	from: 2022 - ongoing
Associazione Italiana di Psicologia, Sezione Sviluppo (AIP)	from: 2024 - ongoing

ORGANIZATION

Cognitive Science Arena	2025
Free University of Bozen-Bolzano	
Chair for the Methodology talks session	
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)

Section written in Italian

Science4all

2024

University of Padova

"Centra il bersaglio: tra misurazione, probabilità e incertezza". Activity organized by the Psicostat Research Group and proposed during the Science4All activity at the University of Padova (27-29th September 2024)

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 il personale del DPSS relativamente alle tematiche sulla società performante. Si è trattato di un workshop interattivo all'interno del retreat del dipartimento (24th February 2023). 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 MEMBERSHIP

Psicostat - psicostat.dpss.psy.unipd.it

2019 - ongoing

I am part of the **core team** of Psicostat founded by professors Massimiliano Pastore, Gianmarco Altoè and Livio Finos. 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.

COLLABORATIONS

A selection of collaborations with scholars outside the School of Psychology (University of Padova)

Daniël Lakens

2024 - ongoing

Eindhoven University of Technology

Improving the reporting of results from psychological studies

Giovanni Parmigiani

2024 - ongoing

Harvard University

Research and teaching projects about replicability in Psychology and Biomedical sciences

Branden Fitelson

2024 - ongoing

Northeastern University

Research and teaching projects about replicability in Psychology and Biomedical sciences

Livio Finos

2023 - ongoing

Department of Statistics, University of Padova

Research projects about inference in multiverse meta-analysis and R packages development

Roy Luria

2021 - ongoing

Tel Aviv University

Research projects about consciousness and working memory

Naotsugu Tsuchiya

2020 - ongoing

Monash University

Research projects about visual consciousness

INVOLVEMENT IN RESEARCH GROUPS

Research group on Multiverse analysis in generalized linear models and meta-2023 - ongoing analysis

Member of a national research group about inference in multiverse for GLM and meta-analysis with Gianmarco Altoè (University of Padova), Anna Vesely (University of Bologna) and Livio Finos (University of Padova), Massimiliano Pastore (University of Padova), Paolo Girardi (Ca' Foscari University of Venice). The research group produced the following conference presentations and posters:

- **Gambarota**, F., Vesely, A., Finos, L., Altoè, G. (2024). *Inference on multiverse meta-analysis*. META-REP. Munich, Germany.
- Girardi, P., Vesely, A., **Gambarota**, F., Altoè, G., Pastore, M., Finos, L. (2024). *Exploring the Dark Side of the Multiverse: Pitfalls and Possibilities in Applications*. Association for Applied Statistics (ASA). Rome, Italy.

- **Gambarota**, F. (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**, F., Vesely, A., Finos, L., Altoè, G. (2023). *Joinmeta - An Inferential approach to multiverse meta-analysis*. Society for the Improvement of Psychological Science (SIPS). Padova, Italy.

Research group working on tutorials about statistical methods in Psychology 2023 - ongoing

Member of a national research group with the aim of writing tutorial for common and widely used statistical methods in Psychology. Main group members are Gianmarco Altoè (University of Padova), Enrico Toffalini (University of Padova) and other members from the Psicostat research group. We produced the following papers:

- **Gambarota** F., & Altoè, G. (2024). Ordinal regression models made easy: A tutorial on parameter interpretation, data simulation and power analysis. *International Journal of Psychology*. <https://doi.org/10.1002/ijop.13243>
- **Gambarota** F., & Altoè, G. (2024). Understanding meta-analysis through data simulation with applications to power analysis. *Advances in Methods and Practices in Psychological Science*, 7. <https://doi.org/10.1177/25152459231209330>
- Toffalini, E., **Gambarota** F., Perugini, A., Girardi, P., Tobia, V., Altoè, G., Giofrè, D., Psicostat Core Team, & Feraco, T. (2024). Clusters that are not there: An r tutorial and a shiny app to quantify a priori inferential risks when using clustering methods. *International Journal of Psychology*. <https://doi.org/10.1002/ijop.13246>

Research group on visual consciousness and visual working memory 2019 - ongoing

Member of an international research group about visual consciousness for emotions and the relationship between visual working memory and consciousness. The principal investigators are Paola Sessa (University of Padova) and Naotsugu Tsuchiya (Monash University, Australia; **tLab** research group). Other members of the research group are: Antonio Maffei (University of Padova), Roy Luria (University of Tel Aviv, Israel), Roberto Dell'Acqua (University of Padova), Thomas Quettier (University of Bologna). The collaboration produced the following publications:

- Maffei, A., **Gambarota** F., Liotti, M., Dell'Acqua, R., Tsuchiya, N., & Sessa, P. (2024). Conscious perception of fear in faces: Insights from high-density EEG and perceptual awareness scale with threshold stimuli. *Cortex*, 174, 93–109. <https://doi.org/10.1016/j.cortex.2024.02.010>
- Quettier, T., Maffei, A., **Gambarota** F., Ferrari, P. F., & Sessa, P. (2023). Testing EEG functional connectivity between sensorimotor and face processing visual regions in individuals with congenital facial palsy. *Frontiers in Systems Neuroscience*, 17, 1123221. <https://doi.org/10.3389/fnsys.2023.1123221>
- **Gambarota** F., Tsuchiya, N., Pastore, M., Di Polito, N., & Sessa, P. (2022). Unconscious visual working memory: A critical review and bayesian meta-analysis. *Neuroscience and Biobehavioral Reviews*, 136, 104618. <https://doi.org/10.1016/j.neubiorev.2022.104618>

SOFTWARE

I mainly use R and the majority of research works are bounded with an R package, Shiny application or R code. The code and unpublished packages can be found on Github:

- [filippogambarota](#): main personal repository
- [shared-research](#): collection of papers with code and or packages
- [stat-teaching](#): collection of teaching materials
- [psicostat](#): repository of the Psicostat research group



> R PACKAGES ON CRAN

- [trackdown](#): I have co-authored an R package to collaborate on R Markdown and Quarto documents. [\[CRAN\]](#)

LANGUAGES

- **Italian** 🇮🇹: *mother tongue*
- **English** 🇬🇧🇺🇸: *proficient*

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 

[ITA] Autorizzo il trattamento dei dati personali presenti nel CV ai sensi del D.Lgs. 2018/101 e del GDPR (Regolamento UE 2016/679).

Il sottoscritto Filippo Gambarota, consapevole delle responsabilità anche penali nel caso di falsità in atti e dichiarazioni mendaci ai sensi dell'art.76 del DPR 445/2000, dichiara che i dati, le informazioni e le notizie riportate nel presente Curriculum Vitae corrispondono al vero.

[ENG] I authorize the processing of personal data included in my CV in accordance with Legislative Decree 2018/101 and the GDPR (Regulation EU 2016/679).

I hereby declare that the information and details provided in this Curriculum Vitae are true and accurate to the best of my knowledge, acknowledging the legal and criminal consequences of providing false statements as per Article 76 of Presidential Decree 445/2000.

March 9, 2025

Filippo Gambarota

A handwritten signature in black ink that reads "Filippo Gambarota". The script is cursive and elegant, with the first letters of the first and last names being capitalized and prominent.