

GIACOMO MAZZOTTA

PhD Candidate in Neuroscience

CONTACTS

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PERSONAL INFORMATIONS

Date of birth: 10/10/1999
Nationality: Italian
Sex: Male

LANGUAGE

Mother tongues:
Italian, Hungarian

English	C1
Spanish	B2
French	A2

RESEARCH EXPERIENCE

PhD Student
11/2025 – Present
Department of neuroscience, psychology, drug research and child health — University of Florence, Florence (Italy)
Engaged in fMRI research on visual attention and brain plasticity, supervised by Professor Paola Binda at the University of Pisa.

Research Fellow in Neuroscience
12/2024 – 10/2025
Department of Translational Research and New Surgical and Medical Technologies — University of Pisa, Pisa (Italy)
Engaged in fMRI research on visual attention and brain plasticity.

Internship
04/2024 – 06/2024
Department of Neuroscience, Psychology, Drug Research and Child Health — University of Florence, Florence (Italy)
Topic: psychophysiological research in neuroaesthetics.

EDUCATION

PhD *(in Progress)*
11/2025 – Present
Department of neuroscience, psychology, drug research and child health — University of Florence, Florence (Italy)
Engaged in fMRI research on visual attention and brain plasticity, supervised by Professor Paola Binda at the University of Pisa.

Master's Degree, Clinical and Health Psychology
10/2022 – 10/2024
Neuropsychology — University of Florence, Florence (Italy) · EQF Level 7
Thesis: "Analysis of salient visual features in fast vision: ERPs study of C1 component." Final result: 110/110 cum laude.

Bachelor's Degree in Psychological Sciences and Techniques
10/2019 – 10/2022
University of Florence, Florence (Italy) · EQF Level 6
Thesis: "In the eyes of the observer: development and applications of eye-tracking techniques in the artistic field."

High School Diploma
09/2014 – 07/2019
Liceo Economico-Sociale Giosuè Carducci, Pisa (Italy) · EQF Level 4

JOB RELATED SKILLS

- Designing and conducting psychophysics experiments
- fMRI (Functional Magnetic Resonance Imaging)
- EEG (electroencephalography)
- Eye-tracking (pupillometry & eye movements)
- Portable psychophysiological recording devices (HR, EDA, GSR, pupillary dilation, scan path)

DIGITAL SKILLS

- MATLAB, R, JASP
- fMRI: SPM, FSL, FreeSurfer, ANTs, AFNI
- EEG: EEGLAB, FieldTrip (preprocessing & ERP extraction)
- Python coding
- Office suite, image editing, presentation software

PUBLICATIONS, WORKSHOPS AND CONFERENCES

Research Articles

2025

Castellotti, S., Mazzotta, G., Benedetto, A. et al. **Optimal feature encoding in early vision**. Sci Rep 15, 23794 (2025). https://doi.org/10.1038/s41598-025-07644-9 (shared first authorship).

Conference Abstracts

2026

Acquafredda, M., Mazzotta, G., Biagi, L., Tosetti, M., Morrone, M.C., Binda, P. **Short-term plasticity of thalamo-cortical connectivity measured with Dynamic Causal Modelling of ultra-high field fMRI**. Poster presented at the Società Italiana di Neuroscienze (SINS), June 2026.

2026

Acquafredda, M., Mazzotta, G., Biagi, L., Tosetti, M., Morrone, M.C., Binda, P. **Short-term plasticity of thalamo-cortical connectivity measured with Dynamic Causal Modelling of ultra-high field fMRI**. Poster presented at the Vision Science Society (VSS), May 2026; abstract published in the conference journal.

2026

Mazzotta, G., Acquafredda, M., Biagi, L., Tosetti, M., Morrone, M.C., Binda, P. **Effects of visual attention in the Pulvinar at 7T fMRI**. Poster presented at the Società Italiana di Neuroscienze (SINS), September 2025.

2025

Mazzotta, G., Acquafredda, M., Biagi, L., Tosetti, M., Morrone, M.C., Binda, P. **Effects of visual attention in the Pulvinar at 7T fMRI**. Poster presented at the European Conference on Visual Perception (ECVP), August 2025; abstract published in the conference journal.

2024

Castellotti, S., Mazzotta, G., Benedetto, A. & Del Viva, M.M. **Extraction of optimally-informative features in fast vision: an ERPs study of the C1 component.** Perception. Poster presented at the European Conference on Visual Perception (ECVP), August 2024; abstract published in the conference journal.

Workshops and conferences

Touch Science and Engineering – NEUROBRIDGE

Scuola Superiore Sant'Anna, Pisa.
February 25, **2026**

Attended the one-day Symposium on Touch Science and Engineering, held within the NEUROBRIDGE Winter School on Neurosciences and Neurotechnologies. Talks covered the neural basis of touch (microneurography, neuromorphic encoding) and its engineering applications, from artificial skin and neural interfaces to robotic palpation and emotional touch in human-robot interaction.

Summer School Sensory Neuroscience – NEUROBRIDGE

University of Pisa, Pisa.
September 3-9, **2025**

Participated in a Master's-level summer school combining lectures from an international faculty with hands-on training, including an fMRI bootcamp at the Imago7 ultra-high-field facility. Organized within the NEUROBRIDGE initiative and the Circle U. alliance, in collaboration with Humboldt-Universität zu Berlin and UCLouvain.

Roots of neurodiversity – Scuola Normale Superiore
SNS, Pisa.
December 17, **2024**

Attended a one-day event at Scuola Normale Superiore on the biological and developmental foundations of neurodiversity, featuring talks and discussion with researchers from different fields.

BrainHack Lucca — Project Leader
IMT School for Advanced Studies, Lucca.
December 2-5, **2024**

Participated as project leader in a 2nd-edition workshop bridging data science and neuroscience, combining a day of training on open computational neuroscience tools with three days of collaborative hacking sessions on neuroscience projects. Worked with an international, interdisciplinary group of researchers to design and run fMRI–EEG analyses using Python-based pipelines.

ADDITIONAL INFORMATION

During my studies, I took part in numerous seminars on visual processes research at the University of Florence and attended presentations by international scientists such as Mark Greenlee and Reuben Rideaux. I also attended seminars on neurodevelopmental disorders and new models of tele-intervention and rehabilitation at IRCCS Stella Maris.

During my internship in the Neuroaesthetics field, I gained hands-on experience with instruments and measurements used across neuroscientific research, including heart rate, eye movements, and electrodermal activity (EDA).

My thesis, an EEG-based study of fast-vision mechanisms, was presented in Oslo at the Structure and Cognition Cluster (RITMO Centre for Interdisciplinary Studies in Rhythm, Time, and Motion, University of Oslo), and as a poster at the ECVP in Aberdeen; the abstract is published in Perception.

While working on my thesis, I collaborated closely with Alessandro Benedetto, who shared his expertise in EEG — from paradigm design to data processing — enabling me to independently carry out data collection and apply a range of analytical techniques. Together, we contributed my first peer-reviewed work to the field.

In my final year of Master's studies, I was awarded an Erasmus Traineeship at the research institute "La Timone" in Marseille, to train eye-tracking techniques.

I am currently engaged in fMRI-based research on visual plasticity and attentional processes across cortical and subcortical regions, using 7T ultra-high-field fMRI, under the supervision of Professor Paola Binda. This experience is further expanding my methodological toolkit and deepening my understanding of brain connectivity and functional neuroimaging.

I regularly take part in the seminar series and summer schools organized by Pisa Vision Lab, and in 2026 attended the Maffei 90th Birthday Symposium — "Neuroscience, Culture, and Society" (Pisa, 9–10 April 2026), with talks by international speakers including Michael Stryker (University of California, San Francisco) and Wolf Singer (Max Planck Institute). I have presented my research at SINS 2025, SINS Youth 2026, and the European Conference on Visual Perception (ECVP) 2025.