# Cecilia Barachini

Pisa, Italy
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## Academics

**11/2025 - Present** — **PhD in Neuroscience (in progress)** — University of Florence

- **Supervisor:** Prof. Paola Binda
- **Research lab:** Pisa Vision Lab, University of Pisa

**09/2023 - 02/2025** — **MSc in Neuroscience** — University of Pisa

- **Thesis:** "Short-term sensory deprivation impacts the physiology of the visual brain studied with ultra-high field fMRI in adult humans" (**Supervisor:** Prof. Paola Binda)
- **Final grade:** 110/110 *cum laude*

**09/2019 - 03/2023** — **BSc in Biology** — University of Pisa

- **Thesis:** "Deep learning in the study of transcription factors" (**Supervisor:** Prof. Ugo Borello)
- **Final grade:** 110/110 *cum laude*

## Research Experience

**11/2025 - present** — **PhD Student in Neuroscience** — University of Florence

- **Supervisor:** Prof. Paola Binda
- **Lab:** Pisa Vision Lab, University of Pisa
- Investigating adult visual plasticity and visual recovery using neuroimaging and psychophysical methods

**03/2025 - 07/2025** — **Research Intern** — Maastricht University

- **Supervisor:** Prof. Jan Kurzawski
- Department of Cognitive Neuroscience
- Analyzed white matter microstructure in amblyopia using diffusion-weighted MRI, tractography, and tractometry

**02/2024 - 02/2025** — **Master's Thesis Research Intern** — University of Pisa

- **Supervisor:** Prof. Paola Binda
- **Lab:** Pisa Vision Lab
- Analyzed visually evoked responses and changes in thalamo-cortical connectivity following short-term monocular deprivation using 7T functional MRI

**05/2022 - 02/2023** — **Undergraduate Research Intern** — University of Pisa

- **Supervisor:** Prof. Ugo Borello
- **Lab:** Molecular Dynamics of Corticogenesis Lab
- Explored cellular and molecular mechanisms of corticogenesis in mouse models using DNA extraction, PCR, gel electrophoresis, cryosectioning, and Nissl staining

## Research Contributions

08/2026 — **First-Author Poster Presentation** — ECVP 2026

- **Title:** Microstructural reorganization of cerebral white matter measured with 7T-MRI in adult amblyopia
- **Authors: C. Barachini**, M. Acquafredda, L. Biagi, M. Tosetti, M. N. Maglionico, M. Figus, I. Di Marco, G. M. Cicchini, A. Sale, M. C. Morrone, J. Kurzawski, and P. Binda
- Presented at the European Conference on Visual Perception (ECVP)

2025 — **Conference Abstract** — VSS and SINS 2025

- **Title:** Short-term Monocular Deprivation changes Thalamo-Cortical Connectivity measured with ultra-high field fMRI during visual stimulation
- **Authors:** M. Acquafredda, **C. Barachini**, L. Biagi, M. Tosetti, M. C. Morrone, and P. Binda. *Journal of Vision*, 25(9), 2039 (conference abstract)
- Presented as a poster at the Vision Sciences Society (VSS) Annual Meeting and the SINS National Congress

## Scholarships and Awards

07/2026-12/2026 — **International Mobility Grant** — University of Florence
One of six doctoral students awarded a merit-based grant by the Department of NEUROFARBA to support study and research abroad

09/2025 - 10/2025 — **Writing and Journalism Scholarship** — Il Post, Milan
One of seven scholarship recipients selected nationwide for a journalism internship at *Il Post*. My winning proposal focused on a science communication project

04/2025 — **Tech4Gender Equality Prize - WIN Challenge** — Contamination Lab Pisa
Awarded as part of the team that developed *BrightHER*, a free online platform supporting women pursuing academic careers in STEM through mentoring, funding information, networking, and outreach events

03/2025-07/2025 — **Erasmus+ Traineeship Scholarship** — University of Pisa
Grant to support a five-month research internship at the Department of Cognitive Neuroscience, Maastricht University

## Additional Training and Conferences

04/2026 — **Maffei 90th Birthday Symposium** — CNR and SNS, Pisa

- Attended "Neuroscience, Culture, and Society", a two-day symposium held on April 9–10, 2026

12/2025 — **BrainHack** — IMT School, Lucca

- Participated in an open neuroscience hackathon focused on collaborative and reproducible research
- Contributed to an EEG project investigating dynamic functional connectivity and working memory

12/2024 — **Roots of Neurodiversity Conference** — SNS, Pisa

- Attended a one-day conference on plasticity, perception, and computational neuroscience

07/2023 — **European Summer School in Sensory Neuroscience** — Circle U. Alliance, Pisa

- One of 30 participants selected internationally
- Training in multisensory and sensorimotor integration, neuroimaging, neurophysiology, and psychophysics

## Professional Experience

09/2025 - 10/2025 **Journalism Intern** Il Post, Milan

- Completed a paid journalism internship
- Developed skills in journalistic writing, fact-checking, editorial workflows, and science communication

2019-2020 **Journalism Intern** La Nazione, Pisa

- Wrote articles for the newspaper and collaborated with the editorial team

2017 and 2019 **Press Office Contributor** Pisa Book Festival

- Contributed to press office activities during the 2017 and 2019 editions

## Leadership, Civic Engagement, and Volunteering

2020-2023 **Founder and Editor-in-Chief of *L'Informazione Giovane*** Online
Founded and edited an online publication aimed at young readers that covered current events, culture, and youth-related topics. I coordinated the contributors, developed the editorial strategy, and oversaw content creation

11/2020-04/2021 **EUth for Democracy** Online
Helped organize a youth civic engagement project encouraging contributions to the Conference on the Future of Europe. The project supported participants in developing policy proposals addressing shared European challenges and presenting them through online public events

10/2019 - 06/2020 **Annual Course *Scuola di Politiche*** Online
Selected for an annual program combining monthly classes with collaborative projects in public policy design. Worked within a multidisciplinary and international framework, developing teamwork, leadership, and communication skills

09/2019 **Summer School *Scuola di Politiche*** Cesenatico
Contributed to the on-site coordination of the *Scuola di Politiche* Summer School

07/2019 **ID - Budapest European Agora** Budapest
Participated in a five-day international initiative bringing together 130 young Europeans and European leaders. Engaged in debates and workshops on European affairs, public policy, and democratic participation

2008-2024 **Scout** Pisa
Progressed from Scout member to volunteer leader, guiding groups of approximately 30 young people aged 12-17. Organized activities fostering practical and social skills, teamwork, and community responsibility. Represented Italy as part of the Italian Scout delegation to the 2015 World Scout Jamboree in Japan, taking part in international cultural exchange

## Languages

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| **Italian** | Native |
| **English** | C1 (Advanced) |
| **French** | B1 (Intermediate) |

## Technical Skills

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| **Programming** | MATLAB, Python, LaTeX |
| **MRI Analysis** | FSL, FreeSurfer, ANTs, SPM (DCM), QSIPrep, pyAFQ |
| **Statistics** | JASP |
| **Scripting & Tools** | Bash/Zsh, Git |