



MASTER 2 Fundamental and Clinical Neurosciences

Internship proposal 2024-2025

(internship from January to June 2025)

Host laboratory: Institute of Cognitive Sciences *Marc Jeannerod*, 67 Bd. Pinel, 69675 Bron

Host team: *Cognitive neuropsychology and development*

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Project title: Sex differences in the social brain

Project summary:

A body of studies in cognitive neuroscience has documented sex differences in empathy and social cognition skills (see e.g., Proverbio, 2023). In the past years, we have uncovered previously uncharted mechanisms of human visual perception, which appear to be important for aspects of social cognition such as understanding social actions and the interactions between people (Abassi & Papeo, 2022; Gandolfo et al., 2024; Papeo et al., 2017). Building on our findings, behavioral research on newly-hatched chickens has shown marked sex differences, already present at birth, in the animals' perception of interactions between conspecifics (Zanon, Lemaire, Papeo, Vallortigara, 2024). We have collected a large database of behavioral ($N > 300$) and functional MRI data ($N > 150$) on healthy human adults. The goal of the present project is to reanalyze this database to begin investigating possible sex differences in the behavioral and neural responses during visual perception of social interactions.

3-5 recent publications:

Abassi, E., & Papeo, L. (2022). Behavioral and neural markers of visual configural processing in social scene perception. *Neuroimage*, 260, 119506.

Gandolfo, M., Abassi, E., Balgova, E., Downing, P. E., Papeo, L., & Koldewyn, K. (2024). Converging evidence that left extrastriate body area supports visual sensitivity to social interactions. *Current Biology*, 34(2), 343-351.

Papeo, L., Stein, T., & Soto-Faraco, S. (2017). The two-body inversion effect. *Psychological science*, 28(3), 369-379.

Proverbio, A. M. (2023). Sex differences in the social brain and in social cognition. *Journal of Neuroscience Research*, 101(5), 730-738.

Zanon, M., Lemaire, B. S., Papeo, L., & Vallortigara, G. (2024). Innate sensitivity to face-to-face biological motion. *Iscience*, 27(2).