



**Masters in Mind & Brain**  
**Berlin School of Mind and Brain**  
**Humboldt-Universität zu Berlin**

## **Philosophy of Computational Neuroscience**

Can cognition be sufficiently understood by looking into neural activity alone? In this course we will study and discuss in depth philosophical questions at the foundations of scientific psychology, cognitive science, and (computational) neuroscience. We will study closely at the relationship between psychological and neuroscientific explanations, the nature and the role of mental representations, predictive coding and Bayesian models of the brain. First we will critically examine the aspects of psychological experience (William James, Wittgenstein, Anscombe), to then think about the epistemic role, if any, of these aspects in the cognitive modelling of neural activity and brain data analysis. Second, we will then focus on examining cognitive models (from neural networks, predictive coding to complexity science) from an E-cognition perspective.

### **Textbooks**

van Geert, P., & de Ruiter, N. (2022). *Toward a Process Approach in Psychology: Stepping into Heraclitus' River*. Cambridge University Press.

Fuchs, T. (2017). *Ecology of the brain: The phenomenology and biology of the embodied mind* Oxford University Press.

Lecturer

Dr Inês Hipólito

(Berlin School of Mind and Brain / Institut für Philosophie, HU Berlin) Office 2.OG 316

Email: [ines.hipolito@hu-berlin.de](mailto:ines.hipolito@hu-berlin.de)

Office hours: by appointment