

## Workshop in Computational Methods for Brain Health Research

This workshop provides a rigorous exploration of computational methodologies at the forefront of brain health research, with a specific focus on aging and dementia. Over two days, participants will engage with theoretical concepts and practical applications, guided by internationally recognized experts in the field.

- **Day 1: *"Machine Learning and Brain Clocks: Theoretical Foundations and Practical Innovations in Aging and Dementia Research"***

**Dr. Enzo Tagliazucchi** will examine the integration of machine learning with neuroscience to understand brain dynamics, emphasizing the role of brain clocks as biomarkers for aging and dementia. The session will combine theoretical discussions with innovative practical applications, offering attendees a comprehensive understanding of these transformative tools.

- **Day 2: *"Whole-Brain Modeling in Aging and Dementia: Theoretical Insights and Practical Applications"***

**Dr. Carlos Coronel** will delve into whole-brain modeling, presenting it as a robust framework for investigating the neural underpinnings of aging and dementia. This session will encompass foundational theory, model development techniques, and hands-on training in applying whole-brain models to neurodegenerative research.

By the conclusion of the workshop, participants will have developed a deeper appreciation for these advanced methodologies and their potential to revolutionize brain health research and interventions.