

# Mapping the Mind: Investigating the Relationships across Psychometric and Neural Variables through Network Science

*Friday, September 12, 2025 11:00 AM (1h 30m)*

This symposium is organized with the aim of fostering a deeper understanding of Network Analysis as a theoretical and methodological approach in psychology. In recent years, Network Science has emerged as a powerful tool to model psychological constructs as systems of interacting components. This shift allows researchers to examine the structure, dynamics, and complexity of psychological functioning across individuals, time, and levels of analysis.

The symposium will address four key topics:

- a) Theoretical and methodological foundations of psychological networks: The opening talk will provide an overview of the core principles of Network Science and its application to psychology, illustrating how this framework enables the modeling of mental phenomena as dynamic and interconnected systems.
- b) Network psychometrics and intraindividual variability: Michela Zambelli (Università Cattolica del Sacro Cuore) will present a multilevel network model applied to daily diary data, showing how meaning-making unfolds over time through the interaction of core psychological components.
- c) Personality architecture in healthy and pathological aging: Silvia Gobbo (Università di Milano-Bicocca) will explore age-related changes in personality structure using Exploratory Graph Analysis, comparing healthy older adults and individuals with Alzheimer's Disease.
- d) Linking brain connectivity to cognitive and behavioral networks: Arianna Menardi (Università di Padova) will present findings on the relationship between psychometric networks and resting-state brain connectivity, using data from the Human Connectome Project.

By integrating theory-driven and data-driven perspectives, this symposium showcases the potential of Network Analysis to capture the multifaceted and dynamic nature of psychological processes.

## If you're submitting a symposium talk, what's the symposium title?

Mapping the Mind: Investigating the Relationships across Psychometric and Neural Variables through Network Science

## If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

Yes

**Primary author:** VICENTIN, Stefano (Università di Padova)

**Co-author:** MENARDI, Arianna (Department of Neuroscience, University of Padova)

**Presenter:** VICENTIN, Stefano (Università di Padova)

**Session Classification:** Mapping the Mind: Investigating the Relationships across Psychometric and Neural Variables through Network Science