

# **Kognitywistyczne Seminarium Metodologiczne**

Czwartek, 10 stycznia, g. 17:00, Instytut Psychologii UJ, Ingardena 6, s. 2.15

referuje

**mgr Adam Gagol**

(Laboratorium Procesów Neuropoznawczych, Zakład Kognitywistyki IF UJ)

## **There is more to neuronal oscillations than just band power – cross-frequency coupling and its dynamics during cognitive tasks**

The concept of phase-amplitude coupling (PAC) will be presented, which is one of the ways to understand the complex interactions between neuronal oscillations at different frequencies. I will shortly explain the theoretical idea behind PAC as well as will describe techniques to assess it computationally. The main body of talk will be focused on the end-to-end PAC analysis of the EEG data acquired in the large-sample experiment, in which participants solved several fluid intelligence tests. Besides computing the PAC itself, I will show the analytical means of dealing with the massive feature spaces, and hence accounting for the – quite serious – multiple comparison problem, which is intrinsic to the PAC analyses.