



Wednesday, 05 April 2023, 13:00 (CET)

Wilhelm-Wundt-Room

Language Circle

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Physiological influences on brain state changes and their consequences for subjective perception and performance

Changes in brain state over time impact our perception and may influence performance. I will present some findings that show that cortical state influences perception beyond the stimulus detected-vs-not-detected dichotomy, and characterise the fluctuations themselves more closely in the process. I will also tell you why we may want to consider them more rigorously in our data analysis using the example of pre-stimulus alpha oscillations. Drawing on another set of recent results, I will review arousal-linked neuromodulation as one likely source of cortical state fluctuations. Against a previously held notion of arousal as a global influence on cortical state, our analysis of simultaneous pupil and MEG recordings show diverse neuromodulatory influences that differ depending on the targeted cortical region, can express in brain oscillations of different frequency bands or as broadband effects, and vary in their timing. Finally, I will show recent results that tie arousal fluctuations to another physiological rhythm. Taken together, these findings give a better understanding of how, when and where brain state changes manifest, what their perceptual consequences are and where some of them may originate.



Join online:

<https://zoom.us/j/95065830000>

Meeting-ID: 950 6583 0000



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