

Vortragseinladung

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Thema: Vestibular Cognition: Self-Motion Perception, Mental Imagery and Predictions

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Abstract:

Vestibular cognition has gained recent attention. Plenty of experimental demonstrations provide evidence that vestibular and cognitive processes are nested and intertwined, for example in numerical tasks, body representation, decision making and affective control. Several studies from our group in different experimental settings suggest that egocentric spatial transformations and the processing of vestibular information share some common mechanisms. We have measured in different experimental settings including microgravity and we tested healthy participants and patients with vestibular loss. Despite substantial empirical evidence from different paradigms, the mechanisms that underlie vestibular cognition are still scarcely understood. Interestingly, most modeling approaches in vestibular science include a top-down or a priori component. Thus, it is possible that forward models are not only in the service of estimating sensory states but they can also operate in an offline-mode. I will present some conceptual considerations about the involvement of vestibular information in higher-level cognitive tasks