



**SFB 1315**

Mechanisms and Disturbances in Memory Consolidation:  
From synapses to systems

Tuesday

**JUN 4, 2024**  
**4:00 pm CET**

CCO Auditorium

Virchowweg. 6, Berlin

**ZOOM ID: 7754910236**

[SFB1315.ifb@hu-berlin.de](mailto:SFB1315.ifb@hu-berlin.de)

**SFB 1315 LECTURE SERIES 2024**

# **BRAIN-WIDE DYNAMICS UNDERLYING DIFFERENT COGNITIVE FUNCTIONS**

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German Research Foundation





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# BRAIN-WIDE DYNAMICS UNDERLYING DIFFERENT COGNITIVE FUNCTIONS

Our lab studies brain-wide dynamics underlying cognition. We train mice on many different behavioral tasks, each focusing on a different cognitive function such as sensory integration, perception, working memory, social interactions and more. As mice perform each task, we use brain-wide imaging techniques to record neuronal population activity from as many brain areas as possible.

Two mesoscale techniques used in the lab are wide-field imaging of the whole dorsal cortex and multi-fiber photometry to record from dozens of cortical and subcortical areas also during freely moving behavior.

I will show unpublished results from mice trained on different cognitive tasks and highlight critical areas involved in each cognitive function with emphasis on individual mouse variability. I will further show preliminary results from social and freely moving behaviors and highlight the potential of these experiments in studying autism and other neurological diseases.

Our long-term goal is to obtain a brain-wide cognitive map that will aid in understanding cognition as a whole in both the healthy and the disordered brain.

## About the Speaker

Ariel Gilad is Assistant Professor in the Dept. of Medical Neurobiology, Faculty of Medicine, Hebrew University of Jerusalem. He is a Kavli Fellow, recipient of an ERC starting grant and awardee of numerous research grants in North America and in Europe (NSF-BSF-NIH, Einstein Foundation) to name only a few. This invited talk is hosted by SFB1315 Speaker Matthew Larkum (A04), who will introduce the speaker.

## Certificate of attendance:

Please contact team assistant  
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