

Second Workshop on Computational Properties of Prefrontal Cortex:

Prefrontal-Hippocampal Interactions, 6^h-8th Sept. 2012

The prefrontal cortex is centrally involved in higher cognitive functions related to the organization of behavior, like decision making, rule learning, and working memory. How specifically it participates in these functions, however, what computations it performs and which aspects of behavior and the environment it represents, is far from clear. Especially in recent years there is also mounting evidence that many of these functions depend crucially on tight interactions between the prefrontal cortex and the hippocampus, another brain region central for memory functions and representation of context. Alterations within the functional connectivity between the prefrontal cortex and hippocampus have also been linked to psychiatric diseases such as schizophrenia. Important questions are what complementary roles these two areas may play in learning, decision making, behavioral planning, and working memory, what types of information they exchange, how this information is coded, how the exchange is organized neuronally, and when during task performance or acquisition these interactions are most needed.



Heidelberg: Historical city center and castle

This workshop follows up on a workshop on prefrontal cortex held in 2010 in Whistler, Canada. It brings together leading international experts on prefrontal cortex and hippocampus, from the fields of in-vivo electrophysiology, neuroimaging, and theoretical/computational neuroscience, to discuss the current state of the field, identify key research questions, and promote the tight integration of experimental and theoretical approaches within this field of neuroscience.



International Research Forum (IWH)

The workshop will be hosted by the Bernstein-Center for Computational Neuroscience Heidelberg-Mannheim (www.bccn-heidelberg-mannheim.de). It will be located at the International Research Forum (IWH, www.iwh.uni-hd.de/index_engl.html) of Heidelberg University, a meeting center for international interdisciplinary exchange. The IWH is located in the beautiful historical city center of Heidelberg, near the famous Heidelberg castle and close to the Neckar river waterfront.

Preliminary list of speakers:

Bruno Averbeck
Francesco Battaglia
Karim Benchenane
Lee Daeyeol
Chris Lapish
Christian Leibold
Christian Machens
Bruce McNaughton
Cyriel Pennartz
Emmanuel Procyk
Torfi Sigurdsson
Xiao-Jing Wang