



Thesis defense

Thesis defense Haibing Xu (Csicsvari Group)

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IST Austria

Host:

Reactivation of Hippocampal Cognitive Map in Goal-directed Spatial Tasks

Abstract:

The ability of forming autobiographical memories of lifetime events and, thus, remembering what we did, where and when it happened is one of the most remarkable abilities of the brain. The hippocampus is known to be essential for such memories but it is also implicated in multiple forms of spatial memories, including both short-term working memory and long-term reference memory. However, little is known about the specific neural mechanisms that allow this circuit to code and store new spatial information. Haibing used a combination of techniques, including large scale multi-electrode recordings and behavioral paradigms on a radial eight-arm maze to understand how the brain, and in particular the hippocampus learns and remembers spatial memories. In this talk, he will explain how spatial memory traces are encoded during learning and how transient recollections of learned spatial paths of the maze, as expressed by the activity of hippocampal neurons, might help the animal to solve spatial tasks.

Biographical sketch: Haibing received a Medical Degree in 2008 and a Master's of Science Degree in Neuropharmacology in 2011 from Nanjing Medical University in China. After that, he joined the Csicsvari Group at IST Austria, where he dedicated himself to study the neural bases of spatial learning and memory. Specifically, he has focused on elucidating the role of hippocampal network activity relating to specific types of spatial memories and task demand, involving short-term working and longer-term reference memories.

Monday, August 7, 2017 04:00pm - 05:00pm

Mondi Seminar Room 2, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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<https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.

