

OIST PRESIDENTIAL LECTURE

# Cerebral Cortex Connectomics



Wed, **March 4<sup>th</sup>**  
**14:00 - 15:30**  
Sydney Brenner  
Lecture Theater **B250**

The mapping of neuronal connectivity is one of the main challenges in neuroscience. We are developing methods to make circuit reconstruction feasible using a combination of human-machine interaction and artificial intelligence. We are applying these methods to neuronal circuits in the mammalian cerebral cortex in order to extract algorithmic properties of cortical circuits, quantify connectomic traces of experience, and study the alterations of cortical circuits over development, evolution, and in models of psychiatric disease.

**Prof. Dr. Moritz Helmstaedter**

*Director at the Max Planck Institute for Brain Research*

Moritz Helmstaedter is Director at the Max Planck Institute for Brain Research in Frankfurt, Germany. His work aims at pushing the frontiers of Connectomics, an emerging research field occupied with mapping neuronal networks in the brain at unprecedented scale and resolution. Before joining the Max Planck Institute for Brain Research in 2014, he was a group leader at the Max Planck Institute of Neurobiology in Munich (2011-2014).

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