INSTITUT PARIS DESCARTES NEUROSCIENCES COGNITION

FÉDÉRATION DE RECHERCHE EN NEUROSCIENCES

Neuroscience Seminar Series

Friday, November 16th, 2018 at 11:30

Salle des Conférences (R229)

Centre Universitaire des Saints-Pères

45 rue des Saints-Pères, 75006 Paris

Takaki Komiyama

Professor of Neurobiology and Neurosciences

University of California San Diego, USA

Imaging neural ensembles in flexible behavior

With repetitive practice, animals develop novel and stereotyped movements over time, a process called motor skill learning. Motor skill learning is supported by circuit changes at multiple spatiotemporal scales. We investigate these changes by applying imaging techniques in head-fixed mice learning a motor skill. Over weeks of daily training, mice develop increasingly more stereotyped movements. With two-photon imaging in the primary motor cortex, we have identified profound changes in both microcircuit activity and synaptic structures. These studies have established that motor learning modifies the relationship between brain activity and associated movements. These activity changes coincided with cell type-specific changes in synaptic structures. I will discuss our latest results regarding the micro- and macro-scale reorganizations of cortical circuits during motor learning.

Those interested in meeting with the speaker please contact

merouann.kassa@parisdescartes.fr

UNIVERSITÉ PARIS DESCARTES

MEMBRE DE USPC Université Sorbonne Paris Cité