



Saints Pères Neuroscience Seminar Series

Friday, October 8th, 2021 at 11:30

Salle des Conférences (R229)

Centre Universitaire des Saints-Pères

45 rue des Saints-Pères, 75006 Paris

Laurent Venance

Collège de France, Paris

Striatal synaptic plasticity and procedural learning

Our main interest is how neural networks of the brain support its cognitive capacities. We are focusing on the procedural learning, i.e. the acquisition of skills through repeated performance and practice of a behavior in response to external cues. Cortex/thalamus-basal ganglia loops are involved in the adaptive control of behavior and are the main substrate for procedural learning. Our main focus is about the role of the striatum, the primary input nucleus of basal ganglia, which is a strategic gate extracting pertinent information and a major site of memory formation. Cortico- and thalamo-striatal long-term synaptic plasticity provides a fundamental mechanism for the function of the basal ganglia in action selection and in procedural learning. Thus, characterizing striatal plasticity repertoire and maps at play in physiological and pathophysiological conditions is crucial. I will detail the repertoire of (spike-timing-dependent) plasticity and its conditions of emergence to support various steps of procedural learning.

Those interested in meeting with the speaker please contact

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bâtissent de nouveaux mondes



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