

Neuroscience Seminar Series

Friday, November 23th, 2018 at 11:30

Salle des Conférences (R229)

Centre Universitaire des Saints-Pères

45 rue des Saints-Pères, 75006 Paris

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In vivo Tracking of Neuronal Network and Ensemble Activity During a Disease Course

Studies of pathological brain processes are usually of a cross-sectional nature and only provide a snapshot of highly complex dynamical systems. This is a limitation in neuroscience research and thus we argue that longitudinal studies of brain processes across different spatiotemporal scales will provide better insight into brain pathology and allow us to more fully understand disease courses. We applied multi-modal neuroimaging to study dynamical changes in neuronal network organization and activity as well as different approaches to capture neuronal ensemble activity in a rat model of cocaine addiction that captures the transition from initial controlled cocaine use to compulsive addictive behaviour. This animal model has excellent face and construct validity and translates well into human behaviour. This comprehensive approach provide a blueprint for the application of the concepts of neuronal ensembles and larger neuronal networks to brain disease courses.

Those interested in meeting with the speaker please contact

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