Symposia Series: «Open questions in Neuroscience»

Center for Neurophysics, Physiology & Pathology
Institute of Neuroscience and Cognition
Paris Descartes University, 45 Rue des Saints Pères, Paris

Symposium #2 :
Random Matrices, Dynamics of Large Networks, and Neuroscience
March, 11, 2014

Conference room of the Center for Neurophysics, Physiology & Pathology (3rd floor)

Organizers: David Hansel, Gianluigi Mongillo & Carl van Vreeswijk

Sponsored by ANR and Paris Neuroscience School

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8:30	*Coffee and croissants*
9:00-10:40:	**Random matrices (1)**
9:00- 9:50:	Florent Benaych-Georges (MAP5, Paris Descartes University) Review of recent results in random matrices
9:50 -10:40	Yashar Ahmedian (Columbia University, New York) Interplay of random and structured connectivity in the dynamics of neural networks
10:40-11:00	*Coffee break*
11:00-11:50	**Random matrices (2)**
	Luis Carlos Garcia del Molino (Institut Jacques Monod, Paris) The heterogeneous Coulomb gaz and generalized random matrix ensembles
12:00-13:30	*Lunch*
13:30-16:00	**Dynamics of large networks (1)**
13:30-14:20	Srdjan Ostojic (GNT, Ecole normale supérieure, Paris) Two types of asynchronous activity in excitatory-inhibitory networks of spiking neurons
14:20-15:10	David Hansel (CNPP, Paris Descartes University) Chaotic rate dynamics
15:10-16:00	Carl van Vreeswijk (CNPP, Paris Descartes University) Neuronal dynamics in a balanced network with partially bidirectional connectivity
16:00-16:20	*Coffee break*
16:20- 18:00	**Dynamics of large networks (2)**
16:20-17:10	Gianluigi Mongillo (CNPP, Paris Descartes University) Re-organization of spiking activity by synaptic volatility in a cortical network model
17:10-18:00	Rémi Monasson (LPT, Ecole normale supérieure, Paris) Inferred model of the prefrontal cortex activity unveils task-related cell assemblies and memory replay