

Balance of excitation and inhibition in sensory cortex

January, 8, 2014

Center for Neurophysics, Physiology & Pathology - Institute of Neuroscience and Cognition

Conference room of the Center for Neurophysics, Physiology & Pathology (UMR8119)

Paris Descartes University, 45 Rue des Saints Pères, Paris

Organizers : Frédéric Chavane, David Hansel, Lionel Nowak & Carl van Vreeswijk

Sponsored by ANR and Ecole des Neurosciences de Paris

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- 8:30 *Coffee and croissants*
- 9:00-11:00 : Chairperson : Claude Meunier (CNPP, Paris Descartes U.)
- 9:00 -10:00 Huizhong W.Tao (USC, Los Angeles)
Synaptic mechanisms for visual information processing in mouse cortex
- 10:00-10:30 Lionel Nowak (CERCO, Toulouse)
Mechanisms underlying contrast-dependent receptive field expansion/contraction
- 10h30-11:00 Frédéric Chavane (INT, Marseille)
Normalization and suppression within maps of awake monkey V1
- 11:00-11:30 *Coffee break*
- 11:30-12h45 Chairperson : Laurent Perrinet (INT, Marseille)
- 11:30-12:15 David Hansel/Carl van Vreeswijk (CNPP, Paris Descartes U.)
On selectivity, balance and maps
- 12:15-12h45 Jonathan Touboul (Collège de France, Paris)
Collective phenomena in large neural networks: the role of noise, heterogeneity and balance in the emergence of synchronized activity
- 12:45-14:15 *Lunch*
- 14:15-15:15 Chairperson : Ivo Vanzetta (INT, Marseille)
- Cyril Monier*, Julien Fournier and Yves Frégnac (UNIC, Gif/Yvette)
Role of transient imbalance between excitation and inhibition in the temporal precision of the neural code in the early visual system
- 15:15-15:45 *Coffee break*
- 15:45- 16:45 Chairperson : Dan Shulz (UNIC, Gif/Yvette)
- Li I. Zhang (USC, Los Angeles)
Functional synaptic circuitry of the auditory cortex