

BRAIN CLOCKS AND RHYTHMS SUMMER SCHOOL

SCIENTIFIC PROGRAM

<http://www.brainclocks.com/>

3.1.2010: Different time scales: Introduction

Registration

Charlie Schroeder - Current views on the origins and functional significance of neuronal oscillatory rhythms.

4.1.2010: Basics in System Neuroscience

Pedro Maldonado - Neuronal recordings (single neurons, LFP, EEG, MEG)

Andreas Kleinschmidt - Relationship between Electrophysiology and BOLD

Joerg Stehle - Chronobiology: Circadian rhythms in the brain clock(s)

James Olcese - Chronobiology: Reading and applying circadian clock output

5.1.2010: Millisecond range I: Neuronal communication

Ole Jensen - Functional connectivity reflected by cross-frequency coupling and the physiological basis of evoked responses

Sarah Lippé - Development of spontaneous and evoked neuronal oscillations

Wolf Singer - Temporal dynamics of information coding

6.1.2010: Millisecond range II: From Neuron to Perception

Pedro Maldonado - Time is of the essence: Neuronal activity in V1 during natural vision

Charlie Schroeder - Oscillations in multisensory integration

Andreas Kleinschmidt - 'Spontaneous' brain activity and perception

Matthew Wilson - Mechanisms of memory processing in the hippocampus

Peter Tass - Modelling neuronal oscillations

Wolf Singer - From spiking activity to circannual rhythms

7.1.2010: Excursion

8.1.2010: Millisecond range III: From Neuron to Behavior

Peter Tass - Pathological timing and therapeutical interventions

Hartwig Siebner - Physiological timing in the motor system

Nikolai Axmacher - Oscillations in memory and sleep

Ole Jensen - The role of neuronal oscillations in human memory processing: from working memory to consolidation

Matthew Wilson - Toward futures unforgotten: The hippocampus, thought, and dreams

9.1.2010: Circadian and circannual range

James Olcese - Resetting the circadian clockwork in the brain

Joerg Stehle - Changing neuronal clocks with age

Claudia Torres-Farfan - Brain clocks - peripheral clocks: Same or different?

10.1.2010: Students' team work

11.1.2010: From Milliseconds to interval timing: Speech timing

Marcela Pena - Rhythmic scales of speech perception

Anne-Lise Giraud - Linking dynamics of speech perception and production

Christian Kell - Physiological and pathological timing of speech production

12.1.2010: Interval timing: Rhythms in higher cognitive functions

Lucia Melloni - Long-distance synchronization as a key correlate of consciousness

Nikolai Axmacher - Novelty and Conflict processing

Benjamin Morillon - Cognitive time estimation

Sergio Neuenschwander - Building Expectations: New Vistas for Gamma Oscillations

13.1.2010: Team work presentation and synopsis