

Prof. Wulfram Gerstner EPFL – IC & SV– LCN SG –AAB119 (Bâtiment SG-AAB) Station 15 CH - 1015 LAUSANNE, Switzerland

Tuesday, May 20th, 2014 10h30, Room CO 121

Computational Neuroscience Seminar

Michele GIUGLIANO,

Theoretical Neurobiology & Neuroengineering Lab, Dept. Biomedical Sciences, University of Antwerp

The dynamical response properties of cortical neurons

The role of irregular cortical firing in neuronal computation is still debated, and it is unclear how signals carried by fluctuating synaptic potentials are decoded by downstream neurons and how they influence single-cell electrical activity. In this talk I will present some experimental results obtained in vitro by means of conductance-clamp, extending previous characterisation of input-output linear dynamical response properties in rat cortical neurons. Such an experimental characterisation addresses how neurons respond to time-varying noisy stimuli and is relevant to interpret ensemble responses to fast input transients.