

Neuroscience Seminar Series

Friday, October 10th, 2014 at 11:30 am

Salle des Conférences (R229)
Centre Universitaire des Saints-Pères
45 rue des Saints-Pères, 75006 Paris

David Kleinfeld

*Distinguished Professor and Experimental Biophysics Endowed Chair
University of California at San Diego*

Cortical blood flow: From vascular networks to microstrokes and vasomotion

What is the nature of the angioarchitecture in the cortex that allows the brain to meet the energy demands of neuronal computations? I will discuss the topology and geometry of cortical angioarchitecture, the implications of this angioarchitecture to the flow and distribution of blood, and the varied resilience and susceptibility of the vascular network and underlying neurons to blockages. I will conclude with a discussion of ongoing work on the nature of long-range correlations in the fluctuations of vascular diameter. An underlying theme of these studies is the development of new optical methods concurrent with scientific exploration..