

Abstract

Dr. Mukesh Dhamala - EPFL Life Science Seminars Series - March 20, 2015

Synchronized neuronal oscillations and oscillatory interactions within distributed brain regions are known to be central to normal perceptual and cognitive functions. Breakdowns or changes in interaction and synchronization within the network of brain regions can result in dysfunctions. Understanding oscillatory network interactions, recently begun to be uncovered from human brain activity recordings, can thus not only provide insight into the physiological mechanisms for sub-processes in cognition but also assist in the diagnosis and treatment of brain disorders. In this talk, I will present our network activity analysis framework and describe our recent findings of oscillatory network activity in perceptual decision-making processes and epileptic seizures.