【セミナーのご案内】

Multiscale brain dynamics: from cellular recordings to brain imaging with machine learning applications

Presenter：Professor Alessandro E.P. Villa

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日時：平成30年11月19日（月）18：00～19：00
場所：基礎研究棟1階カンファレンスルーム

Abstract:

"The sequence of action potentials fired by a neuron in the central nervous system carry important information associated with cognitive functions and sensory perception, but random variation, noise, and reliability observed in the experimental recordings pose serious questions to the definition and meaning of neural coding. Spatiotemporal patterns of neuronal discharges, also referred to as preferred firing sequences, correspond to repeated ordered and precise interspike interval relationships which recur above chance levels. These patterns can be associated with chaotic attractor dynamics observed in experimental, theoretical and large scale neuronal networks simulations with embedded neuro-developmental features. These simulations are extended to mesoscale brain signals, local field potentials and EEG, and serve as model signals for functional brain imaging applications with patients. This talk presents the latest findings of this approach and how patients' data are analyzed with machine learning applications aimed at functional categorization of the brain recordings."

＊教員、学部学生、大学院生等ご来聴をお待ちいたします。

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