고려대학교 뇌공학과 KOREA UNIVERSITY

뇌신호처리연구실

National Research Foundation of Korea

Invited Seminar

Large-scale brain connectome modeling: organizational principles and neuronal dynamics

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Abstract

What are the principles of functional organization in the human brain? In this talk, I will first discuss recent evidence showing major neurocognitive axes embedded in the large-scale resting-state functional connectome and their changes across different ages and species. Moreover, using an ensemble learning of directed functional connectivity, I will demonstrate canonical patterns of information flow across those functional axes to better capture underling neuronal dynamics. Beyond such conceptual and analytical advances in connectome fields, I will further showcase the potential of those advanced modeling techniques in the clinical samples – e.g., autism and schizophrenia, and demonstrate their altered brain-behavior relationship. I hope that a series of evidence in my talk could convince you a power of computational brain imaging and network modeling approaches and help study parsimonious yet sufficiently explainable brain mechanisms for complex human cognitive functions.

주최: 고려대학교 뇌공학과 뇌신호처리 연구실 (http://bspl.korea.ac.kr)

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