Colloquium

Professor Emma Zhang

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Thursday, September 21ˢᵗ 2023
Room 220, 60W Charlton
4:00 – 5:00 pm

Network response regressions with applications in neuroimaging

Recent advances in data collection technology have multiplied the availability of network data, leading to not only larger and more complex networks but also to instances where independent network samples are collected. In such data sets, a network serves as the basic data object, and they are increasingly common in neuroscience and genetics. When analyzing these data, a fundamental scientific question of interest is to understand how the subject-level network connectivity changes as a function of clinical characteristics. In this talk, we propose a new network response model framework, in which the networks are treated as responses and the network-level covariates as predictors. Under the proposed framework, we discuss model identifiability, estimation and theoretical properties. Finally, we present our findings from the analyses of three resting-state and task-related neuroimaging studies.

Refreshments will be served 3:15 – 3:45 pm in the Faculty Lounge
4118 French Hall West

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