



Dr. Xin Di

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11:30am - 1:00pm

CKB 217

Understanding Human Brain Connectivity Using Neuroimaging

Abstract:

The human brain is the most complex organ in the body that gives rise to intelligence. Researchers use non-invasive techniques like functional MRI (fMRI) to study brain functions. In order to understand these functions, we must not only map psychological functions to specific brain regions, but also investigate how different regions interact with each other. My research focuses on two areas: how brain connectivity is affected by different tasks and how it changes during movie watching. We've found that connectivity analysis reveals a wider involvement of brain regions than simply looking at regional activity. Task-modulated connectivity and dynamic connectivity during movie watching may be more closely related to behavioral outcomes than baseline intrinsic connectivity. These studies on task- and movie-related connectomes have provided new insights into understanding brain functions.

About the Speaker

Dr. Di holds a Bachelor's degree in Electronic and Information Engineering, as well as Master's and Doctorate degrees in Psychology. He completed postdoctoral research at the University of Medicine and Dentistry of New Jersey and is now a Research Assistant Professor in the BME Department at NJIT. His research centers on utilizing neuroimaging methods, such as fMRI, to investigate human brain connectivity and network organization.