

Resting-State fMRI: Current research, Methodological Issues and its Applications

11:30 a.m. – 12:30 p.m. | February 16, 2017 (Thursday)

Rm 813, 8/F, The Jockey Club Tower | Centennial Campus | The University of Hong Kong



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Abstract

Resting-state functional magnetic resonance imaging (R-fMRI) has emerged as a mainstream imaging modality with myriad applications in basic, translational and clinical neuroscience. Despite exponential growth in usage over the last two decades, R-fMRI methodologies are still confronted with significant challenges. In this talk, I would like to introduce our work on addressing fundamental methodological issues (e.g., impact of head motion, standardization and multiple comparison correction) that exist in resting-state functional connectomic studies. To facilitate the applications of our methodological recommendations, we have developed neuroinformatics platforms (DPABI/DPARSF) to advance standardized processing of R-fMRI data and also launched a collaborative initiative (The R-fMRI Maps Project) to build a data-sharing global network. Lastly, I would like to share our work on applying R-fMRI to cognitive sciences and brain disorders.

About the Speaker

Dr. Chao-Gan Yan is a professor at the Institute of Psychology, Chinese Academy of Sciences (IPCAS). He is the Deputy Director of the Magnetic Resonance Imaging Research Center and the Principal Investigator of The R-fMRI Lab located at IPCAS. Before he joined the IPCAS through the Hundred Talents Program of CAS in 2015, he worked as a Research Scientist at the Nathan Kline Institute for Psychiatric Research and a Research Assistant Professor at the Department of Child and Adolescent Psychiatry, New York University School of Medicine. Dr. Yan received his Ph.D. degree in Cognitive Neuroscience from State Key Laboratory of Cognitive Neuroscience and Learning at Beijing Normal University in 2011. His research mainly focuses on the resting-state fMRI (R-fMRI) computational methodology, mechanisms of spontaneous brain activity, and their applications to brain disorders. He has addressed fundamental methodological issues (e.g., impact of head motion and standardization) on the study of resting-state functional connectomics. He has also developed data processing and analysis toolbox for R-fMRI, DPABI and DPARSF, with the latter has been cited over 900 times. He has published 41 peer-reviewed articles (13 as first or corresponding author) in prestigious journals including Cerebral Cortex, NeuroImage, Neuroinformatics, Translational Psychiatry, Molecular Psychiatry, Nature Methods. His work has been widely cited in the scientific community (total citations > 4900, <http://scholar.google.com/citations?user=IJQ9B58AAAAJ>), achieving an h-index of 25. Additionally, he currently serves as a review editor for Frontiers in Neuroscience: Brain Imaging Methods, Frontiers in Behavioral Neuroscience, and a member for the OHBM Communications Committee

~All are Welcome~

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