

National 2010 DLS@BCS



Distinguished Lecturer Series

in Brain & Cognitive Sciences

The Department of Brain & Cognitive Sciences at Seoul National University introduces 'Distinguished Lecturer Series (*DLS@BCS*)', a series of public lectures by internationally-recognized researchers in Brain & Cognitive Sciences. Dr. Shen Li, Professor in the Department of Radiology and Imaging Sciences at Indiana University School of Medicine will give a lecture on Imaging Genetics: Mapping Genotype to Neuroimaging Phenotype.

2:00 PM, Thursday, September 16, 2010 Mok-am Hall, Bldg. 500 *Imaging Genetics: Mapping Genotype to Neuroimaging Phenotype*

Recent technological advance in acquiring high throughput multi-modal brain imaging and genetic array data has enabled new approaches to study genetic effects on brain for improving early diagnosis and mechanistic understanding of disease processes and treatment response for brain disorders. Integrated neuroimaging and genetic studies of Alzheimer's disease (AD) are an ideal testbed for the development, application and validation of novel computational approaches for analyzing these imaging and genetics data. In this talk, using AD as an example, I will present our recent activities on the investigation of genetic influences on disease onset and trajectory as reflected in structural, functional, and molecular imaging changes; fluid biomarkers; and cognitive status. I will first discuss state of the art computational neuroanatomy methods that we have used and developed for extracting quantitative phenotypes from neuroimaging scans, and then describe our imaging genetics strategies for performing genetic association studies of complex quantitative phenotypes at both the genome-wide scale and the candidate gene level. Finally I will review current challenges and future directions in the field of imaging genetics.



Shen Li, Ph. D.

Professor of neuroimaging, computational biology, and bioinformatics in the Department of Radiology and Imaging Sciences at Indiana University School of Medicine.

Presentation is designed for scholars and students in Brain & Cognitive Sciences as well as general audiences and will be delivered in English. All lectures are free and open to the public. Therefore, reservation is not necessary. The direction to the Bldg. 2500 (Mok-am Hall) can be found at http://useoul.edu/images/map/main.html.

For more information about DLS@BCS, visit BCS website: <u>http://bcs.snu.ac.kr</u>.

