JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH

Department of Biostatistics

BIOSTATISTICS SEMINAR

Why Should My fMRI Data Be Complex-valued, and How Did Non-biological Correlation Get In It?

Daniel Rowe
Marquette University
Daniel.Rowe@marquette.edu
www.mscs.mu.edu/~dbrowe/

Abstract:

In this talk I will present the general AMMUST statistical framework for functional magnetic resonance imaging (fMRI). This framework starts with the original complex-valued k-space measurements in vector form, describes preprocessing and reconstruction as matrix multiplication operators, then produces the correlation induced from these processes. In fMRI, many preprocessing and transformation operations are applied to the original complex-valued measurements in order to form and correct the images. Furthermore, the phase half of the data is discarded before analysis. In light of the aforementioned, it can be difficult to describe fMRI data with a reasonable model. The known induced correlation between voxels from these operations should be properly incorporated in a statistical model in order to reduce any confounds with biologically motivated statements.

The Johns Hopkins Bloomberg School of Public Health
Department of Biostatistics, Monday, December 2, 2013, 12:15-1:15
Room W4030, School of Public Health (Refreshments: 12:00-12:15)

PLEASE NOTE:
We would appreciate it if you would eat your lunch before or after the seminar

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