

BIME Seminar

Department of Biomedical Engineering

Date : 2016 July 15, Friday

Time : 11:00 AM -12:00 PM

Venue: 1-075 Research Transition Facility

“Towards Quantitative Magnetic Resonance Imaging in the Body”

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Abstract:

Quantitative magnetic resonance imaging (qMRI) aims to measure underlying tissue parameters that form MRI image contrast, which allows specific criteria to be developed to improve diagnostic accuracy and reproducibility. While qMRI has been implemented extensively in the brain, adoption in the rest of the body has been slowed by challenges such as motion and magnetic field inhomogeneity. Moreover, qMRI methods typically require multiple scans of the same object, which increases total scan times and worsens sensitivity to motion. This seminar will describe some of the speaker's experience at Stanford correcting for magnetic field inhomogeneity and subject motion, and reduction of scan times by exploiting redundancy and information known a priori. Promising applications of qMRI in the body will be introduced, and predictions on how robust qMRI in the body can be achieved within reasonable scan times will be discussed at a level requiring no technical MRI background.

All Are Welcome