

The Johns Hopkins University
Whiting School of Engineering
Department of Electrical and Computer Engineering

**METHODS FOR HIGH RESOLUTION MYOCARDIAL MOTION AND
STRAIN QUANTIFICATION AND ROBUST CORONARY MRA IN A
RELAXED CARDIAC MRI EXAM**

Seminar By

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Abstract:

Cardiac Magnetic resonance is an important tool for diagnosis and prognosis of cardiovascular diseases. However, it is restricted in use due to long image acquisition time associated with MRI. In this research we propose to tackle this in three steps. First, developing techniques which exploit redundancies to reconstruct MR image for motion and strain quantification from less data. Second, developing efficient data acquisition and post processing framework to generate higher resolution artifacts free cardiac motion and strain maps. Finally, developing a navigator technique to track the motion of heart during free breathing and acquire data during stationary end expiration. The proposed navigator is robust to non-idealities present at high magnetic field, which enhances SNR and facilitates higher resolution cardiac MR at high field strength like 7Tesla.

Thursday, May 7, 2009
4:00 p.m.
CSEB 320

Refreshments will be served at 3:45 p.m.

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