Bilkent EEE Distinguished Seminar Series

Bilkent University - Department of Electrical and Electronics Engineering

Displacement Spectrum Imaging with MRI

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We propose a new method, displacement spectrum (DiSpect) imaging, for probing in vivo complex tissue dynamics such as motion, flow, diffusion and perfusion. Based on stimulated echos and Fourier encoding of displacement, our flexible approach enables observation of spin dynamics over short (milliseconds) to long (seconds) evolution times. We demonstrate applications for arterial perfusion imaging and complex post perfusion venous flow imaging in the brain.

This is a joint work with Ekin Karasan and Zhiyong Zhang.

Bio: Michael (Miki) Lustig is a Professor in EECS. He joined the faculty of the EECS Department at UC Berkeley in Spring 2010. He received his B.Sc. in Electrical Engineering from the Technion, Israel Institute of Technology in 2002. He received his Msc and Ph.D. in Electrical Engineering from Stanford University in 2004 and 2008, respectively. His research focuses on computational imaging methods in medical imaging, particularly Magnetic Resonance Imaging (MRI). Miki is a Fellow of the Society of Magnetic Resonance in Medicine.