

SEMINAR ANNOUNCEMENT

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Using Magnetic Resonance to Study Multiple Sclerosis

**Thursday, November 5, 2009
12 noon, SI 117**

Abstract: Multiple sclerosis (MS) is a chronic brain and spinal cord disease that often starts in early adulthood, and affects ~2.5 million people worldwide (~400,000 Americans). The cause of MS is unknown, the progression of MS is unpredictable (~25% of MS patients become wheelchair-bound), the treatments for MS are only partially effective, and there is no cure. Magnetic resonance imaging (MRI) is used to provide a quicker and more certain diagnosis of MS. Furthermore, MRI and MR spectroscopy (MRS) have been shown to be sensitive to the evolution of certain types of brain abnormalities that are related to MS. The objective of this presentation is to provide an overview of the data-acquisition-related physics and post-acquisition data-processing of in-vivo human brain proton MRS and MRI, and discuss how these techniques are applied: in the clinic for the diagnosis of MS, in clinical trials to evaluate efficacy of new therapies to treat MS, and in research institutes for elucidation of the pathogenesis and disease evolution that may reveal mechanisms and targets for more effective therapies.

Pizza and Refreshments provided at 12noon.

Undergraduate students are encouraged to attend

Host: Ulrich Zurcher, x2429, u.zurcher@csuohio.edu