

T_CSUH Special Seminar

Texas Center for Superconductivity at the University of Houston

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Room 102, University of Houston Science Center
12:00 noon - 1:00 p.m.

Magnetic Resonance Imaging: an Evolving Clinical Imaging Tool

Abstract

This lecture will focus on the various mechanisms through which contrast could be generated in Magnetic Resonance Images (MRI), and the clinical applications of MR. Among diagnostic imaging modalities, MRI is arguably the most versatile. Magnetic resonance imaging allows non-invasive evaluation of an array of tissue properties in vivo, e.g., tissue magnetic-resonance relaxation (anatomic imaging), metabolite distribution within tissue (spectroscopy), tissue micro-structure (diffusion), tissue micro-vascular flow (perfusion), tissue velocity, etc. This versatility has resulted in widespread use of MRI as a diagnostic imaging tool to assess pathology in patients. Recent technological advances have made it possible to use MR not just as diagnostic imaging modality, but also to use in conjunction with interventional, therapeutic procedures, e.g., MR guided focused ultrasound, and other MR guided interventions.

Bio

Dr. Muthupillai received his Ph.D. in Biomedical Sciences (Biomedical Imaging Track) from Mayo Clinic and Foundation in 1997. He is currently a MRI Scientist/Physicist of the Department of Diagnostic and Interventional Radiology at St. Luke's Episcopal Hospital and Clinical Assistant Professor of the Department of Radiology of Baylor College of Medicine. His research focuses on the Cardiovascular MRI and he is the author/coauthor of more than 30 articles and 10 book chapters. He has lectured numerous professional courses and delivered many invited talks. Dr. Muthupillai has also worked for five years as a MRI Senior Clinical Scientist of Philips Medical Systems at Cardiovascular MR Research Laboratory of Texas Heart Institute at St. Luke's Episcopal Hospital where he had developed novel methodology/techniques of MR imaging for medical applications. He has received four patents for his invention.

Persons with disabilities who require special accommodations in attending this lecture should call (713) 743-8210 as soon as possible.



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