From Imaging to Understanding:
Visualization and Smart Analysis

December 12-13, 2010, French Family Science Center

The 2010 annual meeting of Duke’s Center for Molecular and Biomolecular Imaging will focus on the interdisciplinary intellectual challenges associated with extracting useful information from raw data in imaging and spectroscopy. The major limitation of modern imaging methods is rarely signal, it is contrast: structure correlates poorly with function, and often the important details in an image or spectrum are obscured by noise, dynamic range, obvious but unimportant features, or the restrictions conventional reconstruction tools such as Fourier transforms impose on bandwidth and acquisition time.

The goal of this annual meeting is to bring together scientists from fields ranging from pure mathematics to clinical radiology and artwork validation, in order to highlight the underlying principles and opportunities in this discipline.

Preliminary Program:

**Sunday, December 12, 2010**
5:00-6:00 Registration and Poster Setup
6:00-7:00 Invited session
   Robert Calderbank, Duke University (Mathematics/Computer Science)
   Kamil Ugurbil, University of Minnesota (Center for Magnetic Resonance Research)
7:00-9:00 Poster session and Reception

**Monday, December 13, 2010**
8:30-9:00 Breakfast
9:00-12:00 Morning Session
   Geoff Rubin, Duke University (Radiology)
   Stephen Pizer, UNC (Medical Image Display and Analysis Group)
   A. J. Shaka, University of California Irvine (Chemistry)
   Sina Farsiu, Duke University (Biomedical Engineering)
   Quetz Magaña (Spectralysis, LLC)
   Rachel Brady, Duke University (Visualization Technology Group)
12-1:30 Lunch and Poster Session
1:30-4:30 Afternoon Session
   Bernhard Blümich, Aachen University, Germany (Materials Science)
   G. Allan Johnson, Duke University (Center for in vivo Microscopy)
   Montserrat Fuentes, N.C. State University (Statistics)
   Tom Matthews, Duke University (Chemistry)
   Paul Segars, Duke University (Radiology)
   Chris Newgard, Duke University (Stedman Center for Metabonomics)

Registration is free, and preregistration guarantees dinner and conference materials. For registration and poster submission information, go to http://cmbi.duke.edu/events