



## 2012 Fall Colloquium Series

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University of Texas at Dallas

### Multi-Scale Integrated Intelligent Interactive Sensing

In many areas of scientific research, a complete observational context, coupled with theory, is invaluable for an in-depth understanding. This context ideally involves integrating (i.e. fusing) observations of multiple parameters from multiple sensors on multiple spatial and temporal scales. Automatically acquiring such observations represents a major challenge. Employing intelligent and adaptive observation strategies that automatically focus on observing the parameters at the locations, times and scales with the highest information content can greatly facilitate acquiring an adequate observational characterization within tractable data volumes. Remote sensing of the Earth and atmosphere traditionally relies on satellite platforms that provide a homogeneous and continuous coverage of the entire planet. However, the spatio-temporal resolution of satellite remote sensing is always inferior to airborne and terrestrial sensing platforms. In recent years, remote sensing from satellites has seen dramatic improvements in both accuracy and spatio-temporal resolution. More than ever, there is a need to close the gap between the satellite, airborne and terrestrial observations. To make best use of these improvements requires a comprehensive treatment of observation representativeness, calibration and validation. Ultimately, merging remote sensing observations on all scales is key to fully exploit the synergies and overcome the limitations of individual sensing techniques.

Dr. Lary is an applied scientist interested in computational, information systems and autonomous robotic platforms to facilitate discovery and decision support in Earth System Science and societal applications. David Lary completed his education in the United Kingdom. He received a First Class Double Honors B.Sc. in Physics and Chemistry from King's College London (1987) with the Sambrooke Exhibition Prize in Natural Science, and a Ph.D. from the University of Cambridge, while at Churchill College (1991). His contributions have been recognized by his peers through: Invited contributions to the Royal Society, National Academies, and CDC, two dedicated EGU symposia sessions, four prestigious fellowships, five editorial commendations, six NASA awards, and eighty publications with over a thousand citations in the peer-reviewed literature and a Hirsch index of 17. Since moving to UTD in summer 2010 he has been made a Scholar of the Institute for Integrative Health and has been awarded grants of over \$800k from NASA, DoD, and NIH.

**Friday, August 26, 2011**

**1:30 p.m.**

**Baylor Sciences Building, Room D.110  
Baylor University, Waco**

**For additional information please call Sherri Honza x1271**