Workshop on

Intelligent Sensory Data Processing and Imaging in Dynamic Battlefield Scenarios

Fedex Institute of Technology, University of Memphis
October 25-26, 2007, Memphis, TN

Workshop Co-Chairs:
Robert Kozma, University of Memphis, TN
Amir Shirkhodaie, Tennessee State University, TN

Supported by:
FedEx Institute of Technology, Center for Intentional Robotics
Department of Computer Science, University of Memphis
Department of Electrical and Computer Engineering, University of Memphis
Tennessee State University, Nashville, TN
US Air Force Research Laboratory, Sensors Directorate, Hanscom AFB, MA

The goal of this workshop is to create a forum for interdisciplinary researchers to discuss research and development issues in the area of radar, ladar, UV, and imaging sensory data processing, pattern recognition and classification, and information association/correlation and fusion from multi-modality sensors in order to solve long term technological challenges and meet US defense needs in complex warfare scenarios. Recent advances in Ultra-wideband radars, ladar, and imaging systems coupled with biologically-inspired optimization and control algorithms enable achievement of new cutting edge technologies for warfighters acting in dynamically changing environmental conditions, with adversaries hidden behind high level of noise and clutter. The tasks include sensor data acquisition, distributed sensor data processing and fusion, and mobile platforms navigation and control in hostile environment, and the reliable detection and characterization of adversaries.

The Program of the Workshop includes:

- Featured talks by invited speakers from national laboratories and by representatives of the host academia to address recent developments and challenges in this field.
- Extensive discussions on the opportunities of collaborations and exploring the possibilities of attracting funding through DARPA, AFOSR, and other agencies.

Invited Speakers (tentative list):

- Ross Deming, Antheon Co., Waltham, MA
- Thyagaraju Damarla, ARL, Adelphi, MD
- Peter Erdi, Center for Complex Systems, Kalamazoo College, MI
- Khan Iftekharuddin, EECE, University of Memphis, TN
- Robert Kozma, Center of Intentional Robotics, Dept. CS, University of Memphis, TN
- Rob Linnehan, AFRL & Northeastern University, Boston, MA
- Atindra Mitra, WPAF, Dayton, OH
- Leonid Perlovsky, AFRL & Harvard University, Cambridge, MA
- Murali Rangaswami, AFRL, HAFB & WPAF, Dayton, OH
- Amir Shirkhodaie, TSU, Center of Excellence for Battlefield Sensor Fusion, Nashville, TN

Local arrangements: Memphis International Airport provides easy access to the Workshop site at the Fedex institute of Technology, 365 Innovation Drive, Memphis, TN (~ 5 miles). Accommodation is conveniently available at the Holiday Inn at University of Memphis Campus, just across the street from the meeting venue http://www.ichotelsgroup.com/h/d/hi/1/en/hotel/memkw or call 901-678-8200. A block of rooms will be reserved and made available for the participants. Memphis is the birthplace of the blues, Rock and roll, Elvis, and it offers a variety of cultural and culinary experience for visitors.

With inquiries please contact one of the Co-Chairs: R. Kozma: rkozma@memphis.edu or A. Shirkhodaie ashirkhodaie@tnstate.edu .