

# Workshop on Wireless Intelligent Sensor Networks

June 9 & 10, 2014

Duke University, Durham, NC

Heterogeneous sensor networks consist of multiple heterogeneous vehicles, such as ground, air, and underwater robots, each equipped with heterogeneous sensing and wireless communication devices that are employed to meet a common objective. By cooperating and exploiting their complementarities, these networks can exhibit enhanced sensing performance and navigation in complex environments through the use of sensor fusion and data-sharing algorithms. As a result, heterogeneous sensor networks are now being increasingly utilized to remove humans from monitoring and surveillance tasks that are hazardous, tedious, or must last over long periods of time. The WISeNet Workshop brings together scientists and engineers in the fields of sensor networks, robotics, and environmental modeling and prediction to identify and address the technical challenges presented by heterogeneous sensor networks in emerging applications, such as, search-and-rescue operations; robotic serpentine monitoring; environmental monitoring of air quality; monitoring of physical variables in agricultural and greenhouse environments; and detection of oil and gas leaks in refineries, wells, and pipelines.

## TOPICS OF INTEREST

### Information-Driven Environmental Sensing and Prediction

- *Sensor Planning and Control*
- *Environmental Modeling and Prediction*
- *Information Theory*
- *Sensor Data Processing, Fusion, and Simulation*

### Guidance and Control of Mobile Sensor Networks

- *Unmanned Vehicles*
- *Active Sensing*
- *Signal Processing*
- *Intelligent Control and Coordination of Mobile Networks*



Courtesy of the MARHES Lab at University of New Mexico

### Biologically-Inspired Intelligent Sensor Systems

- *Computational Intelligence*
- *Adaptation and Learning*
- *Sensorimotor Modeling and Control*

## SCIENTIFIC COMMITTEE

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### Important Dates:

Abstract submission deadline: **March 10, 2014**

Abstract acceptance notification: **April 1, 2014**

Registration deadline and final manuscripts due: **May 9, 2014**

For more information visit: <http://wisenet.pratt.duke.edu/workshops>