

# Precision Indoor Personnel Location and Tracking for Emergency Responders

3<sup>rd</sup> Annual Technology Workshop, August 4-6, 2008

Worcester Polytechnic Institute, Worcester, MA

## Workshop Focus

This Workshop will provide a forum for researchers and developers working in the important area of indoor location and tracking of emergency response personnel to share technical knowledge and to define the state of the art. The focus of this workshop is zero pre-installed infrastructure tracking, that is systems that do not require any previously installed wiring or equipment in the target building, such as is required by RFID-type systems. Further, the focus is on systems which provide complete tracking and position information on all equipped personnel to the incident command post. Simpler approaches ("homing devices") will also be considered for inclusion in the Workshop. Also, a session will be dedicated to the physiological monitoring of first responders. Select representatives of the governmental and user communities will participate.

## Workshop Organization and Results

Working sessions will be organized around the major technical challenges. It is expected that all participants will contribute from their own experience and will share knowledge and best practices. A report will be published after the conclusion of the Workshop, including the submitted abstracts from the participants and synopses of the discussions and conclusions of the Workshop itself. Monday and Tuesday (August 4<sup>th</sup> and 5<sup>th</sup>) will consist of presentations, demos, and working sessions.

An optional third day (August 6<sup>th</sup>) will allow system developers to test and demonstrate their system using standard scenarios and scripts in a building on the WPI campus or at a WFD training facility.

## Call for Participation and Registration

Potential participants are invited to submit a proposal for their contributions to the Workshop via the Request to Participate Form at <http://www.ece.wpi.edu/Research/PPL/Workshops/2008/regform.html>. There is a registration fee of \$100. Participants are responsible for their own transportation and housing costs. Travel grants will be available to members of the first responder community.

## Session Topics

Final session topics will be determined based upon participant interests and contributions. The following are representative:

- Location and tracking experimental results: successful and unsuccessful tests
- RF ranging and positioning algorithms: performance in the indoor environment
- Inertial navigation and dead reckoning approaches and sensor fusion
- Novel approaches (non-RF, non inertial)
- Monitoring physiological status
- Real-world performance and determining user-requirements and standards

## Keynote Speakers

- Jalal Mapar, Program Manager, DHS S&T Directorate
- Chief Charlie Dickinson, Deputy Assistant Administrator, U.S. Fire Administration, USFA

## Workshop Deadlines

Submission of "Request to Participate" Proposals: May 15, 2008

Notification of acceptance: June 15, 2008

Registration deadline: July 15, 2008

## Travel and Hotel Accommodations

WPI is easily accessible from the Boston or Providence airports via either rental car or airport shuttle services.

Please refer to the WPI website for Directions, Maps, Accommodations, Dining, etc.:

<http://www.wpi.edu/About/Visitors/index.html>

## Information Contact

For further information please contact Colleen Sweeney, ECE Department, WPI, 508-831-5231, [sweeney@ece.wpi.edu](mailto:sweeney@ece.wpi.edu).

## Workshop Sponsors

This workshop is supported by a FEMA Fire Prevention and Safety Grant.

[www.ece.wpi.edu/Research/PPL](http://www.ece.wpi.edu/Research/PPL)

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