



IEEE Robotics and Automation Society

IEEE RAS Washington Section

# Autonomous Small Robot Speedway Competitions

Organizers: Melanie Vida, John Palmisano & Raj Madhavan

## CALL FOR PARTICIPATION

### Background

Robot competitions are entertaining and a means for evaluating the performance of mobile, autonomous robots for a given fitness evaluation. Ranging from mobile, autonomous wheeled vehicles such as the Grand DARPA Challenge to cooperative teams of humanoid robots that compete in soccer, such as RoboCup, the challenges are typically representative of the kind of engineering problems that extend the boundary in Artificial Intelligence, Computer Vision, and Automation. The fitness evaluation can be duration in time to complete a task, ability to complete a sequence of tasks to meet a goal, and ability of robots to handle uncertainty.

### The Competition

The PIs have received a grant under the *IEEE Robotics and Automation Society's Local Chapter Grants* for this purpose. It is our belief that competitions are an effective means of stimulating interest among participants by providing exciting technological problems to tackle. The Autonomous Small Robot Speedway competition is an outdoor, track-and-field race style competition. The track-and-field provides an excellent basis to measure the performance of small self-navigating robots in terms of speed, endurance, and sensor accuracy, and path planning. The rules and guidelines for the competition will be sent to interested participants.

### Who Can Participate?

Under this effort, we are soliciting participants in the Greater Washington Area (Washington D.C., Northern Virginia and Baltimore). We would like to invite any IEEE junior members, University students, and the like to accept the challenge towards acquiring a deeper appreciation of the state-of-the art and the challenges that are currently the focus in robotics and automation.

The mobile robot challenge would begin this summer and there will be 3 tryouts before the final competition. The competition occurs once every month starting in June 2008. The robot size can range from 10x10x10 cm to 40x40x40 cm. The rules and guidelines for the competition will be provided to all the interested applicants by February 28<sup>th</sup>, 2008. First prize ~ \$500.00 and vendor related prizes ~ second, third prize awards.

### Interested?

Please contact us by **April 30, 2008** with a succinct statement of how you expect to benefit from your participation and why you should be selected (emphasize skills and experience with respect to the requirements of the competition) to [ieee.ras.dc@gmail.com](mailto:ieee.ras.dc@gmail.com). If selected, you are expected to attend seminars, tryouts to be held at the University of Maryland over the course of the competition series.

### Beyond the Competition ...

It is our belief that this competition will serve as a model for establishing a university-community focused on a real-world practical problem. The proposed effort will be administered under the auspices of the IEEE Washington Section Robotics & Automation Society Chapter (Chair: Dr. Madhavan).

### Contact Details:

#### **Melanie Vida**

Booz-Allen-Hamilton (BAH)  
[ieee.ras.dc@gmail.com](mailto:ieee.ras.dc@gmail.com)

#### **John Palmisano**

Navy Research Lab. (NRL)  
[palmisano@gmail.com](mailto:palmisano@gmail.com)

#### **Raj Madhavan, Ph.D.**

National Inst. of Stds. & Tech. (NIST)  
[raj.madhavan@ieee.org](mailto:raj.madhavan@ieee.org)

