

# IEEE MINI CONDUCTOR

## Joint IEEE-Dayton Section & Computer Society Meeting

6:00 - 8:00 PM, Wednesday, Nov 18, 2009

### DARPA Grand Challenge - Invention on a Schedule Development of Unmanned Robotic Vehicles



**New Meeting Location**  
Miami Valley Regional Center

at 4801 Springfield St., (that's the same street as the AF Museum, and about a mile West of the Museum, just outside the Dayton corporation line.) (ASC) Affiliate Societies Council, Inc is co-located within the Miami Valley Regional Center, which allows us to use the building. [www.ascdayton.org](http://www.ascdayton.org). The building has a very nice parking lot with lights next to the building, and a park area behind the bldg.



**SPEAKER: Grayson Randall**

**SPONSORS: Dayton IEEE Section & IEEE Computer Society**

**Buffet dinner - no charge for members; \$12 for non-members**

**RSVP by Friday, November 13, 2009 to Amy Solko at 937-224-8513,**

[asc@dnaco.net](mailto:asc@dnaco.net)

**RSVP required.**

**Meeting open to all.**

Developing an innovative product or service can be challenging. Add unsolved technology goals, a fixed schedule, limited resources and budget, and the problem can seem overwhelming.

But somehow a small team with little funding or resources was able to place 12th out of 196 teams in an event created to advance technology in autonomous robotic ground vehicles... How did they do that? The DARPA Grand Challenge and the DARPA Urban Challenge are events sponsored by the US Government to help promote the development of autonomous land robotic vehicles. The government is looking to meet a congressional mandate to have 33% of military ground vehicles operating unmanned by the year 2015.

Continued on Page 2

This presentation will show how an ad-hoc team was able to compete in this international competition. Grayson will discuss technical obstacles, building a team, innovating on a fixed schedule with a small budget, utilization of an incremental development process, techniques used to accelerate technology discovery, mentoring, and the benefits of student participation. He will demonstrate with Grand Challenge pictures and video.

Grayson Randall is president of Insight Technologies, Inc. ([www.insightrobots.com](http://www.insightrobots.com)), a North Carolina company which specializes in ground based robots for both commercial and military use. Insight Technologies, Inc. performs both research and development on control systems for autonomous robotic unmanned vehicles.



He led the Insight Racing team ([www.insightracing.org](http://www.insightracing.org)) in the DARPA (Defense Advanced Research Projects Agency) Grand Challenge series of races. Insight Racing's most recent entry was a computer driven Lotus Elise which was developed in conjunction with NC State University. The Elise would drive through city traffic without a driver, remote control, or any human intervention whatsoever.

Mr. Randall is a "Distinguished Visitor" for the IEEE Computer Society. He received the Outstanding Engineer Award from IEEE Region 3 at SoutheastCon 2009 in Atlanta, Georgia where Mr. Randall was chosen from among over 30,000 engineers in the Southeastern United States. Mr. Randall was also recognized by IEEE-USA in 2007 "for leadership that inspired pre-college students and college engineering students in the area of robotics."

**Prefer to get the mailed version of the Mini? Contact Bob Cooper 298-2062 or [Bobc9101@sbcglobal.net](mailto:Bobc9101@sbcglobal.net)**

non-profit organization  
U.S. Postage PAID  
Dayton, Ohio 45401  
permit no. 190

Dayton Section I.E.E.E.  
PO Box 291885  
Kettering, Oh 45429  
Address Service Requested