



DISTINGUISHED LECTURE

**THURSDAY
OCTOBER 26,
2006**

**LOCATION: SCAIFE 125
TIME: 4:30PM
REFRESHMENTS: 4:00PM**



DR. WILLIAM WHITTAKER

**CARNEGIE MELLON
UNIVERSITY**

Dr. William "Red" Whittaker leads Carnegie Mellon's robot racing initiatives. He is the Fredkin Research Professor of Robotics at the Robotics Institute and the founder of the Field Robotics Center and the Robotics Engineering Consortium. He has authored or co-authored over 200 publications, advised 26 PhD students, fielded many systems, and his robotics endeavors have won numerous awards.

RACING FOR THE FUTURE

Grand Challenges catapult technologies and inspire new visions. Breakthroughs from Grand Challenge robot races catalyze breakthroughs and forever alter views of what is possible. Carnegie Mellon is an epicenter in this robot racing movement, and we are in for the long run. We intend to succeed in the 2007 event, which is the greatest robot racing challenge yet conceived. Success will require a powerful mix of innovation, rigor, process and enterprise.

This talk profiles technologies of perception, planning and robotics as background of prior capabilities and events. The presentation also delves into the issues and barriers of bringing these machines to life. The challenges of developing and launching these complex robot systems are grand challenges in their own right.

Our upcoming challenge requires a mix of town and country driving. This raises the bar for new robotic skills, technical innovation and autonomous driving machines.... to say nothing of the escalating competition. Grand Challenges raise all ships. New difficulties include driving in traffic, following the rules of the road and dealing with many contingencies. The presentation will discuss issues, approaches and Carnegie Mellon's Urban Challenge initiative.

Challenge racing technologies are also moving from laboratory to life. The talk will close with a look at applications, motivations and automation industry that are emerging in the world.