# Field Robotics Center Seminar Series

## Tuesday, May 10, 2011  NSH 3305  11am - noon

Refreshments will be served  Note Special Location

David Wettergreen
Assoc Research Professor
Robotics Institute
Carnegie Mellon University

## Experiments in Robotic Traverse in Antarctica

**Abstract**

There are substantial environmental and economic advantages to using tractors to haul cargo to Antarctic field camps and even to the South Pole, more than 1000 miles from the coast, rather than transporting supplies by aircraft. However it is slow going and very difficult for people to maintain day after day in all conditions. The impact of automating Antarctic traverse will be to increase the average traverse speed and path accuracy and to decrease the fuel consumption, driver stress and expedition risk. In this talk I will explain the challenges to robot traverse and describe experiments intended to uncover an approach. The talk will also discuss field experimentation generally and how to formulate, prepare and execute field work in robotic science, including specifically some aspects of work in Antarctica. There will be at least one picture of a penguin.

**Speaker Bio**

David Wettergreen creates robots that explore. His interest is in places that compel scientific investigation without human presence such as in space or at the extremes of our planet. He has led teams exploring polar environments, diving underwater caverns, surveying microbial life, classifying geologic features, and enabling rovers to explore autonomously.

Dr. Wettergreen's expertise is in field robotics and he directs his research to robot design, endurance navigation, scientific data understanding, and robust autonomy. Dr. Wettergreen obtained his Ph.D. in Robotics and has held research positions at NASA and the Australian National University. He is an Associate Research Professor at the Robotics Institute of Carnegie Mellon University.


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