

# The Field Robotics Center

## Seminar Series

**Tues, October 22    GHC 2109    11AM-12PM**

Food and Drinks will be served

**Franz Hover**

**Finmeccanica Associate Professor**

**Department of Mechanical Engineering**

**Massachusetts Institute of Technology**

### **PLUME-CHASERS:**

### **Designing Fast Robot Teams Underwater**

**Abstract:** Pursuit is a general class of perception and control problems defined by critical space and time scales: a follower that cannot maintain adequate real-time performance will simply be unable to keep up. Autonomous pursuit missions in the ocean include tracking of a marine vehicle or animal, and monitoring a large-scale ocean process like an oil plume or chemical front. The opportunity for multi-vehicle sensing systems to contribute is clear, but wireless communication has been a perennial bottleneck that prevents truly dynamic operation. Network-based control, a major research area over the last ten years, offers some solutions since packet loss, quantization, and delay are all relevant to gateway arrangements and acoustic modems in use today.

**Speaker Bio:** Professor Franz S. Hover is the Finmeccanica Career Development Associate Professor of Mechanical Engineering at the Massachusetts Institute of Technology. Professor Hover earned the B.S. degree in Mechanical Engineering at Ohio Northern University, and the S.M. and Sc.D. degrees from the Woods Hole Oceanographic Institution/Massachusetts Institute of Technology Joint Program in Oceanography/Applied Ocean Science and Engineering. Professor Hover teaches and conducts research in design of ocean systems, dynamics and robotics. Professor Hover was a consultant to industry and a Principal Research Engineer at MIT before joining the MechE faculty in 2007.



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