

2007 IEEE/RSJ International Conference on Intelligent Robots and Systems
 Oct 29 - Nov 2, 2007, Sheraton Hotel, San Diego, CA, USA

Full-day Workshop on:

Micro Aerial Vehicles: Design, Control and Navigation

Friday, November 2, 2007

09:00	09:10	Welcome & Intro.	Roland Siegwart, Samir Bouabdallah
09:10	09:30	Bio-inspired systems	From flappings wings to soaring: evolutionary robotics and flying robots Stéphane Doncieux et al., Pierre & Marie Curie University, Paris, France
09:30	09:50		The Biology and Technology of Autonomous Flying Robots An Overview of EPFL Projects Dario Floreano et al., Swiss Federal Institute of Technology, Lausanne, Switzerland
09:50	10:10		Gaze and heading control systems for a sighted vehicles: a biomimetic approach Stéphane Viollet et al., CNRS, Marseille, France
10:10	10:30		Challenges for 100 Milligram Flapping Flight Roland S. Fearing, UC Berkeley, Berkeley, USA
10:30	10:50		Passive wing rotation for insect-scale MAVs Robert Wood, Harvard University, Cambridge, MA, USA
10:50	11:00	Coffee Break	
11:00	11:20	Rotary wing systems	Achieving Intelligent Navigation in 3D Sanjiv Singh, Carnegie Mellon University, Pittsburgh, USA
11:20	11:40		A comprehensive approach to designing, implementing and testing controllers for small unmanned helicopters M. Castillo-Effen, C. L. Castillo, K. P. Valavanis, W. A. Moreno, University of South Florida, USA
11:40	12:00		STARMAC 2 Quadrotor Helicopters Gabriel M. Hoffmann et al., Stanford University, USA
12:00	12:20		muFly: Towards a Fully Autonomous Micro Coaxial Helicopter Samir Bouabdallah et al., Swiss Federal Institute of Technology Zürich, Switzerland
12:20	13:50	Lunch Break	
13:50	14:10	Sensors	Smart Sensors for Optic Flow Obstacle Avoidance for MAVs in Urban Environments Kevin S. Pratt, University of South Florida, USA
14:10	14:30		Ultra-Miniature Camera Module with Omin-Directional View for Collision Avoidance Pascal Ferrat et al., CSEM, Zürich, Switzerland
14:30	14:50	Navigation	Techniques for Overcoming Inaccurate Pose Estimates in MAVs Clark N. Taylor, Brigham Young University, Provo, UT, USA
14:50	15:10		Autonomous Navigation for Small Flying Vehicles Giorgio Grisetti et al., University of Freiburg, Germany
15:10	15:30	Fixed wing systems	Design of Solar Powered MAVs: Scaling considerations and realization André Noth & al., Swiss Federal Institute of Technology, Zürich, Switzerland
15:30	15:50		Exploration of MAV Aerodynamics and Model Identification via Direct Trajectory Sampling Bernard Mettler et al., University of Minnesota, Minneapolis, USA
15:50	16:00	Coffee Break	
16:00	16:20	H.R interaction	Human-Robot Interaction in MAVs in Close Urban Operations Robin R. Murphy et al., University of South Florida, USA
16:20	16:40	Swarm systems	A Fluid Dynamics Paradigm for MAV Swarms Muhammed R. Pac et al., Space Technologies Research Institute, Ankara, Turkey
16:40	17:00	Test rig	SISTR: Systems Integrated Sensor Test Rig for MAV Design Paul Oh, Drexel University, Philadelphia, USA
17:00	17:40	Discussion	Roland Siegwart & discussion leaders