

SWAR'05 Program at a Glance

Day 1 (9:30-16:55)

09:30	Coffee and Registration	
09:45	Plenary 1: Autonomous GIS-supported Positioning and Navigation	Fredrik Gustafsson, Linköping University
10:35	Session UGV	
10:35	Follow the Past – A Path Tracking method Using Recorded Orientation and Steering Commands,	Ringdahl, Hellström, Umeå U
10:50	Adaptive and Predictive Control for Off-road Mobile Robots Path Tracking	Lenain, Thuilot, Berducat, Martinet, CEMAGREF, LASMEA, FR
11:05	Autonomous Robot Navigation in a Public Nature Park	Andersen, Andersen, Ravn and Blas, DTU
11:20	Laser Guided Vehicles, LGV's: Industrial Experiences and Needs for the Future	Wernersson, Hyypä, Åström, Hedström, Rahm, Luleå Tekniska U., Lund U., Danaher Motion AB
11:35	Spherical Mobile Robots for Extreme Conditions	Kaznov, Rotundus AB
11:50	Evaluations of a UGV in MOUT missions from a Man-System Interaction perspective	Lif, Jander, Borgvall, FOI
12:05	Military use of Unmanned Ground Vehicles in Urban Terrain	Lundberg, Christensen, Hedström, FHS, KTH
12:20	Lunch	
13:20	Session Navigation and Sensors	
13:20	Topological Map Building for Mobile Robots using Omnidirectional Vision	Wahlgren and Duckett, Örebro U.
13:35	Tracking for Human Augmented Mapping	Topp and Christensen, KTH
13:50	Automatic Building Detection for Mobile Robot Mapping	Persson and Duckett, Örebro U.
14:05	Closed Contour Reconstruction using Iterated Smoothing Splines	Karasalo, Hu and Martin, KTH, Texas Tech U.
14:20	Real-time Hough using Reconfigurable Hardware	Asplund, Bergkvist and Savo, Mälardalen U.
14:35	A Comparative Study for WiFi Localization in a Dynamic Environment	Duran, Halmstad U.
14:50	Fault Detection for Increased Robustness in Navigation	Sundvall and Jensfelt, KTH
15:05	Fast Laser Based Feature Recognition	Larsson, Broxvall, Örebro U.
15:20	Coffee	
15:40	Session Architectures and User Interaction	
15:40	Selection of Virtual Fixtures Based on Recognition of Motion Intention for Teleoperation Tasks	Aarno Ekvall and Kragic, KTH
15:55	A Software Infrastructure for Sensors, Actuators and Communication	Johansson and Hellström, Umeå U.
16:10	A Knowledge Processing Middleware Framework and its Relation to the JDL Data Fusion Model	Heintz and Doherty, Linköping U.
16:25	The Worlds Simplest Mechanism Simulator or Making Engineering Students Suddenly Discover that They Want to Devour Mathematics and Physics	Martin Nilsson, SICS, Mälardalen U., Lund U.
16:40	Binary Agents for the Control of Autonomous Vehicles	Wallace, FRONTIOS
19:00	Dinner	

Day 2 (8:30-15:00)

08:30 Session Manipulation	
08:30 Telerobotics, for use in Contaminated Workspaces	Forsberg, Wernersson, Luleå Tekniska U.
08:45 Constrained Path Planning for Mobile Manipulators	Lingelbach, Aarno and Kragic, KTH
09:00 Simulating tactile Sensors in robotic grasping	Tegin, KTH
09:15 Productive Robots and the SMERobot project	Nilsson, Johansson, Robertsson, Bischoff, Brogårdh, Hägele, Lund U., Kuka Roboter GmbH, ABB Robotics.
09:30 Coffee	
09:50 Session Multi Vehicles and Control	
09:50 Symmetries in the Coordinated Rendezvous Problem	Speranzon, Carli, Fagnani and Zampieri, KTH, Padova U., Politecnico di Torino
10:05 Modification via Averaging of Passivity-based Control for Orbital Stabilization	Shiriaev, Freidovich, Umeå U.
10:20 Stabilizations of Vehicle Formations- A Case Study	Gattami, Berglund, Lund U.
10:35 Motion Planning and Dynamical Positioning for a Fleet of Underactuated Ships	Siriaev, Robertsson, Friedovich, Umeå U., Lund U.
10:50 Flocking with Obstacle avoidance, A New Distributed Coordination Algorithm Based on Voronoi Partitions	Lindhe, Johansson, Ögren, KTH, FOI
11:05 Lunch	
12:05 Session UAV	
12:05 A Low-cost UAV-system for Forestry and Agricultural Applications	Hagner and Friström, SLU, Smartplanes AB
12:20 Using Equivalence Classes of Multi-target Paths for Sensor Plan Evaluation	Mårtensson och Svensson, FOI
12:35 Combining Path Planning and Target Assignment to Minimize Risk in SEAD Missions	Ögren, Winstrand, FOI
12:50 On-line Trajectory Planning using Adaptive Temporal Discretization	Anisi, KTH, FOI
13:05 Creating Quality Imagery and Video from Inexpensive UAV	Klomp and Sandström, Uppsala U.
13:20 Information-Theoretic Approach for Concurrent Path and Sensor Planning for a UAV with EO/IR Sensors	Skoglar, Nygård, Ulvklo, Ögren, FOI
13:35 Reconfigurable Path Planning for an Autonomous Unmanned Aerial Vehicle	Wzorek and Doherty, Linköping U.
13:50 Coffee	
14:10 Plenary 2: Autonomy on the SMART-1 Lunar Probe	Per Bodin, Swedish Space Corporation
14:50 Concluding Remarks	