

**TOBB University of Economics and Technology**  
**Multi-Agent and Networked Dynamic Control Systems Workshop Program (Tuesday July 1, 2008)**  
**Location: TOBB University of Economics and Technology,**  
**Söğütözü Caddesi, No: 43, 06560 Ankara**  
**Organizers: Veysel Gazi and Barış Fidan**

8:00-8:45 Registration and Morning Tea/Coffee

8:45-9:00 Introduction  
Veysel Gazi/Barış Fidan  
Prof. Dr. Süleyman Sarıtaş – Dean of Engineering

9:00-9:30 “Flow Control in Communication Networks”  
Hitay Özby, Bilkent University, Dept. Electrical and Electronics Engineering

9:30-10:00 “ULISAR: An Unmanned Underwater Vehicle”  
Kemal Leblebicioğlu, Middle East Technical University, Dept. Electrical and Electronics Engineering

10:00-10:30 “Self-Organized Flocking With a Mobile Robot Swarm”  
Ali Emre Turgut and Erol Şahin, Middle East Technical University, Dept. Computer Engineering

10:30-11:00 “Model Based Predictive Networked Control Systems”  
Ahmet Onat, Sabancı University, Mechatronics Program

11:00-11:30 Tea/Coffee Break

11:30-12:00 “On the Connectivity of Robot Groups”  
Feza Kerestecioğlu, Kadir Has University, Dept. Electronics Engineering

12:00-12:30 “A CPP-RPP BASED COVERAGE APPROACH IN DYNAMIC ENVIRONMENTS”  
Osman Parlaktuna, Eskişehir Osmangazi University, Dept. Electrical and Electronics Engineering

12:30-13:00 “Nonlinear and Adaptive Approaches in Autonomous Multi-Vehicle Localization”  
Barış Fidan, Australian National University and National ICT Australia

13:00-14:00 Lunch Break

14:00-14:30 “Probabilistic Trajectory Planning for Air Vehicles Flying in Complex Environments”  
Emre Koyuncu and Gökhan Inalhan, Istanbul Technical University, Controls and Avionics Laboratory

14:30-15:00 “Sensing and Communication Networks in Robot Formations”  
Dr. Tolga Eren, Kırıkkale University, Dept. Electrical and Electronics Engineering

15:00-15:30 “Target Tracking for Swarming MAVs Using Potential Fields and Panel Methods”  
Oğuz Uzol and İlky Yavrucuk, Middle East Technical University, Dept. Aerospace Engineering, and  
Nilay Sezer Uzol, TOBB University of Economics and Technology, Dept. Mechanical Engineering

15:30-16:00 “OSU-ACT Autonomous Vehicle in DARPA Urban Challenge”  
Ahmet Yazıcı, Eskişehir Osmangazi University, Dept. Computer Engineering  
Ümit Özgüner, Ohio State University

16:00-16:30 Tea/Coffee Break

16:30-17:00 “Coordination and Motion Planning for a Multiple-Moving-Camera Automated Inspection System”  
Afşar Saranlı, Middle East Technical University, Dept. Electrical and Electronics Engineering

17:00-17:20 “COMPARISON OF THREE ORIENTATION AGREEMENT STRATEGIES IN SELF-PROPELLED PARTICLE SYSTEMS WITH TURN ANGLE RESTRICTIONS IN SYNCHRONOUS AND ASYNCHRONOUS SETTINGS”  
Andaç Töre Şamiloğlu, Başkent University, Dept. Mechanical Engineering  
Veysel Gazi, TOBB University of Economics and Technology, Dept. Electrical and Electronics Engineering  
A. Buğra Koku, Middle East Technical University, Dept. Mechanical Engineering

17:20-17:40 “Experimental Studies at TOBB ETU Swarm Systems Research Laboratory Using Matlab and E-puck Robots”  
Ömer Çayırpunar, İter Köksal, Mirbek Turduev, Veysel Gazi, TOBB Univ. of Economics and Technology, Dept. Electrical and Electronics Eng.  
Andaç Töre Şamiloğlu, Başkent University, Dept. Mechanical Engineering

17:40-18:00 “Asynchronous Decentralized PSO with Dynamic Neighborhood and its Application on Multi-Robot Search Task”  
Burak Akat and Veysel Gazi, TOBB University of Economics and Technology, Dept. Electrical and Electronics Engineering  
Özgür Pekçağlıyan, Çankaya University, Dept. Computer Engineering