Call for Papers

Special Issue on Multi-vehicle Systems Cooperative Control with Application

Contributions are invited for a special issue of the IEEE Transactions on Control Systems Technology on the subject of multi-vehicle systems cooperative control. This special issue is concerned with recent advances in multi-vehicle control research with emphasis on experimental results and on solutions to practically relevant problems; therefore, the objective is to bridge part of the gap between theory and practice. The collection of original and high-quality papers are expected to focus on challenges and issues found in cooperative systems operating on ground, in air, at sea and under water. Contributions from industrial researchers are particularly encouraged.

A non-exhaustive list of topics of interest includes:

- Cooperative task assignment, path planning, and trajectory generation
- Experimental validation of cooperative control schemes
- Distributed computing and optimization
- Parallel implementation of optimizing feedback
- Modeling of multi-vehicle control systems
- Real-time performance and synchronization of networked systems
- Hierarchical control and varying dynamic scales
- Decentralization vs. centralized control: issues and challenges
- Reconfiguration, compensation of faults/failures at both the vehicle and the team levels

Only contributions containing significant experimental results will be included. Papers must contain high-quality original contributions and be prepared in accordance with the IEEE Transactions on Control Systems Technology standards. Prospective authors are advised to refer to the information found at http://www.ieeecss.org/PAB/tcst/ under “Information for Authors” prior to submitting a paper. Submitted manuscripts must not have been previously published or be under review for possible publication elsewhere.

Contributed papers should be submitted online by April 30, 2006.

Submitted papers will be rigorously reviewed according to the standards of the IEEE Transactions on Control Systems Technology.

Guest Editors:

C.A. Rabbath
Defence Research & Development Canada
DRDC Valcartier
2459 Pie-XI Blvd. North
Val-Belair, Quebec G3J 1X5
CANADA
Camille-Alain.Rabbath@drdc-rddc.gc.ca

Chun-Yi Su
Department of Mechanical Engineering
Concordia University
1455 de Maisonneuve Blvd. W.
Montreal, Quebec H3G 1M8
Canada
cysu@alcor.concordia.ca

Antonios Tsourdos
Department of Aerospace, Power & Sensors
Cranfield University
Royal Military College of Science
Shrivenham, Swindon
United Kingdom SN6 8LA
A.Tsourdos@cranfield.ac.uk