

CALL for PAPERS

The International Journal of Vehicle Autonomous Systems (IJVAS)

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Mechatronics for Ground Vehicle Autonomy: Modeling, Design and Control

Scope of Special Issue

Autonomy of unmanned ground vehicles to a large extent depends on dynamics and performance of the vehicles and results in the interaction between vehicle systems and terrain/surroundings. Therefore, we can speak on the systems' influence on unmanned vehicle dynamics and performance and hence on the vehicle autonomy. Autonomously operating systems of unmanned vehicles are classified here as mechatronic-type systems. This Special Issue concentrates on modeling and controlling dynamics and performance of unmanned ground vehicles through modeling, designing and controlling their mechatronic systems to advance the level of vehicle autonomy.

Topics include but not limited to

- Advanced analytical and adaptive dynamics methods in modeling unmanned vehicle dynamics and vehicle mechatronic systems
- Qualitative and quantitative evaluation of vehicle autonomy; vehicle system contribution
- Human factor in unmanned vehicle dynamics and vehicle autonomy
- Computational methods for unmanned vehicle dynamics analysis and development of open architecture software products
- Dynamics, design and control of module/reconfigurable vehicles and systems
- Mobility and survivability of unmanned vehicles in uncertain terrain/surroundings
- Unmanned vehicle turnability and stability of motion: modeling and control
- Optimization of unmanned vehicle dynamics and performance while fulfilling the mission tasks
- Uncertain and certain impacts and dynamic behavior of unmanned vehicles and systems
- Interaction between powertrain, chassis systems, navigation, vision/surrounding detection systems and unmanned vehicle mission fulfillment systems
- Vehicle mechanical design for mechatronics requirements

Important Dates

Full paper submission on the IJVAS website	May 15, 2009
Completion of first review	September 1, 2009
Submission of revised paper	October 15, 2009
Completion of final review	November 15, 2009
Final manuscript due	December 15, 2009

Notes for Prospective Authors

Papers must be of original contribution and be prepared in accordance with IJVAS' guidelines. All papers must be submitted online with the subtitle: "Special Issue. Mechatronics for Ground Vehicle Autonomy". Additionally, a PDF-copy of the paper should be e-mailed to the Guest Editor.

Contact and Guest Editor of Special Issue

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