

CALL FOR PAPERS



Special Session on Motion Control in Highly Dynamic Mechatronic Systems

IECON 2018 - The 44th Annual Conference of the IEEE Industrial Electronics Society
October 21-23, 2018, Washington D.C, USA



TOPIC OF THE SPECIAL SESSION

Complex mechatronic systems, and even more sophisticated systems of mechatronic systems (SoMSs), operate in a close interaction with their environments and, therefore, require the more advanced and extended control strategies for irregular and unpredicted disturbing factors. Motion control, as one of the key technologies in various-type mechatronic systems, should follow the changing paradigm of the plants and control specifications, and develop the new methods and strategies to be applicable in praxis. Highly dynamic mechatronic systems, that can be seen as having neither or only quasi stationary states, are especially challenging for the motion control. This is due to the weakly known and non-accounted parts of the system dynamics arising from environments. The purpose of this Special Session is to provide a research forum for generating, exchanging, and following up the ideas, recent trends, and results achieved in the fields of engineering which are closely related to highly dynamic mechatronic systems and motion control. Both theoretical and application driven studies are invited for participation.

Topics of the Session

- Modelling and control of environmental mechatronic systems
- Motion control of systems with weakly known parameters and uncertainties
- Hybrid motion dynamics and hybrid control systems
- Motion control systems with human-in-the-loop
- Sliding mode control in environmental mechatronic systems
- Application of motion control technologies in offshore mechatronic systems
- Motion control systems for road, aerial, sea and underwater vehicles
- Methods and algorithms for non-stationary disturbance estimation and rejection

IEEE IES Technical Committee Sponsoring the Special Session:

- TC on Motion Control

ORGANIZED AND CO-CHAIRER BY

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Author's schedule:

- Deadline for submission of special session papers
May 1, 2018
- Notification of acceptance
July 15, 2018
- Deadline for submission of final manuscripts
August 1, 2018