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**Special Session on**

**Vehicles with new configurations: developments in control and observation technologies**

# Organized by

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# Call for Papers

Adaptability to terrain is crucial for the functionality of vehicles in transportation. Advancing environmental and usage demands drive a burgeoning array of vehicles to depart from traditional wheel-based and passive suspension designs, opting instead for hybrid configurations integrating wheeled, legged, or tracked systems with active suspensions to enhance environment adaptability. While these actuate systems enhance the environmental adaptability and improve the transport efficiency of the vehicles, concerns about the increased implementation costs, durability, and fault tolerance have also been raised. This section aims to offer a forum demonstrating the latest environmental perception, tolerance, and control techniques for vehicles with new actuate structures and discuss the influence and superiority of different actuators designed to enhance terrain adaptation.

Topics of interest include, but are not limited to:

* Active Suspension Control
* Locomotion control of vehicles.
* Cooperative control of multi-actuators.
* Environmental perceptions of vehicles.
* Sensorless control and perceptions in vehicles.
* Fault-tolerant control in vehicles.

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