Special Session:

Distributed control to enhance reliability and resilience in System of Systems

Organizers

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Description:

System of Systems (SoS) is gaining higher and higher importance in engineering approaches thanks to its adaptability to different contexts while keeping acceptable performance. This is mainly possible due to distributed control techniques that enhance the system’s responsiveness and reliability also in the case of adverse conditions or disturbances. Ideally, distributed control benefits from the principles of decentralized controllers, thus removing the single point of failure with the consequent increase in reliability, while reinforcing the control architecture by continuous inter-agent communication. The proposed special session aims at aggregating the most recent findings in SoS with particular attention to the reliability and resilience analysis of such systems, in order to propose new research directions. This session will also explore new algorithms for limiting emergent behaviors (i.e. unexpected reactions that arise due to the interoperability of single subsystems), as well as new methodologies to identify and recover from faults

Keywords: System of systems, distributed control, emergent behaviors, reliability

**Topics:**

* System of systems
* Smart manufacturing systems
* Cooperative Wheeled Mobile Robots
* Greenhouses
* Automotive
* Industrial control systems
* Drones and unmanned aerial vehicles

**Important dates:**

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| Full paper submission: | May 15, 2023 |
| Notification of acceptance/Rejection: | June 15, 2023 |
| Final camera-ready paper submission: | July 10, 2023 |
| Early registration and fee payment: | July 15, 2023 |
| SOHOMA 2023 Workshop | September 28-29, 2023 |
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More information: [https://sohoma2023.sciencesconf.org](https://sohoma2023.sciencesconf.org/) - Email: [sohoma2023@sciencesconf.org](mailto:sohoma2023@sciencesconf.org)