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Special Session on

"Advanced Solutions for Communication in Cooperative Cyber Physical Systems"

Organized by

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Call for Papers

Today, many computer-based systems incorporate computations and communication with physical processes and their environments, resulting in the new paradigm of cooperative Cyber Physical Systems (CPSs). The applications of these systems include cooperative vehicles, platooning, collaborative robots, just to name a few. In order to develop dependable and reliable cooperative CPSs, several challenges concerned with modelling, analysis, run-time configuration and adaptation, safety and security assessment, among others need to be addressed. One of the main focuses of this Special Session is on emerging challenges and advanced solutions for the communication part of these systems, which enables them to be cooperative and collaborative. We encourage submissions of research papers and experience reports from academia and industry. The session also welcomes position papers about an emerging area within the topics of interest.

Topics of interest include, but are not limited to the following aspects of Cooperative CPSs:

- Communication interfaces
- Assuring communication properties, e.g., reliability, safety and security
- Synchronization of architectural tactics
- Platforms for testing and simulation
  Application-level communication technologies (e.g, Linked Data and RDF)
- Communication architectures and topologies (e.g., messages queues and remote process calls)
  Communication knowledge and information modelling
  Model-driven engineering for cooperative components in CPS
- Verification and validation of cooperative components in CPSs
- Scheduling and real-time issues within cooperative components in CPS
- Cognitive agents for controlling complex CPS
- Industrial case studies for CPS

Accepted papers will be published in an IEEE proceedings volume and will be also submitted for the International Publication in *IEEExplore*