

CALL FOR PAPERS



Special Session on Connected and Autonomous Vehicles

ISIE 2019 - The 28th International Symposium on Industrial Electronics – ISIE 2019
June 12-15, 2019, Vancouver, Canada



TOPIC OF THE SPECIAL SESSION

Connected and Autonomous Vehicles (CAVs) are expected to cause fundamental transformations to the transportation industry with significant societal benefits. Potential benefits include improved safety and comfort of passengers, reduced congestion of the transportation infrastructure, reduced and more predictable travel times, improved energy efficiency, reduced frequency of crashes, new car ownership and usage models, etc. CAVs bring significant challenges in every stage of the processing pipeline, from perception, to decision making, to vehicle control, with research issues in performance, safety, security and privacy. This special session invites original research on the following related topics to CAVs:

Topics of the Session

- Perception systems (sensors)
- Sensor fusion algorithms
- Path planning at routing, tactical and strategic levels
- Simultaneous Localization and Mapping (SLAM)
- Intra and inter-vehicle communication and networking
- V2X – Vehicle to Everything – V2I, V2V, V2C, V2P, etc.
- Security of inter and intra-vehicle networking
- High-performance, heterogeneous in-vehicle hardware platforms
- Application mapping and optimization algorithms
- Predictable models of execution
- Model-based design and formal verification for safety and security
- Non-functional properties incl. timing, safety, dependability
- Safety certification based on ISO 2626

IEEE IES Technical Committee Sponsoring the Special Session

- IEEE IES Standards Technical Committee

ORGANIZED AND CO-CHAIRD BY

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Author's schedule:

- Full Paper Submission
Jan. 15th, 2019
- Notification of Acceptance
Mar. 15th, 2019
- Final Submission Full Manuscript
Apr. 15th, 2019
- Early Bird Registration
Apr. 15st, 2019