

Signal Processing for Intelligent Vehicular Communications

General Chairs:

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Vehicular communications is an area of significant importance in our increasingly connected and mobile world. With 5G-enabled vehicular communications, intelligent connected vehicles have been envisioned to significantly enhance transportation efficiency, reduce incidents, improve safety, and mitigate the impacts of traffic congestion. However, vehicular environments are inherently challenging, e.g., due to doubly-selective physical channels and ever-changing network connectivity and topologies. To address the challenges in 5G-based intelligent vehicular communications, signal processing is playing an increasingly substantial role in this area. Examples include topics such as signal processing techniques for vehicular communications, vehicle control and localization, and image/video processing for autonomous vehicles. In this symposium, we aspire to provide a venue for open discussions on various signal processing research and applications enabling and exploiting intelligent vehicular communications.

Topics include but are not limited to:

- 5G-enabled vehicle-to-everything (V2X) communications and networking
- Massive/Distributed MIMO techniques for vehicular communications
- mm-Wave communications in vehicular networks
- UAV-assisted communications in vehicular networks
- NOMA techniques for vehicular communications
- Energy harvesting techniques and simultaneous information and power transfer (SWIPT) in vehicular networks
- Cooperative driving for intelligent/autonomous vehicles
- Security and privacy for intelligent vehicular communications
- Channel measurements and modeling for vehicular communications
- Signal processing for vehicle localization and environment sensing
- Machine learning and data analytics for autonomous vehicles
- Image/video processing in vehicular networks
- Multi-sensor data fusion for intelligent/autonomous vehicles

Paper Submission: Prospective authors are invited to submit full-length papers (up to 4 pages for technical content including figures and possible references, and with one additional optional 5th page containing only references) and extended abstracts (up to 2 pages, for paper-less industry presentations and Ongoing Work presentations) via the GlobalSIP 2018 conference website. Manuscripts should be original (not submitted/published anywhere else) and written in accordance with the standard IEEE double-column paper template. The accepted abstracts will not be indexed in IEEE Xplore, however the abstracts and/or the presentations will be included in the IEEE SPS SigPort. Accepted papers and abstracts will be scheduled in lecture and poster sessions.

Important Dates:

- **June 17, 2018:** Paper submission due
- **Aug. 7, 2018:** Notification of Acceptance
- **Aug. 22, 2018:** Camera-ready paper due

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