

# 2nd International Workshop on Safety and Security of Intelligent Vehicles

Co-located with the **46th Annual IEEE/IFIP International Conference on Dependable Systems and Networks**  
 June 28, 2016 – Toulouse, France

[www.lsec.icmc.usp.br/ssiv](http://www.lsec.icmc.usp.br/ssiv)

## WORKSHOP DESCRIPTION

Over the last years, aerial and ground vehicles as well as mobile robot systems have been receiving an increased number of electronic components, connected through wireless networks and running embedded software. This strong integration between dedicated computing devices, the physical environment and networking, composes a Cyber-Physical System (CPS). CPS have thus become part of common vehicles, accessible to everyone, such as automobiles or unmanned aerial vehicles. Furthermore, as processing power increases and software becomes more sophisticated, these vehicles gain the ability to perform complex operations, becoming more autonomous, efficient, adaptable, comfortable, safe and usable. These are known as Intelligent Vehicles (IV).

However, the combination of high mobility and wireless communications has further increased the exposure of these systems to malicious threats and to faults deriving from uncertain connectivity or communication timeliness. Non-functional requirements like security and real-time operation have thus become harder to fulfill, creating new challenges to such safety-critical embedded systems.

After the very successful initial edition of this workshop, clearly showing the interest of the community on discussions about the challenges and innovative solutions regarding Intelligent Vehicles, the workshop will keep the same focus, namely exploring the challenges and interdependencies between security, real-time, safety and certification, which emerge when introducing networked, autonomous and cooperative functionalities.

## NON-EXHAUSTIVE LIST OF TOPICS OF INTEREST

- Architecture, design, implementation and management of safe and secure intelligent vehicles
- Functional safety, standards and certification
- Security threats to cyber-physical systems
- Secure data communication in vehicular networks
- Collision prediction and avoidance
- Safety and security issues in ADAS
- Real-time perception and sensor fusion for safe autonomous driving
- Vision, learning and distributed cognition for active safety
- Practical experiences and testbeds related with safety and security of intelligent vehicles
- Industrial experiences and best practices relevant to safety and security of intelligent vehicles

## WORKSHOP ORGANIZATION

- João Carlos Cunha, (jcunha@lsec.pt), Instituto Politécnico de Coimbra, Portugal
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## IMPORTANT DATES

- Paper submission – **March 21, 2016**
- Author notification – **April 18, 2016**
- Final version – **to be defined**

## PAPER SUBMISSION AND PUBLICATION

Submissions are accepted in IEEE two-column conference style in two formats:

- **short papers** (no more than 6 pages) and
- **full papers** (no more than 8 pages)

Authors of accepted full papers will have 30 minutes for presentation and discussion during the workshop, while authors of short papers will have 15 minutes. At least one author of an accepted paper must register at the workshop.

Accepted papers will be published in the DSN supplemental volume and made available in **IEEE Xplore**.

Templates and submission website:

- [http://www.ieee.org/conferences\\_events/conferences/publishing/templates.html](http://www.ieee.org/conferences_events/conferences/publishing/templates.html) (US letter)
- <https://easychair.org/conferences/?conf=ssiv2016>

## SPECIAL ISSUE

Selected papers will be considered for a **Special Issue** in an International Journal in connection with this workshop. We will issue an open call after the workshop, submissions will go through a separate peer review process.

## PROGRAM COMMITTEE

- Bill Sanders, U Illinois at Urbana-Champaign, USA
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