



2016 IEEE 19<sup>th</sup> International Conference on Intelligent Transportation Systems (ITSC 2016)  
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**2016 IEEE Intelligent Transportation Systems Conference**

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## Call for Papers – Workshop PPNIV2016 @ ITSC2016

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### 8<sup>th</sup> Workshop on Planning, Perception and Navigation for Intelligent Vehicles *A bridge between Robotics and ITS technologies*

Full day workshop

<http://ppniv16.irccyn.ec-nantes.fr/>

**Organizers:** *Christian Laugier, Philippe Martinet, Christoph Stiller, Urbano Nunes*

**Contact:** *Research Director Christian Laugier (Inria, France) -- [Christian.Laugier@inria.fr](mailto:Christian.Laugier@inria.fr)*

This workshop is organized in the scope of the IEEE RAS Technical Committee on "Autonomous Ground Vehicles and Intelligent Transportation Systems" [IEEE RAS TC - AGVITS](#)

**Paper submission:** Authors intending to submit a paper to PPNIV2016 @ ITSC2016 have to submit their papers to ITSC2016 via paperplazza, while using the code **95vpj** (the papers will be automatically directed to PPNIV 2016).

All the papers submitted to PPNIV 2016 will be reviewed by the ITSC 2016 Program Committee, and the accepted papers will be published in the proceedings of ITSC 2016 and in IEEE Xplore.

**Format of the paper:** Papers should be prepared according to the ITSC 2016 final camera ready format and should be 6 pages long. The detailed information on the paper format is available from the ITSC 2016 webpage: [https://web.fe.up.pt/~ieeeditc2016/?page\\_id=98](https://web.fe.up.pt/~ieeeditc2016/?page_id=98).

**Important dates** (see [deadlines](#))

- [Deadline for Paper submission: July 4th, 2016](#)
- [Acceptance with review comments: August 15th, 2016](#)
- [Deadline for final paper submission: August 29th, 2016](#)

#### **General scope:**

The purpose of this workshop is to discuss topics related to the challenging problems of autonomous navigation and of driving assistance in open and dynamic environments possibly populated by human beings. Technologies related to application fields such as unmanned outdoor vehicles or intelligent road vehicles will be considered from both the theoretical and technological point of views. Several research questions located on the cutting edge of the state of the art will be addressed. Among the many application areas that robotics is addressing, transportation of people and goods seem to be a domain that will dramatically benefit from intelligent automation. Fully automatic driving is emerging as the approach to dramatically improve efficiency while at the same time leading to the goal of zero fatalities. This workshop will address robotics technologies, which are at the very core of this major shift in the automobile paradigm. Technologies related to this area, such as autonomous outdoor vehicles, achievements, challenges and open questions would be presented and discussed.

The main topics of interest are:

- **Perception:** Lane detection & lane keeping, Feature extraction & selection, Pedestrian & vehicle detection, Moving objects Detection & Tracking, Objects classification, Real-time perception and sensor fusion, etc.

- **Road scene understanding:** Environment perception & understanding, Vehicle localization for autonomous navigation, SLAM in dynamic environments, Mapping & Semantic maps for navigation, Robust sensor-based 3D reconstruction, Prediction techniques, etc.
- **Planning & Decision-making for navigation:** Real-time motion planning in dynamic environments, Advanced driver assistance systems, Autonomous navigation, Cooperative navigation & perception techniques, Behavior modeling & learning, Modeling & Control of mobile robots and vehicles, Collision prediction & avoidance, Human-Robot Interaction, etc.

### **Preliminary program**

We will propose 4 invited Keynote Talks, organize an open session for Selected Papers coming from this Call for Papers in relation with the topic of the workshop, and an Interactive Session.

The proposed list of areas and related sessions is the following: (1) *Localization & mapping*; (2) *Perception & Situation Awareness*; (3) *Planning, Navigation and Decision-making*; (4) *Cognitive vehicles, Human-Vehicle Interaction and Behaviors modeling & learning*; (5) *Interactive session*.

All the accepted papers will be published in the proceedings of ITSC 2016 and at IEEE Xplore.

### **Organizers:**

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### **Publication:**

The proceedings of this workshop will be published in the proceedings of IEEE ITSC 2016 and in IEEE Xplore. Some selected papers will be considered for a special issue in the IEEE Transactions on Intelligent Vehicles. We will also issue an open call, and all submissions will go through a separate peer review process.