

# IEEE IV 2012

## Workshop on Navigation, Perception, Accurate Positioning and Mapping for Intelligent Vehicles

June 3, 2012 <http://iv2012-poma.ifsstar.fr/>



### Full-day workshop program

9.15am-9.30am	Workshop presentation
9.30am-11.00am	Session 1. Chair: Jorge Villagra, CSIC
9.30am-9.45am	German Ros, Angel D. Sappa, Daniel Ponsa and Antonio M. Lopez, "Visual SLAM for Driverless Cars: A Brief Survey"
9.45am-10.00am	António Ferreira, José Almeida and Eduardo Silva, "Visual-Inertial SLAM for Precise 3D Mapping of Underground Environments"
10.00am-10.15am	Ming Li, Wei Li, Jian Wang, Qingquan Li and Andreas Nüchter, "Dynamic VeloSLAM - Preliminary Report on 3D Mapping of Dynamic Environments"
10.15am-10.30am	Javier Hidalgo, Jakob Schwendner and Frank Kirchner, "Planetary Rover Localization Design: Antecedents and Directions"
10.30am-11.00am	Robin Schubert, "Vehicle Localization beyond GNSS: Towards Lane-Level Accuracy using Cameras and V2V Communications"
11.00am-11.30am	Coffee break
11.30am-1.00pm	Session 2. Chair: Javier Ibañez-Guzmán, Renault
11.30am-11.45am	Carolina Piñana-Díaz, Rafael Toledo-Moreo, Antonio F. G. Skarmeta, David Bétaille and Francois Peyret, "Elevation-Enhanced-Map-based GPS Non-Line-Of-Sight Detection in Urban Environments"
11.45 am-12.00	Vincent Drevelle and Philippe Bonnifait, "Experimental validation of an interval-based positioning solver"
12.00 - 12.15	Anh Vu , Jay A. Farrell, Rathavut Vanitsthan and Matthew Barth, "Improved Vehicle Trajectory and State Estimation Using Raw GPS and IMU Data Smoothing"
12.15 - 12.30	D. Bétaille, S. Peyraud, F. Mougél, S. Renault, M. Ortiz, D. Meizel and F. Peyret, "Using road constraints to progress in real time NLOS detection"
12.30 - 1.00 pm	David M. Bevly, "Integrating GPS with on-board vehicle sensors for vehicle navigation and control"
1.00pm - 2.30pm	Lunch
2.30pm - 4.00pm	Session 3. Chair: François Peyret, IFSTTAR
2.30pm - 2.45pm	David López-Pérez and Rafael Toledo-Moreo, "An Approach to Road Enhanced Maps in Urban Areas"
2.45pm - 3.00pm	Maxime Meilland, Patrick Rives and Andrew Ian Comport, "Dense RGB-D mapping of large scale environments for real-time localisation and autonomous navigation"
3.00pm - 3.15pm	Diego Viejo and Miguel Cazorla, "A framework for managing heterogenous sensor data in a single map".
3.15pm - 3.30pm	J. R. Siddiqui and C.A.Lindley, "Spatial cognitive mapping for the Navigation of mobile robots"
3.30pm - 4.00pm	Panel discussion on "Digital Maps for Intelligent Vehicles". Introduced by Andreas Schindler, University of Passau, Germany. Moderated by François Peyret, IFSTTAR, France.
4.00pm - 4.30pm	Coffee break
4.30pm - 6.00pm	Session 4. Chair: Eduardo Nebot, Australian Center of Field Robotics
4.30pm - 5.00pm	Martin Lauer, "Interpretation of crossroads from onboard sensors"
5.00pm - 5.15pm	Jean Grégoire Silvére Bonnabel and Arnaud de La Fortelle, "Optimal cooperative motion planning for vehicles at intersections"
5.15pm - 5.30pm	Jorge Villagra, Vicente Milanés, Joshue Pérez and Jorge Godoy, "Path and speed planning for smooth autonomous navigation"
5.30pm - 6.00pm	Fawzi Nashashibi, "Towards advanced road transport for the urban environment: an overview of CityMobil project"
6.00pm - 6.15pm	Break
6.15pm - 7.15pm	Session 5. Chair: Martin Adams, University of Chile
6.15pm - 6.30pm	John Mullane, Samuel Keller and Martin Adams, "Random Set Versus Vector Based SLAM in the Presence of High Clutter"
6.30pm - 6.45pm	Andres Hernandez-Gutierrez, Juan I. Nieto, Tim Bailey and Eduardo Nebot, "Detection and Tracking of Road Course using a Millimetre-Wave Radar"
6.45pm - 7.15pm	Christoph Stiller, "3D Localization and Scene Perception for Cognitive Automobiles"
7.15pm - 7.20pm	Workshop conclusion