

5th Workshop on Planning, Perception and Navigation for Intelligent Vehicles

2013 IEEE/RSJ International Conference on Intelligent Robots and Systems

5th Workshop on Planning, Perception and Navigation for Intelligent Vehicles

Full Day Workshop in Room 610

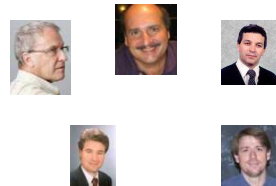
November 3rd, Tokyo, Japan

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This workshop is organized in the framework of the [IEEE Robotics and Automation's Technical Committee on: Autonomous Ground Vehicles and Intelligent Transportation Systems](#)

TC-chairs: P. Martinet, C. Laugier, C. Stiller

IROS'13

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5th Workshop on Planning, Perception and Navigation for Intelligent Vehicles

Session I: Localization & mapping 8:30

Chairman: *P. Bonnifait* (*HEUDIASYC, France*)

Title: New Concepts in Robotic Mapping: PHD Filter SLAM 8:30

Keynote speaker: *Martin Adams* (*Universidad de Chile, Santiago, Chile*) *35min + 5min questions*

Co-authors: John Mullane, Keith Leung, Felipe Inostroza

Title: Large-Scale Dense 3D Reconstruction from Stereo Imagery 9:10

Authors: Pablo F. Alcantarilla, Chris Beall, *Frank Dellaert* *17min + 3min questions*

Title: Generation of Accurate Lane-Level Maps from Coarse Prior Maps and Lidar 9:30

Authors: *Avdhut Joshi*, Michael R. James *17min + 3min questions*



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Session II: Perception 10:30

Chairman: *C. Laugier* (INRIA, France)

Title: Vision-Controlled Micro Aerial Vehicles: from "calm" navigation to "aggressive" maneuvers 10:30


Keynote speaker: *Davide Scaramuzza* (ETHZ, Zurich, Switzerland) 35min + 5min questions

Title: Enabling Efficient Registration using Adaptive Iterative Closest Keypoint 11:10

Authors: *Johan Ekekrantz*, Andrzej Pronobis, John Folkesson, Patric Jensfelt 17min + 3min questions

Title: Information fusion and evidential grammars for object class segmentation 11:30

Authors: *Jean-Baptiste Bordes*, Philippe Xu, Franck Davoine, Huijing Zhao, Thierry Denoeux 17min + 3min questions



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Session III: Interactive session 12:45 -13:45

Chairman: **P. Martinet** (*IRCCyN/ECN, Nantes, France*)

Title: Hierarchical Traffic Control for Partially Decentralized Coordination of Multi AGV Systems in Industrial Environments

Authors: Valerio Digani, *Lorenzo Sabattini*, Cristian Secchi, Cesare Fantuzzi

Title: TLD based Real-Time Weak Traffic Participants Tracking for Intelligent Vehicles

Authors: *Linji Xue*, Ming Yang, Yongkun Dong, Chunxiang Wang, Bing Wang

Title: On Keyframe Positioning for Pose Graphs Applied to Visual SLAM

Authors: Andru Putra Twinanda, Maxime Meilland, Désiré Sidibé, *Andrew I. Comport*

Title: Online Spatiotemporal-Coherent Semantic Maps for Advanced Robot Navigation

Authors: Ioannis Kostavelis, Konstantinos Charalampous, *Antonios Gasteratos*

Title: Use of a Monocular Camera to Analyze a Ground Vehicles Lateral Movements for Reliable Autonomous City Driving

Authors: *Young-Woo Seo*, Rangunathan Rajkumar

Title: Object-Level View Image Retrieval via Bag-of-Bounding-Boxes

Authors: Ando Masatoshi, Yuuto Chokushi, Yousuke Inagaki, Shogo Hanada, *Kanji Tanaka*

Title: Cart-O-matic project : autonomous and collaborative multi-robot localization, exploration and mapping

Authors: Antoine Bautin, Philippe Lucidarme, *Remy Guyonneau*, Olivier Simonin, Sebastien Lagrange, Nicolas Delanoue, Francois Charpillat

Title: Driving Intention Assistance for Front-wheel-drive Personal Electric Vehicle

Authors: *Satoshi Fujimoto*, Zhencheng Hu, Nobutomo Matsunaga, Claude Aynaud, Roland Chapuis, Han Wang

Title: Ad-hoc heterogeneous (MAV-UGV) formations stabilized under a top-view relative localization

Authors: *Martin Saska*, Vojtech Vonasek

Title: Toward Smooth and Stable Reactive Mobile Robot Navigation using On-line Control Set-points

Authors: *Lounis Adouane*



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Session IV: Navigation, Control, Planning 13:45

Chairman: *Philippe Bonnifait* (HEUDIASYC, France)

Title: Intention Aware Planning for Autonomous Vehicles 13:45

Keynote speaker: *Tirthankar Bandyopadhyay* (CSIRO, Australia) 35min + 5min questions

Title: Safe highways platooning with minimized inter-vehicle distances of the time headway policy 14:25

Authors: Alan Ali, Gaetan Garcia, *Philippe Martinet* 17min + 3min questions

Title: Optical Flow Templates for Superpixel Labeling in Autonomous Robot Navigation 14:45

Authors: Richard Roberts, *Frank Dellaert* 17min + 3min questions



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Session V: Situation Awareness & Risk Assessment 15:30

Chairman: *Urbano Nunes* (Coimbra University, Portugal)

Title: Road Scenes Understanding and Risk Assessment using Embedded Bayesian Perception 15:30

Keynote speaker: *Christian Laugier* (INRIA, Grenoble, France) 35min + 5min questions

Co-Authors: Mathias Perrollaz, Christopher Tay Meng Keat, Stéphanie Lefevre

Title: Detection of Unusual Behaviours for Estimation of Context Awareness at Road Intersections 16:10

Authors: *Alexandre Armand*, David Filliat, Javier Ibanez-Guzman

Title: Enhancing Mobile Object Classification Using Geo-referenced Maps and Evidential Grids 16:30

Authors: Marek Kurdej, Julien Moras, *Veronique Cherfaoui*, Philippe Bonnifait

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Attendance : near 130

Next events:

- ✓ **Special issue on Perception and Planning for Autonomous Vehicles in ITS Magazine**
- ✓ **A proposal for a common workshop btw 3 RAS-TC has been submitted to ICRA14**
 - ➔ **Workshop on Modelling, Estimation, Perception and Control of All Terrain Mobile Robots** Philippe Martinet, Kasuya Yoshida, Marcel Bergeman
- ✓ **New PPNIV'14 will be submitted to IROS'14**



IEEE ITS Magazine

Special Issue on

Perception and Planning for Autonomous Vehicles



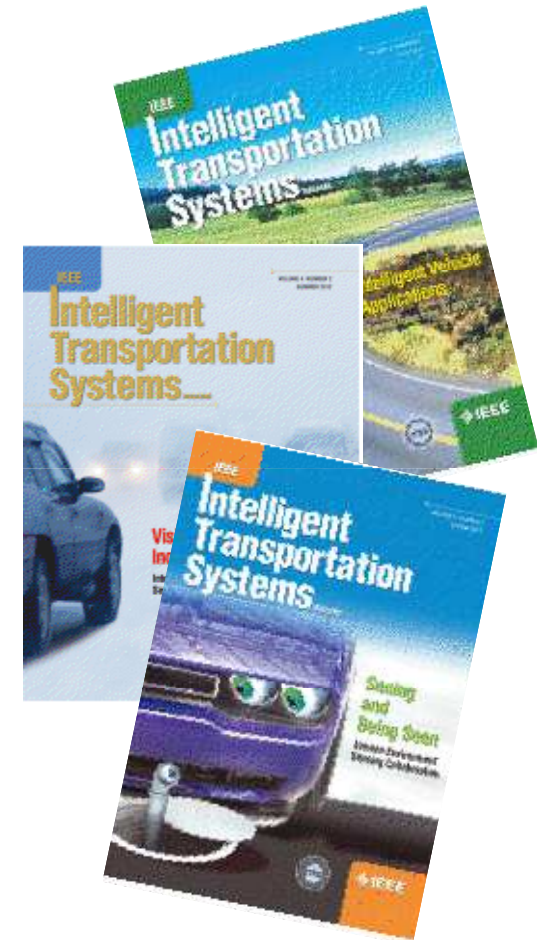
Call for papers available

Contact: stiller@kit.edu

Schedule:

First paper submission deadline:	Jan 31st, 2014
Notification of first decision:	Mar 31st, 2014
Revision submission deadline:	May 31st, 2014
Notification of final decision:	July 15th, 2014
Camera ready manuscript due:	Aug 31st, 2014

Submit via mc.manuscriptcentral.com/t-its
mentioning the special issue on
“Perception and Planning for Autonomous Vehicles”
of the IEEE Intelligent Transportation Systems Magazine.



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PPNIV'13 Best Paper Award

