

ICRA09

Workshop on Safe navigation in open and dynamic environments
Application to autonomous vehicles

**Workshop on Safe Navigation in Open
and Dynamic Environments**
Application to autonomous vehicles

C. Laugier and P. Martinet, U. Nunes

Kobe, Japan, TW-F11, Room 406, 12th May 2009

<http://www.lasmea.univ-bpclermont.fr/Control/workshopICRA09/SafeNavigation.htm>



Philippe
Martinet



ICRA Workshop on Safe navigation in Open and Dynamic Environment,
Kobe, Japan, TW-F11, Room 406, 12th May 2009

Outline of the workshop

Session I: Motion planning 9:00-10:30

Chairman: Alonzo Kelly and Christian Laugier

*Title: Fast and Feasible Deliberative Motion Planner for Dynamic Environments
(invited paper)*

Authors: Mihail Pivtoraiko and Alonzo Kelly

Title: Benchmarking Collision Avoidance Schemes for Dynamic Environments

Authors: Luis Martinez-Gomez and Thierry Fraichard

*Title: Mapping Obstacles to Collision States for On-line Motion Planning in
Dynamic Environments*

Authors: Oren Gal and Zvi Shiller

*Title: Probabilistic Rapidly-exploring Random Trees for autonomous navigation
among moving pedestrians*

Authors: Chiara Fulgenzi, Anne Spalanzani, and Christian Laugier



Outline of the workshop

Session II: Multi-sensor perception & navigation 10:50-12:50

Chairman: Anna Petrovskaya and Martin Rufli

*Title: Multi-Sensor Perception and Dynamic Path Planning in City Environments
(invited paper)*

Authors: Martin Rufli Luciano Spinello Roland Siegwart

Title: Camera and Laser Radar Co-detection of Pedestrians

Authors: Hao LI, Ming YANG, Huijia QIAN

Title: Model Based Vehicle Tracking in Urban Environments (invited paper)

Authors: Anna Petrovskaya and Sebastian Thrun

*Title: Connexity based fronto-parallel plane detection for stereovision obstacle
Segmentation*

Author: Thomas Veit

Title: Safe and Dependable Operation of a Large Industrial Autonomous Forklift

Author: Ashley Tews



Outline of the workshop

Session III: Vision based perception & Visual SLAM 14:00-15:30

Chairman: François Chaumette and Philippe Martinet

Title: Comparing appearance-based controllers for nonholonomic navigation from a visual memory (invited paper)

Authors: Andrea Cherubini, Manuel Colafrancesco, Giuseppe Oriolo, Luigi Freda and François Chaumette

Title: A generic framework for topological navigation of urban vehicle

Authors: Jonathan Courbon, Youcef Mezouar, Laurent Eck, Philippe Martinet

Title: Use a Single Camera for Simultaneous Localization And Mapping with Mobile Object Tracking in dynamic environments

Authors: Davide Migliore, Roberto Rigamonti, Daniele Marzorati, Matteo Matteucci, Domenico G. Sorrenti

Title: Optimal Metric SLAM for Autonomous Navigation Assistance

Authors: P.F. Alcantarilla, I. Parra, L.M. Bergasa



Outline of the workshop

Session IV: SLAM, Localization, Reconstruction 15:50-17:50

Chairman: Martin Adams and Sukhan Lee

Title: Detection Likelihoods for Safer Occupancy Mapping (invited paper)

Authors: J. Mullane, M. Adams, W. S. Wijesoma

Title: Experimental Comparison of Bayesian Outdoor Vehicle Localization Filters

Authors: A. N. Ndjeng, D. Gruyer, A. Lambert, S. Glaser, B. Mourllion

Title: Predictive Lane Detection for Simultaneous Road Geometry Estimation and Vehicle Localization

Authors: C. Wang, Z. Hu, T. Maeda, N. Hamada, and K. Uchimura

Title: Cognitive Localization of 3D Objects Symbolically Given Navigational Cues (invited paper)

Authors: S. Lee, H. Kim, Z. Lu, and H. Hung

Title: Laser scanner based SLAM in real road and traffic environment

Authors: O. Garcia-Favrot, M. Parent

Workshop closing remarks

- ❖ *Workshop is linked to IEEE-TC on « Autonomous Ground vehicles & ITS »*
<http://tab.ieee-ras.org/committeeinfo.php?tcid=10>
- ❖ *Workshop material will be accessible on the workshop website (paper, presentation, videos)*
- ❖ *Journal special issue?*
 - *in the past one book (Springer Star) and one special issue in IEEE-Trans on ITS*
 - *tight schedule (less than one year)*
 - *preselection based on reviews*
 - *extended version required*
 - *quick answer of the authors (interested or not)*
 - *final acceptance based on regular review process of the journal*
- ❖ *Shall we measure the audience interest/satisfaction (short questionnaire)?*
 - *Topics*
 - *Maybe not enough time for question/discussion?*
 - ...
- ❖ *Next workshop at IROS09 in St-Louis in the US, PPNIV09 (call for contributions)*



Thanks for your attention

Any questions



<http://robots.univ-bpclermont.fr/Control>



martinet@lasmea.univ-bpclermont.fr

