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Pages 1-610

Content List of 2012 Intelligent Vehicles Symposium

Technical Program for Monday June 4, 2012

MoPO1S	Room T1
Poster Session I (Poster Session)	
Chair: Sánchez Prieto, Sebastián	Univ. de Alcalá

09:50-11:20	MoPO1S.1

Track-To-Track Fusion with Asynchronous Sensors and Out-Of-Sequence Tracks Using Information Matrix Fusion for Advanced Driver Assistance Systems, pp. 1-6.

Aeberhard, Michael	BMW Group Res. and Tech.
Rauch, Andreas	BMW Group
Rabiega, Marcin	BMW Group Res. and Tech.
Kaempchen, Nico	BMW Group Res. and Tech.
Bertram, Torsten	Tech. Univ. Dortmund

09:50-11:20	MoPO1S.2

Pedestrian Candidates Generation Using Monocular Cues, pp. 7-12.

Cheda, Diego	Univ. Autònoma de Barcelona
Ponsa, Daniel	Centre de Visió per Computador
López, Antonio M.	Univ. Autònoma de Barcelona

09:50-11:20	MoPO1S.3

Novel Decentralised Formation Control for Unmanned Vehicles, pp. 13-18.

Yang, Aolei	Queen's Univ. Belfast
Naeem, Wasif	Queen's Univ. Belfast
Irwin, George	Queen's Univ. Belfast
Li, Kang	Queen's Univ. Belfast

09:50-11:20	MoPO1S.4

Manual Convoying of Automated Urban Vehicles Relying on Monocular Vision, pp. 19-24.

Avanzini, Pierre	Inst. Pascal, Univ. Blaise Pascal
Thuilot, Benoit	LASMEA/GRAVIR/ROSACE
Martinet, Philippe	Blaise Pascal Univ.

09:50-11:20	MoPO1S.5

A Practical System for Road Marking Detection and Recognition, pp. 25-30.

Wu, Tao	Univ. of Maryland
Ranganathan, Ananth	Honda Res. Inst. USA

09:50-11:20	MoPO1S.6

Lane-Based Safety Assessment of Road Scenes Using Inevitable Collision States, pp. 31-36.

Althoff, Daniel	Tech. Univ. München
Werling, Moritz	BMW Group Forschung und Tech. GmbH
Kaempchen, Nico	BMW Group Res. and Tech.
Wollherr, Dirk	Tech. Univ. München
Buss, Martin	TU Muenchen

09:50-11:20	MoPO1S.7

Robust Road Boundary Estimation for Intelligent Vehicles in Challenging Scenarios Based on a Semantic Graph, pp. 37-44.

Guo, Chunzhao	Toyota Tech. Inst.
Yamabe, Takayuki	Toyota Tech. Inst.
Mita, Seiichi	Toyota Tech. Inst.

09:50-11:20	MoPO1S.8

The Effect of Vehicle Acceleration Near Traffic Congestion Fronts, pp. 45-50.

Vergeest, Joris	Delft Univ. of Tech.
Arem, Bart van	Twente Univ.

09:50-11:20	MoPO1S.9

Generic Camera Calibration and Modeling Using Spline Surfaces, pp. 51-56.

Rosebrock, Dennis	Tech. Univ. Braunschweig

| Wahl, Friedrich M. | Tech. Univ. Braunschweig |

| 09:50-11:20 | MoPO1S.10 |

Omni-Directional Detection and Tracking of On-Road Vehicles Using Multiple Horizontal Laser Scanners, pp. 57-62.

Zhao, Huijing	Peking Univ.
Wang, Chao	Peking Univ.
Yao, Wen	Peking Univ.
Davoine, Franck	CNRS LIAMA Sino French Lab.
Cui, Jinshi	Peking Univ.
Zha, Hongbin	Peking Univ.

| 09:50-11:20 | MoPO1S.11 |

Using Statistical Models to Characterize Eco-Driving Style with an Aggregated Indicator, pp. 63-68.

| Andrieu, Cindie | IFSTTAR |
| Saint Pierre, Guillaume | INRETS/LCPC |

| 09:50-11:20 | MoPO1S.12 |

Visual Odometry Based on Random Finite Set Statistics in Urban Environment, pp. 69-74.

Zhang, Feihu	Tech. Univ. München
Chen, Guang	Tech. Univ. of Munich
Staehle, Hauke	Tech. Univ. Muenchen
Buckl, Christian	fortiss GmbH
Knoll, Alois	Tech. Univ. München

| 09:50-11:20 | MoPO1S.13 |

Optimal Motion Planning Based on CACM-RL Using SLAM, pp. 75-80.

Arribas Navarro, Tomás	Univ. de Alcalá
Gómez Plaza, Mariano	Univ. de Alcalá
Sánchez Prieto, Sebastián	Univ. de Alcalá

| 09:50-11:20 | MoPO1S.14 |

Adaptive Control Solutions for the Position Control of Electromagnetic Actuated Clutch Systems, pp. 81-86.

Dragos, Claudia-Adina	Pol. Univ. of Timisoara
Preitl, Stefan	Pol. Univ. of Timisoara
Precup, Radu-Emil	Pol. Univ. of Timisoara
Petriu, Emil M.	Univ. of Ottawa
Stinean, Alexandra-Iulia	Pol. Univ. of Timisoara

| 09:50-11:20 | MoPO1S.15 |

Localization in Digital Maps for Road Course Estimation Using Grid Maps, pp. 87-92.

Konrad, Marcus	EvoBus GmbH - Daimler Buses
Nuss, Dominik Stefan	Univ. of Ulm
Dietmayer, Klaus	Univ. of Ulm

| 09:50-11:20 | MoPO1S.16 |

Risk Indicators Anticipation Based on the Vehicle Dynamics Anticipation to Avoid Accidents, pp. 93-98.

Ghandour, Raymond	Univ. de Tech. de Compiègne
Victorino, Alessandro	Univ. de Tech. de Compiegne, Departement deGenie Info
Charara, Ali	HEUDIASYC UMR UTC/CNRS 6599
Lechner, Daniel	INRETS-MA

| 09:50-11:20 | MoPO1S.17 |

Local Stereo Disparity Estimation with Novel Cost Aggregation for Sub-Pixel Accuracy Improvement in Automotive Applications, pp. 99-104.

Zhang, Zhen	Univ. of Bristol
Ai, Xiao	Univ. of Bristol
Canagarajah, Nishan	Univ. of Bristol
Dahnoun, Naim	Univ. of Bristol

| 09:50-11:20 | MoPO1S.18 |

Scene Understanding from a Moving Camera for Object Detection and Free Space Estimation, pp. 105-110.

| Haltakov, Vladimir | BMW AG |
| Belzner, Heidrun | BMW Group |

Ilic, Slobodan	Tech. Univ. München

09:50-11:20	MoPO1S.19

A Feasability Study of Drowsiness Detection Using Driving Behaviour Parameters, pp. 111-116.

Bartra Cisa, Ariadna	Ficosa
Meca, Pablo	IBEC
Pardo, Antoni	Univ. of Barcelona
Marco, Santiago	Inst. for BioEngineering of Catalonia
Montesi, Alan	Ficosa
Guamán, Ana	Inst. for BioEngineering of Catalonia

09:50-11:20	MoPO1S.20

Contrast Invariant Features for Human Detection in Far Infrared Images, pp. 117-122.

Olmeda, Daniel	Univ. Carlos III
de la Escalera, Arturo	Univ. Carlos III de Madrid
Armingol Moreno, José María	Univ. Carlos III de Madrid

09:50-11:20	MoPO1S.21

Detection of Missing Roundabouts in Maps for Driving Assistance Systems, pp. 123-128.

Zinoune, Clément	Univ. of Tech. of Compiègne, Renault SAS
Bonnifait, Philippe	Univ. of Tech. of Compiegne
Ibanez Guzman, Javier	Renault S.A.S,

09:50-11:20	MoPO1S.22

Path and Speed Control of a Heavy Vehicle for Collision Avoidance Manoeuvres, pp. 129-134.

Hassanzadeh, Morteza	Chalmers Univ. of Tech.
Lidberg, Mathias	Chalmers Univ. of Tech.
Keshavarz Bahaghighat, Mansour	Volvo AB, Group Trucks Tech.
Bjelkeflo, Lars	Volvo Tech.

09:50-11:20	MoPO1S.23

A Centralized Traffic Controller for Intelligent Vehicles in a Segment of a Multilane Highway, pp. 135-140.

Reghelin, Ricardo	Univ. Tecnológica Federal do Paraná
Arruda, Lúcia Valéria Ramos	Univ. Tecnológica Federal do Paraná (UTFPR)

09:50-11:20	MoPO1S.24

Probabilistic Trajectory Prediction with Gaussian Mixture Models, pp. 141-146.

Wiest, Jürgen	Univ. of Ulm
Höffken, Matthias	Univ. of Ulm
Kressel, Ulrich	Daimler AG
Dietmayer, Klaus	Univ. of Ulm

09:50-11:20	MoPO1S.25

A Probabilistic Discriminative Approach for Situation Recognition in Traffic Scenarios, pp. 147-152.

Tran, Quan	KIT
Firl, Jonas	Adam Opel AG

09:50-11:20	MoPO1S.26

Supervised Landmask Estimation Using Contextual Information in SAR Data, pp. 153-158.

Martin de Nicolas, Jaime	Univ. of Alcala
Barcena-Humanes, Jose-Luis	Univ. of Alcala
Palma-Vazquez, Angel	Univ. of Alcala
Mata-Moya, David	Univ. of Alcalá
Jarabo-Amores, Maria-Pilar	Univ. of Alcala

09:50-11:20	MoPO1S.27

Frontal Object Perception Using Radar and Mono-Vision, pp. 159-164.

Chavez-Garcia, R. Omar	Univ. Joseph Fourier
Burlet, Julien	TRW Conekt
Vu, Trung-Dung	AMA/LIG Univ. Grenoble 1
Aycard, Olivier	Univ. Grenoble1

MoOR1S	Room T1
Driver Assistance Systems I (Regular Session)	
Chair: Barth, Matthew	Univ. of California-Riverside

11:20-11:40	MoOR1S.1

Risk Assessment at Road Intersections: Comparing Intention and Expectation, pp. 165-171.

Lefevre, Stephanie	INRIA
Laugier, Christian	INRIA
Ibanez Guzman, Javier	Renault S.A.S,

11:40-12:00	MoOR1S.2

Electric Vehicle Travel Optimization — Customer Satisfaction Despite Resource Constraints, pp. 172-177.

Hoch, Nicklas	ETH Zurich, Volkswagen AG
Zemmer, Kevin	ETH Zurich
Werther, Bernd	Volkswagen AG
Siegwart, Roland	ETH Zurich

12:00-12:20	MoOR1S.3

Detectability Prediction in Dynamic Scenes for Enhanced Environment Perception, pp. 178-183.

Engel, David	Massachusetts Inst. of Tech.
Curio, Cristobal	Max Planck Inst. for Biological Cybernetics

12:20-12:40	MoOR1S.4

Multipath Detection with 3D Digital Maps for Robust Multi-Constellation GNSS/INS Vehicle Localization in Urban Areas, pp. 184-190.

Obst, Marcus	Chemnitz Univ. of Tech.
Bauer, Sven	Chemnitz Univ. of Tech.
Reisdorf, Pierre	Chemnitz Univ. of Tech.
Wanielik, Gerd	Chemnitz Univ. of Tech.

MoOR2S	Room T1
Cooperative Vehicle-Highway Systems (Regular Session)	
Chair: Salgado, Luis	Univ. Pol. de Madrid

13:50-14:10	MoOR2S.1

Reducing Congestion at Uphill Freeway Sections by Means of a Gradient Compensation System, pp. 191-198.

Goñi Ros, Bernat	Delft Univ. of Tech.
Knoop, Victor	Delft Univ. of Tech.
van Arem, Bart	Delft Univ. of Tech.
Hoogendoorn, Serge	Delft Univ. of Tech.

14:10-14:30	MoOR2S.2

A Classification of Expressway Traffic Flow Characteristics Based on Different Distances between On-Ramp and Off-Ramp, pp. 199-204.

Zhang, Haizheng	Tsinghua Univ.
Shengchao, Yin	Tsinghua
Yao, Danya	Tsinghua Univ.
Su, Yuelong	China National BlueStar (Group) Co., Ltd.,

14:30-14:50	MoOR2S.3

2-Way Evaluation of the Distributed BeeJamA Vehicle Routing Approach, pp. 205-210.

Senge, Sebastian	TU Dortmund
Wedde, Horst F.	TU Dortmund

14:50-15:10	MoOR2S.4

Cooperative Multi-Vehicle Localization Using Split Covariance Intersection Filter, pp. 211-216.

Li, Hao	Mines Paris (ParisTech) / INRIA-IMARAteam
Nashashibi, Fawzi	Mines ParisTech / INRIA

MoPO2S	Room T1
Poster Session II (Poster Session)	

15:10-16:40	MoPO2S.1

An Electronic System to Combat Drifting and Traffic Noises on Saudi Roads, pp. 217-222.

Ben Dhaou, Imed	Al Jouf Univ.

15:10-16:40	MoPO2S.2

HOG-Like Gradient-Based Descriptor for Visual Vehicle Detection, pp. 223-228.

Arróspide, Jon	Univ. Pol. de Madrid
Salgado, Luis	Univ. Pol. de Madrid
Marinas, Javier	Univ. Pol. de Madrid

15:10-16:40	MoPO2S.3

Generating Approximative Minimum Length Paths in 3D for UAVs, pp. 229-233.

Schøler, Flemming	Aalborg Univ.
la Cour-Harbo, Anders	Aalborg Univ.
Bisgaard, Morten	Aalborg Univ.
Hansen, Karl Damkjaer	Aalborg Univ.

15:10-16:40	MoPO2S.4

Estimating Driving Behavior by a Smartphone, pp. 234-239.

Eren, Haluk	Univ.
Makinist, Semiha	iDaSuCo Res. Firat Univ.
Akin, Erhan	FIRAT Univ.
Yilmaz, Alper	THE OHIO STATE Univ. PCVLab

15:10-16:40	MoPO2S.5

ACC of Electric Vehicles with Coordination Control of Fuel Economy and Tracking Safety, pp. 240-245.

Dang, Ruina	Tsinghua or China North Vehicle Res. Inst.
He, Chaozhe	Beihang Univ.
Zhang, Qiang	Chongqing Changan Automobile (Group) Co.
Li, Keqiang	Tsinghua Univ.
Li, Yusheng	Chongqing Changan Automobile (Group) Co.

15:10-16:40	MoPO2S.6

Generation of High Precision Digital Maps Using Circular Arc Splines, pp. 246-251.

Schindler, Andreas	Univ. of Passau
Maier, Georg	FORWISS, Univ. of Passau, Germany
Janda, Florian	Univ. of Passau

15:10-16:40	MoPO2S.7

StreamCars: A New Flexible Architecture for Driver Assistance Systems, pp. 252-257.

Bolles, André	OFFIS - Inst. für Informatik
Appelrath, H.-Jürgen	Univ. Oldenburg
Geesen, Dennis	Univ. Oldenburg
Grawunder, Marco	Univ. Oldenburg
Hannibal, Marco	Deutsches Zentrum für Luft- und Raumfahrt
Jacobi, Jonas	Univ. Oldenburg
Köster, Frank	German Aerospace Center (DLR) Inst. of Transportation System
Nicklas, Daniela	Univ. Oldenburg

15:10-16:40	MoPO2S.8

Estimating Energy Consumption for Routing Algorithms, pp. 258-263.

Kraschl-Hirschmann, Karin	Tech. Univ. Graz
Fellendorf, Martin	Tech. Univ. Graz

15:10-16:40	MoPO2S.9

Development of a General Criticality Criterion for the Risk Estimation of Driving Situations and Its Application to a Maneuver-Based Lane Change Assistance System, pp. 264-269.

Rodemerk, Claas	Tech. Univ. of Darmstadt
Habenicht, Stefan	Tech. Univ. Darmstadt
Weitzel, Alexander	TU Darmstadt
Winner, Hermann	Tech. Univ. Darmstadt

Schmitt, Thomas	TU Darmstadt

15:10-16:40	MoPO2S.10

Car2X-Based Perception in a High-Level Fusion Architecture for Cooperative Perception Systems, pp. 270-275.

Rauch, Andreas	BMW Group
Klanner, Felix	BMW Group
Rasshofer, Ralph	BMW Forschung und Tech. GmbH
Dietmayer, Klaus	Univ. of Ulm

15:10-16:40	MoPO2S.11

Road Ortho-Image Generation Based on Accurate Vehicle Trajectory Estimation by GPS Doppler, pp. 276-281.

Meguro, Junichi	TOYOTA CENTRAL R&D Lab. INC.
Ishida, Hiroyuki	TOYOTA CENTRAL R&D Lab. INC.
Kidono, Kiyosumi	Toyota Central R&D Lab. Inc.
Kojima, Yoshiko	TOYOTA Central R&D Lab. Inc.

15:10-16:40	MoPO2S.12

Bayesian Network Classifiers Inferring Workload from Physiological Features: Compared Performance, pp. 282-287.

Besson, Patricia	UMR CNRS 7287 Aix-Marseille Univ.
Dousset, Erick	Inst. of Movement Sciences, UMR CNRS 7287 Aix-Marseille Uni
Bourdin, Christophe	Inst. of Movement Sciences, UMR CNRS 7287 Aix-Marseille Uni
Bringoux, Lionel	Inst. of Movement Sciences, UMR CNRS 7287 Aix-Marseille Uni
Marqueste, Tanguy	Inst. of Movement Sciences, UMR CNRS 7287 Aix-Marseille Uni
Mestre, Daniel R	Aix-Marseille Univ.
Vercher, Jean-Louis	Inst. of Movement Sciences, UMR CNRS 7287 Aix-Marseille Uni

15:10-16:40	MoPO2S.13

Mobile Application As a Tool for Urban Traffic Data Collection and Generation to Advanced Traveler Information Systems Using Wi-Fi Networks Available in Urban Centers, pp. 288-292.

Dezani, Henrique	Univ. of Campinas (UNICAMP)
Damiani, Furio	Univ. of Campinas
Marranghello, Norian	Sao Paulo State Univ. - UNESP
Viudes, Ulysses	Coll. of Tech. of São José do Rio Preto (FATEC)
Parra, Ícaro Augusto	Coll. of Tech. of São José do Rio Preto (FATEC)

15:10-16:40	MoPO2S.14

Transponder and Camera-Based Advanced Driver Assistance System, pp. 293-298.

Westhofen, Daniel	Continental Safety Engineering International GmbH
Gründler, Carolin	Univ. of Applied Sciences Aschaffenburg
Doll, Konrad	Univ. of Applied Sciences Aschaffenburg
Brunsmann, Ulrich	Univ. of Applied Sciences Aschaffenburg
Zecha, Stephan	Continental Safety Engineering International GmbH

15:10-16:40	MoPO2S.15

Color Correction for Onboard Multi-Camera Systems Using 3D Gaussian Mixture Models, pp. 299-303.

Riem de Oliveira, Miguel Armando	Univ. of Aveiro
Sappa, Angel D.	Computer Vision Center
Santos, Vitor	Univ. of Aveiro

15:10-16:40	MoPO2S.16

Will Intelligent Vehicles Evolve into Human-Peer Robots?, pp. 304-309.

Da Lio, Mauro	Univ. of Trento
Biral, Francesco	Univ. of Trento
Galvani, Marco	Univ. of Trento
Saroldi, Andrea	Centro Ricerche Fiat (CRF)

15:10-16:40	MoPO2S.17

Analyzing Vehicle Traces to Find and Exploit Correlated Traffic Lights for Efficient Driving, pp. 310-315.

Kerper, Markus	Volkswagen Group
Wewetzer, Christian	Volkswagen Group
Mauve, Martin	Univ. of Düsseldorf

15:10-16:40	MoPO2S.18

Towards a Generic and Efficient Environment Model for ADAS, pp. 316-321.

Grewe, Ralph	Continental Div. Chassis & Safety, Advanced Engineering
Hohm, Andree	Continental Div. Chassis & Safety, Advanced Engineering
Hegemann, Stefan	Continental Div. Chassis & Safety, Advanced Engineering
Lueke, Stefan	Continental Div. Chassis & Safety, Advanced Engineering
Winner, Hermann	Tech. Univ. Darmstadt

15:10-16:40	MoPO2S.19

Energy Optimal Control of an Over Actuated Robotic Electric Vehicle Using Enhanced Control Allocation Approaches, pp. 322-327.

Brembeck, Jonathan	German Aerospace Center (DLR)
Ritzer, Peter	-

15:10-16:40	MoPO2S.20

Improving Lateral Performance of Longer Combination Vehicles – an Approach Based on Eigenstructure Assignment, pp. 328-333.

Kharrazi, Sogol	Chalmers Univ. of Tech.
Gordon, Tim	Univ. of Michigan
Lidberg, Mathias	Chalmers Univ. of Tech.

15:10-16:40	MoPO2S.21

Veiling Luminance Estimation on FPGA-Based Embedded Smart Camera, pp. 334-339.

Grana, Costantino	DII - Univ. degli Studi di Modena e Reggio Emilia
Borghesani, Daniele	DII - Univ. degli Studi di Modena e Reggio Emilia
Santinelli, Paolo	DII - Univ. degli Studi di Modena e Reggio Emilia
Cucchiara, Rita	Univ. of Modena and Reggio Emilia

15:10-16:40	MoPO2S.22

Text Recognition on Traffic Panels from Street-Level Imagery, pp. 340-345.

Gonzalez, Alvaro	Univ. of Alcala
Bergasa, Luis M.	Univ. of Alcala
Yebes Torres, José Javier	Univ. of Alcalá
Almazán, Javier	Univ. of Alcalá

15:10-16:40	MoPO2S.23

Safe, Dynamic and Comfortable Longitudinal Control for an Autonomous Vehicle, pp. 346-351.

Reschka, Andreas	Univ. Hildesheim
Saust, Falko	Tech. Univ. Braunschweig
Böhmer, Jürgen Rüdiger	Univ. Hildesheim
Lichte, Bernd	Tech. Univ. Braunschweig
Maurer, Markus	TU Braunschweig

15:10-16:40	MoPO2S.24

Off-Vehicle Evaluation of Camera-Based Pedestrian Detection, pp. 352-358.

Bar Hillel, Aharon	General Motors
Alon, Yaniv	CVtech LTD

15:10-16:40	MoPO2S.25

Lane Keeping and Lane Departure Avoidance by Rear Wheels Steering, pp. 359-364.

Minoiu Enache, Nicoleta	RENAULT SAS
Guegan, Stephane	RENAULT SAS
Desnoyer, François	RENAULT SAS
Vorobieva, Hélène	RENAULT SAS

15:10-16:40	MoPO2S.26

Grid-Based DBSCAN for Clustering Extended Objects in Radar Data, pp. 365-370.

Kellner, Dominik	Univ. of Ulm
Klappstein, Jens	Daimler AG
Dietmayer, Klaus	Univ. of Ulm

15:10-16:40	MoPO2S.27

Dealing with Occlusions with Multi Targets Tracking Algorithms for the Real Road Context, pp. 371-376.

Lamard, Laetitia	Univ. Blaise Pascal and Renault

| Chapuis, Roland | LASMEA |
| Boyer, Jean-Philippe | Renault |

| 15:10-16:40 | MoPO2S.28 |

Fuzzy Takagi-Sugeno LQ Controller for Lateral Control Assistance of a Vehicle, pp. 377-382.

Soualmi, Boussaad	LAMIH, Valenciennes Univ.
Sentouh, Chouki	LAMIH/CNRS Univ. of Valenciennes
Popieul, Jean-Christophe	Univ. de Valenciennes
Debernard, Serge	Univ. of Valenciennes/LAMIH

MoOR3S	Room T1
Vehicle Control (Regular Session)	
Chair: Anderson, Sterling	Massachusetts Inst. of Tech.

| 16:40-17:00 | MoOR3S.1 |

Constraint-Based Planning and Control for Safe, Semi-Autonomous Operation of Vehicles, pp. 383-388.

Anderson, Sterling	Massachusetts Inst. of Tech.
Karumanchi, Sisir	Massachusetts Inst. of Tech.
Iagnemma, Karl	Massachusetts Inst. of Tech.

| 17:00-17:20 | MoOR3S.2 |

Reference Generation and Control Strategy for Automated Vehicle Guidance, pp. 389-394.

Attia, Rachid	Univ. de Haute-Alsace
Daniel, Jeremie	Univ. of Haute Alsace
Lauffenburger, Jean-Philippe	Univ. de Haute-Alsace
Orjuela, Rodolfo	Univ. de Haute-Alsace
Basset, Michel	Univ. de Haute-Alsace

| 17:20-17:40 | MoOR3S.3 |

Backstepping Based Approach for the Combined Longitudinal-Lateral Vehicle Control, pp. 395-400.

| Nehaoua, Lamri | IBISC Lab. |
| Nouveliere, Lydie | IBISC/Univ. of Evry - LCPC/LIVIC |

TuPO3S	Room T1
Poster Session III (Poster Session)	

Chair: Olaverri Monreal, Cristina	Faculty of Mechanical Engineering, Tech.

09:50-11:20	TuPO3S.1

Pushing the Limits of Stereo Using Variational Stereo Estimation, pp. 401-407.

Ranftl, Rene	Univ. of Tech. Graz, ICG
Gehrig, Stefan	Daimler AG
Pock, Thomas	Univ. of Tech. Graz, ICG
Bischof, Horst	Graz Univ. of Tech.

09:50-11:20	TuPO3S.2

Medium Access Control Based on a Non Cooperative Cognitive Radio for Platooning Communications, pp. 408-413.

Manzano, Mario	Univ. of Alcala. Pol. School.
Espinosa, Felipe	Univ. of Alcala. Pol. School.
Bravo, Ángel M.	Carlos III Univ. Pol. School.
Garcia, David	Univ. of Alcala. Pol. School.
Gardel, Alfredo	Univ. of Alcala. Pol. School.
Bravo, Ignacio	Univ. of Alcala. Pol. School.

09:50-11:20	TuPO3S.3

A Comparison of Two Different Tracking Algorithms Is Provided for Real Application, pp. 414-419.

Lamard, Laetitia	Univ. Blaise Pascal and Renault
Chapuis, Roland	LASMEA
Boyer, Jean-Philippe	Renault

09:50-11:20	TuPO3S.4

An Image-To-Image Loop-Closure Detection Method Based on Unsupervised Landmark Extraction, pp. 420-425.

Sariyanidi, Evangelos	Istanbul Tech. Univ.
Sencan, Onur	istanbul Tech. Univ.
Temeltas, Hakan	Istanbul Tech. Univ.

09:50-11:20	TuPO3S.5

An Improved Driver-Behavior Model with Combined Individual and General Driving Characteristics, pp. 426-431.

Angkititrakul, Pongtep	Nagoya Univ.
Miyajima, Chiyomi	Nagoya Univ.
Takeda, Kazuya	Nagoya Univ.

09:50-11:20	TuPO3S.6

3D Outline Contours of Vehicles in 3D-LIDAR-Measurements for Tracking Extended Targets, pp. 432-437.

Steinemann, Philipp	Daimler AG
Klappstein, Jens	Daimler AG
Dickmann, Jürgen	Daimler AG
Wuensche, Hans Joachim	Department of Aerospace
von Hundelshausen, Felix	Univ. of the Bundeswehr Munich

09:50-11:20	TuPO3S.7

Impact of Out-Of-Sequence Measurements on the Joint Integrated Probabilistic Data Association Filter for Vehicle Safety Systems, pp. 438-443.

Westenberger, Antje	Daimler AG
Duraisamy, Bharanidhar	Daimler AG
Munz, Michael	Daimler AG
Muntzinger, Marc	Daimler AG
Fritzsche, Martin	Daimler AG
Dietmayer, Klaus	Univ. of Ulm

09:50-11:20	TuPO3S.8

Visual Ego Motion Estimation in Urban Environments Based on U-V Disparity, pp. 444-449.

Musleh Lancis, Basam	Univ. Carlos III of Madrid
Martin Gomez, David	Carlos III Univ. of Madrid

| de la Escalera, Arturo | Univ. Carlos III de Madrid |
| Armingol Moreno, José María | Univ. Carlos III de Madrid |

| 09:50-11:20 | TuPO3S.9 |

Lateral Stability Analysis of On-Road Vehicles Using the Concept of Lyapunov Exponents, pp. 450-455.

| Sadri, Sobhan | The Univ. of Manitoba |
| Wu, Christine Qiong | Univ. of Manitoba |

| 09:50-11:20 | TuPO3S.10 |

3D LIDAR Point Cloud Based Intersection Recognition for Autonomous Driving, pp. 456-461.

Zhu, Quanwen	Wuhan Univ.
Chen, Long	Wuhan Univ.
Li, Qingquan	Wuhan Univ.
Li, Ming	Wuhan Univ.
Nuechter, Andreas	Jacobs Univ. Bremen
Wang, Jian	WuHan Univ.

| 09:50-11:20 | TuPO3S.11 |

Nature-Inspired Multiple Vehicle Driving Control for Traffic Flow Efficiency: Requirements and Algorithms, pp. 462-468.

Kim, Seongwoo	Seoul National Univ.
Gwon, Gipoong	Seoul National Univ.
Seo, Seungwoo	Seoul National Univ.

| 09:50-11:20 | TuPO3S.12 |

Safety of Stereo Driver Assistance Systems, pp. 469-475.

| Khan, Waqar Ahmed | The Univ. of Auckland |
| Morris, John | Univ. of Auckland |

| 09:50-11:20 | TuPO3S.13 |

Incorporating Environmental Knowledge into Bayesian Filtering Using Attractor Functions, pp. 476-481.

Alin, Andreas	Univ. Tübingen
Butz, Martin V.	Univ. of Tübingen
Fritsch, Jannik	Honda Res. Inst. Europe GmbH

| 09:50-11:20 | TuPO3S.14 |

Probabilistic Localization Method for Trains, pp. 482-487.

Heirich, Oliver	DLR German Aerospace Center
Robertson, Patrick	DLR
Cardalda García, Adrián	DLR
Strang, Thomas	German Aerospace Center (DLR)
Lehner, Andreas	German Aerospace Center (DLR)

| 09:50-11:20 | TuPO3S.15 |

InfraCall : Ecall for the Infrastructure, pp. 488-493.

Dupin, Francis	IFSTTAR
Andrieu, Cindie	IFSTTAR
Besnier, Joëlle	IFSTTAR
Duplan, Félicien	IFSTTAR

| 09:50-11:20 | TuPO3S.16 |

Data Fusion for Overtaking Vehicle Detection Based on Radar and Optical Flow, pp. 494-499.

Garcia, Fernando	Univ. Carlos III de Madrid
Cerri, Pietro	Univ. of Parma
Broggi, Alberto	Univ. of Parma
de la Escalera, Arturo	Univ. Carlos III de Madrid
Armingol Moreno, José María	Univ. Carlos III de Madrid

| 09:50-11:20 | TuPO3S.17 |

Roll Angle Estimation for Motorcycles: Comparing Video and Inertial Sensor Approaches, pp. 500-505.

Schlipsing, Marc	Ruhr-Univ. Bochum
Salmen, Jan	Ruhr-Univ. Bochum
Lattke, Benedikt	Tech. Univ. Darmstadt
Schröter, Kai Gerd	Tech. Univ. Darmstadt

Winner, Hermann	Tech. Univ. Darmstadt

09:50-11:20	TuPO3S.18

Design of a Universal Self-Driving System for Urban Scenarios -BIT-III in the 2011 Intelligent Vehicle Future Challenge, pp. 506-510.

Jiang, Yan	Beijing Inst. of Tech.
Zhao, Xijun	Beijing Inst. of Tech.
Gong, Jianwei	Massachusetts Inst. of Tech.
Xiong, Guangming	Beijing Inst. of Tech.
Chen, Huiyan	Beijing Inst. of Tech.
Zhai, Yong	Beijing Inst. of Tech.
Jiang, Yanhua	Beijing Inst. of Tech.
Zhou, Shengyan	Beijing Inst. of Tech.
Hu, Yuwen	Beijing Inst. of Tech.

09:50-11:20	TuPO3S.19

Parsimonious Real Time Monocular SLAM, pp. 511-516.

Bresson, Guillaume	LASMEA - Univ. Blaise Pascal
Féraud, Thomas	LASMEA - Univ. Blaise Pascal
Aufrere, Romuald	Blaise Pascal Univ.
Checchin, Paul	Univ. Blaise Pascal - Clermont-Ferrand - FRANCE
Chapuis, Roland	LASMEA

09:50-11:20	TuPO3S.20

Platooning with DSRC-Based IVC-Enabled Autonomous Vehicles: Adding Infrared Communications for IVC Reliability Improvement, pp. 517-522.

Fernandes, Pedro	Inst. of Systems and Robotics
Nunes, Urbano	Univ. de Coimbra

09:50-11:20	TuPO3S.21

A Decentralized Smartphone Based Traffic Information System, pp. 523-528.

Picone, Marco	Univ. of Parma
Amoretti, Michele	Univ. degli Studi di Parma
Zanichelli, Francesco	Univ. of Parma

09:50-11:20	TuPO3S.22

Cooperative Driving: Beyond V2V As an ADAS Sensor, pp. 529-534.

Caveney, Derek	Toyota Motor Engineering & Manufacturing North America,Inc.
Dunbar, William B.	Univ. of California, Santa Cruz

09:50-11:20	TuPO3S.23

Improving Situational Awareness with Radar Information, pp. 535-540.

Clarke, Bryan	Univ. of Sydney
Worrall, Stewart	Univ. of Sydney
Brooker, Graham	USYD
Martinez, Javier Carlos	Univ. of Sydney
Nebot, Eduardo	ACFR Univ. of Sydney

09:50-11:20	TuPO3S.24

Up to the Limits: Autonomous Audi TTS, pp. 541-547.

Langer, Dirk	Volkswagen of America
Funke, Joseph	Stanford Univ.
Theodosis, Paul	Stanford Univ.
Hindiyeh, Rami	Stanford Univ.
Kritayakirana, Krisada	Stanford Univ.
Gerdes, Chris	Stanford Univ.
Mueller-Bessler, Bernhard	Audi AG
Huhnke, Burkhard	Volkswagen AG
Hernandez, Marcial	Volkswagen
Stanek, Ganymed	Stanford Univ.

09:50-11:20	TuPO3S.25

A Lasers and Cameras Calibration Procedure for VIAC Multi-Sensorized Vehicles, pp. 548-553.

Mazzei, Luca	Parma Univ.
Medici, Paolo	Univ. di Parma
Panciroli, Matteo	Univ. di Parma

09:50-11:20	TuPO3S.26

Study on Active Steering Control of Vehicle for Safe Driving in Highway with GPS Information, pp. 554-557.

Lee, Kwang-Hee	Inha Univ.
Bak, Jeong-Hyeon	Inha Univ.
Lee, Chul-Hee	Inha Univ.

09:50-11:20	TuPO3S.27

Predictive Maneuver Evaluation for Enhancement of Car-To-X Mobility Data, pp. 558-564.

Firl, Jonas	Adam Opel AG
Stübing, Hagen	Adam Opel AG
Huss, Sorin Alexander	Tech. Univ. Darmstadt
Stiller, Christoph	Karlsruhe Inst. of Tech.

TuOR1S	Room T1
Vehicle Environment Perception (Regular Session)	
Chair: Franke, Uwe	Daimler AG

11:20-11:40	TuOR1S.1

May I Enter the Roundabout? a Time-To-Contact Computation Based on Stereo Vision, pp. 565-570.

Muffert, Maximilian	Daimler AG
Milbich, Timo	HFT Stuttgart
Pfeiffer, David	Daimler AG
Franke, Uwe	Daimler AG

11:40-12:00	TuOR1S.2

The Analysis of the Acceleration of the Vehicle for Assessing the Condition of the Driver, pp. 571-576.

Krotak, Tomas	Univ. of West Bohemia
Simlova, Martina	Univ. of West Bohemia

12:00-12:20	TuOR1S.3

Tracking and Classification of Arbitrary Objects with Bottom-Up/Top-Down Detection, pp. 577-582.

Himmelsbach, Michael	Univ. of the Bundeswehr, Munich
Wuensche, Hans Joachim	Univ. Bw Munich

12:20-12:40	TuOR1S.4

On-Road Position Estimation by Probabilistic Integration of Visual Cues, pp. 583-589.

Popescu, Voichita	Tech. Univ. of Cluj-Napoca
Danescu, Radu Gabriel	Tech. Univ. of Cluj-Napoca
Nedevschi, Sergiu	Tech. Univ. of Cluj-Napoca

TuOR2S	Room T1
Automated Vehicles and Collision Avoidance (Regular Session)	
Chair: Stiller, Christoph	Karlsruhe Inst. of Tech.

13:50-14:10	TuOR2S.1

Generation and Exploitation of Local Orthographic Imagery for Road Vehicle Localisation, pp. 590-596.

Napier, Ashley	Univ. of Oxford
Newman, Paul	Univ. of Oxford

14:10-14:30	TuOR2S.2

Planning Autonomous Vehicles in the Absence of Speed Lanes Using Lateral Potentials, pp. 597-602.

Kala, Rahul	Univ. of Reading
Warwick, Kevin	Univ. of Reading

14:30-14:50	TuOR2S.3

Object-Related-Navigation for Mobile Robots, pp. 603-610.

| Mueller, Andre | Univ. of the Bundeswehr Munich |
| Wuensche, Hans Joachim | Univ. Bw Munich |

| 14:50-15:10 | TuOR2S.4 |

Improving Information Dissemination in Sparse Vehicular Networks by Adding Satellite Communication, pp. 611-617.

Spijker, Hanno	Univ. of Twente
Kloiber, Bernhard	German Aerospace Center (DLR)
Strang, Thomas	German Aerospace Center (DLR)
Heijenk, Geert	Univ. of Twente

TuPO4S	Room T1
Poster Session IV (Poster Session)	
Chair: Yebes Torres, José Javier	Univ. of Alcalá

| 15:10-16:40 | TuPO4S.1 |

Vision-Based Drowsiness Detector for Real Driving Conditions, pp. 618-623.

García Daza, Iván	Univ. of Alcala
Bronte, Sebastian	Univ. de Alcalá
Bergasa, Luis M.	Univ. of Alcala
Almazán, Javier	Univ. of Alcalá
Yebes Torres, José Javier	Univ. of Alcalá

| 15:10-16:40 | TuPO4S.2 |

Distributed Skip Air Index for Smart Broadcasting in Intelligent Transportation Systems, pp. 624-629.

| Maglaras, Leandros | Univ. of Thessaly |
| Katsaros, Dimitrios | Univ. of Thessaly |

| 15:10-16:40 | TuPO4S.3 |

Real-Time Detection and Tracking of Pedestrians at Intersections Using a Network of Laserscanners, pp. 630-635.

Meissner, Daniel Alexander	Univ. of Ulm
Reuter, Stephan	Univ. of Ulm
Dietmayer, Klaus	Univ. of Ulm

| 15:10-16:40 | TuPO4S.4 |

A Joint Integrated Probabilistic Data Association Filter for Pedestrian Tracking across Blind Regions Using Monocular Camera and Radar, pp. 636-641.

Otto, Carola	Karlsruhe Inst. of Tech. Daimler AG
Gerber, Wladimir	Karlsruhe Inst. of Tech.
Puente León, Fernando	Karlsruhe Inst. of Tech.
Wirnitzer, Jan	Daimler AG

| 15:10-16:40 | TuPO4S.5 |

Extrinsic Calibration of a Camera and a Lidar Based on Decoupling the Rotation from the Translation, pp. 642-648.

| Zhou, Lipu | Tsinghua Univ. |
| Deng, Zhidong | Tsinghua Univ. |

| 15:10-16:40 | TuPO4S.6 |

Motion-Without-Structure: Real-Time Multipose Optimization for Accurate Visual Odometry, pp. 649-654.

Lategahn, Henning	Inst. of Measurement & Control
Geiger, Andreas	Karlsruhe Inst. of Tech.
Kitt, Bernd	KIT
Stiller, Christoph	Karlsruhe Inst. of Tech.

| 15:10-16:40 | TuPO4S.7 |

Identification of Target Populations for Current Active Safety Systems Using Driver Behavior, pp. 655-660.

| Kusano, Kristofer | Virginia Tech. |
| Gabler, Hampton Clay | Virginia Tech. |

| 15:10-16:40 | TuPO4S.8 |

Experts of Probabilistic Flow Subspaces for Robust Monocular Odometry in Urban Areas, pp. 661-667.

| Herdtweck, Christian | Max Planck Inst. for Biological Cybernetics |
| Curio, Cristobal | Max Planck Inst. for Biological Cybernetics |

15:10-16:40	TuPO4S.9

Mono-Camera Based Pitch Rate Estimation in Nighttime Scenarios, pp. 668-673.

Schüle, Florian	Daimler AG
Schweiger, Roland	Daimler AG
Dietmayer, Klaus	Univ. of Ulm
Hartmann, Oliver	Daimler AG

15:10-16:40	TuPO4S.10

A New Collision Warning System for Lead Vehicles in Rear-End Collisions, pp. 674-679.

Cabrera, Adrian	EPFL
Gowal, Sven	EPFL
Martinoli, Alcherio	EPFL

15:10-16:40	TuPO4S.11

Multiple-Vehicle Longitudinal Collision Avoidance and Impact Mitigation by Active Brake Control, pp. 680-685.

Lu, Xiao-Yun	Univ. of California, Berkeley
Wang, Jianqiang	Tsinghua Univ.

15:10-16:40	TuPO4S.12

Lessons from a Minimal Middleware for IP-Based In-Car Communication, pp. 686-691.

Weckemann, Kay	BMW Group Res. and Tech.
Satzger, Florian August	BMW Group Res. and Tech.
Stolz, Lothar	BMW Group Res. and Tech.
Herrscher, Daniel	BMW Group Res. and Tech.
Linnhoff-Popien, Claudia	LMU Munich

15:10-16:40	TuPO4S.13

360 Degree Multi Sensor Fusion for Static and Dynamic Obstacles, pp. 692-697.

Schueler, Kai	Tech. Univ. of Munich
Weiherer, Tobias	TU München
Bouzouraa, Mohamed Essayed	AUDI AG
Hofmann, Ulrich	Audi AG Ingolstadt

15:10-16:40	TuPO4S.14

Free Space and Speed Humps Detection Using Lidar and Vision for Urban Autonomous Navigation, pp. 698-703.

Fernandez Lopez, Carlos	Univ. of Alcalá
Gavilán Velasco, Miguel	Univ. of Alcala
Fernandez Llorca, David	Univ. of Alcala
Quintero Mínguez, Raúl	Univ. of Alcalá
Parra Alonso, Ignacio	Univ. de Alcala
Vlacic, Ljubo	Griffith Univ.
Sotelo, Miguel A.	Univ. of Alcala
García Lorente, Alejandro	Univ. of Alcalá

15:10-16:40	TuPO4S.15

A Track-To-Track Association Method for Automotive Perception Systems, pp. 704-710.

Houenou, Adam	Univ. of Tech. of Compiegne
Bonnifait, Philippe	Univ. of Tech. of Compiegne
Cherfaoui, Véronique	Univ. Tech. Compiègne
Boissou, Jean-François	PSA Peugeot Citroën

15:10-16:40	TuPO4S.16

COL: A Data Collection Protocol for VANET, pp. 711-716.

Dieudonne, Yoann	Univ. de Picardie Jules Vernes
Ducourthial, Bertrand	Univ. de Tech. de Compiègne (UTC)
Senouci, Sidi-Mohammed	Univ. de Bourgogne

15:10-16:40	TuPO4S.17

Real-Time Dynamic Environment Perception in Driving Scenarios Using Difference Fronts, pp. 717-722.

Vatavu, Andrei	Tech. Univ. of Cluj-Napoca
Danescu, Radu Gabriel	Tech. Univ. of Cluj-Napoca
Nedevschi, Sergiu	Tech. Univ. of Cluj-Napoca

15:10-16:40	TuPO4S.18

Autonomous Driving for Vehicular Networks with Nonlinear Dynamics, pp. 723-729.

    Iftekhar, Lamia — Dartmouth Coll.

    Olfati-Saber, Reza — Dartmouth Coll.

15:10-16:40	TuPO4S.19

Probe Vehicle Data for Characterizing Road Conditions Associated with Inclement Weather to Improve Road Maintenance Decisions, pp. 730-735.

    Hainen, Alexander — Purdue Univ.

    Remias, Stephen — Purdue Univ.

    Brennan, Thomas — Purdue Univ.

    Day, Christopher — Purdue Univ.

    Bullock, Darcy — Purdue Univ.

15:10-16:40	TuPO4S.20

Stereo Based Visual Odometry in Difficult Traffic Scenes, pp. 736-741.

    Golban, Catalin — Tech. Unversity of Cluj-Napoca

    Szakats, Istvan — Tech. Univ. Cluj Napoca

    Nedevschi, Sergiu — Tech. Univ. of Cluj-Napoca

15:10-16:40	TuPO4S.21

Illumination Invariance for Driving Scene Optical Flow Using Comparagram Preselection, pp. 742-747.

    Dederscheck, David — Goethe Univ. Frankfurt

    Mueller, Thomas — Goethe-Univ. Frankfurt am Main

    Mester, Rudolf — Univ. Frankfurt

15:10-16:40	TuPO4S.22

Visible Light Communications in Intelligent Transportation Systems, pp. 748-753.

    Kumar, Navin — Inst. of Telecommunication, Univ. of Aveiro, Portugal

    Lourenço, Nuno — Inst. de Telecomunicações

    Terra, Domingos — Inst. de Telecomunicações - Aveiro

    Alves, Luis Nero — IT / Univ. de Aveiro

    Aguiar, Rui L — Inst. de Telecomunicações, Univ. de Aveiro

15:10-16:40	TuPO4S.23

Robust Extraction of Lane Markings Using Gradient Angle Histograms and Directional Signed Edges, pp. 754-759.

    Satzoda, Ravi Kumar — Nanyang Tech. Univ.

    Sathyanarayana, Suchitra — Nanyang Tech. Univ.

    Thambipillai, Srikanthan — Nanyang Tech. Univ.

15:10-16:40	TuPO4S.24

Obstacle Detection Using Sparse Stereovision and Clustering Techniques, pp. 760-765.

    Kramm, Sebastien — INSA Rouen

    Bensrhair, Abdelaziz — INSA de Rouen

15:10-16:40	TuPO4S.25

Vehicle Detection Using Discriminatively Trained Part Templates with Variable Size, pp. 766-771.

    Tehrani Nik Nejad, Hossein — DENSO Corp.

    Kawano, Taiki — Toyota Tech. Inst.

    Mita, Seiichi — Toyota Tech. Inst.

    Shimizu, Mikio — DENSO Corp.

15:10-16:40	TuPO4S.26

Multirate Active Steering Control for Autonomous Vehicle Lateral Maneuvering, pp. 772-777.

    Lee, Seung-Hi — Hanyang Univ.

    Lee, Young Ok — Hanyang Univ.

    Son, YoungSeop — Mando

    Chung, Chung Choo — Hanyang Univ.

15:10-16:40	TuPO4S.27

Drivable Space Characterization Using Automotive Lidar and Georeferenced Map Information, pp. 778-783.

    Moras, Julien — Heudiasyc UMR 6599 Univ. de Tech. de Compiègne

Rodriguez Florez, Sergio Alberto   Univ. Paris Sud. Inst. d'Electronique Fondamentale UMR 8

Drevelle, Vincent   Univ. of Tech. of Compiegne

Dherbomez, Gerald   CNRS HEUDIASYC

Cherfaoui, Véronique   Univ. Tech. Compiègne

Bonnifait, Philippe   Univ. of Tech. of Compiegne

Technical Program for Wednesday June 6, 2012

WePO5S	Room T1
Poster Session V (Poster Session)	
Chair: Maldonado-Bascón, Saturnino	Univ. de Alcalá

09:50-11:20	WePO5S.1

Multipath Mitigation in GNSS-Based Localization Using Robust Optimization, pp. 784-789.

Sünderhauf, Niko	Chemnitz Univ. of Tech.
Obst, Marcus	Chemnitz Univ. of Tech.
Protzel, Peter	Chemnitz Univ. of Tech.
Wanielik, Gerd	Chemnitz Univ. of Tech.

09:50-11:20	WePO5S.2

Improving Moving Objects Tracking Using Road Model for Laser Data, pp. 790-795.

Baig, Qadeer	UJF
Aycard, Olivier	Univ. Grenoble1

09:50-11:20	WePO5S.3

Detection & Classification of Arrow Markings on Roads Using Signed Edge Signatures, pp. 796-801.

Sathyanarayana, Suchitra	Nanyang Tech. Univ.
Satzoda, Ravi Kumar	Nanyang Tech. Univ.
Thambipillai, Srikanthan	Nanyang Tech. Univ.

09:50-11:20	WePO5S.4

Detection, Classification and Tracking of Moving Objects in a 3D Environment, pp. 802-807.

Azim, Asma	Univ. of Grenoble I
Aycard, Olivier	Univ. Grenoble1

09:50-11:20	WePO5S.5

A Platform for the Development and Evaluation of Passive Safety Applications, pp. 808-813.

Szczurek, Piotr	Univ. of Illinois at Chicago
Xu, Bo	Univ. of Illinois at Chicago
Wolfson, Ouri	Univ. of Illinois at Chicago
Lin, Jie (Jane)	Univ. of Illinois at Chicago

09:50-11:20	WePO5S.6

Co-Training of Context Models for Real-Time Vehicle Detection, pp. 814-820.

Gepperth, Alexander	Ec. National Superieure de Tech. Avancées

09:50-11:20	WePO5S.7

Lateral Stability Analysis of On-Road Vehicles Using Lyapunov's Direct Method, pp. 821-826.

Sadri, Sobhan	The Univ. of Manitoba
Wu, Christine Qiong	Univ. of Manitoba

09:50-11:20	WePO5S.8

Leaks Detection and Characterization in Diesel Air Path Using Levenberg-Marquardt Neural Networks, pp. 827-832.

Benkaci, Mourad	IRSEEM-ESIGELEC
Hoblos, Ghaleb	IRSEEM/ESIGELEC
Bencherif, Karim	RENAULT

09:50-11:20	WePO5S.9

Validation of Reference Laboratories to Place in Service Railway Projects (Tracks and Trains), pp. 833-836.

Tamarit, Jaime	CEDEX / LIF
Bueno, Jose	CEDEX / LIF
Molina, Daniel	CEDEX / LIF

09:50-11:20	WePO5S.10

Empirical IEEE 802.11p Performances Evaluation on Test Tracks, pp. 837-842.

Demmel, Sébastien	QUT & IFSTTAR
Lambert, Alain	IFSTTAR
Gruyer, Dominique	IFSTTAR
Rakotonirainy, Andry	Queensland Univ. of Tech.

Monacelli, Eric	Univ. de Versailles Saint-Quentin-en-Yvelines

09:50-11:20	WePO5S.11

3-Layer Fault Tolerance Strategy in 6x6 Hybrid Electric Vehicle Which Has Independent Steering and In-Wheel Drives, pp. 843-848.

Chae, Heeseo	Samsung Tech.
Nah, Jaewon	Seoul National Univ.
Hong, Ji Tae	Samsung Tech.
Lee, Dae Ok	Agency for Defense Development

09:50-11:20	WePO5S.12

Semiotic Prediction of Driving Behavior Using Unsupervised Double Articulation Analyzer, pp. 849-854.

Taniguchi, Tadahiro	Ritsumeikan Univ.
Nagasaka, Shogo	Ritsumeikan Univ.
Hitomi, Kentarou	Toyota InfoTechnology Center Co.,Ltd.
Naiwala P., Chandrasiri	Toyota InfoTechnology Center
Bando, Takashi	DENSO Corp.

09:50-11:20	WePO5S.13

Vehicle Detection and Tracking Using Mean Shift Segmentation on Semi-Dense Disparity Maps, pp. 855-860.

Lefebvre, Sébastien	IFSTTAR
Ambellouis, Sebastien	Inst. of Res.

09:50-11:20	WePO5S.14

Cooperative Driving in Mixed Traffic Networks – Optimizing for Performance, pp. 861-866.

Calvert, Simeon Craig	TNO
Van den Broek, Thijs Hendrikus Adrianus	TNO
van Noort, Martijn	TNO

09:50-11:20	WePO5S.15

Satellite Image Based Topological Map Building Method for Intelligent Mobile Robots, pp. 867-872.

Lee, Yu-Cheol	ETRI
Christiand, Christiand	Department of Robot Cognition and System, ETRI
Yu, Wonpil	ETRI
Kim, Sunghoon	ETRI

09:50-11:20	WePO5S.16

Adaptive Visual Memory for Mobile Robot Navigation in Dynamic Environment, pp. 873-878.

Courbon, Jonathan	Inst. Pascal
Mezouar, Youcef	LASMEA
Korrapati, Hemanth	Inst. Pascal

09:50-11:20	WePO5S.17

Effectiveness Study of Cooperative Sensor Systems for VRU-Safety, pp. 879-884.

Kloeden, Horst	BMW Group Res. and Tech.
Schwarz, Daniel	BMW Group
Biebl, Erwin	Tech. Univ. München
Rasshofer, Ralph	BMW Forschung und Tech. GmbH

09:50-11:20	WePO5S.18

Learning Lane Change Trajectories from On-Road Driving Data, pp. 885-890.

Yao, Wen	Peking Univ.
Zhao, Huijing	Peking Univ.
Davoine, Franck	CNRS LIAMA Sino French Lab.
Zha, Hongbin	Peking Univ.

09:50-11:20	WePO5S.19

Google Street View Images Support the Development of Vision-Based Driver Assistance Systems, pp. 891-895.

Salmen, Jan	Ruhr-Univ. Bochum
Houben, Sebastian	Ruhruniversität Bochum
Schlipsing, Marc	Ruhr-Univ. Bochum

09:50-11:20	WePO5S.20

Optimal Experts' Knowledge Selection for Intelligent Driving Risk Detection Systems, pp. 896-901.

Martín de Diego, Isaac	Univ. Rey Juan Carlos
S. Siordia, Oscar	Univ. Rey Juan Carlos
Conde, Cristina	Univ. Rey Juan Carlos
Cabello, Enrique	Univ. Rey Juan Carlos

09:50-11:20	WePO5S.21

Smart City for VANETs Using Warning Messages, Traffic Statistics and Intelligent Traffic Lights, pp. 902-907.

Tripp Barba, Carolina	Univ. Pol. de Catalunya (UPC)
Mateos, Miguel Ángel	Univ. Pol. de Catalunya (UPC)
Regañas Soto, Pablo	Univ. Pol. de Catalunya (UPC)
Mezher, Ahmad Mohamad	Univ. Pol. de Catalunya (UPC)
Aguilar Igartua, Mónica	Univ. Pol. de Catalunya (UPC)

09:50-11:20	WePO5S.22

An Optimization Model for Microscopic Centralized Traffic Management of Intelligent Vehicles in a Segment of a Single Lane Highway, pp. 908-913.

Reghelin, Ricardo	Univ. Tecnológica Federal do Paraná
Arruda, Lúcia Valéria Ramos	Univ. Tecnológica Federal do Paraná (UTFPR)

09:50-11:20	WePO5S.23

Monitoring and Predicting Charging Behaviour for Electric Vehicles, pp. 914-919.

Hill, Graeme	NEWCASTLE Univ.
Blythe, Phil	Univ. of Newcastle

09:50-11:20	WePO5S.24

Effects of Discomfort Glare on Peripheral Visual Attention in a Driving Simulator, pp. 920-925.

Huang, Ying-Yin	ETH Zurich
Menozzi, Marino	ETH Zurich

09:50-11:20	WePO5S.25

Performance Analysis of a Scalable Navigation Solution Using Vehicle Safety Sensors, pp. 926-931.

Martin, Scott	Auburn Univ.
Rose, Christopher	Auburn Univ.
Britt, Jordan	Auburn Univ.
Bevly, David	Auburn Univ.
Popovic, Zeljko	Honda R & D Americas, Inc.

09:50-11:20	WePO5S.26

Advanced Intersection Management for Connected Vehicles Using a Multi-Agent Systems Approach, pp. 932-937.

Jin, Qiu	Univ. of California, Riverside
Wu, Guoyuan	Univ. of California-Riverside
Boriboonsomsin, Kanok	Univ. of California-Riverside
Barth, Matthew	Univ. of California-Riverside

09:50-11:20	WePO5S.27

Development of 'Intelligent Pioneer' Unmanned Vehicle, pp. 938-943.

Mei, Tao	Chinese Acad. of Sciences

WeOR1S	Room T1
Driver Assistance Systems II (Regular Session)	
Chair: Wanielik, Gerd	Chemnitz Univ. of Tech.

11:20-11:40	WeOR1S.1

Effectiveness of Forward Collision Warnings for Different Driver Attention States, pp. 944-949.

Ovcharova, Neli	Robert Bosch GmbH
Fausten, Michael	Robert Bosch GmbH
Gauterin, Frank	Inst. of Vehicle System Tech. Karlsruhe Inst. of T

11:40-12:00	WeOR1S.2

An Approach to Automotive ECG Measurement Validation Using a Car-Integrated Test Framework, pp. 950-955.

Schneider, Johannes	FZI Res. Center for Information Tech.

| Köllner, Christian | FZI Res. Center for Information Tech. |
| Heuer, Stephan | FZI Res. Center for Information Tech. |

| 12:00-12:20 | WeOR1S.3 |

An Evaluation of Boosted Features for Vehicle Detection, pp. 956-961.

Liu, Liwei	Tsinghua Univ.
Duan, Genquan	Tsinghua Univ.
Ai, Haizhou	Tsinghua Univ.
Lao, Shihong	OMRON Social Solutions Co., LTD.

| 12:20-12:40 | WeOR1S.4 |

Generalized Probabilistic Data Association for Vehicle Tracking under Clutter, pp. 962-968.

Schubert, Robin	BASELABS GmbH
Adam, Christian	Chemnitz Univ. of Tech.
Richter, Eric	BASELABS GmbH
Bauer, Sven	Chemnitz Univ. of Tech.
Lietz, Holger	Chemnitz Univ. of Tech.
Wanielik, Gerd	Chemnitz Univ. of Tech.

| **WeOR2S** | Room T1 |

Sensors (Regular Session)

| Chair: Himmelsbach, Michael | Univ. of the Bundeswehr, Munich |

| 13:50-14:10 | WeOR2S.1 |

Modeling and Validation of a New Generic Virtual Optical Sensor for ADAS Prototyping, pp. 969-974.

Gruyer, Dominique	IFSTTAR
Grapinet, Mélanie	IFSTTAR - LEMCO
Desouza, Philippe	CIVITEC

| 14:10-14:30 | WeOR2S.2 |

Lane Recognition for Moving Vehicles Using Multiple On-Car RFID Receiver Antennas - Algorithm and Its Experimental Results, pp. 975-981.

Togashi, Hiroaki	The Graduate Univ. for Advanced Studies
Borcea, Cristian	New Jersey Inst. of Tech.
Yamada, Shigeki	National Inst. of Informatics

| 14:30-14:50 | WeOR2S.3 |

Noise Model for Car-Embedded Speech Acquisition System Design, pp. 982-986.

Ayllon, David	Univ. of Alcala
Gil-Pita, Roberto	Univ. of Alcala
Utrilla-Manso, Manuel	Univ. of Alcala
Rosa-Zurera, Manuel	Univ. of Alcala

| 14:50-15:10 | WeOR2S.4 |

Accident Reproduction System for the Identification of Human Factors Involved on Traffic Accidents, pp. 987-992.

S. Siordia, Oscar	Univ. Rey Juan Carlos
Martín de Diego, Isaac	Univ. Rey Juan Carlos
Conde, Cristina	Univ. Rey Juan Carlos
Cabello, Enrique	Univ. Rey Juan Carlos

| **WePO6S** | Room T1 |

Poster Session VI (Poster Session)

| Chair: Guo, Chunzhao | Toyota Tech. Inst. |

| 15:10-16:40 | WePO6S.1 |

Indoor Micro Navigation Utilizing Local Infrastructure-Based Positioning, pp. 993-998.

Einsiedler, Jens	Fraunhofer Inst. for Open Communication Systems
Sawade, Oliver	Fraunhofer Inst. for Open Communication Systems
Schäufele, Bernd	Daimler Center for Automotive Information Tech.
Witzke, Marcus	Daimler Center for Automotive Information Tech. Innovations

Radusch, Ilja   Daimler Center for Automotive Information Tech. Innovations

| 15:10-16:40 | WePO6S.2 |

Sensor Clouds for Intelligent Truck Monitoring, pp. 999-1004.

Zingirian, Nicola   Univ. of Padova
Valenti, Carlo   Click & Find s.r.l.

| 15:10-16:40 | WePO6S.3 |

Driving Coach: A Smartphone Application to Evaluate Driving Efficient Patterns, pp. 1005-1010.

Araújo, Rui   Faculdade de Engenharia da Univ. do Porto
Igreja, Ângela   Faculdade de Engenharia da Univ. do Porto
de Castro, Ricardo   Faculdade de Engenharia da Univ. do Porto
Esteves Araújo, Rui   Faculdade de Engenharia, Univ. do Porto

| 15:10-16:40 | WePO6S.4 |

Driver'a Authority Monitoring System for Intelligent Vehicles: A Feasibility Study, pp. 1011-1016.

Uluer, Pinar   Galatasaray Univ.
Gocmenoglu, Can   Galatasaray Univ.
Acarman, Tankut   Galatasaray Univ.

| 15:10-16:40 | WePO6S.5 |

Evaluation of Compression Algorithms for Automotive Stereo Matching, pp. 1017-1022.

Forster, Julian   Daimler AG
Jiang, Xin   Tech. Univ. of Munich
Terzis, Anestis   Ulm Univ. of Applied Sciences
Rothermel, Albrecht   Univ. of Ulm

| 15:10-16:40 | WePO6S.6 |

Modular Approach to Energy Efficient Driver Assistance Incorporating Driver Acceptance, pp. 1023-1028.

Themann, Philipp   Inst. für Kraftfahrzeuge, RWTH Aachen Univ.
Eckstein, Lutz   RWTH Aachen

| 15:10-16:40 | WePO6S.7 |

Fast Iterative Closest Point Framework for 3D LIDAR Data in Intelligent Vehicle, pp. 1029-1034.

Choi, Won-Seok   POSTECH
Kim, Yang-Shin   POSTECH
Oh, SeYoung   Pohang Univ. of Science and Tech.
Lee, Jeihun   LG Electronics Advanced Res. Inst.

| 15:10-16:40 | WePO6S.8 |

Real-Time Pedestrian Detection with Deformable Part Models, pp. 1035-1042.

Cho, Hyunggi   Carnegie Mellon Univ.
Rybski, Paul   Carnegie Mellon Univ.
Bar Hillel, Aharon   General Motors
Zhang, Wende   GM R&D

| 15:10-16:40 | WePO6S.9 |

DAARIA: Driver Assistance by Augmented Reality for Intelligent Automobile, pp. 1043-1048.

George, Paul   Univ. de Tech. de Compiègne
Thouvenin, Indira   Heudiasyc CNRS Lab. Univ. of Tech. Compiegne
Fremont, Vincent   Univ. de Tech. de Compiègne
Cherfaoui, Véronique   Univ. Tech. Compiègne

| 15:10-16:40 | WePO6S.10 |

Modeling Car-Following Behavior As Instantaneous Maximization of Drivers' Utility for Estimation of Traffic Level of Service, pp. 1049-1054.

Kasai, Makoto   Tokyo Univ. of Science

| 15:10-16:40 | WePO6S.11 |

Visible Light Communications: Application to Cooperation between Vehicles and Road Infrastructures, pp. 1055-1059.

Cailean, Alin Mihai   Univ. of Versailles, LISV
Cagneau, Barthélemy   LISV - Univ. de Versailles
Chassagne, Luc   LISV-Univ. de Versailles

Topsu, Suat	Univ. of Versailles
Alayli, Yasser	LISV - Univ. de Versailles
Blosseville, Jean-marc	IFSTTAR

15:10-16:40	WePO6S.12

Moving Objects Detection and Recognition Using Sparse Spatial Information in Urban Environments, pp. 1060-1065.

Li, You	Univ. de Tech. de Belfort-Montbeliard
Ruichek, Yassine	Univ. of Tech. of Belfort-Montbeliard

15:10-16:40	WePO6S.13

Efficient Stixel-Based Object Recognition, pp. 1066-1071.

Enzweiler, Markus	Daimler AG
Hummel, Matthias	Daimler AG
Pfeiffer, David	Daimler AG
Franke, Uwe	Daimler AG

15:10-16:40	WePO6S.14

An Embedded Calibration Stereovision System, pp. 1072-1077.

Jia, Yunde	Beijing Inst. of Tech.
Qin, Xiameng	Beijing Inst. of Tech.

15:10-16:40	WePO6S.15

Practical Testing Application of Travel Time Estimation Using Applied Monte Carlo Method and Adaptive Estimation from Probes, pp. 1078-1083.

Hadachi, Amnir	INSA DE ROUEN
Mousset, Stéphane	INSA/Univ. de ROUEN
Bensrhair, Abdelaziz	National Inst. of Applied Sciences- Rouen,

15:10-16:40	WePO6S.16

A Novel Multi-Lane Detection and Tracking System, pp. 1084-1089.

Zhao, Kun	Univ. Duisburg-Essen
Meuter, Mirko	Delphi Electronics & Safety
Nunn, Christian	Delphi Electronics and Safety
Mueller, Dennis	Delphi Electronics & Safety
Müller-Schneiders, Stefan	Delphi Deutschland GmbH
Pauli, Josef	Univ. Duisburg-Essen

15:10-16:40	WePO6S.17

Fast Visual Road Recognition and Horizon Detection Using Multiple Artificial Neural Networks, pp. 1090-1095.

Shinzato, Patrick	Univ. of Sao Paulo
Wolf, Denis	Univ. of Sao Paulo
Osorio, Fernando	USP - Univ. of Sao Paulo
Grassi Jr, Valdir	Univ. of Sao Paulo

15:10-16:40	WePO6S.18

Driver Behavior Monitoring System Based on Traffic Violation, pp. 1096-1101.

Aliane, Nourdine	Univ. Europea de Madrid
Fernandez, Javier	Univ. Europea de Madrid
Bemposta Rosende, Sergio	Univ. Europea de Madrid
Mata, Mario	Univ. europea de madrid

15:10-16:40	WePO6S.19

Detection of Abnormal Driving Using Multiple View Geometry in Space-Time, pp. 1102-1107.

Saruwatari, Kota	Nagoya Inst. of Tech.
Sakaue, Fumihiko	Nagoya Inst. of Tech.
Sato, Jun	Nagoya Inst. of Tech.

15:10-16:40	WePO6S.20

Path Following with Backtracking Based on Fuzzy Controllers for Fordward and Reverse Driving, pp. 1108-1113.

Pérez, Joshué	Automation and Robotics Centre
Godoy, Jorge	Automation and Robotics Centre
Milanés, Vicente	AUTOPIA program, CAR
Villagra, Jorge	Automation and Robotics Centre

Onieva, Enrique	Center for Automation and Robotics

15:10-16:40	WePO6S.21

Development of a Particle Swarm Algorithm for Vehicle Localization, pp. 1114-1119.

Godoy, Jorge	Automation and Robotics Centre
Gruyer, Dominique	IFSTTAR
Lambert, Alain	IFSTTAR
Villagra, Jorge	Automation and Robotics Centre

15:10-16:40	WePO6S.22

Intensity Self Similarity Features for Pedestrian Detection in Far-Infrared Images, pp. 1120-1125.

Miron, Alina	INSA
Besbes, Bassem	National Inst. for Applied Sciences- Rouen
Rogozan, Alexandrina	National Inst. of Applied Sciences- Rouen
Ainouz-Zemouche, Samia	LITIS Lab. INSA de Rouen
Bensrhair, Abdelaziz	National Inst. of Applied Sciences- Rouen,

15:10-16:40	WePO6S.23

Kinematic Constraints in Visual Odometry of Intelligent Vehicles, pp. 1126-1131.

Jiang, Yanhua	Beijing Inst. of Tech.
Chen, Huiyan	Beijing Inst. of Tech.
Xiong, Guangming	Beijing Inst. of Tech.
Gong, Jianwei	Massachusetts Inst. of Tech.
Jiang, Yan	Beijing Inst. of Tech.

15:10-16:40	WePO6S.24

Image Based Fog Detection in Vehicles, pp. 1132-1137.

Pavlic, Mario	BMW Group
Belzner, Heidrun	BMW Group
Rigoll, Gerhard	Munich Univ. of Tech.
Ilic, Slobodan	Tech. Univ. München

15:10-16:40	WePO6S.25

An Empirical Study on Optical Flow Accuracy Depending on Vehicle Speed, pp. 1138-1143.

Onkarappa, Naveen	Computer Vision Center
Sappa, Angel D.	Computer Vision Center

15:10-16:40	WePO6S.26

Model-Based Detection and Tracking of Vehicle Using a Scanning Laser Rangefinder: A Particle Filtering Approach, pp. 1144-1149.

Noyer, Jean Charles	Univ. Lille Nord de France
Wahl, Martine	Univ. Lille Nord de France, IFSTTAR, LEOST
Vanpoperinghe, Elodie	Univ. Lille Nord de France, IFSTTAR, LEOST

15:10-16:40	WePO6S.27

Numerical Modeling of ADA System for Vulnerable Road Users Protection Based on Radar and Vision Sensing, pp. 1150-1155.

Ruiz Garate, Virginia	Univ. Catholique de Louvain (UCL)
Bours, Roy C.H.	TNO Automotive Safety Solutions
Kietlinski, Kajetan Krzysztof	TASS Germany GmbH

15:10-16:40	WePO6S.28

Robotic Wheeled Vehicle Ripple Tentacles Motion Planning Method, pp. 1156-1161.

Yu, Hongxiao	Beijing Univ. of Tech.
Gong, Jianwei	Massachusetts Inst. of Tech.
Iagnemma, Karl	Massachusetts Inst. of Tech.
Jiang, Yan	Beijing Inst. of Tech.
Duan, Jianmin	Beijing Univ. of Tech.

WeOR3S	Room T1
Active and Passive Safety (Regular Session)	
Chair: Mugnai, Alexandre	TASS

16:40-17:00	WeOR3S.1

Driver Intent Inference at Urban Intersections Using the Intelligent Driver Model, pp. 1162-1167.

Liebner, Martin	BMW Group Res. and Tech.
Baumann, Michael	BMW Group Res. and Tech.
Klanner, Felix	BMW Group
Stiller, Christoph	Karlsruhe Inst. of Tech.

17:00-17:20	WeOR3S.2

Field of Safe Travel: Using Location and Motion Information to Increase Driver Acceptance of Pedestrian Alerts, pp. 1168-1172.

Smith, Kip	Cognitive Engineering and Decision Making, Inc
Källhammer, Jan-Erik	Autoliv Development AB

17:20-17:40	WeOR3S.3

A Novel Approach for the Probabilistic Computation of Time-To-Collision, pp. 1173-1178.

Berthelot, Adam	Daimler AG
Tamke, Andreas	Daimler AG
Dang, Thao	Daimler AG
Breuel, Gabi	Daimler AG

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