

2015 IEEE Intelligent Vehicles Symposium

(IV 2015)

**Seoul, South Korea
28 June – 1 July 2015**

Pages 1-699



**IEEE Catalog Number: CFP15IVS-POD
ISBN: 978-1-4673-7267-1**

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Ravi Kumar Satzoda, Mohan M. Trivedi (University of California at San Diego), Pujitha Gunaratne (Toyota Research Institute North America)

10:50-12:30, TuPoAT1.9

9. Snap-DAS: A Vision-Based Driver Assistance System on a Snapdragon Embedded Platform 660

Ravi Kumar Satzoda, Sean Lee, Frankie Lu, Mohan M. Trivedi (University of California at San Diego)

10:50-12:30, TuPoAT1.10

10. Autonomous Driving at Ulm University: A Modular, Robust, and Sensor-Independent Fusion Approach 666

Felix Kunz, Dominik Nuss, Juergen Wiest, Hendrik Deusch, Stephan Reuter, Alexander Scheel, Manuel Stuebler, Cornelius Wild, Klaus Dietmayer (University of Ulm), Franz Gritschneider, Martin Bach, Patrick Hatzelmann (Inst. of Measurement, Control and Microtechnology)

10:50-12:30, TuPoAT1.11

11. Local Trajectory Planning and Tracking for Autonomous Vehicle Navigation Using Clothoid Tentacles Method 674

Alia Chebly, Gilles Tagne, Reine Talj, Ali Charara (Université de Technologie de Compiègne)

10:50-12:30, TuPoAT1.12

12. Lane Map Building and Localization for Automated Driving Using 2D Laser Rangefinder 680

Dongwook Kim, Kyongsu Yi (Seoul National University), Taeyoung Jung (Hyundai Mobis)

10:50-12:30, TuPoAT1.13

13. Robust Stereo Visual Odometry from Monocular Techniques 686

Mikael Persson, Tommaso Piccini, Michael Felsberg (Linköping University), Rudolf Mester (University Frankfurt)

10:50-12:30, TuPoAT1.14

14. The Deeva Autonomous Vehicle Platform 692

Alberto Broggi, Stefano Debattisti, Paolo Grisleri, Matteo Panciroli (University of Parma)

10:50-12:30, TuPoAT1.15

15. A Constrained VFH Algorithm for Motion Planning of Autonomous Vehicles 700

Panrang Qu, Jianru Xue, Liang Ma, Chao Ma (Xi'an Jiaotong Univ)

10:50-12:30, TuPoAT1.16

16. Map Free Lane Following Based on Low-Cost Laser Scanner for Near Future Autonomous Service Vehicle 706

Zhiwei Song, Weiwei Huang, Ning Wu, Xiaojun WU, Chern Yuen Anthony Wong, Vincensius Billy Saputra, Benjamin Chia, Jian Simon Chen, Qun Zhang, Susu Yao, Boon Siew Han (Agency for Science, Technology and Research)

10:50-12:30, TuPoAT1.17

17. Evidential Occupancy Grid Mapping with Stereo-Vision 712

Chunlei Yu, Véronique Cherfaoui, Philippe Bonnifait (Universite de Technologie de Compiene)

10:50-12:30, TuPoAT1.18

18. Optimizing Fuel Economy of Hybrid Electric Vehicles Using a Markov Decision Process Model 718

Xue Lin, Yanzhi Wang, Paul Bogdan, Massoud Pedram (University of Southern California), Naehyuck Chang (KAIST)

10:50-12:30, TuPoAT1.19

19. Energy Optimal Adaptive Cruise Control During Following of Other Vehicles 724

Folko Flehmig, Amir Sardari, Uta Fischer, Andreas Wagner (Robert Bosch GmbH)

10:50-12:30, TuPoAT1.20

20. Optimal Energy Consumption Algorithm Based on Speed Reference Generation for Urban Electric Vehicles 730

Carlos Flores, Vicente Milanés, Joshué Pérez Rastelli, David González Bautista, Fawzi Nashashibi (INRIA)

10:50-12:30, TuPoAT1.21

21. Efficient Vehicle Driving on Multi-Lane Roads Using Model Predictive Control under a Connected Vehicle Environment 736

Md. Abdus Samad Kamal, Takayoshi Yoshimura, Shun Taguchi (Toyota Central R&D Labs., Inc)

10:50-12:30, TuPoAT1.22

22. Optimal Parameter Selection of a Model Predictive Control Algorithm for Energy Efficient Driving of Heavy Duty Vehicles 742

Michael Henzler (Daimler AG), Michael Buchholz, Klaus Dietmayer (University of Ulm)

10:50-12:30, TuPoAT1.23

23. Improved Energy Efficiency and Vehicle Dynamics for Battery Electric Vehicles through Torque Vectoring Control 749

Stefan Köhler, Alexander Viehl (Forschungszentrum Informatik Karlsruhe), Oliver Bringmann, Wolfgang Rosenstiel (Eberhard Karls Univ. Tübingen)

10:50-12:30, TuPoAT1.24

24. Estimating the Energy Consumption of a PHEV Using Vehicle and On-Board Navigation Data 755

Abdel-Djalil Ourabah, Benjamin Quost, Thierry Denoeux (Université de Technologie de Compiègne), Atef Gayed (Renault S.A.S)

10:50-12:30, TuPoAT1.25

25. The Development of Optimum Control Strategy for Hybrid EPS System Using Taguchi Method 761

Ji In Park, Kwangki Jeon (Korea Automotive Technology Institute), Kyongsu Yi (Seoul National University)

10:50-12:30, TuPoAT1.26

26. Range Prediction for Electric Vehicles: Real-Time Payload Detection by Tire Pressure Monitoring 767

Heiko Fechtner, Benedikt Schmuelling (University of Wuppertal), Thomas Teschner (Thomas Teschner Consulting)

10:50-12:30, TuPoAT1.27

27. State-Based Power Optimization Using Mixed-Criticality Filter for Automotive Networks 773

Wei Hong, Otto Hucke, Andreas Burger (FZI Research Center for Information Technology), Alexander Viehl (Forschungszentrum Informatik Karlsruhe), Oliver Bringmann, Wolfgang Rosenstiel (Eberhard Karls University Tübingen)

10:50-12:30, TuPoAT1.28

28. Eco-Driven Signal Control and Eco-Driving of Hybrid City Buses 779

Michael Haberl, Martin Fellendorf (Graz University of Technology)

10:50-12:30, TuPoAT1.29

29. Intelligent Navigation System-Based Optimization of the Energy Consumption 785

Adnane Cabani, Khemmar Radouane Khemmar, Jean-Yves Ertaud, Joseph Mouzna (ESIGELEC-IRSEEM)

10:50-12:30, TuPoAT1.30

30. Ecodriving Performances of Human Drivers in a Virtual and Realistic World 790

Olivier Orfila, Dominique Gruyer, Vincent Judalet, Marc Revilloud (IFSTTAR)

10:50-12:30, TuPoAT1.31

31. Developing a Framework of Eco-Approach and Departure Application for Actuated Signal Control 796

Peng Hao, Guoyuan Wu, Kanok Boriboonsomsin, Matthew Barth (University of California-Riverside)

10:50-12:30, TuPoAT1.32

32. Fast PatchMatch Stereo Matching Using Multi-Scale Cost Fusion for Automotive Applications 802

Ji-Ho Cho (Vienna University of Technology), Martin Humenberger (AIT Austrian Institute of Technology)

10:50-12:30, TuPoAT1.33

33. Can Appearance Patterns Improve Pedestrian Detection? 808

Eshed Ohn-Bar, Mohan M. Trivedi (University of California at San Diego)

10:50-12:30, TuPoAT1.34

34. On Line Mapping and Global Positioning for Autonomous Driving in Urban Environment Based on Evidential SLAM 814

Guillaume Trehard, Evangeline Pollard, Fawzi Nashashibi (INRIA), Benazouz Bradai (Valeo Lighting Systems)

10:50-12:30, TuPoAT1.35

35. Efficient Scene Parsing by Sampling Unary Potentials in a Fully-Connected CRF 820

Lachlan Horne, José M. Alvarez, Mathieu Salzmann, Nick Barnes (NICTA)

10:50-12:30, TuPoAT1.36

36. Robust Profile Face Detection and Rotation Angle Estimation of the Driver's Head in a Novel Dazzling Avoidance System 826

Xiangpeng Liu, Qianrui Wang, Jie Zhao, Axel Graeser (University of Bremen)

10:50-12:30, TuPoAT1.37

37. Fast Accurate Contours for 3D Shape Recognition 832

Muhammad Usman Butt, John Morris, Nitish Patel, Morteza Biglari-Abhari (The University of Auckland)

10:50-12:30, TuPoAT1.38

38. Joint Spatial and Doppler-Based Ego-Motion Estimation for Automotive Radars 839

Michael Barjenbruch, Dominik Kellner, Klaus Dietmayer (Univ. of Ulm), Jens Klappstein (Daimler AG), Jürgen Dickmann (Mercedes-Benz AG)

10:50-12:30, TuPoAT1.39

39. A Comparative Study of Color and Depth Features for Hand Gesture Recognition in Naturalistic Driving Settings 845

Eshed Ohn-Bar, Mohan M. Trivedi (University of California at San Diego)

Tuesday, June 30, 2015

TuPoPT1: Poster Session 4

16:00-17:40

E4 (3F)

Chair: Kyoungchul Kong (Sogang University)

Co-Chair: Jianqiang Wang (Tsinghua University)

16:00-17:40, TuPoPT1.1

1. An Auto Exposure Control Algorithm Based on Lane Recognition for On-Board Camera 851

Tong Li, Yan Song, Tao Mei (Chinese Academy of Sciences)

16:00-17:40, TuPoPT1.2

2. Balancing Risk against Utility: Behavior Planning Using Predictive Risk Maps 857

Florian Damerow (Technical University of Darmstadt), Julian Eggert (Honda Research Institute Europe GmbH)

16:00-17:40, TuPoPT1.3

3. Lane Change Maneuver Recognition Via Vehicle State and Driver Operation Signals – Results from Naturalistic Driving Data 865

Guofa Li, Shengbo Li, Yuan Liao, Wenjun Wang, Bo Cheng (Tsinghua University), Fang Chen (Chalmers University of Technology)

16:00-17:40, TuPoPT1.4

4. Safety Benefits of Belt Pretensioning in Conjunction with Precrash Braking in a Frontal Crash 871

Xiao Luo, Wenjing Du, Jinhuan Zhang (Tsinghua University)

16:00-17:40, TuPoPT1.5

5. Quaternion-Based IMU and Stochastic Error Modeling for Intelligent Vehicles 877

Thomas Brunner, Sébastien Changey (ISL), Jean-Philippe Lauffenburger, Michel Basset (Université de Haute Alsace)

16:00-17:40, TuPoPT1.6

6. Enhanced Maximum Tire-Road Friction Coefficient Estimation Based Advanced Emergency Braking Algorithm 883

Taewoo Kim, Kyongsu Yi (Seoul National University), Jaewan Lee (Korea Transportation Safety Authority)

16:00-17:40, TuPoPT1.7

7. Problem Formulation Improvement for Multi-Vehicle Collision Avoidance and Impact Mitigation 889

Ye Yuan, Jianqiang Wang (Tsinghua University), Xiao-Yun Lu (University of California, Berkeley)

16:00-17:40, TuPoPT1.8

8. K-Stacks: High-Density Valet Parking for Automated Vehicles 895

Julian Timpner, Johannes van Balen, Lars Wolf (TU Braunschweig), Stephan Friedrichs (Max Planck Institute for Informatics)

16:00-17:40, TuPoPT1.9

9. Multi Trajectory Pose Adjustment for Life-Long Mapping 901

Marc Sons, Christoph Stiller (Karlsruhe Institute of Technology), Henning Lategahn (Atlatec), Christoph Gustav Keller (Daimler AG)

16:00-17:40, TuPoPT1.10

10. Collision-Free and Kinematically Feasible Path Planning Along a Reference Path for Autonomous Vehicle 907

Mengyin Fu, Kai Zhang, Yi Yang, Hao Zhu, Meiling Wang (Beijing Institute of Technology)

16:00-17:40, TuPoPT1.11

11. Please Take Over! an Analysis and Strategy for a Driver Take Over Request During Autonomous Driving 913

Mohammad Bahram, Michael Aeberhard (BMW Group Research and Technology), Dirk Wollherr (Technische Universität München)

16:00-17:40, TuPoPT1.12

12. Autonomous Car Following: A Learning-Based Approach 920

Stéphanie Lefèvre, Ashwin Carvalho, Francesco Borrelli (University of California at Berkeley)

16:00-17:40, TuPoPT1.13

13. Vehicle Sensor and Actuator Fault Detection Algorithm for Automated Vehicles 927

Yonghwan Jeong, Kyuwon Kim, Beomjun Kim, Kyongsu Yi (Seoul National University), Jihyun Yoon, Hyok-jin Chong, Bongchul Ko (Hyundai Motor Company)

16:00-17:40, TuPoPT1.14

14. Ability and Skill Graphs for System Modeling, Online Monitoring, and Decision Support for Vehicle Guidance Systems 933

Andreas Reschka, Gerrit Bagschik, Simon Ulbrich, Marcus Nolte, Markus Maurer (TU Braunschweig)

16:00-17:40, TuPoPT1.15

15. Task Planning for Highly Automated Driving 940

Chao Chen, Andre K Gaschler, Markus Rickert, Alois Knoll (Technische Universität München)

16:00-17:40, TuPoPT1.16

16. The Impact of Driver Cognitive Distraction on Vehicle Performance at Stop-Controlled Intersections 946

Yuan Liao, Shengbo Li, Wenjun Wang, Guofa Li, Bo Cheng (Tsinghua University), Ying Wang (Beihang University)

16:00-17:40, TuPoPT1.17

17. Estimating Driver Awareness of Pedestrians in Crosswalk in the Path of Right or Left Turns at an Intersection from Vehicle Behavior 952

Kei Tateiwa, Keiichi Yamada (Meijo University)

16:00-17:40, TuPoPT1.18

18. Face Orientation Estimation for Driver Monitoring with a Single Depth Camera 958

Zhencheng Hu, Naoko Uchida (Kumamoto University), Yanming Wang, Yanchao Dong (Tongji University)

16:00-17:40, TuPoPT1.19

19. Predicting the Driver's Turn Intentions at Urban Intersections Using Context-Based Indicators 964

Claas Rodemerik, Hermann Winner (*Technical University of Darmstadt*), Robert Kastner (Honda R&D Europe GmbH)

16:00-17:40, TuPoPT1.20

20. Estimation of Driver Awareness of Pedestrian Based on Hidden Markov Model 970

Minh-Tien Phan, Vincent Fremont, Indira Thouvenin, Mohamed Sallak, Véronique Cherfaoui (Université de Technologie de Compiègne)

16:00-17:40, TuPoPT1.21

21. Automatic Lane Change Extraction Based on Temporal Patterns of Symbolized Driving Behavioral Data 976

Masataka Mori, Kazuhito Takenaka, Takashi Bando (DENSO Corporation), Tadahiro Taniguchi (Ritsumeikan University), Chiyomi Miyajima, Kazuya Takeda (Nagoya University)

16:00-17:40, TuPoPT1.22

22. In-Car Tactical Advice Using Delayed Detector Data 982

Wouter Schakel, Bart van Arem (Delft University of Technology)

16:00-17:40, TuPoPT1.23

23. Performance Comparison of Two Model Based Schemes for Estimation of Queue and Delay at Signalized Intersections 988

Anusha S. P, Lelitha Vanajakshi, Shankar Subramanian (Indian Institute of Technology, Madras), Anuj Sharma (Iowa State University)

16:00-17:40, TuPoPT1.24

24. Traffic Density Estimation Using Dimensional Analysis 994

Amritha Sunny, Lelitha Vanajakshi, Shankar Subramanian (Indian Institute of Technology, Madras)

16:00-17:40, TuPoPT1.25

25. Demonstration of Disturbance Propagation and Amplification in Car-Following Situation for Enhancement of Vehicle Platoon System 999

Jinsoo Kim, Jinhan Jeong, Kyung-young Jhang, Jahng Hyon Park (Hanyang University)

16:00-17:40, TuPoPT1.26

26. On the Prediction of Future Vehicle Locations in Free-Floating Car Sharing Systems 1006

Simone Formentin, Andrea Giovanni Bianchessi, Sergio Savaresi (Politecnico di Milano)

16:00-17:40, TuPoPT1.27

27. Adaptive Dynamic Preview Control for Autonomous Vehicle Trajectory Following with DDP Based Path Planner 1012

Ning Wu, Weiwei Huang, Xiaojun Wu, Zhiwei Song, Qun Zhang, Susu Yao (Institute for Infocomm Research)

16:00-17:40, TuPoPT1.28

28. Torque-Vectoring Stability Control of a Four Wheel Drive Electric Vehicle 1018

Benedict Jaeger, Peter Neugebauer, Reiner Kriesten, Christian Gutenkunst (University of Applied Sciences), Nejila Parspour (University of Stuttgart)

16:00-17:40, TuPoPT1.29

29. Inverse Model Control Including Actuator Dynamics for Active Dolly Steering in High Capacity Transport Vehicle 1024

Mohammad Manjurul Islam, Bengt Jacobson (Chalmers University of Technology), Leo Laine (Volvo Group Trucks Technology)

16:00-17:40, TuPoPT1.30

30. Optimal Tire Force Allocation for Trajectory Tracking with an Over-Actuated Vehicle 1032

Hyunghai Park, Chris Gerdes (Stanford University)

16:00-17:40, TuPoPT1.31

31. A Comparative Study of Lane Keeping System: Dynamic and Kinematic Models with Look-Ahead Distance 1038

Chang Mook Kang, Seung-Hi Lee, Chung Choo Chung (Hanyang University)

16:00-17:40, TuPoPT1.32

32. Design of Passivity-Based Controllers for Lateral Dynamics of Intelligent Vehicles 1044

Gilles Tagne, Reine Talj, Ali Charara (Université de Technologie de Compiègne)

16:00-17:40, TuPoPT1.33

33. A New Model for the Movement Pattern of Vacant Taxi 1050

Yingnan Guang, Min Yang, Xuedan Zhang (Tsinghua University)

16:00-17:40, TuPoPT1.34

34. Essential Feature Extraction of Driving Behavior Using a Deep Learning Method 1054

HaiLong Liu, Tadahiro Taniguchi (Ritsumeikan University), Yusuke Tanaka (Toyota InfoTechnology Center Co., Ltd), Kazuhito Takenaka, Takashi Bando (DENSO Corporation)

16:00-17:40, TuPoPT1.35

35. Calibration-Free Correspondence Finding between Vision and LIDAR Sensors 1061

Egor Sattarov, Sergio Rodriguez, Roger Reynaud (Universite Paris-Sud), Alexander Gepperth (ENSTA ParisTech)

16:00-17:40, TuPoPT1.36

36. Modeling the Cost and Coverage of an Ad-Hoc Asset Management System Based on Existing Fleet Vehicles 1068

Dana Pordel, Lars Petersson, Namin Shahin, Adrián Rebola Pardo (NICTA)

16:00-17:40, TuPoPT1.37

37. Fusion of Laser and Radar Sensor Data with a Sequential Monte Carlo Bayesian Occupancy Filter 1074

Dominik Nuss, Manuel Stuebler, Stephan Reuter, Klaus Dietmayer (University of Ulm), Ting Yuan (MBRDNA, Inc), Gunther Krehl (Mercedes Benz Res. & Development North America, Inc)

16:00-17:40, TuPoPT1.38

38. Traffic and Vehicle Speed Prediction with Neural Network and Hidden Markov Model in Vehicular Networks 1082

Bingnan Jiang, Yunsi Fei (Northeastern University)

16:00-17:40, TuPoPT1.39

39. Dataset for Testing and Training of Map-Matching Algorithms 1088

Matej Kubicka, Hugues Mounier, Silviu-Iulian Niculescu (CNRS/Supélec), Arben Cela (ESIEE Paris), Philippe Moulin (IFP Energies Nouvelles)

Wednesday, July 1, 2015

WeOrA1: Advanced Driver Assistance Systems

09:30-10:50

E1+2+3 (3F)

Chair: Hwasoo Yeo (KAIST)

Co-Chair: Whoi-Yul Kim (Hanyang University)

09:30-09:50, WeOrA1.1

1. Kinematic and Dynamic Vehicle Models for Autonomous Driving Control Design 1094

Jason Kong, Georg Schildbach, Francesco Borrelli (University of California at Berkeley), Mark Pfeiffer (ETH Zurich)

09:50-10:10, WeOrA1.2

2. Design of a Robust Yaw Stability Controller for Commercial Vehicles with Parameter Sensitivity Reduction and Stochastic Root Locus 1100

Baek-soon Kwon, Kyongsu Yi (Seoul National University), Sungsub Kim (Korea Transportation Safety Authority)

10:10-10:30, WeOrA1.3

3. Surrounding View Based Parking Lot Detection and Tracking 1106

Kazukuni Hamada, Zhencheng Hu (Kumamoto University), Mengyang Fan, Hui Chen (Tongji University)

10:30-10:50, WeOrA1.4

4. Performance Bounds on Change Detection with Application to Manoeuvre Recognition for Advanced Driver Assistance Systems 1112

Jan Erik Stellet, Jan Schumacher, Wolfgang Branz (Robert Bosch GmbH), J. Marius Zöllner (FZI Forschungszentrum Informatik)

Wednesday, July 1, 2015

WePoA1: Poster Session 5

10:50-12:30

E4 (3F)

Chair: Wooyong Han (ETRI)

Co-Chair: Ji Hyun Yang (Kookmin University)

10:50-12:30, WePoA1.1

1. Advanced Path Following Control of an Overactuated Robotic Vehicle 1120

Peter Ritzer, Christoph Winter, Jonathan Brembeck (German Aerospace Center)

10:50-12:30, WePoA1.2

2. Situation-Aware Decision Making for Autonomous Driving on Urban Road Using Online POMDP 1126

Wei Liu, Scott Drew Pendleton, Marcelo H Ang Jr (National University of Singapore), Seong-Woo Kim (Singapore-MIT Alliance for Res. and Tech)

10:50-12:30, WePoA1.3

3. Prioritizing Collision Avoidance and Vehicle Stabilization for Autonomous Vehicles 1134

Joseph Funke, Matthew Brown, Stephen M. Erlien, Chris Gerdes (Stanford University)

10:50-12:30, WePoA1.4

4. Multi-Drive Feature Association for Automated Map Generation Using Low-Cost Sensor Data 1140

Markus Schreiber, André-Marcel Hellmund (FZI Research Center for Information Technology), Christoph Stiller (Karlsruhe Institute of Technology)

10:50-12:30, WePoA1.5

5. Path Planning with Orientation-Aware Space Exploration Guided Heuristic Search for Autonomous Parking and Maneuvering 1148

Chao Chen, Markus Rickert (Fortiss GmbH), Alois Knoll (Technische Universität München)

10:50-12:30, WePoA1.6

6. General Behavior and Motion Model for Automated Lane Change 1154

Hossein Tehrani Nik Nejad, Masumi Egawa, Kenji Muto (DENSO Corporation), Quoc Huy Do, Keisuke Yoneda, Seiichi Mita (Toyota Technological Institute)

10:50-12:30, WePoA1.7

7. A Practical Trajectory Planning Framework for Autonomous Ground Vehicles Driving in Urban Environments 1160

Xiaohui Li, Zhenping Sun, Qi Zhu, Daxue Liu, Zhen He (National University of Defense Technology)

10:50-12:30, WePoA1.8

8. Timing of Unstructured Transitions of Control in Automated Driving 1167

Brian Mok, Mishel Johns, Hillary Ive, David Miller, Wendy Ju (Stanford University), Key Jung Lee (Robert Bosch LLC)

10:50-12:30, WePoA1.9

9. On Time-Memory Trade-Off for Collision Detection 1173

Albert Rizaldi, Sebastian Söntges, Matthias Althoff (Technische Universität München)

10:50-12:30, WePoA1.10

10. Sampling-Based Collision Warning System with Smartphone in Cloud Computing Environment 1181

Hwasoo Yeo, Sehyun Tak, Soomin Woo (KAIST)

10:50-12:30, WePoA1.11

11. Uncertainty Propagation in Criticality Measures for Driver Assistance 1187

Jan Erik Stellet, Jan Schumacher, Wolfgang Branz (Robert Bosch GmbH), J. Marius Zöllner (FZI Forschungszentrum Informatik)

10:50-12:30, WePoA1.12

12. Triggering Algorithm Based on Inevitable Collision States for Autonomous Emergency Braking (AEB) in Motorcycle-To-Car Crashes 1195

Giovanni Savino, Marco Pierini (University of Florence), Julie Brown (University of New South Wales), Matteo Rizzi (Folksam), Michael Fitzharris (Monash University)

10:50-12:30, WePoA1.13

13. Impact of Positioning Uncertainty of Vulnerable Road Users on Risk Minimization in Collision Avoidance Systems 1201

Philipp Themann, Jens Kotte, Dominik Raudszus, Lutz Eckstein (RWTH Aachen University)

10:50-12:30, WePoA1.14

14. Potential of Intersection Driver Assistance Systems to Mitigate Straight Crossing Path Crashes Using U.S. Nationally Representative Crash Data 1207

John Michael Scanlon, Kristofer Kusano, Hampton Clay Gabler (Virginia Tech), Rini Sherony (Toyota Motor Engineering and Manufacturing North America)

10:50-12:30, WePoA1.15

15. On Threat Assessment and Collision Avoidance for Articulated Machinery in Low-Speed Scenarios 1213

Stefan Bergquist, Christian Grante (Volvo GTT Advanced Technology & Research.), Jonas Sjöberg (Chalmers University of Technology)

10:50-12:30, WePoA1.16

16. Threat Prediction Algorithm Based on Local Path Candidates and Surrounding Vehicle Trajectory Predictions for Automated Driving Vehicles 1220

Jaehwan Kim, Dongsuk Kum (KAIST)

10:50-12:30, WePoA1.17

17. Day and Night-Time Drive Analysis Using Stereo Vision for Naturalistic Driving Studies 1226

Morten Bornø Jensen, Mark Philip Philipsen, Thomas Moeslund, Andreas Møgelmoose (Aalborg University), Mohan M. Trivedi, Ravi Kumar Satzoda (University of California at San Diego)

10:50-12:30, WePoA1.18

18. Managing the Complexity of Inner-City Scenes: An Efficient Situation Hypotheses Selection Scheme 1232

Stefan Klingelschmitt, Florian Damerow (Technical University of Darmstadt), Julian Eggert (Honda Research Institute Europe GmbH)

10:50-12:30, WePoA1.19

19. Predicting Car States through Learned Models of Vehicle Dynamics and User Behaviours 1240

Theodosios Georgiou, Yiannis Demiris (Imperial College London)

10:50-12:30, WePoA1.20

20. Guidance Image Based Method for Real-Time Motion Artefact Handling on Time-Of-Flight Cameras 1246

Cedric Schockaert, Frederic Garcia, Bruno Mirbach (IEE S.A)

10:50-12:30, WePoA1.21

21. A Bayesian Filter for Modeling Traffic at Stop Intersections 1252

Thierry Wyder (ETH Zürich), Georg Schildbach, Stéphanie Lefèvre, Francesco Borrelli (University of California at Berkeley)

10:50-12:30, WePoA1.22

22. Observing Behaviors at Intersections: A Review of Recent Studies & Developments 1258

Mohammad Shokrolah Shirazi, Brendan Morris (University of Nevada, Las Vegas)

10:50-12:30, WePoA1.23

23. A Typical Video-Based Framework for Counting, Behavior and Safety Analysis at Intersections 1264

Mohammad Shokrolah Shirazi, Brendan Morris (University of Nevada, Las Vegas)

10:50-12:30, WePoA1.24

24. Driver Behavior Modeling Near Intersections Using SVM Based on Statistical Feature Extraction 1270

Seifemichael Bekele Amsalu, Abdollah Homaifar, Fatemeh Afghah, Saina Ramyar (North Carolina A&T State University), Arda Kurt (The Ohio State University)

10:50-12:30, WePoA1.25

25. Classifying Driver's Uncertainty about the Distance Gap at Lane Changing for Developing Trustworthy Assistance Systems 1276

Fei Yan (University of Oldenburg), Lars Weber, Andreas Luedtke (OFFIS-Institute for Information Technology)

10:50-12:30, WePoA1.26

26. Development of Driver-State Estimation Algorithm Based on Hybrid Bayesian Network 1282

Dong Woon Ryu, Hyeon Bin Jeong, Sang Hun Lee, Woon-Sung Lee, Ji Hyun Yang (Kookmin University)

10:50-12:30, WePoA1.27

27. A Transforming Steering Wheel for Highly Automated Cars 1287

Philipp Kerschbaum, Lutz Lorenz (BMW Research & Technology), Klaus Bengler (Technische Universität München)

10:50-12:30, WePoA1.28

28. Analyzing Driver Gaze Behavior and Consistency of Decision Making During Automated Driving 1293

Chiyomi Miyajima, Suguru Yamazaki, Hitoshi Terai, Hiroyuki Okuda, Takatsugu Hirayama, Tatsuya Suzuki, Kazuya Takeda (Nagoya University), Takashi Bando, Kentarou Hitomi, Masumi Egawa (DENSO Corporation)

10:50-12:30, WePoA1.29

29. Driver Model with Motion Stabilizer for Vehicle-Driver Closed-Loop Simulation at High-Speed Maneuvering 1299

Youngil Koh, Hyundong Her, Kyongsu Yi (Seoul National University), Kilsoo Kim (Hyundai Motor Company)

10:50-12:30, WePoA1.30

30. Using EEG to Recognize Emergency Situations for Brain-Controlled Vehicles 1305

Teng Teng, Luzheng Bi, Xinan Fan (Beijing Institute of Technology)

10:50-12:30, WePoA1.31

31. A 3DoF-Sidestick User Interface for Four Wheel Independent Steering Vehicles 1310

Michael Panzirsch, Bernhard Weber (DLR Oberpfaffenhofen)

10:50-12:30, WePoA1.32

32. An Efficient Multiple Session Key Establishment Scheme for VANET Group Integration 1316

Cheng-Chi Lee (Fu Jen Catholic University), Yan-Ming Lai, Pu-Jen Cheng (National Taiwan University)

10:50-12:30, WePoA1.33

33. Greedy Algorithms for Information Dissemination within Groups of Autonomous Vehicles 1322

Ignacio Llatser, Sebastian Kühlmorgen, Andreas Festag, Gerhard Fettweis (Technische Universität Dresden)

10:50-12:30, WePoA1.34

34. An Efficient Cooperative Lane-Changing Algorithm for Sensor and Communication-Enabled Automated Vehicles 1328

Tanveer Awal, Manzur Murshed, Mortuza Ali (Federation University Australia)

10:50-12:30, WePoA1.35

35. Multi-Vehicle Motion Coordination Using V2V Communication 1334

Xiaotong Shen, Zhuang Jie Chong, Scott Drew Pendleton, Wei Liu, Baoxing Qin, Marcelo H Ang Jr (National University of Singapore), James Guo Ming Fu (Singapore-MIT Alliance for Research and Technology)

10:50-12:30, WePoA1.36

36. Investigating Communications Performance for Automated Vehicle-Based Intersection Control under Connected Vehicle Environment 1342

Joyoung Lee (New Jersey Institute of Technology), Byungkyu (Brian) Park (University of Virginia)

10:50-12:30, WePoA1.37

37. DSRC and Radar Object Matching for Cooperative Driver Assistance Systems 1348

Qi Chen, Ting Yuan, Joerg Hillenbrand, Axel Gern (Mercedes-Benz Research & Development North America), Tobias Roth, Florian Kuhn, Marius Zoellner (FZI Research Center for Information Technology), Jakob Breu, Miro Bogdanovic, Christian Weiss (Mercedes-Benz Research and Development)

10:50-12:30, WePoA1.38

38. Compensation of Wireless Communication Delay for Integrated Risk Management of Automated Vehicle 1355

Donghoon Shin, Kyongsu Yi (Seoul National University)

10:50-12:30, WePoA1.39

39. Safety Beaconing Rate Control Based on Vehicle Counting in WAVE 1361

Hyogon Kim, Yongtae Park, Piao Haiyue, Byungjo Kim (Korea University)

10:50-12:30, WePoA1.40

40. Adaptive Decision Algorithms for Data Aggregation in VANETs with Defined Channel Load Limits 1367

Josef Jiru, Karsten Roscher (Fraunhofer ESK), Aboobeker Sidhik Koyamparambil Mammu (University of Deusto)

10:50-12:30, WePoA1.41

41. When Will It Change the Lane? a Probabilistic Regression Approach Dealing with Rarely Occurring Events 1373

Julian Schlechtriemen, Andreas Wedel, Gabi Breuel (Daimler AG), Florian Wirthmueller (Illmenau University of Technology), Klaus-Dieter Kuhnert (University of Siegen)

Wednesday, July 1, 2015

WeOrM1: Autonomous / Intelligent Robotic Vehicles

14:00-15:20

E1+2+3 (3F)

Chair: Kyoungchul Kong (Sogang University)

Co-Chair: Yeonsik Kang (Kookmin University)

14:00-14:20, WeOrM1.1

1. Context-Aware Tracking of Moving Objects for Distance Keeping 1380

Wenda Xu, Jarrod Snider, Junqing Wei, John Dolan (Carnegie Mellon University)

14:20-14:40, WeOrM1.2

2. The Combinatorial Aspect of Motion Planning: Maneuver Variants in Structured Environments 1386

Philipp Bender, Omer Sahin Tas, Christoph Stiller (FZI Research Center for Information Technology), Julius Ziegler (Atlatec)

14:40-15:00, WeOrM1.3

3. Submap-Based SLAM for Road Markings 1393

Eike Rehder, Alexander Albrecht (Karlsruhe Institute of Technology)

15:00-15:20, WeOrM1.4

4. Turn Prediction at Generalized Intersections 1399

Bo Tang (University of Rhode Island), Salman Khokhar (University of Central Florida), Rakesh Gupta (Honda Research Institute USA Inc)