

2006 IEEE Intelligent Transportation Systems Conference

**Toronto, Ontario, CANADA
17-20 September-2006**

Volume 1 of 4



**IEEE Catalog Number:
ISBN:**

**06TH8865
1-4244-0093-7**

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IEEE Catalog Number: 06TH8865
ISBN: 1-4244-0093-7
Library of Congress: 2005938115

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Proceedings

MA1		Trinity I
PATH at 20 (Special Session)		
Chair: Shladover, Steven E.		Inst. of Transportation Studies
Organizer: Shladover, Steven E.		Inst. of Transportation Studies
10:20-10:40		
<i>PATH at 20 -- History and Major Milestones (I)</i> , pp. 1-8		
Shladover, Steven E.		Inst. of Transportation Studies
10:40-11:00		
<i>PATH Investigations in Vehicle-Roadside Cooperation and Safety: A Foundation for Safety and Vehicle-Infrastructure Integration Research (I)</i> , pp. 9-16		
Misener, James A.		PATH, Univ. of California, Berkeley
Shladover, Steven E.		Inst. of Transportation Studies
11:00-11:20		
<i>Policy and Behavior Research at the California Partners for Advanced Highways and Transit (PATH) (I)</i> , pp. 17-22		
Barth, Matthew		Univ. of California, Riverside
Shaheen, Susan		Univ. of California, Berkeley
11:20-11:40		
<i>PATH Innovative Research on ITS Technologies and Methodologies for Multimodal Transportation Solutions (I)</i> , pp. 23-29		
Zhang, Wei-Bin		PATH, Univ. of California, Berkeley
Shladover, Steven E.		PATH, Univ. of California, Berkeley
11:40-12:00		
<i>Development of Methods and Tools for Managing Traffic Congestion in Freeway Corridors (I)</i> , pp. 30-37		
Recker, Wilfred		Univ. of California, Irvine
Zhang, H. Michael		Univ. of California, Davis
Chu, Lianyu		Univ. of California, Irvine
Chen, Anthony		Utah State Univ.
McNally, Michael		Univ. of California, Irvine
MA2		Trinity II
Public Transportation Management (Regular Session)		
Chair: Morency, Catherine		Ecole. Pol. de Montreal
10:20-10:40		
<i>Optimization of Highway Transport Line Configuration Based on Whole Trip Course</i> , pp. 38-43		
Yao, Xin sheng		Henan Agricultural Univ.
Xu, Guangyin		Henan Agricultural Univ.
Cui, Yan		Henan Agricultural Univ.
10:40-11:00		
<i>Analysing the Variability of Transit Users Behaviour with Smart Card Data</i> , pp. 44-49		
Morency, Catherine		École Pol. de Montréal
Trepanier, Martin		École Pol. de Montréal
Agard, Bruno		École Pol. de Montréal
11:00-11:20		
<i>Automation of Operational Train Control on Regional Branch Lines by a Basic Train Control System</i> , pp. 50-54		
Stadlmann, Burkhard		Univ. of Applied Sciences Wels
11:20-11:40		
<i>Real-Time Route Planning of the Public Transportation System</i> , pp. 55-60		
Zidi, Salah		Univ. des Science et Tech. de Lille USTL
Maouche, Salah		USTL
Hammadi, Slim		Ec. centrale lille
11:40-12:00		
<i>Impact of BRT on Martin Luther King Dr and Madison Road</i> , pp. 61-67		
O.M., Salem		Univ. of Cincinnati
Wei, Heng		Univ. of Cincinnati

MA3		Trinity III
Intersection Traffic Control (Regular Session)		
Chair: Rakha, Hesham A. Co-Chair: Burghout, Wilco		Virginia Tech. Royal Inst. of Tech.
10:20-10:40 <i>Delay at Controlled Intersections: The Old Theory Revised</i> , pp. 68-73 Van Zuylen, H.J. Viti, Francesco		Delft Univ. of Tech. Delft Univ. of Tech.
10:40-11:00 <i>Feedback Control Strategy for Isolated Intersections</i> , pp. 74-80 Yang, Xiaoguang Yuan, Changliang Shen, Feng Ma, Wanjing		Tongji Univ. Tongji Univ. Tongji Univ. Tongji Univ.
11:00-11:20 <i>Improved Signal Control for Oversaturated Intersection</i> , pp. 81-84 Yi, Ping Shao, Chun		Univ. of Akron Univ. of Akron
11:20-11:40 <i>A Mobile Computing Approach to Automatic Traffic Evacuation Management</i> , pp. 85-90 Aved, Alexander Ho, Ai Hua, Kien Hoang, Lap Hamza-Lup, Georgiana		Univ. of Central Florida Univ. of Central Florida Univ. of Central Florida FDOT Univ. of Central Florida
11:40-12:00 <i>System-Wide Impacts of Green Extension Transit Signal Priority</i> , pp. 91-96 Ahn, Kyoungho Rakha, Hesham A.		Virginia Tech. Virginia Tech.
MA4		Trinity IV
Pedestrian Detection (Regular Session)		
Chair: Peixoto, Paulo Co-Chair: Naranjo Hernandez, Jose Eugenio		Univ. of Coimbra Industrial Automation Inst. CSIC
10:20-10:40 <i>Vision-Based Pedestrian Detection -- Improvement and Verification of Feature Extraction Methods and SVM-Based Classification</i> , pp. 97-102 Schauland, Sam Kummert, Anton Park, Su-Birm Zhang, Yan Iurgel, Uri		Univ. of Wuppertal Univ. of Wuppertal Delphi Electronics & Safety Delphi Corp. Delphi Electronics & Safety
10:40-11:00 <i>Pedestrian Detection Using SVM and Multi-Feature Combination</i> , pp. 103-108 Sotelo Vázquez, Miguel Ángel Fernandez Llorca, David Parra Alonso, Ignacio Naranjo Hernandez, Jose Eugenio		Univ. of Alcalá Univ. of Alcalá Univ. of Alcalá Industrial Automation Inst. CSIC
11:00-11:20 <i>Multimodal Stereo Image Registration for Pedestrian Detection</i> , pp. 109-114 Krotosky, Stephen Trivedi, Mohan M.		Univ. of California, San Diego Univ. of California, San Diego
11:20-11:40 <i>Track-Based Finding of Stopping Pedestrians – a Practical Approach for Analyzing a Public Infrastructure</i> , pp. 115-120 Brändle, Norbert Bauer, Dietmar Seer, Stefan		Arsenal Res. Austria Arsenal Res. Austria Arsenal Res. Austria
MA5		Trinity V
Advanced Safety Systems 1 (Regular Session)		
Chair: Browning, Brett Co-Chair: Netto, Mariana		Carnegie Mellon Univ. LCPC
10:20-10:40 <i>How to Assist Merging Onto the Freeway</i> , pp. 121-126 Kassner, Astrid Vollrath, Mark		German Aerospace Center German Aerospace Center

10:40-11:00	<i>Learning to Predict Driver Route and Destination Intent</i> , pp. 127-132	
	Simmons, Reid	Carnegie Mellon Univ.
	Browning, Brett	Carnegie Mellon Univ.
	Zhang, Yilu	General Motors Corp.
	Sadekar, Varsha	General Motors Corp.
11:00-11:20	<i>A Switched Optimized Approach for Road-Departure Avoidance</i> , pp. 133-138	
	Minoiu, Nicoleta	INRETS/LCPC - LIVIC
	Netto, Mariana	LCPC
	Mammar, Said	INRETS
11:20-11:40	<i>The Minnesota Mobile Intersection Surveillance System</i> , pp. 139-144	
	Alexander, Lee	Univ. of Minnesota
	Cheng, Pi-Ming	Univ. of Minnesota
	Gorjestani, Alec	Univ. of Minnesota
	Menon, Arvind	Univ. of Minnesota
	Newstrom, Bryan	Univ. of Minnesota
	Shankwitz, Craig	Univ. of Minnesota
	Donath, Max	Univ. of Minnesota

MA6 York A

Commercial Vehicle Operation and Emergency Management (Regular Session)

Chair: Ozbay, Kaan Rutgers, The State Univ. of NJ

10:20-10:40	<i>Automated Work Yard by Use of Decentralized Method</i> , pp. 145-150	
	Holzmann, Frederic	Siemens VDO Automotive
	Bellino, Mario	Ec. Pol. Fédérale de Lausanne (EPFL)
	Pfiffner, Flurin	EPFL
	Sulzmann, Armin	DaimlerChrysler AG
	Hillesheim, Daniel	DaimlerChrysler AG
	Schwarzhaupt, Andreas	DaimlerChrysler AG
	Ryser, Peter	EPFL
	Jacot, Jacques	EPFL

10:40-11:00	<i>Exit-Point Based Approaches for Real-Time Traffic Evacuation Management</i> , pp. 151-156	
	Hamza-Lup, Georgiana	Univ. of Central Florida
	Hua, Kien	Univ. of Central Florida
	Aved, Alexander	Univ. of Central Florida

11:00-11:20	<i>Analysis of Network-Wide Impacts of Behavioral Response Curves for Evacuation Conditions</i> , pp. 157-162	
	Ozbay, Kaan	Rutgers, The State Univ. of NJ
	Yazici, Mustafa Anil	Rutgers Univ.

11:20-11:40	<i>VISIONS: A Service Oriented Architecture for Remote Vehicle Inspection</i> , pp. 163-168	
	Fornasa, Martino	Univ. of Padova
	Zingirian, Nicola	Univ. of Padova
	Maresca, Massimo	Univ. of Padova
	Baglietto, Pierpaolo	Univ. of Genova

11:40-12:00	<i>A Roving User Modeling Framework for Location Tracking Applications</i> , pp. 169-174	
	Abdelsalam, Wegdan	Univ. of Guelph
	Ebrahim, Yasser	Univ. of Guelph
	Chau, Siu-Cheung	Wilfrid Laurier Univ.
	Ahmed, Maher	Wilfrid Laurier Univ.

MA7 York B

ITS Modeling - General (Regular Session)

Chair: Hellinga, Bruce Univ. of Waterloo
 Co-Chair: Wahba, Mohamed Univ. of Toronto

10:20-10:40	<i>Application of Grey Model to Predict Acoustical Properties and Tire/Road Noise on Asphalt Pavement</i> , pp. 175-180	
	Shen, Der-Hsien	Nat'l Taiwan Univ. of Science and Tech.
	Wu, Chia-Ming	Nat'l Taiwan Univ. of Science and Tech.
	Du, Jia-Chong	Tung-Nan Inst. of Tech.

10:40-11:00	<i>Force-Feedback System Design for the Steer-By-Wire: Optimisation and Performance Evaluation</i> , pp. 181-187	
	Gualino, David	PSA Peugeot Citroen
	Adoukpe, Joel	PSA Peugeot Citroen

11:00-11:20
Real Time Vehicle Reidentification and Performance Measures on Signalized Arterials, pp. 188-193
 Geroliminis, Nikolas
 Skabardonis, Alexander
 Univ. of California, Berkeley
 Univ. of California, Berkeley

11:20-11:40
Intelligent Route-Based Speed Estimation Using Timing Advance, pp. 194-197
 Jin, Jing
 Qiu, Zhijun
 Ran, Bin
 Univ. of Wisconsin, Madison
 Univ. of Wisconsin, Madison
 Univ. of Wisconsin, Madison

MB1 Trinity I

Approaches and Algorithms for Dynamic Travel Information Systems (Special Session)

Chair: Bottom, Jon
 Co-Chair: Gao, Song
 Organizer: Bottom, Jon
 Organizer: Wang, Yibing
 CRA International
 Caliper Corp.
 CRA International
 Tech. Univ. of Crete

13:30-13:50
Incident Management Using Variable Message Signs: Implications for Vehicle-Induced Emissions in a Congested Developing City (I), pp. 198-203
 Kaysi, Isam
 Chazbek, Chadi
 El-Fadel, Mutasem
 American Univ. of Beirut
 URS Corp.
 American Univ. of Beirut

13:50-14:10
Online Traveler Information in Stochastic Dynamic Networks (I), pp. 204-211
 Gao, Song
 Caliper Corp.

14:10-14:30
Behavior-Consistent Within-Day Traffic Routing under Information Provision (I), pp. 212-217
 Peeta, Srinivas
 Paz, Alexander
 Purdue Univ.
 Purdue Univ.

14:30-14:50
A Framework for Traffic Assignment with Travel Information (I), pp. 218-223
 Bottom, Jon
 CRA International

14:50-15:10
Real-Time Route Guidance for Large-Scale Express Ring-Roads (I), pp. 224-229
 Wang, Yibing
 Papageorgiou, Markos
 Sarros, George
 Knibbe, Willem Jan
 Tech. Univ. of Crete
 Tech. Univ. of Crete
 Tech. Univ. of Crete
 Rijkswaterstaat AVV Transport Res. Center

MB2 Trinity II

Route Guidance: System and Method (Regular Session)

Chair: Dia, Hussein
 Co-Chair: Rakha, Hesham A.
 -
 Virginia Tech.

13:30-13:50
Hierarchical Routing in Traffic Using Swarm-Intelligence, pp. 230-235
 Tatomir, Bogdan
 Rothkrantz, Leon
 Delft Univ. of Tech.
 Delft Univ. of Tech.

13:50-14:10
Estimating Path Travel-Time Reliability, pp. 236-241
 Rakha, Hesham A.
 EL-Shawarby, Ihab
 Arafeh, Mazen
 Dion, Francois
 Virginia Tech.
 Virginia Tech.
 Virginia Tech.
 Michigan State Univ.

14:10-14:30
Vehicle Route Guidance Systems: Classification and Comparison, pp. 242-247
 Schmitt, Erick
 Jula, Hossein
 Penn State, Harrisburg
 Penn State, Harrisburg

14:30-14:50
The Optimal Location Update Strategy of Cellular Network Based Traffic Information System, pp. 248-253
 Hsiao, Mark
 Chang, S.K. Jason
 Taiwan Univ.
 National Taiwan Univ.

MB3	Trinity III
Freeway Traffic Control and Management (Regular Session)	
Chair: Redmill, Keith	Ohio State Univ.
Co-Chair: Yi, Ping	Univ. of Akron
13:30-13:50	
<i>System Management and Monitoring - Temporal Evaluation of Freeway Management Systems</i> , pp. 254-260	
Redmill, Keith	The Ohio State Univ.
Coifman, Benjamin	The Ohio State Univ.
13:50-14:10	
<i>Coordinated Ramp Metering Via Second Order Sliding Mode Control</i> , pp. 261-266	
Mammar, Salim	PHOENIX
Mammar, Said	INRETS
Netto, Mariana	LCPC
14:10-14:30	
<i>Highway Work Zone Dynamic Traffic Control Using Machine Learning</i> , pp. 267-272	
Jacob, Celine	McCormick Rankin Corp.
Abdulhai, Baher	Univ. of Toronto
Hadayeghi, Alireza	Synectics Transportation Consultants Inc.
Malone, Brian	Synectics Transportation Consultants Inc.
14:30-14:50	
<i>Inter-Vehicle Data Dissemination in Sparse Equipped Traffic</i> , pp. 273-280	
Chawathe, Sudarshan S.	Univ. of Maine
14:50-15:10	
<i>Improving Automatic Vehicle Location Efficiency through Aperiodic Filtering</i> , pp. 281-286	
Nguyen, Long	Univ. of California, Riverside
Barth, Matthew	Univ. of California, Riverside
MB4	Trinity IV
Object Detection and Classification (Regular Session)	
Chair: Toulminet, Gwenaëlle	INSA de Rouen
Co-Chair: Nunes, Urbano	Univ. of Coimbra
13:30-13:50	
<i>Joint Tracking and Classification of Moving Objects at Intersection Using a Single-Row Laser Range Scanner</i> , pp. 287-294	
Zhao, Huijing	Univ. of Tokyo
Shao, Xiaowei	Univ. of Tokyo
Katabira, Kyoichiro	Univ. of Tokyo
Shibasaki, Ryosuke	Univ. of Tokyo
13:50-14:10	
<i>Multiple Object Detection under the Constraint of Spatiotemporal Consistency</i> , pp. 295-300	
Bachmann, Alexander	Univ. of Karlsruhe (TH)
Dang, Thao	Univ. of Karlsruhe (TH)
14:10-14:30	
<i>Tracking of Moving Objects from a Moving Vehicle Using a Scanning Laser Rangefinder</i> , pp. 301-306	
MacLachlan, Rob	Carnegie Mellon Univ.
Mertz, Christoph	Carnegie Mellon Univ.
14:30-14:50	
<i>A Color Stereo Vision System for Extraction of 3D Edges of Obstacle</i> , pp. 307-312	
Cabani, lyadh	INSA de Rouen
Toulminet, Gwenaëlle	INSA de Rouen
Bensrhair, Abdelaziz	INSA de Rouen
14:50-15:10	
<i>A Multi-Target Tracking and GMM-Classifer for Intelligent Vehicles</i> , pp. 313-318	
Premebida, Cristiano	Univ. of Coimbra
Nunes, Urbano	Univ. of Coimbra
MB5	Trinity V
Advanced Safety Systems 2 (Regular Session)	
Chair: Bonnifait, Philippe	Univ. of Tech. of Compiegne
Co-Chair: Blum, Jeremy	The George Washington Univ.
13:30-13:50	
<i>Managing Effectiveness and Acceptability in Intelligent Speed Adaptation Systems</i> , pp. 319-324	
Blum, Jeremy	The George Washington Univ.
Eskandarian, Azim	The George Washington Univ., Virginia

13:50-14:10	<i>Real-Time Robust Pinch Detection Algorithm for Automobile Applications</i> , pp. 325-330	
	Ra, Won-Sang	Yonsei Univ.
	Lee, Hye-Jin	Yonsei Univ.
	Yoon, Tae-Sung	Changwon National Univ.
	Park, Jin Bae	Yonsei Univ.
14:10-14:30	<i>StructView: A Vehicle-Based Laser Scanning System for Roadway Structure Profile Assessment</i> , pp. 331-336	
	Lasky, Ty	Univ. of California, Davis
	Swanston, Travis	Univ. of California, Davis
	Ravani, Bahram	Univ. of California, Davis
14:30-14:50	<i>Dangerous Driving Event Analysis System by a Cascaded Fuzzy Reasoning Petri Net</i> , pp. 337-342	
	Fang, Chiung-Yao	National Taiwan Normal Univ.
	Hsueh, Hsiu-Lin	National Taiwan Normal Univ.
	Chen, Sei-Wang	National Taiwan Normal Univ.
14:50-15:10	<i>Semantic Hierarchy Based Reasoning Chain Algorithm for Event Detection on an Intersection</i> , pp. 343-348	
	Kamijo, Shunsuke	The Univ. of Tokyo
	Liu, Xiaolu	The Univ. of Tokyo

MB6 York A

ITS Architecture and Communications (Regular Session)

	Chair: Wang, Fei-Yue	Univ. of Arizona
13:30-13:50	<i>Smoothing Vehicular Traffic Flow Using Vehicular-Based Ad Hoc Networking & Computing Grid (VGrid)</i> , pp. 349-354	
	Chen, Andrew	Univ. of California, Davis
	Khorashadi, Behrooz	Univ. of California, Davis
	Chuah, Chen-Nee	Univ. of California, Davis
	Ghosal, Dipak	Univ. of California, Davis
	Zhang, H. Michael	Univ. of California, Davis
13:50-14:10	<i>Reliability Analysis of DSRC Wireless Communication for Vehicle Safety Applications</i> , pp. 355-362	
	Bai, Fan	Res. and Development, General Motors
	Krishnan, Hariharan	General Motors Res.
14:10-14:30	<i>A Study on DS/SS Inter Vehicle Communication System Using Array Antenna</i> , pp. 363-368	
	Kawamagari, Yohei	Tokyo Univ. of Science
	Fujii, Masahiro	Tokyo Univ. of Science
	Itami, Makoto	Tokyo Univ. of Science
	Itoh, Kohji	Tokyo Univ. of Science
14:30-14:50	<i>Towards Delivering Context-Aware Transportation User Services</i> , pp. 369-376	
	Meier, René	Trinity Coll. Dublin
	Harrington, Anthony	Trinity Coll. Dublin
	Cahill, Vinny	Trinity Coll. Dublin
14:50-15:10	<i>Development and Research of Intelligent Transportation Systems in China's Tenth Five-Year Plan</i> , pp. 377-382	
	Tang, Shuming	Shandong Acad. of Sciences
	Wang, Fei-Yue	Univ. of Arizona
	Wang, Gang	Beijing Municipal Committee of Communication
	Jia, Xingwu	Shandong Public Security Bureau
	Liu, Fasheng	Shandong Univ. of Science and Tech.

MB7 York B

Travel Time Estimation (Regular Session)

	Chair: Setti, José Reynaldo	Univ. de São Paulo
	Co-Chair: Douxchamps, Damien	Nara Inst. of Science and Tech. (NAIST)
13:30-13:50	<i>Travel Time Variability versus Freeway Characteristics</i> , pp. 383-388	
	Tu, Huizhao	Delft Univ. of Tech.
	van Lint, Hans	Delft Univ. of Tech.
	Van Zuylen, H.J.	Delft Univ. of Tech.
13:50-14:10	<i>Pattern-Based Short-Term Urban Traffic Predictor</i> , pp. 389-393	
	Vlahogianni, Eleni	National Tech. Univ. of Athens
	Karlaftis, Matthew	National Tech. Univ. of Athens
	Golias, John	National Tech. Univ. of Athens
	Kourbelis, Nikolaos	National Tech. Univ. of Athens

14:10-14:30		
<i>Modeling and Estimation of Combined Route and Activity Location Choice</i> , pp. 394-399	Flötteröd, Gunnar Nagel, Kai	Tech. Univ. Berlin Tech. Univ. Berlin
14:30-14:50		
<i>Numerical Simulation of Link Travel Time with Hyperbolic Traffic Behavior</i> , pp. 400-405	Hwang, Ming-Chorng Cho, Hsun-Jung	Kainan Univ. National Chiao Tung Univ.

MC1		Trinity I
Ramp Metering (Special Session)		
	Chair: Wang, Yibing	Tech. Univ. of Crete
	Co-Chair: Bellemans, Tom	Hasselt Univ.
	Organizer: Wang, Yibing	Tech. Univ. of Crete
	Organizer: Bellemans, Tom	Hasselt Univ.
15:30-15:50		
<i>Model Predictive Control for Ramp Metering Combined with Extended Kalman Filter-Based Traffic State Estimation (I)</i> , pp. 406-411	Bellemans, Tom De Schutter, Bart Wets, Geert De Moor, Bart	Hasselt Univ. (IMOB) Delft Univ. of Tech. Hasselt Univ. (IMOB) K.U.Leuven
16:50-16:10		
<i>Improved Online Estimation Methods for a Feedback-Based Freeway Ramp Metering Strategy (I)</i> , pp. 412-417	Ozbay, Kaan Yasar, Ilgin Kachroo, Pushkin	Rutgers Univ. Rutgers Univ. Virginia Tech.
16:10-16:30		
<i>A Ramp Queue Length Estimation Algorithm (I)</i> , pp. 418-425	Vigos, Georgios Papageorgiou, Markos Wang, Yibing	Tech. Univ. of Crete Tech. Univ. of Crete Tech. Univ. of Crete
16:30-16:50		
<i>Local Ramp Metering in the Case of Distant Downstream Bottlenecks (I)</i> , pp. 426-431	Wang, Yibing Papageorgiou, Markos	Tech. Univ. of Crete Tech. Univ. of Crete
16:50-17:10		
<i>Analytical Modeling of Ramp Meter Systems (I)</i> , pp. 432-436	Mirchandani, Pitu Zou, Ning	The Univ. of Arizona The Univ. of Arizona
17:10-17:30		
<i>Evaluation and Field Implementation of the Fuzzy Logic Based Ramp Metering Algorithm ACCEZZ (I)</i> , pp. 437-441	Ernhofer, Oliver Vukanovic, Svetlana	TRANSVER GmbH TRANSVER GmbH

MC2		Trinity II
Cybercars Technology and Trends 1 (Special Session)		
	Chair: Parent, Michel	INRIA
	Co-Chair: Trassoudaine, Laurent	Univ. of Clermont-Ferrand
	Organizer: Parent, Michel	INRIA
	Organizer: Trassoudaine, Laurent	LASMEA
	Organizer: Nunes, Urbano	Univ. of Coimbra
15:30-15:50		
<i>Collective Localization of Communicant Vehicles Applied to Collision Avoidance (I)</i> , pp. 442-449	Karam, Nadir Chausse, Frederic Aufreere, Romuald Chapuis, Roland	LASMEA , Univ. Blaise Pascal UMR6602 CNRS/Univ. Blaise Pascal LASMEA (GRAVIR) LASMEA
16:50-16:10		
<i>Grid Based Fusion & Tracking (I)</i> , pp. 450-455	Olivier, Aycard Anne, Spalanzani Julien, Burllet Chiara, Fulgenzi Trung Dung, Vu David, Raulo Manuel, Yguel	Univ. Joseph Fourier UPMF CNRS-DGA INRIA INRIA INRIA INRIA

16:10-16:30		
<i>Cybercar Cooperation for Safe Intersections (I)</i> , pp. 456-461		
Bouraoui, Laurent		INRIA de Rocquencourt
Laouiti, Anis		INRIA de Rocquencourt
Petti, Stephane		INRIA de Rocquencourt
Parent, Michel		INRIA de Rocquencourt
Fraichard, Thierry		INRIA Rhône-Alpes
16:30-16:50		
<i>Pedestrian Tracking in Car Parks : An Adaptive Interacting Multiple Models Based Filtering Method (I)</i> , pp. 462-467		
Burlet, Julien		INRIA Rhone-Alpes, Gravier-imag Lab., Grenoble
Aycard, Olivier		Univ. Joseph Fourier
Spalanzani, Anne		INRIA
Laugier, Christian		INRIA
16:50-17:10		
<i>Enhanced Local Maps in a GIS for a Precise Localisation in Urban Areas (I)</i> , pp. 468-473		
Jabbour, Maged		Univ. de Tech. de Compiègne
Bonnifait, Philippe		Univ. de Tech. de Compiègne
Cherfaoui, Véronique		Univ. de Tech. de Compiègne
17:10-17:30		
<i>Trajectory Planning with Velocity Planner for Fully-Automated Passenger Vehicles (I)</i> , pp. 474-480		
Solea, Razvan		Univ. of Coimbra
Nunes, Urbano		Univ. of Coimbra
<hr/>		
MC3		Trinity III
Traffic Estimation and Prediction 1 (Regular Session)		
Chair: Hellinga, Bruce		Univ. of Waterloo
Co-Chair: Kezic, Danko		Maritime Faculty in Split, Univ. of Split
15:30-15:50		
<i>A Dynamic Traffic Network Monitoring Algorithm</i> , pp. 481-486		
Cao, Kai		Shandong Univ. of Tech.
Liu, Xiu-song		Shandong Univ. of Tech.
Yu, Shao-wei		Shandong Univ. of Tech.
Zhao, Mo		Shandong Univ. of Tech.
Cao, Feng		Nishikambara Land Improvement District Company
16:50-16:10		
<i>A Real-Time Traffic Information Prediction Model Based on AOSVR and On-Line Learning</i> , pp. 487-492		
Zhao, Mo		Shandong Univ. of Tech.
Cao, Kai		Shandong Univ. of Tech.
Yu, Shao-wei		Shandong Univ. of Tech.
16:10-16:30		
<i>Travel Time Prediction Using a Seasonal Autoregressive Integrated Moving Average Time Series Model</i> , pp. 493-498		
Guin, Angshuman		URS Corp.
16:30-16:50		
<i>Detector Placement Strategies for Freeway Travel Time Estimation</i> , pp. 499-504		
Liu, Ying		Univ. of Maryland
Lai, Xiaorong		Univ. of Maryland
Chang, Gang-Len		Univ. of Maryland
16:50-17:10		
<i>Impact of Probe Vehicles Sample Size on Link Travel Time Estimation</i> , pp. 505-509		
Jiang, Guiyan		Jilin Univ.
Gang, Longhui		Jilin Univ.
Cai, Zhili		Jilin Univ.
17:10-17:30		
<i>ISMAEL – Reliable Eyes for Air Traffic Controllers at Airports</i> , pp. 510-515		
Stockhammer, Constanze		HiTec Marketing
Gao, Haibin		Saarland Univ.
Heuer, Thomas		Univ. des Saarlandes
Hartmann, Uwe		Univ. of Saarbrücken
Grammalidis, Nikos		Informatics and Telematics Inst.
Dimitropoulos, Kosmas		Informatics and Telematics Inst.
Kirrane, Paul Patrick		Advantage Tech. Consulting
Pfister, Joerg		Dr. Pfister

MC4		Trinity IV
Vehicle Detection and Tracking (Regular Session)		
Chair: Batista, Jorge		Univ. of Coimbra
Co-Chair: Alefs, Bram		Advanced Computer Vision - GmbH
15:30-15:50		
<i>Learning Algorithm for Real-Time Vehicle Tracking</i> , pp. 516-521		
Withopf, Daniel		Univ. of Heidelberg
Jähne, Bernd		Univ. of Heidelberg
16:50-16:10		
<i>A Low-Cost Occlusion Handling Using a Novel Feature in Congested Traffic Images</i> , pp. 522-527		
Sadeghi, Maryam		Iran Univ. of Science and Tech. (IUST)
Fathy, Mahmoud		(IUST)
16:10-16:30		
<i>A Dual-Stage Robust Vehicle Detection and Tracking for Real-Time Traffic Monitoring</i> , pp. 528-535		
Batista, Jorge		Univ. of Coimbra
Peixoto, Paulo		Univ. of Coimbra
Fernandes, Catarina		Univ. of Coimbra
Ribeiro, Miguel		Univ. of Coimbra
16:30-16:50		
<i>Embedded Vehicle Detection by Boosting</i> , pp. 536-541		
Alefs, Bram		Advanced Computer Vision - GmbH
16:50-17:10		
<i>A Hierarchical Algorithm for Vehicle Model Type Recognition on Time-Sequence Road Images</i> , pp. 542-547		
Zheng, Mingxie		Yokohama National Univ.
Gotoh, Toshiyuki		Yokohama National Univ.
Shiohara, Morito		Fujitsu Lab. Ltd.
17:10-17:30		
<i>Realtime Obstacle Detection and Tracking Based on Constrained Delaunay Triangulation</i> , pp. 548-553		
Kim, ZuWhan		Univ. of California, Berkeley

MC5		Trinity V
Man-Machine Interfaces (Regular Session)		
Chair: Paletta, Lucas		Joanneum Res.
Co-Chair: Fels, Sidney		Univ. of British Columbia
15:30-15:50		
<i>Multimodal Human-Computer Interfaces for Incident Handling in Metropolitan Transport Management Centre</i> , pp. 554-559		
Shi, Yu		National ICT Australia
Talb, Ronnie		National ICT Australia
Choi, Eric		National ICT Australia
Chen, Fang		National ICT Australia
16:50-16:10		
<i>In-Car Ubiquitous Computing: Driver Tutoring Messages Presented on a Head-Up Display</i> , pp. 560-565		
Karvonen, Hannu		Univ. of Jyväskylä
Kujala, Tuomo		Univ. of Jyväskylä
Saariluoma, Pertti		Univ. of Jyväskylä
16:10-16:30		
<i>A Mobile Vision Service for Multimedia Tourist Applications in Urban Environments</i> , pp. 566-572		
Paletta, Lucas		Joanneum Res.
Fritz, Gerald		Joanneum Res.
Seifert, Christin		Joanneum Res.
Luley, Patrick Morris		Joanneum Res.
Almer, Alexander		Joanneum Res.
16:30-16:50		
<i>Vibrotactile Display for Driving Safety Information</i> , pp. 573-577		
Kim, Hyunho		Gwangju Inst. of Science and Tech.
Seo, Changhoon		Gwangju Inst. of Science and Tech.
Lee, Junhun		Gwangju Inst. of Science and Tech.
Ryu, Jeha		Gwangju Inst. of Science and Tech.
Yu, Si-bok		KATECH (Korea Automotive Tech. Inst.)
Lee, Sooyoung		KATECH
16:50-17:10		
<i>When Does the Driver Workload Reaches Its Limits ?, pp. 578-583</i>		
Girard, Jean-Marc		LAMIH Univ. de Valenciennes et du Hainaut Cambrésis
Younsi, Karine		LAMIH Univ. de Valenciennes et du Hainaut Cambrésis
Nicolas, Tricot		LAMIH UMR CNRS
Popieul, Jean-Christophe		LAMIH Univ. de Valenciennes

17:10-17:30
Investigation of Haptic Feedback in the Driver Seat, pp. 584-589
 Fels, Sidney
 Hausch, Robert
 Tang, Anthony
 Univ. of British Columbia
 Univ. of British Columbia
 Univ. of British Columbia

MC6 York A
Study and Potential Solutions to Evacuation Planning Issues (Special Session)

Chair: Wei, Heng
 Co-Chair: Chiu, Yi-Chang
 Organizer: Wei, Heng
 Organizer: Chiu, Yi-Chang
 Univ. of Cincinnati
 Univ. of Texas, El Paso
 Univ. of Cincinnati
 Univ. of Texas, El Paso

15:30-15:50
Integrating Traffic Simulation Models with Evacuation Planning System in a GIS Environment (I), pp. 590-595
 Li, Qiang
 Yang, X.K.
 Wei, Heng
 Daniel Consultants, Inc.
 Beijing Univ. of Tech.
 Univ. of Cincinnati

16:50-16:10
Using a Generic Network Model to Represent a Case Network for Evacuation Simulation (I), pp. 596-599
 Mitchell, Steven
 Radwan, Essam
 Univ. of Central Florida
 Univ. of Central Florida

16:10-16:30
The Application of Evolutionary Computation in Evacuation Planning (I), pp. 600-605
 Muhdi, Rani
 Garrett, Aaron
 Agarwal, Ravikant
 Davis, Jerry
 Dozier, Gerry
 Umphress, David
 Auburn Univ.
 Auburn Univ.
 Auburn Univ.
 Auburn Univ.
 Auburn Univ.
 Auburn Univ.

16:30-16:50
A Microscopic-To-Macroscopic Crowd Dynamic Model (I), pp. 606-611
 Al-nasur, Sadeq
 Kachroo, Pushkin
 Virginia Pol. Inst. and State Univ.
 Virginia Pol. Inst. and State Univ.

16:50-17:10
A Dynamic Transportation Planning Support System for Hurricane Evacuation (I), pp. 612-617
 Lahmar, Maher
 Assavapokee, Tiravat
 Ardekani, Siamak
 Univ. of Houston
 Univ. of Houston
 Univ. of Texas, Arlington

17:10-17:30
Feedback Control Design and Stability Analysis of One Dimensional Evacuation System (I), pp. 618-623
 Wadoo, Sabiha
 Kachroo, Pushkin
 Virginia Tech.
 Virginia Tech.

MC7 York B
Data Analysis - Offline Applications (Regular Session)

Chair: Rakha, Hesham A. Virginia Tech.

15:30-15:50
Lane Change Maneuver Detection from Probe Vehicle DGPS Data, pp. 624-629
 Xuan, Yiguang
 Coifman, Benjamin
 The Ohio State Univ.
 The Ohio State Univ.

16:50-16:10
Application Oriented Spatio-Temporal Data Model Design for Transportation Planning, pp. 630-635
 Zhu, Liyun
 Wen, Huimin
 Sun, Jianping
 Beijing Transportation Res. Center
 Beijing Transportation Res. Center
 Beijing Transportation Res. Center

16:10-16:30
Qualitative Modeling of Vehicle Behavior for Scenario Parsing, pp. 636-641
 Zheng, Haipeng
 Zhang, Hao
 Meng, Huadong
 Wang, Xiqin
 Tsinghua Univ. China
 Tsinghua Univ.
 Tsinghua Univ.
 Tsinghua Univ.

16:30-16:50
Development of a Semi-Automatic Data Annotation Tool for Driving Data, pp. 642-646
 Torkkola, Kari
 Schreiner, Christopher
 Zhang, Keshu
 Gardner, Mike
 Motorola
 Motorola
 Motorola
 Motorola

16:50-17:10

Pattern Discovering of Regional Traffic Status with Self-Organizing Maps, pp. 647-652

Chen, Yudong
Zhang, Yi
Hu, Jianming
Yao, Danya

Tsinghua Univ.
Tsinghua Univ.
Tsinghua Univ.
Tsinghua Univ.

TA1

Trinity I

Traffic Estimation and Prediction 2 (Regular Session)

Chair: Johnson, Brian K.
Co-Chair: Ozbay, Kaan

Univ. of Idaho
Rutgers Univ.

08:30-08:50

Estimation of Vehicle Speed Based on Asynchronous Data from a Silicon Retina Optical Sensor, pp. 653-658

Litzenberger, Martin
Kohn, Bernhard
Belbachir, Ahmed N.
Donath, Nikolaus
Gritsch, Gerhard
Garn, Heinrich
Posch, Christoph
Schraml, Stephan

ARC Seibersdorf Res. GmbH
ARC Seibersdorf Res. GmbH
ARC Seibersdorf Res. GmbH
ARC Seibersdorf Res. GmbH
ARC Seibersdorf Res. GmbH
ARC Seibersdorf Res. GmbH
ARC Seibersdorf Res. GmbH
ARC Seibersdorf Res. GmbH

08:50-09:10

A Clustering Based Methodology for Determining the Optimal Roadway Configuration of Detectors for Travel Time Estimation, pp. 659-664

Bartin, Bekir
Ozbay, Kaan
Iyigun, Cem

Rutgers Univ.
Rutgers Univ.
Rutgers Univ.

09:10-09:30

Evaluation of Travel Time Variability in New Jersey Turnpike – a Case Study, pp. 665-670

Bartin, Bekir
Ozbay, Kaan

Rutgers Univ.
Rutgers Univ.

09:30-09:50

A Combination Forecasting Model of Urban Ring Road Traffic Flow, pp. 671-676

Guan, Wei
Xie, Hua

Beijing Jiaotong Univ.
Beijing Jiaotong Univ.

09:50-10:10

Travel Time Collection and Traffic Monitoring Via GPS Technologies, pp. 677-682

Byon, Young-Ji
Shalaby, Amer
Abdulhai, Baher

Univ. of Toronto
Univ. of Toronto
Univ. of Toronto

TA2

Trinity II

Driver Behavior Modeling (Regular Session)

Chair: Bellemans, Tom
Co-Chair: Talaat, Hoda

Hasselt Univ.
Univ. of Toronto

08:30-08:50

Effect of Yellow-Phase Trigger on Driver Behavior at High-Speed Signalized Intersections, pp. 683-688

EL-Shawarby, Ihab
Rakha, Hesham A.
Inman, Vaughan
Davis, Gregory

Virginia Tech.
Virginia Tech.
SAIC
FHWA

08:50-09:10

Analysis of Brake Perception-Reaction Times on High-Speed Signalized Intersection Approaches, pp. 689-694

Setti, José Reynaldo
Rakha, Hesham A.
El-Shawarby, Ihab

Univ. de São Paulo
Virginia Tech.
Virginia Tech.

09:10-09:30

Modeling Driver Psychological Deliberation During Dynamic Route Selection Processes, pp. 695-700

Talaat, Hoda
Abdulhai, Baher

Univ. of Toronto
Univ. of Toronto

09:30-09:50

Driving Behavior Analysis Applying Driving Behavior in the AHS, pp. 701-706

luo, yong
Guo, xiuchun

Univ. of Southwest Jiaotong & Univ. of Xihua
The Sichuan Vocational and Tech. Coll. of Comm..

TA3	Trinity III
Passenger Transportation Systems and Electronic Payment (Regular Session)	
Chair: Aoki, Masayoshi	Seikei Univ.
Co-Chair: Lodewijks, Gabriel	Delft Univ. of Tech.
08:30-08:50	
<i>Long Distance Passenger Conveyors</i> , pp. 707-712	
Lodewijks, Gabriel	Delft Univ. of Tech.
Nuttall, Ashley	Delft Univ. of Tech.
Kusumaningtyas, Indraswari	Delft Univ. of Tech.
08:50-09:10	
<i>Development of a Hierarchical BRT System Architecture</i> , pp. 713-718	
Hickman, Mark	Univ. of Arizona
Tan, Chin-Woo	Univ. of California, Berkeley
Lau, Peter	Univ. of California, Berkeley
Zhang, Wei-Bin	PATH, Univ. of California, Berkeley
09:10-09:30	
<i>Evaluation of an LPR-Based Toll Enforcement System on Portuguese Motorways</i> , pp. 719-724	
Silva, Jorge	ISEL
Marques, Gonçalo	ISEL
Jorge, Pedro	ISEL
Abrantes, Arnaldo	ISEL
Osório, António Luís	ISEL
Gomes, Jorge Sales	Brisa
Braga, José	Brisa
09:30-09:50	
<i>Congestion Pricing That Preserves Driver Privacy</i> , pp. 725-732	
Blumberg, Andrew Justin	Stanford Univ.
Chase, Robin	Meadow Networks
09:50-10:10	
<i>Audio Events Detection in Public Transport Vehicle</i> , pp. 733-738	
Rouas, Jean-Luc	INRETS - LEOST
Louradour, Jérôme	IRIT - Univ. Paul Sabatier (Toulouse)
Ambellouis, Sebastien	INRETS - LEOST
TA4	Trinity IV
Imaging and Image Analysis 1 (Regular Session)	
Chair: Broggi, Alberto	Univ. of Parma
Co-Chair: Papanikolopoulos, Nikos	Univ. of Minnesota
08:30-08:50	
<i>Obstacles Detection on a Road by Dense Stereovision with 1D Correlation Windows and Fuzzy Filtering</i> , pp. 739-744	
Lefebvre, Sébastien	INRETS
Ambellouis, Sebastien	Inst. of Res.
Cabestaing, François	Univ. of Lille
08:50-09:10	
<i>The Single Frame Stereo Vision System for Reliable Obstacle Detection Used During the 2005 DARPA Grand Challenge on TerraMax</i> , pp. 745-752	
Broggi, Alberto	Univ. of Parma
Caraffi, Claudio	Univ. of Parma
Porta, Pier Paolo	Univ. of Parma
Zani, Paolo	Univ. of Parma
09:10-09:30	
<i>Crowd Analysis at Mass Transit Sites</i> , pp. 753-758	
Kilambi, Prahlad	UMN
Masoud, Osama	Univ. of Minnesota
Papanikolopoulos, Nikos	Univ. of Minnesota
09:30-09:50	
<i>On Eliminating Static Shadow False Alarms in Automatic Incident Detection Systems</i> , pp. 759-764	
Shehata, Mohamed	Univ. of Calgary
Pervez, Muzamil	Univ. of Calgary
Burr, Tyson	Univ. of Calgary
Cai, Jun	Univ. of Calgary
Badawy, Wael	Univ. of Calgary
Radmanesh, Ahmad	City of Calgary
09:50-10:10	
<i>Recent Developments in Vision Based Target Tracking for Autonomous Vehicles Navigation</i> , pp. 765-770	
Jia, Zhen	Nanyang Tech. Univ.

TA5	Trinity V
Navigation, Guidance and Control (Regular Session)	
Chair: Hasegawa, Takaaki	Saitama Univ.
Co-Chair: El-Rabbany, Ahmed	Ryerson Univ.
08:30-08:50	
<i>An Agent-Based Controller for Vehicular Automation</i> , pp. 771-776	
He, Feng	Inst. of Automation Chinese Acad. Sciences
Wang, Fei-Yue	Univ. of Arizona
Tang, Shuming	Shandong Acad. of Sciences
08:50-09:10	
<i>GPS/INS for Logistics of Ship-Block</i> , pp. 777-782	
Lee, Kyu Chan	Hyundai Heavy Industries Co., Ltd.
Lee, Yeong Ho	Hyundai Heavy Industries Co., Ltd.
Lee, Kil Jong	Hyundai Heavy Industries Co., Ltd.
Son, Yung Deug	Hyundai Heavy Industries Co., Ltd.
09:10-09:30	
<i>An Autonomous GPS Carrier-Phased-Based System for Precision Navigation</i> , pp. 783-787	
El-Rabbany, Ahmed	Ryerson Univ.
09:30-09:50	
<i>The Inverse GPS Based Positioning System Using 2.4GHz Band Radio Signals - System Design and Fundamental Experiments -</i> , pp. 788-792	
Moriya, Jun'ichiro	Saitama Univ.
Honma, Yusuke	Saitama Univ.
Hasegawa, Takaaki	Saitama Univ.
Tanaka, Yuichi	Oki Electric Industry Co., Ltd.
Shimizu, Satoru	Oki Electric Industry Co., Ltd.
09:50-10:10	
<i>On the M-CubiTS Pedestrian WYSIWYAS Navigation System</i> , pp. 793-798	
Manabe, Tetsuya	Saitama Univ.
Yamashita, Seiji	Saitama Univ.
Hasegawa, Takaaki	Saitama Univ.
TA6	York A
Driver Assistance Services (Regular Session)	
Chair: Sotelo Vázquez, Miguel Ángel	Univ. of Alcalá
Co-Chair: Hasegawa, Chisa	Aichi Prefectural Univ.
08:30-08:50	
<i>A System for Driver Behavioral Indicators Processing and Archiving</i> , pp. 799-804	
Bezot, Olivier	Univ. of Tech. of Compiègne
Cherfaoui, Véronique	Univ. of Tech. of Compiègne
Bonnifait, Philippe	Univ. of Tech. of Compiègne
08:50-09:10	
<i>Driver Alertness Sensing</i> , pp. 805-810	
Holzbecher, Jan	Ec. Pol. Fédérale de Lausanne (EPFL)
Holzmann, Frederic	Siemens VDO Automotive
Bellino, Mario	EPFL
Sulzmann, Armin	DaimlerChrysler AG
Ryser, Peter	EPFL
Jacot, Jacques	EPFL
09:10-09:30	
<i>Fast Traffic Sign Detection and Recognition under Changing Lighting Conditions</i> , pp. 811-816	
García-Garrido, Miguel Ángel	Univ. of Alcalá
Sotelo Vázquez, Miguel Ángel	Univ. of Alcalá
Martín-Gorostiza, Ernesto	Univ. of Alcalá
09:30-09:50	
<i>The Effects of Specific Musical Stimuli on Driver's Drowsiness</i> , pp. 817-822	
Hasegawa, Chisa	Aichi Prefectural Univ.
Oguri, Koji	Aichi Prefectural Univ.
09:50-10:10	
<i>Road Bridge Sign Detection and Classification</i> , pp. 823-826	
Marmo, Roberto	Univ. of Pavia
Lombardi, Luca	Univ. of Pavia

TA7	York B
ITS Applications of Various Filtering Techniques 1 (Special Session)	
Chair: Wang, Yibing	Tech. Univ. of Crete
Co-Chair: Antoniou, Constantinos	National Tech. Univ. of Athens
Organizer: Wang, Yibing	Tech. Univ. of Crete
Organizer: Antoniou, Constantinos	National Tech. Univ. of Athens
Organizer: van Lint, Hans	Delft Univ. of Tech.
08:30-08:50	
<i>Real-Time Estimation of Origin-Destination Flows for Actuation-Controlled Intersections (I)</i> , pp. 827-832	
Lou, Yingyan	Univ. of Florida
Yin, Yafeng	Univ. of Florida
08:50-09:10	
<i>Non-linear Kalman Filtering Algorithms for On-line Calibration of Dynamic Traffic Assignment Models (I)</i> , pp. 833-838	
Antoniou, Constantinos	National Tech. Univ. of Athens
Ben-Akiva, Moshe	Massachusetts Inst. of Tech.
Koutsopoulos, Haris N.	Northeastern Univ.
09:10-09:30	
<i>RENAISSANCE: A Real-Time Freeway Network Traffic Surveillance Tool (I)</i> , pp. 839-844	
Wang, Yibing	Tech. Univ. of Crete
Papageorgiou, Markos	Tech. Univ. of Crete
Messmer, Albert	Independent Consulting
09:30-09:50	
<i>Two Distinct Ways of Using Kalman Filters to Predict Urban Arterial Travel Time (I)</i> , pp. 845-850	
Liu, Hao	Delft Univ. of Tech.
van Lint, Hans	Delft Univ. of Tech.
Van Zuylen, H.J.	Delft Univ. of Tech.
Zhang, Ke	Chinese National Intelligent Transport System Center of Tech.
09:50-10:10	
<i>R-Adaptive Kalman Filtering Approach for EstimateHead Orientation for Driving Simulator (I)</i> , pp. 851-857	
Motai, Yuichi	Univ. of Vermont
Himberg, Henry	Univ. of Vermont
Barrios, Cesar	Univ. of Vermont
TB1	Trinity I
Traffic Detection and Surveillance 1 (Regular Session)	
Chair: Peeta, Srinivas	Purdue Univ.
Co-Chair: Jacob, Celine	McCormick Rankin Corp.
10:30-10:50	
<i>AOID: Adaptive On-Line Incident Detection System</i> , pp. 858-863	
Boedihardjo, Arnold	Virginia Tech.
Lu, Chang-Tien	Virginia Tech.
10:50-11:10	
<i>Vehicle Trajectories Evaluation by Static Video Sensors</i> , pp. 864-869	
Goyatyann, Goyat	Univ. of Clermont, Ferrand
Thierry, Chateau	Univ. of Clermont, Ferrand
Laurent, Malaterre	Univ. of Clermont, Ferrand
Laurent, Trassoudaine	Univ. of Clermont, Ferrand
11:10-11:30	
<i>Automated Estimation of Incident Duration on Dutch Highways</i> , pp. 870-874	
Knibbe, Willem Jan	Rijkswaterstaat AVV Transport Res. Center
Alkim, Tom	Rijkswaterstaat AVV
Otten, Jon	IM Tech. - ICT
Aidoo, Moses	IM Tech. - ICT
11:30-11:50	
<i>High Accuracy Traffic Monitoring Using Road-Side Line-Scan Cameras</i> , pp. 875-878	
Douxchamps, Damien	Nara Inst. of Science and Tech. (NAIST)
Chihara, Kunihiro	Nara Inst. of Science and Tech. (NAIST)
Macq, Benoît	Univ. Catholique de Louvain
11:50-12:10	
<i>Vehicle Trajectory-Based Road Type and Congestion Recognition Using Wavelet Analysis</i> , pp. 879-884	
Zhu, Weihua	Univ. of California, Riverside
Barth, Matthew	Univ. of California, Riverside

TB2	Trinity II
ITS Modeling 1 (Regular Session)	
Chair: Kachroo, Pushkin Co-Chair: Foo, Simon	Virginia Tech. Univ. of Toronto
10:30-10:50 <i>On the Existence of Competitions among Information Service Providers and Toll Road Operators</i> , pp. 885-890 Szeto, Wai Yuen	Trinity Coll. Dublin
10:50-11:10 <i>Evaluating the Impacts of Changeable Message Signs on Traffic Diversion</i> , pp. 891-896 Foo, Simon Abdulhai, Baher	Univ. of Toronto Univ. of Toronto
11:10-11:30 <i>Variable Speed Limits: Safety and Operational Impacts of a Candidate Control Strategy for an Urban Freeway</i> , pp. 897-902 Allaby, Peter Hellinga, Bruce Bullock, Mara	IBI Group /Univ. of Waterloo Univ. of Waterloo IBI Group
11:30-11:50 <i>Evaluation of the Combined Impacts of E-ZPass and Time-Of-Day Pricing on Port Authority of New York and New Jersey Crossings</i> , pp. 903-908 Yanmaz-Tuzel, Ozlem Ozbay, Kaan Holguin-Veras, Jose	Rutgers Univ. Rutgers Univ. Rensselaer Pol. Inst.
11:50-12:10 <i>Importance of Spillback Modeling in Assessing ITS</i> , pp. 909-914 Knoop, Victor Hoogendoorn, Serge Van Zuylen, H.J.	Delft Univ. of Tech. Delft Univ. of Tech. Delft Univ. of Tech.
TB3	Trinity III
Vehicle Tracking Applications (Regular Session)	
Chair: Abbas, Montasir Co-Chair: Zhao, Huijing	Virginia Tech. Univ. of Tokyo
10:30-10:50 <i>Global Positioning Systems Data for Performance Evaluation of HOV and GP Lanes on I-66 and I-395/I-95</i> , pp. 915-920 Ali, Asma Venigalla, Mohan	George Mason Univ. George Mason Univ.
10:50-11:10 <i>The Architecture Design of WebGIS Based on Multi-Agent</i> , pp. 921-926 Li, Guangru Hu, Jingfeng Gao, Honhbin	Dalian Maritime Univ. Dalian Maritime Univ. Dalian Maritime Univ.
11:10-11:30 <i>Evaluation of Performance of Beijing Expressway Based on Integrated GPS/GIS Data</i> , pp. 927-932 Huang, Ling Wu, Jianping	Beijing Jiaotong Univ. Univ. of Southampton
11:30-11:50 <i>Study on 3D-Map for On-Board Navigation System, Based on Multigen Creator & Vega</i> , pp. 933-938 Zhang, Lin Yang, Zhaosheng Wang, Bin Hu, Juanjuan	Jilin Univ. Jilin Univ. Hebei Normal Univ. Jilin Univ.
TB4	Trinity IV
Imaging and Image Analysis 2 (Regular Session)	
Chair: Aoki, Masayoshi Co-Chair: Broggi, Alberto	Seikei Univ. Univ. of Parma
10:30-10:50 <i>Color Model-Based Real-Time Learning for Road Following</i> , pp. 939-944 Tan, Ceryen Hong, Tsai Chang, Tommy Shneier, Michael	National Inst. of Standards and Tech. National Inst. of Standards and Tech. National Inst. of Standards and Tech. National Inst. of Standards and Tech.

10:50-11:10	<i>Reliable Architecture of an Embedded Stereo Vision System for a Low Cost Autonomous Vehicle</i> , pp. 945-950	
	Hemetsberger, Hannes	Seibersdorf Res.
	Kogler, Jürgen	Seibersdorf Res.
	Travis, William	Auburn Univ.
	Behringer, Reinhold	Leeds Metropolitan Univ.
	Kubinger, Wilfried	Seibersdorf Res.
11:10-11:30	<i>A Decision Network Based Frame-Work for Visual Off-Road Path Detection Problem</i> , pp. 951-956	
	Broggi, Alberto	Univ. of Parma
	Caraffi, Claudio	Univ. of Parma
	Cattani, Stefano	Univ. of Parma
	Fedriga, Rean Isabella	Univ. of Parma
11:30-11:50	<i>On-Line Calibration Method for Stereovision Systems Used in Vehicle Applications</i> , pp. 957-962	
	Nedevschi, Sergiu	Tech. Univ. of Cluj, Napoca
	Vancea, Cristian Cosmin	Tech. Univ. of Cluj, Napoca
	Marita, Tiberiu	Tech. Univ. of Cluj
	Graf, Thorsten	Volkswagen AG
11:50-12:10	<i>Road Detection and Classification in Urban Environments Using Conditional Random Field Models</i> , pp. 963-967	
	Tsai, Jyun-Fan	National Taiwan Univ.
	Huang, Shih-Shinh	National Taiwan Univ.
	Chan, Yi-Ming	National Taiwan Univ.
	Huang, Chan-Yu	National Taiwan Univ.
	Fu, Li-Chen	National Taiwan Univ.
	Hsiao, Pei-Yung	Chang Gung Univ.

TB5	Trinity V
Collision Avoidance 1 (Regular Session)	

	Chair: Antonsson, Erik	California Inst. of Tech.
	Co-Chair: Peixoto, Paulo	Univ. of Coimbra
10:30-10:50	<i>A New Threat Assessment Measure for Collision Avoidance Systems</i> , pp. 968-975	
	Zhang, Yizhen	California Inst. of Tech.
	Antonsson, Erik	California Inst. of Tech.
	Grote, Karl	California State Univ. Long Beach
10:50-11:10	<i>Pedestrian Collision Avoidance Systems: A Survey of Computer Vision Based Recent Studies</i> , pp. 976-981	
	Gandhi, Tarak	Univ. of California, San Diego
	Trivedi, Mohan M.	Univ. of California, San Diego
11:10-11:30	<i>Collision Prediction at Intersection in Sensor Network Environment</i> , pp. 982-987	
	Kwon, Oje	Pusan National Univ.
	Lee, Sang-Hyun	Pusan National Univ.
	Kim, Joon-Seok	Pusan National Univ.
	Kim, Minsoo	ETRI
	Li, Ki-Joune	Pusan National Univ.
11:30-11:50	<i>Research on Trajectory Planning in Emergency Situations with Multiple Objects</i> , pp. 988-992	
	Schmidt, Christian	Robert Bosch GmbH
11:50-12:10	<i>A Study on the Safety-Capacity Tradeoff Improvement by Warning Communications</i> , pp. 993-999	
	Mourllion, Benjamin	INRETS-LCPC
	Gruyer, Dominique	INRETS/LCPC
	Lambert, Alain	IEF Univ. d'Orsay

TB6	York A
Cooperative Systems (Regular Session)	

	Chair: Misener, James A.	PATH , Univ. of California, Berkeley
	Co-Chair: Chawathe, Sudarshan	Univ. of Maine
10:30-10:50	<i>Robust Min-Max Localization Algorithm</i> , pp. 1000-1005	
	Parker, Ryan	Univ. of Toronto
	Valaee, Shahrokh	Univ. of Toronto

10:50-11:10		
<i>Co-Operative Lane-Level Positioning Using Markov Localization</i> , pp. 1006-1011		
Dao, Thanh-Son		Univ. of Waterloo
Leung, Keith Yu Kit		Univ. of Waterloo
Clark, Christopher		Univ. of Waterloo
Huissoon, Jan Paul		Univ. of Waterloo
11:10-11:30		
<i>A Cooperative Radar System for Collision Avoidance and Communications between Vehicles</i> , pp. 1012-1016		
Tatkeu, Charles		INRETS
Deloof, Pascal		INRETS
Elhillali, Yassin		Univ. of Valenciennes
Rivenq, Atika		Univ. of Valenciennes
Rouvaen, Jean Michel		Univ. of Valenciennes
11:30-11:50		
<i>Design and Implementation of a Cooperative Collision Warning System</i> , pp. 1017-1022		
Huang, Jihua		General Motors
Tan, Han Shue		Univ. of California at Berkeley
11:50-12:10		
<i>Real-Time Crash Avoidance System on Crossroads Based on 802.11 Devices and GPS Receivers</i> , pp. 1023-1028		
Ammoun, Samer		Ec. des Mines de Paris
Nashashibi, Fawzi		Ec. des Mines de Paris
Laurgeau, Claude		Ec. des Mines de Paris
TB7		
ITS Applications of Various Filtering Techniques 2 (Special Session)		
Chair: Wang, Yibing		Tech. Univ. of Crete
Co-Chair: van Lint, Hans		Delft Univ. of Tech.
Organizer: Wang, Yibing		Tech. Univ. of Crete
Organizer: Antoniou, Constantinos		National Tech. Univ. of Athens
Organizer: van Lint, Hans		Delft Univ. of Tech.
10:30-10:50		
<i>A Comparison of Filter Configurations for Freeway Traffic State Estimation (I)</i> , pp. 1029-1034		
Hegy, Andreas		TU Delft
Girimonte, Daniela		European Space Agency
Babuska, Robert		TU Delft
De Schutter, Bart		TU Delft
10:50-11:10		
<i>A Derivative-Free Nonlinear Algorithm for Speed Estimation Using Data from Single Loop Detectors (I)</i> , pp. 1035-1040		
Zhang, Yunlong		Texas A&M Univ.
Ye, Zhirui		Texas A&M Univ.
11:10-11:30		
<i>Incremental and Online Learning through Extended Kalman Filtering with Constraint Weights for Freeway Travel Time Prediction (I)</i> , pp. 1041-1046		
van Lint, Hans		Delft Univ. of Tech.
11:30-11:50		
<i>Particle Filter Based Traffic State Estimation Using Cell Phone Network Data (I)</i> , pp. 1047-1052		
Cheng, Peng		Tsinghua Univ.
Qiu, Zhijun		Univ. of Wisconsin , Madison
Ran, Bin		Univ. of Wisconsin , Madison
11:50-12:10		
<i>Multiple Model Framework of Adaptive Extended Kalman Filtering for Predicting Vehicle Location (I)</i> , pp. 1053-1059		
Barrios, Cesar		Univ. of Vermont
Motai, Yuichi		Univ. of Vermont
Himberg, Henry		Univ. of Vermont
Sadek, Adel		Univ. of Vermont
TC1		
Traffic Detection and Surveillance 2 (Regular Session)		
Chair: Hegyi, Andreas		Delft Univ. of Tech.
Co-Chair: Cipriani, Ernesto		Univ.di Roma
13:40-14:00		
<i>Flatness Based Control of Traffic Flow</i> , pp. 1060-1065		
Abouaissa, Hassane		Faculté des Sciences Appliquées, Univ. d'Artois.
Iordanova, Violina		Faculté des Sciences Appliquées, Univ. d'Artois.
Jolly, Daniel		Faculté des Sciences Appliquées, Univ. d'Artois.

14:00-14:20
Incident Detection System by Sensor Fusion Network Employing Image Sensors and Supersonic Wave Sensors, pp. 1066-1071
 Sumiya, Naoki The Univ. of Tokyo
 Fujihira, Kenji The Univ. of Tokyo
 Kamijo, Shunsuke The Univ. of Tokyo

14:20-14:40
Heuristic Methods for the Optimal Location of Road Traffic Monitoring Stations, pp. 1072-1077
 Cipriani, Ernesto Univ. di Roma Tre
 Fusco, Gaetano Univ. di Roma La Sapienza
 Gori, Stefano Univ. di Roma, Tre
 Petrelli, Marco Univ. di Roma, Tre

14:40-15:00
Robust Classification and Tracking of Vehicles in Traffic Video Streams, pp. 1078-1083
 Morris, Brendan Univ. of California, San Diego
 Trivedi, Mohan M. Univ. of California, San Diego

15:00-15:20
Enhanced Detection of Road Traffic Congestion Areas Using Cell Dwell Times, pp. 1084-1089
 Thajchayapong, Suttipong National Electronic and Computer Tech. Center (NECTEC)
 Pattara-atikom, Wasan NECTEC
 Chadil, Noppadol NECTEC
 Mitrpant, Chaichana NECTEC

TC2 Trinity II

ITS Modeling 2 (Regular Session)
 Chair: Setti, José Reynaldo Univ. de São Paulo
 Co-Chair: Wahba, Mohamed Univ. of Toronto

13:40-14:00
Maximizing Reserve Capacity for a Signalized Road Network Design Problem, pp. 1090-1095
 Chiou, Suh-Wen National Dong Hwa Univ.

14:00-14:20
Comparison of Three Algorithms for Solving a Scalable Convergent Demand Responsive Transportation Problem, pp. 1096-1101
 Chevrier, Remy Univ. d'Avignon et Univ. de Franche-Comté, UMR

14:20-14:40
A Discrete-Event Mesoscopic Traffic Simulation Model for Hybrid Traffic Simulation, pp. 1102-1107
 Burghout, Wilco Royal Inst. of Tech.
 Koutsopoulos, Haris N. Northeastern Univ.
 Andreasson, Ingmar Royal Inst. of Tech.

14:40-15:00
Feedback Control Design and Stability Analysis of Two Dimensional Evacuation System, pp. 1108-1113
 Wadoo, Sabiha Virginia Tech.
 Kachroo, Pushkin Virginia Tech.

TC3 Trinity III

ITS Planning, Training, and Evaluation (Regular Session)
 Chair: Bertini, Robert Portland State Univ.
 Co-Chair: Foo, Simon Univ. of Toronto

13:40-14:00
Evaluating ITS Strategies for Real-Time Freeway Safety Improvement, pp. 1114-1119
 Gayah, Vikash Univ. of Central Florida
 Dos Santos, Cristina Univ. of Central Florida
 Abdel-Aty, Mohamed Univ. of Central Florida
 Dhindsa, Albinder URS Corp.
 Dilmore, Jeremy Florida Department of Transportation

14:00-14:20
Modeling and Analysis of Artificial Transportation System Based on Multi-Agent Technology, pp. 1120-1124
 He, Feng Inst. of Automation Chinese Acad. Sciences
 Holzbecher, Jan EPFL
 Li, Yuantao The Chinese Acad. of Sciences
 Wang, Fei-Yue Univ. of Arizona
 Tang, Shuming Shandong Acad. of Sciences

14:20-14:40
ITS Planning Methodology for Chinese Cities and Its Evaluation Model, pp. 1125-1130
 Huang, Ailing Beijing Jiaotong Univ.
 Shen, Jinsheng Beijing Jiaotong Univ.
 Guan, Wei Beijing Jiaotong Univ.

14:40-15:00
Modeling Interactions in Artificial Transportation Systems Using Petri Net, pp. 1131-1136
 Zhu, Fenghua Key Lab. of Complex Systems and Intelligence Science
 Wang, Zhixue Key Lab. of Complex Systems and Intelligence Science
 Wang, Fei-Yue Univ. of Arizona
 Tang, Shuming Shandong Acad. of Sciences

15:00-15:20
Building an Online ITS Research and Training Facility – the ICAT Database and Platform, pp. 1137-1142
 Foo, Simon Univ. of Toronto
 Abdulhai, Baher Univ. of Toronto

TC4 Trinity IV

Lane Detection (Regular Session)
 Chair: Nedevschi, Sergiu Tech. Univ. of Cluj-Napoca
 Co-Chair: Labayrade, Raphaël Vehicle - Infrastructure - Driver Interactions Res.

13:40-14:00
A Multi-Model Lane Detector That Handles Road Singularities, pp. 1143-1148
 Labayrade, Raphaël Vehicle - Infrastructure - Driver Interactions Res.
 Aubert, Didier Vehicle - Infrastructure - Driver Interactions Res.
 Douret, Jérôme Citilog

14:00-14:20
Realtime Lane Tracking of Curved Local Road, pp. 1149-1155
 Kim, ZuWhan Univ. of California, Berkeley

14:20-14:40
Stereovision-Based Side Lane and Guardrail Detection, pp. 1156-1161
 Danescu, Radu Gabriel Tech. Univ. of Cluj-Napoca
 Sobol, Stefan Tech. Univ. of Cluj-Napoca
 Nedevschi, Sergiu Tech. Univ. of Cluj-Napoca
 Graf, Thorsten Volkswagen AG

14:40-15:00
A Novel, Signal Model Based Approach to Lane Detection for Use in Intersection Assistance, pp. 1162-1167
 Duchow, Christian Univ. of Karlsruhe

15:00-15:20
HSI Color Model Based Lane Marking Detection, pp. 1168-1172
 Sun, Tsung-Ying National Dong Hwa Univ.
 Tsai, Shang-Jeng National Dong Hwa Univ.
 Chan, Vincent National Dong Hwa Univ.

TC5 Trinity V

Collision Avoidance 2 (Regular Session)
 Chair: Zhang, Yan Delphi Corp.
 Co-Chair: Barrios, Cesar Univ. of Vermont

13:40-14:00
Threat Assessment for General Road Scenes Using Monte Carlo Sampling, pp. 1173-1178
 Eidehall, Andreas Linköping Univ.
 Petersson, Lars NICTA

14:00-14:20
Development of Vision-Based Lane and Vehicle Detecting Systems Via the Implementation with a Dual-Core DSP, pp. 1179-1184
 Yeh, Chih-Hsien Industrial Tech. Res. Inst.
 Chen, Yung-Hsin China Motor Corp.

14:20-14:40
Legendre and Gabor Moments for Vehicle Recognition in Forward Collision Warning, pp. 1185-1190
 Zhang, Yan Delphi Electronics & Safety
 Kiselewich, Stephen Delphi Electronics & Safety
 Bauson, William Delphi Electronics & Safety

14:40-15:00
Prediction of Stopping Maneuver According to Driver's State, pp. 1191-1196
 Hayashi, Katsuki Aichi Prefectural Univ.
 Yoshiaki, Kojima Aichi Prefectural Univ.
 Abe, Konomu Tokai Rika Co, LTD.
 Oguri, Koji Aichi Prefectural Univ.

TC6	York A
Traveller Information Systems (Regular Session)	
Chair: Ozbay, Kaan Co-Chair: Bauer, Dietmar	Rutgers, The State Univ. of NJ Arsenal Res.
13:40-14:00 <i>An Ontological Infrastructure for Traveller Information Systems</i> , pp. 1197-1202	
Samper, J. Javier Tomás, Vicente R. Martínez, Juan José van den Berg, Leo	Univ. de Valencia Univ. Jaume I de Castellón Univ. de Valencia Univ. de Valencia
14:00-14:20 <i>Personalized Ontrip Travel Time Information for Mobile Phones</i> , pp. 1203-1206	
Schneider, Walter Reitmeier, Marco Kastner, Matthias	Arsenal Res. Arsenal Res. Arsenal Res.
14:20-14:40 <i>An Adaptive Dissemination Mechanism for Inter-Vehicle Communication-Based Decentralized Traffic Information Systems</i> , pp. 1207-1213	
Xu, Huaying Barth, Matthew	Univ. of California, Riverside Univ. of California, Riverside
14:40-15:00 <i>An Event-Based Communication Environment for Multi-Modal Traffic Information Systems</i> , pp. 1214-1219	
Heistracher, Thomas J. Widmann, Rainer Stadlmann, Burkhard Zellinger, Jürgen	Salzburg Univ. of Applied Sciences Salzburg Univ. of Applied Sciences Univ. of Applied Sciences Wels Salzburg Univ. of Applied Sciences
TC7	York B
Cybercars Technology and Trends 2 (Special Session)	
Chair: Trassoudaine, Laurent Co-Chair: Parent, Michel Organizer: Nunes, Urbano Organizer: Parent, Michel Organizer: Trassoudaine, Laurent	Univ. of Clermont-Ferrand INRIA Univ. of Coimbra INRIA Univ. of Clermont-Ferrand
13:40-14:00 <i>AUTOPIA Architecture for Automatic Driving and Maneuvering (I)</i> , pp. 1220-1225	
Naranjo Hernandez, Jose Eugenio Gonzalez, Carlos de Pedro, Teresa Garcia, Ricardo Alonso Ruiz, Javier Sotelo Vázquez, Miguel Ángel Fernandez Llorca, David	Industrial Automation Inst. CSIC Industrial Automation Inst. CSIC Industrial Automation Inst. CSIC Industrial Automation Inst. CSIC Industrial Automation Inst. CSIC Univ. of Alcalá Univ. of Alcalá
14:00-14:20 <i>Real-Time Lane Detection in Various Conditions and Night Cases (I)</i> , pp. 1226-1231	
Wang, Hong Chen, Qiang	Tsinghua Univ. Tsinghua Univ.
14:20-14:40 <i>Real-Time Coordination of Autonomous Vehicles (I)</i> , pp. 1232-1239	
Bouroche, Mélanie Hughes, Barbara Cahill, Vinny	Trinity Coll. Dublin Trinity Coll. Dublin Trinity Coll. Dublin
14:40-15:00 <i>Fusion of Stereo and Optical Flow Data Using Occupancy Grids (I)</i> , pp. 1240-1245	
Braillon, Christophe Kane, Usher Pradalier, Cédric Crowley, James Laugier, Christian	INRIA Rhône-Alpes CSIRO ICT Center, ASL Lab. Brisbane CSIRO ICT Center, ASL Lab. Brisbane INRIA Rhône-Alpes INRIA Rhône-Alpes
15:00-15:20 <i>Dynamic Fleet Management for Cybercars (I)</i> , pp. 1246-1250	
Wang, Fenghui Yang, Ming Yang, Ruqing	Shanghai Jiao Tong Univ. Shanghai Jiao Tong Univ. Shanghai Jiao Tong Univ.

WA1		Trinity I
Data and Technology Application (Regular Session)		
Chair: Barth, Matthew		Univ. of California-Riverside
Co-Chair: Dia, Hussein		The Univ. of Queensland
08:30-08:50		
<i>Comparative Evaluation of Power-Based Environmental Emissions Models</i> , pp. 1251-1256		
Dia, Hussein		The Univ. of Queensland
Panwai, Sakda		The Univ. of Queensland
Boongrapue, Noppakun		The Univ. of Queensland
Ton, Tu		CSIRO
Smith, Nariida		CSIRO
08:50-09:10		
<i>An Energy and Emissions Impact Evaluation of Intelligent Speed Adaptation</i> , pp. 1257-1262		
Servin, Oscar		Univ. of California, Riverside
Boriboonsomsin, Kanok		Univ. of California, Riverside
Barth, Matthew		Univ. of California, Riverside
09:10-09:30		
<i>Development of an ITS Data Archive Application for Improving Freeway Travel Time Estimation</i> , pp. 1263-1268		
Kothuri, Sirisha		Portland State Univ.
Tufte, Kristin		Portland State Univ.
Ahn, Soyoung		Portland State Univ.
Bertini, Robert		Portland State Univ.
09:30-09:50		
<i>Expansion of an ITS Data Archive with Applications for Improving Spatial Analysis and Tracking Non-Recurrent Congestion</i> , pp. 1269-1274		
Bertini, Robert		Portland State Univ.
Tufte, Kristin		Portland State Univ.
Rucker, James		Portland State Univ.
Potter, Jessica		Portland State Univ.
Welch, Tim		Portland State Univ.
09:50-10:10		
<i>Parking Monitor System Based on Magnetic Field Sensors</i> , pp. 1275-1279		
Wolff, Joerg		Saarland Univ.
Heuer, Thomas		Saarland Univ.
Gao, Haibin		Saarland Univ.
Weinmann, Michael		Votronic Development and Production GmbH
Voit, Stefan		Votronic Development and Production GmbH
Hartmann, Uwe		Saarland Univ.
WA2		Trinity II
Vehicle Routing (Regular Session)		
Chair: Kaysi, Isam		American Univ. of Beirut
Co-Chair: Fu, Liping		Univ. of Waterloo
08:30-08:50		
<i>Drivers' Working Hours in Vehicle Routing and Scheduling</i> , pp. 1280-1285		
Goel, Asvin		Univ. of Leipzig
Gruhn, Volker		Univ. of Leipzig
08:50-09:10		
<i>Development of a Microscopic Traffic Simulator for Inter-Vehicle Communication Application Research</i> , pp. 1286-1291		
Leung, Keith Yu Kit		Univ. of Waterloo
Dao, Thanh-Son		Univ. of Waterloo
Clark, Christopher		Univ. of Waterloo
Huissoon, Jan Paul		Univ. of Waterloo
09:10-09:30		
<i>Accelerating the O-D Estimation Process for Micro Simulation: An Application of a Logit Path Flow Estimator in Paramics</i> , pp. 1292-1297		
Nie, Yu		Univ. of California, Davis
09:30-09:50		
<i>Path-Based System Optimal Dynamic Traffic Assignment Models: Formulations and Solution Methods</i> , pp. 1298-1303		
Shen, Wei		Univ. of California, Davis
Nie, Yu		Univ. of California, Davis
Zhang, H. Michael		Univ. of California, Davis
09:50-10:10		
<i>The Research on Drivers' Route Choice Behavior in the Presence of Dynamic Traffic Information</i> , pp. 1304-1309		
Zhou, Yuanfeng		Beijing Jiaotong Univ.
Wu, Jianping		Univ. of Southampton

WA3		Trinity III
Multi-Sensor Fusion (Regular Session)		
Chair: Aycard, Olivier		Univ. Joseph Fourier
Co-Chair: Toledo-Moreo, Rafael		Univ. of Murcia
08:30-08:50		
<i>An Application of Uncertain Variables to the Implementation of an Interacting Multi-Model Based Filter for the Navigation System of a Road Vehicle</i> , pp. 1310-1315		
Toledo-Moreo, Rafael		Univ. of Murcia
Zamora-Izquierdo, Miguel A.		Univ. of Murcia
Gomez-Skarmeta, Antonio F.		Univ. of Murcia
08:50-09:10		
<i>A Real-Time, Multi-Sensor Architecture for Fusion of Delayed Observations: Application to Vehicle Localisation</i> , pp. 1316-1321		
Tessier, Cédric		CEMAGREF
Cariou, Christophe		CEMAGREF
Debain, Christophe		CEMAGREF
Chausse, Frederic	UMR6602 CNRS/Univ. Blaise Pascal	
Chapuis, Roland		LASMEA
Rousset, Christophe		ECA.
09:10-09:30		
<i>Multi Level Processing Methodology for Automotive Applications</i> , pp. 1322-1327		
Scheunert, Ullrich		Chemnitz Univ. of Tech.
Lindner, Philipp		Chemnitz Univ. of Tech.
Cramer, Heiko		Chemnitz Univ. of Tech.
Tatschke, Thomas		FORWISS Passau
Polychronopoulos, Aristomenis		ICCS Athens
Wanielik, Gerd		Chemnitz Univ. of Tech.
09:30-09:50		
<i>Robust Data Alignment Based on Information Theory and Its Applications in Road Following Situation</i> , pp. 1328-1333		
Jwa, Sangil		The Ohio State Univ.
Tang, Zhijun		The Ohio State Univ.
Ozguner, Umit		The Ohio State Univ.
09:50-10:10		
<i>An Association Algorithm for Tracking Multiple Moving Objects</i> , pp. 1334-1339		
Lemeret, Yann	Univ. d'Artois, Faculté des Sciences Appliquées	
Lefevre, Eric	IUT de Béthune Departement GEII	
Jolly, Daniel	Univ. d'Artois - Faculté des Sciences Appliquées	
WA4		Trinity IV
Imaging and Image Analysis 3 (Regular Session)		
Chair: Papanikolopoulos, Nikos		Univ. of Minnesota
Co-Chair: Dailey, Daniel J.		Univ. of Washington
08:30-08:50		
<i>Deterministic Sampling-Based Switching Kalman Filtering for Vehicle Tracking</i> , pp. 1340-1345		
Veeraraghavan, Harini		Univ. of Minnesota
Papanikolopoulos, Nikos		Univ. of Minnesota
08:50-09:10		
<i>Real-Time Robust Face Tracking for Driver Monitoring</i> , pp. 1346-1351		
Nuevo, Jesús		Univ. of Alcalá
Bergasa, Luis M.		Univ. of Alcalá
Sotelo, Miguel A.		Univ. of Alcalá
Ocaña, Manuel		Univ. of Alcalá
09:10-09:30		
<i>Real-Time License Plate Identification by Perceptual Shape Grouping and Tracking</i> , pp. 1352-1357		
Chen, Huiqiong		Dalhousie Univ.
Rivait, Derek		Dalhousie Univ.
Gao, Qigang		Dalhousie Univ.
09:30-09:50		
<i>Railway Sign Detection and Classification</i> , pp. 1358-1363		
Marmo, Roberto		Univ. of Pavia
Lombardi, Luca		Univ. of Pavia
Gagliardi, Nicola		Univ. of Pavia
09:50-10:10		
<i>Mathematical Theory of Image Straightening with Applications to Camera Calibration</i> , pp. 1364-1369		
Dailey, Daniel J.		Univ. of Washington
Cathey, Frederick		Univ. of Washington

WA5	Trinity V
Automated Vehicle Operation 1 (Regular Session)	
Chair: Savaresi, Sergio	Pol. di Milano
Co-Chair: Antonsson, Erik	California Inst. of Tech.
08:30-08:50	
<i>Automatic Cruise Control Modeling-A Lattice PWL Approximation Approach</i> , pp. 1370-1375	
Khan, M. Junaid	Tsinghua Univ.
08:50-09:10	
<i>An Adaptive Tracking Controller for Backward Driving of a Two-Vehicle Convoy</i> , pp. 1376-1381	
Petrov, Plamen	INRIA, Rocquencourt
Parent, Michel	INRIA, Rocquencourt
09:10-09:30	
<i>A New Robust Control System with Optimized Use of the Lane Detection Data for Vehicle Full Lateral Control under Strong Curvatures</i> , pp. 1382-1387	
Netto, Mariana	LCPC
Blosseville, Jean-marc	INRETS
Lusetti, Benoit	LCPC/INRETS
Mammar, Said	INRETS
09:30-09:50	
<i>Advanced Convoy Control Strategy for Autonomously Driven Railway Vehicles</i> , pp. 1388-1393	
Henke, Christian	Univ. of Paderborn
09:50-10:10	
<i>Improving the Performance of Semi-Active Suspension at the Damping Invariant Point</i> , pp. 1394-1399	
Savaresi, Sergio	Pol. di Milano
Spelta, Cristiano	Pol. di Milano
WA6	York A
DSRC and Vehicle Infrastructure Integration (VII) (Special Session)	
Chair: Lovell, David	Univ. of Maryland
Organizer: Lovell, David	Univ. of Maryland
08:30-08:50	
<i>Minimum Transmission Range in Vehicular Ad Hoc Networks Over Uninterrupted Highways (I)</i> , pp. 1400-1405	
Artimy, Maen M.	Dalhousie Univ.
Robertson, William	Dalhousie Univ.
Phillips, William J.	Dalhousie Univ.
08:50-09:10	
<i>Traffic Information Imputation Using a Linear Model in Vehicular Ad Hoc Networks (I)</i> , pp. 1406-1411	
Kim, Hyoungsoo	Univ. of Maryland
Lovell, David	Univ. of Maryland
09:10-09:30	
<i>Internet Access Protocol Providing QoS in Vehicular Networks with Infrastructure Support (I)</i> , pp. 1412-1417	
Korkmaz, Gokhan	The Ohio State Univ.
Ekici, Eylem	The Ohio State Univ.
Ozguner, Fusun	The Ohio State Univ.
09:30-09:50	
<i>Fast, Robust Message Forwarding for Inter-Vehicle Communication Networks (I)</i> , pp. 1418-1423	
Blum, Jeremy	The George Washington Univ.
Eskandarian, Azim	The George Washington Univ. Virginia
WA7	York B
Petri Net-Based Applications in ITS (Special Session)	
Chair: Giglio, Davide	Univ. of Genova
Organizer: Giglio, Davide	Univ. of Genova
Organizer: Sacco, Nicola	Pol. of Turin
08:30-08:50	
<i>Maximally Permissive Supervisor of Marine Canal Traffic System (I)</i> , pp. 1424-1429	
Kezic, Danko	Maritime Faculty in Split, Univ. of Split
Vujovi, Igor	Maritime Faculty in Split, Univ. of Split
Kuzmanic, Ivica	Maritime Faculty in Split, Univ. of Split
08:50-09:10	
<i>Traffic-Responsive Signalling Control through a Modular/switching Model Represented Via DTPN (I)</i> , pp. 1430-1435	
Di Febbraro, Angela	Univ. of Genova
Giglio, Davide	Univ. of Genova
09:10-09:30	
<i>Modelling a Car Safety Controller in Road Tunnels Using Hybrid Petri Nets (I)</i> , pp. 1436-1441	
Bobbio, Andrea	Univ. of Turin, Italy
Gribaudo, Marco	Univ. of Turin, Italy
Horvath, Andras	Univ. of Turin, Italy

09:30-09:50

A Petri Net Modelling Approach of Intermodal Terminals Based on Metrocargo System (I), pp. 1442-1447

Di Febbraro, Angela
Porta, Guido
Sacco, Nicola

Univ. of Genoa
ILOG srl
Pol. of Turin

WB1

Trinity I

Data Analysis - Real-Time Applications (Regular Session)

Chair: Dailey, Daniel J.
Co-Chair: Wang, Yibing

Univ. of Washington
Tech. Univ. of Crete

10:30-10:50

Performance Evaluation of an Intelligent Dynamic Merge Control System for Highway Work Zones, pp. 1448-1453

Kang, Kyeong-Pyo
Chang, Gang-Len

Univ. of Maryland
Univ. of Maryland

10:50-11:10

Algorithms for Real-Time Gathering and Analysis of Continuous-Flow Traffic Data, pp. 1454-1459

Miller, Jeffrey
Horowitz, Ellis

Univ. of Southern California
Univ. of Southern California

11:10-11:30

Validation of Capacity Reductions in Traffic Monitoring Systems, pp. 1460-1465

Zheng, Pengjun
McDonald, Mike
Jeffery, David

Univ. of Southampton
Univ. of Southampton
Univ. of Southampton

11:30-11:50

Real-Time Parallel Parameter Estimators for a Second-Order Macroscopic Traffic Flow Model, pp. 1466-1470

Wang, Yun
Ioannou, Petros

Univ. of Southern California
Univ. of Southern California

11:50-12:10

Microscopic Simulation Model Calibration and Validation for Freeway Work Zone Network – a Case Study of VISSIM, pp. 1471-1476

Park, Byungkyu (Brian)
Qi, Hongtu

Univ. of Virginia
VHB

WB2

Trinity II

Multi-Modal Modeling (Regular Session)

Chair: Shalaby, Amer
Co-Chair: Zhang, Wei-Bin

Univ. of Toronto
Univ. of California, Berkeley

10:30-10:50

Prediction of Transit Vehicle Arrival Times at Signalised Intersections for Signal Priority Control, pp. 1477-1482

Tan, Chin-Woo
Park, Sungsu
Zhou, Kun
Liu, Hongchao
Lau, Peter
Li, Meng
Zhang, Wei-Bin

Univ. of California, Berkeley
Sejong Univ.
Univ. of California, Berkeley
Texas Tech. Univ.
Univ. of California, Berkeley
Univ. of California, Berkeley
PATH, Univ. of California, Berkeley

10:50-11:10

An Object-Oriented Simulation-Assignment Model with Consideration of Mixed Traffic Flows for ITS Applications, pp. 1483-1488

Hu, Ta-Yin
Chen, Li-Wen
Hung, Pai-Hsien
Huang, Yung-Kuei
Chiang, Min-Ling

National Cheng Kung Univ.
National Cheng Kung Univ.
National Cheng Kung Univ.
Inst. of Transportation, Ministry of Trans and Comm
Inst. of Transportation, Ministry of Trans and Comm

11:10-11:30

Optimal Design of Personal Rapid Transit, pp. 1489-1494

Won, Jin-Myung
Choe, Hyojeong
Karray, Fakhreddine

Univ. of Waterloo
Vectus, Ltd.
Univ. of Waterloo

11:30-11:50

MILATRAS: A Microsimulation Platform for Testing Transit-ITS Policies and Technologies, pp. 1495-1500

Wahba, Mohamed
Shalaby, Amer

Univ. of Toronto
Univ. of Toronto

11:50-12:10

School Trip Production Modeling Using an Improved Adaptive-Network-Based Fuzzy Inference System, pp. 1501-1506

Shafahi, Yousef
S. Abrishami, S. Ehsan

Sharif Univ. of Tech.
Sharif Univ. of Tech.

WB3

Trinity III

Sensor Fusion and Traffic Control Technologies (Regular Session)

- Chair: Mirchandani, Pitu The Univ. of Arizona
- 10:30-10:50
A Multimodal Framework for Vehicle and Traffic Flow Analysis, pp. 1507-1512
 Ploetner, Jeffrey Univ. of California, San Diego
 Trivedi, Mohan M. Univ. of California, San Diego
- 10:50-11:10
On the Observability of Path Constrained Vehicle Localisation, pp. 1513-1518
 Wijesoma, Sardha Nanyang Tech. Univ.
 Lee, Kwang Wee Nanyang Tech. Univ.
 Ibanez Guzman, Javier Renault S.A.S.
- 11:10-11:30
Fundamental Study of Smart Tire System, pp. 1519-1524
 Ohori, Masanori The Univ. of Tokyo
 Tatuya, Ishizuka SONY Inc.
 Takafumi, Fujita The Univ. of Tokyo
 Nobuo, Masaki Bridgestone Inc.
 Yoji, Suizu Bridgestone Inc.
- 11:30-11:50
Hardware and Software Design of an Automated Testing Tool for Traffic Controllers, pp. 1525-1530
 Li, Zhen Univ. of Idaho
 Johnson, Brian K. Univ. of Idaho
 Abdel-Rahim, Ahmed Univ. of Idaho
 Kyte, Michael Univ. of Idaho
- 11:50-12:10
Ramp Metering Based on Adaptive Critic Designs, pp. 1531-1536
 Xu, Jing Chinese Acad. of Sciences
 Yu, Wen-Sheng Chinese Acad. of Sciences
 Wang, Fei-Yue Chinese Acad. of Sciences

WB4

Trinity IV

Imaging and Image Analysis 4 (Regular Session)

- Chair: Sotelo Vázquez, Miguel Ángel Univ. of Alcalá
 Co-Chair: Kamijo, Shunsuke The Univ. of Tokyo
- 10:30-10:50
Vehicle Identification and GPS Error Detection from a LIDAR Equipped Probe Vehicle, pp. 1537-1542
 Gao, Bin The Ohio State Univ.
 Coifman, Benjamin The Ohio State Univ.
- 10:50-11:10
Vehicle Segmentation by Edge Classification Method and the S-T MRF Model, pp. 1543-1549
 Inoue, Hiroshi Univ. of Tokyo
 Mingzhe, Liu Univ. of Tokyo
 Kamijo, Shunsuke Univ. of Tokyo
- 11:10-11:30
Robust Vanishing Point Estimation for Driver Assistance, pp. 1550-1555
 Suttorp, Thorsten Ruhr-Univ. Bochum
 Bücher, Thomas Ruhr-Univ. Bochum
- 11:30-11:50
Bidirectional Roadway Detection for Traffic Surveillance Using Online CCTV Videos, pp. 1556-1561
 Lee, Woochul Univ. of Wisconsin at Madison
 Ran, Bin Univ. of Wisconsin at Madison
- 11:50-12:10
An Evaluation of Mono Image Stabilization Algorithms for Automotive Applications, pp. 1562-1567
 Grisleri, Paolo Univ. of Parma
 Cerri, Pietro Univ. of Parma
 Bombini, Luca Univ. degli Studi di Parma
 Scaffardi, Simone Univ. degli Studi di Parma
 Zani, Paolo Univ. degli Studi di Parma

WB5		Trinity V
Automated Vehicle Operation 2 (Regular Session)		
Chair: Nejat, Goldie		State Univ. of New York at Stony Brook
Co-Chair: Batista, Jorge		Univ. of Coimbra
10:30-10:50		
<i>Motion Planning for Autonomous Rendezvous with Vehicle Convoys</i> , pp. 1568-1573		
Kunwar, Faraz		Univ. of Toronto
Benhabib, Beno		Univ. of Toronto
10:50-11:10		
<i>Neural-Network-Based Docking of Autonomous Vehicles</i> , pp. 1574-1579		
Wong, Joseph		Univ. of Toronto
Nejat, Goldie		State Univ. of New York at Stony Brook
Fenton, Robert G.		Univ. of Toronto
Benhabib, Beno		Univ. of Toronto
11:10-11:30		
<i>Mapping Support for the OSU DARPA Grand Challenge Vehicle</i> , pp. 1580-1585		
Toth, Charles		The Ohio State Univ.
Paska, Eva		The Ohio State Univ.
Redmill, Keith		The Ohio State Univ.
Ozguner, Umit		The Ohio State Univ.
11:30-11:50		
<i>A Decentralized Approach to Pursuer-Evader Games with Multiple Superior Evaders</i> , pp. 1586-1591		
Wei, Mo		Ohio State Univ.
Chen, Genshe		Intelligent Automation, Inc.
11:50-12:10		
<i>Friction-Curve Peak Detection by Wheel-Deceleration Measurements</i> , pp. 1592-1597		
Tanelli, Mara		Pol. di Milano
Savaresi, Sergio		Pol. di Milano
WB6		York A
Calibration and Validation of Microscopic Traffic Flow Models (Special Session)		
Chair: Hoogendoorn, Serge		Delft Univ. of Tech.
Organizer: Hoogendoorn, Serge		Delft Univ. of Tech.
10:30-10:50		
<i>Unscented Particle Filter for Delayed Car-Following Model Estimation (I)</i> , pp. 1598-1603		
Hoogendoorn, Serge		Delft Univ. of Tech.
Ossen, Saskia		Delft Univ. of Tech.
10:50-11:10		
<i>Validating Microscopic Traffic Flow Models (I)</i> , pp. 1604-1608		
Brockfeld, Elmar		Inst. of Transport Res.
Wagner, Peter		Deutsches Zentrum für Luft- und Raumfahrt (DLR)
11:10-11:30		
<i>Calibrating Driving Behavior with Microscopic Measurement Data (I)</i> , pp. 1609-1614		
Miska, Marc Philipp		Delft Univ. of Tech.
Muller, Th.H.J.		Delft Univ. of Tech.
Van Zuylen, H.J.		Delft Univ. of Tech.
11:30-11:50		
<i>Multi-Anticipation and Heterogeneity in Car-Following: Empirics and a First Exploration of Their Implications (I)</i> , pp. 1615-1620		
Ossen, Saskia		Delft Univ. of Tech.
Hoogendoorn, Serge		Delft Univ. of Tech.
WB7		York B
Advanced Technologies and Innovative Concepts to Highway Safety (Special Session)		
Chair: Wei, Heng		Univ. of Cincinnati
Organizer: Wei, Heng		Univ. of Cincinnati
10:30-10:50		
<i>Crash Frequency and Severity Modeling Using Clustered Data from Washington State (I)</i> , pp. 1621-1626		
Ma, Jianming		The Univ. of Texas, Austin
Kockelman, Kara		The Univ. of Texas, Austin
10:50-11:10		
<i>Experimental Testbed and Distributed Algorithm for Cooperative Driving in VII Simulation (I)</i> , pp. 1627-1632		
Sheng, Weihua		Oklahoma State Univ.
Yang, Qingyan		Iteris Inc.
Guo, Yi		Stevens Inst. of Tech.

11:10-11:30

Evaluation on Roadside Safety Degree Based on Grey Theory (I), pp. 1633-1637

Li, Changcheng
Gao, Hailong
Chen, Shengli
Qi, Guocai

Res. Inst. of Highway, MOC
Res. Inst. of Highway, MOC
Construction Office, Qinhai Provincial Communications Dept.
Tangshan Highway Bureau, Hebei Province

11:30-11:50

Exploring the Relationships between Crash Rates and Average Speed Difference between Cars and Large Vehicles on a Suburban

Freeway (I), pp. 1638-1641

Zhong, Liande
Sun, Xiaoduan
Chen, Yongsheng
Zhang, Jie

Beijing Univ. of Tech.
Univ. of Louisiana
Beijing Univ. of Tech.
Beijing Univ. of Tech.

11:50-12:10

Spatial Distribution and Characteristics of Accident Crashes at Work Zones of Interstate Freeways in Ohio (I), pp. 1642-1647

Salem, O.M.
Ash, Genaidy
Wei, Heng

Univ. of Cincinnati
Univ. of Cincinnati
Univ. of Cincinnati