INTELLIGENT TRANSPORTATION SYSTEMS

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IEEE ITS SOCIETY NEWSLETTER

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The IEEE ITS Society Newsletter is published quarterly in January, April, July, and October. The current and all past issues of the Newsletter may be downloaded at no charge from the Society's web site: http://sites.ieee.org/itss/.

You may subscribe to or unsubscribe from announcements at the same web site. Announcements are sent to approximately 16,000 ITS professionals from industry, academia, and government.

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Announcements, feature articles, book and meetings reviews, opinions, letters to the editor, professional activities, Abstracts of reports, and other material of interest to the ITS community are solicited. Please submit electronic material for consideration in any of the following formats: Microsoft Word, OpenOffice, plain ASCII, rich text format (rtf), or portable document format (pdf) to the Editor-in-Chief at brendan.morris@unlv.edu.

SOCIETY NEWS

Message from the Editor

Dr. Brendan Morris

Can you believe we are almost through another year? I hope everyone had a chance to visit Qingdao, China for a fantastic 2014 edition of ITSC.

This is the final newsletter for the 2014 year and it is packed full of information. As always we get to hear some thoughts from the Society President. We have big announcements concerning next year's Executive committee and the introduction of a new Transaction on Intelligent Vehicles. Let's all celebrate the 2014 ITSS Award Winners, they are showing the world the society's strong technical leadership. This issues also contains a report of the IV'14 conference in Michigan along with a feature article highlighting the accomplishments of Lyle Saxton.

Please be sure to check out new CfPs for our flagship conferences and the ITS Podcast mailing list.

Transferring ITS Research to the Real World

Message from the President

Dr. Matthew Barth

The IEEE ITS Society has been on the forefront of disseminating Intelligent Transportation System research results with our conferences, most notably the Intelligent Vehicle Symposium (this year held in Dearborn Michigan, see http://www.ieeeiv.net/) and the ITS Conference (this year held in Qingdao China, see http://www.itsc2014.org/). In addition, our IEEE Transactions on Intelligent Transportation Systems has consistently had one of the highest impact factors of any journal in disseminating ITS research results.

But we need to remember that advancing research in ITS is only part of the story — there is often a large gap between conducting innovative research and then having it deployed in the real world. The researchers and the practitioners need to interact closely, otherwise the best ITS research may never come to fruition. To help bridge this gap, this IEEE ITS Magazine and IEEE ITS Newsletter serve as an interdisciplinary forum for researchers, practitioners, application engineers, transportation agencies, government sponsors, and academia to share information on all aspects of intelligent transportation systems.

Sponsors of ITS research have a vested interest in making sure that their investment eventually leads to deployment. Government agencies don't fund ITS research just so that it ends up as a paper in our society's conferences or journal publications. It is critical that the best ITS research has a pathway to eventually becoming a reality.

A common pathway is exemplified with the recent connected vehicle research programs being carried out in the U.S., in Europe, and in Asia. Vehicles that can communicate with each other or with the infrastructure are "connected", allowing for a wide variety of innovative applications. These applications can focus on improving safety, mobility, environmental factors, or some combination of all three. Applications usually start as a general "concept" whose operation can then be carefully defined. These concepts (and their many variations) can then be modeled and evaluated using advanced analytical or computer simulation tools. These tools can be used to quantify particular benefits in safety, mobility or the environment. These research results often find their way into our transactions and conference papers — but the research shouldn't simply end there. If an application has the potential to be highly beneficial, costs and other deployment issues need to be considered. A small demonstration of the ITS technology or a prototype may be in order to see if the concept is viable in the real world. Next, pilot programs may be implemented at a larger scale and over a longer period of time to collect supporting data. The best pilot programs may even transition to a long term deployment, where different business models can support these new ITS applications.

Our IEEE ITS Society does a great job in dealing with the technical issues of ITS; however we need to consider many of the other non-technical issues if we are ever going see great ITS research become commercially viable and are adopted by the transportation community. We need

to consider open architectures and common standards to help accelerate ITS commercialization. We need to conduct more forums where researchers and practitioners not only discuss ITS technical details, but also issues associated with deployment costs, patents, intellectual property, and market incentives.

As our IEEE ITS Society continues to grow, much of our efforts should continue to publish great ITS research. But we can't forget that we need to also consider many of the other factors that are critical to ITS deployment.

Matt Barth
IEEE ITSS President, 2014-2015

2014 Excom/BoG Fall Meetings

Administrative Activities

Dr. Daniel Dailey

Each year the ITS Society elects a portion of the Board of Governors (BOG), and a portion of the Executive Committee (made up of the society officers). The Board of Governors is the administrative body that guides the Society Policy and Financial decisions. The BOG is made up of 15 members elected by the Society at large, and 10 officers on the Executive committee, making a total of 25 members on the BOG. The election of BOG members from the Society at large is done in a vote that is balloted by IEEE (watch for your ballot if you have not already voted) and the executive committee is, in turn, elected by the entire standing BOG.

The Executive Committee (EXCOM) election is held at the fall BOG meeting often in association with the annual IEEE Intelligent Transportation Systems Conference (ITSC). This year ITSC was held in Qingdao, China and the BOG election was held on October 8, 2014. The bylaws, that define the roles and obligations of both BOG and EXCOM, divides the election of the EXCOM members across two years. The bylaws state that "Election for President-Elect, Vice President for Financial Activities, Vice President for Technical Activities, and Vice President for Administrative Activities, shall take place in even-numbered years with terms to begin in January of the next year."

This year Daniel Zeng was elected as the President Elect, Alberto Broggi was elected as Vice President Financial Activities, Yaobin Chen was elected as Vice President Technical Activities and Daniel Dailey elected as Vice President Administrative Activities. Each of these officers serves two years, and may hold the office for a maximum of two terms.

The Constitution and Bylaws can be found on the society web site for those looking for more details of the structure, procedures, roles and obligations of the member of BOG and EXCOM.

Daniel Dailey
VP Administrative Activities

2015 Executive Committee Election Results

President Elect	Daniel Zeng
VP Financial Activities	Alberto Broggi
VP Technical Activities	Yaobin Chen
VP Administrative Activities	Daniel Dailey

Call for Nominations:

Editor-in-Chief of the IEEE Transactions on Intelligent Vehicles

IEEE Intelligent Transactions Systems Society (ITSS) invites nominations for the position of founding Editor-in-Chief (EiC) of a new publication: IEEE Transactions on Intelligent Vehicles, which is planned to be launched in January 2016.

The Editor-in-Chief will be an acknowledged leader in the field of intelligent vehicles. He/she will agree to assume the roles and responsibilities of the Editor-in-Chief with all attention and vigor, realizing that there will be no remuneration for this service. The period of service will be two years, once-renewable, beginning January 1, 2016.

Nomination deadline: November 20, 2014

Nomination materials to be submitted:

1) Name of candidate
2) A brief biography
3) Full CV
4) A personal statement by the candidate (limited to 500 words)

Please submit nominations to:

Dr. Jason Geng
VP for Publications
IEEE ITSS
Jason.geng@ieee.org

2014 IEEE ITS Awards Announcement

Member Activities

Dr. Daniel Zeng

The prestigious IEEE ITS Outstanding Research Award, IEEE ITS Outstanding Application Award, and IEEE ITS Lead Award are conferred annually to honor ITS researchers, practitioners, and research/development teams who have made significant contributions to research in ITS related fields (for ITS Research Award), developed and deployed successful ITS systems or implementations (for ITS Application Award), and demonstrated leadership in promoting ITS technologies (for ITS Institutional Lead Award). These awards have been established to recognize, promote, and publicize major research contributions, application innovations with real-world impact, and ITS institutional leadership.

Congratulations!

For further information, please contact Dr. Daniel D. Zeng, VP for Membership Activities, IEEE ITSS.

2014 IEEE INTELLIGENT TRANSPORTATION SYSTEMS OUTSTANDING RESEARCH AWARD

Dr. Nathan Gartner
University of Massachusetts, Lowell

2014 IEEE INTELLIGENT TRANSPORTATION SYSTEMS OUTSTANDING APPLICATION AWARD

Dr. Uwe Frake and the Daimler Image Understanding Group
(Markus Enzweiler, Dariu Gavrila, Stefan Gehrig,
Tilo Schwarz, and Fridtjof Stein)
Daimler AG

2014 IEEE INTELLIGENT TRANSPORTATION SYSTEMS INSTITUTIONAL LEAD AWARD

Institute of Artificial Intelligence and Robotics
Xi'an Jiaotong University

2014 IEEE ITSS Best Dissertation Awards Announcement

The prestigious IEEE ITSS Best Ph.D. Dissertation Award is given annually for the best dissertations in any ITS areas that are innovative and relevant to practice. This award is established to encourage doctoral research that combines theory and practice, makes in-depth technical contributions, or is interdisciplinary in nature, having the potential to contribute to the ITSS and broaden the ITS topic areas from either the methodological or application perspectives.

First Prize

Dr. Rahul Kala, Robotics and Artificial Intelligence Laboratory, Indian Institute of Information Technology, Allahabad, India

Advisor: Prof. Kevin Warwick, University of Reading, UK

Dissertation title: Motion Planning for Multiple Autonomous Vehicles

Second Prize

Dr. Mehdi Keyvan-Ekbatani, Delft University of Technology, Netherlands

Advisor: Prof. Markos Papageorgiou, Technical University of Crete, Greece

Dissertation title: Real-Time Urban Traffic Control under Saturated Traffic Conditions

Third Prize

Dr. L.A. Prashanth, SEQUEL project, INRIA Lille - Nord Europe, France

Advisor: Prof. Shalabh Bhatnagar, Indian Institute of Science, Bangalore, India

Dissertation tile: Resource Allocation for Sequential Decision Making under Uncertainty: Studies in Vehicular Traffic Control, Service Systems, Sensor Networks and Mechanism Design

"Radical Collaboration"
Chuck Gulash, Toyota

ITS Podcast

Dr. Javier Sanchez-Medina

Did you know that Toyota has a huge facility in Ann Arbor, Michigan where they have an awful lot of amazing projects on Human Factors, Active Safety, Passive Safety/Biomechanics and Post Crash Projects? We have interviewed Chuck Gulash, Director of the Toyota Collaborative Safety Research Center. He kindly explained a lot of innovative concepts. Do you know what is "Radical Collaboration"? You will get surprised when you hear what is behind that challenging tag.

We also have a delightful Transportation in History Mini-Section, by Mehran Shirazi, about the history of a very simple yet important passive safety system: three points seat belts. For the pessimistics about human nature, that was an example of some car makers that could have made millions with that invention but chose open their patent instead.

Please, listen also the News Minisection. We have a very important call for nominations to the IEEE Transportation Technologies Award.

ITS Podcast Episode 18

Javier J. Sanchez-Medina
EiC IEEE ITS Podcast

Please, check it out and give feedback on the show with your comments at the podcast website or at our social networking accounts: LinkedIn, Twitter (@ITSPodcast), Facebook, Google+ or by email: itsspodcast@gmail.com

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THANK YOU!

Javier J. Sanchez-Medina
EiC IEEE ITS Podcast
(http://itsp.cicei.com)

2014 IEEE Intelligent Vehicles (IV'14) Conference Report

Conference Report

Dr. Yaobin Chen and Umit Ozguner, General Chairs, Tankut Acarmen and Keqiang Li, Program Chairs

The 2104 IEEE Intelligent Vehicles Symposium (IV'14) was held on June 8th-11th in Dearborn, Michigan, U.S.A., the home town of late automotive pioneer Henry Ford who is the founder of the Ford Motor Company, and sponsor of the development of the assembly line technique of mass production. The city of Dearborn is also located in the Greater Detroit Metro Area - the world capital of automobiles. This historical location provides a perfect setting for us to hold such a technical conference as we celebrate the 25th anniversary of this remarkable premier conference on intelligent vehicles, a flagship conference sponsored by the IEEE ITS Society.

This year, the technical program committee received 386 submissions from 27 countries and regions with Germany, the U.S. and China ranked top three countries in terms of the number of papers submitted. After rigorous peered reviews by many experts in the field, 231 high quality papers were accepted with Germany, the U.S. and China ranked top three in accepted papers. The acceptance rate is about 60%. More than 370 researchers, engineers, students and other professionals from more than 25 countries and regions in the world attended the conference. The U.S., Germany and Japan are ranked top three countries in attendance. They came together to recognize outstanding accomplishments and progresses in research and advanced development for safer, greener and more connected driving. In addition, more than 100 participants attended four pre-conference workshops which covered some emerging research and technological areas in IV ranging from naturalistic driving data analytics to connected vehicles test-bed.

During the conference, 23 oral presentations were given in single-track regular oral sessions and 6 oral presentations were given at the workshops. 202 posters were presented at multiple parallel poster sessions. Through our traditional unique single-track oral sessions combined with multiple (parallel) poster sessions, presenters and audience have opportunities to share with each other their research results and outcomes at oral sessions and discuss and exchange ideas face-to-face during poster sessions. A vehicle demonstration session was held on the last day of the conference.

The conference was officially opened by a distinguished plenary speaker Mr. Charles Gulash, Director of Toyota Collaborative Safety Research Center in Ann Arbor, Michigan, U.S.A. The title of his presentation was ""Radical" Collaboration – Contributing to Intelligent Vehicle Research." Two other excellent plenary presentations were also delivered on day 2 and day 3 of the conference. Dr. Joseph I. Peters, Director of Office of Operations Research and Development Federal Highway Administration, U.S. Department of Transportation, gave a presentation on "Pathways to Automation: The Role of Vehicles and Infrastructure in a Future Transportation Environment". The third plenary speech entitled: "Mastering a Long and Winding Road: The Autonomous Bertha Benz Drive" was given by Prof. Dr. Ralf Herrtwich, Director, Daimler AG, Germany and by Prof. Dr. Christoph Stiller, Karlsruher Institut Für Technologie, Germany. These plenary talks provided participants with tremendous information and knowledge about state-of-the-art technological advancement and future trend in IV.

At the end of technical presentations (both oral and poster presentations), an ad hoc award committee selected best paper awards in several categories which are summarized below:

Best oral papers:

- First Place: "Will This Car Change the Lane? - Turn Signal Recognition in the Frequency Domain" by Björn Fröhlich, Markus Enzweiler, Uwe Franke
- Second Place: "6-DoF Day and Night Visual Localisation with Prior 3D Structure for Autonomous Road Vehicles" by William Paul Maddern, Alexander D Stewart, Paul Newman

Best poster papers:

- First Place: "DriveSafe: An App for Alerting Inattentive Drivers and Scoring Driving Behaviors" by Luis M. Bergasa, Daniel Almería, Javier Almazán, José Javier Yebes Torres, Roberto Arroyo (Spain)
- Second Place: "Car Detection at Night Using Latent Filters" by Hossein Tehrani Nik Nejad, Taiki Kawano, Seiichi MITA

Best student oral papers:

- First Place: “Using Scaled down Testing to Improve Full Scale Intelligent Transportation” by Guchan Ozbilgin, Arda Kurt, Umit Ozguner
- Second Place: “Bayesian Nonparametric Modeling of Driver Behavior” by Julian Straub, Sue Zheng, John W. Fisher

Best student poster:

- First Place: “Road Terrain Detection: Avoiding Common Obstacle Detection Assumptions Using Sensor Fusion” by Patrick Shinzato, Denis Wolf, Christoph Stiller
- Second Place: “Drivers’ Car-Following Correlative Behavior with Preceding Vehicles in Multilane Driving” by Chenfei Yu, Jianqiang Wang

In addition to those high quality technical programs, the conference was also highlighted by the banquet dinner held in the spectacular Henry Ford Museum in a nice summer evening on June 9th. All conference attendees had the opportunity to experience in person the technological evolution of automobiles for the last century. A brief dinner program was hosted by Dr. Yaobin Chen,General co-Chair of the conference. Dr. Umit Ozguner, the general co-chair delivered a

brief remarks thanking all members of the Organizing Committee, volunteers, speakers, plenary speakers, session chairs, and attendees. A special thanks was given to Toyota for its financial support of the pre-conference reception. Dr. Tankut Acarman, the Program Chair made a presentation on the technical program. On behalf of the Technical Program Committee he extended sincere thanks to all associate editors and reviewers for their professional reviews and dedication to the conference. Dr. Matt Barth gave a brief presentation on the state of the ITS Society. Representatives from the organizing committees for IV15 and ITSC15 made brief presentations on their upcoming conferences. Participants really enjoyed the program and wonderful dishes at the dinner in the Museum.

As a tradition, our student activity chair, Dr. Brendan Morris organized the student activity. 40 total people attended the event. They represented students in 12 countries - France, Canada, Italy, Japan, Germany, Colombia, USA, China, Ireland, Netherlands, Sweden, and Korea. The group took a bus tour of the surrounding Dearborn, MI on the way to Downtown Detroit with stops by Comerica Park (Tigers baseball stadium) and the Mowtown Museum. They got together for two hours at Traffic Jam and Snug, the first brew-pub in the state of Michigan, to socialize. This event provides a unique opportunity for students from different counties to share their experience and develop potential academic and professional network.

Another unique event was an IEEE public visibility team set up a table next to the registration desk. They talked with many attendees about their experience and opinions on the future of driverless cars, autonomous vehicles etc. They also did a survey with the attendees and other members of the IEEE ITS Society. They also conducted video-interviews with several IEEE ITSS members during the conference. As a result of their survey and video interviews, IEEE made a news release entitled: “IEEE Experts Discuss the Future of Driverless Cars” with videos “Driverless Car Confessions” which have attracted very large number of attention in media

worldwide (see http://www.ieee.org/about/news/intelligent_transportation.html.).

Before concluding this report, we would like to acknowledge many people who have volunteered their valuable time contributing to the success of this conference in many aspects and many ways. First, we'd like to thank members of the Conference Organizing Committee who have been working together tirelessly for the last two years. A special thanks goes to Dr. Tankut Acarman, the Program Chair and members and associate editors of the International Program Committee as well as many reviewers. Our conference student volunteers deserve a special recognition for their hard work and services during the conference.

Lifetime Achievement Award for Lyle Saxton

Featured Article

Emily Sopensky

My first introduction to intelligent transportation systems was a new job with Texas Instruments' RFID group (TIRIS) in 1995. For the U.S. market, TI's first products were for toll roads. To learn more I turned to IEEE. Not only was a technical committee just forming, but I was asked to chair publications for the first conference ITSC'96.

Seventeen years later, having just returned from the IEEE ITSC2014 conference October 8-11 in Qingdao (PR China), it is serendipitous that worldwide attention was just bestowed on Lyle Saxton, the general chair for ITSC'96 (Boston, Mass.), the very first conference in the ITSC series – and the first for the ITS Society's precedent, the ITS Committee.

A few weeks ago, at the ITS World Congress 2014, Detroit, USA, Lyle Saxton was inducted into the World Congress Hall of Fame through the Lifetime Achievement Award.
The Lifetime Achievement Award is given to an outstanding leader in the ITS field as well as a champion of ITS vision and fulfilment. Mr. Saxton is now a member of the ITS World Congress Hall of Fame, created in 2010 to recognize luminaries and true thought leaders in the ITS field.

After joining the Federal Highway Administration in 1968, Mr. Saxton gravitated to R&D in vehicle-highway communications, in-vehicle navigation and information, traffic and freeway management, and automated vehicle control. He became a recognized leader in developing national and international support for intelligent transportation systems and technology. He was the Moderator of the two national Mobility 2000 workshops, composed of key national leaders in government, industry and academia. They developed the U.S. ITS vision and strategic plan in

the early 1990s. In 1991 he received the Transportation Research Board's Roy W. Crum Distinguished Service Award. He retired in 1995 as Director of the FHWA Office of Safety and Traffic Operations R&D.

Congratulations, Lyle!

IEEE Call for Papers

2015 IEEE Intelligent Vehicles Symposium

June 28 – July 1, 2015, COEX, Seoul, Korea

Sponsored by the IEEE Intelligent Transportation Systems Society

ORGANIZING COMMITTEE

General Co-Chairs
Prof. Kyongsu Yi (Seoul National Univ., Korea)
Prof. Seung-Woo Seo (Seoul National Univ., Korea)

Program Co-Chairs
Prof. Chung Choo Chung (Hanyang Univ., Korea)
Prof. Alberto Broggi (Univ. of Parma, Italy)
Dr. Masao Nagai (JARI, Japan)

Domestic Organization Chair
Prof. Gyu-In Jee (Konkuk Univ., Korea)

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Dr. Kwang Keun Shin (Hyundai Mobis, Korea)

Demo Chair
Dr. Jae-Wan Lee (KATRI, Korea)
Dr. Jae Kwan Lee (KATECH, Korea)

Social Chair
Prof. Whoiyul Kim (Hanyang Univ., Korea)

External Affairs Chair
Dr. Wooyong Han (ETRI, Korea)

International Chair
Prof. Dongsuk Kum (KAIST, Korea)

THE INTELLIGENT VEHICLES SYMPOSIUM (IV2015) is a premier annual forum sponsored by the **IEEE INTELLIGENT TRANSPORTATION SYSTEMS SOCIETY (ITSS)**. Researchers, practitioners, and students from universities, industry, and government agencies are invited to present their latest works and to discuss research and applications for Intelligent Vehicles and Vehicle-Infrastructure Cooperation. The technical presentations are characterized by a single oral session and multiple poster sessions where all attendees can exchange ideas in an informal atmosphere. Tutorials will be offered on the first day followed by three days of presentations and a vehicle demonstration day. An exhibition area will be available for the presentation of products and projects.

PROGRAM TOPICS INCLUDE BUT ARE NOT LIMITED TO :

- Advanced Driver Assistance Systems
- Automated Vehicles
- Active and Passive Vehicle Safety
- Vehicle Environment Perception
- Driver State and Intent Recognition
- Eco-driving and Energy-efficient Vehicles
- Impact on Traffic Flows
- Cooperative Vehicle-infrastructure Systems
- Collision Avoidance
- Pedestrian Protection
- V2X Communication
- Proximity Detection Technology
- Assistive Mobility Systems
- Proximity Awareness Technology
- Intelligent Ground, Air and Space Vehicles
- Autonomous / Intelligent Robotic Vehicles
- Image, Radar, Lidar Signal Processing
- Information Fusion
- Vehicle Control
- Telematics
- Human Factors and Human Machine Interaction
- Electric and Hybrid Technologies
- Novel Interfaces and Displays
- Intelligent Vehicle Software Infrastructure

SPECIAL and TUTORIAL SESSIONS are encouraged. Organizers should submit a session proposal through the IV2015 webpage (http://www.iv2015.org). For more information, please visit the webpage or contact the conference secretariat (sec@iv2015.org).

PAPER SUBMISSION

Manuscripts must be electronically submitted through the conference website. Submitted manuscripts should be at most six (6) pages in IEEE two-column format, including figures, tables, and references. Please use the templates at Manuscript Templates for Conference Proceedings available from the conference website to prepare your manuscript. All submissions MUST be in PDF format.

IMPORTANT DATES

Paper Submission Deadline	January 9, 2015
Special/Tutorial Sessions, Workshop Proposal Deadline	January 9, 2015
Notification of Acceptance	March 13, 2015
Final Paper Submission	April 10, 2015

CONTACT

For proposal of a special session, demonstration, and exhibition, contact the organization committee at sec@iv2015.org.

The 18th International IEEE Conference on Intelligent Transportation Systems

Las Palmas de Gran Canaria, Spain, 15 – 18 September 2015

The IEEE Intelligent Transportation Systems Conference is the annual flagship conference of the IEEE Intelligent Transportation Systems Society. IEEE ITSC 2015 welcomes articles in the field of Intelligent Transportation Systems, dealing with new developments in theory, analytical and numerical simulation and modeling, experimentation, demonstration, advanced deployment and case studies, results of laboratory or field operational tests, under the general theme of *Smart Transportation for Safety and Sustainability*. IEEE ITSC 2015 is organized by the University of Las Palmas de Gran Canaria located in the Canary Islands (Spain), last known stop to Christopher Columbus' first voyage to the Americas.

General Chair

Javier Sánchez-Medina

Program Chair

Miguel Ángel Sotelo

Program Co-Chairs

Jeffrey Miller
Cristina Olaverri
Alberto Broggi

General Vice-Chair

Alexis Quesada Arencibia

Topics - The technical areas include but are not limited to the following:

- Transportation Networks
- Advanced Public Transportation Management
- Ports, Waterways, Inland navigation, and Vessel Traffic Management
- Modeling, Simulation, and Detection of Vulnerable Road Users and Animals
- Air, Road, and Rail Traffic Management
- ITS User Services
- Emergency Management
- Artificial Transportation Systems
- Transportation Electrification
- Emissions, Noise, Environment
- Management of Exceptional Events: Incidents and Evacuation
- Security and Safety Systems
- Transportation Smartification
- Commercial Vehicle Operations
- Intelligent logistics
- Sensing, Detectors and Actuators
- Connected and Probe Vehicles
- Big Data and Naturalistic Datasets
- Communication in ITS
- Cooperative Techniques and Systems
- Intelligent Vehicles
- Vision, and Environment Perception
- Electric Vehicle Transportation Systems
- Electronic Payment Systems
- Smart Mobility
- Traffic Theory for ITS
- Modeling, Control and Simulation
- Human Factors, Travel Behavior
- ITS Field Tests and Implementation
- Driver and Traveler Support Systems

Paper Submission

Complete manuscripts in PDF format must be electronically submitted for peer-review, following the standard IEEE conference proceedings format. Detailed submission instructions can be found on the conference website at http://www.itsc2015.org.

Deadline: April 15, 2015.

Special Sessions, Tutorials, and Workshops

Proposals for special sessions, tutorials, and workshops should be submitted via the conference submission website.

Deadline: April 1, 2015.

Best Paper Award and Best Student Paper Award

A "Best Paper Award" and a "Best Student Paper Award" will be conferred to the author(s) of a full paper presented at the conference, selected by the Awards Committee.

Journal and Magazine Publication of Selected Papers

Selected papers of exceptional quality will be invited for submission to a special issue of the IEEE Transactions on ITS or the IEEE ITS Magazine. Authors will be asked to revise their papers according to the standards of the Transactions or the Magazine.

Important Dates

Please visit the conference website at http://www.itsc2015.org/ for news and updated deadlines. You can also follow us at Twitter (@ITSC2015) and Facebook (ITSC2015).

Conference Calendar

Massimo Bertozzi / Paolo Grisleri

This section lists upcoming ITS-related conferences, workshops, or exhibits. Contributions are welcome; please send announcements to itsconfs@ce.unipr.it.

Upcoming Deadlines

IV 2015: January 9, 2015
ITSC 2015: April 15, 2015

CVPR 2015: November 14, 2014
VEHITS 2015: December 16, 2014
ITS World Congress 2015: January 19, 2015

2014

November 14-15
ICTTE 2014 : International Conference on Traffic and Transportation Engineering
Italy, Venice
https://www.waset.org/conferences/2014/italy/ictte/index.php

November 3-7
ICCVE 2014 : International Conference on Connected Vehicles and Expo
Vienna, Austria
Submission due by: July 31, 2014
http://www.iccve.org/

November 20-21
VISIGRAPP 2015: 10th International Joint Conference on Computer Vision, Imaging and Computer Graphic Applications
Berlin, Germany
http://www.visigrapp.org/

November 20-21
ICIAP 2014: International Conference on Image Analysis and Processing
Capetown, South Africa
https://www.waset.org/conferences/2014/capetown/iciap/

December 3-5, 2014
IEEE Vehicular Networking Conference (VNC 14)
Padeborn, Germany
http://ieee-vnc.org/

December 8-10
ISVC 2014: International Symposium on Visual Computing
- Special Track on Intelligent Transportation Systems
Las Vegas, NV
http://www.isvc.net/

December 16-18, 2014
IEEE Conference on Vehicular Electronics and Safety (ICVES 2014)
Hyderabad, India
http://www.uurmi.com/icves2014/

2015

March 11-14, 2015
VISIGRAPP 2015: 10th International Joint Conference on Computer Vision, Imaging and Computer Graphic Applications
Berlin, Germany
http://www.visigrapp.org/

May 11-14, 2015
IEEE Vehicular Technology Conference (VTC2015-Spring)
Glasgow, Korea
http://www.ieeevtc.org/vtc2015spring/

May 20-22, 2015
International Conference on Vehicle Technology and Intelligent Systems
Lisbon, Portugal
http://www.vehits.org/
Submission due by: December 16, 2014

May 21-23, 2015
20th International Conference on Urban Planning and Regional Development in the Information Society REAL CORP 2015
Ghent, Belgium
http://www.corp.at
Submission due by: December 23, 2014

May 25-30, 2015
2015 IEEE International Conference on Robotics and Automation (ICRA 2015)
Seattle, WA, USA
http://www.icra2015.org

June 3-5, 2015
IEEE International Symposium on Industrial Electronics (ISIE 2014)
Buzios, Rio de Janeiro, Brasil
http://www.batlab.ufms.br/isie2015
Submission due by: December 15, 2014

June 28 - July 1, 2015
The 2014 IEEE Intelligent Vehicles Symposium
Coex, Seoul, Korea
http://www.iv2015.org
Submission due by: January 9, 2015

August 5-7, 2015
International Symposium on Transportation and Traffic Theory - ISTTT
Kobe, Japan

September 7-11, 2015
International Conference on Image Analysis and Processing (ICIAP 2015)
Genova, Italy
Submission due by: February 9, 2015
http://www.iciap2015.eu

October 5-9, 2015
ITS World Congress 2015
Bordeaux, France
http://itsworldcongress.com/bordeaux-2015
Submission due by: January 19, 2015

April 28-29, 2015
19th International Forum on Advanced Microsystems for Automotive Applications (AMAA 2015)
Harnack House, Berlin, Germany
http://www.amaa.de/
Submission due by: to be published.

June 7-12, 2015
IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2015)
Boston, MA, USA
http://www.pamitc.org/cvpr15/
Submission due by: November 14, 2014

August, 9-12, 2015
NRITS National Rural ITS Conference
Snowbird, UT, USA
http://www.nritsconference.org/

September 28 - October 3, 2015
IEEE/RSJ International Conference on Intelli-

gent Robots and Systems (IROS 2015)
Hamburg, Germany
http://www.iros2015.org
Submission due by: March 6, 2015

Fall 2015, 2015
IEEE Vehicular Technology Conference: VTC2014-Fall
Boston, MA, USA
http://www.ieeevtc.org/vtc2015fall/
Submission due by: to be published

September 21-23, 2015
2014 IEEE Multi-Conference on Systems and Control
Novotel Manly Pacific, Sidney, Australia
http://www.msc2015.org/

September 15-18, 2015
ITSC2014: The 18th International IEEE Conference on Intelligent Transportation Systems
Las Palmas de Gran Canaria, Canary Islands, Spain
http://www.itsc2015.org/
Submission due by: April 15, 2015

Forthcoming papers on IEEE Transactions on ITS

- **A Cross-layer and Optimized Privacy Method in Vehicular Ad-hoc Networks**
  Yan, Gongjun; Wen, Ding; Lindsey, William
- **A Linear-Time and Space Algorithm for Optimal Traffic Signal Durations at an Intersection**
  Samra, Sameh; El-Mahdy, Ahmed; Wada, Yasutaka
- **A Low-Cost Hardware Architecture for Illumination Adjustment in Real-Time Applications**
  Shiau, Yeu-Horng; Chen, Pei-Yin; Yang, Hung-Yu; Li, Shang-Yuan
- **A Macroscopic Traffic Data Assimilation Framework Based on Fourier-Galerkin Method and Minimax Estimation**
  Tchrakian, Tigran; Zhuk, Sergiy
- **A methodology for denoising and generating bus infrastructure data**
  Pinelli, Fabio; Calabrese, Francesco; Bouillet, Eric
- **A Non-Stationary Wideband MIMO Channel Model for High-Mobility Intelligent Transportation Systems**
  Ghazal, Ammar; Wang, Cheng-Xiang; Ai, Bo; Yuan, Dongfeng; Haas, H.
- **A Note on "Model-Independent Adaptive Fault-Tolerant Output Tracking Control of 4WS4WD Road Vehicles"**
  Li, Danyong; Song, Y. D.
- **A Novel Approach for Vehicle Detection Using an And-Or-Graph-Based Multi-scale Model**
  Li, Ye; Er, Meng Joo; Shen, Dayong
- **A Novel Vehicle Reversing Speed Control Based on Obstacle Detection and Sparse Representation**
  Zhang, Zutao; Xu, Hong; Chao, Zhifeng; Li, Xiaopei; Wang, Chunbai
- **A Pedestrian Detection Method Based on Heterogeneous Features and Ensemble of Multi-View-Pose Parts**
  Liu, Wei; Yu, Bing; Duan, Chengwei; Chai, Liying; Yuan, Huai; Zhao, Hong
- **A Practical Wireless Attack on the Connected Car and Security Protocol for In-Vehicle CAN**
  Woo, Samuel; Jo, Hyo Jin; Lee, Dong Hoon

- **A Review of Online Dynamic Models and Algorithms for Railway Traffic Management**
  Corman, Francesco; Meng, Lingyun
- **A Runtime Integrity Monitoring Framework for Real-time Relative Positioning Systems Based on GPS and DSRC**
  Ansari, Keyvan; Feng, Yanming; Tang, Maolin
- **A Self-adaptive Parameter Selection Trajectory Prediction Approach via Hidden Markov Models**
  Qiao, Shaojie; Shen, Dayong; Wang, Xiaoteng; Han, Nan; Zhu, William
- **A Stochastic Emergency Vehicle Redeployment Model for Effective Response to Traffic Incidents**
  Lei, Chao; Lin, Wei-Hua; Miao, Lixin
- **A Train Localization Algorithm for Train Protection Systems of the Future**
  Lauer (Magazine Ae), Martin; Stein, Denis
- **A Vehicles-Intersection Coordination Scheme for Smooth Flows of Traffic without Using Traffic Lights**
  Kamal, Md. Abdus Samad; Imura, Jun-Ichi; Hayakawa, Tomohisa; Ohata, Akira; Aihara, Kazuyuki
- **A video analysis based system for detecting hazard situations at level crossings**
  Salmane, Houssam; Khoudour, Louahdi; Ruichek, Yassine
- **Analysis and Modeling of Pedestrian Crossing Behavior during Pedestrian Flashing Green Interval**
  Iryo-Asano, Miho; Alhajyaseen, Wael; Nakamura, Hideki
- **Appraisal and Evaluation of Inter-Urban ITS: A European Survey**
  Kolosz, Ben; Grant-Muller, Susan
- **Automated Highway Drive Analysis of Naturalistic Multimodal Data**
  Satzoda, Ravi Kumar; Trivedi, Mohan
- **Autonomous Reverse Parking System based on Robust Path Generation and Improved Sliding Mode Control**
  Du, Xinxin; Tan, Kok Kiong
- **Calibration and validation of probabilistic discretionary lane-change models**
  Knoop (Magazine Guest Editor), Victor; Buisson, Christine
- **Comments on ``Model-Independent Adaptive Fault-Tolerant Output Tracking Control of 4WS4WD Road Vehicles''**
  Singh, Arun; Potluri, Ramprasad

- **Component GARCH Models to Account for Seasonal Patterns and Uncertainties in Travel Time Prediction**
  Zhang, Yanru; Haghani, Ali; Zeng, Xiaosi
- **Constructed Data Pilot (CDP) Assisted Channel Estimators for Mobile Environments**
  Zhao, Zijun; Cheng, Xiang; Wen, Miaowen; Yang, Liuqing; Jiao, Bingli
- **Design of a Mobile Charging Service for Electric Vehicles in an Urban Environment**
  Huang, Shisheng; He, Liang; Gu, Yu; Wood, Kristin; Benjaafar, Saif
- **Discrete-State Encoding in Hybrid-State Systems for Intelligent Vehicle Control and Estimation**
  Kurt, Arda
- **Distributed Traffic Signal Control using the Cell Transmission Model via the Alternating Direction Method of Multipliers**
  Timotheou, Stelios; Panayiotou, Christos; Polycarpou, Marios
- **Dynamic Time Warping based Measurement Data Alignment Model for Condition-based Railroad Track Maintenance**
  Xu, Peng; Liu, Rengkui; Sun, Quanxin; Jiang, Li
- **Efficient Compression of 4D-Trajectory Data in Air Traffic Management**
  Wandelt, Sebastian; Sun, Xiaoqian
- **Efficient Pedestrian Detection via Rectangular Features Based on a Statistical Shape Model**
  Zhang, Shanshan; Bauckhage, Christian; Cremers, Armin
- **Efficient Road Scene Understanding for Intelligent Vehicles Using Compositional Hierarchical Models**
  Töpfer, Daniel; Spehr, Jens; Effertz, Jan; Stiller, Christoph
- **ExTraCT: Expediting Offloading Transfers through Inter-vehicle Communication Transmissions**
  Kolios, Panayiotis; Panayiotou, Christos; Ellinas, Georgios
- **Fast Online Computation of Model Predictive Controller and Its Application to Fuel Economy-oriented Adaptive Cruise Control**
  Li, Shengbo; Jia, Zhenzhong; Li, Keqiang; CHENG, BO

- **Fully Automatic Roadside Camera Calibration for Traffic Surveillance**
  Dubská, Markéta; Herout, Adam; Juránek, Roman; Sochor, Jakub
- **GNSS Multipath and Jamming Mitigation Using High Mask Angle Antennas and Multiple Constellations**
  Heng, Liang; Walter, Todd; Enge, Per; Gao, Grace
- **Graceful Degradation of Cooperative Adaptive Cruise Control**
  Ploeg, Jeroen; Semsar-Kazerooni, Elham; Lijster, Guido; Van De Wouw, Nathan; Nijmeijer, Henk
- **Green Energy and Content Aware Data Transmission in Maritime Wireless Communication Network**
  Yang, Tingting; Zheng, Zhongming; Liang, Hao; Deng, Ruilong; Cheng, Nan; Shen, Xuemin
- **Hand Gesture Recognition in Real-Time for Automotive Interfaces: A Multimodal Vision-based Approach and Evaluations**
  Ohn-Bar, Eshed; Trivedi, Mohan
- **Hierarchical and Networked Vehicle Surveillance in ITS: A Survey**
  Tian, Bin; Morris, Brendan; Tang, Ming; Liu, Yuqiang; Yao, Yanjie; Gou, Chao; Shen, Dayong; Tang, Shaohu
- **INFORMATION DISSEMINATION DELAY IN VEHICLE-TO-VEHICLE COMMUNICATION NETWORKS IN A TRAFFIC STREAM**
  Du, Lili; Dao, Hoang; Li, Xiang-Yang
- **Intelligent Mobile Video Surveillance System as a Bayesian Coalition Game in Vehicular Sensor Networks: Learning Automata Approach**
  Kumar, Neeraj; Lee, Jong-Hyouk; Rodrigues, Joel
- **Intercultural Analyses of Time-to-Collision in Vehicle-Pedestrian Conflict on Urban Mid-block Crosswalk**
  Jiang, Xiaobei; Wang, Wuhong; Bengler, Klaus; Guo, Hongwei
- **Joint Human Detection from Static and Mobile Cameras**
  Miseikis, Justinas; Borges, Paulo
- **Lane Departure Identification for Advanced Driver Assistance**
  Gaikwad, Vijay; Lokhande, Shashikant
- **Longitudinal Model Identification and Velocity Control of an Autonomous Car**
  Dias, Jullierme; Pereira, Guilherme; Palhares, Reinaldo
- **Minimizing the Disruption of Traffic Flow of Automated Vehicles During Lane Changes**
  Desiraju, Divya; Chantem, Tam; Heaslip, Kevin

- **Modeling Social Influence on Activity-Travel Behaviors Using Artificial Transportation Systems**
  Chen, Songhang; Liu, Zhong; Shen, Dayong
- **Multi-Platooning Leaders Positioning and Cooperative Behavior Algorithms of Communicant Automated Vehicles for High Traffic Capacity**
  Fernandes, Pedro; Nunes, Urbano
- **Multi-spectral Stereo Odometry**
  Mouats, Tarek; Aouf, Nabil; Sappa, Angel; Aguilera, Cristhian; Toledo, Ricardo
- **Multi-vehicle Cooperative Driving using Cooperative Perception: Design and Experimental Validation**
  Kim, Seong-Woo; Qin, Baoxing; Chong, Zhuang Jie; Shen, Xiaotong; Liu, Wei; Ang Jr., Marcelo; Frazzoli, Emilio; Rus, Daniela
- **Non-Parametric Technique Based High-Speed Road Surface Detection**
  Wu, Meiqing; Lam, Siew-Kei; Srikanthan, T.
- **Online data-driven adaptive prediction of train event times**
  Kecman, Pavle; Goverde, Rob
- **Performance Evaluation of GNSS for Train Localization**
  Lu, Debiao; Schnieder, Eckehard
- **Potential Cyberattacks on Automated Vehicles**
  Petit, Jonathan; Shladover, Steve
- **Powered two-wheelers Riding Patterns Recognition Using a Machine learning framework.**
  Attal, Ferhat; Boubezoul, Abderrahmane; Oukhellou, L.; Espié, Stéphane
- **Recognition of Low Resolution Logos in Vehicle Images Based on Statistical Random Sparse Distribution**
  Peng, Haoyu; Wang, Xun; Wang, Huiyan; Yang, Wenwu; Liu, Chunxiao
- **Road Edge Recognition Using the Stripe Hough Transform from Millimeter-Wave Radar Images**
  Guo, Kunyi; Hoare, Edward; Jasteh, Donya; Sheng, Xin Qing; Gashinova, Marina
- **Robust Wheel Torque Control for Traction/Braking Force Tracking under Combined Longitudinal and Lateral Motion**
  Hsiao, Tesheng
- **SLPA*: Shape-aware Lifelong Planning A* for Differential Wheeled Vehicles**
  Yoon, Sangyol; Shim, David Hyunchul

- **Spatial Inference of Traffic Transition using Micro-Macro Traffic Variables**
  Thajchayapong, Suttipong; Barria, Javier
- **Time- and Frequency-Varying K-Factor of Non-Stationary Vehicular Channels for Safety Relevant Scenarios**
  Bernadó, Laura; Zemen, Thomas; Tufvesson, Fredrik; Molisch, Andy; Mecklenbräuker, Christoph
- **Traffic Flow Prediction for Road Transportation Networks with Limited Traffic Data**
  Abadi, Afshin; Rajabioun, Tooraj; Ioannou, Petros
- **Traffic Flow Prediction with Big Data: A Deep Learning Approach**
  Lv, Yisheng; Duan, Yanjie; Kang, Wenwen; Li, Zhengxi; Wang, Fei-Yue
- **TraPlan: An Effective 3-in-1 Trajectory Prediction Model in Transportation Networks**
  Qiao, Shaojie; Han, Nan; Zhu, William; Gutierrez, Louis
- **TRIPPLANNER: Personalized Trip Planning Leveraging Heterogeneous Crowdsourced Digital Footprints**
  Chen, Chao; Zhang, Daqing; Guo, Bin; Ma, Xiaojuan; Pan, Gang; Wu, Zhaohui
- **Vehicle Scheduling of Urban Bus Line via an Improved Multi-objective Genetic Algorithm**
  Zuo, Xingquan; Chen, Cheng; Tan, Wei; Zhou, Mengchu

Forthcoming papers on IEEE ITS Magazine

- **Experience, Results and Lessons Learned From Automated Driving on Germany's Highways**
  Aeberhard, Michael; Rauch, Sebastian; Bahram, Mohammad; Tanzmeister, Georg; Thomas, Julian; Pilat, Yves; Homm, Florian; Huber, Werner; Kaempchen, Nico
- **Generation of Accurate Lane-Level Maps from Coarse Prior Maps and Lidar**
  Joshi, Avdhut; James, Michael
- **Insurance telematics: opportunities and challenges with the smartphone solution**
  Handel, Peter; Skog, Isaac; Wahlstrom, Johan; Bonawiede, Farid; Welch, Richard; Ohlsson, Jens; Ohlsson, Martin
- **Learning Driver Behavior Models from Traffic Observations for Decision Making and Planning**
  Gindele, Tobias; Brechtel, Sebastian; Dillmann, Rüdiger
- **Map-aided Evidential Grids for Driving Scene Understanding**
  Kurdej, Marek; Moras, Julien; Cherfaoui, Veronique; Bonnifait (Magazine Guest Editor), Philippe
- **Physical Layer Aspects of Information Exchange in the NOTICE Architecture**
  El-Tawab, Samy; Alhafdhi, Ahmed; Treeumnuk, Dusadee; Popescu, Dimitrie; Olariu, Stephan

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