IEEE ITS SOCIETY

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NEWSLETTER

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SOCIETY NEWS

From the Editor
Shunsuke Kamijo

Dear readers, Happy new year. We have the first issue of 2018 fully loaded with interesting information.

President/past president of our society give us the message in this issue. We also announce the BoG election result in this issue. We are publishing the ITSC2017 report. The Society News and Society Educational Activities are also included in this issue.

We have a number of CFPs for IV, ICVES, ITSC and other ITS related conferences coming in 2018. This issue also publish the list of the forthcoming papers in Transaction on IV and ITS Magazine. Transactions on IV started almost two year ago and the number of publishing papers are getting increased.

We are also publishing some interesting information about joining our society. Membership has a lot of benefits plus the pride of helping out the ITS Society serving our community and colleagues. Think of it!
The president of the IEEE Intelligent Transportation Systems Society has a two-year term. Since January 1, 2018, the former President Daniel Zeng has become Past President and Professor Miguel Ángel Sotelo Vázquez has become President.

Thank You for Two Productive and Fun Years!
Daniel Zeng

Dear Members of the IEEE ITS Society:

It has been a great honor and pleasure for me to serve on the IEEE ITS Society leadership team along with talented, accomplished, and dedicated volunteers in the past two years. I am writing this message for the last time in my capacity as President of the ITS Society.

Looking back at a variety of activities and initiatives our society has undertaken in the past two years, I think we have accomplished quite a bit together as a team.

Our flagship conferences have continued to grow, attracting a lot of high-quality papers and participation. The ITS Transactions and Magazine are doing very well, with record number of submissions and high impact factor. The newly-launched IV Transactions is also kicking off very nicely, with excellent contributions from major groups around the world. Our society has recently established a position of Vice President of Educational Activities, and invested heavily in an array of education-oriented efforts. Such efforts have paid off handsomely, with great feedback from students and colleagues in the field, and prominent recognition at the IEEE level. In close collaboration with the IEEE Standards Association, our society is also initiating our own standards-related activities. In Fall 2017, the ITS Society received the designation of IEEE standards sponsor and the standards team is already engaged in multiple initiatives with heavy industry participation. There is so much more. We have made changes to the ITS leadership structure so that the Executive Committee will function more effectively and efficiently. Efforts are under way to better engage the society-level Technical Activities Board and technical sub-committees in our conference and publication efforts. As the number of ITS society publications grows, we are in the process of redefining the society-level Publication Activities Board, to better support our publications and editorial teams. We have also done well with membership engagement and local chapter development, and have teamed up with sister organizations such as ITS World Congress to pursue mutually beneficial promotional opportunities.
I would like to take this opportunity to thank all the society colleagues who served on the ITS Society’s Board of Governors and Executive Committee. All of them have contributed their valuable time and energy to a variety of society initiatives. I deeply appreciate their significant contributions, dedications, and friendship! The Society leadership team and I are also deeply grateful to you, our fellow society members, for your contributions and volunteerism! Our membership has contributed in so many different ways to the society and IEEE activities, driving our young society into an inspiring, open, diverse, and exciting academic community.

Serving as the President of our society has been a great honor and an exciting experience for me. Professor Miguel Ángel Sotelo Vázquez, a very accomplished ITS researcher, a long-time contributor and leader in our Society, will be our new President for 2018-2019. I know that Miguel will work very hard and very smart in his new position. Our Society is in excellent hands and will for sure continue to grow and prosper!

Best wishes to Miguel and the society membership!

Sincerely,

Daniel Zeng
Past President, IEEE ITS Society
A New Beginning for ITS

It is my pleasure to address our distinguished audience in my first message as President of the IEEE Intelligent Transportation Systems Society. To start off, let me express my gratitude and appreciation for our Past-President, Professor Daniel Zeng, who has led the ITS Society with wisdom and balance during the last two years. Daniel, thanks for your leadership and for the way you have contributed to advancing our dear society. Needless to say, that I will focus my endeavors on continuing the path of success that the ITS Society has been following in the past years. By doing so, I will honor not only the work carried out by my predecessors, but also the thrust and motivation of our members. Talking about members, yes, I admit that increasing the number of ITSS members is a goal, as it is for any other scientific society, and it would be nice to reach a figure of, say 2000 members, but I consider that increasing the impact of our work on the society at large is even more important and significant. When I talk about impact, I talk in a really global sense. It means impact from many different perspectives, such as the impact of our scientific publications and conferences, the impact and scope of our education, technical, and outreach activities, and last but not least, the impact of the technologies that we successfully transfer to the society. As you can perfectly understand, we can make a significant impact on a global scale from many different angles, i.e. scientific, industrial, etc. Consequently, we need to develop a holistic strategy to succeed in this ambitious goal. In this regard, the conditions are excellent, if we take into account the number of hot research topics nowadays that are closely related to the ITS Society. Automated driving, smart cities, and transport sustainability are just a few examples of research themes of the utmost relevance worldwide.

As previously mentioned, an outstanding aspect of the work we do is connected to the impact of our publications. In this regard, the ITS Society is currently running 3 successful journals, namely IEEE Intelligent Transportation Systems Magazine, IEEE Transactions on Intelligent Transportation Systems, and IEEE Transactions on Intelligent Vehicles. The latter, which is the most recent one, is growing really fast and I am truly convinced that it is going to become a reference in the field very soon. Regarding ITSS-sponsored conferences, the number of submissions doesn’t cease to grow year after year. Thus, we are aiming at significantly increasing the number of conference attendees. Similarly, our efforts on membership are outstanding. As a proof of that, the ITSS is one of the fastest growing IEEE societies despite the global trend of continuous decline in the number of IEEE members and society affiliations. I am sure this is closely related to the remarkable work that the ITSS is doing in terms of Education and Technical activities, offering excellent opportunities for the professional development of our members in a really international context.
This been said, it is time to move forward and to leverage the momentum of ITS worldwide. For this purpose, I will concentrate on growing our publications, conferences, and membership, as well as on enhancing the education and technical activities, without forgetting other important issues in today’s world, such as communication and promotion efforts, including social media outreach. Easy to say, hard to accomplish, I know, but I believe anything is possible when it comes to the ITS Society. Honestly, I cannot think of any society with a better atmosphere and a more pleasant environment for professional and personal development. Please, stay with us and help us advance the ITS Society. Your contributions are wholeheartedly appreciated.

I look forward to meeting many of you in our ITSS-sponsored conferences and events throughout the year.

Sincerely,

Miguel Ángel Sotelo
President. IEEE Intelligent Transportation Systems Society
Each year, the members of the Society elect five members to serve a three year term on the Board of Governors (BoG), the Society’s governing body. The BoG consists of the fifteen elected members (five each year for a three-year term) and the officers of the Society.

The candidates for election are nominated by the Society’s Nominations Committee. The Chair of the Committee is designated in the Society’s bylaws. This year, the Chair was Miguel Ángel Sotelo, who was President-Elect in 2017. IEEE has announced the results of the election for the Board of Governors. The following five candidates have been elected for a three year term beginning January 1, 2018.

**Tankut Acarman**

Tankut received his Ph.D. from The Ohio State University in Electrical Engineering, and his M.Sc. in Control and Computer Engineering from the Istanbul Technical University Istanbul. His research interests are: Intelligent Transportation Systems and Intelligent Vehicle Technologies Vehicle-to-Vehicle and Vehicle-to-Infrastructure communication, driver assistance systems, active safety, perception, routing, navigation, data fusion, dynamic scheduling, collision avoidance systems, path planning, Energy Intelligent Transportation Systems, hybrid and electric vehicle technologies, simulator technologies. Systems and Control Theory Classical control, modern control, sliding mode control, robust nonlinear control, optimal control, estimation, robust nonlinear control of mechanical, electromechanical systems and vehicle dynamics. Computer Networks, Robotics Routing, congestion control, wireless sensor networks, sensor fusion, localization, map matching. Professor Acarman is a Professor of Computer Engineering at Galatasaray University, Istanbul, Turkey, where he has been the Chair of the Computer Engineering Department since 2015. At Galatasaray University he has also been Associate Director, Institute of Sciences (2008 - 2014), and the Director of the Center of Computing Resources (2004 - 2005). Professor Acarman has served the IEEE ITS Society in many roles, as Program Co-Chair of a number of its Conferences including ITSC and IV, and been in the organizing committee of a number of its other meetings. He was the finance chair of IV 2007, publication chair of ICVES 2008 and VNC 2009, program chair of ICVES 2012 and IV 2014, and finally, program co-chair of IV 2017. He has been an Associate Editor of the Transactions on Intelligent Vehicles since its start in 2016, and is now moving to become a Senior Editor. He will support IEEE ITS conference organizations, ITSS initiatives, standardization activities, and promote the interdisciplinary ITS research to students and engineers.
Shunsuke Kamijo
Shunsuke Kamijo is an Associate Professor of The University of Tokyo. He received B.S. and M.S. degree on Physics from The University of Tokyo in 1990 and 1992 respectively, and PhD degree on Information Engineering in 2001 from The University of Tokyo. He worked for Fujitsu Ltd. from 1992 as a processor design engineer. He was Assistant Professor from 2001 to 2002, and he is Associate Professor since 2002. His research interests include computer vision, wireless communication, and their applications to ITS. His research focuses are on autonomous vehicles, traffic video surveillance, traffic signal control, V2X communications, pedestrian and car navigations. He is a member of IEEE ITS Society. He is a member of Board of Governors for IEEE ITS Society since 2015, and has been serving as the Editor-in-Chief for ITSS Newsletter. He joined International Program Committee of ITS World Congress since 2011. He is an editorial board member of “International Journal on ITS research (Springer)” and “Multimedia Tools and Applications (Springer)”. He is also members of TRB, ION, IEICE and IATSS. He is a founding member of ITS Chapter in IEEE Tokyo section in 2014, and serves as the Chairman of the Tokyo chapter in 2017-2018. He organized IEEE ICVES2015 and ITSC2017 as General Co-Chair.

Chunzhao Guo
Chunzhao Guo received his B.S. in Control Science and Engineering and Ph.D. degree in Pattern Recognition and Intelligent System from University of Science and Technology of China in 2002 and 2007, respectively. Currently, he is a Researcher with the Toyota Central R&D Labs., Inc., Japan. Previously, he was a research fellow at Osaka University and an assistant professor at Toyota Technological Institute. He has also been a part-time Lecture at Nagoya University. Dr. Guo is a member of IEEE and a member of the IEEE ITS Society. For the past several years he has served on the Organizing Committees of the flagship ITSS conferences, such as Program Co-Chairs for IV2016 and ITSC2018, Workshop/Tutorials Co-Chairs of IV2018, Industry Track & Exhibition Co-Chairs of ITSC2016, Exhibition Chair of FISTS2016, Local Chairs of UV2016, Publicity Co-Chairs of ITSC2015, Publication Co-Chairs of IV2014 and ITSC2014, etc. He has also served or is about to serve in the Editorial Board of the major ITSS publications, such as Guest Editor on the ITS Magazine, Associate Editor on the Transaction on ITS (term starts on Jan. 1, 2018), Associate Editors of IV2014 and IV2016, etc. He has organized a number of international workshops and is being a regular reviewer for 13 IEEE transactions and international journals and 6 international conferences in the ITS and Robotics fields. Dr. Guo’s research interests include computer vision, pattern recognition, machine learning, automated vehicles, ADAS, ITS, robotics, etc. Particularly, he is recently interested in knowledge-based road environment understanding and human-like decision making and behavior generation. He is the author/coauthor of 1 book, 3 refereed book chapters, 14 refereed
journal papers on Transaction of ITS, ITS Magazine, Transaction on IV, Intelligent Systems, etc., and over 40 refereed conference papers on IV, ITSC, ICRA, IROS, BMVC, ICSR, etc. He holds 2 Japan patents and has 7 more patent applications pending. He has been awarded many times in various academic activities and international conferences, such as Toyota Scholarship Foundation Research Awards, Best Application Paper Award at PSIVT2015, Best Service Robotics Paper Award-Finalist at ICRA2014, Best Paper Award-Finalist at AVEC2014, Student Award at ISABMEC2006, etc. He has been invited to give speeches at a number of symposiums, lectures, workshops and institutes, etc.

Yisheng Lv
Yisheng Lv received his Ph.D. degree in Control Theory and Control Engineering from the Institute of Automation, Chinese Academy of Sciences, Beijing, China, in 2010. He was a visiting scholar at North-western University, Evanston, USA from 2014 to 2015. He joined the State Key Laboratory for Management and Control of Complex Systems in 2010 where he is currently an Associate Professor. Dr. Lv’s research interests include deep learning & machine learning in transportation, artificial intelligence, parallel transportation systems, traffic data analysis, traffic prediction, and traffic control. He has authored or co-authored 20+ patents, and 50+ journal/conference papers. Among which, one journal paper on deep learning for traffic flow prediction is the most popular article on IEEE Transactions on Intelligent Transportation Systems and well cited, one best student paper at 2013 IEEE International Conference on Service Operations and Logistics, and Informatics. For the last 8 years he has been awarded a total of RMB 8M in grants and contracts sponsored by National Natural Science Foundation of China, industrial partners, and transportation administration agencies. Dr. Lv received 2015 IEEE ITS Outstanding Application Award for ACP-based Qingdao Parallel Urban Traffic Management and Control System. He has served as Organizer or Program Committee member for a number of international conferences/workshops.

Shengbo Eben Li
Shengbo Li received his M.S. and Ph.D. degrees in Mechanical Engineering from Tsinghua University in 2006 and 2009, respectively. He worked at Stanford University in 2007, University of Michigan from 2009 to 2011, and University of California Berkeley in 2015. He is currently a tenured Associate Professor in the Department of Automotive Engineering at Tsinghua University. Dr. Li’s research interests include connected and automated vehicles, driver behavior modeling and assistance, reinforcement learning and distributed control, optimal control and estimation, etc. He has authored or co-authored over three (3) books in Springer, more than 100 journal/conference papers, and 20 patents. For the last five years, he has
been awarded a total of $3M in research grants and contracts sponsored by Chinese government, industrial partners, and the university. Dr. Li was the recipient of the Award for Science and Technology of China ITS Association (2012), Award for Technological Invention in the Ministry of Education of China (2012), National Award for Technological Invention in China (2013), Best Student Paper Award at the IEEE 17th International Conference on Intelligent Transportation Systems (2014), Best Paper Award in the 14th ITS Asia Pacific Forum (2015), NSK Sino-Japan Outstanding Paper in Mechanical Engineering (2014/2015), Excellent Young Scholar of NSF China (2016), Young Professor of Changjiang Scholar Program (2016), Science and Technology Award of China Automotive Industry (2016), Excellent Academic Career Award by Tsinghua University (2017). He has served as chair and member of organizational committee or technical committee for a number of international conferences in ITS field.
IEEE ITS Society Educational Activities

EDU ITSS
edu-ieee-itss.org

- Online short courses in the ITS area
  - Introduction to Vehicular Robotic Modeling with V-REP
  - Short Course in Predictive Analytics in ITS
  - Autonomous Vehicles, Platooning and Traffic Flow Control for Connected Vehicles
  - A primer on security and privacy in vehicular ad-hoc networks

- Summer Schools
  - IEEE ITSS Summer School on Cooperative Interacting Automobiles
  - EEE ITSS Summer School on Frontiers in ITS: Transportation 5.0

- ITS Keynotes
  - The 2017 IEEE International Conference on Vehicular Electronics and Safety (IEEE ICVES 2017)

Enroll now!
We are very pleased to report the main features in the IEEE ITSC2017, IEEE 20th International Conference on Intelligent Transportation Systems. The 20th year of IEEE Intelligent Transportation Systems Conference is a great milestone in the ITS society. As the annual flagship conference of ITS society, ITSC2017 provided the participants an opportunity to present and exchange their knowledge and ideas. The IEEE ITSC 2017 was held in the Yokohama, Japan from October 16-19, 2017. Yokohama is the largest trading port in Japan, and acquires easy access from Tokyo International Airport and central business area of Tokyo. The conference venue, Mielparque Yokohama is located in the bay area of Yokohama and has a very nice view.

Technical Program
ITSC2017 conference organization committee received 734 submissions, including 599 regular papers and 135 workshop papers from 49 different countries. 392 papers (313 regular papers and 79 workshop papers) were included in the program with 1255 authors. The acceptance rate is about 53%. The top 3 countries in terms of submissions were: P.R. China (156), USA (82), and Germany (81). Overall the technical program was organized in 11 parallel tracks and 83 sessions. Among the topics that appeared more frequently in the submissions, we can highlight: Vision, and Environment Perception (51), Big Data and Data Driven Innovation (35), and Vehicle Localization (26). We have appreciated 296 associate editors and 1092 reviewers for their hard work during the review process and very important comments and suggestions.

Invited Keynote Speakers
ITSC2017 invited three keynote speakers from Japan and overseas. Mr. Masao Fukushima from NISSAN MOTOR CO., LTD introduced the SIP (Cross-ministerial Strategic Innovation Promotion Program) Autonomous Driving Project of Japan. SIP-Automated Driving System (SIP-AD) is acting under the slogan of "In Pursuit of a Transport Society That Brings Everyone a Smile" undertaking activities with the goal of reducing traffic congestion, reducing traffic accident fatalities, and realizing, popularizing and deploying the automated driving system, as a result of utilizing automated driving technologies.
Next, Mr. Yoichi Sugimoto from Honda R&D Co., Ltd talked about the history of Car Navigation systems and the future prospects of automated driving. Aiming at the collision-free society with the joy and freedom of mobility, Honda has been proactively working on research and developments of intelligent vehicle technologies. As one of its achievements, the World’s 1st car navigation system was introduced in 1981. Honda was awarded with IEEE Milestone in March 2017 about their world 1st Car Navigation system.

Finally, Prof. Emeritus U. Ozguner from the Ohio State University talked about the future of smart city from the intelligent vehicle perspective. Smart Cities can collect and distribute extensive data helping mobility and safety. One aspect that is important in cities is the dense population of pedestrians, and their interaction with automated vehicles. This keynote speech outlines the works from Prof. Emeritus U. Ozguner at the Ohio State University, both in developing small platforms for providing mobility to the impaired, and also the safe motion of such platforms in dense pedestrian environments.

Workshops
The main conference was preceded by a day of workshops, with a great participation of the attendees. The organizers had prepared their workshops voluntarily for several months. 10 excellent workshops, which collocated with IEEE ITSC 2017 were as follows:

<table>
<thead>
<tr>
<th>Workshop</th>
<th>Organizer(s)</th>
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<tbody>
<tr>
<td>Connected, cooperative and automated transport - from IEEE 802.11p towards 5G</td>
<td>Meng Lu (Dynniq, the Netherlands)</td>
</tr>
<tr>
<td>Human Factors in Intelligent Vehicles</td>
<td>Cristina Olaverri Monreal(UAS Technikum Wien, Austria) and Fernando Garcia(University Carlos III, Spain)</td>
</tr>
<tr>
<td>Workshop</td>
<td>Organizers</td>
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<tr>
<td><strong>Eco-drive at Intersections with Connected, Cooperative and Automated Vehicle Technology</strong></td>
<td>Organized by Meng Wang(Delft University, the Netherlands), Meng Lu(Dynniq, the Netherlands) and Guoyuan Wu(University of California, Riverside, USA)</td>
</tr>
<tr>
<td><strong>Workshop on Modelling, Analysis and Control of Intelligent Mobility-on-Demand Systems</strong></td>
<td>Organized by Francesco Ciari(ETH, Switzerland), Chiara Boldrini(Italian National Research Council, Italy), Raffaele Bruno(Italian National Research Council, Italy) and Hironori Kato(The University of Tokyo, Japan)</td>
</tr>
<tr>
<td><strong>Deep Learning for Autonomous Driving</strong></td>
<td>Organized by Senthil Yogamani (Valeo Vision Systems, Ireland), Patrick Denny (Valeo Vision Systems, Ireland), Ahmad El Sallab (Valeo AI Research, Egypt), Bharanidhar Duraisamy (Daimler, Germany), Markus Enzweiler (Daimler, Germany), Felix Friedmann (Audi, Germany), Dan Levi (GM, Israel), Anoop KP (Conti, India), Ravishankar Sivalingam (Qualcomm, USA)</td>
</tr>
<tr>
<td><strong>Artificial Transportation Systems and Simulation</strong></td>
<td>Organized by Fenghua Zhu(Chinese Academy of Sciences, China), Shuming Tang(Chinese Academy of Sciences, China) and Rosaldo Rossetti(University of Porto, Portugal)</td>
</tr>
<tr>
<td><strong>The Third International Workshop on Intelligent Public Transports – Toward the Next Generation of Urban Mobility</strong></td>
<td>Organized by Luis Moreira-Matias(NEC, Germany), Oded Cats(TU Delft, the Netherlands), Lijun Sun(MIT, USA) and Francesco Viti(University of Luxembourg, Luxembourg)</td>
</tr>
<tr>
<td><strong>Behavioural Change Support Intelligent Transportation Applications</strong></td>
<td>Organized by Efthimios Bothos(the National Technical University of Athens, Greece), Babis Magoutas(the National Technical University of Athens, Greece), Brian Caulfield(the Trinity College Dublin, Ireland), Athena Tsirimpa(the University of the Aegean, Greece), Maria Kamargianni(the University College London, United Kingdom), Panagiotis Georgakis(f the University of Wolverhampton, United Kingdom) and Gregoris Mentzas(the National Technical University of Athens, Greece)</td>
</tr>
<tr>
<td><strong>Transportation 5.0</strong></td>
<td>Organized by Fei-Yue Wang(Chinese Academy of Sciences, China), Yisheng Lv(Chinese Academy of Sciences, China), Fenghua Zhu(Chinese Academy of Sciences, China), Xiao Wang(Chinese Academy of Sciences, China) and Lingxi Li(Purdue University, USA)</td>
</tr>
<tr>
<td><strong>International workshop on Large-Scale Traffic Modeling and Management</strong></td>
<td>Organized by Ludovic Leclercq(Ecole Nationale des Travaux Publics de l'État, France), Mohsen Ramezani(University of Sydney, Australia), Mehmet Yildirmoglu(Queensland University, Australia) and Nan Zheng(Beihang University, China)</td>
</tr>
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Workshops were highly participated during the day. Below are some photos from the workshop day of the conference.
Hackathon

We successfully organized the first IEEE ITS DATA MINING Hackathon in ITSC2017 with a great effort of Prof. Javier J. Sanchez-Medina from ULPGC, Spain and Prof. Kazuya Takeda from Nagoya University, Japan. The topic of this first edition Hackathon is NATURALISTIC DRIVING. We set up a competition to detect lane-changes upon data captured at a vehicle, on expressways around Nagoya University. More than 10 groups joined into the Hackathon. The winners were awarded in the Awards Ceremony in Gala Dinner.
Special Sessions and Exhibitions

In addition to regular sessions, we also organized the three special sessions in ITSC2017. “International Collaborative Research on Automated Vehicles” session discussed several new initiatives involving international collaborative research on autonomous driving, covering the areas of trajectory planning, sensing and localization and functional safety. “Naturalistic Driving Data Acquisition for Smart Mobility Application” session introduced latest research activities of naturalistic driving study and the platform development for the self-driving cars and other applications. “QZSS: Quasi-Zenith Satellite System” session focused the recent developments in QZSS, Quasi-Zenith Satellite System and its related achievements for ITS. Moreover, ITSC2017 prepared an exhibition area for sponsors, exhibitors and participants.

Welcome Reception and Gala Dinner

After the workshop day, we started the Welcome Reception at the Yokohama Marine Tower, participants gathered and had a very relaxing moment. The Gala Dinner took place at the Royal Hall Yokohama. The participants enjoyed the delicious Japanese drink and food, and Japanese traditional drum performance.
Awards
The Awards Ceremony was scheduled in the Gala Dinner. The awarding of the IEEE ITS Society were chaired by Prof. Miguel Angel Sotelo, the Society's president from 2018. IEEE ITSC 2017 also selected the best papers from several hundred submissions. We awarded two best papers and three best student papers. The Awards ceremony concluded with the presentation of the IEEE ITSC2018, to be held in Hawaii, USA, on 4 - 7 November 2018.

<table>
<thead>
<tr>
<th>Award</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>2017 IEEE ITS Outstanding Research Award</strong></td>
<td>Azim Eskandarian, Virginia Tech for Contributions in Autonomous Systems and Intelligent Machines</td>
</tr>
<tr>
<td><strong>2017 IEEE ITS Institutional Lead Award</strong></td>
<td>TU Delft Automated Research Program Bart van Arem for leading the TU Delft Automated Driving Research Program</td>
</tr>
<tr>
<td><strong>2017 IEEE ITSS Best Ph.D. Dissertation Award, First Prize</strong></td>
<td>Eshed Ohn-Bar, University of California, San Diego - advisor: Mohan Trivedi Contextual Visual Object Recognition and Behavior Modeling for Human-Robot Interactivity</td>
</tr>
<tr>
<td><strong>2017 IEEE ITSS Best Ph.D. Dissertation Award, Second Prize</strong></td>
<td>Kun Xie, New York University - advisor Kaan Ozbay New Opportunities in Urban Safety Analytics Using Advanced Quantitative Methods and Big Data</td>
</tr>
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</table>
Best Paper Award of ITSC2017

- Richard Brunauer (Salzburg Research, Austria), Stefan Henneberger (Salzburg Research, Austria), Karl Rehrl (Salzburg Research, Austria) for the paper entitled “Network-Wide Link Flow Estimation Through Probe Vehicle Data Supported Count Propagation”

- Masahito Takizawa (Takushoku University, Japan), Hideki Takahashi (Central Nippon Highway Engineering NAGOYA Co., Ltd., Japan), Hajime Oshima (Nagoya Electric Works Co., Ltd., Japan), Kouji Yamamoto (Central Nippon Expressway Co., Ltd., Japan), Kazutoshi Tago (Nagoya Electric Works Co., Ltd., Japan) for the paper entitled “Structure of Traffic Information Related to Suddenly Occurring Events on Expressway”

Best Student Paper Award of ITSC2017

- Brian Mok, Mishel Johns, Stephen Yang, Wendy Ju (Stanford University, USA) for the paper entitled “Actions Speak Louder: Effects of a Transforming Steering Wheel on Post-Transition Driver Performance”

- Ehsan Javanmardi, Mahdi Javanmardi, Yanlei Gu, Shunsuke Kamijo (The University of Tokyo, Japan) for the paper entitled “Autonomous Vehicle Self-Localization Based on Probabilistic Planar Surface Map and Multichannel LiDAR in Urban Area”

On the last day of the Conference, 9:00-10:30 October 19, the five awardees of IEEE ITS Society presented highlights of their achievements in the award speech session, chaired by Prof. Brendan Morris. The detail of this session is as follows: Prof. Azim Eskandarian D. Sc. presented “A Perspective on Safety and Mobility”. Prof. Bart van Arem gave a presentation on “The TU Delft Automated Driving Research programme”. Dr. Eshed Ohn-Bar presented “Human-Centered Intelligent Vehicles”. Dr. Kun Xie presented “New Opportunities in Urban Safety Analytics Using Advanced Quantitative Methods and Big Data”. Dr. S. Ali Reza Fayazi gave a recorded presentation for “Connected Vehicles at Signalized Intersections: Traffic Signal Timing Estimation and Optimization”.

Student activity
Student Event was held on Oct. 17th at JICA (Japan International Cooperation Agency) Yokohama International Center. The event was a social gathering with ITSC student participants and IEEE Student Branch members in Tokyo Section. More than 50 students joined in our activity. Half of them were from Student branches in Japan. Welcome talks from ITS society were given by Prof. Brendan Morris, Prof. Tankut Acarman and Prof. Javier Sanchez Medina. We also invited the following student branch members in IEEE Tokyo Section. They introduce their university and branch activities to ITSC2017 participants.

- Aoyama Gakuin University Student Branch
- Kanto Gakuin University (preparing for establishing)
- Meiji University Student Branch
- Tokyo Denki University Student Branch
- Tokyo University of Science Student Branch
- Yokohama National University Student Branch

The participants did “ICE cream party” game for exchanging. They discussed each other to complete the missions. The missions had been set to become one of the opportunities for talking with other participants who have different backgrounds. Participated students enjoyed this event and exchanging.

Acknowledgment
We gratefully acknowledge over 300 colleagues who served as associate editors and more than 1000 reviewers for their review and evaluation of the contributed paper. The collective efforts of these colleagues ensured the quality of the proceedings. We would like to thank Prof. Javier and Takeda sensei for organizing the Hackathon. We also would like to thank the workshop and special session organizers and speakers. We would like to thank more than 1200 authors who contributed quality papers to the conference. Thanks all participants who contributed to great interactive discussions at the sessions, at the coffee and lunch breaks. Our deep appreciation also goes to the volunteers helping during the conference and resolved issues to ensure the smoothness of the conference. Finally, we would like to acknowledge the contributions of the sponsors and exhibitors.

ITSC2017 Organizing Committee
IEEE Division Delegate/Director

OVERVIEW:
The voting members of each Division elect a Delegate to the Assembly, designated as its Divisional Delegate, who shall also by virtue of such election be a Director, designated as its Divisional Director.

Division Delegate/Directors represent the membership of his/her Division in the IEEE Assembly (Section I-200 of IEEE Bylaws) as a voting delegate.

IN ADDITION, Division Delegate/Directors are voting members of the Technical Activities Board, and are encouraged to actively participate on TAB and its standing committees. They are encouraged, in their elect-year(s), to volunteer to serve on committees or Boards outside of Technical Activities, in order to gain a broader perspective of IEEE.

The IEEE Division Delegate/Director also serves as a member of the IEEE Board of Directors, the governing body of IEEE. See Member, IEEE Board of Directors Position Description for more detail of this position including responsibilities and additional time requirements.

TERM:
• This is a three-year commitment: One-year term as Director-elect, and a two-year term as Division Director

ROLES:
• Serves as a member of the IEEE Assembly;
• Serves as a member of the IEEE Board of Directors;
• Serves as a member of the Technical Activities Board;
• Serves as a member of the Division Directors' Forum;
• May chair the Division Nominating Committee of his/her Division.

DESCRIPTION OF RESPONSIBILITIES:
• Is familiar with TAB governing documents;
• Attends all TAB Meetings, TAB Caucuses, Division Directors' Forums, and other meetings as required;
• Assists the TAB Chair and the IEEE Board of Directors by carrying out additional ad-hoc assignments;
• Forms and participates on (or chairs) the Division Nominating Committee, in consultation with the constituent Societies & Councils (S/Cs), and ensures that the nomination process, as specified in Section 8 of the TAB Operations Manual, is followed. Informs potential Divisions Director candidates of the functions, duties and qualifications of a Division Director;
• Helps recruit candidates for Division Delegate/Director-Elect for respective Division;
• Make appointments as necessary.
Identifies, encourages, nominates and mentors candidates for higher volunteer positions within IEEE;

As member of the Division Directors’ Forum, appoints Division representatives to TAB Standing Committees and Committees of other Organizational Units (OUs) as required, in a timely manner;

Engages with the S/Cs of his/her Division:
1. Attends at least one Administrative Committee (AdCom) or Board of Governors (BoG) meeting of each S/C during his/her term of office.
2. Facilitates communication and cooperation among the S/Cs in his/her own Division and helps resolve any conflicts, possibly in the role as mediator. This may include meetings and/or social events during the week of the TAB meetings.
3. Determines Division S/C needs and helps them to develop programs and plans which are consistent with IEEE and TAB policies; ensures they receive due consideration in TAB.
4. Reinforces and facilitates compliance of the S/Cs with the IEEE Bylaws, IEEE Policies and TAB policies. Helps resolve situations to ensure matters of importance to successful S/C operation such as reports, conference closures, publication activities, etc., are carried out in an effective and timely manner.

Facilitates communication, cooperation and problem resolution across IEEE.
1. Communicates needs, concerns, and actions between TAB and the IEEE Board of Directors.
2. Promotes communication and cooperation among S/Cs across TAB. Cooperates with other Division Delegate/Directors to resolve conflicts across Divisions.
3. Expedites problem resolution involving S/Cs and TAB across IEEE.
4. Promotes cooperation among S/Cs in his/her Division and the Regions.
5. Promotes technical activities at the regional level of the S/Cs in his/her Division.

Also see the BoD Member Responsibilities in the Generic BoD Member position description.

ELIGIBILITY:
- Must be an IEEE member in good standing;
- Must be of IEEE Senior Member grade or higher;
- Must be a member of at least one Society in his/her Division.

QUALIFICATIONS AND SKILLS:
- See Qualifications and Skills for Member, Board of Directors. In addition,
- Normally should have had experience as a S/C President or S/C senior leadership position (e.g., Vice President/Chair of a S/C Board.)
- Should have the support of that person’s employer in meeting the obligations of the position.

**ESTIMATED TIME REQUIREMENTS**: 

<table>
<thead>
<tr>
<th>Item</th>
<th>Estimated Time Required: <strong>31– 112 Days</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material Review: (Examples: agendas, correspondence, reports, minutes, email, mail, web postings, reports, ad hoc meetings)</strong></td>
<td>TOTAL: <strong>12 – 54 Days</strong></td>
</tr>
<tr>
<td>- Technical Activities Board meetings</td>
<td>2 days/3 per year</td>
</tr>
<tr>
<td>- Society Meetings</td>
<td>½ - 4 days/month (flex time)</td>
</tr>
<tr>
<td><strong>In-Person Meetings: (no travel time)</strong></td>
<td>TOTAL: <strong>15 – 36 Days</strong></td>
</tr>
<tr>
<td>- TAB Meetings (Mini-Series)</td>
<td>3 days/3 per year</td>
</tr>
<tr>
<td>- Society Meetings</td>
<td>1.5 – 5 days/3-5 per year, depending on Division)</td>
</tr>
<tr>
<td>- Region Meetings (optional)</td>
<td>1-2 days (1/per year)</td>
</tr>
<tr>
<td><strong>Teleconferences:</strong></td>
<td>TOTAL: <strong>1-3 Days</strong></td>
</tr>
<tr>
<td>- Society and other Governance related</td>
<td>Up to 10 per year, and as needed (1-2 hours each)</td>
</tr>
<tr>
<td><strong>Other Travel: (does not include meeting time)</strong></td>
<td>TOTAL: <strong>3 – 19 Days</strong></td>
</tr>
<tr>
<td>- Region Meetings (optional)</td>
<td>2-4 days (1/year)</td>
</tr>
<tr>
<td>- Society Meetings</td>
<td>1-3 days (3-5/year)</td>
</tr>
</tbody>
</table>

*depends on meeting venue & location of Director

*Does not include time requirements for responsibilities as a member of the IEEE Board of Directors. See Member, IEEE Board of Directors Position Description.

**REIMBURSED EXPENSES:**
Ordinary and necessary IEEE travel expenses are reimbursed in accordance with IEEE policies.

**STAFF CONTACT:**
Name: Jayne Cerone, Sr. Director, Technical Activities Volunteer
Telephone: +1 732 562 3908
Email: j.cerone@ieee.org

October 2017
ITS Society News

2017 was another great year for the Society. We are at a record high with almost 1800 members and steadily growing. Our two flagship conferences, IV2017 in Redondo Beach, California and ITSC2017 in Yokohama, Japan, continued the series’ strong growth trend. In fact, IV2017 actually had to end registration as it hit maximum capacity of the venue. We expect to see continued growth in the coming years with emphasis placed on self-driving vehicle technology and smart cities around the world. It is an incredibly exciting time where our community has the unique opportunity to make not only research advancements but real-world impact in everyday life through improved mobility, safety, and energy efficiency. Next year, IV2018 (June) will be held in Changshu, China - co-located with the Chinese Intelligent Vehicles Future Challenge - and promises to be an exciting event. Get your swim wear ready, ITSC2018 will be on the Island of Maui, Hawaii to help us forget about cold weather. If you are interested in hosting a conference, please do contact the ITS Society for more information. Even if you do not have experience chairing a conference, there are other smaller ITSS sponsored meetings where you can be involved.

In addition to work within the community, ITS Society members are making an impact at the IEEE level. The ITS Podcast was recognized as a “Best Practice” and model for other Societies to follow. In June 2017, Cristina Olaverri-Monreal was awarded the IEEE Educational Activities Board (EAB) Meritorious Achievement Award in Continuing Education for her efforts to develop edu.ITSS, an online platform for ITS education including short courses and summer courses. At the same meeting, former BOG member Emily Sopensky was awarded the 2017 IEEE TAB Hall of Fame award. Additionally, Dr. Alberto Broggi was awarded the 2017 IEEE Medal for Environmental and Safety Technologies for “outstanding accomplishments in the application of technology in the fields of interest of IEEE that improve the environment and/or public safety.” Medals are the highest award given by IEEE and a true honor in recognition of one’s life work. You can see the 2017 award presentation which highlights his work in autonomous vision online. Finally, we had four ITSS members elevated to IEEE Fellow grade. Let’s congratulate Swaroop Dharbha, Guoqiang Mao, Ronghai Qu, and our new society President, Miguel Ángel Sotelo for their well-deserved honor. These four join a growing list of ITS Society members with an extraordinary record of accomplishment recognized by IEEE.

Finally, as we start a new year, I want to encourage our readers to stay involved with the Society. This community is for all of us, run by volunteers, and we need your help to continue growing and improving. Take part in local Chapter activities or help start a new Chapter in your area. Get involved in Technical Activities Sub-Committees to ensure high quality content in our publications. To have more direct impact on the Society activities, consider running for the Board of Governors next November or volunteer to serve on a committee. There is always more work that can be done so we need your help.
IEEE INTELLIGENT TRANSPORTATION SYSTEMS SOCIETY

Changing How the World Moves

MOVING FAST

The road less traveled, made famous by American poet Robert Frost’s 1916 poem “The Road Not Taken,” has become much busier for the majority of global citizens.

According to the United Nations, more than 50 percent of the world’s population lives in urban areas. Today, the most urbanized regions include Northern America (82 per cent living in urban areas in 2014), Latin America and the Caribbean (80 per cent), and Europe (73 per cent). And that number is expected to grow.

Keeping people safe as they travel is an imperative – one that has been the mission of IEEE’s Intelligent Transportation Systems Society for nearly 20 years.

From the early days of loop detectors for traffic light signal management to civilian use of GPS, to tomorrow’s connected cars and advanced automation, the ITS industry not only enhances the quality of life, it increases passenger safety and reduces pollution.

JOIN NOW

Become a member of the IEEE ITS Society and join colleagues from around the world, spanning not just continents and countries but multiple disciplines in the ITS field.

ITS Society Membership includes access to ideas, events and colleagues that are moving transportation in a whole new direction.

“

The global intelligent transportation system (ITS) market is expected to reach US $66.5 billion by 2024.

The usage of ITS to reduce road accidents and increase safety is a major driving force for the ITS market.”

source: www.businesswire.com

RATES

IEEE members receive special prices for Society memberships. If you are not an IEEE member, you may wish to join as an Affiliate.

<table>
<thead>
<tr>
<th>Membership Type</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEEE Professional Member</td>
<td>US $35.00</td>
</tr>
<tr>
<td>IEEE Student Member</td>
<td>US $18.00</td>
</tr>
<tr>
<td>Society Affiliate</td>
<td>US $109.50</td>
</tr>
</tbody>
</table>

sites.ieee.org/itss

more details on reverse
Publications

- IEEE Transactions on Intelligent Transportation Systems (electronic)
- IEEE Intelligent Transportation Systems Magazine (electronic and print)
- IEEE Transactions on Intelligent Vehicles (discounted)
- IEEE RFID Virtual Journal (electronic)
- ITS Newsletter (electronic)
- ITS Podcast

Conferences

The Intelligent Transportation Systems Society hosts several annual conferences offering opportunities to hear first-hand from colleagues around the world who are advancing the field.

- IEEE Intelligent Transportation Systems Conference (ITSC): annual flagship conference covering all things ITS.
- IEEE Intelligent Vehicles (IV) Symposium: premier forum for intelligent and cooperative vehicle research and applications.
- In addition, a number of more tightly-focused conferences take place each year including:
  - International Conference on Vehicular Electronics and Safety
  - Service Operations and Logistics, and Informatics (SOLI)
  - International Conference on Intelligence and Security Informatics (ISI)
  - International Conference on Megatronic and Embedded Systems and Applications (MESA)
  - Forum on Integrated and Sustainable Transportation Systems (FISTS)

Awards

The ITS Society recognizes the accomplishments of members in all aspects of the field from leadership, research, development and implementation.

- IEEE ITS Institutional Lead Award
- IEEE ITS Outstanding Application Award
- IEEE ITS Outstanding Research Award
- IEEE Lifetime Achievement Award
- IEEE ITSS Best Dissertation Award

Educational Offerings

The Society offers a growing range of courses to develop relevant skills for research and industry.

- A Primer on Security and Privacy in Vehicular Ad-Hoc Networks
- Frontiers in ITS: Transportation 5.0
- Introduction to Vehicular Robotic Modeling with V-REP
- Autonomous Vehicles, Platooning and Driver Personalization

Chapters

Leverage local colleagues to enhance your professional network and continue industry connections outside of annual conferences while attending lectures by experts in the field.

Trending Topics

Stay up to date on emerging ideas including:

- Autonomous and cooperative driving
- Transportation communication
- Transportation management
- Smart Cities Initiative
- Driving assistance programs
- Advanced transportation sensing and analysis

The North America ITS industry is anticipated to reach US $26.29 billion by 2024. Increased government focus on passenger safety and implementation of traffic management projects and initiatives are propelling the demand for intelligent transportation system.”

source: www.businesswire.com
ITS Podcast New Episodes and Information

Please, circulate this!

**ITS Podcast Episode 44:** One of India’s first driverless cars

Happy New Year and Happy Holidays Friends!
Hopefully you had a break from 2017 and ready to start 2018 with all new ambitions and plans!

As we have announced in our Social media before we have a special guest from Incredible India. One of India’s startups which made one of India’s first autonomous cars. Mr. Pinaki Laskar is a member of this group and has very interesting things to say. Before we jump to the interview let’s listen to our news mini-section and I am sure that you don’t want to miss the book review by Prof. Haluk Eren about “**ITS Sensors and Architectures for Traffic Management and Connected Vehicles**” followed by Prof. Kamijo and Yanlei together from Japan who kindly inform you about what happened in Yokohama Japan during The IEEE Intelligent Transportation Conference in October!

**Volunteer Recruiting Campaign:**

*Dear Listeners, either you are a researcher in Intelligent transportation field or are just interested, don’t hesitate to contact us, we are recruiting volunteers and your help will be highly appreciated.*

Contact us on our email at: **itsspodcast@gmail.com**

*Or just simply message us on any of our social media.*
CALL FOR PAPERS

2018 IEEE Intelligent Vehicles Symposium (IV’18)
June 26-June 30, 2018, Changshu, Suzhou, China

Sponsored by the IEEE Intelligent Transportation Systems Society

The 2018 IEEE Intelligent Vehicles Symposium (IV’18, June 26-29, 2018) is a premier annual technical forum sponsored by the IEEE Intelligent Transportation Systems Society (ITSS). It brings together researchers and practitioners worldwide to share and discuss the latest advances in theory and technology related to intelligent vehicles. It welcomes articles dealing with any aspect of intelligent vehicles, as well as proposals for workshops and special sessions. Demonstration and Exhibition related to intelligent vehicles are also welcome.

Together with IV’18, the top teams of the Chinese 9th Intelligent Vehicles Future Challenge (IVFC 2017) will have demonstrations (June 30, 2018) at the Chinese flagship Intelligent Vehicle Proving Center (iVPC), Changshu, Suzhou, China, which is a county-level city located in the lower reaches of the Yangtze River in Jiangsu Province. Its envied cultural history, beautiful landscape, and abundant produce have won itself a great admiration in east China.

TOPICS OF INTEREST

The topics of interest include but are not limited to the following.

- Advanced driver assistance systems
- Advanced sensing and recognition
- Artificial intelligence technologies in intelligent vehicles
- Automated vehicles with/without driver
- Connected vehicles
- Human factors and driver personalization
- Human machine interaction
- Intelligent electrified vehicles
- Inter-vehicular networks
- Navigation and localization systems
- Parallel driving: Cyber-physical-social systems based connected and automated vehicles
- Policies and regulations for intelligent vehicles
- Testing and assessment of connected and automated vehicles
- Vehicle dynamics and control
- Vehicle hardware/software systems
- Vehicle on-board diagnostics
- Vehicular signal processing
CONFERENCE ORGANIZING COMMITTEE

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General Co-Chairs
Prof. Petros Ioannou, University of Southern California, USA
Prof. Miguel Sotelo, University of Alcala, Spain

Program Chair
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Program Co-Chairs
Prof. Li Li, Tsinghua University, China
Prof. Lingxi Li, Indiana University-Purdue University Indianapolis, USA
Prof. Dongpu Cao, Cranfield University, UK

PAPER SUBMISSION

Regular paper submission:
Complete manuscripts in PDF must be submitted electronically at the conference website:
http://www.iv2018.org

Proposal submission for special sessions and workshops:
Proposals should include a one-page summary of the proposed session with authors' name, affiliation, title of the abstract with five extended abstracts (less than 1000 words) attached. Please contact us at: ieeeiv2018@gmail.com or visit http://www.iv2018.org if you have any questions.

Journal special issues:
High quality papers will be selected and recommended for consideration for special issues in IEEE Transactions on Intelligent Vehicles, IEEE Transactions on Intelligent Transportation Systems, IEEE Intelligent Transportation Systems Magazine, and IEEE/CAA Journal of Automatica Sinica. Authors will be asked to revise their papers according to the journal standards, which are subjected to the journal review process.

IMPORTANT DATES

January 15, 2018 -Proposal submission deadline for special sessions/workshops
January 29, 2018 -Full paper submission deadline
March 31, 2018 -Notification of paper acceptance
April 8, 2018 -Final paper submission deadline
The 21st International IEEE Conference on Intelligent Transportation Systems
Maui, Hawaii, USA, November 4-7, 2018

The 2018 annual flagship conference of the IEEE Intelligent Transportation Systems Society will be held in Maui, Hawaii, United States. This conference welcomes papers and presentations in the field of Intelligent Transportation Systems, dealing with new developments in theory, analysis, simulation and modeling, experimentation, demonstration, case studies, field operational tests and deployments. ITSC 2018 particularly invites and encourages prospective authors to share their work, findings, perspectives and developments as related to implementation and deployment of advanced ITS applications.

Original contributions and workshop proposals are solicited in all areas pertinent to Intelligent Transportation Systems (see key topic areas at https://www.ieee-its.org/). All presented papers will be published by the IEEE and included in IEEEXplore. Please visit ITS Society webpage for more detailed information (https://www.ieee-itss.org/conferences).

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Alexandre Bayen

Program Chairs
Matthew Barth
Javier Sanchez-Medina

Program Co-Chairs
Jeffrey Miller
Chunzao Guo
Ansar Yasar

Workshops and Tutorials Chair
Hilmi Berk Celikoglu

Finance Chair
Petros Ioannou

Outreach Chair
Matthew Barth
Arnaud de La Fortelle

Shunsuke Kamijo

Important Dates
Please check our website for the latest Important Dates: http://www.ieee-itsc2018.org
- Workshop & Tutorials Proposals: February 15, 2018
- Workshop & Tutorials Announcement: March 01, 2018
- Regular & Workshop Papers Submission: April 15, 2018

Please visit the conference website at http://www.ieee-itsc2018.org for news and updated deadlines. You can also follow us at Twitter (@ITSC2018) and Facebook (ITSC2018).

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.

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, Privacy and Safety Systems
- Transportation Smartification
- Deep Learning
- Automation and Robotics
- 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
- Shared Mobility
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Christian Waldschmidt, Ulm University, Germany

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Thomas Zwick, Karlsruhe Institute of Technology, Germany

Important dates
PAPER SUBMISSION DEADLINE
December 10, 2017
ACCEPTANCE NOTIFICATION
February 4, 2018
EARLY BIRD REGISTRATION DEADLINE
February 18, 2018
CONFERENCE DATE
April 16-18, 2018

Second Call for Papers
http://icmim-ieee.org

2018 International Conference on Microwaves for Intelligent Mobility, ICMIM2018
16-18 April 2018, Munich, Germany

About the conference
The 4th annual IEEE International Conference on Microwaves for Intelligent Mobility will be held in Munich, Germany. The conference covers all key enabling technologies for intelligent mobility, including components, circuits, and systems, from decimeter to millimeter waves. Potential applications address automated land, sea, and airborne vehicles, automotive radar and other sensing techniques, navigation and localization, mobile communications, driver assistance, and over-the-air testing.

ICMIM 2018 invites submission of original papers on all topics related to the scope of the conference, including but not limited to:

- Microwave components, MMIC, and packaging
- Frontends and frontend modules
- Design and testing of antennas, arrays, and MIMO systems
- Automotive radar systems, modulation and waveforms
- Wave propagation, channel measurements, channel modeling
- Analogue RF and digital signal processing, sensor data fusion
- Interference and coexistence issues

in these and related fields of applications:

- RF for intelligent transport systems and other industrial applications
- Unmanned vehicles (land, sea, airborne)
- Automotive radar
- Mobile communications (e.g., ITS-G5/DSRC, C-V2X, LTE, 5G)
- Sensing and imaging techniques and systems (passive, active)
- Wireless localization and navigation
- Environmental detection
- System measurements, performance evaluation, test and validation

Conference Organisation
The conference contributions will be arranged as regular oral or interactive poster presentations in up to two parallel tracks. Internationally renowned keynote and invited speakers from industry and academia will highlight the state-of-art in key areas of ICMIM. The conference also hosts an industrial exhibition and offers a topical workshop on “New radar technologies for autonomous driving – sensors, algorithms, and testing”.

Paper Submission
Paper submission instructions are provided on the internet. Submissions undergo thorough review and will be evaluated in terms of novelty, practical relevance, originality, interest to the community, and clarity. Measured data should be provided, to verify numerical or analytical results. The best paper will receive the ICMIM 2018 Innovation Award.

Papers accepted and presented will be submitted to IEEE Xplore. Selected contributions may be eligible for publication of extended versions in Special Issues of the IEEE Transactions on Microwave Theory and Techniques (T-MTT) or IEEE Transactions on Intelligent Vehicles (T-IV).
Objectives

The goal of the 14th ASME/IEEE MESA2018 is to bring together experts from the fields of mechatronic and embedded systems, disseminate the recent advances in the area, discuss future research directions, exchange application experience, and vision services they can enable. MESA2018 will especially bring out and highlight the latest research results and developments in the IoT (Internet of Things) era in the field of mechatronics and embedded systems. The conference site is in the heart of the city of Oulu, Hotel Radisson Blu Oulu. This year the conference has a specific focus, without limiting others, on the following Research Tracks/Symposia.

Symposia
- Autonomous Systems and Ambient Intelligence
- Bio-Mechatronics - Medical Devices & Technologies
- Bio-Inspired Robotics and Biorobotics
- Artificial Intelligence and Emerging Technologies for Mechatronic and Embedded Systems
- Cyber-Physical Systems and Hybrid Systems
- Diagnosis and Monitoring in Mechatronic Systems
- Embedded Systems Infrastructure and Theory
- Fractional Derivatives and Their Applications
- Mechatronics and Industry 4.0
- Mechatronic Control and Electrical Vehicular Systems
- Mechatronics and Embedded Systems Applications
- Mechatronics and Embedded Systems Education
- Mechatronic and Embedded Systems for Renewable Energy Systems
- Mechatronic and Embedded Technologies in Intelligent Transportation Systems
- Mechatronics for Hazardous Environments
- Robotics and Mobile Machines
- Mechatronic and Embedded Systems for Agriculture 4.0
- Sensors and Actuators
- Small Unmanned Aerial Vehicle Technologies and Applications
- Virtual Prototyping in Mechatronics
- Micro-/Nano-Manipulation Technologies and Applications
- Disturbance Rejection Control

Paper Submission

Manuscripts should be at most six (6) pages in IEEE two-column format and must be submitted in PDF format via the conference web-site. Please use the LATEX style file or Microsoft Word template to prepare your manuscript (template available on http://bit.ly/2matQlB). Accepted, peer-reviewed papers will be published in the conference proceedings, EI indexed, and submitted to IEEE Xplore.

Important Dates

January 31, 2018: Full Paper Submission
March 20, 2018: Notification of Acceptance
April 30, 2018: Final Paper Submission
April 30, 2018: Author Registration
The 20th IEEE International Conference on Vehicular Electronics and Safety (ICVES’2018) is an annual forum sponsored by the IEEE Intelligent Transportation Systems Society (ITSS). It is the premier interdisciplinary platform for the presentation of new advances and research results in the fields of intelligent vehicular electronics and safety. It brings together leading academic scientists, researchers and scholars in the domain of interest from around the world.

### Topics

Authors are invited to submit papers that fall into the area of vehicular electronics and safety. Topics of interest include, but are not limited to, the following:

- Active & Passive Safety Systems
- Telematics
- Vehicular Power Networks
- X-By Wire Technology
- System-On-a-Chip
- Vehicular Sensor
- On-Vehicle Sensor Networks
- Embedded Operating Systems
- Electro Magnetic Compatibility
- Inter-Vehicular Communication
- Vehicle Testing
- Navigation & Localization Systems
- Vehicular Measurement Technology
- Vehicular Signal Processing
- Micro-electromechanical Systems
- Image Sensor
- Vehicle/Engine Control
- Driver Assistance Systems
- Adaptive Cruise Control Systems
- Pattern Recognition for Vehicles

### Paper Submission

Prospective authors are required to submit their manuscripts electrically through EDAS. Submitted papers shall not exceed six pages as a PDF file in IEEE two column format. Please use the templates at Manuscript Templates for Conference Proceedings available from the conference website to prepare your paper. All presented papers will be published by the IEEE and the conference proceedings will be submitted to the IEEE Xplore® digital library.

### Important Dates

- **Submission Deadline**: 30th of April 2018
- **Notification Deadline**: 30th of June 2018
- **Camera-ready Deadline**: 23rd of July 2018

### Contact Us

**Website**


**Email**

ieee.icves.2018@gmail.com
The advent of terrestrial positioning systems, the internet of things and human sensor networks providing new navigation functionalities sets a novel paradigm for indoor positioning and navigation solutions. The environment, where navigation technology is expected to work, has extended to challenging indoor spaces and to the context of goods and personal mobility. Globally there is no overall and easy solution. Every year, IPIN gathers over 400 industrial and academic experts in informatics, electronics and surveying to address this challenge. In the footsteps of our Japanese colleagues, we welcome you in France to IPIN 2018 for its ninth edition to discuss scientific and industrial matters, experience geolocation competitions beyond the conference venue and enjoy the historical and cultural heritage of Nantes.

The topics include, but are not limited to:

Ubiquitous geolocation technologies
- Self-contained systems
- TOF, TDOA based Localization
- Frameworks for Hybrid Positioning
- Industrial Metrology & Geodetic Systems, AGPS
- Mapping, SLAM
- Indoor Spatial Data Model & Indoor Mobile Mapping
- Applications of Location Awareness & Context Detection
- Health and Wellness Applications
- Benchmarking, technology assessment and standardization
- Wearables and multi-sensors systems

Connected intelligent urban mobility
- User Requirements
- Hybrid IMU Pedestrian Navigation & Foot Mounted Navigation
- Human Motion Monitoring
- Optical Systems
- Radar Systems
- Novel uses of maps and 3D building models
- Seamless Innovative Systems
- Location Privacy
- Locations based services and applications

Indoor location sharing in IoT context
- High Sensitivity GNSS, Indoor GNSS, Pseudolites
- RTK GNSS with handheld devices
- Mitigating GNSS errors prior to moving indoors
- Signal Strength Based Methods, Fingerprinting
- UWB (Ultra WideBand)
- Passive & Active RFID
- Ultrasound Systems
- Localization, Algorithms for Wireless Sensor Networks
- Magnetic Localization
- Robotic and UAV

Authors Schedule
Deadline for regular papers submission: Apr. 30, 2018
Deadline for Work-in-Progress submission: Apr. 30, 2018
Deadline for special sessions proposals: Mar. 30, 2018
Notification of acceptance: Jun. 21, 2018
Submission of final manuscript: Jul. 9, 2018

Submission
The submission procedure will be found on the conference website and must follow the guidelines and template given. Authors can consider two types of submissions:
- Regular Papers (limited to 8 double-column pages)
- Work-in-Progress -WIP- (limited to 4 double-column pages)

All accepted papers will be included in the conference proceedings and regular papers presented at the conference will be also submitted to IEEE Digital Xplore. Manuscripts must be submitted electronically in PDF format, according to online instructions. Both kind of papers will follow a peer review process to decide acceptance.

Contact for information
ipin2018@ifsttar.fr
http://ipin2018.ifsttar.fr/
CALL FOR PAPERS | Deadline for paper submission: June 1st, 2018

The International Conference on Universal Village, now in its 4th year, is established as the premier venue in exemplifying a desired future society that pursues human-nature harmony through the wise use of technologies. Universal Village concept signifies that we should follow the law of universe, protect environment/eco-system, understand humans’ need in depth, and innovate new lifestyles, thus providing sustainable happiness for humanity’s future. UV2018, to be held on October 23-24th, 2018 in Boston, USA, will provide leading edge, scholarly sessions for researchers, engineers, and students alike to share their state-of-the-art research and development work in the broad areas in developing Universal Village. The conference will feature a diverse mixture of interactive sessions: core technical sessions of high quality cutting-edge research articles; inspiring keynote speeches; insightful panel discussions from domain experts; and posters representing emerging ideas. UV2018 expected to call for collective effort across multi-disciplinary fields in order to develop collaboration platform, and to find a systematic, coordinated, long-term solution for future. The theme for UV2018 is “Diversity, Mobility and Connectivity for Emergence of Harmony in Universal Village.”

IMPORTANT DATES

- Last day for paper submission: June 1st, 2018
- Notification of paper acceptance starts on: July 1st, 2018
- More details can be found on the Important Dates page.

SUBMISSION GUIDELINES

- Authors can submit SHORT PAPERS (within 4 pages) or REGULAR PAPERS (5-6 pages) in IEEE format.
- The best papers will receive UV2018 Best Paper Award and get published at the journal Frontiers of Computer Science.
- Online submission will be opened at the end of March.
- Papers that have been accepted and presented will be included into the conference proceedings. Authors of accepted papers (or at least one of the authors) are expected to register in full and present their work at UV2018.

For additional information, contact UV2018 Program Committee at UV2018.contact@universal-village.org

UV2018 THEME

Diversity, Mobility and Connectivity for Emergence of Harmony in Universal Village

SECTIONS

1. Intelligent Transportation and Urban Planning
   - Intelligent transportation, intelligent vehicles and its infrastructure
   - Traffic control & management, human-centered transportation
Urban planning, human mobility, distribution services, information circulation

2. Healthcare and Well-being

- Pervasive & non-invasive health-monitoring
- Personalized healthcare & Intelligent nursery
- Senior care and assistive technology for mobility-challenged residents
- Public health: changing trends and emerging new technologies

3. Intelligent Communities & New Life Styles Enabled by Big Data & AI

- Information & Communication Technology to improve quality of life
  - Social media, education and communication
  - Security, safety, reliability and privacy protection
  - Seamless wireless network, mobile computing, cloud storage
- Intelligent monitoring & sensing. Robotics for dynamic applications.
- Integrated energy management & Treatment for zero-emission
- Response to emergency and global climate change

4. Data Management

- Big data: data storage, vitalization, visualization, integration and mining
- Deep learning
- Human-centered computing & Planning & decision systems.

5. Green Energy and Materials

- Emergent 3D printing and its applications
- Energy-saving, greener manufacturing for electric vehicles and building constructions
- Frontier of Artificial intelligence(A.I.) for advanced nanoscale materials development
- Emergent materials for advanced electronic and photonic devices and novel sensors
- Smart materials for ecological systems and health care
- Renewable energy production, capture, storage, and transmission
  - Solar energy: photovoltaics, solar thermos
  - Wind energy: emergent wind turbine materials and novel design, simulations of tornado energy and its applications
  - Hydrogen: solar splitting water, fuel cells
  - Biomass, natural gas, and hydroelectric energy
  - Emergent battery materials and technologies for safer and higher energy density batteries
  - Energy storages and grids

6. Blue Energy and Materials (invited keynote speakers and posters)
• Emergent technologies and devices for ocean wave energy capturing and storage
• Emergently Anti-corrosion materials for blue energy devices
• Challenges in Ocean Energy Storage Grids and Transmission
• Blue Batteries based on the uses of ocean water
• Modeling of the applications of hurricane
• Theoretical simulations of ocean wave energy and its applications

7. Ecological and Environmental Systems

• Innovative agriculture, Green roof
• Ecological economy and strategy
• Integrated solutions & new life styles to eliminate waste & pollution
• Environmental protection and trash management
• Effective microorganism technology

8. Special Sessions

• System integration, implementation and evaluation
• Culture / technology / habits and their changing trends
• Urbanization: impact and challenges. Regional, cultural, and political factors.
• Collaboration across companies, governments, universities and different countries.
• Entrepreneurship and new investment for new UV technologies.
Call for Papers
IEEE Transactions on Intelligent Vehicles

The IEEE Transactions on Intelligent Vehicles (T-IV) publishes peer-reviewed articles that provide innovative research concepts and application results, report significant theoretical findings and application case studies, and raises awareness of pressing research and application challenges in the areas of intelligent vehicles, and in particular in automated vehicles.

The IEEE Transactions on Intelligent Vehicles will commence publication in 2017, with 4 issues annually.

Prospective authors are invited to submit original contributions or survey papers for review for publication in T-IV. Topics of interest 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
- Cooperative Vehicle Systems
- Collision Avoidance
- Pedestrian Protection
- Proximity Detection Technology
- Assistive Mobility Systems
- Proximity Awareness Technology
- Autonomous / Intelligent Robotic Vehicles
- IV related Image, Radar, Lidar Signal Processing
- Information Fusion
- Vehicle Control
- Human Factors and Human Machine Interaction
- IV technologies in Electric and Hybrid Vehicles
- Novel Interfaces and Displays
- Intelligent Vehicle Software Security

All manuscripts must be submitted through Manuscript Central at http://mc.manuscriptcentral.com/t-iv

Refer to http://its.ieee.org/2014/10/06/submitting-a-paper/ for general information about electronic submission through Manuscript Central.

Editor-in-Chief: Prof. Ümit Özgüner, The Ohio State University, Department of ECE and Center for Automotive Research (CAR), Columbus, Ohio USA. (ozguner.1@osu.edu)
Conference Calendar
By Haluk Eren, PhD. Firat University, Turkey.

This section lists upcoming ITS-related conferences, workshops, or exhibits. Contributions are welcome; please send announcements to http://goo.gl/forms/xpgl8WLt9F

IEEE Intelligent Transportation Systems Society’s Sponsored Conferences

2018 IEEE Intelligent Vehicles Symposium (IV’18)
June 26-30, 2018,
Changshu, Suzhou, China
http://www.iv2018.org/
Submission due by: January 29, 2018

IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications (MESA 2018)
July 2-4, 2018
Oulu, Finland
http://mesa2018.org/
Submission due by: January 31, 2018

August 26-29, 2018
Quebec City, Canada
https://www.asme.org/events/idetccie
Submission due by: March 12, 2018

IEEE 21st IEEE International Conference on Intelligent Transportation Systems (ITSC 2018)
November 4-7, 2018
Maui, Hawaii, USA
https://www.ieee-itsc2018.org/
Submission due by: April 15, 2018
IEEE International Conference on Vehicular Electronics and Safety (ICVES 2018)
September 12-14, 2018
Madrid, Spain
http://www.icves2018.org/
Submission due by: April 30, 2018

IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI 2018)
July 31-August 2, 2018
Singapore
http://2018.ieee-soli.org/
Submission due by: March 9, 2018

The 4th International Conference on Universal Village (UV2018)
October 23-24, 2018
Boston, USA
http://www.universal-village.org/
Submission due by: June 1st

IEEE International Conference on Intelligent Rail Transportation (IEEE ICIRT)
Submission due for the next event: To be determined

IEEE Intelligent Conference on Intelligence and Security Informatics (ISI)
Submission due for the next event: To be determined

IEEE Vehicular Networking Conference (VNC)
Submission due for the next event: To be determined

Other Conferences

SAE Battelle CyberAuto Challenge
July 22-27, 2018
Detroit, Michigan, USA
http://www.sae.org/events/cyberauto/
Submission due by: June 15, 2018
The 23rd International Symposium on Transportation and Traffic Theory (ISTTT23)
    July 24-26, 2019
    Lausanne, Switzerland
    https://isttt23.sciencesconf.org/

NRITS National Rural ITS Conference
    Phoenix, Scottsdale, USA
    October 21-24, 2018
    http://www.nationalruralitsconference.org/

IEEE 87th Vehicular Technology Conference: VTC2018-Spring
    03–06 June 2018
    Porto, Portugal
    http://www.ieeevtc.org/vtc2018spring/

IEEE Multi-Conference on Systems and Control
    Submission due for the next event: To be determined

    October 1-5, 2018
    Madrid, Spain
    https://www.iros2018.org/
    Submission due by: March 1, 2018

Seminars and Dagstuhl Perspectives Workshops 2018
    https://www.dagstuhl.de/en/program/calendar/

    January 27-29, 2018
    Funchal, Madeira, Portugal
    http://www.visigrapp.org

International Conference on Connected Vehicles & Expo (ICCVE)
    Submission due for the next event: To be determined

Intertraffic Amsterdam 2018
    March 20-23, 2018
    Amsterdam, Netherlands
    http://www.intertraffic.com/amsterdam/
WCX18: SAE World Congress Experience
April 10-12, 2018
Detroit, Michigan, USA
http://wcx18.org/

March 16-18, 2018
Funchal-Madeira, Portugal
http://www.vehits.org

IEEE International Conference on Robotics and Automation (ICRA 2018)
May 21-25, 2018
Brisbane, Australia
http://icra2018.org/
Forthcoming papers on IEEE Transactions on IV

Regular papers:

L_1Adaptive Control of Vehicle Lateral Dynamics  
Mehran M Shirazi, Ahmad Rad

Identifying Predictable Patterns in the Unconventional Overtaking Decisions of PTW for Cooperative ITS  
Emmanouil N Barmpoanakis, Eleni I Vlahogianni, John Goliблаг

Intelligent Energy Management Strategy based on Artificial Neural Fuzzy for Hybrid Vehicle  
Elkhatib Kamal, Lounis Adouane

Special Section on IV’17:

Automated Driving in Uncertain Environments: Planning with Interaction and Uncertain Maneuver Prediction  
Constantin Hubmann, Jens Schulz, Marvin Becker, Daniel Althoff, Christoph Stiller

Distributed Conflict Resolution for Connected Autonomous Vehicles  
Changliu Liu, Chung-Wei Lin, Shinichi Shiraishi, Masayoshi Tomizuka

Likelihood-based Data Association for Extended Object Tracking Using Sampling Methods  
Karl Granstrom, Lennart Svensson, Stephan Reuter, Yuxuan Xia, Maryam Fatemi

Human-like Behavior Generation in Urban Environment based on Learning-based Potentials with a Low-cost Lane Graph  
Chunzhao Guo, Kiuosumi Kidono, Ryuta Terashima, Yoshiko Kojima

Understanding Pedestrian Behavior in Complex Traffic Scenes  
Amir Rasouli, Iuliia Kotseruba, John Tsotsos

Prediction of Risk Generated by Different Driving Patterns and their Conflict Redistribution  
Gultekin Gunduz, Cagdas Yaman, Ali Ufuk Peker, Tankut Acarman

Map-Aided Dead-Reckoning With Lane-Level Maps and Integrity Monitoring  
Frank Li, Philippe Bonnifait, Javier Ibanez-Guzman
Forthcoming papers on IEEE ITS Magazine

Regular Papers

Velocity Control Strategies to Improve Automated Vehicle Driving Comfort

Bike fleet allocation models for repositioning in bike-sharing systems

Server-Based Intelligent Public Transportation System with NFC

System Architecture of a Driverless Electric Car in the Grand Cooperative Driving Challenge

Reliable intersection-based traffic aware routing protocol for urban areas vehicular ad hoc networks

Algorithms and Architectures: A Case Study in When, Where and How to Connect Vehicles

Accuracy Assessment of Weigh-in-Motion Systems for Vehicle’s Direct Enforcement”

Special Section on High Performance Computing in Simulation and Optimization of Dynamic Transportation

Harnessing the Power of HPC in Simulation and Optimization of Large Transportation Networks: Spatio-Temporal Traffic Management in the Greater Toronto Area

Traffic Events Oriented Dynamic Traffic Assignment Model for Expressway Network: A Network Flow Approach

Dynamic Trajectory Optimization Design for Railway Driver Advisory System

A Simulation Environment for the Evaluation of Routing Algorithms for Electromobility Related Services

Distributed agent-based traffic simulations
Most popular papers on IEEE Transactions on ITS

   Yisheng Lv ; Yanjie Duan ; Wenwen Kang ; Zhengxi Li ; Fei-Yue Wang

   Victoria J. Hodge ; Simon O'Keefe ; Michael Weeks ; Anthony Moulds

3. Visualization of Driving Behavior Based on Hidden Feature Extraction by Using Deep Learning
   HaiLong Liu ; Tadahiro Taniguchi ; Yusuke Tanaka ; Kazuhiro Takenaka ; Takashi Bando

4. Cyber Threats Facing Autonomous and Connected Vehicles: Future Challenges
   Simon Parkinson ; Paul Ward ; Kyle Wilson ; Jonathan Miller

5. Potential Cyberattacks on Automated Vehicles
   Jonathan Petit ; Steven E. Shladover

Most popular papers on IEEE ITS Magazine

1. Making Bertha Drive—An Autonomous Journey on a Historic Route
   Julius Ziegler ; Philipp Bender ; Markus Schreiber ; Henning Lategahn ; Tobias Strauss ; Christoph Stiller ; Thao Dang ; Uwe Franke ; Nils Appenrodt ; Christoph G. Keller ; Eberhard Kaus ; Ralf G. Herrtwich ; Clemens Rabe ; David Pfeiffer ; Frank Lindner ; Fridtjof Stein ; Friedrich Erbs ; Markus Enzweiler ; Carsten Knoppel ; Jochen Hipp ; Martin Haueis ; Maximilian Trepte ; Carsten Brenk ; Andreas Tamke ; Mohammad Ghanaat ; Markus Braun ; Armin Joos ; Hans Fritz ; Horst Mock ; Martin Hein ; Eberhard Zeeb

2. Three Decades of Driver Assistance Systems: Review and Future Perspectives
   Klaus Bengler ; Klaus Dietmayer ; Berthold Farber ; Markus Maurer ; Christoph Stiller ; Hermann Winner

3. Autonomous Vehicle Safety: An Interdisciplinary Challenge
   Philip Koopman ; Michael Wagner

4. A Tutorial on Graph-Based SLAM
   Giorgio Grisetti ; Rainer Kummerle ; Cyrill Stachniss ; Wolfram Burgard

5. Artificial Intelligence and Intelligent Transportation: Driving into the 3rd Axial Age with ITS
   Fei-Yue Wang

Most popular episode on IEEE ITS Podcast in 2017

ITS Podcast Episode 38: Vision-Based Turning Movement Monitoring
### Officers and Committee Chairs

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**IEEE INTELLIGENT TRANSPORTATION SYSTEMS**

[https://www.ieee-itss.org/](https://www.ieee-itss.org/)

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