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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:

www.ewh.ieee.org/tc/its

You may subscribe to or unsubscribe from announcements at the same web site. Announcements are sent to approximately 10,000 ITS professionals from industry, academia, and government.

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Information for Contributors

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 yaobin.chen@ieee.org.

SOCIETY NEWS

From the Editor

by Yaobin Chen

Happy New Years! I am excited to start my new role to serve the ITSS as the Editor-in-Chief of the Newsletter. I would like to take this opportunity to thank Dr. Charles Herget for his excellent work as the Editor-in-Chief for more than three years. Dr. Herget and his team have laid strong foundation for the Newsletter that has provided our members and other readers the timely and up to date information about what is going on in ITS research and development in the world. His great leadership and service will be missed. I am pleased to announce that Simona Berté has graciously agreed to continue to serve as the Associate Editor for IEEE Transactions on ITS Reports and Abstracts, and Massimo Bertozzi and Paolo Grisleri will continue to serve as the Associate Editors for Conferences, Workshops, and Journals. I am confident that the tradition of excellence that has been established by my predecessors for the Newsletter will continue in the years to come with the support of my team members and readers like you.
Board of Governors Election Results

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 Fei-Yue Wang who was president in 2006-2007. IEEE has announced the results of the election for the Board of Governors. The following five candidates have been elected to a three year term beginning January 1, 2011.

**Sudarshan S. Chawathe** serves as Associate Professor of Computer Science, and Cooperating Associate Professor of the Climate Change Institute at the University of Maine.

**Mashrur (Ronnie) Chowdhury**, Ph.D., P.E., F.ASCE is the IDEAS Professor, College of Engineering and Science, and Associate Professor, Department of Civil Engineering at Clemson University.

**Azim Eskandarian** is a Professor of Engineering and Applied Science at the CEE Department of The George Washington University (GWU), where he initially started as an Associate Research Professor in 1993.

**Rosaldo Rossetti** joined the Faculty of Engineering at University of Porto, Portugal, as an assistant professor in 2006, initially in the Informatics Section of the Department of Electrical and Computer Engineering.

**Yinhai Wang** is an Associate Professor in transportation engineering at the University of Washington (UW).
The 13th International IEEE Conference on Intelligent Transportation Systems (ITSC2010; http://itsc2010.isr.uc.pt) was held at Tivoli Madeira Hotel in Funchal, Madeira Island, one of Portugal’s first class destinations, known as the “Island of Eternal Spring” because of its all year round mild climate.

ITSC is the annual flag ship conference of the IEEE Intelligent Transportation Systems Society (ITSS) and a leading forum where the state-of-the-art research, latest developments, and future prospect relating to intelligent transportation systems are presented and discussed each year. The ITSC 2010 call for paper sled to 543 submissions (including 17 special session proposals) from 44 countries. The paper review for ITSC 2010 was handled by the conference program committee, which had one program chair (Dr. Yibing Wang), four program co-chairs (Dr. Christoph Stiller, Dr. Hesham Rakha, Dr. Matthew Karlaftis and Dr. Sadayuki Tsugawa), three special session chairs (Dr. Hans Van Lint, Dr. Constantinos Antoniou and Dr. Ioannis Papa-michail), and 120 committee members worldwide.

The submitted papers were organized into four regular profiles:
- ITS modeling and analysis;
- Travel, traffic and emergency management;
- Advanced safety systems & intelligent vehicles;
- Electric vehicle transportation systems.

Each managed by one program co-chair, and one special session profile managed by the three special session chairs.

Over 350 participants from allover the world attended the conference. A wide range of topics...
were covered by the conference. The conference program included 309 oral presentations arranged in 62 parallel sessions, including 15 special sessions covering a variety of highly focused topics such as “traffic and mobility management for rare events and emergencies,” “variable speed limits for freeway management and control,” “active traffic management,” “ramp metering,” “advances in traffic state estimation and prediction,” “computational intelligence in ITS,” and “robotics technologies for intelligent autonomous vehicles.”

Prof. Fei-Yue Wang, from the Chinese Academy of Sciences and University of Arizona, Dr. Peter Van Den Bossche, from the Erasmus University College of Brussels, and Prof. Alberto Broggi, from University of Parma presented three plenary talks on “Parallel Control and Management for Intelligent Transportation Systems: Theory, Methods and Applications,” “Harnessing Charging Power: The Communication Issues of Electrical Vehicle Charging Infrastructure from a Standardization Point of View,” and “A New Extreme Challenge for Autonomous Vehicles.”

In addition, the program included a panel discussion focusing on international strategic planning for ITS research, which was open to all conference attendees. The panel discussion was led by Prof. Robert Bertini, Portland State University and US Department of Transportation, and
the panelists included Prof. Fei-Yue Wang, from China and USA, Prof. Hani Mahmassani, from USA, Prof. Markos Papageorgiou, from Greece, and Dr. Masao Fukushima, from Japan.

The conference was preceded by three Workshops: “Emergent Cooperative Technologies in ITS” organized by M.A. Sotelo, U. Nunes, L. Vlacic, and Hans Van Lint; “Traffic Behavior, Modeling and Optimization” organized by M. Galán Moreno and J. Sánchez Medina; and “Artificial Transportation Systems and Simulation” organized by R. Rossetti, H. Liu and S. Tang. In addition to more than 45 presentations, the workshops also included four keynote speeches by Dr. Matthew Bart, Dr. Robert Bertini, Dr. Erel Avineri, and Dr. Ronghui Liu, respectively on “Estimating and Optimizing the Environmental Impacts of Signalized Arterial Roadways,” “Transforming Transportation through Connectivity: U.S. Perspectives on Cooperative Systems,” “Choice Architecture and the design of Advanced Travel Information Systems,” and “The Role of Microscopic Simulation in ATS.”

The conference banquet took place at the Swimming Pool Balcony and Gardens of Madeira Tivoli Hotel, with a wonderful Atlantic Ocean View. At the banquet, the IEEE ITSS awards were presented.

ITSC 2010 has made several new records for ITSC, particularly in relation to the size of the program committee, the number of paper submissions received, the number of oral presentations conducted, as well as the number of participants. Overall, the conference was featured by its dedicated organizing team, excellent program, enthusiastic atmosphere, warm hospitality, and fantastic conference venue.
Intelligent Transportation Systems (ITS) hold the promise of improving mobility, safety, and security, while ensuring energy efficiency and reducing environmental impacts of transportation systems.

The 14th IEEE ITS Conference theme is Safe, Secure, and Sustainable Transportation. The Conference brings together researchers, engineers, practitioners, managers, and policy makers from academia, industry, and government to share and discuss the latest in ITS R&D results and implementation strategies. This conference includes dedicated sessions at which Government experts and decision makers will share the latest R&D and implementation needs of ITS.

**Venue**

Cafritz Conference Center, The George Washington University

At the heart of the nation’s capital, this conference provides an ideal setting for exchange of ideas between academic/industry researchers and Government decision makers. Washinton, DC offers numerous technical and site seeing opportunities to conference participants. Home to some of the world’s best museums, finest dining and shopping, spectacular parks, and historic buildings in a beautiful metropolitan environment, the city has something to offer to every visitor.

**Technical and Special Tours**

Special technical tours will be arranged to visit various Government Laboratories such as the Federal Highway Administration (FHWA) Laboratories at Turn Fairbank Highway Research Center, McLean, VA, and the National Institute of Standards and Technology (NIST), among others. A variety of Special Tours can be accessed via commercial venues. Most capital area attractions are either within walking distance or a short Metro (subway) ride.

**Who Should Attend**

Those in ITS research, development, design, deployment, planning, and decision making who are in academic institutions, transportation industry, automotive manufacturers and suppliers, government, local transport authorities, national labs, international organizations, public transport authorities, freight and transport operators, public transport operators, service providers, telecom operators, system integrators, commercial fleet owners, road operators, and motoring organizations and all others who are in the energy and environment sector with an interest in transportation systems will benefit by attending this unique conference.
Call for Papers

Original and innovative contributions in ITS research and advanced implementations and deployments are sought for technical sessions. Articles conveying new developments in theory, analytical and numerical simulation and modeling, experimentation, advanced deployment and case studies, results of laboratory or field operational tests, and other related creative endeavors as well as special educational development for ITS curriculum are sought. The conference theme is Safe, Secure, and Sustainable Transportation. The technical areas include but are not limited to the following:

- Traffic theory, modelling, simulation
- Intelligent algorithms
- Sensors and actuators
- Vision systems and processing
- Safety Systems
- Security Systems
- Evacuation Systems
- Traffic and Communications Networks
- Traffic Control Systems
- V2V and V2I Communications
- Technologies for ITS User services: ATMS ATIS, AVCS, etc.
- Intelligent Vehicles
- Driver Assistance
- Vehicle Collision Avoidance
- Integrated Safety Systems
- Commercial Vehicle Operations
- Multi-modal ITS
- ITS Implementation
- Pedestrian and Bicyclist Safety and Mobility systems
- ITS for Special Needs
- Emergency Services

In the tradition of successful IEEE ITS Conferences, only the highest quality papers will be accepted through an on-line peer review process. The final version of the accepted papers will be included in the Conference proceedings, only after at least one author’s official registration.

Important Dates

- Full-paper submission deadline: March 15, 2011
- Notification of acceptance: June 1, 2011
- Final paper submission deadline: July 1, 2011
- Special Session proposal submission deadline: February 25, 2011
- Workshop/Tutorial proposal submission deadline: March 15, 2011

Best Student Paper Award

Articles written and presented by a primary author who is a student will be specially selected for the Best Student Paper Award recognition during the Conference. This is arranged through the IEEE ITS Committee.

Special Issue of IEEE Transactions on ITS

Selected exceptional quality articles will be invited for submission to a special issue of the IEEE Transactions on Intelligent Transportation Systems; Authors will be asked to revise their papers according to the standards of the transactions, which will be subjected to the Transactions’ review process.

Workshops

Proposals are sought for Special Workshops and Tutorials related to the topics and themes of the conference.
IEEE Intelligent Vehicles Symposium
June 5-9, 2011, Baden-Baden, Germany
Sponsored by the IEEE Intelligent Transportation Systems Society

Call for Papers

THE INTELLIGENT VEHICLES SYMPOSIUM (IV’11) is the premier annual forum sponsored by the IEEE INTELLIGENT TRANSPORTATION SYSTEMS SOCIETY (ITSS). Researchers, academicians, practitioners, and students from universities, industry, and government agencies are invited to discuss research and applications for Intelligent Vehicles and Intelligent Infrastructures. The technical presentations are characterized by a single session format so that all attendees remain in a single room for multilateral communications 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
- Vehicular Safety, Active and Passive
- Vehicle Environment Perception
- Driver State and Intent Recognition
- Smart Infrastructure
- Impact on Traffic Flows
- Cooperative Vehicle-Highway Systems
- Collision Avoidance
- Pedestrian Protection
- V2I / V2V Communication
- Assistive Mobility Systems
- Intelligent Ground, Air and Space Vehicles
- Autonomous / Intelligent Robotic Vehicles
- Image, Radar, Lidar Signal Processing
- Information Fusion
- Vehicle Control
- Telematics
- Human Factors
- Human Machine Interaction
- Novel Interfaces and Displays
- Intelligent Vehicle Software Infrastructure

Manuscripts of 6 pages in PDF format must be electronically submitted for peer-review in IEEE standard-format. For detailed submission instructions visit the conference website www.mrt.uni-koeln.de/iv2011

Important Dates
Special Session Proposal: January 15th, 2011
Paper submission deadline: January 15th, 2011
Notification of acceptance: March 10th, 2011
Final paper submission: April 1st, 2011

Contact
For proposal of a special session, demonstration, and exhibition contact the organization committee at iv2011@mrt.kit.edu

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Call for Papers

2011 IEEE International Conference on Vehicular Electronics and Safety

Sponsored by the IEEE Intelligent Transportation Systems Society
Beijing, China, July 10-12, 2011
http://www.ieeeves.org

VENUE

The International Conference on Vehicular Electronics and Safety (ICVES’11) is an annual forum sponsored by the IEEE Intelligent Transportation Systems (ITS) Society. It brings together researchers and practitioners to discuss vehicle electronics, and safety systems research and practice. ICVES’11 welcomes papers dealing with any aspect of vehicle electronics and safety systems.

TOPICS OF INTEREST

The topics of interest include and are not limited to the following:

• Active Safety Systems and Testing
• Battery Management and Vehicle System Control for Electric and Hybrid Vehicles
• Telematics
• Vehicular Power Networks
• X-By Wire Technology
• System-on-a-Chip
• Vehicular Sensor
• Vehicle Bus
• Sensor Network
• Embedded Operation System
• Electro Magnetic Compatibility
• Inter-Vehicular Network
• Vehicle Testing
• Navigation and Localization Systems
• Vehicular Measurement Technology
• Vehicular Signal Processing
• Micro-electromechanical Systems
• Image Sensor
• Vehicle/Engine Control
• Driver Assistance Driving Systems
• Adaptive Cruise Control Systems
• Pattern Recognition for Vehicles
• Human Machine Interaction
• Vehicle on Board Diagnostics
• Virtual/Digital System
• Vehicle Hardware /Software Systems
• (Semi-) Autonomous Driving Systems

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PAPER SUBMISSION

Regular paper submission: Complete manuscripts in PDF must be submitted electronically at the conference website: http://www.ieeeves.org. Manuscripts should be at most six (6) pages in the IEEE two-column format including figures, tables, and references.

Invited paper submission: Proposals for invited sessions should be submitted to the Program Chair. Full manuscripts should be submitted in the same manner as regular papers after the proposal has been accepted. The proposal should include a one-page summary of the proposed session with authors’ name, affiliation, title of the abstract with five (5) extended abstracts (no more than 1000 words) attached. Please contact us at: ieeeves2011@gmail.com if you have any questions. Please refer to the conference website for the most up-to-date information http://www.ieeeves.org.

IMPORTANT DATES

February 14, 2011
Proposal submission deadline for invited sessions

March 13, 2011
Full Paper submission deadline

May 2, 2011
Notification of acceptance

May 23, 2011
Camera-ready copy due
MESA11 - Call for Papers

The 7th ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications
August 29-31, 2011 Washington, DC, USA
http://iel.ucdavis.edu/mesa/MESA11

Objectives: Mechanical and electrical systems show an increasing integration of mechanics with electronics and information processing. This integration is between the components (hardware) and the information-driven functions (software), resulting in integrated systems called mechatronic systems. The development of mechatronic systems involves finding an optimal balance between the basic mechanical structure, sensor and actuators, automatic digital information processing and control in which embedded systems play a key role. The goal of the 7th ASME/IEEE MESA11, is to bring together experts from the fields of mechatronic and embedded systems, disseminate the recent advances made in the area, discuss future research directions, and exchange application experience. The conference is organized in a number of symposia under the umbrella of the ASME IDETC 2011.

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Autonomous Systems and Ambient Intelligence
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Bio-Mechatronics
S. Xie, University of Auckland, New Zealand
L. Zuo, State Univ. of New York at Stony Brook, USA

Cyber-Physical Systems and Cooperative Systems
S. Nestinger, Worcester Polytechnic Institute, USA

Diagnosis and Monitoring in Mechatronic Systems
W. Chen, Wayne State University, USA

Design & Verification Tools for Embedded Systems
P. Rössler, UAS Technikum Wien, Austria
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Embedded Systems Infrastructure and Theory
J. Xu, York University, Canada

Fractional Derivatives and Their Applications
D. Baleanu, Cankaya University, Turkey

Mechatronic Control & Electrical Vehicular Systems
Ch. Ma, U-M-SJTU Joint Institute, China

Mechatronic and Embedded Energy Systems
U.A. Rosa, University of California at Davis, USA

Mechatronics and Embedded Systems Applications
E. Frontoni, Polytechnic Univ. of Marche, Italy

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Robotics & Mobile Machines
X. Kong, Heriot-Watt University, UK
M. Zoppi, Univ. of Genua, Italy

Sensors & Actuators
J.Ch. Koo, Sungkyunkwan University, Korea
J.Y. Chang, Massey University, New Zealand

Sensor Networks & Networked Embedded Systems
B. Chen, Michigan Technological University, USA

Small Unmanned Aerial Vehicle Technologies & Applications
Y.Q. Chen, Utah State University, USA
Y. Zhang, Concordia University, Canada

Virtual Prototyping in Mechatronics
M. Germani & M. Mengoni, Polytechnic Univ. of Marche, Italy

Paper Submission: Manuscripts shall be no longer than 10 pages and shall adhere to the ASME author guidelines. Word and LaTeX templates are available from ASME to assist authors in preparing their papers for publication. Final papers in PDF format must be electronically submitted to: https://www.asmeconferences.org/IDETC2011.

Important Dates:
Submission of Abstract 11-02-2011
Submission of Full-Length Paper 18-02-2011
Author Notification of Acceptance 20-05-2011
Submission of Final Paper 30-05-2011

Technical Co-Sponsors:
ASME Division of Design Engineering
IEEE Intelligent Transportation Systems Society
IEEE Control Systems Society
Conference Calendar

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

March 22-23
WIT 2010: 8th International Workshop on Intelligent Transportation
Submission due by: November 15th, 2010
http://wit.tu-harburg.de/

March 5-7
VISIGRAPP-2011 Conference
Algarve, Portugal
http://visigrapp.org/
Submission due by: October 19, 2010

April 12-14
SAE 2010 World Congress
Cobo Center
Detroit, Michigan, USA
http://www.sae.org/congress

May 9-13
IEEE International Conference on Robotics and Automation
Shanghai, China
http://www.icra2011.org/

May 15-18
IEEE 73rd Vehicular Technology Conference: VTC2011-Spring
Budapest, Hungary
http://www.ieeevtc.org/vtc2011spring/

June 5-9
2011 IEEE Intelligent Vehicles Symposium
Baden-Baden, Germany
http://www.mrt.uni-karlsruhe.de/iv2011/
Submission due by: January 15th, 2011
June 20-25  
Computer Vision and Pattern Recognition: CVPR 2011  
Colorado Springs, CO, USA  
Submission due by: Nov. 11, 2010

June 27-30  
ISIE 2011 - IEEE International Symposium on Industrial Electronics  
Gdansk, Poland  
http://www.isie2011.pl/  
Submission due by: October 23, 2010

July 10-12  
2011 IEEE International Conference on Vehicular Electronics and Safety (ICVES11)  
Beijing, China  
http://www.ieeeves.org/  
Submission due by: March 13, 2011

August 29-31  
7th ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications 2011 (MESA11)  
Washington, D.C.  
http://iel.ucdavis.edu/mesa/MESA11  
Submission due by: Feb.18, 2011

October 5-7  
14th IEEE Intelligent Transportation Systems Conference 2011 (IEEE ITSC 2011)  
Washington, D.C.  
http://www.seas.gwu.edu/itsc2011/index.html  
Submission due by: March 15, 2011
Values of ITSS Membership
Jason Geng, VP of Membership

It is my great honor to serve as the Vice President for Membership for IEEE ITSS starting from this year. The function of the Vice President for Membership, as defined in the ITSS “By-Laws”, is to oversee programs for the growth of ITSS membership, its educational and student-related activities, its regional activities, and its fellows program while advocating members’ interests across all society programs. I look forward to working with all of ITSS members to fulfill my duty and to create good opportunities in advancing members’ career potential in ITS fields.

Last a few years have been quite exciting time for ITSS in terms of its growth. Although our society is still quite young, our membership has reached a benchmark of over one thousand: As of September 2010, IEEE ITSS has a total of 1,055 members. The members of the Society constitute the real substance of our value: it's because of our members and supporters that we reached our great professional level in our journals and conferences. It is members’ volunteer work that provided the necessary help to run our conferences, attract other people, and generate interest in our scientific world.

The ultimate purpose for ITSS as a professional society to exist is to serve its membership by providing tangible benefits and values to its members. The focus of our activities also has to be adoptable to the fast-paced changes in today’s technical world, as well as cater to the needs of our members. I certainly believe that the ITSS provides excellent values to its members, primarily in the following aspects:

Publications
ITSS hosts three premier publications, providing diversified forum for publishing technical articles on ITS and state-of-the-art information on ITS developments. They are:
- IEEE Transactions on Intelligent Transportation Systems
- IEEE ITS Magazine
- IEEE ITS Newsletters

We are pride have one of the best transportation journals in the world - our IEEE Transactions on Intelligent Transportation Systems, which is now ranked #3 publication in Transportation Science & Technology in the world by IEEE. Our second publication is a great magazine - the IEEE ITS Magazine, which in its unique format provides a forum for technical publication, tutorials, and society related information. ITS fields have broad applications in various projects and for those practitioners who have focused on ITS applications and implementations, ITS Magazine will provide an ideal publication vehicle currently not available to them. We also have an ITSS Newsletters that provides timely activities related to ITSS and ITS fields in general. These three ITSS publications all published quarterly, but in different month, so that our ITSS members can receive publication from ITSS every month of the year.

Conferences
ITSS is the premier organizer of seven global conferences (and workshops) that provide venues for presenting the latest research and developments in all aspects of ITS. These conferences include:

- The IEEE Intelligent Transportation Systems Conference (ITSC)
- The IEEE Intelligent Vehicle Symposium (IV)
- The IEEE International Conference on Vehicular Electronics and Safety (ICVES)
- The IEEE International Conference on Service Operations and Logistics, and Informatics (SOLI)
- IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications (MESA)
- The IEEE Intelligence and Security Informatics (ISI)
- IEEE Forum on Integrated and Sustainable Transportation Systems (FISTS)

Professional Recognitions
ITSS gives a number of prestigious professional awards, including:

- IEEE ITS Outstanding Research Award
- IEEE ITS Outstanding Application Award
- IEEE ITS Institutional Lead Award
- IEEE ITSS Best Ph.D. Dissertation Award

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

In addition, the prestigious IEEE ITSS Best Ph.D. Dissertation Award is given annually for the best dissertation in any ITS area that is 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.

Opportunities for networking, professional services, and career advancements in ITS related fields
ITSS has numerous technical committees, through which members can have opportunities of networking and professional services. These technical committees (TCs) include:

- Traffic & Travel Management
- Railroad Systems and Applications
- Software Infrastructure in ITS
- Mobile Communications
- Mechatronic & Embedded Systems
- ISI for Transportation Systems
- Logistics & Services
- Artificial Transportation Systems & Simulation
- Communication Networks
Since ITSS is a young and rapidly growing society, we have a number of opportunities for enthusiastic volunteers to serve on various important positions and help their career advancements.

As one of the newest IEEE societies (established only four years ago), ITSS is facing many challenges – but our opportunities are virtually unbounded. As a starter here, transportation systems are playing a critical role in virtually all facets of modern life. Significant challenges remain to further improve the efficiency and safety of the current transportation systems of all kinds, and to develop value-added applications closely tied into such systems. For our ITSS society, focused on intelligent transportation systems, we are truly blessed in this regard. Although largely taken for granted in today's high-tech world – one of the essential building blocks of society is transportation systems. Opportunities abound, largely due to fast-paced developments in a broad spectrum of related engineering, communications, video surveillance, and information technology fields. In effect, we are beginning to understand Charles Darwin's practical view on change -- that "it is not the strongest of the species that survives, nor the most intelligent, but the one that is the most adaptable to change". With this regards, the membership of IEEE ITSS could be a valuable asset to help you adapt to this ever-changing world.
U.S. Department of Transportation Announces
Connected Vehicle Technology Challenge

The U.S. Department of Transportation’s Research and Innovative Technology Administration (RITA) today announced the Connected Vehicle Technology Challenge, a new national competition seeking ideas for using wireless connectivity between vehicles to make transportation safer, greener and easier.

Through the competition, RITA is soliciting ideas for products or applications that use Dedicated Short Range Communications (DSRC), an advanced wireless technology, similar to WiFi but faster and more secure. DSRC can communicate basic messages—such as alerts about imminent crash situations or roadway hazards—from one vehicle to another in a fraction of a second with minimal interference and without manipulation by the driver. The spectrum used by DSRC technology has been reserved by the Federal Communications Commission for transportation applications.

“This is an example of new technology helping to make transportation safer and more efficient,” said U.S. Transportation Secretary Ray LaHood.

DSRC will be the basis for a future system of connected vehicles that will communicate with each other as well as the surrounding infrastructure, such as traffic signals, work zones and toll booths. According to a National Highway Traffic Safety Administration report, wireless Vehicle-to-Vehicle (V2V) and Vehicle-to-Infrastructure (V2I) communications can potentially address 81 percent of all unimpaired vehicle crashes.

“This technology is an opportunity to help create a future where millions of vehicles communicate with each other by sharing anonymous real-time information about traffic speeds and conditions. This new world of wireless communication will make transportation safer, provide better and faster exchange of information for vastly improved daily and long-distance travel, and even reduce environmental pollution,” said RITA Administrator Peter Appel.

Selected prize recipients will receive funded opportunities to present their winning ideas to unleash a new breed of advanced wireless technologies to make universal vehicle connectivity a reality.

The Connected Vehicle Technology Challenge is open to all idea generators and innovators, including those not working in the transportation industry. It will run from Jan. 24 through May 1 and competition rules and additional details can be found at www.Challenge.gov.

CALL FOR NOMINATIONS
2012 IEEE MEDAL FOR ENVIRONMENTAL AND SAFETY TECHNOLOGIES

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IEEE Transactions on Intelligent Transportation Systems
Special Issue Call for Papers
Emergent Cooperative Technologies in Intelligent Transportation Systems

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Transport accounts for 30% of total energy consumption in western countries. Whereas some governments are currently negotiating with the automotive industry on how to reach an average CO2 emission of 120g/km for the new cars fleet by 2012, ITS (Intelligent Transportation Systems) technologies offer a complementary way of reducing CO2 emissions, increasing safety and improving the efficiency and reliability of the whole transportation system, for example by means of dynamic traffic management and control. Emergent cooperative systems, in which intelligent vehicles communicate with each other and with intelligent infrastructures, offer a new and integrated platform for such ITS, with a huge anticipated potential for dynamic traffic management and control. Emergent cooperative systems, in which intelligent vehicles communicate with each other and with intelligent infrastructures, offer a new and integrated platform for such ITS, with a huge anticipated potential for dynamic traffic management and control. However, for these anticipated benefits to manifest there are a number of key success factors. These emerging systems should be scalable over time and space and scalable with increasing numbers of equipped vehicles. More over, the systems should be robust and fault tolerant and lead to sustainable solutions for the control and management of transport systems. The objective of this special session is to disseminate the best research results from cross-disciplinary researchers working on such sustainable and scalable Emergent Technologies in Intelligent Transportation Systems. Relevant topics of interest include, but are not limited to:

- New Mobility Concepts based on such emergent systems
- Energy-Efficient Intelligent Infrastructure and Eco-driving
- Intelligent methodologies and devices for Efficient/Sustainable Navigation
- Design and methodological frameworks for large Scale Management Systems
- Distributed Dynamic Traffic Control methods
- New and advanced provision and use of Floating Car Data
- Parallel control and management for ITS

This CFP is a follow-up of the Emergent Cooperative Technologies in Intelligent Transportation Systems Workshop that was held at IEEE ITSC2010 in Madeira, September 2010. High-quality papers are solicited and will undergo the normal rigorous peer-review procedure of the journal for inclusion in the Special Issue. Manuscripts should be submitted before the deadline at http://mc.manuscriptcentral.com/t-its/ by selecting the manuscript type “Special Issue on EC-TITS”.

Submission of Manuscripts: 28 February 2011
Peer-Review Results: 31 May 2011
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PHD POSITION IN INTELLIGENT TRANSPORTATION SYSTEMS

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In response to the need for clean, efficient, safe and sustainable transportation the PhD position invites applicants who are willing to contribute to the research area of advanced intelligent transport system design. Activities will involve research on vehicle flow modeling and analysis, efficient system design by optimal autonomous applications, detection and identification of relevant unattended events, failures. Novel fault tolerant Intelligent Transport Systems concepts are going to be developed.

This Ph.D student positions is a part of Chalmers Area of Advance in Transport. The vision in this area is to be among the internationally leading universities with regards to green, safe and efficient future transport systems. To achieve this, we are building on a wide range of disciplines and close connection between research and higher education and on an intense cooperation with industry and societal actors.

For additional information or application: http://www.chalmers.se/s2/EN/news/vacancies-at-signals/positions/phd-position-in8151.
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