Call for Workshop Proposals

26th IEEE International Conference on Intelligent Transportation Systems

The 26th edition of the IEEE International Conference on Intelligent Transportation Systems (ITSC 2023) is the annual flagship conference sponsored by the IEEE Intelligent Transportation Systems Society (ITSS). This event hosts an attractive agenda of technical contributions, keynote presentations, tutorials, special sessions, and workshops on topics related to the field of Intelligent Transportation Systems (ITS). The conference aims to gather researchers and practitioners working in this field towards sharing, discussing, and opening new paths in the theory, analysis, simulation, data-based modeling, experimentation, deployment, and case studies embracing transportation and mobility at their core. In particular, ITSC 2023 builds upon its motto to invite and encourage prospective authors to present results, findings, perspectives, and developments related to the implementation and deployment of ITS applications that consider human interaction at the core of their design.

ITSC 2023 solicits proposals for half-day and full-day workshops covering topics relevant to the field of intelligent transportation systems and its applications. Interested organizers are invited to submit their tutorial proposals in the topic areas listed in the Call for Papers of the conference (https://2023.ieee-itsc.org/call-for-paper/call-for-papers/).

The proposal for a workshop should include title; contents of the workshop; a list of topics of interest; website; details of the organizers; a list of potential contributors with their affiliations, contact e-mails, and abstracts; information about the target audience and expected attendance; invited speakers; and materials needed to implement the workshop. Proposals must be submitted electronically by following the instructions available in the conference website (https://2023.ieee-itsc.org/). The deadline is March 1st, 2023.

Disclaimer 1: any workshop proposal that is incomplete and/or is not submitted by following this form will not be evaluated for its inclusion in the program of the conference.

Disclaimer 2: The proposal should describe how the workshop will be organized to encourage an active interaction between presenters and attendance.

Disclaimer 3: Attendance at workshops will be subject to an additional fee, in addition to the Conference registration fee. Thus, all workshop session participants (including organizers and presenters) will be required to pay a workshop attendance fee due to the venue hire cost and catering costs.

Disclaimer 4: unless otherwise imposed by organizational constraints, workshops will be held on September 24th, 2023.

Further enquiries can be forwarded to: contact@2023.ieee-itsc.org
Workshop Proposal

- Title:
  2\textsuperscript{nd} Workshop on Dependable and Reliable Artificial Intelligence for Intelligent Transportation System

- Contents:
  This workshop represents a continuation and extension of the same successful workshop held in ITSC 2022. It is supposed to provide increased opportunities for communication and interaction, thereby facilitating attendees' comprehension of cutting-edge research and discoveries.

Recent years have witnessed the rapid progress of artificial intelligence and its applications in intelligent transportation systems (ITS). Among the key characteristics, safety lies in the nature of ITS. Many recent advances, however, are hardly reliable due to the black-box property of the neural networks model. Thus, how to design dependable and reliable artificial intelligence techniques for ITS becomes a vital issue.

This workshop aims to gather a group of active researchers in intelligent transportation systems, signal processing, artificial intelligence, and autonomous driving vehicles and discuss their most recent research results, emphasizing safe driving with dependable and reliable artificial intelligence techniques. The expected submissions include but are not limited to the following list of topics:

- Robustness of AI for ITS
- Explainable AI for ITS
- Adversarial factors in ITS and autonomous driving
- Verification techniques for ITS
- Generic safety goals in the ITS
- Privacy issues in ITS and autonomous driving
- Risk aware decision making for autonomous driving
- Certifiable AI for ITS
- Cyber security in ITS and autonomous driving
- Vulnerable road users’ recognition and prediction
- Dangerous and abnormal road surface conditions recognition
- Reliable and dynamic edge resource allocation in V2X scenarios
- Digital twin techniques for safer ITS
- Modeling of AI philosophy in ITS and autonomous driving

- Organizers (names, affiliations, emails, and short bio):

  **Leading Organizer**
  Prof. Shichun Yang, Professor, Dean of School of Transportation Science and Engineering, Beihang University, Beijing, China
  **Email:** yangshichun@buaa.edu.cn
Short Bio: Shichun Yang is currently the Dean of the School of Transportation Science and Engineering, Beihang University. He is recognized as the leading personnel of scientific and technological innovation in the National Ten-thousand Talents Program, leading personnel among the young and middle-aged in the Ministry of Science and Technology, National outstanding scientific and technological worker. He is the Vice Chairman of the Electric Vehicle Division of National Technical Committee of Automobile Standardization (NTCAS), an Expert of the Road Vehicle Specialized Committee of China Intelligent Transportation System Association (CTTSA), and the Vice Chairman of the SAE Vehicle Safety and Information Security Technical Committee. His main research interests include scientific and technological research for EV power system safety, high-efficient optimal theory, and integrated control. He was awarded as the National Second Prize for progress in Science and Technology, the First Prize of technical invention and sci-tech progress by China Automatic S&T, the Second Prize of sci-tech progress, and the Technical Invention by the Ministry of Education.

Prof. Yang will lead the following organization team for the workshop

Organizer 1
Ms. Yuyi Chen,
Ph.D. Candidate, School of Transportation Science and Engineering Beihang University, China
Email: yychen@buaa.edu.cn
Short Bio: Yuyi Chen received the B.S. degree in Automotive Engineering and the M.S. degree in New Energy Vehicle Engineering from Beihang University, China, in 2017 and 2021. She is currently a Ph.D. candidate in School of Transportation Science and Engineering, Beihang University. Her research interests include driving intention prediction for autonomous vehicles and perception of road surface condition through intelligent tires

Organizer 2
Mr. Yaoguang Cao
Research Assistant Professor, Beihang University
Email: caoyaoguang@buaa.edu.cn
Short Bio: Yaoguang Cao received the B.S. degree in Thermal Energy and Power Engineering in 2010 from Beihang University, China. He received the M.S. and Ph.D. degree in Automotive Engineering in 2012 and 2020 from Beihang University. During 2013~2015, he had a work experience serving in the EV project management office of High Technology R&D Center, Ministry of Science and Technology of China. His research interests include intelligent decision and planning strategy for autonomous vehicles, automotive cybersecurity, and intelligent ADAS sensors. Mr. Cao’s awards and honors include Second Prize of The National Science and Technology Progress Award, First Prize of Technical Invention by China Automatic S&T.

Organizer 3
Mr. Zhaowen Pang,
Ph.D. Candidate, Department of Information and Communication Engineering, Hainan University, China
Email: zhaowen_pang@163.com
Short Bio: Zhaowen Pang received the B.S. degree in Automotive Engineering in 2016 from Hubei University of Automotive Technology, China. He received the M.S. degree in Automotive Engineering in 2019 from Yanshan University. He has been studying for a Ph.D. in Information and Communication Engineering in Hainan University Since 2019. His research interests include intelligent decision and planning for autonomous vehicles, intelligent vehicle dynamics and chassis control. Mr. Pang’s awards and honors include having received the M.S. degree excellent graduate from Yanshan University and published relevant academic papers in the field at home and abroad.
Organizer 4
Mr. Jiayi Lu
Ph.D. Candidate, School of Transportation Science and Engineering, Beihang University, Beijing, China.
Email: lujiayi@buaa.edu.cn
Short Bio: Jiayi Lu received the B.S. degree from Beijing University of Technology and M.S. degree from King’s College of London, UK. He is currently a Ph.D. student in Beihang University. He majors in computer science, artificial intelligence, and vehicle engineering. His research interests include automatic vehicle integrated systems, mobile edge computing and, virtual simulation. He owns several patents about the autonomous vehicle’s perception system.

Organizer 5
Ms. Rui Wang
Master Candidate, School of Transportation Science and Engineering, Beihang University, Beijing, China.
Email: bhwangr@buaa.edu.cn
Short Bio: Rui Wang received the bachelor's degree in Vehicle Engineering from Beihang University, China, in 2020. She is currently a master candidate in School of Transportation Science and Engineering, Beihang University. Her research interests include perception of road surface condition through intelligent tires.

Organizer 6 (Corresponding Organizer)
Mr. Fan Zhou
Assistant Professor
Email: zhoufan@buaa.edu.cn
Short Bio: Fan Zhou received his Ph.D. in Jan. 2022 from the Department of Computer Science of Université Laval, with which he worked as a post-doctoral research fellow working on DEpendable Explainable Learning (DEEL). He is now an assistant professor in at Department of Automotive Engineering, Beihang University. He has served as Program Committee member of the AAAI-22 and 23 conference, and assisted to ICRA-19, NeurIPS-19 conferences. He will also assist to organize the Rendez-Vous IA Quebec 2022 Conference.

- Intended audience and expected attendance for the workshop (including a clear statement how interaction between presenters and attendance will be fostered):

This workshop is mainly for researchers in the field of autonomous driving, including but not limited to those working on autonomous driving safety technology, advanced driving decision and control technology, and vehicle perception technology. The intended audience is researchers from universities and scientific research institutions, and the number of expected attendances is around 40. We will disseminate workshop-related content through the WeChat official account of the School of Transportation Science and Engineering, Beihang University, and invite scientific research project collaborators from universities including Tsinghua University, Beihang University, and Harbin Institute of Technology to participate in the conference. The hosts will provide personal contact information to facilitate in-depth technical exchanges with the participants.

- Invited speakers (if any):

Speaker 1: Prof. Boyu Wang, Assistant Professor, Department of Computer Science, Western University, Canada
Topic: Trustworthy Machine Learning and its Applications for Intelligent Transportation System

Speaker 2: Dr. Xiang Guo, University of Virginia, USA
Topic: Vulnerable Road users’ Recognition and Prediction

Speaker 3: Dr. Changjian Shui, Postdoctoral Researcher, McGill University, Canada
Topic: Explainable Artificial Intelligence and Transportation Applications.

Speaker 4: Prof. Shichun Yang, Dean, School of Transportation, Beihang University, Beijing, China
Topic: Security Assessment for Electric and Intelligent Vehicles.

We are still actively seeking more speakers with diverse research areas and diverse geographical coverage.

- Materials and equipment needed for the workshop:
  A meeting room which can host approx. 50 audience and a projector.

- Contact details of the proposers (email, postal address, etc):
  Corresponding Organizer:

  Mr. Fan Zhou
  Assistant Professor
  Department of Automotive Engineering, Beihang University
  Email: zhoufan@buaa.edu.cn