











IEEE SA Symposium on Autonomous Driving

Date	Time	Name	Company Name or Organization Name	Job Title	Topic	Short Bio	Personal Photo	online/off line	Abstract	
December 15	13:50-14:00	Dong Sun	IEEE	ADWG Chair	Introduction to ADWG	Dong Sun serves as the chair of IEEE ADWG. He has more than 30 years business and technical experience of ICT (Cloud, Big Data & AI etc, and 4G/5G wireless, data and IoT etc)) and services/applications (Digital Telecom, Automated automotive, Smart xxx etc)), specializing in digital architecture & business strategy planning & marketing, product & market management, technology evolution & innovation.				
	14:00-14:30	Joseph Sifakis		Turing Award Winner	Challenges in the design and validation of autonomous driving systems	foreign academician of the Chinese Academy of Sciences, academician of the French Academy of Engineering, academician of the European Academy of Sciences, academician of the French Academy of Sciences, academician of the American Academy of Arts and Sciences, foreign academician of the US National Academy of Engineering, honorary scientific director of Verimag Laboratory in France, distinguished professor of the Department of Computer Science and Engineering of Southern University of Science and Technology		online	Autonomous driving systems (ADS) are probably the most difficult systems to design and validate, as they are built from heterogeneous components subject to temporal and spatial dynamism. In particular, the need to integrate notoriously inexplicable artificial intelligence components into traditional digital systems makes the application of existing systems engineering techniques problematic. We examine the challenges posed by the design and validation of ADS, identifying possible technical avenues for overcoming them. <i>We argue that end-to-end autopilots based on artificial intelligence do</i>	
	14: 30-15:00	German Ros	Nvidia	Carla Founder	CARLA: An Open Simulation Framework and Platform for Autonomous Driving	German Ros serves as Director of Simulation Ecosystem Development at NVIDIA and is the Executive Director for the non-profit CARLA organization at the Embodied AI Foundation.. German is passionate about enabling safe autonomous systems by building modern simulation platforms to accelerate development and validation cycles. German's work intersects areas such as simulation for autonomous systems, AI, 3D computer vision, and computer graphics. German has driven large open-source projects such as the CARLA Autonomous Driving simulator, and the Open3D processing library, always with a focus on creating strong and thriving communities.		online	CARLA is an open-source simulator aiming to accelerate the creation of autonomous driving and Embodied AI solutions. There is a rich ecosystem around CARLA, featuring extensions, tooling and integrations with 3rd-party systems, driven by ISVs and the community. The CARLA platform is used to gain insights in a variety of topics, including the creation of new driving policies, the development of perception stacks, and system validation. In this talk, we will discuss where CARLA stands today and the next steps in our journey.	
	15:00-15:30	Marius Dupuis	ASAM	CEO	The globalization of automotive standards – ASAM's view	Marius Dupuis holds a diploma in Aerospace Engineering. After an initial engagement in engineering flight simulation, he became co-founder and general manager of VIRES imulationstechnologie GmbH in 1998 and grew the company to a leading provider of environment simulation solutions for ADAS and autonomous driving systems. Marius left VIRES in 2020 and started to work as an independent consultant. During that phase, he also founded Sim Cert and co-founded GEONATIVES. Marius is one of the initiators and original authors of the simulation data standards OpenDRIVE, OpenCRG and OpenSCENARIO. In 2018, he supervised their transfer to ASAM e.V.. Following these standards and his personal interest in dynamic organizations, Marius joined ASAM e.V. in May 2022 as Chief Executive Officer.			The speech will address the need to agree on common languages to accelerate engineering for mobility. These languages, if widely accepted, become standards – either de facto or formalized. We are currently at a point where new concepts like the software-defined vehicle will strongly influence the future of the standardization landscape	
	15:30-16:00	coffee break								
	16: 00-16: 30	Amid Gil	Foretellix Ltd, Israel,	Chief Regulatory Affairs Officer, VP Operations and Co-Founder	Safety Driven Validation - - Enabling Large Scale ADS/ADAS Safety Validation using ASAM OpenSCENARIO® 2.0.0	il Amid is Chief Regulatory Affairs Officer, VP Operations and Co-Founder of Foretellix Ltd.Gil is a former Vice President of Intel Corporation. Gil has over 35 years of experience in the verification world, from system level H/W and S/W verification, to VLSI/microprocessors validation and verification.		online	The presentation describes a new approach to large scale safety verification and validation of ADS/ADAS. The approach utilizes ASAM OpenSCENARIO 2.0.0, coupled with scenario-based coverage-driven validation, producing safety metrics. This approach changes the way the automotive industry is conducting verification and validation of automated driving systems. It also demonstrates an advanced method for safety verification that allows tackling the infinite space of scenarios. Several use cases will be presented, with an emphasis on how the new approach enables a step function in ensuring the correctness and safety of automated driving systems.	
	16:30-17:00	Yuxi Pan	Synkrotron Technologies,Co.,Ltd	CTO	P3344-Scenario Representation for Autonomous Driving	Ph.D. from UCLA. He has served as a senior application scientist and technical director at Cisco Systems, Inc. and Uber, where he was mainly engaged in research related to artificial intelligence systems and product safety. After returning to China, Dr. Pan led the R&D team at Synkrotron to launch a number of enterprise-level products in the fields of intelligent connected car software system development, simulation testing and software security.				
	8:50-9:00	Jams Yang	Synkrotron Technologies,Co.,Ltd	CEO	Introduction to Technical Committee on Electric and Autonomous Vehicles	Founder and CEO of Synkrotron, professor at Xi'an Jiaotong University and director of the Turing Cross Information Science Research Center, director of the Trusted Artificial Intelligence Innovation Center of the Cross Information Core Technology Research Institute, former full professor of the Department of Computer Science at Western Michigan University and electrical engineering at the University of Michigan and visiting professor in the Department of Computer Science. Academic part-time jobs include co-chairman of the IEEE Electric Vehicles and Autonomous Vehicles Technical Committee, vice-chairman of the Autonomous Driving International Standards Working Group, chairman of the 2020 IEEE International Autonomous Driving Software Conference, and co-chairman of the 2019 IEEE International Software Testing and Verification Conference.				

December 16	9:00-9:30	Jin Shang	AICC	Managing Director&CTO	Autonomous Driving Architecture for Vehicle OS and SDV	Dr. Shang Jin, AICC CEO & CTO, chief technical expert of the National Intelligent Connected Vehicle Innovation Center, leader of the basic software working group of China Intelligent Connected Vehicle Industry Innovation Alliance, deputy director of the Software Branch of the China Automotive. He has served as CEO of large OEM overseas R&D centers and technology and R&D leaders of many technology companies in China and the United States. national entrepreneurial talent, special prize of China Automotive Industry Science and Technology Progress Award.				
	9:30-10:00	Wen Cui	Synkrotron Technologies, Co., Ltd	postdoctoral researcher	The white paper of simulation, testing, verification and validation (STV2) of autonomous driving	Currently a postdoctoral researcher at Synkrotron and Cross Information Core Technology Research Institute. He graduated from the School of Electrical and Computer Engineering at the University of Victoria in Canada in June 2021. His main research directions are Internet of Vehicles, vehicle-road collaboration, fused sensing, wireless communication system design and wireless signal perception. , research results have been published in top journals and flagship conferences in the industry, and several US and Chinese patents have been approved.				
	10:00-10:30	Tianyue Yu	SAE ASS	committee member	Efforts in LiDAR Performance Benchmarking for Automotive LiDAR Standards Development	Tianyue Yu is a member of Society of Automotive Engineers Active Safety System Standards Committee with focuses on Active Safety LiDAR Performance Task Force. She was the founder and CTO of Quanergy Systems, a LiDAR and perception solutions provider in Silicon Valley, US. Dr. Yu received Ph.D. from Cornell University and BS from USTC.				
	10:30-10:45	Coffee break								
	10:45-11:15	Gaurav Pandey	Ford	Technical Leader	Autonomous Navigation System	Dr. Pandey is currently working as Technical Leader at Ford Motor Company, developing perception algorithms for highly automated vehicles. Prior to his involvement with Ford Motor Company, Dr.Pandey was an Assistant Professor in the Electrical Engineering Department at the Indian Institute of Technology (IIT) Kanpur in India. His current research focus is on visual perception for autonomous vehicles and mobile robots using tools from computer vision, machine learning and information theory. He received his BS from IIT Roorkee in 2006 and completed his PhD studies at the University of Michigan, Ann Arbor in December 2013.		online	A typical autonomous navigation system consists of various modules including sensor data fusion, perception, 3D mapping, localization, path planning and control. Environment perception in Autonomous Vehicles (AV) is a challenging problem due to complex traffic intersections with buildings close to the curb, which may minimize the field of view of AV sensors. Integration of smart infrastructure nodes on roads where AVs operate can help overcome these challenges. In the talk, a method used to perform fully automatic multi-modal sensor data fusion of on-board perception sensors (LiDAR scans and camera images) using mutual information will be presented. As part of the method, fused data is combined with navigation data using a pose graph optimization framework to generate highly	
	11:15-11:45	Qixin Wang	Hongkong Polytech Univ	Associate Professor	Software Engineering Issues in Cyber-Physical Systems	Qixin Wang received the Bachelor of Engineering and Master of Engineering degrees from the Department of Computer Science and Technology, Tsinghua University (Beijing, China) in 1999 and 2001 respectively; and the Ph.D. degree from the Department of Computer Science, University of Illinois at Urbana-Champaign (Illinois, USA) in 2008. He joined the Department of Computing of the Hong Kong Polytechnic University in 2009, and is now an associate professor. His research interests include cyber-physical systems, real-time/embedded systems/networks, and their applications in industrial control, medicine and assisted living. He has authored/coauthored more than 50 papers/articles in leading publication venues in these fields, including a featured article in IEEE Transactions on Mobile Computing 2008 May Issue and an article winning 2008 best paper award of IEEE Transactions on Industrial Informatics. He is a member of the				
	11:45-12:15	Yong He	Futurewei Technologies, Inc.	Open source software architect	P3412 - Autonomous Driving Architecture	Works at Futurewei Technologies, Inc. leading open source software architecture. Mainly focusing on the insights and ecosystem development of emerging edge computing and cloud infrastructure technologies, especially the Rust language, WebAssembly and their potential applications in the fields of autonomous driving and robotics, and committed to industrial digital transformation.				
中文研讨										
	14:00-14:30	屈操	无锡威孚高科技集团股份有限公司	新能源与网联技术研究院 院长	面向自动驾驶的4D成像雷达感知技术 4D Imaging Radar Perception Technology for Automated Driving	屈操，男，博士，南京航空航天大学信息与通信工程专业。威孚高科智能驾驶方向团队负责人，长期从事汽车智能驾驶领域研究，近几年在汽车毫米波雷达及其融合应用技术成果转化和创新创业方面取得多项成绩。2022年获无锡市“百名科技之星”、江苏省“优秀青年工程师”荣誉称号、江苏省“工程师学会人才智库”青年专家。				
	14:30-15:00	张昱	USTC	教授	自动驾驶数据框架标准工作组及进展	中国科学技术大学教授。CCF 杰出会员、系统软件专委会和教育专委会的常务委员；ACM 中国操作系统分会副主席、计算机科学教育分会常务理事；IEEE 自动驾驶数据框架(DFAD)标准工作组副主席。主要研究方向为面向智能、数据和量子等新兴计算领域的编程系统、分析与优化。在学术期刊和国际会议上发表论文 130 余篇，获得国家发明专利授权 13 项、已公开 11 项，软件著作权 6 项；牵头制定省级地方标准 1 部。获全国高校计算机专业优秀教师奖、宝钢优秀教师奖等。		online		

December 16	15:00-15:30	王凡	北斗星通智联科技有限责任公司	副总经理	智能驾驶与智能座舱的融合趋势	西北工业大学人工智能专业毕业，从事芯片行业研发10余年，汽车智能驾驶研发7年。曾任纵目科技CTO，美国Zoran半导体以及CSR半导体研发管理职务，带领团队开发出行业领先的自主代客泊车（AVP）以及自动泊车（APA）产品，并在多家主机厂落地量产，曾获中国汽车工程学会科技进步一等奖			
	15:30-16:00	coffee break							
	16:00-16:30	张晓东	西安电子科技大学	副教授	自动驾驶系统交规安全保障	工作于西安电子科技大学，新加坡管理大学博士后，深信科创技术顾问，主要研究方向为自动驾驶系统安全、软件测试与分析、形式化方法。2018年博士毕业于西安交通大学，先后任职于华为云、西安电子科技大学、深信科创、SMU，已在ISSTA、TSE、ICST、ISSRE、ICPC、软件学报等国内外会议期刊发表论文多篇，参与省部级项目多项。			
	16:30-17:00	苗成生	广汽研究院	博士/高级工程师	虚实结合智行万里 数字孪生驾驭未来	博士毕业于北京理工大学/密歇根州立大学，汽车电子高级工程师，现任广汽研究院智驾数据仿真技术专家，主要从事智驾决策算法开发、数据驱动、虚拟仿真、软件质量及功能安全等方向研究。			