

WORKSHOP
MIND THE GAPS: DO YOU TRUST AI-ENABLED
AUTONOMOUS VEHICLES?

Hybrid Workshop

Tuesday, 11 October 2022

09:00 - 16:45 CET
3:00 am US Eastern/3:00 pm China

SPEAKER BIOS



Jyotika Athavale

(2023 President Elect Candidate, IEEE Computer Society) is a Senior IEEE Member, experienced leader and influencer in emerging technologies and international standardization initiatives. She was awarded the IEEE Computer Society Golden Core Award in 2022. Currently an elected member of the Computer Society Board of Governors and Executive Committee, Jyotika also serves as the 2022 Secretary and Distinguished Visitor of the IEEE Computer Society. She chairs the IEEE P2851 Standard on Functional Safety interoperability.

With over 25 years of industry experience, Jyotika is currently a senior technical leader in automotive functional safety at NVIDIA, and is driving capability development, safety architectures and methodologies, system safety engineering activities and pathfinding for safety critical markets such as autonomous driving and avionics. Prior to NVIDIA, she was Principal Engineer at Intel Corporation where she led functional safety platform architecture for Automotive and Avionics use cases and drove Corporate-wide methodologies for radiation effects modeling and product qualification across market segments.

Jyotika is an active member of the IEEE Computer Society Functional Safety Standards Committee, Design Automation Standards Committee and Diversity and Inclusion Committee. In addition, she represents the Computer Society at the IEEE USA AI Policy Committee, IEEE SA Industry Connection Group on Mobility as a Service (MaaS) related standardization activities, the IEEE Women in Engineering (WIE) Committee and the IEEE Systems Council. Last year she also served on the IEEE Computer Society Industry Engagement Committee and Audit Committee.

Outside of IEEE, Jyotika is actively influencing several international standardization initiatives on functional safety with ISO, SAE and UL. She also serves on various technical conference committees, has authored patents and many technical publications in IEEE conferences and journals. She received her MS degree in Electrical Engineering in 1996 from Iowa State University. Please visit <https://www.jyotikaathavale.com> for more information.



Hermann Brand

Hermann Brand joined IEEE as European Standards Affairs Director in June 2017. His responsibilities include European standardisation policy, technology policy, co-operations and standards related activities with industry, research organizations, and academia. Hermann Brand worked for ETSI (European Telecommunications Standards Institute) as Director Innovation and Vice President 'New Initiatives and Market Development'. He was responsible for various institutional services of ETSI, including new initiatives, partnership management, membership care, and meeting support. He worked closely with members and other stakeholders to setup new standardization committees/groups covering e.g. machine communication, network function virtualisation and edge computing.

Hermann Brand has held many different positions in the industry, as SW developer and system designer in telecommunication, as researcher in the semiconductor business. He managed several international R&D teams in mobile communications including researchers, system engineers and a group of delegates to different standards developing organizations. Moreover, Dr Brand worked as technology manager, innovation manager and business developer.



Alexander Braun

Alexander Braun received his diploma in physics with a focus on laser fluorescence spectroscopy from the University of Göttingen in 2001. His PhD research in quantum optics and quantum computers was carried out at the University of Hamburg, resulting in a doctorate from the University of Siegen in 2007. He started working as an optical designer for camera-based ADAS with the company Kostal, and later became responsible for the optical quality of the series mass production. Next, he became a professor of physics at the University of Applied Sciences Düsseldorf in 2013, where he now researches optical metrology and optical models for simulation in the context of autonomous driving. He is a member of DPG, SPIE, IS&T and VDI, participating in norming efforts at IEEE (P2020) and VDI (FA 8.13), and currently serves on the advisory board for the AutoSens conference and for the VDI Optical Technologies (Fachbeirat 8).



Axel Deicke

Chair IC20-009 Nurturing the Era of end-to-end Mobility as a Service (MaaS): Standards for Connected and Autonomous Transportation

Orchestration iamts Pre-Symposium, Automotive Consultant

Axel Deicke has worked for over 40 years as an electrical engineer in leading positions of the automotive industry, currently as an independent automotive consultant. Axel was employed at BMW in engineering/project management as well as aftersales engineering for over 30 years, working on programs like BMW's first E/E system integration, building up local E/E content in South Africa, and leading an industrial PC manufacturing factory. In 2020, he began to work with iamts on this Pre-Symposium. Axel studied electrics/electronics at Technical University Munich.



Tijs Donkers

Tijs Donkers is an Associate Professor in the Control Systems group of the Dept of Electrical Engineering of Eindhoven University of Technology, Netherlands. He received the M.Sc. degree and the Ph.D. degree (both cum laude) in Systems and Control in 2008 and 2011, respectively, from the Dept of Mechanical Engineering of the same university. In 2010, he visited the Cyber-Physical Systems laboratory of the University of California at Los Angeles, CA, USA, and, from 2012 until 2013, he was a researcher at the Dutch Institute for Applied Scientific Research (TNO) in Helmond, Netherlands. His research interests include optimal control for energy management systems in automotive systems, and modelling and state estimation for battery management systems. He is currently involved in the European projects LONGRUN and SENSIBAT as well as several the Dutch Battery Competence Centre.



Peter Fintl is an electronics engineer and business economist who has been in the global automotive industry for more than 20 years in. Peter currently works as Vice-President Technology and Innovation at Capgemini Engineering and has a focus on automated driving, vehicle electronics and sustainable mobility.



Daniel Gamber

Chief Commercial Officer, Kontrol GmbH

In May 2022, Daniel Gamber has joined Kontrol as Chief Commercial Officer. Daniel oversees all go-to-market and partnership-related activities for the European deep tech company based out of Linz, Munich, and Berlin. Previously, building up to his 10+ years of professional experience, Daniel was spearheading multiple electric and smart mobility initiatives at BMW Group, Byton, and Zync. He has led successful go-to-market and B2B sales organizations at early-stage technology companies in Silicon Valley, Europe, and Asia.



Ibrahim Habli

Ibrahim Habli is a Professor of Safety-Critical Systems and the Deputy Head of the Department of Computer Science at the University of York. He co-leads the research activities of the £12M Lloyd's Register Foundation Assuring Autonomy International Programme. He is also the PI on the UKRI-funded project 'Assuring Responsibility for Trustworthy Autonomous Systems'



Kasra Haghghi

Dr. Kasra Haghghi is CEO and co-founder of UniqueSec AB. He has received his PhD in Communication Systems from Chalmers University of Technology in 2013. Kasra started UniqueSec with focusing on radar development for industrial applications. He is the co-inventor of ASGARD technology for over-the-air (OTA) testing of automotive radars. Kasra has a lot of knowledge and experience within radar, signal processing, embedded hardware, and software development. He has a long experience of entrepreneurship and management.



Ali G. Hessami

Ali is currently the Director of R&D and Innovation at Vega Systems. He extensive track record in systems assurance and safety, security, sustainability, knowledge assessment/management methodologies and has a background in design and development of advanced control systems for business and safety critical industrial applications.

Ali represents UK on CENELEC & IEC safety systems, hardware & software standards committees. He was appointed by CENELEC as convener of a number of Working Groups for review of EN50128 Safety Critical Software Standard and for update and restructuring of the software, hardware and system safety standards in CENELEC. Ali also a member of Cyber Security Standardisation WG26 Group and started and chairs the IEEE SMC and the Systems Council Chapters in the UK and Ireland Section. During 2017 Ali joined the IEEE Standards Association (IEEE SA) initially as a committee member for the new landmark IEEE P7000 standard focused on “Addressing Ethical Concerns in System Design”. He was subsequently appointed as the Technical Editor and later the Chair of P7000 standard. In November 2018, he was appointed as the VC and Process Architect of the IEEE ‘s global Ethics Certification Programme for Autonomous & Intelligent Systems (ECPAIS).

He has been the recent Chair of the IEEE in the UK and the Republic of Ireland driving an extensive programme of reform and member value initiatives ranging from a structured educational programme for online and face to face delivery to events, Open Days, Lectures and Professional Recognition and Registration for members.

Ali is a Visiting Professor at London City University’s Centre for Systems and Control in the School of Engineering & Mathematics and at Beijing Jiaotong University School of Electronics & Information Engineering. He is also a Fellow of Royal Society of Arts (FRSA), Fellow of the UK Institution of Engineering & Technology (IET) and a Life Senior Member of IEEE.



Balvinder Khurana

Balvinder is an industry veteran with 20+ years of expertise in Pre-Post Silicon SOC/IP Validation engineering management, validation content development, validation architecture, validation platform development, and a distinguished author in the SOC validation space, during this professional tenure he has worked at industry giant's Intel, Freescale, McAfee, Toshiba, and now NXP. Have qualified 15+ System On Chips Designs throughout his career.

During this 20 years of industry experience, currently Balvinder is Senior System Validation Manager at NXP Semiconductors leading global SOC validation teams and ensuring quality validation from cradle to grave for automotive and edge processing chipsets. During his latest tenure at NXP, he has led System Validation for NXP's S32V 1st Vision Processing ADAS Chipset and 1st 16FFC S32G Vehicle Network processor along with leading other global quality charters. Prior to NXP Balvinder has made solid technical contributions as an energy metering firmware developer @ Toshiba (Apollo energy Meter heavily deployed in Brazil), Boot ROM architect @Motorola/Freescale (Moto Razor Phone), South Complex SV Tech Lead (Intel ASUS Phone) and anti-virus hacker @Mcafee (Solidifier – Enterprise Applications whitelisting).

Industry Contributions include 2 Patent prior arts @IP.com, Several technical publications (IEEE and others), and Invited guest speakers in IEEE events and Academia workshops. Have also been featured in the Times of India in the article "NXP creates chips for autonomous cars". An active member of Car Connectivity Consortium and Automotive Safety Council.

Refer to his details and peer recommendations @Linkedin.

His special interests include ADAS Validation, AI/ML, Automotive Safety, and off course SOC System validation methodologies.



Jürgen Neises

Dr. Jürgen Neises is Senior Consultant and manages the Fujitsu Europe R&I Subsidies Program. Since 1990, he has led a number of research and innovation projects on infrastructure, mobile, and security solutions in research and at Fujitsu. Jürgen's track record includes high-performance computing, carrier-grade availability, and a wide range of security and IoT/AI related solutions. Currently, Jürgen coordinates Fujitsu Europe's participation in the Horizon Europe program and leads the projects MobiSpaces (Grant No. 101070279), TANGO (Grant No. 101070052), and INFINITECH (Grant No. 101070052). Jürgen is Fujitsu Distinguished Engineer.



Terje Noevig

Blickfeld's COO and Managing Director, Terje Noevig, has long-standing operational and strategic experience, gained during his time at OSRAM and Siemens, where he held different management positions. His operational management responsibilities in the automotive business encompassed sales, marketing, R&D, production, quality, procurement, and supply chain. Terje studied Business Administration at Lancaster University / ESB Reutlingen and holds an MBA from BI Norwegian Business School.



Zoe Porter

Dr Zoë Porter is an ethicist in the Assuring Autonomy International Programme at the University of York, where she co-leads research on the societal acceptability of autonomous systems and is a Co-Investigator on the UKRI-funded TAS project, *Assuring Responsibility for Trustworthy Autonomous Systems*. Zoë's research spans responsibility for AI and autonomous systems, ethical assurance, human-machine teaming, artificial moral agency, and AI in healthcare. She was previously Chief Speechwriter at the Equality and Human Rights Commission and has also worked for members of the European and UK Parliaments.



Fahimeh Rafieinia

CTO of Uniquesec, a Swedish start-up developing test and verification solutions for self-driving cars. She joined the company as R&D engineer and project manager in 2015, working within radar signal processing and automotive radar testing and validation. Her areas of expertise include system design, software-defined radio (SDR), FPGA and real-time systems, RF systems, business development, etc. Fahimeh is the inventor of the award-winning frequency domain automotive radar target simulator (called ASGARD). She holds a Master's degree in Communications Engineering, has been the reviewer of a few IEEE journals, including IEEE Vehicular Technology and Microwave and Wireless Components. Since 2018, Fahimeh has been active towards initiating the automotive radar standard. She is now serving as the chair of the newly-started IEEE SA working group for automotive radar performance metrics and testing methods for ADAS and ADS applications.



Qing Rao

Qing joined Momenta Europe as a staff engineer and senior AI expert responsible for the global ADAS software rollout. He has long years of in-depth industrial experience with different automotive OEMs in Germany, including Mercedes-Benz, BMW, and a Chinese electric vehicle start-up named XPeng. His passion lies above all in accelerating the industrialization process of AI technologies and bringing enhanced ADAS / autonomous driving to our daily life.

Qing received his bachelor's degree in 2010 from Shanghai Jiao Tong University and his master's degree with a primary focus on computer vision and robotics in 2012 from the Technical University of Munich. His Ph.D. dissertation "Merging the Virtual and Real in a Car: In-Vehicle Augmented Reality," published in 2019, was one of the pioneering works that enabled AR navigation in today's series production cars.



Yaniv Sulkes

Yaniv Sulkes is the VP of Automotive at Hailo, a leading chipmaker that developed a uniquely designed processor for accelerating AI applications on edge devices. Yaniv brings over 20 years of experience in leadership roles including product management, marketing, and business development. Prior to joining Hailo, Yaniv served as the VP of Business Development & Marketing for North America and Europe at Autotalks, a leader in vehicle-to-everything (V2X) communication chipsets for connected and autonomous vehicles, where he was leading the global marketing and the automotive business in the regions. Previously, Yaniv led the global marketing for Allot Communications (NASDAQ: ALLT, TASE: ALLT) after a few product management roles in which he led the company's key products to commercial success. Yaniv holds a B.Sc. in Industrial Engineering and an M.Sc. in Electrical Engineering from Tel-Aviv University.



Lei Sun

Technical program manager TuSimple.ai, San Diego, CA

- **Autonomous Vehicle Onboard Systems Management.** Manage system architecture projects: sensor software, V2C TeleOps, and Security. Migrate autonomous driving system to embedded system. Define the long-term strategy for onboard systems. Communicate opportunities for strategic alignment.
- **OTA (over-the-air) Service Management:** Define onboard firmware/software update automation wireless delivery. Accelerated Sensor Firmware upgrade configuration from 30+ to 10 minutes. Work with cross-functional departments and teams to define/develop ETL data pipelines between systems/services. Keep data transparency and concurrency. Identify opportunities to expand/optimize onboard data infrastructure
- **Autonomous Vehicle Communication Gateway Management.** Drive onboard network system integrations. Upgrade to 5G network, amplify wireless bandwidth, and improve latency. Work with Wireless carriers/OEMs and Engineering teams to upgrade the V2C(Vehicle-to-Cloud) connectivity. Build relationships with external manufacturing automobile suppliers and service partners
- **Sensor Issue Triage Data Service Management.** Define strategic solutions, milestones, criteria, resource allocation, and deliverables. Oversee overall product plan to monitor sensor unit performance and address functional issues automatically



Zsolt Szalay

Associate Professor, Head of Department
Budapest University of Technology and Economics (BME)
Faculty of Transportation Engineering and Vehicle Engineering
Department of Automotive Technologies

Head of Research & Innovation
ZalaZONE Automotive Proving Ground Ltd.

Deputy CEO of Research & Innovation
Defense Innovation Research Institute (VIKI)

Zsolt SZALAY, Ph.D. received the M.Sc. degree in electrical engineering from the Budapest University of Technology and Economics (BME), Hungary, in 1995, the M.Sc. degree in business administration from Corvinus University, in 1997, and the Ph.D. degree in mechanical engineering from BME, in 2002. He is currently an Associate Professor and the Head of the Department of Automotive Technologies, Budapest University of Technology and Economics. He also acts as the Head of Research and Innovation with ZalaZONE Automotive Proving Ground, the unique Hungarian infrastructure for connected and automated vehicle testing. He is also the Deputy CEO of Research & Innovation at Defense Innovation Research Institute (VIKI).

His research interests include advanced automotive technologies related to the testing and validation of highly automated and autonomous vehicles. He is a committed supporter of young talents from an early age as a Children's University lecturer and via the BME Automated Drive Lab.



Alexander Woellwarth-Lauterburg

Alexander Woellwarth-Lauterburg has already worked as a manager in research funding, where he predominantly supported the application process for IoT and new energy projects. He is currently responsible for the German market as Director for Artificial Intelligence at DataForce. The DataForce product portfolio includes industry-leading AI data augmentation and annotation across all industries.