



2020 IEEE SA ETHERNET & IP @ AUTOMOTIVE TECHNOLOGY WEEK

14–18 September 2020 | Virtual
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2020 IEEE SA ETHERNET & IP @ AUTOMOTIVE TECHNOLOGY WEEK

Welcome to the 2020 Ethernet & IP @ Automotive Technology Week

In November 2011, BMW hosted the first Ethernet & IP @ Automotive Technology Week in Munich Germany. In 2011, Ethernet in Automotive was at the very beginning. BMW was the only car manufacturer who had, only a few years earlier in 2008, launched the first car with Ethernet communication links using 2-pair 100BASE-TX for this purpose. At the time, BMW seemed to be the only car manufacturer seriously looking into Ethernet communication in the car.

However, the single pair BroadR-Reach (now 100BASE-T1) had also just appeared on the scene, while the requirements for higher data rates started to show industry wide. Everyone was curious. Does it really work to transmit 100Mbps data over one pair of unshielded cables under the severe electromagnetic conditions in cars? Who else is interested in this technology? What about timing requirements in the best effort technology Ethernet? The first Ethernet & IP @ Automotive Technology Week in 2011 sold out with more than 300 participants!

Since then Automotive Ethernet has come far. All major car manufacturers have introduced Automotive Ethernet into their EE-architectures. Various new physical layer technologies have been specified (from 10Mbps to 10Gbps over electrical and partially also optical media), new protocols allow to meet even more stringent timing requirements, and tool vendors and test houses have outdone themselves to support the development process with respective products. All the while, the Ethernet & IP @ Automotive Technology Week has toured the world and established itself as one of the main events for information exchange on the latest trends on Automotive Ethernet.

This year, would have been the 10th anniversary of the event. As the initiator of the event in 2011, I had been particularly looking forward to it and would have loved to welcome everybody in person at the FIZ Forum in Munich, Germany. Owing to the worldwide Covid-19 pandemic, this is not possible. Instead, we will explore new paths and have the first virtual Ethernet & IP @ Automotive Technology Week, which includes expert presentations, Q&A, and the possibility to visit the exhibitors' booths (also virtually). In order to allow for participation from around the globe at the same time, we spread the event over five afternoons (CET), with presentations on three of them.

I am looking forward to an interesting virtual event this year – shall we call it the 9.5th Ethernet & IP @ Automotive Technology Week? – and intend to welcome you in person in Munich September 15 and 16, 2021 for the anniversary event.

Kirsten Matheus, BMW, 2020 IEEE SA EIP@ATD Chair

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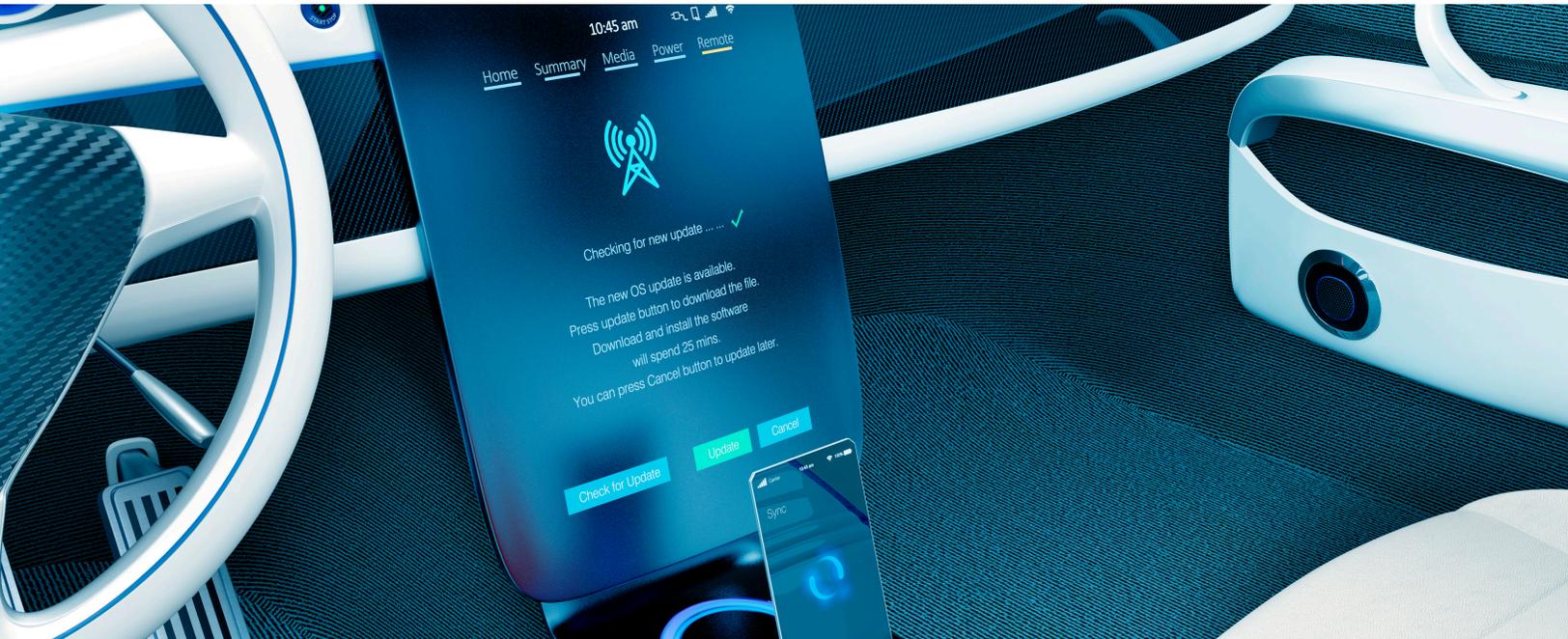
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CONFERENCE COMMITTEES

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Mike Jones – Microchip
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Kirsten Matheus – BMW
James Lawlis – Ford Motor Company
Laurent Manhes – Microchip

CONFERENCE AGENDA

**VIRTUAL EXHIBITS WILL BE AVAILABLE DAILY FROM
MONDAY 14 SEPTEMBER 2020 - FRIDAY 18 SEPTEMBER 2020
Meet Exhibitor Staff from 14:00-17:00 daily**

TUESDAY 15 SEPTEMBER 2020

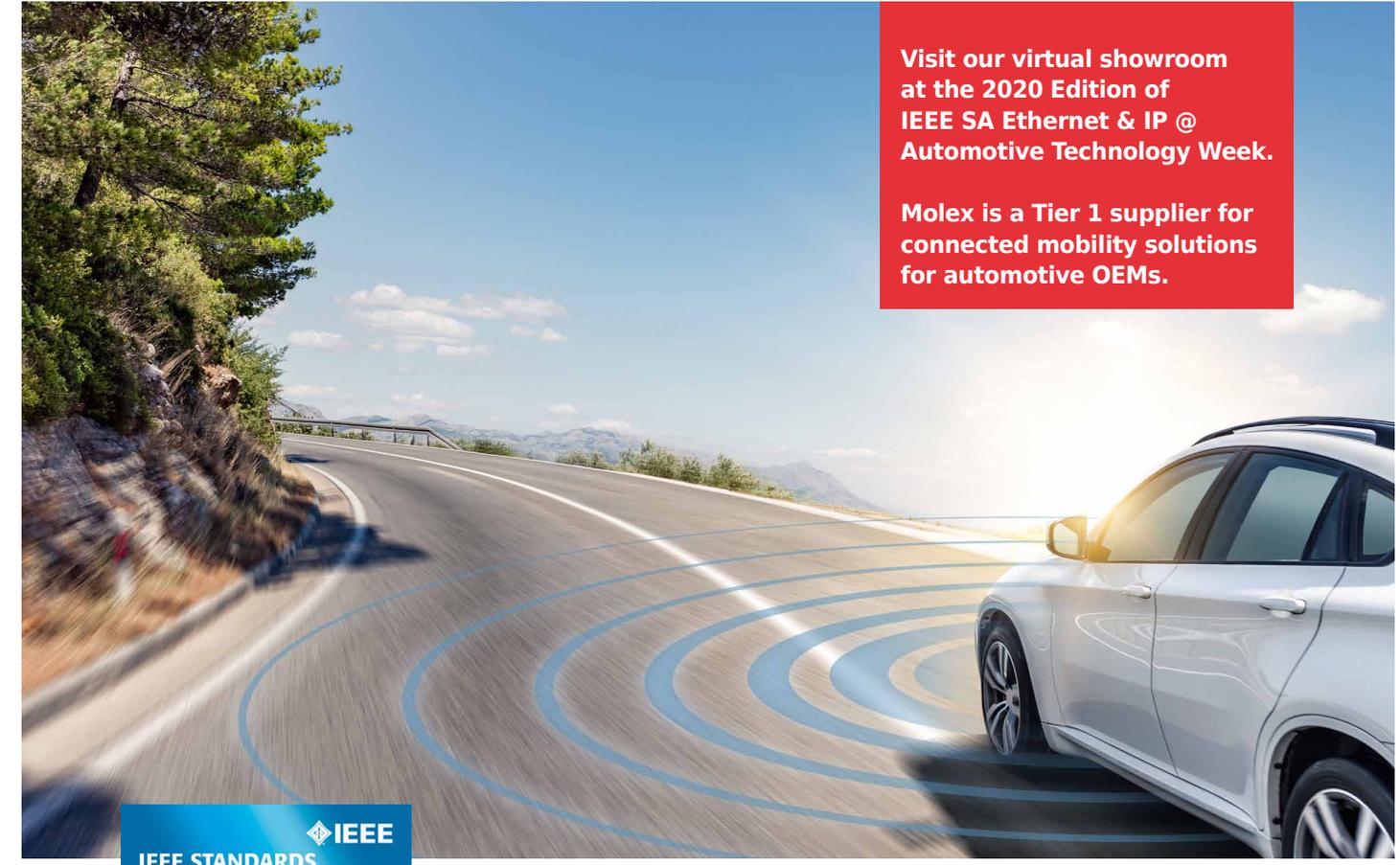
14:00 -14:15 CEST	Welcome and Opening Remarks <i>Rudi Schubert (IEEE Standards Association)</i> <i>Opening: Kirsten Matheus (BMW)</i>
	PHY, Switch, μC
14:15 - 14:45 CEST	HighSpeed Interfaces for HighPerformance Computing <i>Daniel Hopf (Continental)</i>
14:45 - 15:15 CEST	Inter-processor Connectivity for future Centralized Compute Platforms <i>Richard Cannon, Mike Jones (Microchip)</i>
15:15 - 15:30 CEST	Program Break
15:30 – 16:00 CEST	Self-Diagnosis for In-Vehicle Networks <i>Ramin Farjadrad, Dance Wu (Marvell)</i>
	AVB/TSN, Higher Layer Protocols, Software
16:00 – 16:30 CEST	Status and Content of the IEEE TSN Automotive Profile Standard <i>Don Pannell (NXP)</i>
16:30 – 17:00 CEST	Fault tolerant Ethernet Time Synchronization <i>Prathap Venugopal, Soheil Samii (GM)</i>

CONFERENCE AGENDA

WEDNESDAY 16 SEPTEMBER 2020	
	Application, Connectivity
14:00 -14:30 CEST	AUTOSAR 10BASE-T1S <i>Dr. Ahmed Majeed Khan (Mentor)</i>
14:30 - 15:00 CEST	Service-Oriented Gateway Connecting Automotive Ethernet and Cloud for Efficient Development <i>Wonseon Sim (Hyundai Motor Group)</i> <i>Seung Jun Lee (AirPlug, Inc.)</i>
	Network and Architecture
15:00 - 15:30 CEST	DoIP (ISO13400) enhancements for future architectures <i>Max Turner (Ethernovia)</i>
15:30 – 15:45 CEST	Program Break
15:45 - 16:15 CEST	Towards Computer-Aided, Iterative TSN-and Ethernet-based EE Architecture Design <i>Oliver Creighton (BMW Group)</i> <i>Nicolas Navet, Patrick Keller (University of Luxembourg)</i> <i>Jörn Migge, (RealTime-at-Work (RTaW))</i>
16:15 – 16:45 CEST	Holistic Analysis of Task and Message Scheduling in Automotive EE Architecture <i>Hoai Hoang Bengtsson, Martin Hiller and Fredrik Mattsson, (Volvo Car Corporation)</i>
16:45 – 17:15 CEST	Lessons learned of 10+ years Ethernet Development – Ways on keeping the complexity under control <i>Thomas Königseder, Dr. Lars Völker (Technica Engineering GmbH)</i>

CONFERENCE AGENDA

THURSDAY 17 SEPTEMBER 2020	
	Validation and Test
14:00 - 14:30 CEST	Comparing the adoption of TSN between automotive and non-automotive networks <i>Avik Bhattacharya (Keysight (former ixia))</i>
14:30 - 15:00 CEST	A framework to virtually validate Quality of Service contracts in Ethernet-Based vehicle <i>Ricardo Gonzalez de Oliveira, Indrasen Raghupatruni, Damon Martini, Achim Henkel (Robert Bosch GmbH)</i>
	Safety & Security
15:00 - 15:30 CEST	Automotive Network Security Myths Debunked <i>Dr. Lars Völker (Technica Engineering GmbH)</i>
15:30 – 15:45 CET	Program Break
15:45 - 16:15 CEST	Practical Use Cases for Ethernet Redundancy in Automotive <i>Don Pannell (NXP)</i> <i>Nicolas Navet (University of Luxembourg)</i>
16:15 – 16:45 CEST	Safety issues with gPTP and potential solutions <i>Max Turner (Ethernovia)</i>
16:45 – 17:00 CEST	Closing Remarks: <i>Kirsten Matheus (BMW)</i>



Visit our virtual showroom
at the 2020 Edition of
IEEE SA Ethernet & IP @
Automotive Technology Week.

Moxel is a Tier 1 supplier for
connected mobility solutions
for automotive OEMs.



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Enabling Next-Generation Vehicle Technology



In the area of Connected Mobility Solutions, Moxel is leveraging long-standing expertise and deep experience in high-speed networking, datacom, factory automation and automotive solutions to enable the foundation of the connected vehicle.

We develop, produce, test and market innovative solutions for wired and wireless communication. Our technology makes it possible for vehicles to exchange data and voice messages inside and outside the car.

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EXHIBITORS

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Phone: 408 222 2501

To deliver the data infrastructure technology that connects the world, we're building solutions on the most powerful foundation: our partnerships with our customers. Trusted by the world's leading technology companies for 25 years, we move, store, process and secure the world's data with semiconductor solutions designed for our customers' current needs and future ambitions. Through a process of deep collaboration and transparency, we're ultimately changing the way tomorrow's enterprise, cloud, automotive, and carrier architectures transform—for the better.

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Molex combines innovation and technology to deliver electronic solutions to customers worldwide.

With a presence in more than 40 countries, Molex offers a full range of connectivity products, services and solutions for markets that include data communications, medical, industrial, automotive and consumer electronics.

In the area of Connected Mobility Solutions, Molex is leveraging long-standing expertise and deep experience in high-speed networking, datacom, factory automation and automotive solutions to enable the foundation of the connected vehicle.

We develop, produce, test and market innovative solutions for wired and wireless communication. Our technology makes it possible for vehicles to exchange data and voice messages inside and outside the car.

Molex is headquartered in the United States and has over 45,000 employees worldwide.

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Technica Engineering was founded in Munich, Germany, and has branch offices, distributors, and partners in five continents.

At Technica Engineering, we have shaped the Automotive Future for more than a decade. We have been developing Automotive Ethernet solutions since 2008 and we are the trusted engineering and testing partner for the leading OEMs and Tier-1s in the field.

Our innovative Automotive Ethernet hardware and software solutions allow our customers to extensively and efficiently test modern on-board electronic components and networks. As a leading vendor for Ethernet-based products, many OEMs and Tier-1s trust in our hardware solutions for product testing, prototyping, and recording communication. Some hardware examples are our MediaGateway, 1000BASE-T1 MediaConverter, or 100BASE-T1 MediaConverter EMC, which combined with our software, ANDi (Automotive Network Diagnoser), provide the customer the ideal testing equipment combination.

As pioneers in innovation in Automotive Ethernet, we've come up with a unique solution for the support of the most relevant in-vehicle communication: The Capture Modules. Through low latency design and a modular and scalable system, Technica's Capture Modules are the trusted testing tool for today's self-driving test cars. With the support for time synchronization and TECMP, our capture modules once again redefined the state-of-the-art of data recording. Capture Modules are offered for different bus systems, such as CAN/CAN-FD, LIN, Ethernet, 100BASE-T1, and 1000BASE-T1.

With our industry-known experts, we are supporting multiple OEMs by designing and specifying their Automotive Ethernet Systems. We are called to help OEMs to achieve their Automotive Ethernet SOPs and we test ECUs and vehicles as well as supply solutions.

Our team has an outstanding experience with Automotive Ethernet. Our founders, Joseba Rodriguez and Thomas Königseder, started the vision of Ethernet in the Automotive industry, being the leading forces in enabling Ethernet as an in-vehicle communications technology. Thus, Technica Engineering counts with a team of technical fellows, who are leading experts in Ethernet hardware and protocol design, who have created standards for Automotive Ethernet (e.g. SOME/IP), being well-known experts in Automotive Gateways, Diagnostics, Testing, and Security.

Our vision is to grow as an innovative and market-driven technology company, while providing the automotive industry with the missing elements for solving the highly complex challenges in the era of disruptive innovation through our all-in-one solutions.

Our mission is to create the leading know-how in the automotive field and to channel it through our innovative services and testing tools. *(continued on the next page)*

EXHIBITORS (Continued)

We seek to create cost and time-efficient, complex solutions to accurately test the entire E/E architecture of a vehicle; to offer a holistic consulting service of the highest quality; to perform a professional testing of complex ECUs; to encourage innovation and develop solutions adapted to latest automotive market trends; to provide a superior customer service; to foster an inclusive, sustainable, and fair growth based on respect and integrity; to inspire the automotive market and to expand worldwide to reach our global customers and foster partnerships. We create the Automotive Future.
For more information, please visit: <https://technica-engineering.de>.

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Website: <https://www.vector.com>
Company Contact: Falko Thieß
Title: Marketing Expert
Email: falko.thiess@vector.com
Phone: 49 711 80670 5362

Vector is the leading manufacturer of software tools and embedded components for the development of electronic systems and their networking with many different systems from CAN to Automotive Ethernet.

Vector has been a partner of automotive manufacturers, suppliers and related industries since 1988. Vector tools and services provide engineers with the decisive advantage to make a challenging and highly complex subject area as simple and manageable as possible. Worldwide customers in the automotive, commercial vehicles, and transportation industries rely on the solutions and products of the independent Vector Group for the development of technologies for future mobility.

Vector worldwide currently employs more than 3,000 people with sales of EUR 770 million in 2019. With its headquarters in Germany (Stuttgart), Vector has subsidiaries in the USA, Japan, France, Great Britain, Italy, Austria, Sweden, South Korea, India, China, and Brazil.

Automotive Ethernet Product Portfolio

Customers benefit from Vector's products for Automotive Ethernet, that support the vehicle-specific physical layers as well as protocols like SOME/IP, SD, AVB/TSN, DoIP, etc.

Your advantages:

- AUTOSAR compliant design of Automotive Ethernet networks and clusters
- Tools for simulation, analysis, and testing of networks and ECUs
- Interfaces for direct access to Ethernet networks
- Embedded software with low resource requirements to meet the challenges in the Automotive industry

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Xena develops and markets what is probably the world's best Ethernet traffic generation and analysis solutions. Spread across five product lines, these solutions are all primarily used for testing the performance, functionality and QoS of switches, NICs, firewalls and other core networking devices.

Xena's growth reflects the ubiquitous adoption of Ethernet across the global industries of networking, automotive, avionics, industrial, energy, healthcare, and defence, all being fuelled by the technology trends of Internet of Things (IoT), Cloud Data Centres, and 5G. It has business units focused on high-growth technology segments including Automotive Ethernet and Time Sensitive Networking (TSN).

Xena's customer base comprises equipment manufacturers, chip manufacturers, government and defence contractors, service providers, enterprises, and academia.

Founded in Denmark in 2007, Xena is consistently named as one of the top three vendors in this niche. The company has sales offices around the world and markets its solutions through a global network of partners, winning multiple international awards for ease of use, responsiveness to customer needs and disruptive pricing policies.



Capture all in-vehicle traffic with precise **time-stamp**
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(TECMP; time-stamping)
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Time aware traffic injection
Supports all standard protocols



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SPEAKERS (alphabetical by last name)



Hoai Hoang Bengtsson

Dr. Hoai Hoang Bengtsson is a System Architect at Volvo Cars, Sweden. She received her PhD in computer engineering from Chalmers University of Technology, Sweden in 2007. Before starting at Volvo Cars in 2018, she was a senior researcher on cooperative systems at Research Institutes of Sweden (RISE). She has also been appointed assistant professor at Halmstad University and worked with research and development at Saab Group, Gothenburg, Sweden. Her focus at Volvo Cars is in-vehicle networking protocols and real-time scheduling for network/processors. Hoai has a strong research interest in time-critical communication systems for in vehicles as well as between vehicles.



Avik Bhattacharya

Avik Bhattacharya is the Product Manager for L23 Network Test Solutions in Keysight's Ixia Solution Group. Since 2007, he has worked on cutting-edge networking technologies including routing, switching, multiprotocol label switching (MPLS), software-defined networking (SDN), and time-sensitive networking (TSN). During this time, his roles have included R&D engineer, engineering management, and now product management. As an expert in automotive and industrial network testing, he is a frequent presenter for technical events and a contributor to technical blogs and articles. Avik holds a B. Tech degree in computer science and completed his MBA in international business.



Rich Cannon

Rich Cannon is the Compute & Storage Group Manager for EMEA in Microchip. He is responsible for the technical support and business development of Microchip's compute & storage products, including PCIe switches for automotive applications. Rich has experience in many end equipment applications, including communications, enterprise storage, data center and wireless LTE/5G infrastructure. For the past 2-3 years he has been involved in discussions with automotive OEM and Tier 1 for architecting next-generation central vehicle computers supporting high performance, multi-domain processing enabled by PCIe switches. Rich has 22+ years working in technical sales and applications with cutting-edge, highly integrated semiconductor SoC products. Rich graduated with honors in microelectronic systems engineering from the University of Manchester, England.

SPEAKERS (Continued)



Oliver Creighton

Oliver Creighton is an E/E Architect in BMW's E/E Architecture and Automotive Security department. His areas of expertise include onboard Ethernet architecture, variability models across the entire product range, the service-oriented meta model and methodology for the next-generation onboard communication network, and onboard network security. Most recently he has become the organizer of BMW's Center of Competence for Automotive Security.

Before joining BMW in 2016, he has worked as Senior Software Engineer for "Olli," the all-electric autonomous shuttle vehicle from Local Motors, and held various positions during his time at Siemens from 2005-2015, developing a software-intensive system architecture for future electric vehicles (in the RACE project) and also working in program management, consulting, training, and development of requirements engineering techniques for several operating units within Siemens. He received his doctoral degree in computer science from Technische Universität München in 2005.



Shaoan Dai

Shaoan Dai is the Principal Engineer of DSP at Marvell, where he focuses on high-speed Ethernet communication technologies for both the industry and automotive sectors. Dai is the architecture lead on Marvell's unique approach and implementation of 1000BASE-T1 PHY, the first automotive gigabit PHY in the world. He has more than 20 years of comprehensive experience in DSP, control algorithm, power electronics, EMC, high-speed communication and Ethernet. He earned a BS and ME in control engineering from Harbin Institute of Technology, as well as a PhD in ECE from Oregon State University.



Ramin Farjadrad

Ramin Farjadrad is the CTO & VP of Networking/PHYs at Marvell, where he is in charge of developing multi-GHz connectivity solutions for autonomous vehicles, hyperscale data centers, and heterogeneous system-in-package (SiP) integration. In addition to his role at Marvell, he is the chairman of the technical committee for the Networking for Autonomous Vehicles Alliance.

Prior to joining Marvell, Farjadrad founded two companies in Silicon Valley, Aquantia Corp. and Velio Communications Inc., which focused on leading communication/networking technologies. During his tenure at Aquantia Corp., the company received numerous industry awards for Most Respected Private Company (GSA, 2013), Company of the Year (EE Times, 2014), and the EDN Annual Creativity in Electronics Award (2014).

An expert in high-speed communication circuits & systems, signal processing/coding, as well as optimized mixed-mode architectures, Farjadrad has proposed signaling schemes that were adopted in IEEE Standard for Multi-Gbps Automotive Ethernet (802.3ch) and Enterprise Ethernet (802.3bz). He has authored more than 100 US and international patents in the communications/networking fields, some of which have been adopted as the base scheme in Multi-Gig Ethernet for Enterprise (IEEE 802.3bz). He earned a BS in theoretical physics & electronics from Sharif University of Technology, and both a MSc in electrical engineering and a PhD in EECS from Stanford University.

SPEAKERS (Continued)



Ricardo Gonzalez De Oliveira

Ricardo Gonzalez De Oliveira is a doctoral student at the University of Luxembourg and is associated with Robert Bosch GmbH. He has a MSc degree in electrical engineering and information technology from the University of Applied Sciences Darmstadt and a BSc degree in control and automation engineering from Federal University of Santa Catarina. His research interests lie in in-vehicle communication network safety and E/E architecture.



Achim Henkel

Achim Henkel is a Director in the Technical Strategy department of Robert Bosch GmbH. He is in charge of E/E-architecture design and communication simulation frameworks for in-vehicle networks. He received a PhD from the Technical University of Darmstadt, Germany and a “Diplôme de spécialisation” from Supélec, France.



Martin Hiller

Martin has worked in the area of embedded distributed systems and software for over 20 years. He received a MSc in computer science and engineering in 1996, and a PhD in computer engineering (Fault-tolerant systems) in 2002, both from Chalmers University of Technology.

Currently, Martin is a Technical Leader in Software Architecture at Volvo Cars, Sweden. Before joining Volvo Cars in 2015, he worked in the flight software section at ESA’s technological heart, ETSEC, in Noordwijk, The Netherlands, coordinating ESA’s efforts to introduce Integrated Modular Avionics (IMA) principles from the aeronautical domain to the space domain. Prior to ESA, he worked with research and advanced engineering at Volvo Trucks, focusing on dependable embedded systems, AUTOSAR, and automotive electronic architectures.

Martin is currently working with future generations of the automotive electronic architecture at Volvo Cars. The future of the automobile and the automotive industry is moving towards more integrated computerisation, autonomy, and interconnection across vehicles, infrastructure, and cloud. Martin does what he can to ensure that Volvo Cars is prepared for this transformation.

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SPEAKERS (Continued)



Daniel Hopf

Daniel Hopf has been working on in-vehicle networking technologies for the last six years at Continental. During that time, he has been involved in TSN standardization and application, consortia work in both OPEN Alliance and NAV Alliance, and currently is investigating applicability of different MIIs to transport next-generation multigigabit speeds using automotive Ethernet.



Mike Jones

Mike Jones has a 1st Class Masters degree in electronic systems engineering at Aston University in Birmingham, UK. He has more than 10 years of digital design experience in the telecoms industry followed by 20 years high speed networking design in the semiconductor industry. He worked in partnership with automotive OEMs to define and introduce the very first automotive-grade Ethernet devices to market in 2008. Mike is a Senior Product Marketing Manager at Microchip Technology, responsible for automotive Ethernet business strategy and roadmap definition.



Patrick Keller

Patrick Keller received his BS degree in computer science from Saarland University, Germany, in 2015 and his MS degree in information and computer science from University of Luxembourg in 2019.

Prior to his master's studies, Patrick worked two years as a software developer in a social media monitoring startup. Currently he is pursuing his PhD studies at University of Luxemburg, focusing on machine learning and design space exploration in the domain of (automotive) real-time and embedded systems.

SPEAKERS (Continued)



Ahmed Majeed Khan

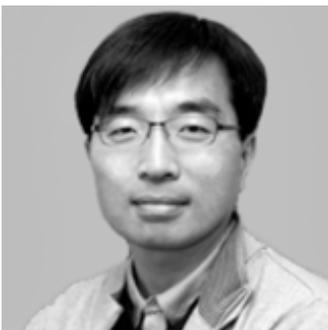
Ahmed Majeed Khan is an engineering leader, experienced in working with cross-functional groups to push the envelope of technology implemented in diverse automotive and consumer electronic domains. A Silicon-Valley veteran with a proficiency to manage onshore and off-shore development of innovative and disruptive products, he has led teams around the globe to produce several high-volume, high quality system-level solutions. Currently, he holds a Senior Engineering Management position at Mentor—A Siemens Business, where he assisted in creation of a market-leading automotive-grade product portfolio. Dr. Khan is also Mentor’s focal point for the international automotive software consortium AUTOSAR. He holds a doctorate in engineering management from George Washington University, an MS in electrical engineering from Michigan State University, and a BE in electronics engineering from National University of Sciences and Technology, Pakistan.



Thomas Königseder

Thomas has more than 20 years of automotive experience. He brought multiple communication technologies as well as ECUs into vehicles. Thomas envisioned automotive Ethernet and led the first automotive Ethernet project in the industry as well as others.

Today, Thomas uses his experience to support many OEMs in automotive Ethernet.



Seung Jun Lee

Seung Jun Lee is a co-founder and CTO of AirPlug, Inc., a Seoul, Korea-based company providing connectivity solutions and services. Dr. Lee has over 25 years of experience in data communication and embedded software. He founded two companies and has more than 50 patents granted. His current focus is on designing optimal automotive connectivity ranging from Ethernet/IP-based in-vehicle connectivity to legacy and external connectivity.

SPEAKERS (Continued)



Damon Martini

Damon Martini is the Lead for Network Communications Timing Simulation in the advanced engineering division at Robert Bosch GmbH. He holds a Bachelor's degree in electronic engineering from the University of Western Australia.



Fredrik Mattsson

Fredrik Mattsson is Senior Strategic Architect at Volvo Cars. Fredrik has been working as a system architect in the automotive industry for more than 20 years. His focus at Volvo cars is embedded real-time systems, automotive software, and product development. Before joining Volvo in 2009, Fredrik was founder, business area manager and senior consultant at Know It, Sweden. Currently, Fredrik is working with development of the next generations of E/E architecture at Volvo Cars.



Jörn Migge

Jörn Migge is the CTO of RealTime-at-Work (RTaW), an SME specializing in simulation and timing analysis for automotive and aerospace systems. He has an extensive experience in network design and network configuration issues. In particular, he led the development of configuration algorithms for several TSN protocols including the Credit-Based Shaper and Time-Aware Shaper. Before joining RTaW in 2008, Jörn worked for 8 years in the R&D department of PSA Peugeot-Citroën on methods and tools for the optimization and validation of embedded software architectures. He has contributed to AEE, ITEA-EAST, AUTOSAR, and TIMMO-2-USE automotive industry-wide projects. He received a PhD in applied mathematics from the University of Nice in 1999.

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SPEAKERS (Continued)



Don Pannell

Donald R. Pannell is a Fellow in the Automotive Ethernet Networking at NXP Semiconductors. Don has architected Ethernet switches and networking solutions for over 25 years, focusing on automotive Ethernet solutions for the last 10 plus years. He has been an active participant and contributor in both IEEE 802.3 and IEEE 802.1 for over 22 years. Don organized the IEEE 802.3 Call for Interest (CFI) for RTPGE, which resulted in 1000BASE-T1 Automotive PHY, and he started the Time Aware Shaper project in IEEE 802.1, now known as IEEE 802.1Qbv. More recently he helped start the new IEEE 802.1 Time Sensitive Networking (TSN) Automotive Profile project, where he is responsible for creating the use case and requirements document.

Don has worked on the IEEE 802.1 AVB/TSN standards since their beginning, and he is currently secretary of the IEEE 1722 working group and editor of the new IEEE 1722b standard (which is standardizing end-node protocols for AVB/TSN). He worked on his first IEEE standard in 1980 and was vice chair of the board of the VESA standards association in 1990. He has been a lead architect for over 30 years at companies including Sierra Semiconductor, I-Cube, Marvell, and now NXP. Don currently has over 80 patents granted with more in the works, and he received his BSEE degree from Loyola University in California.



Indrasen Raghupatruni

Indrasen Raghupatruni is an Associate in the Technical Strategy department of Robert Bosch GmbH. He holds a Master's degree in advanced embedded systems design from the International Institute of Information Technology, India, and a Bachelor's degree in electronics and communications engineering from Jawaharlal Nehru Technology University, India.



Nicolas Navet

Nicolas Navet is a professor of computer science at the University of Luxembourg. His objective is to contribute to the automation techniques and tools that will make it possible to build provably safe E/E architectures in a time and cost-efficient manner.

Since the mid-1990s, Nicholas has worked on many projects with OEMs and suppliers in the automotive and aerospace domains, both as an academic as well as for the company RealTime-at-Work that he created in 2007.

SPEAKERS (Continued)



Soheil Samii

Soheil Samii is a Staff Researcher at General Motors R&D, where he has worked since 2013 on Ethernet TSN and next-generation automotive E/E architectures. He was a voting member of the IEEE 802.1 working group (2014-2017) and made contributions to several automotive TSN standards. He holds a PhD in computer science from Linköping University, Sweden, where he since 2017 holds an adjunct lecturer position.



Wonseon Sim

Wonseon Sim is a Software Architect at Hyundai Motors. He has designed system architecture for seven years and is now designing software architecture for central network ECUs in vehicles.



Max Turner

Max holds a Diploma in physics from the University of Ulm. He joined BMW in Munich at the end of 2002, where he worked on MOST and FlexRay physical layer specifications. From 2005 to 2008 Max worked at the BMW Technology Office in Palo Alto, California, where he focused on DSRC-based V2x communication around IEEE 802.11P and IEEE 1609. After his return to Munich, he started the introduction of Ethernet into AUTOSAR (SocketAdaptor) and became part of the team developing the Diagnostics over IP (ISO 13400) specification. Max was part of the team introducing Ethernet (e.g., SOME/IP) into BMW vehicles and was active in IEEE and AVnu to foster automotive adaptations. Max spent two years at Jaguar Land Rover in Gaydon UK, where he worked on vehicle network architectures focused on automated driving, before joining Ethernovia in 2019, where he serves as Automotive Network Architecture Lead, bringing together OEM experience and latest semiconductor hardware design.

SPEAKERS (Continued)



Prathap Venugopal

Prathap Venugopal has a Master's in embedded systems from SASTRA University, India. Prathap started his career with Siemens Information Systems in 2004, writing diagnostics software and communication middleware for CAN, LIN, and FlexRay protocols based on both OSEK and AUTOSAR standards. After a brief stint at Continental Automotive, he joined General Motors (GM) in 2009 working on electrical architectures. He was the technical lead for AUTOSAR BSW vendor qualification activities and was the GM representative in the CF-CCB, Communication (WP-A2), and Acceptance Testing (WP-T1) work packages of the AUTOSAR consortium.

After joining the R&D division in 2014, Prathap has been leading automotive Ethernet concepts evaluation activities, for GM, which includes Ethernet switches and communication middleware based on both classic and adaptive AUTOSAR. He has been a speaker at the UCSAR-AUTOSAR NA Regional User Group and also leads the Ethernet Subgroup and AUTOSAR-Academic Partnership initiatives.



Lars Völker

Dr. Lars Völker has more than 10 years of automotive Ethernet experience. He was the driving force behind SOME/IP—the most used automotive middleware solution today. He led Ethernet switch requirements in the OPEN Alliance to guide the industry to better automotive Ethernet switches. And he successfully introduced a key and certificate management solution as well as network security into the vehicles of his previous employer.

Today Lars is a Technical Fellow at Technica Engineering and reports directly to the CTO. In this role, Lars is supporting many different OEMs to bring Ethernet-based architectures into series production.



Dance Wu

Dance Wu is a Senior Director of System Engineering at Marvell within the company's automotive business unit. With a history of working in the semiconductor industry, Wu is skilled in automotive electromagnetic compliance, signal and power integrity simulation and real issue resolving, product lifecycle management, and test automation.

Prior to joining Marvell, Dance worked as a design manager for Maple Optical Systems and as a hardware design manager for Allied Telesis. He earned a BS and an MS in electromagnetic theory and microwave circuit from Tsinghua University.

SPEAKERS (Continued)



Peter Wu

Peter Wu is an Engineering Director/Architect at Marvell who specializes in system modeling, budgeting, and algorithm design for mixed-signal PHY transceivers. Peter has more than 20 years of experience within the networking and automotive industries, working on high-speed PHY architecture designs for Ethernet transceivers. He has been active in multiple projects in the IEEE 802.3 working group and ASA TCA.

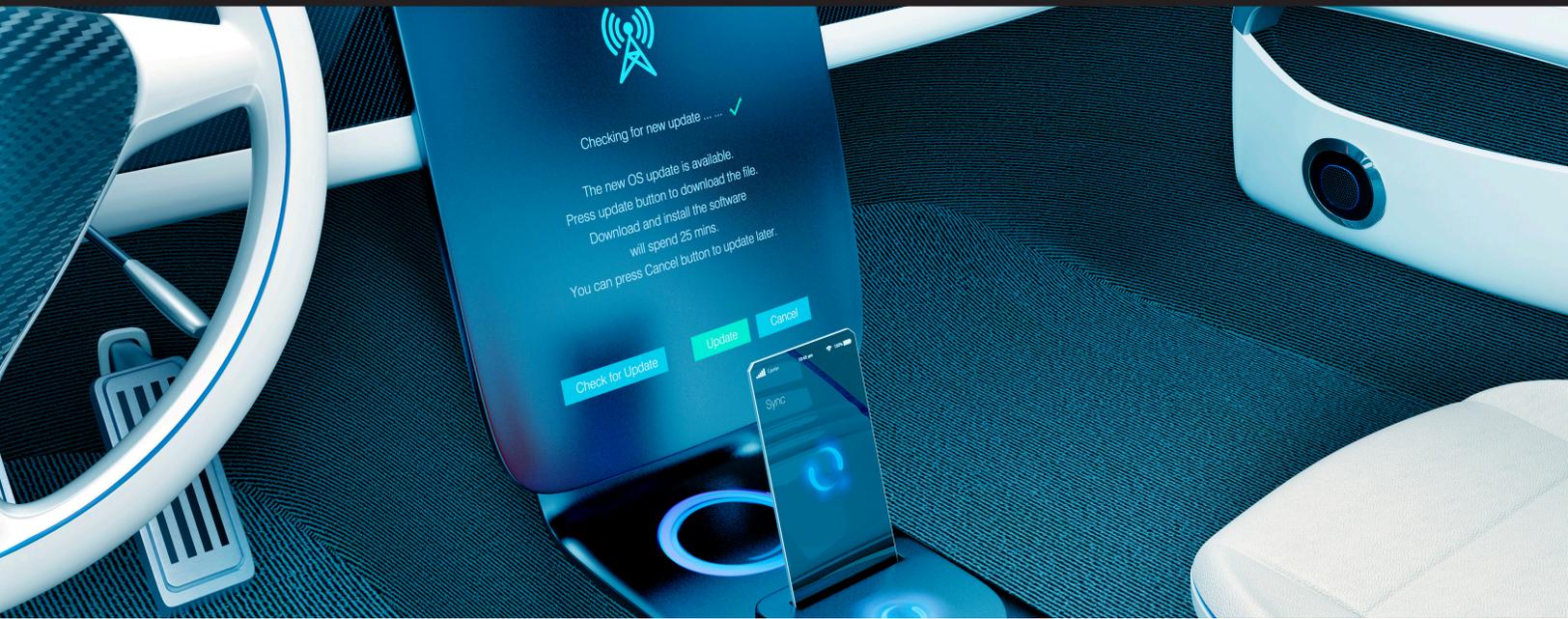
Prior to joining Marvell, Peter worked for Agere Systems/Lucent Micro-electronics, Enable Semiconductors, and National Semiconductors. He earned degrees from the Georgia Institute of Technology and the University of Science and Technology of China.



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