Nuremberg, Germany

11.–13.3.2025

embeddedworld

Exhibition&Conference

CONFERENCE PROGRAM

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Hall 5 / Booth 5-253

embeddedworld
Exhibition&Conference

Prof. Dr.-Ing. Axel Sikora
Chairman of embedded world Conference

embedded world Conference 2025
connecting a global community

Welcome to the 23rd edition of embedded world Exhibition & Conference held in Nuremberg during 11 - 13 March 2025! The **unique combination** of an exhibition for engineers and technical management and a world-leading conference at the intersection of applied research and industrial applications has proven extremely successful. embedded world is **driven by technology** as well as by applications with a strong focus on **system and cross domain aspects.**

Our slogan "connecting a global community" recognizes three aspects of the event:

- It is great to host a global event in Nuremberg that's experiencing a roaring increase in international speakers and visitors from all continents. This goes along with the growing international presence of the embedded world. We now had two top class and very busy editions of embedded world Exhibition & Conference China in Shanghai in June 2023 and June 2024; and we kicked off embedded world Exhibition & Conference North America in Austin (Texas) in October 2024. Schedules for 2025 are 18 – 20 June 2025 for Shanghai, and 4 – 6 November 2025 in Anaheim (California).
- embedded world 2025 will cover all aspects of the development and application of embedded systems, from fundamental technologies to development processes and special fields of applications. It is one of the central strengths of the event to be cross-sectoral and interdisciplinary. The conference provides a platform to bring together experts from different domains and application areas of embedded systems in order to promote a holistic system design perspective, to identify synergies and commonalities, and to strengthen the exchange of knowledge and experiences.

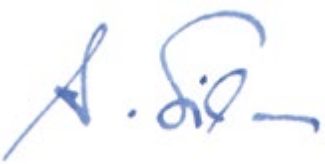
  One key element here is the close collaboration with our community partners, who help us in coping with today's complexity of dependable embedded systems of systems. We organized and are running special sessions with alliances such as the Bluetooth SIG, Edge AI Foundation, Edge AI and Vision Alliance, Global Certification Forum (GCF), MIPI Alliance, IoT M2M Council, MISRA, Zephyr Project, Yocto Project, PICMG/SGET, CAN in Automation or the RISC-V Foundation. This makes the embedded world truly a **community of communities.** We are grateful for this collaboration.
- Connecting embedded systems of systems and the Internet of Things, connecting people and things, and driving the embedded world to new levels – with regards to semiconductor technology, to algorithms, to signal processing. With regards to embedded systems, we are talking about connecting machines. With our embedded world event, we are connecting people and communities!

This 23rd edition of the embedded world delivers a thrilling program **structured along 7 tracks.** The program features a total of **217 hours** of knowledge delivery and exchange.

- All **80 sessions** will not only include **presentations,** but also offer **Q&A rounds** between speakers and participants in each session.
- We will have a **keynote** from Sandra Rivera, CEO of Altera. She will talk on **"Pushing Boundaries: Flexible AI at the Edge"**, one of the hot topics of our industry.
- **20 half- or full day classes** will enable an in-depth knowledge transfer of current and relevant embedded systems topics.
- We will also feature six **expert panel discussions** on relevant overarching topics such as "Hardware Accelerators for AI – Impact on Embedded Vision", "The Future of Cloud Enabled Development of Software Defined Vehicles", "Are SoC Vendors Providing the Right Tools for Edge AI Developers?", "Implementing the Cyber Resilience Act", and "IoT Security: a Holistic Approach to Securing the IoT Stack". And we will have one panel "c-level@embedded world" with top notch industry leaders to discuss strategic questions of the embedded industry.

The steering board of embedded world 2025 wishes all participants stimulating discussions about new ideas and solutions enabling the community to more efficiently cope with the immense challenges that lie ahead for our industries and societies. We welcome you to gain great insights in a pulsating atmosphere.

It will be good to see all of you in Nuremberg … and in Shanghai … and in Anaheim … !



Prof. Dr.-Ing. Axel Sikora
Chairman of embedded world Conference

FREE ADMISSION for all trade fair visitors

Tuesday, 11 March 2025, 10:00, NCC Ost, Level 3, Room TOKIO

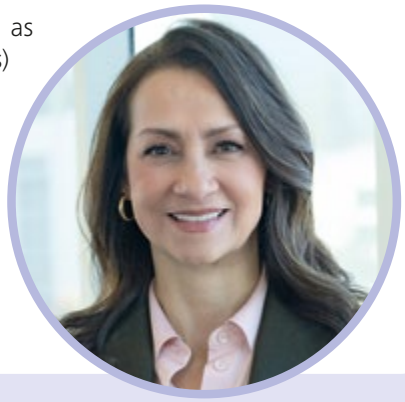
Conference Keynote
Pushing Boundaries: Flexible AI at the Edge

AI is impacting everybody and nowhere is that more apparent than in the tech industry. We interact with chatbots, create content, and search for and analyse data using AI. Whereas most of this happens in the cloud today, Convolutional Neural Networks are already in the edge with smart cameras and other intelligent sensors. Will we see the same progression with Large Language Models such as ChatGPT? With security, low latency, low power and low cost all being critical factors, a different approach to large scale GPU deployment is needed at the Edge, for the Embedded World.

Sandra Rivera

Sandra L. Rivera is chief executive officer of Altera, an Intel Company. Rivera leads Altera as a standalone business focused on development of field programmable gate arrays (FPGAs) that are used across the data center, communications, industrial, automotive, aerospace and defense markets.

Before assuming her current role, Rivera led Intel's Data Center and AI Group, where she guided development of data center products, including Intel Xeon processors, Intel Max and Flex series graphic processors, Intel Gaudi AI accelerators and FPGA products. Rivera also drove Intel's overall artificial intelligence (AI) strategy and product roadmap. In 2023, Rivera was named by TIME Magazine as one of the industry's most influential people in AI.



Expert Panels 2025

Tuesday, 11.3.2025 | Exhibitor's Forum, Hall 5 | Booth 5-210
11:30 – 12:30

Are SoC Vendors Providing the Right Tools for Edge AI Developers?

This panel features invited SoC vendor and ecosystem representatives to discuss their solutions for hardware and software for AI at the Edge. In this space, hardware offerings range from discrete SoCs and SoMs, to complete Edge AI-targeted IPC platforms. Software offerings provided by SoC vendors and software suppliers range from API support for NN/NPU hardware, to complete solutions for AI training and on-device inference. George Grey, founder of Foundries.io, hosts a panel to find out whether Edge AI developers are getting the tools they need. Panel attendees will find out more about key applications for AI at the Edge, what tools are available from vendors to build Edge AI solutions, developer workflow for AI applications, how to compare vendor solutions and tools, and speakers views on the future of AI and Edge computing.

Participants:
- *Manvinder Singh, Vice President Product Management, Qualcomm*
- *Zach Shelby, Chief Executive Officer (CEO), Edge Impulse*
- *Nicolas Gaude, AI Solutions Product Marketing Manager, STMicroelectronics*
- *Ali Osman Ors, Global Director AI Strategy and Technologies, NXP Semiconductors*

Moderation: *George Grey, Foundries.io Lead at Qualcomm*

Tuesday, 11.3.2025 | Conference Area NCC Ost | Room Sydney
13:30 – 14:30

c-level@embedded world

embedded world Exhibition&Conference is the world's largest event on the topic as well as the meeting point for the global community, from deeply technical developers to industry leaders. In the expert panel "c-level@embedded-world", we will have top-level managers from leading companies discussing general trends, overarching challenges and looming opportunities of the embedded world. Join us for an intense discussion with today's thought leaders!

Participants:
- *Deepali Trehan, Head of Product Marketing, Altera, an Intel Company*
- *Dr. Ahmad Bahai, Chief Technology Officer (CTO) and Director of Kilby Labs, Texas Instruments*
- *Remi El Ouzzane, President, Microcontrollers, Digital ICs and RF Products Group, STMicroelectronics*

Moderation: *Prof. Dr.-Ing. Axel Sikora, Offenburg University and Hahn-Schickard Association, Germany / Chairman of the embedded world Conference*

Wednesday, 12.3.2025 | Exhibitor's Forum, Hall 5 | Booth 5-210
11:30 – 12:30

Implementing the Cyber Resilience Act (CRA)

The Cyber Resilience Act (CRA), as a significant legislative milestone of the European Commission, has the potential to heavily influence embedded systems development. Aiming at enhancing the cybersecurity and resilience of products with digital elements, it forces manufacturers and developers to ensure, that their products are secure by design and that vulnerabilities can be addressed throughout the complete product lifecycle. Besides these technical challenges, liability requirements will force the implementation of new processes that ensure transparent updates will be implemented within short time periods. From this panel, the audience will learn how this new framework for cybersecurity can and must be implemented into their products and development processes. Key questions which will be addressed include: What is the content of the CRA? How will it affect companies' processes? What does this imply for IoT and other embedded products? What must be considered from an architectural perspective for the hardware and software implementation? What (open source) solutions are available and will help companies to comply with the CRA?

Participants:

- *Dr. Julien Bernet, Head of Security, Witekio*
- *Mark Hermeling, VP of Global Solutions Engineering, CodeSecure*
- *Caren Kresse, Member of the Board of Directors, OSADL*

Moderator: *Prof. Dirk Pesch, ewC Steering Committee, University College Cork, Ireland*

Wednesday, 12.3.2025 | Conference Area NCC Ost | Room Sydney
13:30 – 14:30

IoT Security: a Holistic Approach to Securing the IoT Stack

Most IoT regulations, standards, and certifications today concentrate on securing devices against attack. But what good is a secure device if the cloud/app or network layers behind it are insecure? This panel will discuss what is required to provide the greatest level of security to IoT deployments by analyzing all layers of the IoT stack. It will also update attendees on the latest security initiative from the IoT M2M Council and Global Certification Forum – the IMC-GCF Joint Task Force on IoT Security – which takes this holistic approach to cybersecurity.

Participants:

- *Patrick Cao, VP of RSP/SIM/eSIM Products, Tata Communications*
- *Syed Hosain, Founder/Evangelist, Aeris*
- *Markus Soppa, Managing Director, filancore*
- *Mike Rohrmoser, VP Product Management OEM Solutions, Digi International*
- *Jean-Francois Gros, Head of IoT Services Product Line, Thales*

Moderator: *Robin Duke-Wooley, CEO/Principal, Beecham Research*

Thursday, 13.3.2025 | Exhibitor's Forum, Hall 5 | Booth 5-210
11:30 – 12:30

Hardware Accelerators for AI – Impact on Embedded Vision

The race to unlock AI's full potential is reshaping the embedded vision landscape, with hardware accelerators at the forefront. From edge devices to autonomous systems, these specialized chips are enabling faster processing, reduced power consumption, and real-time capabilities. AI accelerators promise to push the boundaries of what's possible with AI-driven embedded vision. But as innovation accelerates, so do the challenges of integration, optimization, and scalability. What does this mean for the future of embedded vision? How will these advancements shape industries relying on vision systems, from automotive to healthcare, from retail to logistics, and: will existing edge applications in the machinery and production industry benefit? Join experts from the embedded vision and AI industry as they delve into the transformative impact of hardware accelerators on embedded vision and discuss the breakthroughs, obstacles, and opportunities that lie ahead.

Participants:

- *Dr. Jean Caron, Vice President Sales & Support EMEA, euresys (a TKH Vision brand)*
- *Yash Kharia, Director Product Management, Industrial Embedded IoT Business, Qualcomm Technologies*
- *Dr. Martin Klenke, Director Business Development, Teledyne Imaging*
- *Jan-Erik Schmitt, Vice President, Vision Components*
- *Jan-Friso Blaquière, Vice President Sales, Hailo*

Moderator: *David Löh, Editor-in-Chief, inspect, Wiley-VCH*

Thursday, 13.3.2025 | Conference Area NCC Ost | Room Sydney
13:30 – 14:30

The Future of Cloud Enabled Development of Software Defined Vehicles

The convergence of Software Defined Vehicles (SDVs) and Virtual Prototyping, powered by cloud technologies, is revolutionizing the automotive industry by accelerating development cycles, improving quality, and enhancing safety compliance. Cloud-based platforms enable shift-left and shift-right testing, allowing earlier validation and ongoing optimization throughout a vehicle's lifecycle. Virtual prototyping allows engineers to simulate complex systems without physical tests, cutting time-to-market and costs. SDVs add flexibility with over-the-air updates and real-time monitoring, ensuring compliance with evolving safety, security, and performance standards. Cloud tools support the full development pipeline, fostering a continuous feedback loop that enhances innovation and reliability in next-generation vehicles. The panelists give an insight in the state of the art of cloud based SDV and virtual prototyping from the point of view of cloud service providers, virtual platform providers, IoT/SDV developers and IT services.

Participants:

- *Nicholas Glewicz, Vice President, Judge Group*
- *Bill Neifert, Vice President, Corellium*
- *Christopher Rumpf, Senior Director Automotive & IoT, ARM*
- *Prof. Dr. Dirk Slama, Robert Bosch*

Moderator: *Kanishk Agrawal, CTO, Judge Group*

Expert Panels

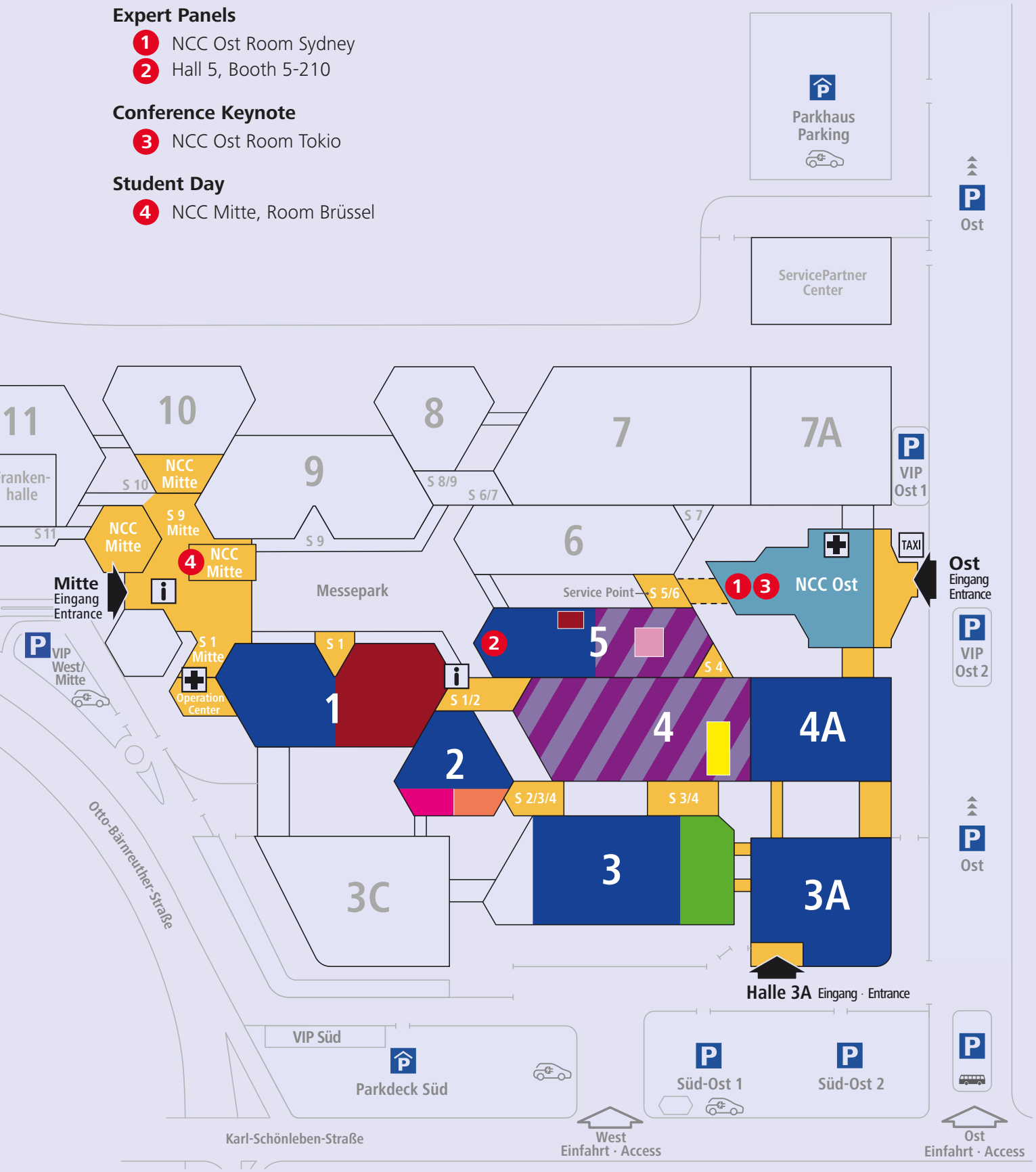
1. NCC Ost Room Sydney
2. Hall 5, Booth 5-210

Conference Keynote

3. NCC Ost Room Tokio

Student Day

4. NCC Mitte, Room Brüssel



Tuesday, 11 March

9:30-13:00	**Class 2.1** **Mastering Docker for Embedded Linux Development: A Hands-On Introduction** Raul Muñoz, Foundries.io **Room Stockholm**	**Class 2.2** **Embedded GNU/Linux for Safety-related Systems – Options and Pitfalls** Nicholas Mc Guire, Open Source Automation Development Lab (OSADL) eG **Room Helsinki**	**Class 3.1** **Embedded Safety Architectures** Alessandro Bastoni, STMicroelectronics **Room Neu-Delhi**	**Class 5.1** **Unit Testing and Code Coverage for Embedded Systems on Target Hardware** Mohamad Ballouk, Vector Informatik Fully booked **Room Singapur**
14:00-17:00	**Class 1.1** **TSN in Practice: From Network-Configuration to Endpoint Solutions** Florian Frick, University of Stuttgart **Room Stockholm**	**Class 3.3** **Embedded Linux Security** Dr. Michael Weiß, Fraunhofer AISEC **Room Helsinki**	**Class 3.2** **Functional Safety Standards IEC 61508, IEC 61511, ISO 26262, ISO 13849 – What are the Basics and What are the Differences?** Ingo Rolle, Hochschule Darmstadt **Room Neu-Delhi**	**Class 7.1** **Introduction to tinyML - Running Deep Learning Models on Low-Power Micro-Controllers** Prof. Daniel Mueller-Gritschneder, Technische Universität Wien **Room Singapur**

Wednesday, 12 March

9:30-13:00	**Class 2.3** **Getting Started with Real-Time Operating Systems (RTOS)** Jacob Beningo, Beningo Embedded Group **Room Stockholm**	**Class 5.2** **C++ and Modern C++ for Embedded Development** Dr. Carmelo Loiacono, Green Hills Software **Room Helsinki**	**Class 5.3** **Practical SysML and MBSE: Basic Guidance for Engineers** Dr. Michael Jastram, Formal Mind **Room Singapur**	**Class 5.4** **Rust, a Safe Language for Low-level Programming** Prof. Dr. Stefan Wehr, Hochschule Offenburg **Room Neu-Delhi**
14:00-17:00	**Class 2.4** **Hands-On Zephyr Project Workshop** Jonas Remmert, PHYTEC Messtechnik **Room Stockholm**	**Class 4.1** **Single Pair Ethernet Design with Power over Data Line with EMC Aspects** Dr. Heinz Zenkner, Würth Elektronik eiSos **Room Helsinki**	**Class 5.5** **Advanced Embedded Rust** Dion Dokter, Tweede golf Fully booked **Room Neu-Delhi**	**Class 7.2** **Rapid Development of Anomaly Detection Machine Learning Algorithms** Bartosz Boryna, STMicroelectronics **Room Singapur**

Thursday, 13 March

9:30-16:30	**Class 2.5** **Introduction to Embedded Linux Using a Yocto Project SDK** Robert Berger, Reliable Embedded Systems **Room Neu-Delhi**	**Class 4.2** **FPGA-Design using C/C++ and High-Level Synthesis** Prof. Dr. Frank Kesel, Hochschule Pforzheim **Room Stockholm**	**Class 4.3** **Ultra Low Power hands-on workshop** Herman Roebbers, Capgemini Engineering **Room Helsinki**	**Class 5.6** **Tuning Software-Tests for Embedded Systems** Dr. Stephan Grünfelder, Stephan Grünfelder **Room Singapur**

Classes:
In the embedded world Classes, reputed experts speak on special topics for half a day or a full day. This format is aimed primarily at participants who want to familiarize themselves thoroughly and efficiently with a specific topic.

Be sure to register now!

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	1. IOT & CONNECTIVITY				2. EMBEDDED OS		3. SAFETY & SECURITY
DAY 1: morning	Session 1.1 **Industrial IoT 1** Room Prag	Session 1.10 **Intelligent IoT** Room Budapest			Session 2.1 **Developing with Zephyr: Introduction** Room St. Petersburg		Session 3.1 **Trustworthy Embedded Devices** Room Istanbul
DAY 1: afternoon	Session 1.2 **Industrial IoT 2** Room Prag	Session 1.11 **OPC UA Use Cases** Room Budapest			Session 2.2 **Developing with Zephyr: How to** Room St. Petersburg		Session 3.2 **Implementing the Cyber Resilience Act (CRA)** Room Istanbul
	Session 1.3 **Localization & Tracking** Room Prag	Session 1.12 **Vehicular Networks** Room Budapest			Session 2.3 **Zephyr for Safety & Security Applications** Room St. Petersburg		Session 3.3 **Security in the Quantum Era** Room Istanbul
DAY 2: morning	Session 1.4 **TSN for Industrial Automation** Room Prag	Session 1.13 **Cellular IoT: 5G & 6G** Room Budapest			Session 2.4 **Developing with Embedded Linux** Room St. Petersburg		Session 3.4 **Qualifiying Safe Embedded Systems** Room Istanbul
DAY 2: afternoon	Session 1.5 **TSN Management** Room Prag	Session 1.14 **Cellular IoT: Emerging technologies** Room Budapest			Session 2.5 **Real-time Linux** Room St. Petersburg		Session 3.5 **Efficient Engineering of Safety/Security Projects 1** Room Istanbul
	Session 1.6 **TSN Synchronization** Room Prag	Session 1.15 **Mesh Networks** Room Budapest			Session 2.6 **Yocto Use Cases** Room St. Petersburg		Session 3.6 **Efficient Engineering of Safety/Security Projects 2** Room Istanbul
DAY 3: morning	Session 1.7 **Fieldbus Applications** Room Prag	Session 1.16 **Bluetooth Technologies** Room Budapest	Session 1.19 **IoT Identify Management** Room Riga	Session 1.22 **Modular & Open Systems** Room Kopenhagen	Session 2.7 **Optimization of Embedded OS** Room St. Petersburg		Session 3.7 **Developing Safe Software** Room Istanbul
	Session 1.8 **Fieldbus Security** Room Prag	Session 1.17 **Bluetooth Channel Sounding** Room Budapest	Session 1.20 **IoT Security Management** Room Riga		Session 2.8 **Over The Air (OTA) Updates** Room St. Petersburg		Session 3.8 **The Way to Safe AI** Room Istanbul
DAY 3: afternoon	Session 1.9 **CAN: Protocols & Security** Room Prag	Session 1.18 **Wireless Connectivity with Matter & Thread** Room Budapest	Session 1.21 **IoT Data Management** Room Riga		Session 2.9 **Virtualization: Hypervisors & Containers** Room St. Petersburg	Session 2.10 **Embedded OS in Automotive Applications** Room Krakau	Session 3.9 **Safety & Security Use Cases** Room Istanbul

Conference Fees

Fees Classes	Full Price
1 Half-Day Class Ticket	EUR 495.00
2 Half-Day Classes Ticket	EUR 990.00
3 Half-Day Classes Ticket	EUR 1295.00
4 Half-Day Classes Ticket	EUR 1490.00
5 Half-Day Classes Ticket	EUR 1795.00
6 Half-Day Classes Ticket	EUR 1990.00

Fees Sessions	Full Price
Sessions 1 Day Ticket	EUR 695.00
Sessions 2 Day Ticket	EUR 845.00
Sessions 3 Day Ticket	EUR 990.00

All fees excluded 19% VAT

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Exhibition Ticket Included

REGISTER ONLINE: www.embedded-world.eu

Terms and Conditions:

1. The attendance fee includes participation on the booked conference days, proceedings, refreshments, and free admission to the embedded world 2025 Exhibition.
2. You will receive a confirmation of your conference registration along with your invoice.
3. Cancellations received in writing before or on 18 February 2025 will be subject to a service charge of EUR 50 for one-day registrations and EUR 100 for several-days registrations. For all cancellations received after 18 February 2025 the full conference fee remains payable. Substitutions within the same company are welcome at any time.
4. The organizers reserve the right to make changes in the program and/or speakers or to cancel sessions/classes if conditions beyond its control prevail.
   Please check www.embedded-world.eu for the latest conference information.
5. Students are granted a 50% reduction, student ID required. Please register online.
6. Exhibitors will receive a discount of 30%. Please use the code: EWC25EXH
7. For registrations of five persons and more from one company, please contact our conference department for special rates.
8. On-site-registration: Please register in advance. For on-site-registration a surcharge of EUR 70 per attendee will apply

4. HARDWARE DESIGN		5. SOFTWARE & SYSTEMS ENGINEERING		6. EMBEDDED VISION	7. EDGE AI
Session 4.1 **CPUs & Coprocessors** Room Oslo	Session 4.4 **MIPI I3C Serial Bus** Room Krakau	Session 5.1 **Programming Languages** Room Kiew	Session 5.10 **Embedded DevOps and CI** Room Riga		Session 7.1 **Compliance for Edge AI** Room Kopenhagen
Session 4.2 **Multiprocessor System Design** Room Oslo		Session 5.2 **Programming Languages: Rust** Room Kiew	Session 5.11 **Open Source Software** Room Riga	Session 6.1 **MIPI for Embedded Vision** Room Krakau	Session 7.2 **Workflows for Edge AI** Room Kopenhagen
Session 4.3 **Developing with FPGAs** Room Oslo	Session 4.5 **MIPI Interfaces** Room Krakau	Session 5.3 **Software Coding Paradigms** Room Kiew	Session 5.12 **Development Processes for SW-Defined Vehicles (SDV)** Room Riga		Session 7.3 **Strategies for Building Edge AI** Room Kopenhagen
Session 4.6 **RISC-V Development Ecosystem** Room Oslo		Session 5.4 **Robust Software Architectures** Room Kiew	Session 5.13 **Test Processes and Strategies** Room Riga	Session 6.2 **Embedded Vision Use Cases** Room Krakau	Session 7.4 **Hardware for Edge AI** Room Kopenhagen
Session 4.7 **RISC-V System Design** Room Oslo		Session 5.5 **Artificial Intelligence (AI) Algorithms** Room Kiew	Session 5.14 **Software Product Quality** Room Riga	Session 6.3 **AI in Embedded Vision Applications** Room Krakau	Session 7.5 **Frameworks for Edge AI** Room Kopenhagen
Session 4.8 **Memory: Test for Zero Defect** Room Oslo		Session 5.6 **Debugging Software & Systems** Room Kiew	Session 5.15 **Test Automation** Room Riga	Session 6.4 **Embedded Vision Interfaces** Room Krakau	Session 7.6 **Smart Sensing Based on Edge AI** Room Kopenhagen
Session 4.9 **Developing Embedded Hardware** Room Oslo	Session 4.11 **Measuring Power Supply Current** Room Krakau	Session 5.7 **MISRA SW Coding Guidelines** Room Kiew			
Session 4.10 **Sensors, Actuators, Radar** Room Oslo	Session 4.12 **Ultra Low Power & Energy Harvesting** Room Krakau	Session 5.8 **Static Code Analysis** Room Kiew			Session 7.7 **Edge AI Case Studies 1** Room Kopenhagen
		Session 5.9 **How to Leverage AI for Development** Room Kiew			Session 7.8 **Edge AI Case Studies 2** Room Kopenhagen

STEERING BOARD

(from left to right):
Prof. Dr. Dirk Pesch,
Dr. Bernd Hense,
Caspar Grote,
Prof. Dr. Axel Sikora,
Prof. Dr. Peter Fromm,
Prof. Dr. Ansgar Meroth.

The steering board is the strategic think tank behind the embedded world Conference. Currently six senior engineers with excellent scientific and business records, with open minds and a lot of ideas, shape the future direction of the embedded world Conference.

The photo was taken at the Hochschule Offenburg, Germany.

	1. IOT & CONNECTIVITY		2. EMBEDDED OS	3. SAFETY & SECURITY
10:00-10:15	Opening & Welcome Remarks | Room Tokio Prof. Dr. Axel Sikora, Hochschule Offenburg/Hahn-Schickard			
10:15-10:45	Conference Keynote: Pushing Boundaries: Flexible AI at the Edge Sandra Rivera, Altera			
	1.1: Industrial IoT 1	**1.10: Intelligent IoT**	**2.1: Developing with Zephyr: Introduction**	**3.1: Trustworthy Embedded Devices**
11:00-11:30	**How Can Connectivity Innovations Transform the Industrial Market?** Jonathan Regalado-Hawkey, Valens Semiconductor	**Intelligently Online When Needed: A Revolution in IoT Cellular Connectivity!** Thomas Larsson, Giesecke+Devrient Mobile Security Germany	**What's in a Name: Is Zephyr Really (Just) an RTOS?** Benjamin Cabé	**From Identification to Trust: Ensuring Brand Protection and Consumer Safety** Benjamin Baratte, STMicroelectronics
11:30-12:00	**Unlocking Value and Driving Innovation: The Power of IoT in Manufacturing** Marc Sauter, Vodafone Business IoT	**How to Get from Sensor Data to an AI Based Realtime Application – A Technical Deep Dive** Simon Kneller, esentri	**Unlocking Streamlined Development and Simplifing Maintenance with Zephyr RTOS for IoT Devices** Luka Mustafa, IRNAS	**Supply Chain Attacks: Strategies for Secure Supply Chain Management** Dr. Martin Neumann, infoteam Software
12:00-12:30	**A Visionary Modelling Approach for Predictive Maintenance in a Highly Regulated Environment** Peter Lieber, SparxSystems Software	**Edge AI Unleashed: Architecting Seamless Cloud-to-Edge Intelligence with Connected Services** Channa Samynathan, Amazon Web Services	**Boosting Product Development with the Zephyr RTOS – A Critical Reflection** Moritz Marquardt, Carl Zeiss	**Demystifying Reverse Engineering Attacks on Embedded Devices** Nils Albartus, Emproof
12:30-12:45	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
	Lunch Break			
	1.2: Industrial IoT 2	**1.11: OPC UA Use Cases**	**2.2: Developing with Zephyr: How to**	**3.2: Implementing the Cyber Resilience Act (CRA)**
13:45-14:15	**Built to Last: Critical Considerations for Future-Ready IoT** Toby Gasston, Wireless Logic	**OPC UA at Field Level with Open Source Solutions** Vasilij Strassheim, Linutronix	**Unlocking Zephyr's Potential: A Practical Guide to Efficient Product Development** Dr. Tobias Kästner, inovex	**Understanding the CRA: Implications for Device Software** Julien Bernet, Witekio
14:15-14:45	**Digital Product Passport as Key Enabler of Circular Economy** Ricardo Dunkel, Open Industry 4.0 Alliance	**LADS OPC UA – Enabling Plug'n'Play Connectivity for Laboratory and Analytical Devices** Dr. Melanie Kahl, infoteam Software	**From Code to Current: Reducing Energy Consumption in Zephyr Device Drivers** Fabian Pflug, grandcentrix	**Compliance Requirements and Implementation for Embedded Devices under the Cyber Resilience Act** Patrick Niklaus, TUV Rheinland Group
14:45-15:15	**Integrating Edge and Cloud: Technical Comparison and Performance Benchmarking of DDS, OPC UA, MQTT, and Kafka** Dr. Gerardo Pardo, Real-Time Innovations (RTI)	**Time Sensitive Networking for Industrial Automation using OPC-UA** Martin Kellermann, Microchip Technology	**Porting a Bluetooth Application to Zephyr OS – Benefits and Challenges** Dr. David Egan, Infineon Technologies	**Implementing a Robust Firmware Signing Infrastructure Complying with the CRA** Guillaume Crinon, Keyfactor
15:15-15:30	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
	Coffee Break			
	1.3: Localization & Tracking	**1.12: Vehicular Networks**	**2.3: Zephyr for Safety & Security Applications**	**3.3: Security in the Quantum Era**
16:00-16:30	**AI-Driven Dynamic Multiprotocol Integration for Enhanced IoT Connectivity and Localization** Dr. Wael Guibene, Silicon Labs	**The Emerging Importance of Connected V2X Mobility for Safety on Roads** Thomas Jaeger, DEKRA SE	**Preparing for the CRA when using Open Source Projects** Kate Stewart, Linux Foundation	**Protecting Devices and Data In the Quantum Era** Bart Stevens, Rambus
16:30-17:00	**Is Tracking the Killer App for IoT? Incorporating Find My Functionality into Bluetooth Devices** Dr. David Egan, Infineon Technologies	**Vehicle Communication System in Distributed Data Space** Matija Bedeković, Cetitec	**Zephyr as a Secure Choice for Embedded Development** Pierre Lecomte, Witekio	**Quantum-Resilient Architectures, Embedding Tomorrow's Security in Today's IoT** Kevin Hilscher, DigiCert
17:00-17:30	**HD-FDD and the Art of Seamless Asset Tracking** Igor Tovberg, Sony Semiconductor Israel	**Applying TSN and DDS to Software Defined Vehicles and Other Real-time Edge Applications** Dr. Gerardo Pardo, Real-Time Innovations (RTI)	**Testing Embedded Software With Zephyr** Mohammed Billoo, MAB Labs Embedded Solutions	**Crypto Agility for Industrial & IoT: Challenges and Opportunities when Migrating to Post-Quantum Cryptography** Dr. Joppe Bos, NXP Semiconductors
17:30-17:45	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A

4. HARDWARE DESIGN	4. HARDWARE DESIGN 5. SOFTWARE & SYSTEMS ENGINEERING	5. SOFTWARE & SYSTEMS ENGINEERING	5. SOFTWARE & SYSTEMS ENGINEERING 6. EMBEDDED VISION	7. EDGE AI
Opening & Welcome Remarks | Room Tokio Prof. Dr. Axel Sikora, Hochschule Offenburg/Hahn-Schickard				
Conference Keynote: Pushing Boundaries: Flexible AI at the Edge Sandra Rivera, Altera				
4.1: CPUs & Coprocessors	**4.4: MIPI I3C Serial Bus**	**5.1: Programming Languages**	**5.10: Embedded DevOps and CI**	**7.1: Compliance for Edge AI**
Processing and Power Subsystem Co-development for Sustainable and Cost Effective Time to Market Juan Romero, NXP Semiconductors	**An Introduction to MIPI I3C, the Next-Generation Serial Bus Enabling Industrial Applications** Michele Scarlatella, MIPI Alliance	**Making C++ Safe – or Better go Rust, C# or Cpp2?** Klaas van Gend, Sioux Technologies	**Embedded DevOps: Hardware in the CI Loop and the Transformative Power of Sharing Work-in-Progress** Darwin Sanoy, GitLab	**Law Compliance of AI Systems** Prof. Dr. Julius Schöning, Osnabrück University of Applied Sciences
Designing Domain Specific Accelerators with High-Level Synthesis Prof. Russell Klein, Siemens EDA	**Best Practices for Smooth Adoption of the MIPI I3C Interface** Martin Cavallo, Binho LLC	**Rust Embedded Ecosystem: An Overview** Tamme Dittrich, Tweede golf	**Toward Continuous Firmware Delivery** Guilherme Costa, Stratio Automotive	**Qualification of AI/ML Systems and Interfacing Devices** Steve Di Camillo, LDRA
Mastering the Art of Microcontroller Selection for IoT and Edge Computing Innovations: A Deep Dive Sakshi Madaan, Anders Electronics	**Enabling Next-Generation Embedded Vision Systems with MIPI I3C** Marie-Charlotte Leclerc, STMicroelectronics	**Embedded MicroPython: Viable and Surprisingly Capable for IoT and Embedded Systems** Brad Stewart, AeroSynth	**DevSecOps for Linux-Based MPUs** Laurent Sustek, STMicroelectronics	**Design, Exploration and Evaluation of Safety-Critical Software for Integrating AI/ML-based Algorithms** Dr. Gabriel Pedroza, Ansys
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
Lunch Break				
4.2: Multiprocessor System Design	**5.2: Programming Languages: Rust**	**5.11: Open Source Software**	**6.1: MIPI for Embedded Vision**	**7.2: Workflows for Edge AI**
Enhance the Software Developer Experience in Semiconductor Industry Dr. Stefano Mangioni, Accenture	**Rust in Embedded Systems: Safe and Efficient Programming for the Next Generation of IoT Devices** Joseph Schneider, Dojo Five	**Enabling Software Defined Vehicles through Open Source Software** Dan Cauchy, Automotive Grade Linux	**Empowering Autonomous Driving: The Impact of MIPI CSI-2 on Advanced Sensor Technologies** Simon Bussieres, Rambus	**AI-Powered Workflow Automation: Autonomous Service Labeling and RAG Systems** Dr. Philipp Dumbach, infoteam Software
How Many CPUs is too Many? Hugh Breslin, Microchip Technology	**Using Rust with Existing Systems** Dion Dokter, Tweede golf	**Enabling Safety in the SDV with Open-Source Software** Dr. Alexander Mattausch, Elektrobit Automotive	**Machine Vision Processing of Event-based Sensor with MIPI Interface on FPGAs** Satheesh Chellappan, Lattice Semiconductor	**Leveraging Automated AI Model Discovery and Development for Edge Processing** Ali Osman Ors, NXP Semiconductors
Network Traffic Tunneling on Heterogenous SoCs Nitika Verma, Texas Instruments	**Rust for Medical Device Development** Milica Kostic, Zuhlke Engineering	**Open-source GPU Drivers: Why you need them for your Embedded Products** Samuel Iglesias Gonsálvez, Igalia	**Addressing the Challenges in the Medical Industry's Transition to Disposable Endoscopes** Jonathan Regalado-Hawkey, Valens Semiconductor	**Tackling ML Performance Challenges In Multichannel Edge Environments** David Steele, Arcturus
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
Coffee Break				
4.3: Developing with FPGAs	**4.5: MIPI Interfaces**	**5.3: Software Coding Paradigms**	**5.12: Development Processes for SW-Defined Vehicles (SDV)**	**7.3: Strategies for Building Edge AI**
Enhancing Workflow of FPGA Development through Container Orchestration Jonathan Hendriks, Zuhlke Engineering	**Genius in Simplicity: A Practical Guide to Connecting DSI-2 Display Panels to Microcontrollers in Embedded Applications** Dr. Mohamed Hafed, Introspect Technology	**Low-Latency Embedded Applications: Optimizing for Speed and Responsiveness** Ofra Bechor, Green Hills Software	**Rapid Prototyping for Software-Defined Vehicles with GenAI and the digital.auto Playground** Prof. Dr. Dirk Slama, Bosch	**Contextual AI and the Creation of Efficient On-Device Assistants** Dominic Pajak, Synaptics
Hybrid Verification Approaches for Large-scale FPGA-based SoCs Moumon Chatterjee, Ericsson	**How Universal Flash Storage is Enabling Edge-AI in Automotive and Industrial Applications** Bruno Trematore, KIOXIA Europe (Speaking on Behalf of MIPI Alliance and JEDEC)	**Understanding "Memory Safety": Guarantees, Limits, and Different Solution Approaches** Dr. Martin Becker, The MathWorks	**Solving the Complexities behind Software Integration for SDVs** Salvador Rodriguez Lopez, TTTech Auto	**How to Bridge Technological Gaps in Edge AI Industrial Applications** Umar Ahmad, Advantech Europe
From Breadboard to FPGA Pablo Trujillo, controlpaths	**Soundwire When Compared to I2S and TDM** Saravana Kumar Muthusamy, Soliton Technologies	**Typedefs and Records and Generics, oh my: New Type Safety Features Coming in C2Y** Alex Celeste, Perforce Software	**How Continuous Integration is Transforming the Automotive Industry** Philip Miesbauer, Jaguar Land Rover	**How to Run Big AI Models Using NVIDIA TAO on the Latest CortexM85 ARM Based MCU's** Amir Sherman, Edge Impulse
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A

Want more? See page 7 for additional classes!

	1. IOT & CONNECTIVITY		2. EMBEDDED OS	3. SAFETY & SECURITY
	1.4: TSN for Industrial Automation	**1.13: Cellular IoT: 5G & 6G**	**2.4: Developing with Embedded Linux**	**3.4: Qualifiying Safe Embedded Systems**
10:00-10:30	**Keys to Scaling Time-Sensitive Networks and vPLCs for Mass Adoption of Industry 4.0** Christopher Main, TenAsys	**Reality Check 5G IoT: Revolution Delayed?** Peter Gaspar, A1 Digital International	**The Status of Debian for Embedded Systems** Leonardo Held, Toradex	**Successful SIL4 Project thanks to HIL Testing During Development** Michael Weiß, Hitex
10:30-11:00	**TSN-based Factory Backbone as an Enabler for vPLCs** Philipp Neher, University of Stuttgart	**Seamless Transitions between Terrestrial and Satellite Networks in IoT Systems** Marco Guadalupi, Sateliot	**Porting an Embedded Linux Driver from C to Rust** Remo Senekowitsch, ZHAW Institute of Embedded Systems	**Level up your Embedded Testing Game – Fretish, Robot and Twister: A Dream Team** Christian Schlotter, Carl Zeiss Meditec
11:00-11:30	**DetNet: How Industrial Automation Benefits from Cloud and Internet Technologies** Dr. Florian Kauer, Linutronix	**Green FPGA: The Role of FPGA in Waveform Agnostics Radio Unit (RU) for 5G and 6G Applications** Dr. Hossam Fattah, Lattice Semiconductor	**Running Sandboxed Programs in the Linux Kernel – Practical Use-cases for eBPF** Jan Altenberg, Open Source Automation Development Lab (OSADL)	**Task Monitoring Unit for Temporal and Logical Flow Measurement in Safety Critical Automotive Microcontroller Units** Giuseppe Dangelo, STMicroelectronics
11:30-11:45	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
	Lunch Break			
	1.5: TSN Management	**1.14: Cellular IoT: Emerging technologies**	**2.5: Real-time Linux**	**3.5: Efficient Engineering of Safety/Security Projects 1**
12:45-13:15	**Enabling Intent-based Network Management for TSN by Modelling Complex Dependencies** Hamza Chahed, Karlstad University	**GCF Certification for Emerging IoT Cellular Technologies: 5G RedCap and NTN NB-IoT** Carlos Pedraz Rodríguez, Global Certification Forum	**Evolving IoT Patterns in Heterogeneous Multicore for Linux Real-Time (RT)** Richard Elberger, Amazon Web Services	**Dangers of Over-Engineering a Safe System** Louay Abdelkader, BlackBerry QNX
13:15-13:45	**Ensuring Reliable TSN Management by Monitoring Time Synchronization Precision** Kedar Dnyaneshwar Naik, Hochschule Offenburg	**SGP.32: Advancing Remote SIM Provisioning for the IoT** Bertrand Moussel, Trusted Connectivity Alliance	**Real Time Networking with PREEMPT_RT** Kurt Kanzenbach, Linutronix	**How Much Safety Can You 'Buy' for Less than a Dollar?** Maria Teresa Jacob, Microchip Technology
13:45-14:15	**Analyzing and Solving Common Interoperability Challenges in TSN-Networks** Kilian Brunner, ZHAW, Zurich University of Applied Sciences	**GCF Certification of Remote SIM Provisioning for Devices with IoT eSIM** Lars Skjold Nielsen, Global Certification Forum	**Optimizing Boot Time for Embedded Linux Systems Performance** Frederic Hoerni, The Embedded Kit by WITEKIO	**Mind the Economic Safety Gap: Accelerating Safety Innovation using Generative Artificial Intelligence** Andreas Kreutz, Fraunhofer IKS
14:15-14:30	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
	Coffee Break			
	1.6: TSN Synchronization	**1.15: Mesh Networks**	**2.6: Yocto Use Cases**	**3.6: Efficient Engineering of Safety/Security Projects 2**
15:00-15:30	**Clock Manager: Revolutionizing Industrial Clock Synchronization with Real-Time Monitoring** Jun Ann Lai, Intel	**Self-Organizing Mobile Mesh Network** Torsten Ohlenforst, Fraunhofer IIS	**Application Integration on Yocto-based Linux Systems** Pierre Gal, The Embedded Kit	**Developing Safety Systems with Agile Methods** Andre Schmitz, Green Hills Software
15:30-16:00	**5G TSN Integration: Achieving Nanosecond-Level Time Synchronization Accuracy for Time-Critical Applications** Weifeng Voon, Intel Microelectronics	**Off-Grid Emergency Mesh: IoT-Enabled Meshtastic Networks for First Responders** Channa Samynathan, Amazon Web Services	**Building Yocto-based Linux Systems for Medical Device Compliance** Pierre Lecomte, Witekio	**A Model-based Approach to Safety-critical Automotive Systems** Dr. Bernhard Kaiser, Ansys Germany
16:00-16:30	**Time Synchronization over Network Redundancy in Real-Time Applications** Daolin Qiu, Texas Instruments	**Holistic Framework for LPWAN Protocol Development** Johannes Neyer, ZHAW Institute of Embedded Systems	**Unlocking Secure OTA Updates for IoT at Scale with Yocto and Containerization** Raul Muñoz, Foundries.io	**Open Source Software in Safety-Critical Applications: Challenges and Collaborative Solutions** Philipp Ahmann, ETAS (BOSCH)
16:30-16:45	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A

4. HARDWARE DESIGN	5. SOFTWARE & SYSTEMS ENGINEERING		6. EMBEDDED VISION	7. EDGE AI
4.6: RISC-V Development Ecosystem	**5.4: Robust Software Architectures**	**5.13: Test Processes and Strategies**	**6.2: Embedded Vision Use Cases**	**7.4: Hardware for Edge AI**
Moving to RISC-V: Is it Really that Difficult? Designing Software to be Futureproof Hugh Breslin, Microchip Technology	**The Role of Reusable Software Components in Safety-Critical Software Development** Ehsan Salehi, LDRA	**20 Years of Embedded Linux Quality Testing – Lessons Learned** Alexander Bähr, Open Source Automation Development Lab (OSADL)	**YOLOX Networks in Embedded Vision: Novel Tiled Training and One-Shot Inference for Small Object Detection, Quality Inspection, and Deployment** Marco Roggero, The MathWorks	**Channeling AI to Revolutionize Semiconductor Dynamics** Dr. Marco Addino, Accenture
Transforming the RISC-V Landscape: The Path to Ecosystem Alignment Angel Berrio, Quintauris	**From Defense to Offense: A Paradigm Shift in Error Handling** Tyler Hoffman, Memfault	**Qualification of AI for Embedded Systems Testing: Accelerating DevSecOps Workflows** Rainer Poisel, honeytreeLabs	**OpenVX for Automotive: Accelerating Vision Processing Across Diverse Sensors** Raphel Cano, Robert Bosch	**Multi-die Design for Edge AI Applications** Hezi Saar, Synopsys
How to Enable RISC-V Processor Customization without Re-verifying the Whole Processor Dr. Zdenek Prikryl, Codasip	**Embedded Software Development for Complex System-on-Chip (SoC) Architectures** Marcus Nissemark, Green Hills Software	**Software Integration Testing for Functional Safety** Jeffrey Fortin, Vector Informatik	**Intelligent Glasses for Kids' Screentime Tracking** Daniel Rossbach, Hahn-Schickard Gesellschaft für Angewandte Forschung e.V.	**Multi-instance Machine Learning Models on Limited Hardware Resources** Bartosz Boryna, STMicroelectronics
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
Lunch Break				
4.7: RISC-V System Design	**5.5: Artificial Intelligence (AI) Algorithms**	**5.14: Software Product Quality**	**6.3: AI in Embedded Vision Applications**	**7.5: Frameworks for Edge AI**
CVA6 MMU-less Virtualization – From Hardware to Software, and Vice Versa! Dr. Sandro Pinto, Universidade do Minho / Zero-Day Labs	**Optimizing Implementation of AI Algorithms in Automotive Products** Petri Solanti, Siemens EDA	**Why Model Based Development Alone is not Sufficient to Ensure Safety and Security in Critical Embedded Software?** Mark Richardson, LDRA	**Deploying Vision-Language Model Applications Efficiently on Embedded Devices** Amit Badlani, Ambarella	**Bringing Machine Learning to Embedded Devices with ExecuTorch** Christopher Seidl, Arm
Wearable Biomarker Processing using Speckle Plethysmography Based on an Embedded RISC-V ASIP Carsten Rolfes, Fraunhofer IMS	**Ensuring Safety in AI/ML-Driven Embedded Systems** Ricardo Camacho, Parasoft	**Virtual ECUs: Redefining Scalability and Efficiency in Embedded Software Development, Debugging and Testing** Matthias Scheid, TASKING Germany	**State-Space Language Models for Visual Language Tasks: Advancing Efficiency in Embedded Visual Systems** Bram-Ernst Verhoef, AXELERA AI	**Bridging the TinyML Language Gap with MicroPython and Emlearn** Jon Nordby, Soundsensing
The Benefit of RISC-V for Machine Learning Applications Itai Yarom, MIPS	**Using Intermediate Representations to Comprehend Embedded Software and Power Retrieval Augmented Generation** Daniel Hensley, Driver AI	**Importance of Control Coupling Analysis in Certifying Safety Multicore Systems** Ehsan Salehi, LDRA	**Fast Online Recognition of Gestures using Hardware Efficient Spatiotemporal Convolutional Networks via Codesign** Dr. Anthony Lewis, Brainchip	**Tiny AI for Safety-Critical Embedded Systems** Jonas Messner, Robert Bosch
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
Coffee Break				
4.8: Memory: Test for Zero Defect	**5.6: Debugging Software & Systems**	**5.15: Test Automation**	**6.4: Embedded Vision Interfaces**	**7.6: Smart Sensing Based on Edge AI**
An Easy RTL Approach to Boost up IP Subsystem Scan Test Coverage Shanshan Zhou, Synopsys	**Comparing Debugging Strategies to Enhance System Reliability** Dr. Carmelo Loiacono, Green Hills Software	**Overcoming Challenges Deploying GoogleTest Unit Testing Frameworks for C/C++ Embedded Software Compliance** Miroslaw Zielinski, Parasoft	**Kamaros – The Embedded Camera Open API Standard from Khronos** Naushir Patuck, Raspberry Pi	**Sensor Hub for Near-Sensor Low-latency Data Fusion in AI System** Dr. Hoon Choi, Lattice Semiconductor
Silent Data Corruption (SDC) and No Trouble Found (NTF): Ways of Improving Industrial Semiconductor Test Towards 0ppm Prof. Dr. Peter Poechmueller, Neumonda	**Highest Availability Needs In-field Debugging** Dr. Albrecht Mayer, Infineon Technologies	**Lessons Learned from Automated Testing of Embedded Devices** Leonardo Held, Toradex	**Migrating to COM Express for Rapid NPI** Jeff Baldwin, Sealevel Systems	**AI-based IoT Sensors with Autoencoders** Kolja Bohne, SSV Software Systems
Errors to Avoid to Ensure Your Storage Media Lasts as Long as Your Device Thom Denholm, Tuxera	**Everything You [N]ever Wanted to Know About Hardware Tracing – Utilizing Your Microcontroller's Trace Capabilities for Maximum Timing Insights** Harald Paschke, TASKING Germany	**Integration Tests for Embedded Linux in CI: Labgrid as the Foundation for Your Testing Workflow on Series Hardware** Chris Fiege, Pengutronix	**Precision Time Synchronization over MIPI Interfaces (Case Study)** Roman Mostinski, Mobileye	**Where Analog Signal Chains Meet the AI World** Dr. Andrei Cozma, Analog Devices
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A

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	1. IOT & CONNECTIVITY			1. IOT & CONNECTIVITY 2. Embedded OS
	1.7: Fieldbus Applications	**1.16: Bluetooth Technologies**	**1.19: IoT Identify Management**	**1.22: Modular & Open Systems**
09:30-10:00	**Audio Solutions with TSN – Architecture for Zonal Automotive ECUs** Nilabh Anand, Texas Instruments India	**Examining the Bluetooth Technology Roadmap: Key Upcoming Features and Emerging Use Case Trends** Damon Barnes, Bluetooth SIG	**Self-Sovereign Identity: Pioneering the Implementation of New EU Regulations** Markus Soppa, Filancore	**Efficiency Unleashed: The Advantages of Modular Embedded Systems and Open Standards** Ansgar Hein, SGET e.V.
10:00-10:30	**Secure Firmware Updates over 10BASE-T1L: Leveraging Rust and Zephyr for Industrial IoT with Single-Pair Ethernet** Aengus Gorey, Analog Devices International	**Unlocking the Potential of Bluetooth for IoT: Best Practices for Enabling Cloud Connectivity** Donatien Garnier, Blecon	**Are You Doing Device Management Right on Your IoT Device?** Reuben Miller, Cumulocity	**Rapid Deployment of IoT Infrastructure on Standards-based SOMs and Open-source Software** Dario Freddi, SECO
10:30-11:00	**10BASE-T1S – Bringing Ethernet to the Edge for Industrial and Building Automation** Mary Sue Haydt, Microchip Technology Germany	**Seamless Connection Switching in Bluetooth Low Energy Applications** Gerhard Willbold, Microchip Technology	**Securing Industry 4.0 with Digital Identities for Embedded Components** Florian Handke, Campus Schwarzwald	**Open Hardware Standards Help Pave a Path to Software-Defined Manufacturing** Steve Bitar, ExxonMobil
11:00-11:15	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
	Coffee Break			
	1.8: Fieldbus Security	**1.17: Bluetooth Channel Sounding**	**1.20: IoT Security Management**	**2.8: Over The Air (OTA) Updates**
11:45-12:15	**Hardware and Lifecycle Requirements for Secure PROFINET Devices** Prof. Dr. Karl-Heinz Niemann, Hochschule Hannover	**Emerging Technology Update: Bluetooth Channel Sounding** Damon Barnes, Bluetooth SIG	**The Rising Importance of Managed Certificates in Industrial Systems: Enhancing Trust in OT Communications** Florian Handke, Campus Schwarzwald	**Delivering Reliable OTA Updates in Diverse IoT Environments** André Detsch, Foundries.io
12:15-12:45	**Approaches to CAN Security in the Context of the Open Systems Interconnection Layer Model** Dr. Martin Merkel, CAN in Automation	**How to Improve Channel Sounding Accuracy using Two Antennas** Charlie Ice, NXP Semiconductors	**EDEN: A Secure Embedded Data Ecosystem Network** Dr. Susan Rea, Munster Technological University	**A/B Partitioning: a Path to Robust OTA Updates for Linux Systems** Josef Holzmayr, Northern.tech (Mender.io)
12:45-13:15	**microTLS: Optimizing TLS-PSK for Secure Communication in Resource-constrained Embedded Networks and Communication Channels** Peter Scheydt, Embedded Systems Academy	**Important Factors for Channel Sounding System Designs** Arne Bestmann, Lambda:4 Entwicklungen	**Final Integrated Solution and Validation Results of the ERATOSTHENES Holistic IoT Devices Security and Privacy Respecting Architecture** Konstantinos Loupos, INLECOM	**Securely Updating the ML Assets in your IoT Device** Samuel Taylor, Arm
13:15-13:30	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
	Lunch Break			
	1.9: CAN: Protocols & Security	**1.18: Wireless Connectivity with Matter & Thread**	**1.21: IoT Data Management**	**2.9: Virtualization: Hypervisors & Containers**
14:30-15:00	**CAN FD Light – Enabler for Low Cost End Nodes** Gregor Sunderdiek, Robert Bosch	**Connecting Matter with Thread Networks to the Internet** Charlie Ice, NXP Semiconductors	**Benchmarking Network Startup Time for Security-enforced Industrial IOT Devices** Nilabh Anand, Texas Instruments India	**Porting of a Static Partitioning Hypervisor to TC4 Platforms** David Cerdeira, OSYX Technologies
15:00-15:30	**Consequences of Cybersecurity Acts and Regulations for Non-Internet Embedded Networks and Communication Channels** Olaf Pfeiffer, Embedded Systems Academy	**Evaluating Smart Home Connectivity Options from a User's Perspective** Devanjan Sikdar, Silicon Labs	**Data Modelling in Complex Communication Systems** Stjepan Gornik, Cetitec	**Rethinking Embedded Virtualization: Flexible Static Partitioning** Jose Martins, University of Minho/OSYX Technologies
15:30-16:00	**CAN XL – Enabler for Future-proof E/E Architectures** Dr. Arthur Mutter, Robert Bosch	**Sustainable IoT Gateway Architecture: Enhancing Energy Efficiency with Thread and Matter** Dr. Wael Guibene, Silicon Labs	**Real-time Data Management on NAND Flash Storage** Steve Graves, McObject	**Using Containers for Flexible Hardware Development and Troubleshooting** Drew Moseley, Toradex
16:00-16:15	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A

2. Embedded OS 3. SAFETY & SECURITY	3. SAFETY & SECURITY 4. HARDWARE DESIGN	4. HARDWARE DESIGN	4. HARDWARE DESIGN 5. SOFTWARE & SYSTEMS ENGINEERING	5. SOFTWARE & SYSTEMS ENGINEERING 7. EDGE AI
2.7: Optimization of Embedded OS	**3.7: Developing Safe Software**	**4.9: Developing Embedded Hardware**	**4.11: Measuring Power Supply Current**	**5.7: MISRA SW Coding Guidelines**
An Approach to a Maintainable OS-solution Based on Embedded Linux, Safe and Secure Dr. Michael Armbruster, emlix	**Debunking the Myth: How, Why, and When CPU Self Test Libraries Boost Microcontrollers Safety** Alessandro Bastoni, STMicroelectronics	**Design of a Surface-Mounted Qi-Compliant Wireless Power Coil** Tobias Egerland, Würth Elektronik eiSos	**Growing Significance of Battery-less BLE and its IoT Use Cases** Jay Nagdeo, ACAL BFi	**MISRA – What's New and What's Happening?** Andrew Banks, MISRA and LDRA
Bringing High-End Memory Management to MCUs: Shared Objects for Resource-Constrained Systems Anders Lundgren, IAR Systems	**Methods for Integrating Software-Test Libraries in Microcontroller Hypervisors** Dr. Andrew Coombes, Arm	**Deploying Simscape Electrical Models on FPGAs for HIL Testing** Dimitri Hamidi, The Mathworks	**IoT Node Powered by TEG in Tree-Air Configuration: 4 Years Results** Manuel Böbel, University of Applied Sciences, ZHAW-InES	**C, Rust, C-rusted and MISRA for Safe and Secure Embedded Software** Prof. Dr. Roberto Bagnara, University of Parma / BUGSENG
Boot Time Optimization for Early Display and Graphics in Embedded Systems Divyansh Mittal, Texas Instruments	**Accelerating Safety-Critical Development with Low-Code State Machine Design** Anders Holmberg, IAR Systems	**Why are 5-Volt Designs Still Relevant?** Odd Jostein Svendsli, Microchip Technology	**Innovative Battery Fuel Gauging Solution for Ultra-Low Power Applications** Steve Harrell, NXP Semiconductors	**Iron Carbide: Applying MISRA Rules to C and Rust in Practice** Alex Celeste, Perforce Software
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
Coffee Break				
3.8: The Way to Safe AI	**4.10: Sensors, Actuators, Radar**	**4.12: Ultra Low Power & Energy Harvesting**	**5.8: Static Code Analysis**	**7.7: Edge AI Case Studies 1**
Possibilities on How to Integrate AI in Safety (Embedded) Systems Frank Poignée, infoteam Software	**A Low-power DAC Sub-system for Digital Beam Forming** Ankur Bal, STMicroelectronics	**Streamlining Load Transient Test Setups** Xinlei Tang, NXP Semiconductors	**Static Analysis – Getting It Right** Andrew Banks, LDRA	**A Reinforcement Learning Based Controller for Shape Memory Alloy Valves** Bryan Marcos Ramos Maldonado, Hahn-Schickard Gesellschaft für Angewandte Forschung e.V.
Can AI Applications be Functionally Safe? Jill Britton, Perforce Software	**Faster Time to Market, Effective mmWave Radar Prototyping: A Unified Approach with TI MMIC and MATLAB** Matthieu Chevrier, Texas Instruments; Ahmad Saad, Mathworks	**Ultra Low Power Leak Detect** Odd Jostein Svendsli, Microchip Technology	**Challenges in Code Coverage Analysis for Safety-Critical C++ Applications** Prof. Dr. Marcel Beemster, Solid Sands	**AI Assisted Motor Control: From Simulation to Silicon on a RISC-V with AI Accelerator** Steven Klotz, Infineon Technologies
A Workflow for Safe-AI Suzana Veljanovska, Zurich University of Applied Sciences (ZHAW)	**A New Experience of Sound – How MEMS Microspeakers and Bone Conduction Sensors Redefine the Listening Experience** Dr. Christina Strohrmann, Bosch Sensortec	**Ultra-low Noise Wide Bandwidth Current Readout in CMOS Integrated Circuits** Dr. Mohammad Amayreh, Hahn-Schickard Gesellschaft für Angewandte Forschung e.V.	**Sound Signal Flow Analysis for C/C++** Dr. Daniel Kästner, AbsInt Angewandte Informatik	**GPU Based Audio Processing Platform with AI Audio Effects** Simon Schneider, Zürich University of Applied Sciences (ZHAW)
Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A	Discussion/Q&A
Lunch Break				
2.10: Embedded OS in Automotive Applications	**3.9: Safety & Security Use Cases**		**5.9: How to Leverage AI for Development**	**7.8: Edge AI Case Studies 2**
An Open Source Automotive Middleware Stack for Secure and Real-Time Embedded Systems Lars Bauhofer, Qorix	**Unified Safety & Security Verification in Automotive** Rolland Dudemaine, TrustInSoft		**GenAI – The 5th Industrial Revolution and its Impact on How to Share Technical Information** Jürgen Mayer-Zintel, Infineon Technologies	**Achieving Dependability of AI Execution with Radiation-Hardened Processors** Carlos Rafael Tordoya Taquichiri, Zürich University of Applied Sciences (ZHAW)
Navigating the Software Ecosystem for Software-Defined Vehicles: A Multi-OS Architecture Approach Himanshu Pande, Wind River	**Mitigating Automotive Cybersecurity Risks in Software Containers for SDVs** Gregor Knappik, VicOne		**AI-assisted Programming in Embedded Development: A Comparative Study of Human and AI-assisted Engineering Work** Dr. Patrick Ott, ERNI Deutschland	**Advances in Software Approaches to Execute AI/ML Inference for High-Reliability Applications on Resources Constrained Hardware** Dr Pablo Ghiglino, Klepsydra Technologies
Zephyr Usage in Arm Automotive Solutions Software Stack Ed Doxat, Arm	**Implementation of CHERI Capabilities in a Safety-critical Real-time Operating System and Type-1 Hypervisor for Intelligent Edge Systems** Dmitriy Yeliseyev, Wind River		**Accelerating Coding Standards Compliance using AI-augmented Static Analysis** Arthur Hicken, Parasoft	**Case Study of an Embedded Volume Determination** Andy Walter, Cloudflight Germany
Discussion/Q&A	Discussion/Q&A		Discussion/Q&A	Discussion/Q&A

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