embeddedworldChina

Exhibition&Conference

上海国际嵌入式会议

2025.10.16-17, 上海世博展览馆

embedded world China Conference

October 16-17, 2025, SWEECC, Shanghai

分论坛：嵌入式技术会议
Session 1 Embedded Technology & Applications

分论坛：汽车电子电气架构会议
Session 2 Vehicle Electronic / Electrical Architecture & Technologies

分论坛：边缘AI加持下的嵌入式视觉技术创新发展大会
Session 3 Embedded Vision Technologies Innovation
and Development Conference using Edge AI

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上海国际嵌入式会议将于 2025 年 10 月 16-17 日在上海世博展览馆举办。此次会议将由三个版块组成：嵌入式技术会议、汽车电子电气架构会议、边缘 AI 加持下的嵌入式视觉技术创新发展大会。

三个版块均采用论文征集的形式，对每一位在嵌入式系统产业有自己观点与见解的人士提供平等的参与机会，无论是精专深度的学术探讨，或是日常研发应用的案例分析，均可通过征集平台被专家顾问委员会所看到，并有机会作为演讲人与参会听众交流。

征文入选规则

入选原则 - 真实、原创、具有创新视角，投稿人亲身实例为佳。

国内外专业领域与权威机构的专家、教授、企业高层，将组成顾问委员会，为会议品质的提升、分享内容的甄选，以及大会议程的安排，提出专业的指导建议。

大会安排

摘要提交截止	2025.7.31
作者通知	2025.8.11
议程公布	2025.8.18
演讲材料提交	2025.9.22
大会开幕	2025.10.16-17

The embedded world China Conference will take place on October 16 and 17, 2025 at the Shanghai World Expo Exhibition and Convention Centre.
The main topics of this year's conference are

- Embedded Technology & Applications
- Vehicle Electronic / Electrical Architecture & Technologies
- Embedded Vision Technologies Innovation and Development Conference using Edge AI

Interested speakers for all three tracks are invited to submit their proposals to contribute to the 3rd edition of the conference with a technical presentation or paper. The embedded world China Conference 2025 calls for future-oriented technologies and solutions, best practices, new ideas and smart concepts for efficient development and lifecycle processes. The presentations will be used to initiate discussions and help other engineers and managers to benefit from shared experiences.

Experts with insight into the embedded systems industry is given an equal opportunity to participate, whether through in-depth academic discussions, technological show cases or best practice studies from research and development.

Acceptance Criteria

Papers will be selected based on the following criteria:
- novelty
- technological soundness
- technological significance
- experience of the speaker

Important Deadlines

• Abstract Submission	31. Jul. 2025
• Notification of Authors	11. Aug. 2025
• Agenda Released	18. Aug. 2025
• Submission of Presentations	22. Sep. 2025
• embedded world China Conference	16-17. Oct. 2025

The selection will be made by a programme committee. The members of the programme committee are independent senior engineers and researchers with excellent scientific and business experience.

分论坛：嵌入式技术会议
Session 1 Embedded Technology & Applications

为业界呈现满载着前沿信息、丰富应用与深刻案例分享的技术盛宴。来自中国及全球各地的杰出演讲嘉宾齐聚一堂，通过他们的精彩演讲，与会者将得以一窥行业最前沿的技术风貌，洞悉未来发展趋势。

Embedded Technology & Applications offers the industry with a technology feast full of cutting-edge information, rich applications and insightful case sharing. Gathering eminent speakers from China and around the world, through their wonderful speeches, participants will be able to get a glimpse of the industry's most cutting-edge technology and insight into the future development trend.

论文征集范围

1. 物联网——平台与应用
1.1 物联网架构与管理
1.2 应用协议和配置文件：OPC UA、MQTT、LWM2M、CANopen、Matter...
1.3 物联网软件平台
1.4 数据管理、隐私与分析
1.5 物联网应用案例研究

2. 连接解决方案
2.1 有线：CAN、以太网、TSN...
2.2 无线 LPWAN、NB IoT、5G/6G、蓝牙 ...
2.3 网络架构与管理、网关
2.4 连接性应用案例研究

3. 嵌入式操作系统
3.1 实时操作系统：开源与闭源、安全、多核 ...
3.2 基于 Linux 的 嵌入式 Linux、Android、ROS
3.3 云集成与服务
3.4 虚拟化与 Dockers
3.5 应用案例研究：现场更新、OTA...

4. 安全与保障
4.1 功能安全与安全架构
4.2 功能安全与安保标准、CRA
4.3 密码学与可信计算
4.4 长期安全与后量子密码学
4.5 黑客攻击
4.6 安全可靠系统的鉴定
4.7 安全可靠系统的应用案例研究

5. 板级硬件工程
5.1 微控制器
5.2 存储器
5.3 传感器和执行器
5.4 电路板与封装：高性能、射频与天线
5.5 设计、印刷与柔性电子 ...
5.6 能源与电源管理
5.7 电源、无线、以太网供电

6. 系统与软件工程
6.1 流程与方法：敏捷、DevOps、MLOps、MBSE...
6.2 用户界面设计与设计思维
6.3 人工智能辅助工程
6.4 编程语言：C、C++、Rust...
6.5 编码标准与静态分析：MISRA ...
6.6 质量、测试与验证、调试
6.7 开放源代码

7. 嵌入式视觉
7.1 硬件组件与系统集成
7.2 软件工具（包括人工智能）和工具链
7.3 标准化（如相机接口）
7.4 嵌入式雷达、嵌入式激光雷达
7.5 嵌入式视觉应用案例研究

8. 边缘人工智能
8.1 传感器融合与集成
8.2 嵌入式 ML 与 AI 算法
8.3 支持人工智能的硬件
8.4 可解释与可预测的人工智能
8.5 人工智能系统的鉴定
8.6 嵌入式 ML/AI 的应用案例研究

9. 片上系统 (SoC) 设计
9.1 数字电路与系统：芯片、FPGA、ASIC...
9.2 模拟、射频和混合信号电路与系统
9.3 IP 和集成电路级开放式硬件：RISC-V、MIPS....
9.4 EDA 工具
9.5 代工技术
9.6 应用案例研究

10. 绿色和可持续工程
10.1 法律要求和标准
10.2 工程道德
10.3 可持续发展与循环经济工程学
10.4 生命周期工程学

11. 应用案例
11.1 工业、自动化、设施管理
11.2 关键基础设施：能源、水、通信
11.3 交通运输：汽车、航空电子、铁路
11.4 安全与国防
11.5 生命科学：医疗、健康、福利
11.6 环境、农业、海洋
11.7 物流与零售
11.8 其他

12. 特别征集
12.1 CAN in Automation （CiA）
12.2 Yocto
12.3 Zephyr

Topics of interest include

1. Internet of Things – Platforms & Applications

1.1 IoT Architectures & Management

1.2 Application Protocols & Profiles: OPC UA, MQTT, LWM2M, CANopen, Matter···

1.3 Software Platforms for IoT

1.4 Data Management, Privacy & Analytics

1.5 Application Case Studies for IoT

2. Connectivity Solutions

2.1 Wired: CAN, Ethernet, TSN, ···

2.2 Wireless: LPWAN, NB IoT, 5G/6G, Bluetooth, ···

2.3 Network Architectures & Management, Gateways

2.4 Application Case Studies for Connectivity

3. Embedded OS

3.1 RTOS: Open & Closed Source, Safety, Multicore, ···

3.2 Linux-based: Embedded Linux, Android, ROS

3.3 Cloud Integration & Services

3.4 Virtualization & Dockers

3.5 Application Case Studies: Field Updates, OTA, ···

4. Safety & Security

4.1 Functional Safety & Security Architectures

4.2 Functional Safety & Security Standards, CRA

4.3 Cryptography & Trusted Computing

4.4 Long-Term Security & Post-Quantum Cryptography

4.5 Hacking

4.6 Qualification of Safe and Secure Systems

4.7 Application Case Studies for Safe and Secure Systems

5. Board Level Hardware Engineering

5.1 IMicrocontrollers

5.2 Memory

5.3 Sensors & Actuators

5.4 PCB & Packaging: High Performance, RF & Antenna Design, Printed & Flexible Electronics, ···

5.5 Energy & Power Management

5.6 Power Supply: Wireless, Power over Ethernet, ···

6. Systems & Software Engineering

6.1 Processes & Methods: Agile, DevOps, MLOps, MBSE, ...

6.2 UI Design & Design Thinking

6.3 AI Assisted Engineering

6.4 Programming Languages: C, C++, Rust, ···

6.5 Coding Standards & Static Analysis: MISRA, ···

6.6 Quality, Test & Verification, Debug

6.7 Open Source

7. Embedded Vision

7.1 HW Components & System Integration

7.2 Software Tools (incl. AI) & Toolchains

7.3 Standardisation (e.g. Camera Interfaces)

7.4 Embedded Radar, Embedded Lidar

7.5 Application Case Studies for Embedded Vision

8. Edge AI

8.1 Sensor Fusion & Integration

8.2 Algorithms for Embedded ML & AI

8.3 Hardware Support for ML & AI

8.4 Explainable & Predictable AI

8.5 Qualification of AI Systems

8.6 Application Case Studies for Embedded ML/AI

9. System-on-Chip (SoC) Design

9.1 Digital Circuits & Systems: Chiplets, FPGA, ASIC, ···

9.2 Analog, RF & Mixed-Signal Circuits & Systems

9.3 Open HW at IP- and IC-Level: RISC-V, MIPS, ...

9.4 EDA Tools

9.5 Foundry Technologies

9.6 Application Case Studies

10. Green and Sustainable Engineering

10.1 Legal Requirements and Standards

10.2 Engineering Ethics

10.3 Engineering for Sustainability & Circular Economy

10.4 Lifecycle Engineering

11. Application Use Cases

11.1 Industrial, Automation, Facility Management

11.2 Critical Infrastructure: Energy, Water, Communication

11.3 Transport: Automotive, Avionics, Railway

11.4 Security & Defence

11.5 Life Sciences: Medical, Health, Wellbeing

11.6 Environmental, Agriculture, Marine

11.7 Logistics & Retail

11.8 Others

12. Special Call for Papers

12.1 CAN in Automation（CiA）

12.2 Yocto

12.3 Zephyr

分论坛：汽车电子电气架构会议

Session 2 Vehicle Electronic / Electrical Architecture & Technologies

智能汽车的快速进化正推动整个汽车行业迈向高度智能化、集成化和软件定义的新时代。在智能化浪潮的驱动下，电子电气架构 (E/E 架构) 已成为汽车技术突破与产业竞争的核心。集中式、域集中化的架构逐步取代传统分布式架构，成为实现高效算力、数据交互以及智能功能整合的关键路径。

技术的迭代离不开软硬件深度协同，芯片、操作系统及嵌入式技术的创新正在为智能汽车提供强劲的技术支撑。同时，消费者需求的个性化、多样化也倒逼行业加速变革，E/E 架构的重塑势在必行。然而，面对不同技术路线的碰撞、供应链变局的挑战以及标准化需求的提升，产业各方在竞争与合作间寻找平衡，迫切需要凝聚共识。

在此背景下，E/E Tec2025 新一代智能汽车电子电气架构技术大会，立足行业发展前沿，聚焦集中式架构、嵌入式技术、新一代 MCU 解决方案及 AI 应用等热点议题，旨在汇聚行业智慧，共同探索未来架构的发展路径，引领汽车智能化的技术变革与行业创新。

Smart cars are rapidly changing the automotive industry, pushing it towards smarter, more integrated, software-defined vehicles. At the core of this transformation is the electronic/electrical (E/E) architecture, which has become essential for technological innovation and competitive advantage.

Centralised systems are replacing old, fragmented designs, enabling better computing power, data sharing and smart features. Technological advances, including new chips, software, and embedded tools, are instrumental in facilitating these developments. However, consumer demands for customization and tech-driven features are also forcing faster change.

However, the industry faces challenges, including clashing tech strategies, supply chain issues, and the need for standards. To progress, companies must find the right balance between competition and collaboration.

This conference focuses on cutting-edge E/E topics, such as centralized architectures, AI, and MCU solutions, with the aim of connecting experts, exploring trends, and driving innovation in smart vehicle technology.

讨论范围 Topics

新一代 E/E 架构技术进展

1. 新一代 E/E 架构技术进展
 · 区域和域架构
2. E/E 架构的新型通信解决方案
 · 基于 CAN
 · 基于以太网
 · 小型巴士
3. 集中式 EE 架构的新一代硬件解决方案
 · MCU–RISC-V
 · MCU–ARM
 · MCU——国产
 · FPGA
 · 小型芯片
* 其它包含以上但不限
3. 存储在新一代 MCU 中的作用和技术趋势
4. 硬件设计和验证过程

Vehicle Electronic / Electrical Architecture & Technologies

1.Current Status and Trend Prediction of Vehicle E/E Architecture Development
 · zonal and domain architectures
2. Novel Communication Solutions for E/E Architectures
 · CAN-based
 · Ethernet-based
 · Sub-Bus
3. New Generation Hardware Solutions for EE Architectures
 · MCUs – RISC-V
 · MCUs – ARM
 · MCUs – domestic
 · FPGA
 · Chiplets
 · etc.
3. Role and Technical Trends of Storage in New Generation MCUs
4. Hardware Design & Verification Processes

软件和系统开发过程

1. 软件和人工智能定义车辆时代的软件和系统发展趋势
 · 标准 · 安全 · 安保 · 认证证书
2. CI / CD
3. 编码范式和标准
4. 软件和系统测试
5. 汽车虚拟化技术
6. 新技术中的车辆操作系统和 AUTOSAR 演进
7. 汽车应用中的 AI 应用场景
8. 汽车应用的 AI 架构和数据管道
9. 基于云的通信

Software and System Development Processes

1. Software and System Development Trends in the era of Software and AI-defined Vehicles
 · Standards · Safety · Security · Certification
2. CI / CD
3. Coding Paradigms & Standards
4. Software & System Test
5. Virtualization Technologies for Automotive
6. Vehicle OS and AUTOSAR Evolution in New Technologies
7. AI Application Scenarios in Automotive Applications
8. AI Architectures and Data Pipelines for Automotive Applications
9. Cloud-Based Communications

分论坛：边缘AI加持下的嵌入式视觉技术创新发展大会

Session 3 Embedded Vision Technologies Innovation and Development Conference using Edge AI

embedded world China 将联合雅时国际商讯旗下的《视觉系统设计》杂志共同举办此次大会。《视觉系统设计》中文版从 2012 年开始在中国编辑发行，多年来致力于报道成像器件、设备、方法和工艺等方面的最新技术、解决方案及发展趋势，为机器视觉领域的专业人士提供解决问题的参考信息。

embedded world China is co-organising this conference with Vision System Design magazine, a division of ACT. The Chinese edition of Vision System Design has been published and distributed in China since 2012, and for many years has been dedicated to reporting the latest technologies, solutions and trends in imaging devices, equipment, methods and processes, and providing problem-solving references for machine vision professionals.
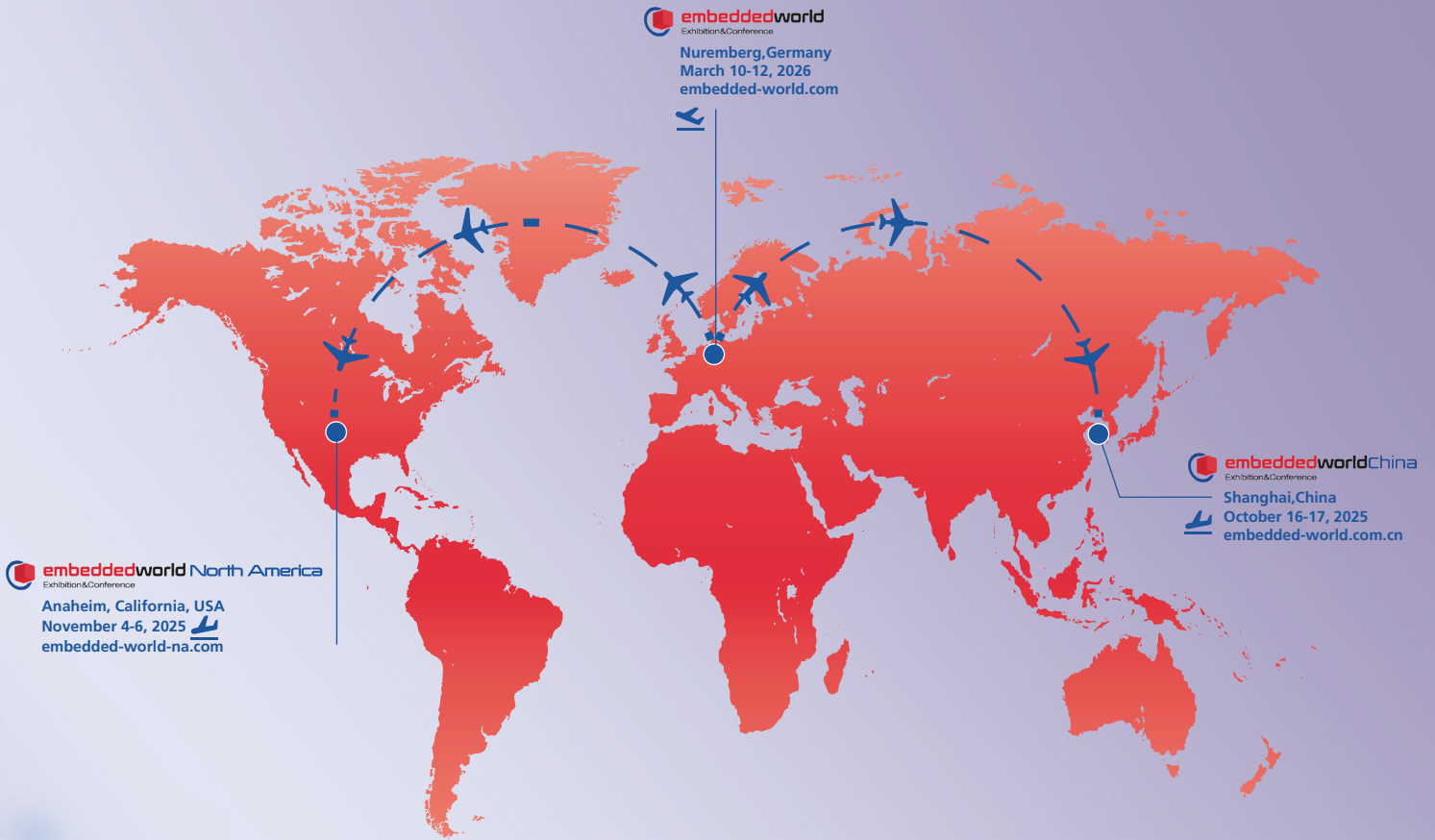
重点聚焦

- 边缘 AI 在嵌入式视觉系统中的架构优化与效能强化
- 嵌入式视觉的接口设计
- 针对嵌入式视觉应用的深度学习模型的轻量化
- 嵌入式视觉中的高可靠性和低延迟技术
- 边缘 AI 与云计算在嵌入式视觉中的共生发展
- 嵌入式视觉系统的数据安全与隐私保护
- 嵌入式视觉在 3C 电子、汽车制造、工业控制等领域的应用案例分享
- 嵌入式视觉的工作流与数据传输
- 嵌入式视觉技术的前沿研究与未来发展
- 其他嵌入式视觉相关话题

Key focus

- Architecture optimization and performance enhancement of Edge AI in embedded vision systems
- Interface design for embedded vision
- Lightweight deep learning models for embedded vision applications
- High reliability and low latency technology in embedded vision
- The symbiotic development of Edge AI and cloud computing in embedded vision
- Data Security and Privacy Protection of Embedded Visual Systems
- Application case sharing of embedded vision in 3C electronics, automotive manufacturing, industrial control and other fields
- Workflow and Data Transmission of Embedded Vision
- Frontier research and future development of embedded vision technology
- Other topics related to embedded vision

期待与您十月再相聚！ See you in October!

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联系我们 Contact

分论坛：嵌入式技术会议
Session 1 Embedded Technology & Applications

- 纽伦堡会展（上海）有限公司 NürnbergMesse China
- 上海国际嵌入式会议组委会 embedded world China Conference Team
- +86 21 6036 1237
- ewchina.conference@nm-china.com.cn

分论坛：汽车电子电气架构会议
Session 2 Vehicle Electronic / Electrical Architecture & Technologies

- 纽伦堡会展（上海）有限公司 NürnbergMesse China
- 曹萌先生 Mr. William Cao
- +86 21 6036 1237
- william.cao@nm-china.com.cn

分论坛：边缘 AI 加持下的嵌入式视觉技术创新发展大会
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- 雅时国际商讯 ACT
- 庞会荣 Rossie Pang
- 150 1031 3852 (电话 / 微信)
- rossiep@actintl.com.hk

- 纽伦堡会展（上海）有限公司 NürnbergMesse China
- 曹萌先生 Mr. William Cao
- +86 21 6036 1237
- william.cao@nm-china.com.cn

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