COMMITTEE

Conference Chairs

- Harald Kuhn, Institute Director Fraunhofer ENAS
- Wolfgang Dettmann, Vice President R&D Funding, Infineon Technologies (Acting)

Core Team

The conference is prepared by a core team of experts from industry as well as from basic and applied research organizations and will be published on our website.

Scientific Committee

The members of the scientific committee are experienced researchers in the field of sensors and system integration and will be published on our website.

Organisation

The technical organisation is realised by

Silicon Saxony Management GmbH
Manfred-von-Ardenne-Ring 20,
Haus F
01099 Dresden

contact: ssi@silicon-saxony.de

VENUE

The Smart Systems Integration Conference will take place from April 8-10, 2025 in Prague, Czech Republic. The conference venue is the Prague Congress Centre. It is located in the wider city centre of the metropolis directly at Metro C-Line Station - Vyšehrad, only two stations away from the centre of Prague.

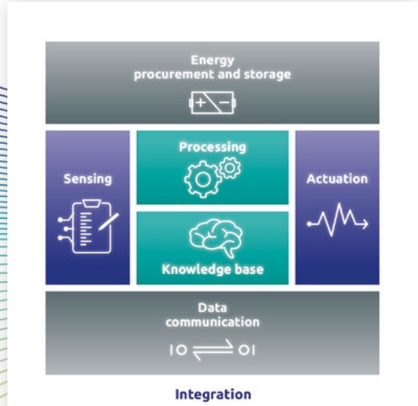
Networking at the SSI

A variety of networking offers enrich the scientific program: Exhibition booths of sponsors, exhibitors as well as of other companies and research institutions show their latest R&D results, developments and products. There is also the offer to discuss job opportunities with exhibitors. Book your next interview with the smart system integration experts in the conference app.

Once again, the SSI will be co-located with the European "advanced process control and manufacturing" Conference, apc|m europe, at the same place and time. A single ticket allows you to attend both conferences and increase your networking range.

smartsystemsintegration

INTERNATIONAL CONFERENCE AND EXHIBITION ON SMART SYSTEMS INTEGRATION



CALL FOR PAPERS

CONFERENCE AND EXHIBITION

APRIL 8 – 10, 2025

Fraunhofer ENAS

EPoSS European Association on Smart Systems Integration

INVITATION

The key mission of the Smart Systems Integration Conference is to present academic and industrial R&D results and to transfer the results into industrial applications. The conference is focusing on the integration aspect for smart and sustainable system solutions for the benefit of our society. It covers topics from system design, integration technologies, characterization and test, system software, Edge AI to system applications. The conference connects participants from academia and industry with policy and decision makers. The three-day event is commonly organized by Fraunhofer ENAS together with the European Association on Smart Systems Integration (EPoSS). Silicon Saxony executes the conference organization.

The Smart Systems Integration Conference 2025 consistently aligns with the Strategic Research and Innovation Agenda for Electronic Components and Systems (ECS SRIA) and, for the first time, addresses quantum technologies in a specific track as spotlight in order to connect the ECS and quantum community.

In an engaging and compact format, the conference provides a unique and valuable opportunity to interact with the stakeholders of the smart systems community by means of technical sessions, podium discussions, exhibition booths as well as discussing job opportunities.

On behalf of the whole committee – we look forward to receiving your contributions by submitting innovative abstracts.

Prof. Harald Kuhn
Conference Chair

Dr. Wolfgang Dettmann
Conference Chair Industry (Acting)

TIMELINE

Deadlines

Abstracts submission

- Start November 18, 2024
- Deadline December 20, 2024

Deadlines for scientific papers

- Selection by committee January 15, 2025
- Submission of full paper February 21, 2025
- Peer review March 15, 2025
- Revision revised paper April 5, 2025

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Conference & Exhibition

April 8 – 10, 2025

Conference Dinner

April 9, 2024

Abstract Submission

Please submit your abstract including a short motivation, a summary of your technical main results and how they were achieved and conclusions (500 words) until **December 20th 2024** via https://smartsystemsintegration.com/

Online Abstract Submission until December 20, 2024

PUBLICATION OPPORTUNITIES

There are two opportunities for conference paper submission. Please indicate, which option is favorable for you:

- Scientific papers can be submitted for publication in IEEE Explore®. Full scientific papers (min. 4 pages) undergo a rigorous peer review process.
- It is possible to publish a non-scientific paper without peer review (e.g. overview project report incl. achievements), which appears in the conference proceedings, exclusively.
  Conference Language: English

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Selection Process

The committee will review all abstracts. Submitted abstracts are selected for oral or poster presentation. Conference proceedings will be available online.

Oral and Poster Presentations

To highlight the networking aspect, special focus is put on a central poster session and selected oral presentations in two parallel tracks. The conference app guides you through the conference and enables feedback on posters and presentations. Oral and poster presentations will be included in the conference proceedings. The proceedings will be additionally published online and open access.

www.smartsystemsintegration.com
Questions concerning submission: ssi@silicon-saxony.de

TRACKS

The conference is organized in line with the Strategic Research and Innovation Agenda for Electronic Components and Systems (ECS SRIA). It is open for all contributions from Academia, RTOs and companies in the field of smart system integration to provide insights into technological foundations from basic research up to application-oriented solutions prior to product stage as well as cross-sectional technologies. Funded research projects are especially welcome to disseminate their overall project results to foster scientific and technological discussions and transfer into industrial applications.

Track 1
Technologies for smart system integration

This track contains relevant technologies and technology platforms for the integration of smart systems from TRL 2 to TRL 6:

- Novel sensor concepts, e.g. mechanical sensing, chemical sensing, quantum sensing, photonics, magnetics, fluidics, etc.
- Functional materials for hetero integration and packaging, e.g. photonic integration, wide bandgap semiconductors
- Hetero integration of components, e.g. chiplet (integration) technologies, 2.5 and 3D integration and advanced packaging
- Sustainable and green smart systems, e.g. substition of toxic process materials, alternative raw materials, re-use of recycled materials and components (9R strategies)
- Perspectives of system integration technologies, e.g. in the context of European facilities such as Chips JU pilot lines

Track 2
Cross-sectional technologies for Smart Systems

This track covers cross-sectional technologies for smart systems concerning hardware and software:

- Design and test methods, such as design for test, safety, security and/or sustainability
- Artificial intelligence and software-based solution for data acquisition, intelligent processing and fusion as well as communication at the edge (Edge AI hardware, algorithms, AI application challenges, human acceptance)
- Reliability and safety (technologies, methods and concepts for reliability, safety, privacy and security)
- Cybersecurity, such as hardware security components, fabrication, software security, system and IoT security

TRACKS

Track 3
Application Domains

This track covers the most relevant application domains of smart systems with a TRL level of min. 6, but prior to product stage. Presentations discuss technological solutions for application driven challenges in the fields of:

- Mobility, e.g. automotive, maritime, rail, aerospace...
- Energy
- Industry
- Agri food and natural resources
- Biomedical and wellbeing
- Environmental monitoring

Focus Track 4
Integration for quantum systems and quantum computing

This track comprises integration challenges of quantum systems and quantum computing units. It deals with:

- Design, fabrication and test of components for the use of quantum effects (e.g. based on trapped ions, neutral atoms, solid state spins, color centers, superconducting qubits or entangled photons,...)
- Low-temperature and cryogenic challenges, challenges connected with operation in UHV (e.g. temperature-stable sealing and packaging, material compatibility, outgassing, reliability, operation aspects)
- Integration of functional materials and components (e.g. superconducting materials, light sources, heterogenous material approaches…)
- Managing of the complexity of quantum systems in terms of scaling and heterogeneity
- Software-based solutions and AI