COMMITTEE

Conference Chairs

- Harald Kuhn, Institute Director Fraunhofer ENAS
- Stefan Finkbeiner, CEO Bosch Sensortec GmbH
- Holger Kapels, Institute Director Fraunhofer ISIT

Core Team

The conference is prepared by a core team of high-ranking experts from industry as well as from basic and applied research organisations:

- Klas BrinkfeldT, RISE
- Sywert Brongersma, IMEC
- Wolfgang Dettmann, Infineon Technologies AG
- Thomas Dietrich, IVAM
- Mathias Straub, microTec Südwest
- Albrecht Donat, Siemens AG
- Luis Fonseca, Centro Nacional de Microelectronica (CNM-IMB)
- Paddy French, TU Delft
- Rainer Günzler, Hahn-Schickard
- Matthias Kühnel, Robert Bosch GmbH
- Christoph Koegler, Infineon Technologies AG
- Antonio Lionetto, STMicroelectronics
- Alan O'Riordan, Tyndall
- Jean-Philippe Polizzi, CEA LETI
- Harald Pötter, Fraunhofer IZM
- Sven Rzepka, Fraunhofer ENAS
- Elisabeth Steimetz, EPoSS
- Bart Vandevelde, IMEC
- Christian Irmscher, Fraunhofer ENAS

The members of the scientific committee will be published on the webpage.

VENUE

The SSI conference will take place from 16th to 18th April 2024 in Hamburg, Germany. The conference venue is the Cinemaxx at Dammtordamm 1 in Hamburg. This modern cinema will open exclusively for the SSI 2024. Thanks to its location in Hamburg's city centre and surrounded by numerous hotels, it will be a conference of short distances.

Networking at the SSI

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

The exhibition booth enables meaningful exchange within the community, showcasing sponsors, exhibitors, companies, and job opportunities. Book your next meeting with the Smart System Integration experts in the conference app.
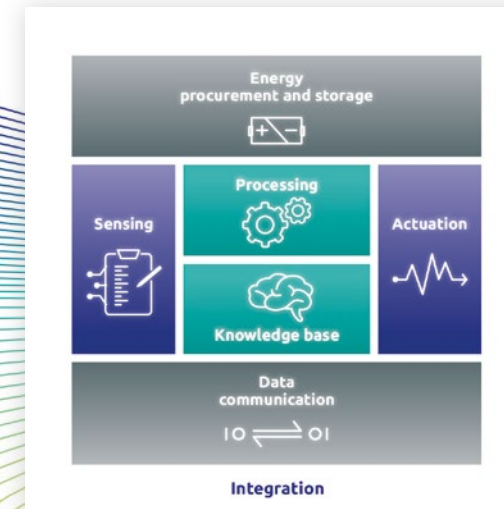
The technical organisation is realised by

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smartsystemsintegration

INTERNATIONAL CONFERENCE AND EXHIBITION ON SMART SYSTEMS INTEGRATION

CALL FOR PAPERS

CONFERENCE AND EXHIBITION
16TH–18TH APRIL 2024

INVITATION

The key mission of the Smart Systems Integration Conference is to align research, technology and dissemination activities along the value chain for future smart and sustainable system solutions. Its community is connected by the aspect of system integration from System on Chip via System in Package to System Applications – including hardware and software. The conference connects participants from academia and industry as well as policy and decision makers. The three-day event is jointly organised by Fraunhofer ENAS together with the European Association on Smart Systems Integration (EPoSS) to combine technology and policy aspects in one event. Silicon Saxony supports the technical organisation of the conference. The European autonomy on chips envisaged and the requirements for secure communication enhances the demand for joint efforts for integrated smart and sustainable system solutions on all levels. Still, the autonomy on chips must be discussed in an international context.

The special topic at the Smart Systems Integration 2024 is dedicated to artificial intelligence in Smart Systems. Organised by Fraunhofer ENAS, this session addresses AI hardware architectures, AI solutions for signal and sensor data fusion, application spaces as well as cross-section topics like data privacy, security and human acceptance of AI. Beyond research and development topics, EPoSS as co-organiser will hold sessions on strategy and business creation as well as the impact of European-funded projects in the domain of SSI.

In an engaging and compact format, the conference provides a unique and valuable opportunity to interact with the stakeholders of the Smart Systems community along the value chain by means of technical sessions, strategy panels, job opportunities, podium discussions and exhibition booths. On behalf of the entire committee, we are looking forward to receiving your innovative abstracts.

Prof. Harald Kuhn
Conference Chair

Dr. Stefan Finkbeiner
Conference Chair Industry

Deadlines

- **Abstracts submission**
  - Start — 15th November 2023
  - Deadline — 22th December 2023
- **Deadlines for scientific papers**
  - Selection by committee — 17th January 2024
  - Submission of full paper — 15th February 2024
  - Peer review — 15th March 2024
  - Revision revised paper — 05th April 2024

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EPoSS Working Group Meetings and Preevent

16th April 2024

Conference

16th – 18th April 2024

Exhibition

16th – 18th April 2024

Conference Dinner

17th April 2024

**Online Abstract Submission
until 22th December 2023**

There are two opportunities for paper submission.

- Scientific papers can be submitted for publication in IEEE Explore®. Full scientific papers (min. 4 pages) are subject to a rigorous peer review process.
- Industry and European projects are specifically encouraged to submit papers. There is no full paper required, but it is possible to publish a non-scientific paper exclusively 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 emphasise the networking aspect, the focus will be on a central poster session and selected oral presentations in two parallel tracks. The conference app guides you through the conference and enables feedback. Oral and poster presentations will be included in the conference proceedings. The proceedings will also be published online and are freely accessible.

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

**Track 1
New components of Smart Systems**

This track contains new and innovative components of Smart Systems without technology restrictions, but with a clear link to applications via further system integration.

- Single components and new sensor technologies
- Advanced micro/nano and smart power technologies
- Novel concepts for smart sensing, control and actuation
- Disruptive innovations in terms of functionality, accuracy, autonomy, automation, cost, size, …
- Novel topics of Smart Systems, such as quantum sensing, photonic-integrated circuits and new materials

**Track 2
System integration aspects concerning hardware and software**

This track focuses on the various integration aspects such as:

- Integration of different functionalities (energy management, communication, knowledge-based data processing, …)
- Green, environmentally-friendly, recyclable aspects
- 2.5/3D integration, interconnect technologies and packaging the electronics and all associated sensors/actuators etc.
- Heterogeneous integration for Smart Systems
- Software integration, firmware
- Reliability and security aspects (methodologies and concepts for reliability, safety, and security)

**Track 3
Application Domains**

This track covers all application domains from healthy living, food and biomedicine to mobility, energy and industry.

- Smart Systems with a TRL level of min. 6 for dedicated applications within the different domains
- These include:
  - AI-based smart sensor systems and networks, control units and drives, including aspects such as power electronics, and communication systems

- Secure, reliable, decentralised, multi-modal systems
- Ultra-flexible, high-performing, energy and resource efficient, and collaborative systems for different applications - digital twins that work together from design to customer service

**Track 4
Strategy and Business Creation**

This track focusses on business development and technologically founded market forecasts. This year, the strategic aspect focusses on internationalisation, whereas the thematic focus is on AR & VR solutions in the SSI context.

- Policy talks will be invited. The Call for Paper is open to:
  - International and European contributions to Smart Systems Integration
  - Smart System solutions created by start-ups and SMEs
  - Results from industrial partners and impact gained in funded European projects
  - Presentations of European and local networks CSAs related to SSI topics, Digital Innovation Hubs

**Track 5 – Special track of SSI2024
Artificial intelligence in Smart Systems**

This track is a special track for the SSI2024. It will be introduced by a general keynote and can be extended by a panel of experts. We are looking for abstract submissions on the following subtopics:

- Edge AI hardware: e.g. Edge AI frameworks; novel AI architectures for embedded systems, e.g. RISC-V; spiking neuronal networks; …
- Algorithms for Smart Systems: sensor data fusion and autonomous systems; hybrid and physics-informed AI; …
- AI application challenges: mobility, smart production, agriculture, smart cities, biomedical, energy, …
- Human acceptance of AI: explainability and trustworthiness at the Edge; data privacy; sustainability