

COMMITTEE

Conference Chairs

- Thomas Otto, Fraunhofer ENAS
- Stefan Finkbeiner, Bosch Sensortec GmbH
- Emmanuel Sabonnadiere, CEA LETI

Core Team

The conference is prepared by the new core team, which includes high-level 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
- Albrecht Donat, Siemens AG
- Luis Fonseca, Centro Nacional de Microelectronica (CNM-IMB-CSIC)
- Paddy French, TU Delft
- Wolfgang Gessner, EPoSS
- Rainer Günzler, Hahn-Schickard
- Thomas Hammer, Siemens AG
- Christoph Koegler, T-Systems Multimedia Solutions
- Jochen Langheim, STMicroelectronics / EURIPIDES
- Antonio Lionetto, STMicroelectronics
- Reinhard Neul, Robert Bosch GmbH
- Alan O'Riordan, Tyndall
- Jean-Philippe Polizzi, CEA LETI
- Harald Pötter, Fraunhofer IZM
- Hervé Ribot, Minalogic
- Sven Rzepka, Fraunhofer ENAS
- Elisabeth Steimetz, EPoSS
- David Storer, CLEPA
- Bart Vandavelde, IMEC
- Martina Vogel, Fraunhofer ENAS

The scientific committee will be published on the webpage.

VENUE



The conference takes place April 27–29, 2021 as online conference.

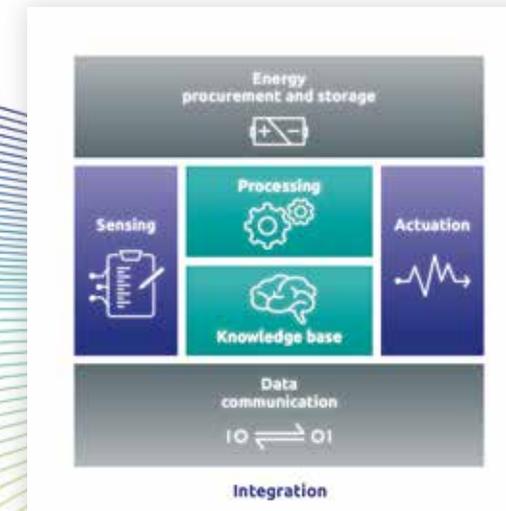
Actually it is impossible to guarantee that the conference can take place as a normal event. For that reason the chairs and core team decided to hold the Smart Systems Integration Conference and Exhibition virtually instead of Grenoble, France. The conference will also include several matchmaking possibilities.

The technical organisation is done by Silicon Saxony Management GmbH. The contact details will be published on the conference webpage.



smartsystemsintegration

INTERNATIONAL CONFERENCE AND EXHIBITION
ON SMART SYSTEMS INTEGRATION



CALL FOR PAPERS

ONLINE CONFERENCE AND EXHIBITION
APRIL 27–29, 2021



INVITATION

The Smart Systems Integration Conference and Exhibition re-starts after a one-year break with a new concept and a new technical organiser. We invite you to present your recent developments in the field of Smart Systems along the whole of the value chain, starting from MEMS/NEMS, photonics, micromechanics, microfluidics, printed functionalities through to complete systems and different application scenarios.

Digitalisation is not only increasingly entering our lives; it changes the game. Advances in individual components and subsystems are necessary but not enough. In our connected digital world it is the integration of software, connectivity, components and subsystems into smart modules and Smart Systems that is the key. To be successful, interdisciplinary approaches are required. Starting with the conference 2021 in Grenoble, the topics are arranged into five tracks covering technology readiness levels from 1 to 9. Key enablers and key technologies are addressed, as well as Smart Systems solutions for mobility, energy, industry, agri-food, biomedical applications, and healthy living. The former EPoSS sessions are included in the track on strategy and business creation.

The conference will provide, in an engaging and compact format, a unique and valuable opportunity to interact with the stakeholders of the Smart Systems value chain by means of technical sessions, strategy panels and exhibition booths. RTOs, SMEs and industry will share their latest approaches and the results. As in the previous years, the conference is driven by the EPoSS community. The conference industry chair is the president of EPoSS, Dr. Stefan Finkbeiner, CEO of Bosch Sensortec. The local community is supported by the local co-chair Dr. Emmanuel Sabonnadiere, CEO of CEA-LETI.

On behalf of the whole committee – we are looking forward to receiving your application or scientific oriented submission.

Prof. Thomas Otto
Conference Chair

Dr. Stefan Finkbeiner
Conference Chair Industry

TIMELINE

SUBMISSION REQUIREMENTS

TRACKS

TRACKS

Deadlines

- **Submission of Abstracts** December 6, 2020
- **Selection by Committee** December 15, 2020
- **Submission of Full Paper** January 29, 2021
- **Peer Review** February 27, 2021
- **Submission of Revised Paper** March 20, 2021

Conference Language

English

Conditions of Acceptance

Only original material can be submitted.
The different tracks address TRLs 1–9

Please indicate the track number when submitting the abstract or the full paper.

Track 1

Key Enablers for Next Generation Smart Systems

New discoveries & inventions of functional principles for Smart Systems and artificial intelligence at the edge & in the cloud:

- Novel concepts for smart sensing, actuation, energy supply, data processing, storage, AI and communication
- Design & design verification methods for Smart Systems
- Material innovations, new fabrication tools & processes
- Advanced micro / nano and smart power technologies
- Heterogeneous integration for Smart Systems with AI
- Methodologies and concepts for reliability, safety, and security to be inherently built into components and systems

Track 2

Key Technologies for Smart Systems

Hardware and software building blocks of Smart Systems, their design, fabrication, and test methods at device, wafer, component, module, and system levels:

- System Integration: 2.5/3D integration, interconnect technologies & packaging for the electronics and all associated sensors/actuators etc.
- Embedded intelligence and cognition at the device level
- Fabrication of micro/nano systems & smart power systems
- Smart low-cost approaches including roll-to-roll technologies and printed functionalities
- High volume components at Euro cents for billions of infection or immunity tests

Track 3

Application Domains: Mobility, Energy, Industry

AI based smart sensor systems and networks, control units and drives incl. aspects such as power electronics, packaging and further system integration as well as communication systems for the fields of (auto)mobility, energy, and automation like:

- E-mobility (land, air and sea) and its infrastructure
- Highly automated and connected vehicles
- Secure, reliable, decentralized, multi-modal energy systems with a high level of renewable sources
- Highly automated distribution grids coupling the energy sector with mobility, industry & domestic use
- Ultra-flexible, high-performing, energy and resource efficient, and collaborative production facilities
- Digital twins supporting from design to customer service

Track 4

Application Domains: Food, Biomedical, Healthy Living

Disruptive innovation of Smart Systems in terms of accuracy, autonomy, automation, cost, size, etc. for applications like

- Digitising agriculture for sustainable production
- Food safety, security, and monitoring from field to fork
- Inexpensive real-time disease detection, e.g. COVID-19
- Connected life - Enabling the work-life balance
- Combined wearable / implants systems
- Enabling healthy lifestyles to prevent disease and to promote autonomous living

Track 5

Strategy and Business Creation

Instruments of support addressing aspects of strategy and business creation:

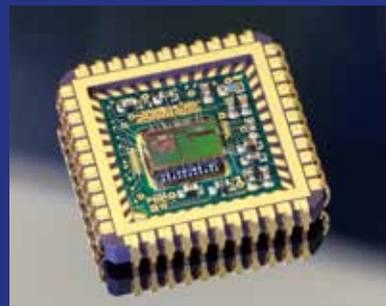
- Global market dynamics and the stability of value chains
- The competitive advantages of European ecosystems
- Political framework and support programmes
- From research to business: start-up and SME support
- Global co-operation and Joint venture strategies
- Opportunities and challenges of networking at European and regional level
- Standardisation
- Highlights from digital innovation hubs in action



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EPoSS Working Group Meetings

April 27, 2021

Online Conference

April 28–29, 2021

Virtual Exhibition

April 28–29, 2021

Virtual Networking Sessions

April 28 - 29, 2021

Selection Process

The committee will review the abstracts. Submitted abstracts may be selected for oral or poster presentation. Full scientific papers (4 pages) undergo a peer review process. We aim for IEEE EPS being the sponsor for publication at IEEE *xplore*®. The updated status will be published on the webpage of the conference. Especially for authors from industry: presentation only is possible.

Oral and Poster Presentations

Parallel sessions will be held at the conference. Poster authors will have the possibility to present their posters in a special session and also throughout the conference. All papers will be included in the conference proceedings. Information concerning open access publication will be shown on the webpage.

Online Abstract Submission
until December 6th, 2020

www.smartsystemsintegration.com
Questions concerning Submission: SSI@enas.fraunhofer.de