

EPOSS Annual Forum 2021

Towards New Horizons

DAY 0 – Monday, October 4, 2021

(EPoSS Members only)

12:00 – 13:00 Registration and Lunch

13:00 – 15:00 EPoSS Executive Committee Meeting (Room Conference)

15:00 – 15:30 Coffee Break

15:30 – 16:15 Parallel Working Groups Meetings

Room **WG Transportation**
Conference *Chairmen: Riccardo Groppo, Gereon Meyer*

Room **WG Healthy Living**
Kolleg *Chairmen: Rainer Günzler, Michael Scholles*

16:15 – 16:30 Break

16:30 – 17:15 Parallel Working Groups Meetings

Room **WG Energy**
Conference *Chairman: Thomas Hammer*

Room **WG Food, Agriculture and Natural Resources**
Kolleg *Chairman: Giorgos Fagas*

17:15 – 17:30 Break

17:30 – 18:00 **WG EUREKA (Room Conference)**
Chairman: Jochen Langheim

18:00 – 18:30 **WG Key Technologies (Room Conference)**
Chairmen: Wolfgang Dettmann, Sven Rzepka

20:00 EPoSS Executive Committee Dinner
Restaurant Martin's Bräu (<https://www.martinsbraeu-freiburg.de>)

Freiburg im Breisgau, 04-07 October 2021

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Towards New Horizons

DAY 1 – Tuesday, October 5, 2021

08:00 – 09:00 Registration and Welcome Coffee

09:00 – 12:00 General Assembly (admission restricted to EPoSS Members)

available
online

12:00 – 13:00 Registration and Lunch Break

Opening Session – Towards New Horizons for Smart Systems Integration
Chair: Wolfgang Gessner, EPoSS Adviser

available
online

13:00 – 13:15 **Stefan Finkbeiner**
CEO Bosch Sensortec
EPoSS Chairman, Board Member microTEC Südwest

13:15 – 13:30 **Alfons Dehé**
Director, Hahn-Schickard
Georg H. Endress Chair for Smart Systems Integration, University of Freiburg

13:30 – 13:45 **Günther Leßnerkraus**
Head of the Department Industry, Innovation, Business-oriented Research
and Digitization
Ministry of Economy, Labour and Tourism Baden-Wuerttemberg

13:45 – 14:00 **Stefan Mengel**
Head of Division Electronics and Autonomous Driving; Supercomputing
Federal Ministry of Education and Research

14:00 – 14:15 **Henri Rajbenbach**
Scientific Officer
DG CONNECT, European Commission

14:15 – 14:30 **Yves Gigase**
Head of Programmes of the ECSEL Joint Undertaking

14:30 – 14:45 **Nadja Rohrbach**
Executive Director of the Xecs Cluster

14:45 – 15:00 Panel Discussion

15:00 – 15:30 Coffee Break

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DAY 1 – Tuesday, October 5, 2021

Session I – New Horizons for Fruitful Co-operations

Chair: Elisabeth Steimetz, EPoSS Director

15:30 – 15:40	Furio Gramatica <i>Fondazione Don Gnocchi</i>	Healthtech4EU Alliance: The First Cross-technology Platform for Healthcare in Europe
15:40 – 15:50	Sywert Brongersma <i>IMEC</i>	Workplace Vitality
15:50 – 16:00	Julia Koch <i>Hahn-Schickard</i>	Empowering SMEs in the Digital Age: Smart Anything Everywhere Success Stories in the Field of Smart Systems Integration
16:00 – 16:10	Oana Mitrea <i>Silicon Alps Cluster</i>	Smart Systems & Systems Integration – Key Project Development Areas in the Silicon Alps Cluster
16:10 – 16:20	Giorgos Fagas <i>Tyndall</i>	ASCENT+ Access to European Infrastructure for Nanoelectronics
16:20 – 16:30	Tim Wolfer <i>Continental AG</i>	Moving forward together for trustworthy electronics – Integration of printed electronics as an example
16:30 – 16:45	Panel: Questions and Answers	
16:45 – 17:00	Break	

Session II – New Horizons Opened by Functional Electronics

Chair: Albrecht Donat, EPoSS Executive Committee Chairman, Siemens AG

17:00 – 17:15	Petra Weiler <i>VDI/VDE-IT</i>	Functional Electronics: Transversal Enabler for Europe's Digital Transformation
17:15 – 17:30	Zeba Khan <i>University of Freiburg</i>	Hybrid 3D Printing of Polymer and Solder to Create Functional 3D Electronics
17:30 – 17:45	Björn Albrecht <i>Institut für Mikroelektronik Stuttgart (IMS CHIPS)</i>	Flexible Electronic Systems Manufactured with Chip-Film Patch (CFP) Technology
17:45 – 18:00	David Esteves <i>Centre for Nanotechnology and Smart Materials</i>	Innovative Smart Surfaces For Automotive Components
20:00	Evening Event: Kreativpark Lokhalle (https://kreativwirtschaft-freiburg.de/kreativpark-lokhalle-freiburg) Opening: Hanna Böhme , CEO FWTM	

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DAY 2 – Wednesday, October 6, 2021

08:00 – 09:00 Registration and Welcome Coffee

Session III– New Horizons for Healthy Living

Chair: Rainer Günzler, Hahn-Schickard

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| 09:00 – 09:20 | Key Note: Nadine Borst
<i>Hahn-Schickard</i> | Mobile Diagnostic Platforms for Biomarker Monitoring and Pathogen Detection for Tailored Patient Treatment in Homecare Settings |
| 09:20 – 09:35 | Alessandro Surpi
<i>Istituto per lo Studio dei Materiali Nanostrutturati</i> | Magnetic Device to Capture and Manipulate Molecular Biomarkers for Early Diagnostics |
| 09:35 – 09:50 | Lars-Cyril Blystad
<i>University of South-Eastern Norway</i> | Development of an Implantable Interface for an Arm Neuroprosthesis |
| 09:50 – 10:05 | Cecilia Jimenez-Jorquera
<i>CSIC</i> | Hybrid Multisensing Wearable Patches for Hydration Monitoring |
| 10:05 – 10:20 | Ahmed Elhaddad
<i>Friedrich-Alexander University Erlangen-Nuremberg</i> | Integration of Cellular Internet of Things Modules into Sport Wearable |

10:20 – 10:50 Break

10:50 – 12:15 **EPOSS Start-up Contest**
Chair: Christine Neuy, microTEC Südwest

12:15 – 13:15 Lunch Break

Session IV– New Horizons for Sustainable Environment

Chair: Petra Weiler, VDI/VDE-IT

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| 13:15 – 13:35 | Key Note: Andreas Middendorf
<i>Fraunhofer IZM</i> | Green System Integration |
| 13:35 – 13:50 | Dionysis Bochtis
<i>CERTH</i> | Towards Digital Transformation of Agricultural Production |
| 13:50 – 14:05 | Steffen Kurth
<i>Fraunhofer ENAS</i> | Wireless Sensor Platform for Low Cost Applications |
| 14:05 – 14:20 | Patrick Blouet
<i>ST Microelectronics</i> | Towards Green ECS: A Real European Challenge |

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DAY 2 – Wednesday, October 6, 2021

14:20 – 15:00 Local Hosts Presentations: microTEC Südwest and Hahn-Schickard

Poster Pitches:

Soumya Deep Paul, Fraunhofer ENAS

Cees J.M. Lanting, DATSA

Pedro Henriques, CeNTI

José Matos, CeNTI

Enrique Zueco, Zytech

15:00 – 15:45 Coffee Break with Poster Exhibition

Session V– New Horizons Enabled by AI at the Edge

Chair: Stephan Karmann, Hahn-Schickard

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| 15:45 – 16:05 | Key Note: Armin Klumpp
<i>Fraunhofer EMFT</i> | Beyond CMOS Technologies for Enabling Integrating Artificial Intelligence at the Edge |
| 16:05 – 16:20 | Kay Bierzynski
<i>Infineon</i> | EPoSS AI White Paper: AI at the Edge and an Outlook on the next Version |
| 16:20 – 16:35 | Pekka Pursula
<i>VTT Technical Research Centre of Finland</i> | How to Enable Multisensory Data Fusion and AI on the Edge? |
| 16:35 – 16:50 | Dirk Mayer
<i>Fraunhofer Institute of Integrated Circuits IIS</i> | Integration of AI Based Data Analytics into Industrial Applications |
| 16:50 – 17:05 | Vivart Kapoor
<i>Endress+Hauser Process Solutions</i> | Energy Management with Industrial Internet of Things: Combining the Best of Two Worlds |

20:00

Evening Event with Start-up Award Ceremony

Historisches Kaufhaus (<https://www.historischeskaufhaus.freiburg.de>)

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DAY 3 – Thursday, October 7, 2021

09:00-10:00 and 10:30-11:30 Site Visit at Hahn-Schickard

Besides research and engineering solutions, Hahn-Schickard offers the subsequent manufacturing services, too. The Lab-on-a-Chip Foundry at Freiburg offers a “one-stop-shop” for all needs in the areas of development, prototyping, scale-up and manufacturing of lab-on-a-chip solutions. Since 2020 PCR-based microfluidic cartridges are in serial production used for a special “rapid testing” for COVID-19 in laboratory quality exploited by the Hahn-Schickard Spin-Off Spindiag.

09:00-10:00 and 10:30-11:30 Site Visit at IMTEK

The Institute of Microsystems Engineering (IMTEK) is one of the world's largest and leading academic research centers in the field of microsystems technology. The Cleanroom Service Center is a joint institution of the professorships at IMTEK. The main focus of the work is the development of functional samples of microsystems for the traditional MEMS area with applications ranging from sensors and microactuators to microoptics.

09:00-10:00 and 10:30-11:30 Site Visit at Fraunhofer IPM

The Fraunhofer Institute for Physical Measurement Techniques IPM develops tailor-made measuring techniques and systems for industry. We design miniaturized system components and sensor systems as MEMS and MOEMS relying on many years of experience in packaging and characterizing integrated systems comprising simulation processes, measurement technology and system construction. For the EPoSS members we offer a tour of our new building (since August 2020).

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