

EPOSS Annual Forum 2022

# CONNECTING SYSTEMS, DRIVING TRANSITION

4 -7 OCTOBER 2022 - TURIN, ITALY



**DAY 0 – Tuesday, October 4, 2022 | EPOSS Members only!**

**12:00 – 13:00** Registration and Sandwich Lunch

**13:00 – 15:00** EPOSS Executive Committee Meeting  
*Chairman: Albrecht Donat, Siemens AG*

**15:00 – 15:15** Break

**15:15 – 16:25** Parallel EPOSS Working Group Meetings

Room Agnelli WG Transportation, *Chairman: Gereon Meyer, VDI/VDE-IT*

Room Torino WG Health, *Chairman: Rainer Günzler, Hahn-Schickard*

**16:25 – 16:35** Coffee Break

**16:35 – 17:45** Parallel EPOSS Working Group Meetings

Room Agnelli WG Industry, *Chairman: Antonio Lionetto, STMicroelectronics*

Room Torino WG Energy, *Chairman: Thomas Hammer, Siemens AG*

**17:45 – 19:45** Workshop: EPOSS Task Force 2024  
*Chairman: Sven Rzepka, Fraunhofer ENAS*

**20:30 – 23:00** EPOSS Executive Committee Dinner  
*Ristorante Circolo La Posta*

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EPoSS Annual Forum 2022

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## DAY 1 – Wednesday, October 5, 2022

**08:00 – 09:00 Registration and Welcome Coffee**

**09:00 – 11:30 EPoSS General Assembly with Coffee Break EPoSS Members only!**

**11:00 – 11:30 Registration**

**11:30 – 13:00 Opening Session**

11:30 – 11:40 Welcome by EPoSS Chairman *Stefan Finkbeiner, Bosch Sensortech*

11:40 – 12:00 Opening by Authorities of the Piedmont Region and Representatives of Industry and Innovation

12:00 – 12:15 Chips Act/Chips JU *Lucilla Sioli, European Commission*

12:15 – 12:30 KDT & R&D&I priorities for Europe  
*Ralf Bornefeld, KDT GB Chairman, Senior VP Robert Bosch GmbH*

12:30 – 12:45 Invited talk: Next Generation Smart Systems  
*Candido Fabrizio Pirri, Politecnico di Torino*

12:45 – 13:00 Q&A

**13:00 – 14:00 Lunch and Networking**

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Smart Systems Integration

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## DAY 1 – Wednesday, October 5, 2022 – continued

<b>14:00 – 15:30</b>		<b>Session 1: Latest Technology and Platform Developments</b> <i>Chairman: Albrecht Donat, Siemens AG, Germany</i>
14:00 – 14:15	Technology platforms for optical micro components	<i>Steffen Kurth, Fraunhofer ENAS, Germany</i>
14:15 – 14:30	Ultra-precise deposition for Smart Systems Integration and Advanced Packaging	<i>Lukasz Kosior, XTPL SA, Poland</i>
14:30 – 14:45	AIN-AIScN piezoMEMS – a platform for high-performance MEMS	<i>Jyrki Kiihamaki, VTT, Finland</i>
14:45 – 15:00	Tailored sensor arrays to realise smart batteries	<i>Johannes Ziegler, Fraunhofer ISC, Germany</i>
15:00 – 15:15	In situ detection of dissolved metal ions in Li-ion battery electrolyte	<i>Tina Paljic, National Institute of Chemistry, Slovenija</i>
15:15 – 15:30	Collective Intelligence – From simple local interactions to complex global structures in decentralised systems	<i>Samer Al-Magazachi, Fraunhofer IZM, Germany</i>
<b>15:30 – 15:45</b>		<b>Coffee Break</b>
<b>15:45 – 16:45</b>		<b>Session 2: Smart Systems for Health and Agriculture</b> <i>Chairman: Paolo Dondo, Mesap, Italy</i>
15:45 – 16:00	A smart mobile SARS-CoV-2 nucleic acid amplification test for efficient and reliable decentralised testing	<i>Markus Riester, meisterwerk ventures GmbH, Germany</i>
16:00 – 16:15	AptaMED – A novel solution for medication monitoring through the application of flexible electronics and smart materials	<i>Miguel Ramalho, CeNTI-TVC, Portugal</i>
16:15 – 16:30	Miniaturised organic optoelectronic system for plasmonics-based quantitative biosensing of multiple analytes in milk	<i>Stefano Toffanin, CNR-ISMN, Italy</i>
16:30 – 16:45	Use of protein-based silk-fibroin films for the fabrication of antifouling electrochemical biosensors	<i>Alexandre Moreno Diaz, Instituto de Microelectrónica de Barcelona, Spain</i>

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## DAY 1 – Wednesday, October 5, 2022 – continued

16:45 – 17:00			<b>Break</b>
17:00 – 17:45			<b>Challenges for Next Generation Advanced Packaging and Heterogeneous Integration</b>
17:00 – 17:20	<b>Invited talk:</b> <i>Henley Liu, AMD, USA</i>		Challenges for Next Generation Advanced Packaging and Heterogeneous Integration
17:20 – 17:45	Panel Discussion on Advanced Packaging in Europe for Europe		
17:45 – 18:00			<b>Break</b>
18:00 – 19:15			<b>Connected EDIHs Drive Innovation</b> <i>Chairman: Rainer Günzler, Hahn-Schickard, Germany</i>
18:00 – 18:15	Welcome and Introduction	<i>Sandro D'Elia, European Commission</i>	
<b>Belgium</b>	Flanders AI EDIH	<i>Stefan Van Baelen, IMEC</i> <i>Ziga Valic, Flanders Make</i>	
	DIGITALIS	<i>Ziga Valic, Flanders Make</i> <i>Stefan Van Baelen, IMEC</i>	
	EDIH-EBE	<i>Stefan Van Baelen, IMEC</i>	
<b>France</b>	MinaSmart-EDIH	<i>Pierre-Damien Berger, Minalogic</i>	
<b>Germany</b>	EDIH Südwest	<i>Sven Spieth, Hahn-Schickard</i>	
<b>Ireland</b>	ENTIRE	<i>Cian Omurchu, Tyndall National Institute</i>	
<b>Italy</b>	DANTE	<i>Petro Siciliano, IMM-CNR</i>	
	ARTES5.0	<i>Antonio Lionetto, STMicroelectronics</i>	
	EXPAND	<i>Enrico Pisino - CIM4.0</i>	
20:30 – 23:00			<b>EPoSS Dinner Event</b> <i>Museo Nazionale del Risorgimento</i>

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## DAY 2 – Thursday, October 6, 2022

<b>08:00 – 09:00</b>		<b>Registration and Welcome Coffee</b>
<b>09:00 – 10:30</b>		<b>Session 3: Industrial IoT and Smart Production Lines</b> <i>Chairman: Antonio Lionetto, STMicroelectronics, Italy</i>
09:00 – 09:15	Towards Zero Power – Next generation IIOT Platform	<i>Harald Pötter, Fraunhofer IZM, Germany</i>
09:15 – 09:30	Strategies of AI-based defects prediction and life cycle management for optoelectronic production line	<i>Giulia Pippione, Prima Electro, Italy</i>
09:30 – 09:45	A hybrid sensing system for extreme production environments	<i>Adriana Cunha, CeNTI, Portugal</i>
09:45 – 10:00	NxTracker, the new smart system for effective facility management	<i>Laura Notarangelo, Vincenzo Zeffiri, Nextome, Italy</i>
10:00 – 10:15	Adding intelligence to water monitoring systems	<i>José Salgado, CeNTI, Portugal</i>
10:15 – 10:30	AI on the Edge for smart products digitisation	<i>Walter Ferrarese, ORCHESTRA, Italy</i>
<b>10:30 – 12:15</b>		<b>Poster Pitches &amp; Poster Session with Coffee</b> <i>Chairman: Albrecht Donat, Siemens AG, Germany</i> > Sequence and themes see appendix
<b>12:15 – 13:00</b>		<b>Latest Members' News and Company Pitches</b> <i>Chairman: Martin Martens, VDI/VDE-IT, Germany</i>
12:15 – 12:30	Integrated Body Motor Controller	<i>Riccardo Groppo, Ideas &amp; Motion, Italy</i>
12:30 – 12:45	Engineering requirements for increased-throughput quantum processor diagnostics	<i>Sebastian Hähnle, Orange Quantum Systems, The Netherlands</i>
12:45 – 13:00	Converting cars to solar hybrid vehicles as a short-term option to accelerate the transition to sustainable mobility	<i>Gianfranco Rizzo, eProInn, Italy</i>
<b>13:00 – 14:00</b>		<b>Lunch and Networking</b>

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## DAY 2 – Thursday, October 6, 2022 – continued

<b>14:00 – 15:15</b>	<b>EPoSS Start-up Award (Presentations by candidates)</b> <i>Chair: Albrecht Donat, Siemens AG, Germany</i> <i>Serena Zerbinati, Mesap, Italy</i>	
<b>15:15 – 16:30</b>	<b>Funding Opportunities and Brokerage</b> <i>Chairwoman: Elisabeth Steimetz, VDI/VDE-IT, Germany</i>	
15:15 – 15:40	KDT Programme & Funding opportunities, KDT JU, <i>Huascar Espinoza</i>	
15:40 – 16:05	EUREKA Cluster Programme and Xecs Call information, <i>Nadja Rohrbach</i>	
16:05 – 16:30	EPSI brokerage, <i>Rene Wiljens</i>	
<b>16:30 – 17:00</b>	<b>Coffee Break</b>	
<b>17:00 – 18:30</b>	<b>Session 4: Towards Sustainable and Automated Mobility Solutions</b> <i>Chairman: Riccardo Groppo, Ideas &amp; Motion, Italy</i>	
17:00 – 17:15	Unveiling innovation potential of circular approaches in automotive electronics and beyond	<i>Nicolas Gouze, VDI/VDE-IT, Germany</i>
17:15 – 17:30	Advanced sensors and manufacturing technologies for innovative automotive measurement systems	<i>Andreas Klug, AVL List GmbH, Austria</i>
17:30 – 17:45	Online health monitoring of power electronic converter in electric vehicles using edge computing technologies	<i>Sachin Kumar Bhoi, Vrije Universiteit Brussel, Belgium</i>
17:45 – 18:00	TinyML for condition monitoring of automotive electronics and tooling machines	<i>Tim Langer, Fraunhofer IIS/EAS, Germany</i>
18:00 – 18:15	AI-based driving style estimation for sensorless driver state monitoring	<i>Angelo Benfitto, Politecnico di Torino, Italy</i>
18:15 – 18:30	Driver monitoring: towards a global 'fit-to-drive' index	<i>Christophe Prat, CEA, France</i>
<b>20:30 – 23:00</b>	<b>EPoSS Dinner Event &amp; Award Ceremony</b> <i>Palazzo Ceriana Mayneri – Circolo della Stampa</i>	

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DAY 3 – Friday, October 7, 2022

## Site Visits Across the City of Turin

We will offer four visits to regional partners. Please plan this firmly into your itinerary. You will have the opportunity to take part in one of these tours and can sign up for it on-site.

09:00 – 13:00

Further details on the companies and their field of work can be found in the [attachment](#).

+CIM4.0 | Competence Industry Manufacturing 4.0  
PRIMA INDUSTRIE & PRIMA ELECTRO | Electronic and laser technologies  
INRiM | Italy's National Metrology Institute (NMI)

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## APPENDIX | Poster Session | Sequence and Themes DAY 2 – Thursday, October 6, 2022, 10:30 – 12:15

10:30 – 12:15		
Poster Pitches & Poster Session (with coffee)		
Chairman: Albrecht Donat		
1.	The Digital Challenge, a new DIH innovation service to support project between corporate and SMEs	Isabelle Dor, CEA, France
2.	Toward Eco-Design of a 5G mmWave Transmitarray Antenna Based on Life Cycle Assessment	Josua Guerid, CEA, France
3.	ADAS data-driven adaptive energy management strategy for an hybrid light duty commercial vehicle	Eugenio Tramacere, Politecnico di Torino, Italy
4.	Role of advanced ADAS and autonomous driving capabilities in the crashworthiness design of safe urban electric vehicles	Javier Romo, CIDAUT Foundation, Spain
5.	Occupant safety in the context of autonomous driving	Javier Romo, CIDAUT Foundation, Spain
6.	EV-integrated app for decision-making on optimised routes in urban freight distribution	Emilio Larrodé, University of Zaragoza, Spain
7.	Improvement of vehicle manoeuvrability using torque vectoring with feedforward control	Luis Miguel Castellanos Molina, Politecnico di Torino, Italy
8.	Mesomorph. All-in-one machine for hybrid technologies enabling high value added microsystems for electronics, photonics and medical fields	Francesco Impaziante, SUPSI, Switzerland

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APPENDIX | Poster Session | Sequence and themes

DAY 2 – Thursday, October 6, 2022, 10:30 – 12:15 – continued

10:30 – 12:15	Poster Pitches & Poster Session (with coffee)	
	<i>Chairman: Albrecht Donat</i>	
9.	A Cloud-Connected In Situ Junction Temperature Measurement of a SiC Power MOSFET Module	<i>Mahamudul Hasan, Vrije Universiteit Brussel, Belgium</i>
10.	High power density motor drive for low voltage inverter applications applying wide bandgap semiconductors	<i>Marco Cannone, Infineon Technologies AG, Austria</i>
11.	A hybrid product identification system to support the sustainability of textile products	<i>Adriana Cunha, CeNTI, Portugal</i>
12.	Innovative Jig Sensing for Production Lines	<i>José Salgado, CeNTI, Portugal</i>
13.	Energy harvesting concrete modules for urban infrastructures	<i>Miguel Ramalho, CeNTI-TVC, Portugal</i>

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