

55th CIRP Conference on Manufacturing Systems Leading Manufacturing Systems Transformation

Tuesday 28.06.2022, 18.00-19.30

Welcome reception

18.00 The welcome reception will be held in the Garden of the Congress centre (or hall).

Wednesday 29.06.2022,

Amphitheatre (Room A)

09.15 **Opening and welcome address
by the Chairman of the Conference**
Professor Emanuele Carpanzano

09.30 **Keynote: Re-Thinking Manufacturing - Future concepts for production**
Dr. Simon Harst, The Fraunhofer-Gesellschaft, Germany

Dr. Simon Harst is scientific advisor to the President of the Fraunhofer-Gesellschaft, Prof. Reimund Neugebauer, and Deputy Head of the Fraunhofer Think Tank. With his strong professional background in production technology - he earned his doctorate under Prof. Fritz Klocke in Aachen - he is significantly involved in identifying new topics relevant to the entire Fraunhofer-Gesellschaft and supporting the decision-making of the Executive Board, especially in the area of production technologies. From the beginning of next month, he will be responsible for the area of cognitive production as a business unit manager at the Fraunhofer Institute for Machine Tools and Forming Technology

10.00 **Keynote: Digital factory, lesson learned**
Thierry Protas, Antares Vision Group

Mr. Protas has spent the last 25 years focused on Pharmaceutical Industry to implement automation and robotic solutions, labelling and printing processes, Visual inspections, Serialization, Aggregation and T&T system, Brand protection solutions, mainly in packaging environment. He brought his experience to Antares Vision Group to develop our Digital Factory products and link software and hardware components to enable pertinent analysis at the plant level to optimize production, reduce wasted time and increase the profits for our customers. He is passionate about technology and how to mix the different tools together to bring the best of breed solutions for our customers

10.30 - 11.00 Coffee break

Wednesday 29.06.2022, 11.00-18.20

Room B1, B2, B3, C1 and E – Parallel sessions

11.00 - 13.00	Digital Transformation CPS and Industry 4.0 Digital Twins Robotic Systems Artificial Intelligence & Machine Learning	Room E Room C Room B1 Room B2 Room B3
13.00 - 14.00	Lunch	
14.00 - 16.00	Digital Transformation Human centric manufacturing Digital Twins Robotic Systems Artificial Intelligence & Machine Learning	Room E Room C Room B1 Room B2 Room B3
16.00 - 16.20	Coffee break	
16.20 - 18.20	Digital Transformation Human centric manufacturing Digital Twins Advanced control and automation systems Artificial Intelligence & Machine Learning	Room E Room C Room B1 Room B2 Room B3
18.45 - 19.45	Lab tour	Campus EST

Thursday 30.06.2022,

Room B1, B2, B3, C1 and E – Parallel sessions

08.20 - 10.20	Digital Transformation Digital and virtual manufacturing (CAD/CAM, VR/AR) Manufacturing Systems design, planning and management Advanced machining & manufacturing processes Artificial Intelligence & Machine Learning	Room E Room C Room B1 Room B2 Room B3
10.20 - 11.00	Coffee break	
11.00 - 13.00	CPS and Industry 4.0 Additive manufacturing Manufacturing Systems design, planning and management Advanced machining & manufacturing processes Artificial Intelligence & Machine Learning	Room E Room C Room B1 Room B2 Room B3
13.00 - 14.00	Lunch	
14.00 - 16.00	Human-robot cooperation Additive manufacturing Flexible, reconfigurable & matrix production systems Advanced control and automation systems Quality control	Room E Room C Room B1 Room B2 Room B3
16.00 - 16.20	Coffee break	
16.20 - 18.00	Human robot cooperation Additive manufacturing Production networks Sustainable & Circular manufacturing Quality control	Room E Room C Room B1 Room B2 Room B3

Gala Dinner

18.40 - 19.20	Aperitif Parco Ciani
19.20 - 22.30	Gala Dinner Villa Ciani

Friday 01.07.2022, Parallel sessions

Room B1, B2, B3, C1 and E – Parallel sessions

08.20 - 10.20	Sustainable & circular manufacturing	Room E
	Smart devices, sensors and networks	Room C
	Flexible, reconfigurable & matrix production systems	Room B1
	Advanced control and automation systems	Room B2
	Production networks	Room B3
10.20 - 11.00	Coffee break	
11.00 - 13.00	Sustainable & circular manufacturing	Room E
	Smart devices, sensors and networks	Room C
	Manufacturing Systems design, planning and management	Room B1
	Manufacturing processes modelling, simulation and optimization	Room B2
	Production service life cycle	Room B3
13.00 - 14.00	Lunch	

Friday 01.07.2022, 14.00 – 15.45

Amphitheatre (Room A)

- 14.00 **Introduction**
 by the Chairman of the Organising Committee
 Professor Emanuele Carpanzano
- 14.05 **Keynote: Advanced Manufacturing Research Initiatives in Switzerland**
 Dr. Lars Sommerhäuser, Swiss Federal Laboratories for Materials Science and
 Technology
- Lars Sommerhäuser is the head of a laboratory at Empa, the Swiss Federal Laboratories for Materials Science and Technology, and the program manager of a research-funding program of the ETH Domain in advanced manufacturing. Furthermore, he drives several national initiatives to foster collaborations between academia and industry and to transfer new manufacturing technologies into industry. Before joining Empa, he worked for more than 15 years as department head, COO, CTO and CEO in various Swiss and German industry companies. He holds a PhD degree in mechanical engineering of the RWTH Aachen.*
- 14.35 **Best Paper Award**
 Professor Emanuele Carpanzano
- 14.45 **CIRP CMS 2023 Announcement**
 by the Chairman of the Organising Committee
 Professor Khumbulani Mpofu
- 15.00 - 15.45 Farewell Coffee break