

Europe
CEST

9/8/26
Tuesday

8:00	8:00	Registration					
9:00	9:00	WS01	WS02	WS05	WS06	WS03	WS04
9:30							
10:00							
10:30	10:30	Coffee break					
11:00	11:00	WS01	WS02	WS05	WS06	WS03	WS04
11:30							
12:00							
12:30	12:40	Lunch					
13:00							
13:30	13:40	WS01	WS02	WS05	WS06	Industry Forum 1	
14:00							
14:30							
15:00	15:10	Coffee break					
15:30	15:40	WS01	WS02	WS05	WS06	Industry Forum 2	
16:00							
16:30							
17:00	17:10						

9/9/26
Wednesday

8:00	Registration					
9:00	Welcome and opening ceremony					
9:30	Keynote 1					
10:30	Coffee break					
11:00	Industry Forum 3				TT09a (5)	TT10a (5)
12:40	Lunch					
13:40	TT02a (2)	TT03a (4)	TT04a (5)	TT06a (3)	TT09b (5)	SS08 (5)
14:20	WiP02 (13)	WiP03 (3)		WiP06 (8)		
15:20	Coffee break					
15:50	Welcome Newbies Session Discover Your IES Community at ETFA 2026 Event			TT01a (4)	SS09 (4)	SS11 (4)
17:10						

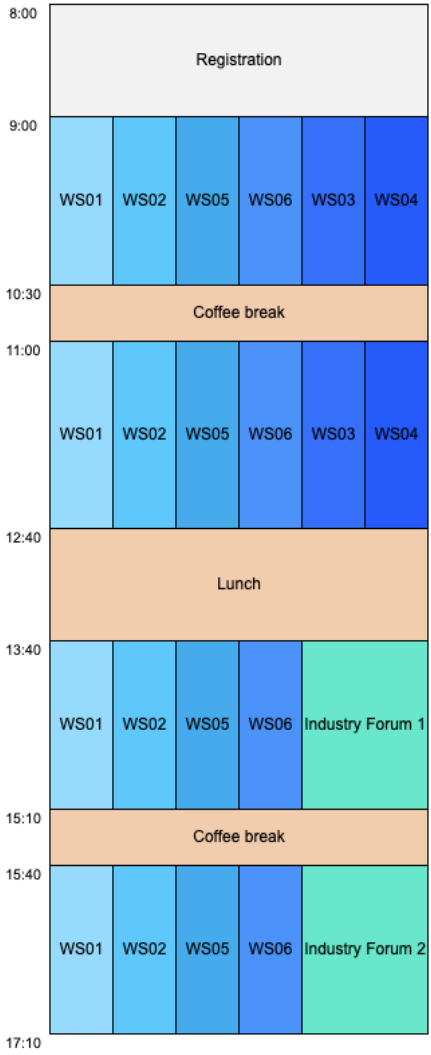
9/10/26
Thursday

8:00	Registration					
8:30	TT05a (2)	TT07a (5)	TT08 (5)	TT10b (1)	TT02b (5)	SS06a (3)
9:10	SS04a (3)			WiP10 (15)		
9:30						SS07a (3)
9:50						
10:10		WiP07 (4)	WiP08 (5)			
10:30	Coffee break					
11:00	Keynote 2					
12:00	Lunch					
13:00	TT01b (2)	TT07b (5)	TT09c (2)	TT10c (5)	SS01 (5)	SS06b (5)
13:40	WiP01 (12)		WiP09 (11)			
14:40	Coffee break					
15:10	TT01c (4)	TT04b (3)	TT05b (4)	TT11a (4)	SS04b (4)	SS07b (4)
16:30						

9/11/26
Friday

8:00	Registration					
8:30	TT04c (2)	TT05c (3)	TT06b (6)	TT09d (5)	TT10d (6)	TT11b (3)
9:10	WiP04 (11)	WiP05 (8)				WiP11 (6)
9:30						
10:30	Coffee break					
11:00	Keynote 3					
12:00	Lunch					
13:00	TT02c (5)	TT03b (5)	TT06c (5)	TT07c (5)	TT10e (5)	SS10 (4)
14:40	Coffee break					
15:10	TT01d (4)	TT02d (4)	TT04d (4)	TT07d (4)	TT11c (4)	SS12 (4)
16:30	Closing ceremony					
17:00						

08/09/2026



Tuesday

08:00 - 09:00	Registration
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09:00 - 10:30		
	Workshop 1 - Juliet & Romeo: Expressive Event-Driven Automation and Robotics Platform for Industry 5.0 WS01a: Session 1 Session chairs: Chair 1, Chair 2	
09:00 - 09:30	xxx	Presenters
09:30 - 10:00	yyy	Presenters
10:00 - 10:30	zzz	Presenters

	Workshop 2 - How to make collaborative robots more collaborative for real environments WS02a: Session 1 Session chairs: Chair 1, Chair 2	
09:00 - 09:30	xxx	Presenters
09:30 - 10:00	yyy	Presenters
10:00 - 10:30	zzz	Presenters

	Workshop 5 - Digitalization and Automation for Production Flexibility WS05a: Session 1 Session chairs: Chair 1, Chair 2	
09:00 - 09:30	xxx	Presenters
09:30 - 10:00	yyy	Presenters
10:00 - 10:30	zzz	Presenters

	Workshop 6 - Fifth Workshop on Implementing Asset Administration Shells (ImplAAS) WS06a: Session 1 Session chairs: Chair 1, Chair 2	
09:00 - 09:30	xxx	Presenters
09:30 - 10:00	yyy	Presenters
10:00 - 10:30	zzz	Presenters

	Workshop 3 - Industry 4.0/5.0 in Practice: Industrial PhD Research on AI, Digital Twins, and Smart Industrial Systems WS03a: Session 1 Session chairs: Mats Jackson, Mats Ahlskog	
09:00 - 09:20	Making Digital Twins Work in Practice: From Pilot to Daily Use in Discrete Manufacturing	Adrian Sanchez de Ocana, AlfaLaval, Sweden
09:20 - 09:40	Mechanisms for Artificial Intelligence Integration in Production Systems: From Pilot to Practice	Nicolas Leberruyer, Volvo CE, Sweden
09:40 - 10:00	Leveraging Technical Interoperability for Information Processing Within Engineer-to-Order Manufacturing.	Vésteinn Sigurjónsson, Alstom, Sweden
10:00 - 10:15	Supporting Manufacturing Companies in Transforming from Legacy to Cyber-Physical Production Systems	Tobias Englund, Sandvik, Sweden
10:15 - 10:30	Towards Human-centric Data-Driven Production Planning	Christos Kakouros, Volvo CE, Sweden

	Workshop 4 - DIVERSE — 8th Workshop on Advanced Technologies in Industrial Vehicular Systems WS04a: Session 1 Session chairs: Luis Almeida, Saad Mubeen, Mohammad Ashjaei	
09:00 - 09:30	xxx	Presenters
09:30 - 10:00	yyy	Presenters
10:00 - 10:30	zzz	Presenters

10:30 - 11:00	Coffee break
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11:00 - 12:40		
	Workshop 1 - Juliet & Romeo: Expressive Event-Driven Automation and Robotics Platform for Industry 5.0 WS01b: Session 2 Session chairs: Chair 1, Chair 2	
11:00 - 11:30	xxx	Presenters
11:30 - 12:00	yyy	Presenters
12:00 - 12:40	zzz	Presenters

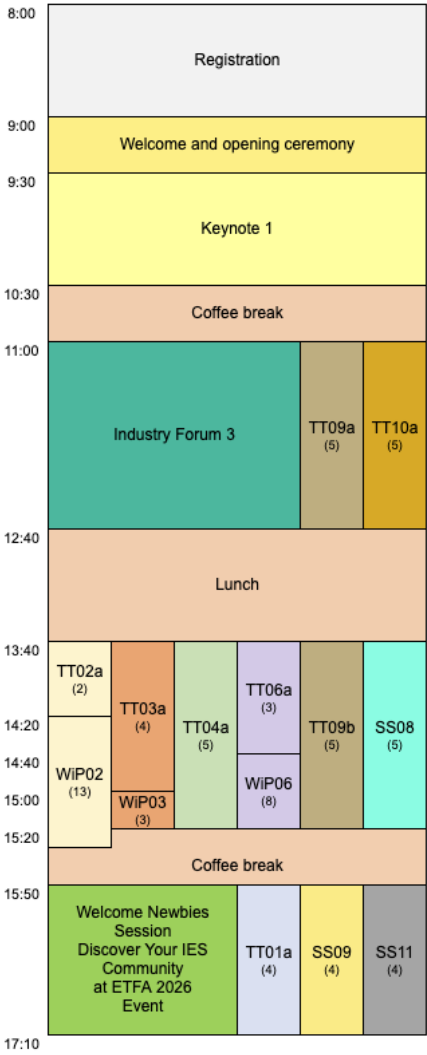
	Workshop 2 - How to make collaborative robots more collaborative for real environments WS02b: Session 2 Session chairs: Chair 1, Chair 2	
11:00 - 11:30	xxx	Presenters
11:30 - 12:00	yyy	Presenters
12:00 - 12:40	zzz	Presenters

	Workshop 5 - Digitalization and Automation for Production Flexibility WS05b: Session 2 Session chairs: Chair 1, Chair 2	
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	11:00 - 11:30	xxx	Presenters
	11:30 - 12:00	yyy	Presenters
	12:00 - 12:40	zzz	Presenters
	Workshop 6 - Fifth Workshop on Implementing Asset Administration Shells (ImplAAS) WS06b: Session 2 Session chairs: Chair 1, Chair 2		
	11:00 - 11:30	xxx	Presenters
	11:30 - 12:00	yyy	Presenters
	12:00 - 12:40	zzz	Presenters
	Workshop 3 - Industry 4.0/5.0 in Practice: Industrial PhD Research on AI, Digital Twins, and Smart Industrial Systems WS03b: Session 2 Session chairs: Mats Jackson, Mats Ahlskog		
	11:00 - 11:20	Supporting the Implementation and Use of Smart Maintenance Technologies in the Manufacturing Industry	San Giliyana, MITC, Sweden
	11:20 - 11:40	Digital Twins got Quarry Sites	Abdulkarim Habbab, Volvo CE, Sweden
	11:40 - 12:00	A Data-Driven Framework for Smart Troubleshooting in Heterogeneous IoT Systems	Sania Partovian, Sigma Technology, Sweden
	12:00 - 12:20	AI-augmented Requirements Engineering for Industrial Systems	Sarmad Bashir, RISE, Sweden
	12:20 - 12:40	Simulation-Driven Decision Support for Future Manufacturing Systems	Akshay Goyal, MITC, Sweden
	Workshop 4 - DIVERSE — 8th Workshop on Advanced Technologies in Industrial Vehicular Systems WS04b: Session 2 Session chairs: Luis Almeida, Saad Mubeen, Mohammad Ashjaei		
	11:00 - 11:30	xxx	Presenters
	11:30 - 12:00	yyy	Presenters
	12:00 - 12:40	zzz	Presenters
	12:40 - 13:40	Lunch	
13:40 - 15:10			
	Workshop 1 - Juliet & Romeo: Expressive Event-Driven Automation and Robotics Platform for Industry 5.0 WS01c: Session 3 Session chairs: Chair 1, Chair 2		
	13:40 - 14:10	xxx	Presenters
	14:10 - 14:40	yyy	Presenters
	14:40 - 15:10	zzz	Presenters
	Workshop 2 - How to make collaborative robots more collaborative for real environments WS02c: Session 3 Session chairs: Chair 1, Chair 2		
	13:40 - 14:10	xxx	Presenters
	14:10 - 14:40	yyy	Presenters
	14:40 - 15:10	zzz	Presenters
	Workshop 5 - Digitalization and Automation for Production Flexibility WS05c: Session 3 Session chairs: Chair 1, Chair 2		
	13:40 - 14:10	xxx	Presenters
	14:10 - 14:40	yyy	Presenters
	14:40 - 15:10	zzz	Presenters
	Workshop 6 - Fifth Workshop on Implementing Asset Administration Shells (ImplAAS) WS06c: Session 3 Session chairs: Chair 1, Chair 2		
	13:40 - 14:10	xxx	Presenters
	14:10 - 14:40	yyy	Presenters
	14:40 - 15:10	zzz	Presenters
	Industry Forum 1 IF1: Session 1 Session chairs: Chair 1, Chair 2		
	13:40 - 14:10	xxx	Presenters
	14:10 - 14:40	yyy	Presenters
	14:40 - 15:10	zzz	Presenters
	Industry Forum 2 IF2: Session 1 Session chairs: Chair 1, Chair 2		
	13:40 - 14:10	xxx	Presenters
	14:10 - 14:40	yyy	Presenters
	14:40 - 15:10	zzz	Presenters

	15:10 - 15:40	Coffee break	
15:40 - 17:10			
	Workshop 1 - Juliet & Romeo: Expressive Event-Driven Automation and Robotics Platform for Industry 5.0		
	WS01c: Session 4		
	Session chairs: Chair 1, Chair 2		
	15:40 - 16:10	xxx	Presenters
	16:10 - 16:40	yyy	Presenters
	16:40 - 17:10	zzz	Presenters
	Workshop 2 - How to make collaborative robots more collaborative for real environments		
	WS02c: Session 4		
	Session chairs: Chair 1, Chair 2		
	15:40 - 16:10	xxx	Presenters
	16:10 - 16:40	yyy	Presenters
	16:40 - 17:10	zzz	Presenters
	Workshop 5 - Digitalization and Automation for Production Flexibility		
	WS05c: Session 4		
	Session chairs: Chair 1, Chair 2		
	15:40 - 16:10	xxx	Presenters
	16:10 - 16:40	yyy	Presenters
	16:40 - 17:10	zzz	Presenters
	Workshop 6 - Fifth Workshop on Implementing Asset Administration Shells (ImplAAS)		
	WS06c: Session 4		
	Session chairs: Chair 1, Chair 2		
	15:40 - 16:10	xxx	Presenters
	16:10 - 16:40	yyy	Presenters
	16:40 - 17:10	zzz	Presenters
	Industry Forum 1		
	IF1: Session 2		
	Session chairs: Chair 1, Chair 2		
	15:40 - 16:10	xxx	Presenters
	16:10 - 16:40	yyy	Presenters
	16:40 - 17:10	zzz	Presenters
	Industry Forum 2		
	IF2: Session 2		
	Session chairs: Chair 1, Chair 2		
	15:40 - 16:10	xxx	Presenters
	16:10 - 16:40	yyy	Presenters
	16:40 - 17:10	zzz	Presenters

09/09/2026



wednesday

08:00 - 09:00	Registration
09:00 - 09:30	Welcome and opening ceremony
09:30 - 10:30	Keynote 1
10:30 - 11:00	Coffee break

11:00 - 12:40

	IF3: Industry Forum 3		
	Session chairs: Chair 1, Chair 2		
	11:00-11:30	xxx	Presenters
	11:30-12:00	yyy	Presenters
	12:00-12:40	zzz	Presenters
	TT09a - Engineering Information Logistics, MBSE, and Lifecycle Integration		
	Session chairs: Arndt Lüder, David Hoffmann		
	11:00 - 11:20	Enabling SMEs to exploit automated engineering by realizing an engineering information logistics	David Hoffmann, Kevin Hansch, Ranjitkumar Gudder, Prathamesh Kadam, Arndt Lüder, Paula Hünecke
	11:20 - 11:40	Bridging IT and OT for Lot-Size-One Production: An MBSE-Based Product Reference Architecture	Christoph Binder, David Hoffmann
	11:40 - 12:00	Fragmentation in Lifecycle Integration of Material Flow Simulation: A Systematic Literature Review and Gap Taxonomy	Yue Yu, Arndt Lüder, Jan Fischer
	12:00 - 12:20	AML-BRIDGE: AutomationML-based Framework for Multi-Domain Engineering Data Logistics	Ranjitkumar Gudder, Sooraj Sunil, Paula Hünecke, Richard Verbeet, Arndt Lüder
	12:20 - 12:40	Extracting and Formalizing Domain Knowledge from Legacy Infrastructure Data through MBSE	Jounes-Alexander Gross,Simon Eschlberger,Katharina Polanec,Elias Bader,Christian Neureiter

	Track 10 - Artificial Intelligence for Cyber Physical Systems in Automation		
	TT10a - Industrial Cybersecurity, Threat Detection, and Vulnerability Analysis		
	Session chairs: Christoph-Alexander Holst, Alexander Diedrich		
	11:00 - 11:20	KEYSER: Stateful Adversarial Campaign Evaluation of ML-Based Intrusion Detection in Industrial Automation	Jaafer Rahmani, Axel Sikora
	11:20 - 11:40	Zero-Shot Cyberattack Classification in Industrial Control Systems Using Tool-Augmented Large Language Models	Felix Specht, Henning Trsek
	11:40 - 12:00	Federated Learning for Cyberattack Classification in Network Traffic of Industrial Control Systems	Felix Specht, Stefanie Hittmeyer, Harsh Kaushik Dhanesha
	12:00 - 12:20	Modular Cybersecurity Ontology for Risk Assessment of Multi-Robot Systems	Lisa Gebauer, Aron Schnakenbeck, Luis Miguel Vieira da Silva, Amr Elfeky, Felix Gehlhoff
	12:20 - 12:40	VISOR: Automated Vulnerability Assessment of Software Repositories	Negar Emami, Christian Göttel, Shuai Guo, Enrico Fregnan, Philipp Sommer, Thanikesavan Sivanthi

12:40 - 13:40

13:40 - 15:20

	Track 2 - Industrial Communication Technologies and Systems		
	TT02a - Process-Aware Intrusion and Anomaly Detection in ICSs		
	Session chairs: Chair 1, Chair 2		
	13:40 - 14:00	A Distributed Intrusion Detection Framework for Process-Aware Attacks in ICSs	Estelle Hotellier, Franck Sicard, Julien Francq, stephane mocanu
	14:00 - 14:20	Generic Anomaly Detection Approach based on Information Extracted from PLCs in ICSs	Franck Sicard, Jean-Baptiste Paux, Julien Francq

	WiP02		
	Session chairs: Chair 1, Chair 2		
	14:20 - 14:25	Impact of Factory Layout on the Performance of MANETs in Industrial Environments	Frank von Schoettler, Eike Lyczkowski, Peter M. Rost
	14:25 - 14:30	Impact of Benign Connectivity Variations on Intrusion Detection for Encrypted OPC UA Traffic in Industrial Private 5G Networks	Song Son Ha, Florian Foerster, Henry Beuster, Tim Kittel, Dominik Merli, Gerd Scholl
	14:30 - 14:35	On the Simulation of Wi-Fi Roaming Strategies in Industrial Networks	Pietro Chiavassa, Stefano Scanzio, Gianluca Cena, Francesc Wilhelmi, Boris Bellalta
	14:35 - 14:40	Machine Learning for Link Quality Prediction with Adaptive Combination of EMA Models	Stefano Scanzio, Sindi Shima, Lukasz Wisniewski, Gianluca Cena
	14:40 - 14:45	Towards Proactive Resilience: Short-Horizon Forecasting of Application-Relevant States in Industrial Wireless Communication	Shashank Jhansale, Ahmad Ashraf Zargar, Lars Wolf
	14:45 - 14:50	Model-Driven NOS for Networked Control Systems Featuring a Software-Based Hybrid Data Plane	Hasal Kulasekara Pallewaththe Kankanamge, Martin Wollschlaeger
	14:50 - 14:55	Lightweight Data Compression for LoRaWAN Applications: An Energy-Accuracy Trade-off Study	Rodrigo Lange, Carlos Montez, Richard D. Souza, Erico Leão, Paulo Portugal
	14:55 - 15:00	Towards Automated 5G Configuration: Design and Evaluation of a RAG-Enhanced AI Pipeline	Steffen Fricke, Jie Wang, Juergen Jasperneite
	15:00 - 15:05	Converging Safety and Security: IO-Link Wireless and OPC UA over 5G under prEN 50742	Henry Beuster, Thomas Robert Doebbert, Gerd Scholl
	15:05 - 15:10	Sustainable EV Charging Optimization by Context-Awareness Integration	Alireza Estaji, Gerald Franzl, Thilo Sauter
	15:10 - 15:15	A New Platform for Testing TSN Usage in Substation Automation Systems	Mateu Jover, Alberto Ballesteros, Manuel Barranco, Julian Proenza, Andreu Garcia
	15:15 - 15:20	Mixed Reality Assisted Commissioning and Readiness Validation for Deterministic TSN Networks	Krithiga Ramesh, Vamsi Kumar Yeraseni, Arne Neumann
	15:20 - 15:25	Introducing a Fault-Injection Platform for TSN	Alberto Ballesteros, Jakub Szlachta, Julian Proenza

	Track 3 - Real-Time Systems and Applications		
	TT03a - Real-Time Scheduling, OS Architectures, and Execution Frameworks		
	Session chairs: Chair 1, Chair 2		

	13:40 - 14:00	Beyond the System Tick: Portable Time-Triggered Scheduling for Embedded RTOSes	Jonatan Sastre Hernandez, Silviu Craciunas
	14:00 - 14:20	TiM2S, a lightweight, OS-agnostic Time-Multiplexed Multilevel Scheduler	Julian Linne, Severin Brunner, Sebastian Altmeyer
	14:20 - 14:40	Support for Logical Execution Time in FreeRTOS	Matthias Becker
	14:40 - 15:00	Can Linux Fly a Drone? A Flight Control Evaluation for Unified UAV Architectures Using PREEMPT_RT Kernel	Luiz Giacomossi, Afshin Ameri, Håkan Forsberg, Ivan Tomasic, Baran Cürüklü, Tommaso Cucinotta

		WiP03 Session chairs: Chair 1, Chair 2	
	15:00 - 15:05	Schedulability Analysis of Periodic Moldable Gang Tasks with Arbitrary Deadlines	João Lima, Mario de Sousa
	15:05 - 15:10	A Simulation-Based Methodology to Derive Timing Requirements in Distributed Real-Time Systems	Aaiza Aziz Khan, Daniel Bujosa, Saad Mubeen
	15:10 - 15:15	Bounding Traffic Generation Jitter in Wireless TSN Using Real-Time Operating Systems	Pablo Avila-Campos, Oscar Mlra-Ferre, Jetmir Haxhibeqiri, Jeroen Hoebeke

		Track 4 - Automated Manufacturing Systems TT04a - Sensing, Monitoring, and Anomaly Detection for Industrial Quality and Safety Session chairs: Chair 1, Chair 2	
	13:40 - 14:00	Recurrent and Convolutional Temporal Neural Networks for State Detection of a Hydraulic Valve in the Steel Industry	Nusyba Yesmin, Oscar Bautista Gonzalez, Sunil kumar Telagamsetti, Daniel Ronnöw
	14:00 - 14:20	A Multi-Modal Industrial Monitoring Framework for Detecting Screwdriving Anomalies	Chen LI, Dimitrios Chrysostomou, Amran Mahboub
	14:20 - 14:40	Probe-then-Push: A GPR-Based Approach for Safe and Efficient Connector Insertion in Robotic Wire Harness Assembly	Simon Lamprecht, Patrick Bründl, Dev Makwana, Jörg Franke
	14:40 - 15:00	Which Parameter Matters Most? A Structured Literature Review and Unified Simulation Comparison of Design and Material Influences on PCBA Solder-Joint Lifetime	Maurice Paul Artelt, Marianna Lintzeri, Matthias Weiß, Nasser Jazdi, Michael Weyrich
	15:00 - 15:20	Evaluation of Large Language Models-based Anomaly Detection for Time-Series in Autonomous Cyber-Physical Systems	Muhammad Wasiq Pervez, Sheng Ding, Andrey Morozov

		Track 6 - Computer Vision and Human-Machine Interaction in Industrial and Factory Automation TT06a - Human-Centered Sensing: Ergonomics and Physiological Monitoring Session chairs: SEBASTIAN FELIX RAUH, JAVIER SILVESTRE-BLANES	
	13:40 - 14:00	Simulation-Based Ergonomic Assessment of Human–Robot Collaboration: An Industry 5.0 Perspective	Guilherme Andrade Pimentel da Costa, Fábio Lima
	14:00 - 14:20	A Quality-Aware Framework for Heterogeneous Video-Derived Respiratory Monitoring	Nhi Nguyen, Le Nguyen, Manuel Lage Cañellas, Miguel Bordallo, Constantino Álvarez Casado
	14:20 - 14:40	Thermal Imaging for Contactless Cardiorespiratory and Sudomotor Response Monitoring	Constantino Álvarez Casado, Mohammad Rakibur Rahman, Sasan Sharifipour, Nhi Nguyen, Manuel Lage Cañellas, Xiaoting Wu, Miguel Bordallo

		WiP06 Session chairs: LE NGUYEN , UDAYANTO DWI ATMOJO	
	14:40 - 14:45	MS-AD: a Metal Stamping Dataset for Visual Anomaly Detection under Real-World Conditions	Can Karacomak, Francesco Ponzio, Simone Bigaran, Santa Di Cataldo, Luciano Scaltrito
	14:45 - 14:50	See the Truth: Introducing Mixed Reality for Visual Die-Cast Part Inspection Training	Sebastian Felix Rauh, Mehdi El Mnasri, Richard Révész, Lukas Kroeninger, Setareh Zafari
	14:50 - 14:55	Training-free Multimodal Surface Defect Classification using RAG and LMM	Laszlo Czuni, Sascha Thomas Dauer
	14:55 - 15:00	TIP3D: An In-the-Wild Benchmark Dataset for 3D-Reconstruction of Tiny Industrial Parts	Mikhail Polikarpov, Oskar Müller, Siddhesh Kakade, Daniel Boiar, Khaled Auf, Jochen Deuse
	15:00 - 15:05	Detecting Random-Like Human Behavior via Eye Tracking Using Deterministic Labeling	Hoàng Nam Lê, Behnaz Amiri, Piercarlo Dondi, Marco Porta
	15:05 - 15:10	Influence of image quantization on the sim-to-real gap of synthetically trained deep learning models	Alexander Moriz, Meike Huber, Robert H. Schmitt
	15:10 - 15:15	Output Standardization in Deep Learning for Chemical Elemental Composition Prediction of 2205 Duplex Stainless Steel from Images	Yajie Hao, Swagat Kumar, Dorothy Tse, Xuejun Ren, Tomasz Tański, Zbigniew Brytan, Guicheng Wang, Mohamad Zaki bin Hassan, Ardhendu Behera, Peter Matthew, Yonghuai Liu
	15:15 - 15:20	A Physiological State-Aware, LLM-Driven Multimodal Human Robot Collaboration Framework with Augmented Reality Interface	Udayanto Dwi Atmojo, Mikhail Kolesnikov, Valeriy Vyatkin, Arnab Chakraborty

		Track 9 - Complex Automation Systems and Systems Engineering TT09b - AI-Driven Automation Engineering and Intelligent Engineering Tools Session chairs: Linus Witucki, Katharina Polanec	
	13:40 - 14:00	A hybrid-AI semantic tool for AutomationML with database persistence and a human-in-the-loop refinement layer	Niharika Ramanath, Ranjitkumar Gudder, David Hoffmann, Arndt Lüder
	14:00 - 14:20	Automated Transformation of MOF-Conformant Metamodels into SysML v2 Domain-Specific Libraries	Markus Peter, Katharina Polanec, Simon Eschlberger, Josef Kolatschek, Markus Schweizer
	14:20 - 14:40	Spec2ControlSequence: an LLM Pipeline for robust IEC 61131-3 SFCs Generation from Natural Language Specifications	Tabea Bordis, Thilo Braun, Heiko Koziolk, Karoline Grotterud
	14:40 - 15:00	Benchmarking Agentic AI Architectures for Automation Engineering	Ilona Bühlmann, Marwin Madsen, Christian Späth, Fabian Pfetzing, Frank Maurer, Mike Barth
	15:00 - 15:20	Value-based Change Impact Analysis in Production with System Impact Architecture Modeling	Hossein Rahmani, Kristof Meixner, David Hoffmann, Stefan Biff, Arndt Lüder

		Special Session 8 - Emerging Intelligent Technologies for Automated Logistics Systems: Agents, Perception, and Planning in Practice SS08 Session chairs: Chair 1, Chair 2	
	13:40 - 14:00	4D Radar Object Localization and Classification	Leon Rafael Schönfeld, Yannick Wunderle, Sören Hohmann
	14:00 - 14:20	Exploring Metamodels and LLM Agents for Planning Tasks in Modular Material Handling Systems	Hind Makarem, Lars Ohnemus
	14:20 - 14:40	Parcel6D: CAD-Free Top-Surface Pose Estimation for Robotic Parcel Handling	Gideon Arndt, Carolin Brenner
	14:40 - 15:00	FOGMACHINE - Leveraging Discrete-Event Simulation and Scene Graphs for Modeling Hierarchical, Interconnected Environments under Partial Observations from Mobile Agents	Lars Ohnemus, Nils Hantke, Kai Furmans, Max Weisser
	15:00 - 15:20	Vision-Language Model Reasoning for Contextual Semantic Mapping in Intralogistics	Marvin Rüd, Hao Pang, Constantin Enke, Zăzilia Seibold, Kai Furmans

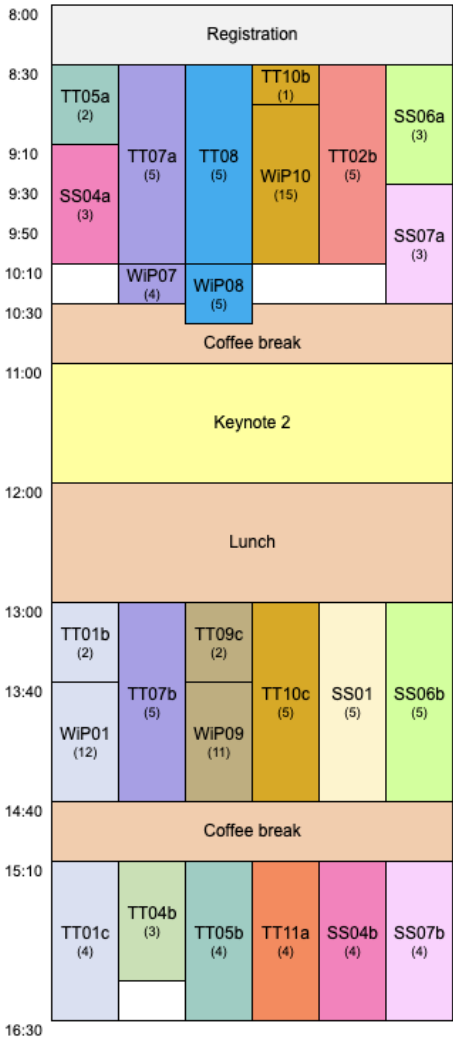
	15:20 - 15:50	Coffee break
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15:50 - 17:10

		Welcome Newbies Session Discover Your IES Community at ETFA 2026 Session chairs: Chair 1, Chair 2	
	15:50 - 17:10	xxx	

	Track 1 - Information Technology in Automation		
	TT01a - Asset Administration Shell and Digital Representations for Industry 4.0		
	Session chairs: Patrick Denzler, Gernot Steindl		
	15:50 - 16:10	Semantic Quality of AAS Submodel Templates: Dataset and LLM-Based Validation Approach	Björn Otto, Marko Ristin, Ina Steinmetz, Sebastian Heppner, Tobias Langer, Hasal Kulasekara Pallewaththe Kankanamge, Nico Braunsch, Hans Wernher van de Venn, Martin Wollschlaeger, Tobias Kleinert
	16:10 - 16:30	Standardized Digital Representations for Multi-Organizational Coordination: An Industrial Case Study Using Alarm Lifecycle Management	Nafise Eskandani, Frank Biringer, John Pretlove
	16:30 - 16:50	AAS-Enabled Emissions Attribution for Multi-Tenant Industrial Storage Infrastructure	Jana Heinrich, Mo'ath Daoud, Thomas Kuhn
	16:50 - 17:10	An Architecture Proposal for Trusted Digital Product Passport Preservation	Frank Schnicke, Philipp Zech
	Special Session 9 - Manufacturing-as-a-Service for On-Demand, Decentralized and Circular Production		
	SS09		
	Session chairs: Chair 1, Chair 2		
	15:50 - 16:10	Building a Dataspace for Manufacturing as a Service in Factory-X	Marco Simon, Felix Schoeppenthau, Richard Kuntschke, Catharina Czech, Birgit Obst, Bertram Fuchs, Thomas Lepper, Timo Schurek, Steffen Currle, Kai Wernet, Jana Pralle, Pascal Rübel
	16:10 - 16:30	Assessment and Remediation of IEC 61499-automated Process Implementability based on Skills, Ontologies and LLM	Melwin Xavier, Tatiana Liakh, Valeriy Vyatkin
	16:30 - 16:50	Digital Twin–Based Fault Diagnosis with Uncertainties in Input Parameters: Gas Turbine Study	Vahid Ehteshami Bojnurdi, Amir Yousefi, Fateme Ranjbaran, Valeriy Vyatkin
	16:50 - 17:10	Graph-Based Migration of IEC 61131 Ladder Diagrams to IEC 61499 Function Blocks with Preserved Execution Semantics	Roman Rumiantcev, Valeriy Vyatkin
	Special Session 11 - AI driven Safe, Secure, and Sustainable (I)-IoT/CP		
	SS11		
	Session chairs: Chair 1, Chair 2		
	15:50 - 16:10	A Cross-Layer Hybrid IDS for Industrial OT Systems: Addressing Detection Gaps due to Abstraction-Layer Mismatch	Kaan Yildirim,Stefanie Merz,Johannes Baum,Michael Heigl
	16:10 - 16:30	Adversarial Robustness Evaluation of a Multi-Layer OT Intrusion Detection System via Automated C2 Red Teaming	Jafer Rahmani,Salva Daneshgadeh Çakmakçı,Kai-Oliver Detken,Axel Sikora
	16:30 - 16:50	On the Differential Privacy Analysis in AI-driven Healthcare: The ADAPT-MedAI Tripartite Architecture and Experimental Validation	Taofik Olajobi,Muhammad Taimoor Khan
	16:50 - 17:10	Rank-Preserving Probability Perturbations for Adversarial Robustness	Georgios Nakas,Divyasheel Sharma

10/09/2026



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08:00 - 08:30	Registration	
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08:30 - 10:30		
	Track 5 - Industrial Control TT05a - PID and Robust Control Tuning Session chairs: Francesco Campregher, Sebastian Madrigal	
	08:30 - 08:50 Implications of Disk Margin and Maximum Sensitivity as Robustness Constraints for 2-DoF PID Controller Tuning	Sebastián Madrigal, Victor Alfaro, Montse Meneses, Orlando Arrieta, Ramon Vilanova
	08:50 - 09:10 Optimal IMC-based tuning rules of PIDA controllers	Francesco Campregher, Antonio Visioli
	Special Session 4 - Hybrid AI for Industrial Automation: Integrating Semantic Models and Generative AI SS04a - Semantic Modeling, Knowledge Reuse, and Information Retrieval Session chairs: Chair 1, Chair 2	
	09:10 - 09:30 Verification of Semantic Dictionaries with Semantic Embedding and LLMs	Sebastian Heppner, Ablay Abdimalinov, Moritz Sommer, Marko Ristin, Tobias Kleinert, Hans Wernher van de Venn
	09:30 - 09:50 ECLASS-Augmented Semantic Product Search for Electronic Components	Nico Baumgart, Markus Lange-Hegermann, Jan Henze
	09:50 - 10:10 Leveraging LLMs and Case-Based Reasoning for Expert-Governed Risk Knowledge Reuse	David Hoffmann, Ranjith Mahesh, Subham Kumar Raju, Arndt Lüder
	Track 7 - Intelligent Robots and Systems TT07a - Robot Planning, Coordination and Fleet Management Session chairs: Chair 1, Chair 2	
	08:30 - 08:50 Aulis - A Modular and Agent-Based Fleet Management System for Mobile Robots	Lars Tønning, Maximilian Hoerstrup, Mahdokht Mohammadi, Jana Gödeke, Jana Jost, Marc Hantzsch, Peter Detzner, Dennis Lünsch
	08:50 - 09:10 Continuous-Space Roadmap Generation for Mobile Robot Fleets with Distance Constraints and Geometry-Aware Discretization	Marvin Rüdtt, Constantin Enke, Kai Furmans
	09:10 - 09:30 Hierarchical Decentralized Multi-Agent Path Finding with Congestion-aware Cost Heuristics	Mahdokht Mohammadi, Dennis Lünsch, Fabian Menebröker, Marc Hantzsch, Jérôme Rutinowski, Lars Hildebrand, Alice Kirchheim
	09:30 - 09:50 AutoCRAFT: Leveraging LLMs and VLMs for CAD-Driven Automated Robotic Assembly Planning	David Timmermann, Felix Schemenz, Nicolas Hügel, Georg Heppner, Tristan Schnell, Rüdiger Dillmann
	09:50 - 10:10 Lightweight Dynamic Navigation with Semi-Static Obstacle Detection for Mobile Manipulators in Industrial Environments	Josefine Monnet, Manuel Belke, Artem Bliznyuk, Arun Berking, Oliver Petrovic, Werner Herfs
	WiP07 Session chairs: Chair 1, Chair 2	
	10:10 - 10:15 A Concept for Handling Uncertainties in the Robot-Based Assembly of Deformable Linear Objects	Celina Dettmering, Florian Pachler, Johannes C. Bauer, Paul Geng, Rüdiger Daub
	10:15 - 10:20 Multi-Agent 5G Architecture for Task-Level Robotic Control in Simulation	Andrés Meseguer Valenzuela, Javier Silvestre-Blanes, Jose Vera Perez, Luis Miguel Bartolin-Arnau, Víctor M. Sempere-Payá
	10:20 - 10:25 Simulation-Grounded Multi-Agent Planning for Interrupt Recovery in Intralogistics	Johannes Sigel, Nico Wilhelm, Nasser Jazdi Motlagh, Michael Weyrich
	10:25 - 10:30 Teaching a Humanoid an Industrial Kitting Task with Vision-Language-Action Policies	Niklas Persson, Nicklas Andersson, Rasmus Larsson
	Track 8 - Advanced Sensing Technologies in the Industrial Internet of Things Era TT08 - Intelligent Sensing and AI-Driven Analytics for Industrial IoT Systems Session chairs: Inés Álvarez, Steffen Lindner	
	08:30 - 08:50 Adaptive Soft Sensing: A Just-in-Time Approach with Self-Organizing Maps and Online Feature Selection	Louis Berthier, Ahmed Shokry, Maxime Moreaud, Guillaume Ramelet, Eric Moulines
	08:50 - 09:10 Priority Decay for Edge-Cloud Autoscaling	Casper Lundberg, Johan Kristiansson, Ulf Bodin
	09:10 - 09:30 SecureDrive-FL: Joint Differential Privacy and Gradient-Aware Partial Homomorphic Encryption for Federated Driver Monitoring	Baran Can Gül, Hanuma Siddhartha Tunuguntla, Anjana Arvind Naik, Abhishek Vijay Potekar, Nasser Jazdi Motlagh, Michael Weyrich
	09:30 - 09:50 IMU-Based Object Activity Recognition: An Industrial Dataset and Deep Learning Approach for Enhanced Process Transparency in Logistics	Marc Julian Brandt, Jean Lenard Kuhlmann, Hermann Foot, Alexander Krooß, Ferdi Kandemir, Jan Phillipp Jäkel
	09:50 - 10:10 Breathing Activity Recognition: A Multi-objective Optimization Approach	Le Nguyen, Constantino Álvarez Casado, Manuel Lage Cañellas, Anirban Mukherjee, Nhi Nguyen, Dinesh Babu Jayagopi, Miguel Bordallo
	WiP08 - Industrial Sensing, Localization, and Condition Monitoring Session chairs: Inés Álvarez, Steffen Lindner	
	10:10 - 10:15 Investigation of Multi-Resolution Wavelets for Micro-Vibration Analysis in High-Precision Manufacturing Platforms	Jaehyun Park, Anmok Jeong, Jeongin Koo, Hyung Tae Kim
	10:15 - 10:20 Uncertainty-Aware RFID Sensing for Infrastructure-Free Industrial Object Localization	Jose Lopez Vicario, Nedal Benelmekki, Eden Corrales
	10:20 - 10:25 Reliable Heater Circuit Design for Process Automation	Alyaa Ismaeil, Manar Rashad, Malak Mekky, Ramez Daoud, Hassanein AMER
	10:25 - 10:30 AE-Based Bearing Fault Diagnosis using EEMD under Low-Speed and Misalignment Conditions	Pablo Cifuentes, Jordi Romeu, Teresa Pàmies
	10:30 - 10:35 Probabilistic Framework for Multi-Vehicle Tracking Using Distributed Accelerometer Sensors	Thomas Routhu, Tullio Facchinetti
	Track 10 - Artificial Intelligence for Cyber Physical Systems in Automation TT10b - Dependable AI for Manufacturing (IMP. REMEBER TO MERGE Track 10 with WiP 10 by placing them in the same room) Session chairs: Lucia Lo Bello, Claudio Zunino	
	08:30 - 08:50 Towards Dependable LLM-Based Systems in Manufacturing	Gereon Weiss, Hoai My Van, René Beck, Melise Rocha
	WiP10 Session chairs: Lucia Lo Bello, Gianluca Cena	

08:50 - 08:55	A Probabilistic System for Conveyor Object Detection Using Electromagnetic Confinement	Javier del Rio Toledano, Nedal Benelmekki, Gerard Zamora González, Jordi Bonache, Jose Lopez Vicario, Antoni Morell
08:55 - 09:00	From Code Generator to Engineering Companion: A Plant-aware Agent for PLC Programming	Joschka Kersting, Gesa Benndorf
09:00 - 09:05	From Floorplan to Smart Home: LLM-Assisted Configuration of Home Automation Systems	Marcel Dix, Charles Steinmetz, Nika Strem, Christian Kruppa, Jörg Platte
09:05 - 09:10	Towards Tool Wear Prediction Using Geometric Process Data in Industrial Steel Wire Forming	Julian Bültemeier, Jan Ehlenbröker, Christoph-Alexander Holst, Volker Lohweg
09:10 - 09:15	Selective Hybrid Decision Support for Incoming Quality Inspection under Scarce Industrial Defect Data	Behzad Ajdari, Alberto Barutti, Elvezia Maria Cepolina
09:15 - 09:20	Cost and Energy-Aware Evaluation of YOLO Architectures for Hierarchical Industrial AIoT	Jorge Zafrilla-Muñoz, Javier Silvestre-Blanes, Teresa Albero
09:20 - 09:25	BPMN-Based Approach for Modeling IEC 62443 Security Programs for OT Asset Owners	Julia Becker, Henning Trsek, Simon Leister, Natalia Moriz
09:25 - 09:30	Holonic Bioprocess Units as Autonomous Cyber-Physical Modules for Distributed Biopharmaceutical Automation	Norman Trapp, Leon Urbas, Tarek Aissa
09:30 - 09:35	A Knowledge Graph Approach for Mapping Relationships Across Industrial Cybersecurity Standards	Pegah Ramezani, Felix Specht, Henning Trsek
09:35 - 09:40	LLM-Assisted Signal Temporal Logic Generation for Fault Detection in Cyber-Physical Systems	Thomas Ederer, Philipp Zech, Gernot Steindl
09:40 - 09:45	Trustworthy AI Agent for Abnormal Situation Handling: Integrating Knowledge Graphs and STAMP/CAST for Safe Procedure Generation	Shinya Kasai, Kentaro Yoshimura
09:45 - 09:50	Towards an Ontological Representation of the EU Artificial Intelligence Act	Lisa Gebauer, Iman Talai, Lasse Beers, Niklas Jobs, Luis Miguel Vieira da Silva, Felix Gehlhoff
09:50 - 09:55	Towards an Intention Abstraction Layer for Autonomous Industrial Systems	Artan Markaj, Raphael Höfer, Felix Gehlhoff
09:55 - 10:00	Physics-Informed FMEA Knowledge Graphs for Industrial Fault Detection	Diogo Rocha, Rui Pinto, Gil Gonçalves
10:00 - 10:05	Real-Time Tacit Knowledge Capture and Integration for Industrial Operations based on User-Centric Design, Semantic Web Standards and GraphRAG	Perna Juhlin, Reuben Borrison, Nilavra Bhattacharya, Anders Persson, Yanqing Zhang, Pawel Gielmuda

	Track 2 - Industrial Communication Technologies and Systems TT02b - Time-Sensitive Networking and Real-Time Industrial Communications Session chairs: Chair 1, Chair 2	
08:30 - 08:50	nascTime: A Full-Stack 5G-TSN Bridge Simulation Framework with SDAP-Based QoS Mapping and IEEE 802.1AS Transparent Clock	Mohamed Seliem, Utz Roedig, Cormac Sreenan, Dirk Pesch
08:50 - 09:10	Performance Measurement and Analysis of gPTP Time Synchronization over Private 5G-TSN Networks	Manuel Schappacher, Dominik Welte, Axel Sikora, Kedar Naik, Seyedali Hadian, Jubin Sebastian E
09:10 - 09:30	An Improved Linux-based PRP Algorithm for Industrial Networks	Steffen Lindner, Felix Maurer
09:30 - 09:50	A distributed Bellman-Ford approach with dynamic delays for enhancing stream allocation in TSN	Nitin Desai, Sasikumar Punnekkat
09:50 - 10:10	Performance Evaluation of Multihop Wireless Networks for Real-Time Industrial Applications	Frank von Schoettler, Maximilian Nesan, Eike Lyczkowski, Oliver Haala, Andreas Frotzscher, Peter M. Rost

	Special Session 6 - Capability- and Skill-based Engineering of Manufacturing Systems SS06a - LLM Integration and Proactive Asset Administration Shells Session chairs: Chair 1, Chair 2	
08:30 - 08:50	Decentralized Multi-Stage Service Negotiation in Value Networks with Proactive AAS using Standardized Submodels	David Dietrich, Carsten Ellwein, Armin Lechler, Alexander Verl
08:50 - 09:10	An LLM-Based Assistance System for Intuitive and Flexible Capability-Based Planning	Luis Miguel Vieira da Silva, Nicolas König, Felix Gehlhoff
09:10 - 09:30	MCP-Driven Proactive AAS: LLM-Assisted Process Modeling and Execution	Anil Riza Bektas, Jürgen Roßmann

	Special Session 7 - From Automation to Autonomy: AI-Driven Industrial Operations SS07a - Autonomous Navigation, Reinforcement Learning, and Edge Cyber-Resilience Session chairs: Chair 1, Chair 2	
09:30 - 09:50	Optimizing Warehouse Logistics: Task-Driven Reinforcement Learning with Multi-Agent Queuing	Oliver Stolz, Maximilian Hörstrup, Steffen Bondorf, Nicolas Bach, Peter Detzner
09:50 - 10:10	Beyond Specialization: Robust Reinforcement Learning Navigation via Procedural Map Generators	Christian Jestel, Nicolas Bach, Marvin Wiedemann, Jan Finke, Peter Detzner
10:10 - 10:30	Perturbation-Driven Robustness Benchmarking of ML-Based Detection of Database Write Attacks at the Industrial Edge	Gianluca Manca, Balz Maag, Thanikesavan Sivanthi, Shuai Guo, Philipp Sommer, Alexander Fay

10:30 - 11:00	Coffee break
11:00 - 12:00	Keynote 2
12:00 - 13:00	Lunch

13:00 - 14:40

	Track 1 - Information Technology in Automation TT01b - Variability and Feature Analysis in Industrial Software Systems Session chairs: Patrick Denzler, Alois Zoitl	
13:00 - 13:20	Mining the Delta: Variability Mining for IEC 61499	Alexander Stummer,Hafiyyan Sayyid Fadhilillah,Rick Rabiser
13:20 - 13:40	RAG4FIA: LLM-Assisted Feature Interaction Analysis in Software Product Lines	Lennard Hettich,Nasser Jazdi Motlagh,Michael Weyrich

	WiP01 Session chairs: Patrick Denzler, Alois Zoitl	
13:40 - 13:45	Environment-Aware Event Flow Graphs for IEC 61499 Applications	Dunja Životin, Alois Zoitl
13:45 - 13:50	Design of a Database-Driven Soft-Sensor Using Linear Interpolation	Kodai Matsushita, Takuya Kinoshita, TORU YAMAMOTO
13:50 - 13:55	Geometry-Guided Learning for P&ID Digitization: Towards Explainable Interactive Automation in Industry 5.0	Nika Strem, Nicolai Schoch, Marcel Dix
13:55 - 14:00	Towards Data Dependence Graphs for IEC 61499 Basic Function Blocks	Dunja Životin, Alois Zoitl
14:00 - 14:05	Monte Carlo Analysis of Time Synchronization Uncertainties in Open-Loop Networked Control of Autonomous Ground Vehicles	Alberto Morato, Federico Tramarin, Claudio Zunino, Manuel Cheminod
14:05 - 14:10	Towards Dataspace readiness: A Formal Model for Enterprise Data Landscapes Assessment	Philip Sehr, Jonas Kortner, Natalia Moriz, Christian Wittenbröker, Mohamed Bassam Kassabji, Henning Trsek
14:10 - 14:15	Translating IEC 61131-3 LD Programs to SFC - a Pattern-Matching Approach	Mario de Sousa, Duarte Tavares, Yimin Zhang
14:15 - 14:20	Invisible Textile Traceability Using UV/IR-Sensitive Fibres: A Data Matrix Recognition System with Synthetic-to-Real Evaluation	Patrick Denzler, Carina Hauber, Alois Ferscha

	14:20 - 14:25	Rule-based Redesign of Abstract GraphML Representations into IEC 61499-oriented Designs	Shubham Sharma, Oleksandr Kudriavchenko, Felix Schmid, Alois Zoitl
	14:25 - 14:30	Extending the Capability-Skill Paradigm to Digital Twins and Large Language Models	Milapji Singh Gill, Luis Miguel Vieira da Silva, Philip Topalis, Felix Gehlhoff
	14:30 - 14:35	World-Model-Aware Responsibility Allocation in Heterogeneous Logistics Systems	Artan Markaj, Niklas Jobs, Felix Gehlhoff

		Track 7 - Intelligent Robots and Systems TT07b - Robust Perception, Localization, and Safety Assurance Session chairs: Chair 1, Chair 2	
	13:00 - 13:20	Simulation-Only Training for Real-World Localization Integrity Monitoring	Markus Knitt, Philipp Braun, Jana Jost, Manav Thakkar, Sean Maroofi, Maximilian Schmidt, Swantje Plambeck, Hendrik Rose
	13:20 - 13:40	Comparative Evaluation of Localization Algorithms for High-Dynamic Robotic Systems: A Case Study on evoBOT	Alexander Voß, Adrian Böckenkamp
	13:40 - 14:00	Foundation Model for the Detection of Cyber-attacks on Mobile Robot Perception System	Aleksandar Jokic, Milica Petrovic, Zoran Miljkovic
	14:00 - 14:20	Safety Engineering of Human-Robot Collaboration Tasks using a 3D LiDAR	Giulia Giamberini, Georgios Katranis, Tommaso Zoppi, Muhammad Atif, Paolo Lollini, Andrea Ceccarelli, Andrey Morozov, Andrea Bondavalli
	14:20 - 14:40	Spatially Grounded Scene Captioning for Intralogistics Using a Hybrid Object Detection and Vision-Language Pipeline	Johannes Sigel, Matthias Weiß, Nasser Jazdi Motlagh, Michael Weyrich

		Track 9 - Complex Automation Systems and Systems Engineering TT09c - Energy Systems and Industrial Cybersecurity Session chairs: Arndt Lüder, Gerald Franzl, Antti Pakonen	
	13:00 - 13:20	Battery Electric Storage Systems Integration into Smart Grid Support at the Feeder Network Level	Gerald Franzl, Mariia Forkaliuk
	13:20 - 13:40	Cybersecurity for Digital Substation Networks: From Threat Landscape to Intent-Based Mitigation	Lukas Bechtel, Sabrina Kaniewski, Tobias Heer

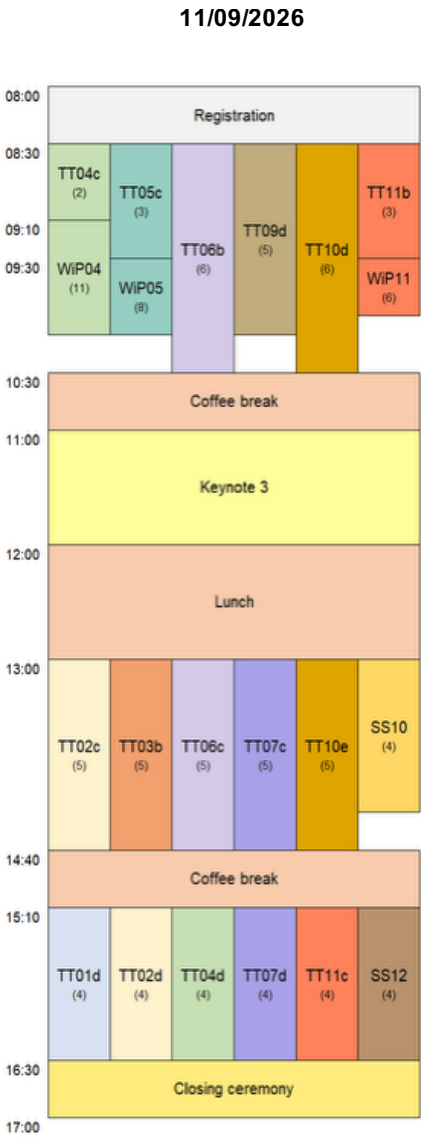
		WiP09 Session chairs: Arndt Lüder, Gerald Franzl, Antti Pakonen	
	13:40 - 13:45	The Self-Reinforcing Automation Loop in Human-Centric Manufacturing	Kevin Hansch, Arndt Lüder, David Hoffmann
	13:45 - 13:50	An AutomationML Domain Library for the Formalized Process Description	Hamied Nabizada, Rainer Drath, Felix Gehlhoff, Alexander Fay
	13:50 - 13:55	When One Reference Is Not Enough: Multi-Context Modeling in AutomationML	Rainer Drath, Hamied Nabizada
	13:55 - 14:00	Proven: A graphical tool for model-checking function block diagrams	Antti Pakonen, Miro Eklund, Tuukka Lehtonen
	14:00 - 14:05	Beyond Automation: Is RAMI 4.0 ready for Industry 5.0? An MBSE Perspective	Christoph Binder, Tobias Bein, David Hoffmann
	14:05 - 14:10	Transformation of Native Engineering Artefacts to AutomationML Network Representations	Arndt Lder, Ranjitkumar Gudder, Niharika Ramanath
	14:10 - 14:15	Role–Lifecycle Governance of AAS-Based Digital Product Passports: A Control Cabinet Manufacturing Perspective	Israt Nowshin, Dirk Schöttke, Stephan Schäfer, Daniel Büttner, Ralf Lehmann, Felix Strohmeier
	14:15 - 14:20	Mapping Photovoltaic Systems onto SGAM: A Model-Based Reference Architecture	Ranjitkumar Gudder, Ashay Pare, David Hoffmann, Arndt Lüder
	14:20 - 14:25	Extending Software-Defined Automation to Field Device Configuration and Firmware Update Support	Sofia Colaco, Mohammad Ashjaei, Zenepe Satka, Jessica Bruch
	14:25 - 14:30	The False Consensus Trap in Interdisciplinary Data Driven Engineering Research Projects	Sebastian Baum, Patrik Michalski, Birgit Vogel-Heuser, Agnes Koschmider, Nasser Jazdi Motlagh, Michael Weyrich
	14:30 - 14:35	A Metacognitive Decision Framework for Adaptive Human–AI Cooperation during Alarm Floods	Peter Pfeiffer, Yoav Ben Yaakov, Nasser Jazdi Motlagh, Joachim Meyer, Michael Weyrich

		Track 10 - Artificial Intelligence for Cyber Physical Systems in Automation TT10c - LLMs, Multi-Agent Systems, and Intelligent Decision Support Session chairs: Volker Lohweg, Gianluca Cena	
	13:00 - 13:20	LLM Agents Perform Controlled Experiments Using Simulation Models	Yuchen Xia, Michael Weyrich, Nasser Jazdi Motlagh, Johannes Stümpfle, Johannes Sigel, Akshay Kumar Venkatesha Narla, Gavin Reynolds, Anna Jawor-Baczynska, Pol Llopart
	13:20 - 13:40	LLM-Driven Multi-Agent Control for Skill-Based Smart Manufacturing	Kay Köhle, Darko Anicic, Thomas Runkler, René Graf
	13:40 - 14:00	AI-Assisted Threat Modelling with LLMs and VLMs: A Comparative Evaluation	Georgios Nakas, Yashraj Sawant, Christian Göttel, Balz Maag, Enrico Fregnan, Michele Marazzi, Andrew Habib
	14:00 - 14:20	A Hierarchical Multi-Agent Framework for Fault Diagnosis and Corrective Action Recommendation in Machine Tools	Tom Koerner, Adriano Polzer, Marco Huber
	14:20 - 14:40	A Conceptual Framework for Automated Metal Recycling Route Decision in Waste PCB using AI-Based Object Detection and Ontology Knowledge Base	Sinta Uri El Hakim, Torben Miny, Sunu Wibirama, Tobias Kleinert

		Special Session 1 - Addressing Data Scarcity: Machine Learning, Information Fusion, and Sustainable AI SS01 Session chairs: Chair 1, Chair 2	
	13:00 - 13:20	RFID-Based Traceability for Smart Manufacturing in Data-Scarce Industrial Environments	Nedal Benelmekki, Fatin Al Molahed, Yaiza Latorre, Mehdi Ben Sliman, Irene Hidalgo, Marc Ros, Antoni Morell, Jose Lopez Vicario
	13:20 - 13:40	Synthetic Data Generation for Gear Defect Detection: A Case Study	Hossein Omid Beiki, Seyedehmona Basiri, Kristof Grosser, Oliver Petrovic, Christian Brecher
	13:40 - 14:00	UnrealMVS: A Generator for Synthetic Multi-Fisheye Omnidirectional Depth Data	Karol Rösner, Jérôme Rutinowski, Hartmut Surmann, Alice Kirchheim
	14:00 - 14:20	A Scalable Edge-Cloud CPPS Architecture for Data-Efficient Industrial Monitoring under Data Scarcity	Bernardo Moreira, Rui Pinto, Gil Gonçalves, Miguel Moura
	14:20 - 14:40	Exploiting automated similarity analysis of synthetic data for performance improvements of object detection models	Alexander Moriz, Meike Huber, Robert H. Schmitt

		Special Session 6 - Capability- and Skill-based Engineering of Manufacturing Systems SS06b - Process Planning, Skill Orchestration, and Formal Execution Runtimes Session chairs: Chair 1, Chair 2	
	13:00 - 13:20	Reactive Scheduling for Human-Robot Collaboration: An Event-Driven Approach with Adaptive Skill Execution	Lukas Buchner, Philipp Zallinger, Karin Nachbagauer, Alois Zoitl, Roman Froschauer
	13:20 - 13:40	Optimal Executable Process Plan Generation for Capability-Constrained Modular Plants	Bowen Chen, Michael Winter, Torben Miny, Tobias Kleinert
	13:40 - 14:00	From Distributed AAS Descriptions to Executable Non-Deterministic Production Policies via FOND Planning and Behaviour Trees	Tristan Schwörer, Martin Bieber Jensen, Zakka Ugih Rizqi, Lazaros Nalpantidis, Dimitrios Chrysostomou
	14:00 - 14:20	Automatic Generation of Finite State Machines for Modular Robot Systems	Linus Witucki, Mike Barth
	14:20 - 14:40	A Hybrid-OT Runtime for Behavior Tree-Based Skill Orchestration in Heterogeneous Manufacturing Systems	Florian Gramß, Katharina Naetscher, Shubhankar Riswadkar, Renzo Bazan Santos, Philipp Weeger, Manuel Kreutz, Stefan May, Dhvani Agrawal

	14:40 - 15:10	Coffee break	
	15:10 - 16:30		
	Track 1 - Information Technology in Automation		
	TT01c - Security, Trust, and Key Management in Industrial Control Systems		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	Execution-Synchronized and Bandwidth-Optimized Stateless Fuzzing for Soft-PLCs in Constrained OT Networks	Nobutaka Kawaguchi, Mayuko Tanaka, Ashokkumar Chettymani, Minako Toba, Satoshi Misaka, Hiromi Isokawa
	15:30 - 15:50	Communication-Efficient Federated Anomaly Detection Across the IT/OT DMZ: A Deployment Architecture for Industrial Control Systems	Veysel Alevcan, Yakubu Tsado, Mohammad Furqan Ali, Teresa Sousa, Luis Miguel Campos
	15:50 - 16:10	Evaluating Decoupled Certificate Management in Modular Automation Architectures through Blockchain-Based Approaches	Marwin Madsen, Tobias Schill, Mike Barth
	16:10 - 16:30	PGB-PKI: A Module-Internal Decentralized PKI for Modular Automation	Marwin Madsen, Malte Vater, Mike Barth
	Track 4 - Automated Manufacturing Systems		
	TT04b - Digital Twins, Virtual Commissioning, and Asset Administration Shells		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	From CAD Data to Simulation Function: A Function Oriented Path to Automated Virtual Commissioning of Special Purpose Machinery	Josip Lozic, Shengjian Patrick Chen, Oliver Riedel
	15:30 - 15:50	Change Impact Analysis in Virtual Commissioning: Unified Continuous Parameterization of Robotic Systems	Simon Nowinski, Shengjian Patrick Chen, Andreas Wortmann
	15:50 - 16:10	Enabling Manufacturing-as-a-Service through Agent-based Asset Administration Shells	Alexandre Manta-Costa, Márcio Costa, Ricardo Peres, Jose Barata
	Track 5 - Industrial Control		
	TT05b - Systems-Level Perspectives in Industrial Production: Human, Organizational, and Data-Driven Approaches		
	Session chairs: Takao Sato, Akira Yanou		
	15:10 - 15:30	Data-Driven Heart Rate Control for Worker Fatigue Management in Industry 5.0: A Human-in-the-Loop Approach	Takao Sato, Yoshiharu Kawahara, Yusuke Tsunoda, Natsuki Kawaguchi, Kiichiro Murotani, Yuichi Kimura, Isao Mizukura, Hirashi Mori, Hayato Uchida, Syoji Kobashi, Yoshihiro Ohnishi
	15:30 - 15:50	Towards Autonomous Battery Cell Production - A Digital Twin for Continuous Slurry Mixing	Simon Otte, Sebastian Schabel, Jürgen Fleischer
	15:50 - 16:10	Why Autonomous Mobile Robots Fail to Scale? A Diagnostic Socio-Technical Framework for Organisational and Technical Complexity in Industrial Environments	Atair Alves Camargo Junior, Mats Jackson, Anna Ericson Oberg, Linn Gustafsson
	16:10 - 16:30	A Data-Driven Assessment System for Robustness and Resilience in Production Systems	Florian Pleier, Johannes Schilp
	Track 11 - Vehicular Embedded Systems		
	TT11a - Software-Defined Vehicles, Virtualization, and System Testing		
	Session chairs: Saad Mubeen, Ramez Daoud		
	15:10 - 15:30	Plug-and-Play Sensor Evolution in Software-Defined Vehicles through Asset Administration Shells	Akshay Kumar Venkatesha Narla, Nasser Jazdi Motlagh, Michael Weyrich
	15:30 - 15:50	A Scalable Software-in-the-Loop Test Methodology for Early Integration Testing Using Virtual ECUs	Fatima Kavgic, Okan Ecin, Alexander Jesser
	15:50 - 16:10	Closing the Loop: Continuous Measurement-Driven Refinement of Offloading Predictions	Falk Dettinger, Matthias Weiß, Michael Weyrich
	16:10 - 16:30	BA-TRACE: Boundary-Aware Trace Reconstruction for Scenario-Based Evaluation of Mixed AUTOSAR Adaptive and ROS 2 Vehicular Embedded Systems	Shunsuke Ito, Ryudai Iwakami, Hiroyuki Hanyu, Tasuku Ishigooka, Takuya Azumi
	Special Session 4 - Hybrid AI for Industrial Automation: Integrating Semantic Models and Generative AI		
	SS04b - Industrial Automation, Digital Twins, and Asset Administration Shells		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	Semi-Automatic Asset Administration Shell Creation Using Large Language Models and Human-in-the-Loop Interaction	Michael Baumann, Ina Steinmetz, Marc Leon Haller
	15:30 - 15:50	Ontology-based Grounding and Feedback for Reliable LLM-based Asset Administration Shell Generation	Martin Jensen, Tristan Schwörer, Sazvan Saeed, Zakka Ugih Rizqi, Casper Schou
	15:50 - 16:10	LLM-based Multi-Agent System for Automatic Co-Simulation Model Generation in Virtual Commissioning of Machine Tools	Sascha Schaper, Kevin Diebels, Alexandra Ast, Alexander Verl
	16:10 - 16:30	Hybrid Vision Pipeline for Knowledge Graph Construction from P&IDs	Gernot Steindl, Julian Pauschenwein, Jürgen Pannosch, Christian Heschl
	Special Session 7 - From Automation to Autonomy: AI-Driven Industrial Operations		
	SS07b - Process Industry Automation: Alarm Intelligence and Operator Decision Support		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	Multi-Scale State-Space Autoencoder Framework for Industrial Alarm Flood Classification	Amirhossein Najafi, Mohammad Hossein Roohi, Tongwen Chen
	15:30 - 15:50	Resilient Industrial AI for Autonomous Process Operations: Applications, Theses, and Research Directions	Gianluca Manca, Alexander Windmann, Marcel Dix, Ruben Hühnerbein, Alexander Fay
	15:50 - 16:10	Rethinking the Role of Control Room Operators in Highly Automated Process Industries	Chandrika K R, Yanqing Zhang, Petra Bjørndal, Anders Persson, Dawid Ziobro
	16:10 - 16:30	Toward Autonomous Industrial Systems: Agentic Alarm-Based Retrieval-Augmented Operator Advisory	Amirhossein Najafi, Tongwen Chen
		A Probabilistic System for Conveyor Object Detection Using Electromagnetic Confinement	Javier del Rio Toledano, Nedal Benelmekki, Gerard Zamora González, Jordi Bonache, Jose Lopez Vicario, Antoni Morell



Friday

08:00 - 08:30	Registration	
08:30 - 10:30		
	Track 4 - Automated Manufacturing Systems TT04c - Economic and Operational Efficiency in Manufacturing Logistics Session chairs: Chair 1, Chair 2	
08:30 - 08:50	Beyond FTE Displacement: Formalising Inventory Working Capital as the Primary Return Stream in Industrial Robot Deployment	Aniruddha Singhal
08:50 - 09:10	Efficient Raw Material Collection through Constrained Multi-Vehicle Routing Optimization	Mihaela-Alexandra Barb-Ciorbea, Marius Kloetzer, Cristian Mahulea
	WiP04 Session chairs: Chair 1, Chair 2	
09:10 - 09:15	Cycle Time Analysis for Classification of the Functional States of Automatic Assembly Machines	Alessio Ferrari, Massimiliano Gaffurini, Enrico Brunelli, Axel Sikora, Emiliano Sisinni, Paolo Ferrari
09:15 - 09:20	Integrating an Open Source Virtual PLC with a Virtual Commissioning Tool	Enrico Brunelli, Massimiliano Gaffurini, Alan Oliveira de Sa, Eduardo Paciencia Godoy, Emiliano Sisinni, Paolo Ferrari
09:20 - 09:25	Open-Source Containerized IEC 61499 with TSN for Deterministic Field-Level Industrial Communication	Rajat Das, Supriya Gain, Chirabrata Bhaumik, Pratyush Mandal
09:25 - 09:30	A Physics-Informed Multimodal Framework for Manufacturing Defect Detection in Polymer Selective Laser Sintering	Mariorosario Prist, Paolo Cicconi, Alessandro Di Biase, Federico Brunella, Matteo Colletta, Angiello Libofsha, Andrea Monteriù, Andrea Bonci
09:30 - 09:35	Machine Learning-Based Energy Optimization in Injection Molding Machines	Matheus Martins, Fábio Lima
09:35 - 09:40	Uncertainty-Aware Remaining Useful Life Prediction for Electromechanical Relays with Bayesian LSTM Networks	Maurice Paul Artelt, Matthias Weiß, Nasser Jazdi, Michael Weyrich
09:40 - 09:45	Cable Layouts in Confined Space Without Order Effects	Ruben Lipperts, Marc Hesse, Ulrich Rückert
09:45 - 09:50	Swarm Intelligence for Ergonomic Storage Location Assignment: Preliminary Results from a Ten-Algorithm Benchmark	Ricardo Silva, Gil Gonçalves, Diogo F. Gomes, Vítor Pinto, Abel Mendes
09:50 - 09:55	Precision Additive Manufacturing Process Control for High-Speed Cylindrical 3D Printing Based on Rotating-Nozzle Flow Dynamics	Leon Ueshima, Wakana Tsuru, Ryosuke Tasaki
09:55 - 10:00	From Manufacturing Data to Evidence-Aware Capability Effects	Marco Simon, Tatjana Legler, Pascal Rübel, Martin Ruskowski
10:00 - 10:05	Work-in-progress: Discrete-event simulation goes performance testing – realistic manufacturing traffic for evaluation of next-generation mobile communication	Janina Gauß, Niklas Beckmann, Niels König, Robert Schmitt
	Track 5 - Industrial Control TT05c - Adaptive and Advanced Control Strategies for Dynamic Systems Session chairs: Akira Yanou, Sofia Hustiu	
08:30 - 08:50	Deployment of Sliding Mode Control and real-time evaluation for Crazyflie 2.1+ UAV	Ioana Hustiu, Sofia Hustiu, Andrada-Anamaria Toader
08:50 - 09:10	MIMO Two-Degree-of-Freedom Self-Tuning GPC Using an Adaptive Observer with a Weighted Control-Error-Dependent Update Rate	Akira Yanou
09:10 - 09:30	Adaptive Feedforward Control Based on Real-Time Payload Estimation for Improved Tracking Performance	Jakob Gesell, Denis Pfeifer, Philipp Rodegast, Jörg Fehr
	WiP05 Session chairs: Kentaro Hirata, Ramon Vilanova	
09:30 - 09:35	Work-in-Progress: Toward Experimental pH Regulation in a Vertical Microalgae Photobioreactor Using PI-Based CO ₂ Injection	Vinicius Oliveira, Manoela Almeida
09:35 - 09:40	Online Reconfiguration of Smart Material Recovery Facilities using Mixed-Integer Linear Programming	Jan-Philipp Schulze, Philip Wette
09:40 - 09:45	Design of a Database-Driven Multivariable PID Control	Tomohiro Hirakawa, TORU YAMAMOTO
09:45 - 09:50	Local Ring Stability of Car-Following Model under Decentralized Delayed Feedback Control	Kentaro Hirata, Ryusei Maruo
09:50 - 09:55	Practical Edge-to-Cloud Telemetry Bridge for Proprietary Prosumer Hardware Toward Interoperable Energy Community Monitoring	Haoran Huang, Sebastián Madrigal, Pau Comas, Antoni Morell, Jose Lopez Vicario, Montse Meneses, Ramon Vilanova
09:55 - 10:00	Structure-Aware GPR for Motion Prediction and Strategy Change Detection in Excavator Swing	Masaki Akiyama, TORU YAMAMOTO, Tomofumi Okada, Natsuki Yumoto, Kazushige Koiwai
10:00 - 10:05	An Integrated IT-OT Architecture in High Voltage Direct Current Power Transmission Systems	Zeinab Bakhshi, Mohammad Ashjaei, Guillermo Rodriguez-Navas
10:05 - 10:10	Tuning the Cost-Performance Trade-off in Activated Sludge Control: A Demand-Driven Supervisory Layer	Andreea Elena Voipan, Marian Barbu, Montse Meneses, Ramon Vilanova
	Track 6 - Computer Vision and Human-Machine Interaction in Industrial and Factory Automation TT06b - Vision-Based Sensing and Monitoring Systems for Industrial Processes Session chairs: CZUNI LASZLO, JAVIER SILVESTRE-BLANES	
08:30 - 08:50	A Vision-Based Framework for Real-Time Detection of PPE Compliance in Cleanrooms	Takumi Ege, Hiroto Nagayoshi, Sanjay Kumar Dwivedi, Akhil GAKHAR
08:50 - 09:10	Robust Light State Validation for ECU Testing: A Camera-Based System for Real-Time Optical Signal Monitoring under Variable Illumination	Jessika Spyra, Stefan Konwalinka, Balaji Muthinen, Michael Fahrbach, Jürgen Pannek, Mohamad Kumail Abbas
09:10 - 09:30	DiagEx: Zero-Shot P&ID-to-DEXPI Digitization with a Vision-Language Agent	Heiko Koziolk, Thilo Braun, Tabea Bordis
09:30 - 09:50	Targetless Thermal-to-CAD Registration for 3D Die Temperature Monitoring via Perspective-n-Lines	Jozef Janus, Wolfgang Kemmetmüller, Stephan Strommer, Tobias Glück
09:50 - 10:10	Line-Scan Sensors and Convolutional Neural Networks: Unified Modelling, Parameter Selection and Row-Wise Inference	Felix Kronenwett, Georg Maier, Thomas Längle
10:10 - 10:30	Gabor Filter Bank based Noise Robust Fluid Flow Regime Classification	Sai Siri, Ankita Jain, Palani Thanaraj Krishnan, Vivek Kanhangad, Sunil kumar Telagamsetti
	Track 9 - Complex Automation Systems and Systems Engineering TT09d - Digital Twins, Simulation, and Smart Manufacturing Operations Session chairs: Arndt Lüder, Rainer Drath	
08:30 - 08:50	QoS-Aware Composable Digital Twins for Resilient Coordination of Industrial Mobile Robots	Ulf Bodin, Jan Niemi, Ulf Andersson

	08:50 - 09:10	Simulation-Driven Sensor Placement Optimization for Thermal Anomaly Detection in Industrial Control Cabinets	Torsten Rauch, Tobias Noesselt, Oliver Wallscheid
	09:10 - 09:30	MTP GUIverse: Automated Creation of Universal XR-GUIs for Vendor-Neutral MTP Process and Production Modules	Vincent Schmitt, Fabian Anger, Rainer Drath
	09:30 - 09:50	Digital Value Scope: A Holistic Methodology for Identifying Digital Waste in Engineering Processes	Oussama Jarrar, Niklas Offenbauer, Paula Hünecke, Andreas Holtz, Arndt Lder
	09:50 - 10:10	A Review on Human Digital Twins for Manual Operations in Manufacturing and Logistics	Tobias Bein, Christoph Binder, David Hoffmann, Arndt Lder

	Track 10 - Artificial Intelligence for Cyber Physical Systems in Automation TT10d - Autonomous Systems, Optimization, and Predictive Maintenance Session chairs: Henning Trsek, Mohsen Kazemian		
	08:30 - 08:50	BeMALGS: A Multi-Stage Benchmark for Aircraft Landing Gear Systems Predictive Maintenance	Francesco Biondani, Luigi Capogrosso, Mattia Bortolaso, Edoardo Finamore, Domenico Fabio Migliore, Francesco Acerra, Michele Magno, Franco Fummi
	08:50 - 09:10	Agent-Based Reinforcement Learning for Automated Pipe Routing in Modular Water Electrolyzer Plants	Simon Krieger, Nils Niedernostheide, Patrick Adler, Bernd Kuhlenkötter
	09:10 - 09:30	Uncertainty-Aware Model Learning for Fault Diagnosis	Friederike Bruns, Alexander Diedrich, Andreas Rauh, Oliver Niggemann
	09:30 - 09:50	Learning When to Observe: A Reinforcement Learning Strategy for Exploration Scheduling in Mobile Robot Systems	Christof Schützenhöfer, Thomas Ulz, Christian Steger
	09:50 - 10:10	Towards Autonomous Commissioning of Industrial Drives via Multi-Objective Bayesian Optimization	David Petrovic, Gian Antonio Susto, Angelo Cenedese
	10:10 - 10:30	Deploying Neural Networks on Resource-Constrained PLCs via IEC 61131-3 Compilation	Nikolaj Jakobsen, Kristian Hill, Firas Saleh

	Track 11 - Vehicular Embedded Systems TT11b - Vehicular Cybersecurity and Secure Communications Session chairs: Saad Mubeen, Ramez Daoud		
	08:30 - 08:50	A Micro-benchmark of ECDSA curves and Ed25519 for Low-Latency V2X Message Authentication	Mahdi Panahi, Bashar Ali, Wagner Ourique de Morais, Obada Khalaf, Seid Hackovic, Merhawi Tekleab, Edison Pignaton de Freitas, Alexandre Dos Santos Roque
	08:50 - 09:10	Retrofitting MACsec with Lightweight Origin Authentication in Networked Embedded Systems	Gianluca Cena, Stefano Scanzio
	09:10 - 09:30	Temporal Graph Neural Network-Based Anomaly Detection in In-Vehicle CAN-Bus Sensor Data	Matthias Becker, Fatemeh Seyedin

	WiP11 Session chairs: Saad Mubeen, Ramez Daoud		
	09:30 - 09:35	Mapping Automotive Software Systems to Zonal Architectures	Tobias Beibl, Jonas Peeck, Christian Pigorsch, Rolf Ernst
	09:35 - 09:40	Comparison of Robust Origin Authentication Strategies for MACsec based on Lamport Keychains	Gianluca Cena, Stefano Scanzio
	09:40 - 09:45	IMU-Assisted Dual-LiDAR Registration with Partitioned Vertical Field-of-View and Camera-LiDAR Fusion for Motorcycle Perception Systems	Manar Rashad, Alyaa Ismaeil, Ramez Daoud, Hassanein AMER, Hany Elsayed
	09:45 - 09:50	FPGA-Accelerated Onboard Perception for an Indoor Quadrotor UAV	Michalis Neofytou, Kyriakos Deliparaschos, Savvas Loizou, Argyrios Zolotas
	09:50 - 09:55	Low-Cost Real-Time Modular Battery Swapping Station Management System for Electric Vehicles: An Industry Practice	Omar Hagra, Mariam Gabr, Ramez Daoud, Hassanein AMER, Nagham Abdelrazek, Hager Raslan
	09:55 - 10:00	Performance Assessment of Zenoh on Microcontrollers in Automotive Scenarios	Francesco Cerruto, Alessio Pirri, Luca Leonardi, Lucia Lo Bello, Gaetano Patti

	10:30 - 11:00	Coffee break
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	11:00 - 12:00	Keynote 3
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	12:00 - 13:00	Lunch
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13:00 - 14:40

	Track 2 - Industrial Communication Technologies and Systems TT02c - Next-Generation Wireless Communications and Industrial Connectivity Session chairs: Chair 1, Chair 2		
	13:00 - 13:20	Enhancing 6G Wireless Intelligence: Do LLMs Work for CSI Prediction?	Mohsen Kazemian, Jürgen Jasperneite
	13:20 - 13:40	Towards Ambient Internet of Things in 5G: What does Medium Access Control Scheduling cost?	Nico Kalis, Sven Pawletta, Christian Haubelt, Frank Golasowski
	13:40 - 14:00	Fairness-Aware Beam Routing Automation for Low Earth Orbit Satellite Constellations	Flávio Henry Ferreira, Arun Narayanan, Jasmine Araújo, Pedro Nardelli
	14:00 - 14:20	Multi-Modal NFC for Industrial Sensors	Billy Baker, John Woods, Martin Reed
	14:20 - 14:40	Selective Field Transmission: Bandwidth Efficient Communication under Standardized Message Schemas	David Philipp Klüner, Alexandru Kampmann, David Murach, Stefan Kowalewski

	Track 3 - Real-Time Systems and Applications TT03b - Embedded Architectures, Automotive Systems, and Performance Analysis Session chairs: Chair 1, Chair 2		
	13:00 - 13:20	AutoConfig: Autonomous TSN Configuration via Traffic Profiling	Hamza Chahed, Susruth Sudhakaran, Andreas Kassler, Dave Cavalcanti
	13:20 - 13:40	Embedded Ultrasound Doppler Radar for Real-Time Sub-Millimeter Motion Sensing	Johannes Anderle, Volker Tenta, Patrick Schmitt, Roman Beneder
	13:40 - 14:00	Vehicle Signal Specification-Based Semantic Data Abstraction Framework for Cooperative Vehicular Data Exchange	Akshay Kumar Venkatesha Narla, Aniket Barve, Nasser Jazdi Motlagh, Michael Weyrich
	14:00 - 14:20	Detecting Microarchitectural Attacks in Hypervisor-based Mixed-Criticality Systems	Rafael Canal, Gabriel Martins, Giovanni Gracioli, Giulio Rossolini, Daniel Casini
	14:20 - 14:40	Evaluating the Impact of GPU Partitioning on Kernel Execution Time	Baptiste Escande, Federico Aromolo, Tommaso Cucinotta

	Track 6 - Computer Vision and Human-Machine Interaction in Industrial and Factory Automation TT06c - Data-Driven Defect Detection and Anomaly Localization in Industrial Inspection Session chairs: MING LIU, JAVIER SILVESTRE-BLANES		
	13:00 - 13:20	Evaluation of Unpaired Image-to-Image Translation for Rare Defect Augmentation in Industrial Visual Inspection	Luis Fernandes, Jose Santos, Nuno Lau

	13:20 - 13:40	Synthetic Data-Driven Deep Learning for Industrial Surface Inspection: Advancing Beyond Classical Computer Vision	Josefine Monnet, Werner Herfs, Oliver Petrovic, Elen Ayanyan, Ludwig Tonn, Christian Brecher
	13:40 - 14:00	LayerWatch -- A Benchmark for Layer-wise Multi-Class Visual Defect Detection in Fused Filament Fabrication	Anna Rieckmann, Sebastian Eilermann, Jonas Ehrhardt, Marc Mayer, Tobias Meyer, Niels Streekmann, Oliver Niggemann
	14:00 - 14:20	Industrial Validation of Generative Domain Adaptation for Cross-Fabric Defect Detection	Ming Liu, Shohei Kato
	14:20 - 14:40	Recovering Total Recall: Multi-Scale Feature Fusion for High-Resolution Industrial Anomaly Localization	Yayang Qian

	Track 7 - Intelligent Robots and Systems		
	TT07c - Perception-Guided Robot Manipulation and Robust Robotic Systems		
	Session chairs: Chair 1, Chair 2		
	13:00 - 13:20	SafeSeCA: Safe Action Decomposition for 3D Deformation of Large Soft-Linear Objects	Anthony Guzman, Rosario Aragüés, Carlos Sagüés Blázquez
	13:20 - 13:40	Digital Twin-Based Vision-Guided Hose Handling for Pharmaceutical Automation	Alexander Fay, Thomas Becker
	13:40 - 14:00	Authority-Fenced Recovery in Hierarchical Multi-Robot Systems	Emil Persson, Mikael Ekström, Saad Mubeen, Cristina Secoleanu
	14:00 - 14:20	OrientDiff: Geometry-Aware Tool Orientation for Surface Interaction via Path-Conditional Diffusion Policies	Jenish Thapa, Anish Pratheepkumar, Fabian Widmoser, Markus Ikeda, Andreas Pichler
	14:20 - 14:40	Analytic Grasp Synthesis for Parallel-Jaw Grippers Handling Unknown Objects in Robotic Recycling	Frederic Lorbeer, Martin Seidel, Torsten Felsch, Sebastian Lang, Magnus Hanses

	Track 10 - Artificial Intelligence for Cyber Physical Systems in Automation		
	TT10e - Industrial AI Foundations: Data, Models, and Learning Methodologies		
	Session chairs: Alexander Fay, Alessio Bucaioni		
	13:00 - 13:20	Synthesis of Discrete-valued Process Data based on a Dependency-preserving Temporal HMM	Stefan Windmann
	13:20 - 13:40	Discrete State-Learning in Multivariate Time Series for CPS and HAR	Phillip Johann Overlöper, Oliver Niggemann
	13:40 - 14:00	Towards Energy-Aware Industrial AI: Multi-Level Statistical Analysis and Meta-Modeling of Model Training Dynamics in Industrial Automation	Rania Farah, Marco Wagner
	14:00 - 14:20	Learning in Modal Space: Physics-Guided Diffusion for Multi-Scale Time-Series Generation	Zafer Yigit, Masoud Daneshtalab, Håkan Forsberg
	14:20 - 14:40	Toward Reliable Industrial CVE Profiling with LLMs: Comparing Prompt-based and Workflow-based Guardrails	Shuai Guo, Thanikesavan Sivanthi, Negar Emami

	Special Session 10 - Evaluation Methods for Autonomous Cyber-Physical Systems' Behavior		
	SS10		
	Session chairs: Chair 1, Chair 2		
	13:00 - 13:20	Market Strategy Evaluation for Prosumers in Local Electricity Markets	Lukas Peter Wagner, Raoul Bisson, Felix Gehlhoff
	13:20 - 13:40	An LLM-Driven Workflow for Automated Process Control Strategy Generation and Tuning from Dynamic Process Models	Eike Cramer, Klaus Hellgardt, Ari Luna Rueda, Mehmet Mercangöz
	13:40 - 14:00	Towards Systematic Evaluation of Perception Stability in Heterogeneous Mobile-Robot Cyber-Physical Systems	Raphael Höfer, Lennart Schmedt, Felix Gehlhoff
	14:00 - 14:20	Self-Adaptive Anomaly Detection with Reinforcement Learning and Human Feedback in Connected Vehicles	Maurice Paul Artelt, Falk Dettinger, Nasser Jazdi Motlagh, Michael Weyrich, Matthias Weiß, Athreya Hosahalli Prakash

	14:40 - 15:10	Coffee break
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15:10 - 16:30

	Track 1 - Information Technology in Automation		
	TT01d - AI and Automation in Support of Engineering Processes		
	Session chairs: Patrick Denzler, tbd		
	15:10 - 15:30	Towards solving the software dependency and update execution order problem for industrial plants	Benedikt Geib, Eike Lyczkowski, Mike Barth
	15:30 - 15:50	A Schema-Guided Transformation Approach for Engineering Documents in Process Automation	Benedikt Schmetz, Bowen Chen, Torben Miny, Tobias Kleinert, Birgit Vogel-Heuser
	15:50 - 16:10	An Agentic AI Framework for Mobile Network Configuration Documentation	Ebenezer Isaac, Konstantinos Vandikas, Elham Dehghan Biyar, Gnanaprakash Janarthanam
	16:10 - 16:30	Cost-Aware Selective Classification for Parcel-Damage Detection in Automated Logistics Systems	Muhammad Atif, Andrea Ceccarelli, Tommaso Zoppi, Andrea Bondavalli

	Track 2 - Industrial Communication Technologies and Systems		
	TT02d - Middleware, Edge Infrastructure, and Industrial Communication Systems		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	A Flexible Framework for Adaptive Broker Selection in Redundant MQTT Systems	Claudio Zunino, Manuel Cheminod, Alberto Morato, Federico Tramarin
	15:30 - 15:50	StreamRTPS: Increasing DDS Bandwidth Efficiency by Reducing Protocol Overhead	David Philipp Klüner, Stefan Kowalewski, Alexandru Kampmann
	15:50 - 16:10	Enabling Run-Time Remote Management of EtherCAT-based Drive Systems in Industrial Facilities	Inés Álvarez, Pablo Grande
	16:10 - 16:30	Performance Evaluation of Container Network Interfaces in OpenShift for Industrial Real-Time Workloads	Amin Shahraki, Steffen Lindner, Dirk Schulz

	Track 4 - Automated Manufacturing Systems		
	TT04d - AI-Driven Planning and Scheduling for Manufacturing and Assembly Systems		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	A Condition-Aware Scheduling Framework for Flexible Manufacturing Systems Using Deep Reinforcement Learning	Tzuyun CHIU, Shigeru Fujimura
	15:30 - 15:50	LLM-Based Assembly Sequence Planning Grounded in a CAD-and-Documentation Knowledge Graph with Anchor-Aware Structure	Renzo Bazan Santos, Alexander Seelmann, Florian Gramß, Stefan May, Rafael Parzeller, Shubhankar Riswadkar
	15:50 - 16:10	Comparative Evaluation of AI-Based and Classical Algorithms for Risk-Aware Multi-Objective Skill Sequencing in Manufacturing	Patrick Fischer, Andrey Morozov, Alexander Uhl, Andreas Wortmann, Carsten Ellwein, Max Hossfeld
	16:10 - 16:30	A Planning Method for Design-Space Exploration of Multi-Robot Assembly Cells	Elias Huber, Marc Ungen

	Track 7 - Intelligent Robots and Systems		
	TT07d - Enabling Platforms and Evaluation Methods for Collaborative Robotics		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	A Literature Review of Self-Reported Trust Measurement Scales in Industrial Human-Robot Collaboration	My Legendi, Anna Syberfeldt, Maurice Lamb
	15:30 - 15:50	A comparative study of skill learning for task composition in human-robot collaborative scenarios	Cesare Luigi Blengini, Rosario Francesco Cavelli, Pangcheng David Cen Cheng, Marina Indri, Carlo Migliaccio
	15:50 - 16:10	A Reconfigurable ROS2-Based Architecture for Robotic Management of Apparel and Accessories	Andrea Bonci, Alessandro Di Biase, Marina Indri, Matilde Zampolini
	16:10 - 16:30	A Cloud-Native Platform for GPU-Accelerated Digital Twin Workflows in Automation Research	Florian Patzelt, Domenic Schäffer, Sahar Deppe, Sebastian Wrede
	Track 11 - Vehicular Embedded Systems		
	TT11c - Sensing, Planning, Control, and Physical AI		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	Interpretable Surrogate Models for Physical AI: Integrating Symbolic Regression into Co-Simulation	Pablo Oliveira Antonino, Javad Hosseinzadeh, Yi Wang, Priom Biswas, Seyed Pedram Mirelmi, Philipp Zech
	15:30 - 15:50	Lightweight Autotuning for Automotive PID Controllers	Patricia Micheletto, José Luis Conradi Hoffmann, Antônio Augusto Fröhlich
	15:50 - 16:10	Path Refinement from Graph Routes Using Potential Fields and Elastic Bands	Andrea Bonci, Federico Brunella, Matteo Colletta, Alessandro Di Biase, Angjelo Libofsha, Mariorosario Prist
	16:10 - 16:30	LiCo-Film: A Standardized Film-Based Dataset and Benchmark for LiDAR Cover Contamination	Jannis Grimminger, Felix Breitner, Alexander Windmann, Jai Doshi, Oliver Niggemann
	Special Session 12 - Human-Centric Smart Automation: Generative AI and LLM-Driven Human–Robot Collaboration		
	SS12		
	Session chairs: Chair 1, Chair 2		
	15:10 - 15:30	Levels of Human-Centric Automation: A Taxonomy for Intent-Aware Industrial Systems	Fredrik Danielsson, Anders Nilsson, Kristina Eriksson
	15:30 - 15:50	Agentic AI for Human-Centric Scheduling: LLM-Driven Reinforcement Learning	Zakka Ugih Rizqi, Ole Madsen, Casper Schou, Michael Cleemann Christensen, Martin Bieber Jensen, Tristan Schwörer
	15:50 - 16:10	SimVFMP: Simulation-Verified Foundation Model Planning for Robotic Manipulation	Chen Li, Dimitris Chrysostomou, Signe Møller-Skuldbøl, Thor Kryhlmand Iversen, Gustav Bay Baastrup, Silas Jensen, Kasper Kjærsgaard Lauritsen
	16:10 - 16:30	Integrating Digital Twins and Large Language Models for Explainable Human-Robot Collaboration	Anna Syberfeldt, Tehseen Aslam
	16:30 - 17:00	Closing ceremony	