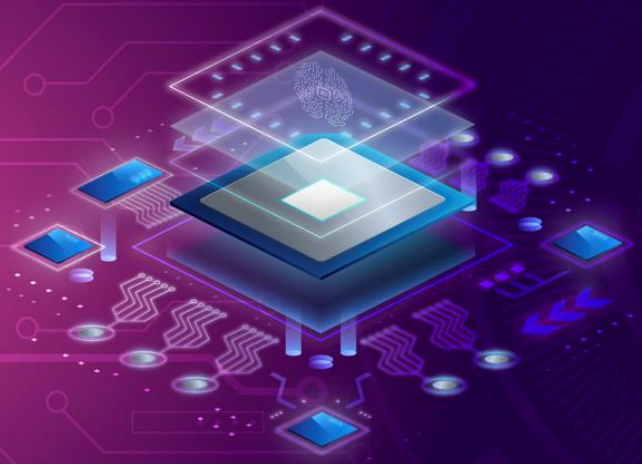
European Conference on EDGE AI Technologies and Applications - EEAI



The intersection of imagination and execution, where edge AI learns to create, reason, and act.

20-22 October 2025, Naples, Italy

The European Conference on EDGE AI Technologies and Applications – EEAI 2025

Date: 20 - 22 October 2025 Venue: Hotel San Francesco al Monte, Naples, Italy

Monday 20 October 2025 – Day 1

08:30 – 09:00	**Welcome and Registration**	
09:00 – 10:30	**Plenary Session PS01**	
	Plenary Session PS01 (Room Antico Refettorio): Foundations of Edge AI. ***Session Chair:*** *Ovidiu Vermesan, SINTEF AS, Norway.*	
09:00 – 09:15	***Presentation PS01-1: From Micro to Meta Edge: Architecting Generative and Agentic Edge AI Technologies and Autonomous Systems.*** *Ovidiu Vermesan, SINTEF AS, Norway.*	
09:15 – 10:00	***Presentation PS01-2: Accelerating Edge AI Integration with Open Edge Platform.*** *Jan Gorecki, Intel Technology Poland sp. z o.o.*	
10:00 – 10:30	***Project Pitch Presentations.*** *dAIEDGE and TRISTAN.*	
10:30 – 11:00	**Morning Coffee/Tea Break (Room La Terrazza dei Barbanti)**	
11:00 – 12:30	**Parallel Sessions A01 and B01**	
	Session A01 (Room Antico Refettorio): Machine Vision at the Edge. ***Session Co-Chairs:*** *Ana Pinzari, University Grenoble Alpes, France; Christos Kozanitis, FORTH, Greece.*	***Session B01 (Room San Giovan Giuseppe): Edge AI Applications.*** ***Session Co-Chairs:*** *Silke Braun, Infineon Technologies Austria AG, Austria; Arno van der Weijden, Technolution B.V., Netherlands.*
11:00 – 11:20	***Presentation A01-1: Towards Energy-Efficient Automotive Edge AI: Multi-Core FPGA Acceleration for In-Cabin Monitoring.*** *Alain Pagani, German Research Center for Artificial Intelligence, Germany.*	***Presentation B01-1: Sea Ice Classification Using Edge AI for Synthetic Aperture Radar Satellite On-board Image Processing.*** *Dominik Günzel, German Aerospace Center, Germany.*
11:20 – 11:40	***Presentation A01-2: Edge AI for Grape Quality Estimation at the Press – From design to production.*** *Lucas Mohimont, University of Reims, France.*	***Presentation B01-2: Towards Automated Liability Determination for Autonomous Vehicles in Road Accidents.*** *Omkar Joglekar, asvin GmbH, Germany.*
11:40 – 12:00	***Presentation A01-3: Vision-Language Embeddings in Large Scale LiDAR SLAM for Terrain Segmentation.*** *Peteris Racinskis, Institute of Electronics and Computer Science, Latvia.*	***Presentation B01-3: Transition-Based Vectorial Representation of HRV and BPV for Digital Physiology Inference.*** *Juan A. Montiel-Nelson, University of Las Palmas de Gran Canaria, Spain.*
12:00 – 12:20	***Presentation A01-4: VisioEdgeAI: An Industry-Compliant PCBA Defect Detection using AI at the edge with Cost Efficiency.*** *Claudio Cantone, High Technology Systems SRL, Italy; Alberto Faro, Deeepsensing Srl, Italy.*	***Presentation B01-4: AI-Driven Energy Optimisation for Intelligent Water Tank Storage.*** *Ole Eilsø Nielsen, NxtEnergy AS, Norway.*
12:30 – 13:30	**Networking Lunch (Room La Terrazza dei Barbanti)**	

13:30 – 15:10	**Parallel Sessions C01 and D01**	
	Session C01 (Room Antico Refettorio): Multi-Agent Solutions at the Edge. ***Session Co-Chairs:*** *Fabian Chersi, CEA-List, France; Holger Schmidt, Infineon Technologies AG, Germany.*	***Session D01 (Room San Giovan Giuseppe): Federated and Continual Learning.*** ***Session Co-Chairs:*** *Luca Valcarenghi, Scuola Supriore Sant'Anna, Italy; José Cano, University of Glasgow, Scotland, United Kingdom.*
13:30 – 13:50	***Presentation C01-1: UAV-Based Radar–Camera Fusion for Robust Terrain Analysis.*** *Hamed Javadi, imec, Belgium.*	***Presentation D01-1: Decentralized Security in 5G Networks with Federated Learning and Computer Vision Techniques.*** *Andrea Di Matteo, Scuola Superiore Sant'Anna, Italy.*
13:50 – 14:10	***Presentation C01-2: When a Model is not Enough: A Complementary AI Pipeline for Ultra-Safe PCBA Defect Detection.*** *Alberto Faro, Deeepsensing Srl, Italy.*	***Presentation D01-2: Intelligence on Edge Systems.*** *Fetze Pijlman, Signify, Netherlands.*
14:10 – 14:30	***Presentation C01-3: Agentic Edge AI for Immersive and Collaborative Smart Warehouse.*** *Devendra Vyas, VERSES, Belgium.*	***Presentation D01-3: Approximate Computing for Federated Learning.*** *Bilel Tarchoun, CNRS, France.*
14:30 – 14:50	***Presentation C01-4: Bio-Inspired Drone Control: A Reinforcement Learning-Trained Spiking Neural Networks for Agile Navigation in a Dynamic Environment.*** *Sebastiano Mengozzi, University of Bologna, Italy.*	***Presentation D01-4: Acquiring the SCM Dataset: Event-Based Anomaly Detection in Wood Cutting for EdgeAI Applications.*** *Grafika Jati, University of Bologna, Italia.*
14:50 – 15:10	***Presentation C01-5: Mobile Agent Condition Monitoring.*** *Clemens Saur, NeuroControls GmbH, Germany.*	
15:10 – 15:40	**Afternoon Coffee/Tea Break (Room La Terrazza dei Barbanti)**	
15:40 – 17:00	**Parallel Sessions E01 and F01**	
	Session E01 (Room Antico Refettorio): Open Source Edge AI Platforms. ***Session Co-Chairs:*** *Patrick Pype, NXP Semiconductors, Belgium; Philippe Krief, Eclipse Foundation, France.*	***Session F01 (Room San Giovan Giuseppe): Edge AI Systems and Learning.*** ***Session Co-Chairs:*** *Dinu Purice, Cognition Factory GmbH, Germany; Silke Braun, Infineon Technologies Austria AG, Austria.*
15:40 – 16:00	***Presentation E01-1: Neurokit2E Advancements.*** *Fabian Chersi, CEA-List, France.*	***Presentation F01-1: CLEVER Smart Edge Applications.*** *Luca Valcarenghi, Scuola Supriore Sant'Anna, Italy.*
16:00 – 16:20	***Presentation E01-2: From Collaboration to Sovereignty: The European Open Source Journey.*** *Philippe Krief, Eclipse Foundation, France.*	***Presentation F01-2: SYNtzulu, SNN at the Micro-Edge: The Evolution of the Mosquito.*** *Gianluca Leone, University of Cagliari, Italy.*
16:20 – 16:40	***Presentation E01-3: Eclipse Aidge: An Open Source Platform for Embedded AI - Description.*** *Axel Farrugia, CEA-List, France.*	***Presentation F01-3: Edge-Optimized Modular Architecture for Real-Time Vehicle Re-Identification.*** *Tomass Zutis, Institute of Electronics and Computer science, Latvia.*
16:40 – 17:00	***Presentation E01-4: Eclipse Aidge: An Open Source Platform for Embedded AI - Features.*** *Axel Farrugia, CEA-List, France.*	
17:00	**End**	

Tuesday 21 October 2025 – Day 2

08:30 – 09:00	**Welcome and Registration**	
09:00 – 10:30	**Plenary Session PS02**	
	Plenary Session PS02 (Room Antico Refettorio): Resilient, Sustainable, and Trustworthy Edge AI Technologies. ***Session Chair:*** *Marcello Coppola, STMicroelectronics, France.*	
09:00 – 09:45	***Presentation PS02-1: Joining forces on developing RISC-V processors and AI accelerators to leverage the European automotive industry.*** *Patrick Pype, NXP, Netherlands.*	
09:45 – 10:30	***Presentation PS02-2: The Evolution of Edge AI for More Sustainable Solutions.*** *Lisa Trollo, STMicroelectronics, Italy.*	
10:30 – 11:00	**Morning Coffee/Tea Break (Room La Terrazza dei Barbanti)**	
11:00 – 12:30	**Parallel Sessions A02 and B02**	
	Session A02 (Room Antico Refettorio): AI Hardware-Software Co-Design. ***Session Co-Chairs:*** *Mohamed Selim, DFKI GmbH, Germany; Marco Ottella, Xtremion Technology, Austria.*	***Session B02 (Room San Giovan Giuseppe): Frameworks for Intelligent Distributed Processing.*** ***Session Co-Chairs:*** *Filippo Cugini, CNIT, Italy; Hamed Javadi, imec, Belgium.*
11:00 – 11:20	***Presentation A02-1: tinyHLS, a Python-Based Hardware Compiler for 1D and 2D Convolutional Neural Networks.*** *Raphael Gaede, Fraunhofer IMS, Germany.*	***Presentation B02-1: Fair AI Experimentation on Edge Device Clusters via Distributed Orchestration in dAIEdge-Vlab.*** *Baptiste Dupertuis, HES-SO, Switzerland.*
11:20 – 11:40	***Presentation A02-2: Towards a HW/SW Co-Design of Quantized Vision Foundation Models.*** *Lucas Grativol-Ribeiro, CEA-List, Université Paris-Saclay, France.*	***Presentation B02-2: Edge Deployment of Multi-Task Vision Models for Smart City Infrastructures.*** *Carmelo Scribano, University of Modena and Reggio Emilia, Italy.*
11:40 – 12:00	***Presentation A02-3: Accelerating LLMs at the Edge: The Power of Efficient Hardware-Software Co-Design.*** *José Cano, University of Glasgow, Scotland, United Kingdom.*	***Presentation B02-3: Action-Oriented Programming and Automatic Agent Generation for Adaptive Data Collection in Decentralized Data Ecosystems.*** *Mustafa Tayyip Bayram, Infineon Technologies Austria AG, Austria.*
12:00 – 12:20	***Presentation A02-4: Dynamic Reconfiguration of Deep Neural Networks for Resource-Constrained FPGA Edge Accelerators.*** *Alain Pagani, German Research Center for Artificial Intelligence, Germany; Lotfi Guedria, CETIC, Belgium.*	***Presentation B02-4: Enhancing Manufacturing Process Knowledge with AI-based edge and meta-edge tools.*** *Dinu Purice, Cognition Factory GmbH, Germany.*
12:30 – 13:30	**Networking Lunch (Room La Terrazza dei Barbanti)**	

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13:30 – 15:10	**Parallel Sessions C02 and D02**	
	Session C02 (Room Antico Refettorio): Trustworthy Edge AI. Session Co-Chairs: *Mohammed Abuteir, TTTech Auto AG, Austria; Janis Judvaitis, Institute of Electronics and Computer Science, Latvia.*	***Session D02 (Room San Giovan Giuseppe): Neural Network Optimisation. Session Co-Chairs:*** *Alain Pagani, DFKI GmbH, Germany; Lucas Mohimont, University of Reims, France.*
13:30 – 13:50	***Presentation C02-1: Structural Sensitive-Attribute Leakage in Face Recognition Embeddings for Edge AI Deployments.*** *Erica Liu, Eindhoven University of Technology, Netherlands.*	***Presentation D02-1: YOLO vs RT-DETR: Model Optimizations for Energy Efficient Deployment.*** *Ana Pinzari, University Grenoble Alpes, France.*
13:50 – 14:10	***Presentation C02-2: Custom RISC-V and AI models deployment.*** *Luca Testa, KEYSOM, France.*	***Presentation D02-2: From Complexity to Efficiency: Pruning Vision Transformers in Practice.*** *Martyna Poreba, CEA-List, France.*
14:10 – 14:30	***Presentation C02-3: Bias Detection and Human Oversight under the Artificial Intelligence Act: Fit for the Edge?*** *Lydia Belkadi, KU Leuven, Belgium.*	***Presentation D02-3: Investigating Target Class Influence on Neural Network Compressibility for Energy-Autonomous Avian Monitoring.*** *Maximilian Kasper, Fraunhofer IIS, Germany.*
14:30 – 14:50	***Presentation C02-4: Experiences in Deploying a Weapon Detector in a Smart City.*** *Juan Daniel Muñoz Navarrete, University of Castilla-La Mancha, Spain.*	***Presentation D02-4: Vectorized Inference of Decision Tree Ensembles for Edge Devices with ARM Helium Extensions.*** *Mario Barbareschi. University of Naples Federico II, Italy.*
14:50 – 15:10	***Presentation C02-5: Development in platforms available to edgeAI system integrators.*** *Arno van der Weijden, Technolution B.V., Netherlands.*	***Presentation D02-5: An Energy-Efficient Wearable Device for Sleep Apnea Detection Using Tracheal Sounds and Edge AI.*** *Michele Riccio, University of Naples Federico II, Italy.*
15:10 – 15:40	**Afternoon Coffee/Tea Break (Room La Terrazza dei Barbanti)**	
15:40 – 17:00	**Parallel Sessions E02 and F02**	
	Session E02 (Room Antico Refettorio): Edge AI Workflows and System Design. Session Co-Chairs: *Paolo Meloni, Università degli Studi di Cagliari, Italy; Fetze Pijlman, Signify, Netherlands.*	***Session F02 (Room San Giovan Giuseppe): Sustainable Edge AI Technologies. Session Co-Chairs:*** *Thomas Gutt, Infineon Technologies AG, Germany; Martyna Poreba, Université Paris-Saclay, CEA-List, France.*
15:40 – 16:00	***Presentation E02-1: Edge-AI Ready Lightweight Digital Twin for Anomaly Prediction.*** *Esin Öztürk, Framatome GmbH, Germany.*	***Presentation F02-1: Artificial Intelligence in Manufacturing Leading to Sustainability - AIMS5.0.*** *Thomas Gutt, Infineon Technologies AG, Germany.*
16:00 – 16:20	***Presentation E02-2: End-to-End Workflow Automation for Robust Edge AI Systems.*** *Ovidiu Vermesan, SINTEF AS, Norway.*	***Presentation F02-2: Pareto Optimal Benchmarking of AI Models on ARM Cortex Processors for Sustainable Embedded Systems.*** *Maximilian Kasper, Fraunhofer IIS, Germany.*
16:20 – 16:40	***Presentation E02-3: Closing the Gap Between AI Models and Silicon: Application Deployment for Next-Generation Edge Accelerators.*** *Michal Szczepanski, CEA-List, France.*	***Presentation F02-3: A Framework for Intelligent and Responsive Mesh Lighting Systems.*** *Simen Marentius Saxegaard, Nxtech AS, Norway.*
16:40 – 17:00	***Presentation E02-4: STEER: Software Toolkit for Edge Efficient Retraining.*** *Christos Kozanitis, FORTH, Greece.*	
17:00	**End**	
20:00	**Conference Dinner - Gazebo Roof Garden**	

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Wednesday 22 October 2025 – Day 3

08:30 – 09:00 **Welcome and Registration**

09:00 – 10:30 **Plenary Session PS03**

Plenary Session PS03 (Room Antico Refettorio): Navigating the Challenges and the Road Ahead for Edge AI.
Session Chair: *Björn Debaillie, imec; Belgium.*

09:00 – 09:30 ***Presentation PS03-1: Pathways to an Integrated and Strong European Edge AI platform and Ecosystem.*** *Huascar Espinoza, Chips JU, Belgium.*
09:30 – 09:45 ***Presentation PS03-2: PREVAIL - A Multi-hub Test and Experimentation Facility for Edge AI Hardware.*** *Caroline Arnaud, CEA-Leti, France.*
09:45 – 10:30 ***Project Pitch Presentations****. REBECCA, EdgeAI-Trust and NeAIxt.*

10:30 – 11:00 **Morning Coffee/Tea Break (Room La Terrazza dei Barbanti)**

11:00 – 12:30 **Plenary Session AB03**

Session AB03 (Room Antico Refettorio): Future of Edge AI Research and Road Mapping - System Architectures – Frameworks – Open Source – Skills

Presentation AB03-1: Edge AI Reference Architecture. *Ovidiu Vermesan, SINTEF AS, Norway.*
Presentation AB03-2: Trustworthy Edge AI - Ensuring Reliable and Secure AI Systems. *Filippo Cugini, CNIT, Italy; Mohammed Abuteir, TTTech auto AG, Austria.*
Presentation AB03-3a: Open Source Edge AI Accelerating Research and Innovation. *Iakovos Mavroidis, Technical University of Crete, Greece.*
Presentation AB03-3b: Research @ Eclipse Foundation. *Philippe Krief, Eclipse Foundation, France.*
Presentation AB03-4: Edge AI Ecosystem for Edge AI Innovation and How to Bridge the Skills Gap. *Alain Pagani, German Research Center for Artificial Intelligence, Germany.*
Panel: Future Edge AI Technologies and Applications Trends and Development Landscape.

12:30 – 13:30 **Networking Lunch (Room La Terrazza dei Barbanti)**

13:30 – 15:10 **Parallel Sessions C03 and D03**

	Session C03 (Room Antico Refettorio): Edge AI Accelerators and RISC-V.	***Session D03 (Room San Giovan Giuseppe): Edge AI Tools and Methods.***
	Session Co-Chairs: *Konstantinos Georgopoulos, Exascale Performance Systems plc, Greece; Mladen Beerkovic, University of Luebeck, Germany.*	***Session Co-Chairs:*** *Marcello Coppola, STMicroelectronics, France; Roy Bahr, SINTEF AS, Norway*
13:30 – 13:50	***Presentation C03-1: In-GPU GNN-Based Intrusion Detection System.*** *Ahmed Salah Tawfik Ibrahim, CNIT, Italy.*	***Presentation D03-1: Decentralized Split Learning on Resource-Constrained Devices.*** *Yarib Israel Nevarez Esparza, NXP Semiconductors, Netherlands.*
13:50 – 14:10	***Presentation C03-2: NeuroCorgi: A Low-Power DNN Accelerator for Edge AI Applications.*** *Ivan Miro Panades, CEA-List, France.*	***Presentation D03-2: Prediction of Neural Network Latency on Embedded GPU Accelerators.*** *Adrian Osterwind, German Aerospace Center, Germany.*
14:10 – 14:30	***Presentation C03-3: REBECCA: Progress Toward a Safe and Secure RISC-V SoC Platform for Edge AI.*** *Iakovos Mavroidis, Technical University of Crete, Greece; Konstantinos Georgopoulos, Exascale Performance Systems plc, Greece.*	***Presentation D03-3: Beyond Silos: A Unified Middleware Approach to Edge AI with DMWay.*** *Lotfi Guedria, CETIC, Belgium.*
14:30 – 14:50	***Presentation C03-4: GStreamer Plugin for RDMA Offload and Video Processing on BlueField-3 for Edge Applications.*** *Raphael Frantz, NVIDIA, Italy.*	***Presentation D03-4: AI on the Edge: two GNSS embedded application case studies.*** *Giovanni Gogliettino, STMicroelectronics, Italy.*

14:50 – 15:10	***Presentation C03-5: Edge AI use cases to enhance automotive applications.*** *Giuseppe Russo, STMicroelectronics, Italy.*	***Presentation D03-5: AI-based Quality Control for Woodwork Production Process.*** *Carlo Pieretti, SCM Group, Italy.*
15:10 – 15:40	**Afternoon Coffee/Tea Break (Room La Terrazza dei Barbanti)**	
15:40 – 17:00	**Parallel Sessions E03 and F03**	
	Session E03 (Room Antico Refettorio): Neuromorphic Hardware and Processing. ***Session Co-Chairs:*** *Björn Debaillie, imec; Belgium. Iakovos Mavroidis, Technical University of Crete, Greece.*	***Session F03 (Room San Giovan Giuseppe): Modelling and Predictive Control.*** ***Session Co-Chairs:*** *Peet van Tooren, Almende, Netherlands; Janis Arents, Institute of Electronics and Computer Science, Latvia.*
15:40 – 16:00	***Presentation E03-1: Attention-Based SNN on Low-Power FPGAs.*** *Paola Busia, University of Cagliari, Italy.*	***Presentation F03-1: Virtual Metrology for AI-Enhanced Semiconductor Manufacturing.*** *Daniel Najer, ams International AG, Switzerland.*
16:00 – 16:20	***Presentation E03-2: Energy-Efficient Neuromorphic Architecture Using Computation-in-Memory for Edge-AI.*** *Rajendra Bishnoi, University of Delft, Netherlands.*	***Presentation F03-2: On-Device Continual Learning for Unsupervised Visual Anomaly Detection in Dynamic Manufacturing.*** *Haoyu Ren, Siemens AG, Germany.*
16:20 – 16:40	***Presentation E03-3: Neuromorphic Sensing and SNNs at the Edge: SynSense's Approach to Ultra-Low Power AI.*** *Arslan Ali, SynSense, Switzerland.*	***Presentation F03-3: TD-Interpreter: Enhancing the Understanding of Timing Diagrams with Visual-Language Learning.*** *Jie He, Vienna University of Technology, Austria.*
16:40 – 17:00	***Presentation E03-4: Neuromorphic Edge AI for Minimalistic Sensing of Touch Gestures.*** *Daniel Najer, ams International AG, Switzerland.*	***Presentation F03-4: A 3D Simulation Framework for Behaviour Cloning on Edge AI-Enabled E-Scooters in Smart Cities.*** *Artemis Stefanidou, Harokopio University, Greece.*
17:00	**End**	

09:00 – 17:00	**Poster Session (Room Antiche Cucine): 20-22 October 2025**

Poster P01: Model Optimization Pipeline for Hardware-Aware Trustworthy Edge-Residing AI: A Grid Reliability Case Study. *Alexandros Maxairas, enakronic, Greece.*

Poster P02: Explainability and Defect Synthesis for Industrial Applications. *Antonio Fusillo, University of Milan, Italy.*

Poster P03: DNSGuard: An Edge AI DNS Firewall for Smart DNS Filtering. *Kyriakos Vlachos, University of Patras, Greece.*

Poster P04: Neural networks for improving speech understanding in real-time embedded systems. *Zahra Benslimane, CEA-List, France.*

Poster P05: Advancing Edge AI-Powered Systems in Digital Industry. *Silke Braun, Infineon Technologies Austria AG, Austria.*

Poster P06: Optimising Energy with Edge AI Analytics. *Roy Bahr, SINTEF AS, Norway.*

Poster P07: Enhancing Yield and Sustainability Through Edge AI-Driven Technologies. *Marcello Coppola, STMicroelectronics, France.*

Poster P08: Edge AI for Intelligent Mobility. *Janis Arents, Institute of Electronics and Computer Science, Latvia.*

Poster P09: Edge AI Embedded in Digital Society. *Fetze Pijlman, Signify, Netherlands.*

Poster P10: Energy Efficiency and Human-Centric Control with Edge AI. *Simen Marentius Saxegaard, Nxtech AS, Norway.*

Poster P11: ML-based PPA Estimation for Next-Gen Edge-AI Accelerators. *Hana Krichene, CEA, France.*

Poster P12: Shaping the future of edge AI in Europe, driving innovation and sustainability through EdgeAI-Trust. *Mohammed Abuteir, TTTech, Austria.*

17:00	**End**

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We are looking forward to seeing you in Naples, Italy!
20-22 October 2025