



Emerging Tech Conference (ETCEI) 2026

Edge Intelligence

Empowering Europe's Chips Ecosystem
through Emerging Technologies

October 22-23, 2026

University of Ioannina,
Karlolos Papoulias Conference Center,
Ioannina, Greece



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ETCEI 2026 | CONFERENCE PROGRAMME

22-23 October 2026 | University of Ioannina | "Karolos Papoulias" Conference Center

DAY 1 - Thursday, 22 October 2026			
Time	Programme	Main Hall (I)	Hall II / Foyer
09:30-10:00	Registration & Welcome Coffee		
10:00-10:30	Opening Ceremony	Conference Welcome - Prof. Yiorgos TSIATOUHAS, Conference Chair, Uoi Host Institution Greeting - Prof. Aggeliki LEKATOY, Vice Rector, University of Ioannina ETCEI Address – Konstantina TSIAPALI, Conference Chair, VP HETiA Conference Programme Overview – Assoc. Prof. Gregory DOUMENIS, Program Chair, Uoi	
10:30-11:00	Keynote Speech	Prof. Konstantinos FOUNTAS President of the CERN Council Title: State of the art technology developments at CERN Moderator: Yiorgos TSIATOUHAS, University of Ioannina	
11:00-12:30	Parallel Sessions - Paper Presentations	S1.1 Microelectronic Devices, Circuits & Systems Session Chair: Yiorgos TSIATOUHAS, Alkis CHATZOPOULOS	S2.1 Mobile Intelligence, IoT and AI at the Edge Session Chair: Alexandros TZALLAS, Nikolaos GIANNAKEAS
		20 Pursuing better lower bounds for the Wafer Covering Problem <i>Christos GOGOS, Christos VALOUXIS, Olga PEZOULA, Aris MAGKLARAS, Panayiotis ALEFRAGIS and Alexios BIRBAS</i>	12 Decision Support under Partial Observability through Multimodal Data Fusion: An Agricultural Case Study <i>Marios DOUKAS, Alessio COSTA, Maria SOLDATOU</i>
		31 Low-Noise Multi-Voltage Power Supply for Weak-Signal Measurements <i>Kyriakos KOKKINOS, Georgios CHARARAS and Vasilis PAVLIDIS</i>	17 From Rail-Mounted Vibration Data to Embedded Speed Regression: Dataset, Power, and Latency Evaluation <i>Jan CORDES, Frank SLOMKA</i>
		13 Band-Aware Cycle Scheduling for the Tunable Approximate Booth Multiplier (TABooM) in a 10-Band FIR Filter Bank <i>Georgios PAPATHEODOROU, Ioannis RIZOS and Aristides EFTHYMIOU</i>	23 Software Latency on End-to-End Communications for Smart Grid IoT systems <i>Georgios VENITOURAKIS, Alexandros KARVOUNOPOULOS, Alexandros SANTORINAIOS, Georgios LYKAKIS, Georgios KONSTANTOULAKIS, Dionysios REISIS</i>
		48 Design of a Transformer Hardware Accelerator for PCB Heatmap Reconstruction <i>Christoforos MARINOPOULOS, Aristotelis TSEKOURAS and Vasilis F. PAVLIDIS</i>	28 An IoT Multi-Parameter Edge Computing System for Real-Time Stress Detection <i>Vasiliki KARAFOTIA, Gregory DOUMENIS</i>
		49 Mapping and Simulation of Neural Networks on Memristive Crossbar Arrays <i>Anastasios LIONTOS and Vasileios TENENTES</i>	42 EdgeSpace AI: Human–Computer Interaction for a Lightweight IoT Digital Twin in Smart Indoor Spaces <i>Konstantinos SAKKAS, Niki Eleni NTAGKA, Michail SPYRIDAKIS, Euripidis GLAVAS, Alexandros TZALLAS, Nikolaos GIANNAKEAS, Andreas MILTIADOUS</i>

Time	Programme	Main Hall (I)	Hall II / Foyer
12:30-13:20	Networking Coffee Break		
13:20-14:20	Student Innovation	Meet the Teams Shaping Tomorrow's Technology ASL - Autonomous Systems Lab Dimitris GARSOUDIS CSD - 3D Printing Laboratory Composites, Structures and Electronic Devices <i>3D Printing as a Horizontal Emerging Technology: Bridging Personalized Biomedical Applications and Next-Generation Energy Storage and Harvesting Devices</i> Stefanos MALTEZOS , Vladimiros LIONTOS Epirus XR Center - HCILAB <i>Beyond Reality: Exploring Innovation through Extended Reality at Epirus XR Center – HCILAB</i> Niki Eleni NTAGKA HEPHEASTUS - Practical Engineering & Technology Student Group George TSOGAS , Stella PAPASTAMOU IEEE Student Branch UOI – Arta <i>Empowering the Next Generation of Engineers: IEEE Student Branch UOI – Arta</i> Christos NOTIS VCAS - VLSI Computer Architecture System Christoforos PAPAIOANNOU	
14:20-15:20	Lunch Break		
15:20-15:40	Keynote Speech	Tom KATSIOULAS CEO, Archon Design Solutions, Inc Title: From Student to Semiconductor Executive: A Career Journey	<i>Moderator: Gregory DOUMENIS, University of Ioannina</i>
15:40-16:10	Career Workshop	Nikos SYNTAKAS , Recruitment Specialist, kariera.gr Beyond Your Degree: <i>What Employers Look for in Emerging Tech Talent</i>	
16:10-16:40	Panel Discussion	Bridging the Tech Talent Gap: Skills, Expectations & Career Opportunities <i>What companies need, what graduates bring, and how to bridge the gap.</i> Panelists: Manolis FRATZESKAKIS, <i>Argo Semiconductors</i> , Panagiotis TSOPELAS, <i>Industrial Edge Engineering</i> , Panagiotis ZAPARTAS, <i>KENOTOM</i>	<i>Moderator: Juxhin CACA, Project Manager, Tech Community kariera.gr</i>
16:40-17:20	Career Day	Company Presentations Argo Semiconductors Presentation Manolis FRATZESKAKIS Argo Semiconductors IEE Company Presentation Panagiotis TSOPELAS Industrial Edge Engineering. Kenotom Presentation Stergios FRAGKOS KENOTOM, NIKI Presentation Dimitrios NYFANTIS & Nikolas ZARKADIS NIKI Ltd	
17:20-17:50	Career Day		Meet the Companies – One-on-One Career Discussions
17:50-18:00	Closing Remarks - Day 1	Prof. Yiorgos TSIATOUHAS , Conference Chair, Uoi	
19:00-21:30	Networking Cocktail Reception at Roof Garden to SAZ City Life Hotel	Str. 28 th October 7, 452 21, Ioannina, Greece <i>By invitation only – exclusively for ETCEI 2026 speakers & attendees.</i>	

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DAY 2 - Friday, 23 October 2026			
Time	Programme	Main Hall (I)	Hall II
09:30-10:00	Welcome Coffee & Registration		
10:00-10:30	Keynote Speech	Prof. Dr. Robert WILLE Full and Distinguished Professor, Technical University of Munich (TUM) <i>Moderator: Xrysovalantis Kavousianos, University of Ioannina</i>	
10:30-11:55	Parallel Sessions - Paper Presentations	S1.2 Mobile Intelligence, IoT and AI at the Edge Session Chair: Nikolaos GIANNAKEAS, Alexandros TZALLAS	S2.2 Microelectronic Devices, Circuits & Systems Session Chair: Yiorgos TSIATOUHAS
		11 Continual Contextualization of farm-specific Large Language Models for Decision Support <i>Alessio COSTA, Evangelia PAPADOPOULOU, Maria SOLDATOU</i>	24 Accelerating Worst-Case Equivalence Checking of Classical Circuits via Quantum Search <i>Lukas BOMBEL, Adrian OSTERWIND, Domenik HELMS, Nils QUETSCHLICH and Robert WILLE</i>
		8 A Model Capacity Index for Quantitative Evaluation of Deep Convolutional Neural Network Architectures <i>Konstantinos STEFANOY, Andreas MILTIADOUS, Christos BELLOS, Georgios STERGIOS, Markos TSIPOURAS, Alexandros TZALLAS, Marina PLISSITI, Nikolaos GIANNAKEAS</i>	41 Memristive Crossbar Accelerators for Quantum Circuit Simulation <i>Iason DIMOPOULOS, Iosif-Angelos FYRIGOS and Georgios Ch. SIRAKOULIS</i>
		18 Reliability Profiling of LLMs and VLMs for Edge AI under Activation Corruption <i>Georgios MERMIGKIS, Argiris SOFOTASIOS, Panagiotis HADJIDOUKAS, George PAPADIMITRIOU</i>	39 Ultra-Low Frequency Digital LPF for Neuromorphic Applications <i>Priyanshu KUMAR, Georgios CHARARAS, Aristotelis TSEKOURAS and Vasilis F. PAVLIDIS</i>
		15 Intelligent Scenario Boundary Exploration for Cut-In Validation Using Reinforcement Learning <i>Stergios FRAGKOS, Athanasios ATHANASIADIS, Alexandros AMARGIANOS, Konstantinos LAMARIS, Tilemachos MATIAKIS</i>	51 Feasibility of Running Complex Machine Learning Models on Embedded Microcontrollers <i>Anastasios FANARIOTIS, Theofanis ORPHANOUDAKIS and Vasilis FOTOPOULOS</i>
		53 Multi-Step Contrastive Knowledge Distillation for Lightweight UAV Absolute Visual Localization <i>Athanasios KONSTANTAKOPOULOS, Dimitrios KOSMOPOULOS</i>	
11:55-12:10	Coffee Break		

Time	Programme	Main Hall (I)	Hall II
12:10-13:20	Parallel Sessions - Paper Presentations	S1.3 Innovation Ecosystems & Technology Transfer Session Chair: Katerina LAMPRAKOPOULOU	S2.3 Embedded Trust & System Resilience Session Chair: Vasileios TENENTES, Panayiotis KOTZANIKOLAOU
		21 Modeling a Technology-Transfer and Skills Marketplace for the European Chips Ecosystem: Data Design, Architecture, and Keyword-Based Matchmaking in the HCCC Platform <i>Ioannis CHRISTODOULOPOULOS, Evanthia FALIAGKA, Katerina LAMPRAKOPOULOU, Christos ANTONOPOULOS, Nikolaos VOROS</i>	14 A Unified Simulation and Emulation Fault Injection Framework for the Evaluation of Embedded Hardware and Software Implementations <i>Athanasios PAPADIMITRIOU, George PAPADIMITRIOU, Ioannis VOYIATZIS</i>
		46 Context-Aware Conversational AI for Immersive Virtual Reality Industrial Environments: A Domain-Grounded Architecture and Energy Case Study <i>Marios KATSI, Irene IOANNIDOU, Spiros SIRMAKESSIS</i>	45 On the feasibility of lightweight vulnerability detection using Large Language Models through quantization <i>Sokratis NAZLIDIS, Miltiadis SIAVVAS, Georgios KARAGIANNIDIS</i>
		34 Orientation Estimation Methods for Shape Alignment Applications Employing Ensemble of Regression Trees <i>Ioannis BETOUNIS, Nikos PETRELLIS, Christos ANTONOPOULOS, Nikolaos VOROS</i>	47 Energy Efficient Cryptographic Cores toward Sustainable Proof-of-Work Consensus <i>Asimina KOUTRA, Vasileios TENENTES</i>
		35 The SME–Startup Collaboration Gap: Why Willing Firms Do Not Couple <i>Vasileios TOUNTOPOULOS, Spiros SIRMAKESSIS, Zacharias DERMATIS, Athanasios ANASTASIOU</i>	10 A Current-Mode, Array-Type, Strong PUF, based on a Multi-Current Generation Cell <i>Dimosthenis GEORGOULAS, Yiorgos TSIATOUHAS</i>
13:20-14:00	Poster Presentation & Snack Break	Foyer	
		5 From Intrusion Detection Alerts to Contextual Risk Assessment in 5G Networks <i>Spyros DENAZIS, Paris KITSOS, Kostas LAMPROPOULOS, Dionysia VARVARIGOU</i>	27 BEVNet: A Beta-Evidential Network for OOD Detection <i>Mykola BARANOV, Yurii SHCHERBYNA</i>
		6 Design, Fabrication and Performance Assessment of Hybrid Additively Manufactured Thermal Energy Harvesters <i>Evangelos EVANGELOU, George KARALIS, Vladimiros LIONTOS, Evangelos SDRAKAS, Lazaros TZOUNIS</i>	32 Statistical Process Variability Modeling: From Planar CMOS to FinFET Circuit Design <i>Lyudmila TANEVA, Loukas TSOULANAS</i>
		7 MIXYS: An AI-enhanced Cloud Platform for Design and Optimization of Industrial Mixing Systems <i>Antonios ARAMBATZIS, Arsenios CHATZIMIHAILIDIS, Paschalis DOMBOUDIS, Giorgos FELEKOS, Vasilis GERAkis, Dimitris ORLIS, Dimitrios PAPAS, Christos BELLOS</i>	33 A Device with Web-Based HMI Architecture for Portable Diagnosis of Electrohydraulic Heavy-Vehicle Transmissions <i>Georgios PETROULIAS</i>
		9 An Edge-AI Human-Intrusion Alerting System for Restricted-Zone Surveillance on a Raspberry Pi 5 and Hailo-8L NPU <i>Avaneesh BASTIMANE</i>	38 Countering multi-vector security threats in Edge Devices based on a hardware root of trust <i>Fotios GIOULEKAS, Panagiotis KATSAROS, Kalliopi MPAMPALA, Miltiadis SIAVVAS</i>
			40 A Conversational Interface to a Manufacturing-Resilience Toolset <i>Eleni PANOPOULOU, Stavros VASSOS</i>
			50 From Open Dataset to Inclusive-Building Technology: A Technology Transfer and Innovation Ecosystem Case Study of BLE-Based ISAC Sensing <i>Georgios ALOGDIANAKIS, Theodoros SKANDAMIS</i>

Time	Programme	Main Hall (I)	Hall II
16	Polyoxometalate-Modulated SnO2/Perovskitebased Memristive Devices with Ultra-High ON/OFF Ratio and Low Operating Voltages <i>EVANGELOU E.K., MASKANAKI K., SOULTATI A.</i>	52	Improving Early Warning Signals Based DDoS Threat Prediction via Rolling Window Selection for Critical Infrastructure Protection <i>KOTZANIKOLAOU Panagiotis, SOULTOS Georgios</i>
22	3D printing of Sandwich composites with engineered lattice structures for EMI shielding <i>Vasilis CHRISTOFILAKIS, Evangelos EVANGELOU, George KARALIS, Aikaterini KECHAGIA, Stefanos MALTEZOS, Evangelos SDRAKAS, Lazaros TZOUNIS</i>	54	GaN RF MMIC Prototyping in Greece: From Design to Fabrication through the SMARTEC Pilot Line also enabled by HCCC <i>Evangelos ASLANIDIS, Paolo FIORAVANTI, George KONSTANTINIDIS, Giannis KONTOGIANNOPOULOS, Athanasios KOSTOPOULOS, Errikos LOURANDAKIS, Nikolaos MAKRIS, Eleftherios SARRIS, Antonios STAVRINIDIS</i>
25	Free-standing Solid-State Supercapacitors Enabled by SWCNT Coating onto 3D Printed Conductive PLA with High Long-Term Stability <i>Evangelos EVANGELOU, George KARALIS, Vladimiros LIONTOS, Athanasios TILIAKOS, Lazaros TZOUNIS</i>		
14:00-14:45	Keynote Speech	Prof. Gerry TSOUKALAS Deputy Dean for Human-Centered AI and Innovation, Said Business School - University of Oxford <i>Title: The Market Effects of AI: Open Questions for the Systems We Build</i> Moderator: Gregory DOUMENIS, University of Ioannina	
14:45-15:50	HCCC Side Event	Silicon & GaN: Technologies, Manufacturing and Markets <i>From Fabrication Processes to Applications, Economics and Future Opportunities</i> 14:45 – 14:50 Introduction – Gregory DOUMENIS , Assoc. Prof. University of Ioannina 14:50–15:05 Autonomous Operations for Mature and Specialty Semiconductor Fabs Dennis XENOS, Co-founder & CTO, Flexciton 15:05–15:20 GaN Technologies: European Fabs, FORTH Capabilities and the GaN Supply Chain George KONSTANTINIDIS, FORTH 15:20–15:35 Silicon & GaN: The Semiconductor Design Industry Perspective Paolo FIORAVANTI, CEO & Co-Founder, Circuits Integrated 15:35–15:50 Joint Discussion & Q&A: Towards a Semiconductor Manufacturing Ecosystem in Greece Moderator: Gregory DOUMENIS, University of Ioannina	
15:50-16:20	Round Table	From Technology to Market: What Does It Take to Scale Semiconductor Innovation? <i>Turning technology and capabilities into prototypes, investment and business opportunities</i> Panelists: George KONSTANTINIDIS FORTH, Paolo FIORAVANTI Circuits Integrated, John KIKIDIS HCCC, Emmanuel ZERVAKIS HETiA Moderator: Gregory DOUMENIS, University of Ioannina	
16:20-16:30	Conference Summary & Edge Intelligence 2027 Announcement	Conference Summary Report Prof. Yiorgos TSIATOUHAS, Assoc. Prof. Gregory DOUMENIS, Dr. Manolis ZERVAKIS	