TWINRELECT
TWINNING FOR EXCELLENCE IN RELIABLE ELECTRONICS

Business Forum

SHAPING THE FUTURE OF RELIABLE ELECTRONICS

EVENT ROGRAM

25 - 26 September, 2025

Event Hall
Sekeri – Cheiden Str. ECE Building
University of Thessaly, Volos – Greece

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The goal of TWIN-RELECT project is to boost the scientific and innovation capacity of University of Thessaly in the design of reliable electronic systems through strategic networking with three advanced partners: IHP - Institute for High Performance Microelectronics from Germany, National Center for Scientific Research (CNRS) from France, and University of Manchester from United Kingdom.

TWINRELECT PARTNERS

The University of Thessaly (UTH), founded in 1984, spans several cities in Greece with 8 Schools, 37 Departments, and 71 postgraduate programs. Within the ECE Department, the CAS Lab—founded in 2016 by Prof. Fotis Plessas—specializes in Electronic Design Automation (EDA) research and will participate in the TWIN-RELECT project. The lab focuses on Analog, Digital, and RF Circuits and Systems, Hardware Security, and EDA tools, supported by advanced CAD tools, prototyping and testing facilities, and access to semiconductor foundries.

The Leibniz Institute for High-Performance Microelectronics (IHP) specializes in fault-tolerant circuit design for safety-critical applications. The institute, based in Frankfurt (Oder), Germany, has advanced tools for circuit testing and is involved in the EU-funded MORAL project, developing rad-hard microcontrollers for space applications.

The National Center for Scientific Research (CNRS) is represented in the project by the IES (Institute of Electronics and Systems), a joint research unit with the University of Montpellier. The IES RADIAC team, specializing in electronics reliability in radiation environments, plays a key role in international projects and is involved in developing radiation sensors, simulation tools, and failure analysis methods.

The University of Montpellier, established in 1220, is one of the oldest universities in the world. It was reunified in 2015 and ranks among the top 200 universities globally, securing 55th place in the Reuters Most Innovative Universities 2018 and 98th in the University Ranking by Academic Performance 2021–2022.

The University of Manchester's Advanced Processor Technologies (APT) group, led by Prof. Steve Furber, focuses on brain-inspired computing and neuromorphic systems for edge AI applications. They are developing low-power, fault-tolerant solutions, including hybrid SNN-ANN systems, and addressing the lack of electronic design automation tools for reliable, cost-effective neuromorphic architectures.

The goal of COIN-3D project is to to boost research and innovation capacity of University of Thessaly by fostering strategic networking and knowledge exchange with leading European institutions. It focuses on enhancing research management and commercialization, particularly in advanced VLSI design and 2.5/3D chiplet architectures, aligning with broader EU initiatives like the European Chips Act.

COIN-3D PARTNERS

The University of Thessaly (UTH) was founded in 1984 and its administrative and academic center is in the city of Volos. The university is deeply committed to high-quality scientific research, recognizing it as a fundamental prerequisite for the generation and dissemination of new knowledge. Within UTH, Electronics Research Laboratory (ERL) focuses on producing research on high-performance circuits and related design & analysis techniques, with particular emphasis on modern nanometer-scale of VLSI circuits.

The University of Amsterdam (UvA) is a leading European research institution known for its innovative and interdisciplinary approach to science and technology. Within UvA, the Parallel Computing Systems (PCS) group specializes in the design, programming, and run-time management of parallel and distributed computer systems. Their research focuses on modeling, analyzing, and optimizing extra-functional aspects such as performance, energy consumption, thermals, reliability, security, and verifiability.

The University of Bremen (UBREMEN) is a research institution in Germany, celebrated for its interdisciplinary approach and commitment to technological advancement. Within UBREMEN, the Chair for Integrated Digital Systems (IDS) advances microelectronics and embedded systems, focusing on low-power design, SoC architectures, and multiprocessor systems to develop efficient, technology-aware hardware solutions that enhance system performance and autonomy.

The University of Glasgow (UGLA) is a world-renowned research university, excelling in research, teaching, and global collaboration with a commitment to innovation, inclusivity, and impactful contributions. Within UGLA, the Knowledge and Data Engineering Systems (KDES) group specializes in Distributed Computing, Knowledge Engineering, and Data Science, with expertise spanning large-scale distributed systems, Edge Computing, Distributed Machine Learning, and Data-centric AI.

PROGRAM

Thursday, 25 September 2025

09:30 - 10:00	**Registration**
10:00 - 10:30	**Welcome Session** Prof. Christos Sotiriou, University of Thessaly Prof. George Floros, Trinity College
10:30 - 10:40	**Government Representative** Mr. Giannis Anastasios Deputy Regional Governor of Thessaly for Digital Governance & Citizen Service
10:40 - 11:30	**Ansys** Nikolas Perantakos, Application Engineer
11:30 - 12:00	**Coffee Break**
12:00 - 12:45	**1st Keynote Speech - The CMOS 2.0 scaling paradigm** Moritz Brunion, Researcher
12:45 - 13:15	**Trimsignal** George Anagnostopoulos, Chief Software Architect
13:15 - 14:15	**Lunch Break**
14:15 - 15:00	**2nd Keynote Speech - Place & Route Flow: Challenges and Opportunities for Parallelism and AI** Dr. Dimitris Fotakis, Metis Electronic Design
15:00 - 15:30	**Thess IC** Thrasos Axiotis, Director
15:30 - 16:00	**Coffee Break**
16:00 - 16:30	**Space Network** Fotios Kotzakioulafis, Founder and Hub Manager Dr. Georgios Kotlidas, Legal Lead and Founding Member
16:30 - 17:00	**IHP** Dr. Krzysztof Herman, Research Assistant

Friday, 26 September 2025

09:30 - 10:00	**Registration**
10:00 - 10:30	**HETiA** Dr. Sotiris Bantas, Board Member
10:30 - 11:00	**Kenotom** Dr. Tilemachos Matiakis, Project Coordinator and Scientific Supervisor
11:00 - 11:30	**Coffee Break**
11:30 - 12:00	**ArgoSemi** Dr. Konstantinos Vrysas, Co-Funder, Technical Director
12:00 - 12:30	**Corallia - ESA BIC** Dr. Orfeas Voutyras, Programme Coordinator, Senior Associate - ESA BIC Greece Incubator
12:30 - 13:30	**Lunch Break**
13:30 - 14:30	**3rd Keynote Speech - Full Reference Video Quality Metrics - A Review** Dr. Ioannis Katsavounidis, Researcher Scientist - Meta, IEEE SPS Distinguished Industry Speaker
14:30 - 15:00	**Smart Silicon** Nikos Katsaros, Digital Design and Concept Team Lead
15:00 - 15:30	**Round Table**
15:30 - 15:50	**StarBound** University of Thessaly Student Team
15:50 - 17:00	**Networking Session - Coffee Break**
17:00 - 17:20	**Closing Session**

KEYNOTE SPEAKERS

Moritz Brunion: The CMOS 2.0 scaling paradigm

Bio: Moritz Brunion received the M.Sc. degree in electrical and computer engineering from the University of Bremen, Germany, in 2022. He is currently a researcher at imec, Leuven, Belgium, and his research focuses on design-technology co-optimization for fine-grained 3D systems.

Dr. Dimitris Fotakis: Place & Route Flow: Challenges and Opportunities for Parallelism and AI

Bio: Accomplished technologist and strategic leader with over 30 years of experience in software engineering, system architecture, and entrepreneurship. Serial founder with extensive expertise in semiconductor design automation, AI applications, and cloud computing technologies. Track record of building innovative solutions, raising venture capital, and leading high-performance engineering teams.

Dr. Ioannis Katsavounidis: Full Reference Video Quality Metrics - A Review

Bio: Dr. Ioannis Katsavounidis is part of the Media Foundation team, leading technical efforts in improving video quality and quality of experience across all video products at Meta. Before joining Meta, he spent 3.5 years at Netflix, contributing to the development and popularization of VMAF, as well as inventing the Dynamic Optimizer. He was a professor for 8 years at the University of Thessaly's Electrical and Computer Engineering Department in Greece. He was one of the cofounders of Cidana, a mobile multimedia software company in Shanghai, China. He was the director of software for advanced video codecs at InterVideo in the early 2000's and he has also worked for 4 years in high-energy experimental Physics in Italy. He is a general co-chair at the Video Quality Experts Group (VQEG). He is actively involved within the Alliance for Open Media (AOMedia) as co-chair of the software implementation working group (SIWG). He has over 200 publications, including 50 patents. His research interests lie in video coding, quality of experience, adaptive streaming, and energy efficient HW/SW multimedia processing. He is a member of the IEEE-SPS Industry Board and an IEEE-SPS Distinguished Industry Speaker in 2025.

COMPANIES & ORGANIZATIONS

For decades, Synopsys has been delivering breakthroughs in silicon design and IP that have fueled technology innovation. With **Ansys** now part of Synopsys, we can maximize the capabilities of product R&D teams broadly enabling them to rapidly innovate AI-powered products. We're best positioned to deliver new, holistic system design solutions for customers in industries spanning semiconductors, high-tech, automotive, aerospace, industrial, and more. Innovate With Ansys, Power Your Career.

At **imec**, we shape the future by enabling nano- and digital technology innovation that enhances quality of life—together with partners from the industry, government, and academia. Our R&D is built on three core pillars: - a unique 2.5-billion-euro 300mm semiconductor pilot line - over 6,000 colleagues from around the world - an ecosystem of 600+ world-leading industry partners and a global academic network. Since 1984, imec quickly made its name as the leading research hub for advanced CMOS scaling and continues to set the course for the semiconductor industry.

ArgoSemi is a fabless semiconductor company, providing RF solutions for 5G cellular sub-6GHz infrastructure, such as macro-cell Radio-Units and Small-Cell base-stations. The company has developed technologies that allow cost-effective deployment of sub-6 5G massive MIMO networks. The company offers ultra-slim antenna arrays and feature-rich RFIC products, delivering state of the art performance and power efficiency. By integrating active and passive components, the company enables the reduction of the component number in a typical 5G New-Radio Radio-Unit deployment, thus reducing 5G massive MIMO NR RU CAPEX by 25%.

COMPANIES & ORGANIZATIONS

Trimsignal is a pioneering semiconductor technology company specializing in dynamic frequency boosting and advanced signal processing, with a strong focus on LiDAR systems, space and defense applications. Their innovative solutions are designed to deliver higher computational performance while maintaining energy efficiency, addressing critical needs in next-generation systems.

The company has received notable recognition and established strategic partnerships that reinforce its position in the global semiconductor ecosystem. Trimsignal is part of the ESA Business Incubation Centre Greece (ESA BIC Greece) program, in collaboration with ESA and Corallia (Athena Research Center), highlighting its alignment with space-tech and deep engineering excellence. Additionally, Trimsignal is a member of the Hellenic Emerging Technologies Industry Association (HETiA), further strengthening its integration within Greece's national technology landscape.

THESS IC is a fabless integrated circuit design company specializing in automotive semiconductor solutions. Founded in 2020, the company has grown rapidly to employ 20+ engineers, with four holding PhDs and 95% having postgraduate degrees in relevant fields.

The company provides complete solutions including System-on-Chip (SoC), development platforms, and all necessary software. Thess IC serves global clients, helping transform their ideas into integrated circuits using an extensive IP portfolio that includes RISC-V and custom processors, as well as analog, digital, and mixed-signal circuits.

The company develops RISC-V processors aligned with European open protocol adoption policies, supporting the EU's strategic goals for technological autonomy, security, and innovation independence.

THESS IC is a subsidiary of the French company CORTUS SAS. The company has been part of Greece's Elevate Greece startup ecosystem since 2021 and is a member of the Hellenic Emerging Technologies Industries Association (HETIA).

COMPANIES & ORGANIZATIONS

Smart Silicon is a European-based ASIC design and verification services company, providing high-performance solutions for teams developing complex silicon. We specialize in digital front-end design, functional and formal verification, and real-number modeling for mixed-signal systems.

Our unique advantage lies in combining deep semiconductor expertise with the agility of a boutique engineering team. We support clients worldwide—helping them achieve faster time-to-market, tighter design cycles, and silicon that performs exactly as intended.

With a strong track record in automotive chip design, we also serve customers across AI accelerators, IoT, RISC-V, and industrial applications. Whether you're building a next-generation SoC or scaling verification capacity, Smart Silicon is your trusted partner from architecture to tapeout.

We are known for our transparent collaboration, technical ownership, and on-time, on-budget delivery—delivering value at every phase of the ASIC development lifecycle.

KENOTOM is an Embedded Engineering Services provider based in Thessaloniki, Greece, specializing in high-quality solutions for the automotive and industrial automation sectors. Since 2014, the company has grown from a small team into nearly 200 engineers, trusted by leading Tier-1 suppliers, OEMs, and partners across Europe.

Our expertise covers the entire development lifecycle — from system requirements and architecture to implementation, testing, and validation. We focus on safety-critical Electronic Control Units (ECUs) in Powertrain, Interior, and ADAS domains, while also supporting projects in industrial automation, aviation, space, and medical sectors.

Core competencies include:

- Embedded software & control systems
- Hardware design & PCB development
- Automated testing (MiL, SiL, HiL)
- System requirements & lifecycle support

KENOTOM strictly follows internationally recognized standards, such as AUTOSAR, ASPICE, ISO 26262, ISO 21434, ISO 9001, ISO/IEC 27001, and TISAX. Our official certifications in ISO 9001, ISO 27001, and TISAX reflect our commitment to quality management, information security, and trusted data exchange.

At the heart of our work stand our core values: Trust, Evolution, Commitment, and Talent. Guided by these principles, we continuously deliver cost-effective, reliable, and innovative engineering services that empower our partners worldwide.

COMPANIES & ORGANIZATIONS

Founded to unite pioneering industrial and academic leaders, **HETiA** drives digital technology adoption and promotes entrepreneurship across cutting-edge domains of innovation. Originally established as the Hellenic Semiconductor Industry Association in 2005, it has grown into a robust consortium of 60+ industrial members and 28 universities and research institutes. HETiA now serves as a gateway for high-tech enterprises spanning Europe, the Middle East, and Africa.
Beyond networking and advocacy, HETiA plays a pivotal role in launching national initiatives, such as coordinating the Hellenic Chips Competence Centre (HCCC)—a collaborative project to bolster Greece's semiconductor capacity in line with the EU Chips Act.

Corallia is dedicated to the structured management and development of innovation clusters and entrepreneurship programs, with a special focus on high-tech fields. As part of the Athena Research Center, Corallia acts as an incubator, accelerator, and cluster facilitator, driving entrepreneurship, fostering collaboration among businesses, research centers, and universities, and supporting innovative startups to compete globally. Since its founding in 2005, Corallia has played a pivotal role in boosting Greece's global competitiveness by helping hundreds of enterprises grow and attracting significant private and foreign investment into the Greek innovation ecosystem.

The **IHP** is an institute of the Leibniz Association and conducts research and development of silicon-based systems and ultrahigh frequency circuits and technologies including new materials. It develops innovative solutions for application areas such as wireless and broadband communication, security, medical technology, industry 4.0, automotive industry, and aerospace. The IHP employs approximately 350 people. It operates a pilot line for technological developments and the preparation of high-speed circuits with 0.13/0.25 µm SiGe BiCMOS technologies, located in a 1500 m² DIN EN ISO 14644-1 3 certified clean room.

COMPANIES & ORGANIZATIONS

Space Network | Greece is the national hub of one of the fastest-growing international networks dedicated to the commercial space sector. Established as part of Space Network's global expansion, the Greek hub aims to strengthen the country's role in the space economy through international collaboration, innovation, and talent development.

Our focus is threefold: supporting the growth of Greek space startups and scaleups by connecting them with global markets and funding opportunities; activating talent by working with universities and institutes to provide students and young professionals with practical training and career pathways; and fostering community engagement through events, forums, and industry meetups that increase the visibility of the Greek space sector.

Founded in 2023 with offices in Glasgow and New York, Space Network is an ecosystem builder for the global space economy. With the core pillars of Support, Connect, Fund, the network empowers businesses and individuals to innovate, scale, and thrive. Space Network | Greece brings this mission to the national level, combining global reach with local impact to help position Greece as a meaningful contributor to the future of space.

UNIVERSITY TEAMS

Based in the city of Volos, Team **StarBound** is a dynamic multidisciplinary aerospace team of students dedicated to advancing the frontiers of unmanned aerial systems. Founded in 2024, our primary objective is to develop, build, and fly an innovative UAV at the IMechE UAS Challenge 2026, one of the world's most demanding student engineering competitions. Our project integrates advanced aerodynamics, autonomous systems, and a viable business model, reflecting a complete engineering lifecycle. We invite you to our booth to engage with our passionate members, examine our design, and explore potential collaboration opportunities to fuel our quest for progress.