Call for Papers

International Conference on Hardware/Software Codesign and System Synthesis
September 28 – October 03, 2025, *Taipei, Taiwan*

The International Conference on Hardware/Software Codesign and System Synthesis (CODES+ISSS) is the premier conference in system-level design, hardware/software co-design, modeling, analysis, and implementation of modern Embedded Systems, Cyber-Physical Systems, and Internet-of-Things, from system-level specification and optimization to synthesis of system-on-chip hardware/software implementations. CODES+ISSS is part of Embedded Systems Week (ESWEEK), the premier event covering all aspects of hardware and software design for smart, intelligent, and connected computing systems. The topics of interest include:

Journal Track Submissions:
Abstract Submission: March 23, 2025
Full Paper Submission: March 30, 2025 (firm)
Acceptance Notification: July 13, 2025

Late Breaking Results (LBR) Submissions:
Paper Submission: June 1, 2025 (firm)
Acceptance Notification: July 13, 2025

All submissions are due by midnight, AOE.

Track 1) System-level design – Specification, modelling, refinement, synthesis, and partitioning of embedded systems, hardware-software co-design, hybrid system modeling and design, model-based design, design for adaptivity and reconfigurability.

Track 2) Application-specific design – Analysis, design, and optimization techniques for multimedia, medical, automotive, transportation, cyber-physical, aerospace, IoT, space computing and other application domains.

Track 3) System architecture – Heterogeneous systems, many-cores, and distributed systems, architecture and micro-architecture design, exploration and optimizations of application-specific processors and accelerators, reconfigurable, self-programmable, and self-adaptive architectures, storage, memory systems, networks-on-chip, and networks-of-networks.

Track 4) Simulation, validation, and verification – Hardware/software co-simulation, verification and validation methodologies, formal verification, hardware accelerated simulation, simulation and verification languages, models, and benchmarks.

Track 5) Embedded software – Language and library support, compilers, runtimes, parallelization, software verification, memory management, virtual machines, operating systems, real-time support, middleware.

Track 6) Safety, security, and reliability – Cross-layer reliability, resiliency and fault tolerance, test methodology, design for security, reliability, and testability, hardware security, security for embedded, CPS, and IoT devices.

Track 7) Power-aware systems – Power-aware, thermal-aware and energy-aware system design and methodologies, ranging from low-power embedded and cyber-physical systems, IoT devices, to energy-efficient large-scale systems such as cloud datacenters, federated systems, green computing, and smart grids.

Track 8) Embedded artificial intelligence – Hardware and software design, implementation, and optimization for machine learning that are specially designed for resource- and power-constrained embedded, CPS, and IoT devices.

Track 9) Industrial practices and case studies – Practical impact on current and/or future industries, application of state-of-the-art methodologies and tools in wireless, networking, multimedia, automotive, cyber-physical, IoT, aerospace, space computing, federated systems, etc.

Submission link: https://codesisss25.hotcrp.com/

Journal-Integrated Publication Model: Accepted full papers will be published in the *ACM Transactions on Embedded Computing Systems*. Accepted LBR papers will be published in *IEEE Embedded Systems Letters*. Journal-track papers must be up to **20 pages** in ACM one-column format, including references. LBR must be up to **4** pages in IEEE format.

In-Person Presentation Requirement: An accepted paper will be removed from the journal (TECS or ESL) and the technical program unless both of the following conditions are satisfied: (1) One author of the accepted paper must register at the full conference (author registration) rate, and (2) An author of the accepted paper must present (in-person) the paper in the conference. See details at http://www.esweek.org/author-information

ESWEEK General Chairs:
Tei-Wei Kuo, National Taiwan University, Taiwan
Andy Pimentel, University of Amsterdam, Netherlands

CODES+ISSS Program Chairs:
Prabhat Mishra, University of Florida, USA
Paul Bogdan, University of Southern California, USA