

# The 18th IEEE International Conference on Embedded Software and Systems (ICESS-2022)

Dec. 18-20, 2022, Chengdu, China

<http://www.ieee-cybermatics.org/2022/icess/>

## Call for Papers

The advancement of embedded software and systems, such as intelligent vehicles, industrial robots, wearable devices, and Internet-of-Things, has great societal and economic impacts. It is of utmost importance to ensure safety, efficiency, and security of their design and implementation. IEEE International Conference on Embedded Software and Systems (ICESS) is a global forum for researchers and developers from academia, industry, and government to present and discuss emerging ideas and trends in embedded software and systems. The conference has a broad scope covering the design, implementation, optimization, and validation of embedded software and systems in various domains, with recent focus on cyber-physical systems, Internet-of-Things, embedded security, and autonomous software systems. **ICESS 2022 will be held as a hybrid conference, and participants may choose to attend it either on-site or online.**

### Track 1: Systems, Models & Algorithms

- Embedded System Architecture
- Embedded Software Architectures
- Embedded OS, Scheduling and Runtime Support
- Embedded Storage and I/O Systems
- Real-Time Embedded Systems
- Distributed and Networked Embedded Systems
- Fault Tolerant and Trusted Embedded Systems
- Power and Thermal Aware Computing
- Mixed-Criticality Embedded Systems
- Heterogeneous SoC and Multicore Embedded System
- Reconfigurable Embedded Computing

### Track 2: Design Methodology & Tools

- Design Technologies of Embedded Systems
- Formal Methods for Embedded Systems
- Middleware for Embedded Systems
- IDE and Software Tools
- Hardware/Software Co-Design
- Component-Based Embedded Software Design
- Model-based Design for Embedded Software
- Domain/Application-Specific Design Techniques
- Testing Techniques for Embedded Software/ Systems
- Verification and Validation for Embedded Systems
- Compilation and Debug Techniques and Tools

- Performance Evaluation Techniques and Tools
- Safety of Machine Learning for Embedded Systems

### Track 3: Emerging Embedded Applications & Interdisciplinary

- Intelligent Embedded Systems
- Machine Learning for Embedded Applications
- Internet-of-Things (IoT)
- Wearable Computing
- Smart City
- Intelligent Intersection Traffic Signal Control
- Robotics and Control Systems
- Wireless Sensor Networks
- Cyber-Physical Systems (CPS)
- Assured Autonomy for Safety-Critical CPS
- Automotive and Avionics Systems
- Medical Systems
- Database & Multimedia Systems
- Network Protocols and Security
- Emergency and Disaster Management
- Consumer Electronics
- Mobile Cloud Computing and Approximate Computing
- Industrial Practices and Case Studies

## Organizing Committee

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## Paper Submission

Submissions should contain significant novel ideas and technical results that have not been published or concurrently submitted to any other venue. Submitted manuscripts should be written in English conforming to the IEEE conference proceedings format (8.5" x 11" page size, two-column). All papers need to be submitted electronically through the conference submission website with PDF format: <https://edas.info/N29973>

Papers should not be longer than 8 pages in the IEEE conference format. Some papers may be accepted after review as short papers; the camera-ready versions of such papers should normally not exceed 4 pages. Authors of accepted papers (regular-length or short papers) will have the option to pay for up to 2 extra pages at the time of registration.

## Paper Publication

All accepted papers are expected to be included in IEEE Xplore and indexed by EI. Selected papers, after further revisions, will be considered for publication in **Elsevier Journal of Systems Architecture, the Special Issue on Embedded Software and Systems (ICESS2022)**.

## Co-located with Five Other Conferences

- o The 2022 IEEE Int'l Conf. on High Performance Computing and Communications (HPCC-2022)
- o The 2022 IEEE Int'l Conf. on Smart City (Smart City-2022)
- o The 2022 IEEE Int'l Conf. on Data Science and Systems (DSS-2022)
- o The 2022 IEEE Int'l Conf. on Data, Information, Knowledge and Wisdom (DIKW-2022)
- o The 2022 IEEE Int'l Conf. on Dependability in Sensor, Cloud and Big Data Systems and Applications (DependSys-2022)

## Sponsors



Submission Deadline  
Sep. 20, 2022

Author Notification  
Oct. 15, 2022

Final Manuscript Due  
Nov. 10, 2022