OSPERT 2026

The 20th annual workshop on Operating Systems Platforms for Embedded Real-Time applications
July 7, 2026. Lund, Sweden, held in conjunction with ECRTS 2026

Call for Contributions OSPERT is a forum for researchers and engineers working on (and with) Real-Time Operating Systems (RTOSs) to present recent advances and trends in RTOS technology, to promote new and existing initiatives and projects, and to identify and discuss the challenges that lie ahead. The workshop, now in its 20th year, provides the RTOS community with an opportunity to meet and exchange ideas, network, and discuss future directions.

OSPERT strives for an inclusive and diverse program and solicits a range of varied contributions. To this end, the following types of submissions are sought:

1. **proposals for stand-alone presentations** (including talks on open problems, demos & tutorials, calls to action, etc.);
2. **proposals for reports on empirical experiments** (including replication studies, preliminary experiments preceding a full conference submission, and negative experience reports discussing failed approaches); and
3. **technical papers** (short papers and full workshop papers).

See https://www.ecrts.org/workshops/ospert26/contribution-formats/ for a detailed description of the different contribution formats. To encourage a lively, high-quality program, OSPERT may recognize a best paper if a sufficiently competitive pool of submissions is received. *New this year*: An optional DOI-based publication track will be available for accepted papers.

Important Dates

May 14, 2026
Submission Deadline

June 4, 2026
Acceptance Notification

July 7, 2026
Workshop

July 7-10, 2026
ECRTS Conference

Submission Formats

Full workshop papers
Up to six pages

Short WiP papers
Up to three pages

Presentation Proposals
Abstract, 500 words

Workshop Chairs

Marion Sudvarg
Washington University

Antonio Paolillo
Vrije Universiteit Brussel

Scope and Topics of Interest OSPERT is open to all topics related to providing a reliable and efficient operating environment for real-time and embedded applications. Developers of embedded RTOSs are faced with many challenges arising from two opposite needs: on the one hand, there is a need for extreme resource usage optimization (processor cycles, energy, network bandwidth, etc.), and on the other hand, there are also increasing demands in terms of scalability, flexibility, isolation, adaptivity, reconfigurability, predictability, serviceability, and certifiability, to name a few. Further, while special-purpose RTOSs continue to be used for many embedded applications, real-time services are also increasingly introduced and used in general-purpose operating systems and cloud environments, where tail latency and Quality of Service (QoS) are a concern. Market pressures continue to blur the lines between the two formerly distinct classes of operating systems. Notable examples are the various flavors of real-time Linux that support time-sensitive applications, the emergence of commercial and open-source real-time hypervisors, as well as the growth in features and scope of embedded OS and middleware specifications such as AUTOSAR. Moreover, GPUs and other hardware accelerators, originally designed for throughput-oriented workloads, are now increasingly deployed in safety-critical and real-time domains such as autonomous driving, robotics, and industrial automation. Their highly parallel execution models introduce new sources of timing variability and resource contention, raising new challenges for RTOS design. OSPERT is dedicated to the advances in RTOS technology required to address these trends.

As such, areas of interest include, but are not limited to, the following topics:

- Case studies and experience reports
- Consolidation of real-time and best-effort work on embedded platforms
- Certification and verification of RTOSs and middleware
- Coordinated management of multiple resources
- Dynamic reconfiguration and upgrading
- Empirical comparisons and evaluations of RTOSs
- Flexible processor, memory, and I/O scheduling
- Interaction with reconfigurable hardware
- Operating system standards (e.g., AUTOSAR, ARINC, POSIX, etc.)
- Power and energy management
- Quality of Service guarantees
- Real-time Linux variants
- Real-time virtualization and hypervisors
- RTOSs for manycore platforms
- Scalability, from very small-scale embedded systems to full-fledged RTOS
- Security and fault tolerance for embedded real-time systems
- Support for multiprocessor, accelerator-/FPGA-enabled, architectures
- Support for component-based development
- GPU and accelerator scheduling
- Real-time safety systems for autonomous robots

Visit https://www.ecrts.org/workshops/ospert26/ for further details.

Program Committee An Zou, *Shanghai Jiao Tong University*, Andrea Bastoni, *Technical University of Munich*, Bohdan Trach, *Huawei Dresden Research Center*, Bryan Ward, *Vanderbilt University*, Denis Hoornaert, *Technical University of Munich*, Jinwen Wang, *University of Texas at Dallas*, Joshua Bakita, *Mohamed bin Zayed University of Artificial Intelligence*, Michael Roitzsch, *Barkhausen Institute*, Peter Wägemann, *FAU Erlangen-Nürnberg*, Phani Kishore Gadepalli, *VMware*, Tam Chantem, *Virginia Tech*, Takuya Azumi, *Saitama University*, Tanmaya Mishra, *Analog Devices*

OSPERT is a satellite workshop of the 38th Euromicro Conference on Real-Time Systems (ECRTS), the premier European venue for presenting research in the broad area of real-time systems. Along with RTSS and RTAS, ECRTS ranks as one of the three top international conferences on real-time systems.

ECRTS