



33rd Euromicro Conference on Real-Time Systems  
5-9 July 2021 | Virtual Conference



# Call for Papers

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## 33rd Euromicro Conference on Real-Time Systems (ECRTS'21)

July 7–9, 2021 | Virtual Conference | [ecrts.org](http://ecrts.org)

Submission deadline: March 3, 2021 (23:59 UTC-12)

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ECRTS is the premier European venue in the area of real-time systems and, alongside RTSS and RTAS, ranks as one of the top three international conferences on this topic.

Owing to the uncertain pandemic outlook, ECRTS 2021 will be held online as a virtual conference on July 7–9, 2021.

**New in 2021:** no more hard page limit! See paper submission information below.

**New in 2021:** double-blind reviewing. See paper submission information below.

## Scope and Topics of Interest

Papers on all aspects of timing requirements in computer systems are welcome. Systems of interest include not only hard real-time systems, but also time-sensitive systems in general (e.g., systems with soft requirements expressed in terms of tail latency, latency SLAs, QoS expectations, etc.). Typical applications are found not only in classical embedded and cyber-physical systems, but also increasingly in cloud or edge computing contexts, and often stem

from domains such as automotive, avionics, telecommunications, healthcare, robotics, and space systems, among others. **To be in scope, papers must address some form of timing requirement, broadly construed.**

ECRTS welcomes theoretical and practical contributions (including tools, benchmarks, and case studies) to the state of the art in the design, implementation, verification, and validation of time-sensitive systems.

In recent years, papers presented at ECRTS have addressed:

- all elements of time-sensitive **COMPUTER SYSTEMS**, including operating systems, hypervisors, middlewares and frameworks, programming languages and compilers, runtime environments, networks and communication protocols, FPGAs, time-predictable processors and memory controllers, etc.;
- static and dynamic techniques for **RESOURCE DEMAND ESTIMATION**, including stochastic and classic worst-case execution time (WCET) analysis, analyses to bound memory and bandwidth needs, and methods for determining the energy, power, or thermal footprint of real-time applications;
- **FORMAL METHODS** for the verification and validation of real-time systems, including model checking, computer-assisted proofs, and runtime monitoring systems;
- the interplay of timing predictability and other **NON-FUNCTIONAL QUALITIES** such as reliability, security, quality of control, energy/power consumption, environmental impact, testability, scalability, etc.;
- foundational **SCHEDULING** and **PREDICTABILITY** questions, including schedulability analysis, algorithm design, synchronization protocols, computational complexity, temporal isolation, probabilistic guarantees, etc.; and
- last but not least, emerging topics such as the use of **MACHINE LEARNING** techniques in safety-critical systems.

The above list of topics is intended only as coarse summary of recent proceedings and should *not* be understood as an exclusive list of interests. To the contrary, papers breaking new ground, departing from established subfields, or challenging the status quo are most welcome and highly encouraged.

**The models, assumptions, and application scenarios upon which papers build must be properly motivated.** Whenever relevant, we strongly encourage authors to present experimental results (preferably based on real data, but synthetic test cases are acceptable) and/or to demonstrate applicability of their approach to real systems (examples can be found at [ecrts.org/industrialchallenge](http://ecrts.org/industrialchallenge)). We encourage open-source initiatives and

computer-assisted proofs in order to increase confidence in practical and theoretical results and to improve their reusability.

## Paper Submission

Please refer to [the conference homepage](#) for detailed submission instructions. Every accepted paper must be presented by one of the authors at the virtual conference.

### Flexible Page Limit

**New in 2021:** no more hard page limit! We believe that scientists should focus on the content of their papers, rather than worry about formatting tricks and layout micro-optimizations to squeeze the last few paragraphs under a given hard page limit. ECRTS 2021 therefore adopts a flexible page limit with an *expected length of 15 pages of technical content* (including any appendices, excluding references and the title page) and the *option to use additional pages when needed*. To be clear, concision is a hallmark of good academic writing, and authors are still expected to make every effort to keep their conference papers as brief as possible to best serve readers. The flexible page limit is intended to take the stress out of the last couple of sentences spilling onto an extra page, not to invite excessive amounts of content that clearly exceed the limits of a conference paper. See [the submission page](#) for more detailed rules.

### Double-Blind Peer Reviewing

**New in 2021:** In the interest of maximizing fairness and the meritocratic nature of the evaluation process, ECRTS'21 will follow a double-blind peer reviewing process. Authors will submit blinded manuscripts (that do not reveal author identity or affiliation) and reviewers will not be made aware of author identities until after acceptance/rejection decisions have been made. Papers not selected by the program committee for (conditional) acceptance will not be de-blinded.

### Open Access

We believe that a conference serves the research community and the public best when results are accessible to the largest audience without restrictions. All accepted papers will be published again this year as an open-access proceedings in collaboration with LIPICs (Leibniz International Proceedings in Informatics).

## Artifact Evaluation

To improve reproducibility of results and to encourage reuse, authors of accepted papers with a computational component will be invited to submit their code and/or their data to an optional artifact evaluation process.

## Important Dates

Submission deadline	March 3, 2021 (23:59 UTC-12) - firm
Author notification	April 22, 2021
Camera-ready deadline	May 6, 2021 firm
Conference	July 7–9, 2020

## Organizers

### General Chair

Marcus Völz, SnT, University of Luxembourg, Luxembourg

### Program Chair

Björn Brandenburg, Max Planck Institute for Software Systems (MPI-SWS), Germany

## Program Committee

TBA

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To receive more information about ECRTS, please subscribe to the `ecrts-info` mailing list at: <https://www.ecrts.org/mailman/listinfo/ecrts-info>