31st IEEE International Symposium on Computer Arithmetic (ARITH 2024)

June 10-12, 2024, Málaga, Spain

https://arith2024.arithsymposium.org/

Important Dates

- Abstract submission deadline   January 18, 2024
- Paper submission deadline   January 25, 2024
- Reviews completed and Authors notified   April 5, 2024
- Camera ready and Copyright due   April 19, 2024

First Call for Papers

Computer arithmetic has always been at the core of the digital age and is currently driving innovation in domains such as artificial intelligence, high-performance computing, signal processing, and security. Since 1969, the ARITH symposia have served as the premier conference for presenting the latest research in computer arithmetic.

The 31st edition of the symposium, ARITH 2024, will be held in Málaga, Spain, with in-person attendance and presentation of research results, and keynote talks.

Regular Conference Papers

ARITH 2024 welcomes submissions of conference papers describing recent scientific advances related to computer arithmetic. Accepted papers will be included in the conference proceedings and in the IEEE Xplore Digital Library. Topics of interest include, but are not restricted to:

- Foundations of computer arithmetic: emerging or improved number systems and their applications; arithmetic algorithms, their analysis, and applications
- Efficient, low-power, or high-performance novel implementations of computer arithmetic in software and hardware: integer or floating-point operations, elementary and special functions, multiple-precision computing, interval arithmetic, finite field arithmetic
- Novel floating-point algorithms, properties of floating-point arithmetic in emerging domains and applications, such as Machine Learning with 8-bit floating-point formats.
- Computer arithmetic in emerging standards, high-level languages, and compilers
- Test, verification, formal proofs, computer-aided design (CAD) automation, and fault/error-tolerance for computer arithmetic
- New arithmetic paradigms, architectures, and implementations for emerging technologies, for FPGAs or configurable logic, and for non-conventional computing systems

- New arithmetic paradigms and architectures for specific application domains such as cryptography, security, Internet-of-Things, neural networks, deep learning, signal processing, computer graphics, multimedia, computer vision, high-performance computing, finance, …
- Inexact, approximate, and stochastic arithmetic algorithms, architectures, and applications

Industry (Short) Papers

For ARITH 2024, we are also inviting short papers (4 pages maximum) to describe industry applications. Accepted Industry papers will be published in the conference proceedings.

ARITH Demo Track Papers

ARITH 2024 is collocated with the inaugural 'ARITH Demo Track' which will consist of three types of demo: new research tools, existing research tools and industry tools. To this end we welcome the following two types of submissions: 1) a short paper (4 pages) detailing a **new** tool including artifact details, 2) a one page proposal regarding a previously published and publicized tool seeking a wider/renewed audience (no artifact required). Type 1) demo submissions will undergo the same review process as regular and industrial papers; likewise, they will be included in the conference proceedings. Type 2) demo submissions will be reviewed as well, but not included in the proceedings.

Procedure for submission

Submission site: https://easychair.org/conferences/?conf=arith2024

Papers under review elsewhere are not acceptable for submission to ARITH 2024. By submitting a paper, authors implicitly confirm that they are solely submitting it to ARITH 2024.

The final submissions of accepted regular session papers **cannot exceed 8 pages** (NO extra pages) using the IEEE Computer Society Conference format (two columns). However, for review, authors may submit a paper with a maximum of 20 pages, 12pt font size, single column and double spacing.

The final submissions for **industry papers and demo short papers cannot exceed 4 pages** (NO extra pages) using the IEEE Computer Society Conference format (two columns). For review, the paper may have up to 10 pages, in 12pt font size, single column and double spacing.

To indicate that a submission is intended for the Demo track, please include "Demo Track - 4-page" or "Demo Track - 1-page" in your keywords. Paper, artifact and proposal review will follow ARITH 2024 conference paper review timelines.

For formatting instructions, please see:
http://www.ieee.org/conferences_events/conferences/publishing/templates.html

Double-blind policy

The review process for ARITH is double-blind. The names, affiliations, grants of authors should be hidden in submitted papers. Self-references should be treated strictly as third-party references. Papers not complying with this policy will be administratively rejected. Non-anonymous preprints or code repositories are not considered a violation of this policy, but reviewers are discouraged to look for them. Therefore, if a contribution is tied to a specific artifact, authors should do their best to provide an anonymized version of this artifact. The Program Committee will resolve grey area situations.

Presentation of accepted submissions

Accepted regular, industry, and 4-page demo papers will have a full presentation slot scheduled. The accepted 1-page demo papers will be presented as posters throughout the conference. Demo papers, both 4-page and 1-page, will have a live-demo slot scheduled.

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Detailed submission procedures, registration information, and other relevant information will be available by late November/early December at https://arith2024.arithsymposium.org/

Venue: Escuela de Ingenierías Industriales, Málaga, Spain.

We are looking forward to seeing you at ARITH 2024 in Málaga, Spain in June next year. Please forward this message to others who might be interested and are not aware of this.

Thank you,

Julio Villalba and Javier Hormigo /General Chairs, on behalf of the Organizing Committee

Email: arith2024@ieee.org