

RAW 2025 CALL FOR PAPERS

32nd Reconfigurable Architectures Workshop (RAW 2025)

June 3-4, 2025. Milan, Italy

Website: <http://raw.necst.it/>

IMPORTANT DATES:

* Submission deadline: Jan 20, 2025

* Decision notification: Feb 14, 2025

* Camera-ready: Mar 6, 2025

* Conference: June 3-4, 2025

All submission deadlines are 11:59 pm Anywhere on Earth (UTC -12).

SUBMISSION WEBSITE:

<https://ssl.linklings.net/conferences/ipdps/?page=Submit&id=WorkshopRAW2025FullSubmission&site=ipdps2025>

FOLLOW US ON FACEBOOK

<https://www.facebook.com/groups/ReconfigurableArchitecturesWorkshop/>

The 32nd Reconfigurable Architectures Workshop (RAW 2025) will be held in Milan, Italy in June 2025. RAW 2025 is associated with the 39th Annual IEEE International Parallel & Distributed Processing Symposium (IEEE IPDPS 2025) and is sponsored by the IEEE Computer Society and the Technical Committee on Parallel Processing. The workshop is one of the major meetings for researchers to present ideas, results, and on-going research on both theoretical and practical advances in Reconfigurable Computing.

A reconfigurable computing environment is characterized by the ability of underlying hardware architectures or devices to rapidly alter (often on the fly) the functionalities of their components and the interconnection between them to suit the problem at hand. The area has a rich theoretical tradition and wide practical applicability. There are several commercially available reconfigurable platforms (FPGAs and coarse-grained devices) and many modern applications (including embedded systems and HPC) use reconfigurable subsystems. An appropriate mix of theoretical foundations and practical considerations, including algorithms, applications, architectures, technologies, systems, programming models and tools, is essential to fully exploit the possibilities offered by reconfigurable computing. The Reconfigurable Architectures Workshop aims to provide a forum for creative and productive interaction for researchers and practitioners in the area.

TRETS special issue on RAW 2025

After the experiments of RAW2024, we will continue to push for a journal special issue. For RAW 2025, we are collaborating with ACM TRETS to organize a journal special issue. We will invite top papers from the RAW 2025 program to extend their work and submit to the ACM TRETS special issue on RAW 2025.

TOPICS OF INTEREST

Submissions are solicited on the following topics including, but not limited to:

Applications of Reconfigurable Architectures

- * ML/AI Acceleration
- * Big Data Analytics Acceleration
- * Applications in FinTech
- * Applications in Organic Computing, Bio-Inspired Solutions, and Neuromorphic Computing
- * Applications in Computational Genomics, Healthcare, and Biomedical Vision
- * Applications in Autonomous Driving
- * Applications in Digital Media and Entertainment
- * Applications in HPC and Datacenters
- * Applications in Edge Devices and IoT Devices
- * Applications in Cybersecurity
- * Other Novel Use of Commercial FPGAs

Reconfigurable System Architectures & CAD Support

- * Domain-Specific Architectures and Overlays
- * Coarse-Grained Reconfigurable Architectures
- * Specialized Memory Systems including Volatile, Non-Volatile, and Hybrid Memory Subsystems
- * Near Data Reconfigurable Architectures and Systems (e.g., SmartNIC, SmartSSD)
- * Reconfigurable Datacenters and Cloud
- * FPGA-based MPSoC Architectures and Systems
- * Heterogeneous Systems
- * Emerging Technologies (e.g., Quantum, Optical Models, 3D Interconnects, Devices)
- * Other Evolvable, Adaptable, or Autonomous Reconfigurable Computing Systems
- * Low-Level CAD Support for the above Architectures and Systems
- * Critical Issues (Security, Reliability, Fault-Tolerance)

Software Programmability and Tool Support

- * Domain-Specific Languages and Compilers
- * High-Level Synthesis
- * System-Level Synthesis
- * Runtime Systems
- * Operating Systems and Virtualization
- * Debugging and Verification Tools
- * Runtime Reconfiguration Models
- * Partial Reconfiguration Techniques
- * Fast Simulation, Prototyping, and Profiling Tools
- * Other Tool Support to Facilitate Software-Defined Reconfigurable Computing

SUBMISSION OF PAPERS

All manuscripts will be reviewed by at least three members of the program committee, with a single-blind review process. Submissions should be a complete manuscript or, in special cases, may be a summary of relevant work. There are two types of manuscripts: 1) full papers (up to 6 pages) and 2) short papers (up to 4 pages). Both manuscripts should follow the IEEE conference style: single-spaced, double-column pages using 10-point size font on 8.5X11 inch pages. The page limits exclude references and both manuscripts can include up to 2 pages of references. A conformant LaTeX template is available here:

https://www.ieee.org/content/dam/ieee-org/ieee/web/org/pubs/conference-latex-template_10-17-19.zip. Overleaf users can find the LaTeX template here:

<https://www.overleaf.com/latex/templates/ieee-bare-demo-template-for-conferences/ypypvwjmvtdf>. A Microsoft Word template is available here:

<https://www.ieee.org/content/dam/ieee-org/ieee/web/org/conferences/conference-template-letter.docx>.

Papers are to be submitted through

Linklings:<https://ssl.linklings.net/conferences/ipdps/?page=Submit&id=WorkshopRAW2025FullSubmission&site=ipdps2025>. All papers must be submitted electronically in PDF format.

Submitted papers should not have appeared in or be under submission for a different workshop, conference or journal. It is also expected that all accepted papers (full or short) will be presented at the workshop by one of the authors.

PUBLICATION AND JOURNAL SPECIAL ISSUE

IEEE CS Press will publish the IPDPS symposium and workshop abstracts as a printed volume. Proceedings of the workshops are distributed at the conference and are submitted for inclusion in the IEEE Xplore Digital Library after the conference. We will also invite top papers from the workshop to extend their work and submit to the ACM TRETTS special issue on RAW 2025.

AWARDS

RAW 2025 will have 3 different awards:

- * Best paper (selected after the presentation of the 3 best paper candidates)
- * Best poster (selected among all the poster presentations at RAW 2025)
- * Best artifact (see the following section for more information)

ARTIFACT EVALUATION

RAW 2025 will continue the experimental Artifact Evaluation (AE) initiated in RAW 2023. Authors of accepted papers at RAW 2025 can optionally participate in the AE process to formally describe supporting materials (code, data, models, workflows, results).

Artifacts are digital objects that were created by the authors as part of the research or experiments performed with the submitted work. Examples of artifacts are:

- * Software: models, source code, scripts, Makefiles, container images (like Docker files), etc.
- * Hardware: Verilog, VHDL, schematics, CAD tools, flows, etc.
- * Data: spreadsheets, databases, binary files, design sets, etc.

High-quality artifacts are as important as the manuscript itself. The goal of submitting artifacts promotes the availability and reproducibility of the experimental results and data such that other researchers can repeat experiments and replicate results with less effort.

Note that this submission is voluntary and will not influence the final decision regarding the papers. The goal is to help the authors validate experimental results from their accepted papers by an independent AE Committee (AEC) in a collaborative way while helping readers find

articles with available (i.e., publicly accessible in an archival repository), functional (i.e., consistent, documented, and reusable), and validated (i.e., main results from the paper) artifacts.

Each submitted artifact is evaluated by at least two members of the AEC. During the process, authors and evaluators are allowed to communicate anonymously with each other to overcome technical difficulties. Ideally, we hope to see all submitted artifacts successfully pass the artifact evaluation. More details on the AE process will follow, and in the meantime [check the FAQ](#)

Finally, we are seeking volunteers to take part in the AE Committee. If you are interested in taking part in this initiative please consider to submit your candidacy or those of your students through this form: <https://forms.gle/5de1vCC5yomMQ3B39>

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