



Call for Papers

The 34th International Workshop on Logic & Synthesis (IWLS 2025)

June 12-13, 2025, University of Verona, Verona, Italy

<https://www.iwls.org>

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The International Workshop on Logic and Synthesis is the premier forum for research in synthesis, optimization, and verification of integrated circuits and systems. Research on logic synthesis for emerging technologies and for novel computing platforms, such as nanoscale systems and biological systems, is also strongly encouraged. The workshop encourages the early dissemination of ideas and results. The workshop accepts complete papers highlighting important new problems in the early stages of development, without providing complete solutions. The emphasis is on novelty and intellectual rigor.

Topics of interest include but are not limited to: hardware synthesis and optimization; software synthesis; hardware/software co-synthesis; power and timing analysis; testing, validation, and verification; synthesis for reconfigurable architectures; hardware compilation for domain-specific languages; and design experiences. Submissions on modeling, analysis, and synthesis for emerging technologies and platforms are particularly encouraged.

The workshop format includes paper presentations, invited talks, social lunch and dinner gatherings, and recreational activities.

Call for regular papers: Only complete papers with original and previously unpublished material are permitted. Submissions must be no longer than 8 pages (references excluded), double column, 10-point font (we recommend using the [ACM template](#) or the [IEEE template](#), but not necessarily). Accepted papers are distributed only to IWLS participants.

Double-blind policy: IWLS uses a double-blind reviewing system. Manuscripts must not identify authors or their affiliations; those that do will not be considered.

If you have questions about how to meet these guidelines, please contact the [program chairs](#) before the submission deadline.

The papers should be submitted to EasyChair: [IWLS 2025 submission page](#).

Paper abstract submission: March 21, 2025 (AoE) March 28, 2025 (AoE)

Submission deadline for papers: ~~March 28, 2025 (AoE)~~ **April 4, 2025 (AoE)**

Notification of acceptance: May 3, 2025

Final version due: May 30, 2025



UNIVERSITÀ DEGLI STUDI DI MILANO
DIPARTIMENTO DI INFORMATICA



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of COMPUTER SCIENCE

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IWLS 2025 Programming Contest

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The competition this year is a continuation of the IWLS competitions held in the last three years. The decision to continue the competition is based on the observation that the quality of the results has not saturated. Indeed, the competition started in 2022, and the results produced by the participants in 2023 were on average 15% better than those in 2022. Similarly, the results in 2024 were on average 8% better than those in 2023. It will be interesting to see how much progress will be achieved this year.

There will be only one track, minimizing traditional and-inverter graphs (AIGs), as in 2022, and no second track to minimize XOR AIGs, as in 2023 and 2024.

The submission guidelines and evaluation rules will be the same as in the previous years (see the previous competition announcement attached below).

In contrast to the previous years, there will be two sets of benchmarks, each containing 100 test cases represented as truth tables in the text format. The first set of benchmarks is identical to that used in 2022. The second set of benchmarks is composed of unmodified and unobfuscated practical circuits, many of which currently pose problems for hardware designers and EDA tool flows.

The high-level descriptions of the new benchmarks are not disclosed at this time. This is because this is a logic synthesis competition and the participants are encouraged to develop logic synthesis algorithms universally applicable to all types of logic functions. If, on the other hand, the high-level descriptions were provided, the competition will be less about logic synthesis and more about hardware design.

The scores for each set of 100 test-cases will be composed separately. Let us denote them S_1 and S_2 . The final score S for each team of participants will be determined as follows: $S = 4 * S_1 + S_2$, because the first set will be used four times and so improvements on this set are harder to achieve, while the second set is used for the first time.

Submission deadline: June 5, 2025 (AoE)

For details, see the IWLS 2025 webpage: <https://www.iwls.org/iwls2025/>