

**20th IEEE International Workshop on
Automatic Performance Tuning (iWAPT 2025)**

June 3, 2025
Politecnico di Milano, Milan, Italy

iWAPT (International Workshop on Automatic Performance Tuning) is a series of workshops that focus on research and techniques related to performance sustainability issues. The series provides an opportunity for researchers and users of automatic performance tuning (AT) technologies to exchange ideas and experiences acquired when applying such technologies to improve the performance of algorithms, libraries, and applications; in particular, on cutting-edge computing platforms. Topics of interest include performance modeling; adaptive algorithms; autotuned numerical algorithms; libraries and scientific applications; empirical compilation; automated code generation; frameworks and theories of AT and software optimization; autonomic computing; and context-aware computing.

iWAPT2025 is the twentieth in a series of successful workshops devoted to AT. The series started in Tokyo in 2006. Since then, it has been held every year: six times in Japan, five times in the USA, once in Singapore, India, Spain, Canada, and Brazil, and thrice virtually (2020, 2021, and 2022). In particular, iWAPT has been hosted with IPDPS since 2015.

The workshop is particularly interested in autotuning and its relationship to the following topic areas, among others:

- Use of Generative AI for autotuning
- Autotuning for or with non von-Neumann (Quantum, Neuromorphic, ...) architectures
- Machine-adaptive algorithms
- Automatic program generation
- Performance analysis and modeling
- Adaptive numerical algorithms and libraries
- Multi- and manycore systems, heterogeneous architectures challenges
- Compilation strategies (e.g. iterative and empirical compilers)
- Programming models
- Runtime systems
- Empirical search heuristics
- Power- and/or energy-aware computing
- Hyper-parameter tuning for machine learning

This year's program will feature invited talks by Mohammad Alaul Haque Monil from Oak Ridge National Laboratory, Sarah Neuwirth from Johannes Gutenberg University Mainz, Victor

Parque from Hiroshima University, and Nicolas Weber from NEC Laboratory Europe. We received three submissions to the workshop. Each submission was reviewed by three program committee members, and we accepted two submissions as full papers. The authors of the accepted papers will also present at the workshop. We thank the paper authors, the program committee members, and the invited speakers for contributing to this year's high-quality technical program.

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