

# ADVCOMP 2025

## Forward

The Nineteenth International Conference on Advanced Engineering Computing and Applications in Sciences (ADVCOMP 2025), held between September 28<sup>th</sup>, 2025, and October 2<sup>nd</sup>, 2025, in Lisbon, Portugal, continued a series of international events meant to bring together researchers from the academia and practitioners from the industry in order to address fundamentals of advanced scientific computing and specific mechanisms and algorithms for particular sciences.

With the advent of high-performance computing environments, virtualization, distributed and parallel computing, as well as the increasing memory, storage and computational power, processing particularly complex scientific applications and voluminous data is more affordable. With the current computing software, hardware and distributed platforms, effective use of advanced computing techniques is more achievable.

The conference provided a forum where researchers were able to present recent research results and new research problems and directions related to them. The conference sought contributions presenting novel research in all aspects of new scientific methods for computing and hybrid methods for computing optimization, as well as advanced algorithms and computational procedures, software and hardware solutions dealing with specific domains of science.

We take here the opportunity to warmly thank all the members of the ADVCOMP 2025 technical program committee, as well as all the reviewers. The creation of such a high-quality conference program would not have been possible without their involvement. We also kindly thank all the authors who dedicated much of their time and effort to contribute to ADVCOMP 2025. We truly believe that, thanks to all these efforts, the final conference program consisted of top-quality contributions. We also thank the members of the ADVCOMP 2025 organizing committee for their help in handling the logistics of this event.

We hope that ADVCOMP 2025 was a successful international forum for the exchange of ideas and results between academia and industry for the promotion of progress related to advanced engineering computing and applications in sciences.

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