

ADVCOMP 2013

Foreword

The Seventh International Conference on Advanced Engineering Computing and Applications in Sciences (ADVCOMP 2013), held between September 29 and October 3, 2013 in Porto, Portugal, continued a series of events that brought 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. 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 included 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.

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.

We take here the opportunity to warmly thank all the members of the ADVCOMP 2013 Technical Program Committee, as well as the numerous reviewers. The creation of such a broad and 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 efforts to contribute to ADVCOMP 2013. We truly believe that, thanks to all these efforts, the final conference program consisted of top quality contributions.

Also, this event could not have been a reality without the support of many individuals, organizations, and sponsors. We are grateful to the members of the ADVCOMP 2013 organizing committee for their help in handling the logistics and for their work to make this professional meeting a success.

We hope that ADVCOMP 2013 was a successful international forum for the exchange of ideas and results between academia and industry and for the promotion of progress in the field of advanced engineering computing and applications.

We are convinced that the participants found the event useful and communications very open. We hope that Porto, Portugal, provided a pleasant environment during the conference and everyone saved some time to enjoy the charm of the city.

ADVCOMP 2013 Chairs:

ADVCOMP Advisory Chairs

Chih-Cheng Hung, Southern Polytechnic State University, USA

Juha Röning, Oulu University, Finland

Sigeru Omatu, Osaka Institute of Technology, Japan

Erich Schweighofer, University of Vienna, Austria

ADVCOMP 2013 Research/Industry Chair

Jorge Ejarque Artigas, Barcelona Supercomputing Center (BSC-CNS), Spain
Helmut Reiser, Leibniz Supercomputing Centre (LRZ)-Garching, Germany