

Sixth International Workshop on Advances in High-Performance Computational Earth Sciences: Applications and Frameworks (IHPCES)

http://nkl.cc.u-tokyo.ac.jp/IHPCES2016/

in conjunction with 16th International Conference on Computational Science (ICCS 2016) "Data through the Computational Lens" <u>San Diego, CA, USA, June 6-8, 2016</u>

Full paper submission due: <u>January 31, 2016 (extended)</u> !!

Important Days

- Full papers submission due (≤10-pages)
- Notification of acceptance of papers
- Camera ready papers due

January 5, 2016 January 31, 2016 (extended) January 27, 2016 February 21, 2016 (plan) March 04, 2016

Goal of IHPCES

The IHPCES workshop provides a forum for presentation and discussion of state-of-the-art research in high performance computational earth sciences. The emphasis of the sixth workshop continues to be on advanced numerical algorithms, large-scale simulations, architecture-aware and power-aware applications, computational environments and infrastructure, and data analytics methodologies in geosciences. With the imminent arrival of the exascale era, strong multidisciplinary collaborations between these diverse scientific groups are critical for the successful development of earth sciences HPC applications. The workshop facilitates communication between earth scientists, applied mathematicians, computational and computer scientists and presents a unique opportunity to exchange advanced knowledge, computational methods and science discoveries. Work focusing emerging data and computational technologies that benefit the broader geoscience community is especially welcome. Topics of interest include, but not limited to:

- Large-scale simulations on both homogeneous and heterogeneous supercomputing systems in earth sciences, such as atmospheric science, ocean science, solid earth science, and space & planetary science, as well as multi-physics simulations.
- Advanced modeling and simulations on natural disaster prevention and mitigation.
- Advanced numerical methods such as FEM, FDM, FVM, BEM/BIEM, Mesh-Free method, and Particle method etc.
- Parallel and distributed algorithms and programming strategies focused on issues such as performance, scalability, portability, data locality, power efficiency and reliability.
- Software engineering and code optimizations for parallel systems with multi-core processors, GPU accelerators or Xeon Phi co-processors.
- Algorithms for Big Data analytics and applications for large-scale data processing such as mesh generation, I/O, workflow, visualization and end-to-end approaches.
- Methodologies and tools designed for extreme-scale computing with emphasis on integration, interoperability and hardware-software co-design.

Call for Papers !

Authors are invited to submit manuscripts reporting original, unpublished research and recent developments/theoretical considerations in Computational Earth Sciences and related issues <u>by</u> January 31, 2016. In principle, all accepted papers will be printed in the conference proceedings of ICCS 2016 published by Elsevier Science in the open-access Procedia Computer Science series. The submitted paper must be camera-ready and formatted according to the rules of Procedia Computer Science. Please use this file for a Latex template plus instructions and click here for an MS word template file. Submission implies the willingness of at least one of the authors to register and present the paper. PDF and source versions of your paper must be submitted electronically through the EasyChair submission system (https://www.easychair.org/conferences/?conf=iccs20160). Please days of the submission and formatted according and formatted according and formatted electronically through the EasyChair submission system (https://www.easychair.org/conferences/?conf=iccs20160). Please days of the submission and formatted according and formatted according and formatted servers in the paper formatted servers and present the submission system (https://www.easychair.org/conferences/?conf=iccs20160). Please days for get to specify the workshop name as "(Sixth International Workshop on) Advances in the paper and present the paper formatted servers of the submission accessing the workshop name as "(Sixth International Workshop on) Advances in the paper p



<u>do not forget to specify the workshop name as "(Sixth International Workshop on) Advances in High-Performance</u> <u>Computational Earth Sciences: Applications and Frameworks (IHPCES)" in that submission system.</u>

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