1. Goal of this Workshop

The IHPCES workshop will provide a forum for presentation and discussion on the state-of-the-art research in high-performance computational earth sciences. Emphasis will be on novel advanced high-performance computational algorithms, formulations and simulations, as well as the related issues for computational environments and infrastructure for development of high-performance computational earth sciences. Presentations and audience from the broad geoscience communities are highly welcome. The workshop facilitates communication among diverse scientific groups between geoscientists, applied mathematicians, computational and computer scientists to exchange advanced knowledge, insights and science discoveries. These kinds of interactions are particularly encouraged at the post-petascale and exascale where multidisciplinary collaborations for high-performance computational earth sciences are highly required. Contributions are solicited in (but not restricted to) the following areas:

- Large-scale simulations using modern high-end supercomputers in earth sciences, such as atmospheric science, ocean science, solid earth science, and space & planetary science, as well as multi-physics simulations.
- Advanced modeling/large-scale simulations on natural disaster prevention/mitigation.
- Advanced numerical methods for computational earth sciences, such as FEM, FDM, FVM, BEM/BIEM, Mesh-Free method, Particle method, and etc.
- Numerical algorithms and parallel programming models for computational earth sciences.
- Optimization and reengineering of applications for both conventional multi- and many cores processors, or specified accelerators such as GPU.
- Strategy, implementation and applications of pre/post processing and handling of large-scale data sets for computational earth sciences, such as parallel visualization, parallel mesh generation, I/O, data mining and etc.
- Frameworks and tools for development of codes for computational earth sciences on Peta/Post-Peta/Exa Scale Systems.
2. Program Committee

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References

1. IHPCES 2011 Workshop: http://nkl.cc.u-tokyo.ac.jp/IHPCES2011/