Leadership Computing (Sept./Oct. 2014)

Final submissions due 3 Jan. 2014

Leadership Computing focuses on large-scale, computationally intensive projects that address Grand Challenges in science and engineering. Exploiting the capabilities of the largest and most advanced computing systems, these projects aim at accelerating scientific discoveries and technological innovations in a broad range of science and engineering domains.

The goal of this special issue of CiSE is to explore how Leadership Computing is being effectively used to support real-world science and engineering applications. Topics of interest include (but are not limited to):

- Algorithmic and application formulations
- Programming models and systems
- Runtime systems and middleware
- End-to-end application workflows
- Experiences with real applications

Questions?
Contact the guest editors Michael E. Papka, Argonne National Laboratory and James J. Hack, Oak Ridge National Laboratory: cise5-2014@computer.org.

Scientific Software Days (Nov./Dec. 2014)

Final submissions due 4 Mar. 2014

Scientific software has many distinct features when compared to more typical software projects. The communities are smaller. The algorithms, workflows, and methods are often finely attuned to the community’s particular history. The projects are usually funded as subprojects of targeted scientific research grants. The software is made to run on high-performance distributed clusters, presenting a number of technical challenges not seen by commodity desktop hardware. In practice, code is often written or modified by more junior persons on the team such as graduate students and postdoctoral researchers, who may not have much formal software training. Despite the key importance of the endeavor, there is no traditional career track within the scientific sector that treats software development as a professional peer activity.

Scientific Software Days (SSD) is a small meeting of consumers and producers of scientific software that addresses these broad issues as well as specific projects in the field. Researchers, both academic and industrial, come together for a few days in Austin, Texas to learn about the best practices and new software. The result has been six years of community building and knowledge transfer around scientific codes. Funded by the University of Texas at Austin's Jackson School of Geoscience and Texas Advanced Computing Center, SSD has hosted a wide array of topics (how to use version control and reproducibility in scientific computing; open scientific code initiatives; and the shift from high-performance to data-intensive computing). This unique meeting brings maintainers of high-performance computing resources together with researchers building and using large scientific codes, resulting in an exchange of requirements and ideas between the two communities to advance the discipline.

This special issue of CiSE highlights many topics presented at SSD over the years. We invite participants to present their code in science, such as Hadoop.

Questions?
Contact the guest editors Andy R. Terrel, Michael Tobis, or George K. Thiruvathukal: cise6-2014@computer.org.

Copublished by the IEEE Computer Society and the American Institute of Physics, Computing in Science and Engineering magazine features the latest computational science and engineering research in an accessible format, along with departments covering news and analysis, CSE in education, and emerging technologies.

Authors are asked to submit high-quality original work that has neither appeared in nor is under consideration by other journals. All submissions will be peer-reviewed following standard journal practices. Manuscripts based on previously published conference papers must be extended substantially to include at least 50 percent new material. Manuscripts should be written in the active voice, should be no longer than 6,000 words (counting each standard figure and table as 250 words), and should follow the style and presentation guidelines of CiSE (see www.computer.org/cise/author for details). If you have any questions about submitting your article, contact the peer review coordinator at cise@computer.org.

www.computer.org/cise/author