SC11 Visualization Showcase to Highlight the Beauty of Science

SEATTLE, September 13, 2011--Sometimes big data and big science can be as beautiful as great works of art.

SC11, the international conference on high performance computing, networking storage and analysis, will give conference attendees a chance to experience some of that beauty through the Scientific Visualization Showcase, a new feature at this year's conference.

SC11, the premier conference of its kind, will take place Nov. 12–18 at Seattle's Washington State Convention Center and is expected to bring as many as 11,000 professionals from academia, industry and government to the city.

The Scientific Visualization Showcase will display scientific images and animations created by visualization programmers, animation specialists and graphic artists to help scientists view their data in intuitive, visual and sometimes three-dimensional formats. The imagery, including still images, simulations and models built from scientific data, will be presented on large-format LCD panels set up to resemble a gallery in the hallways outside the convention center's 6th floor exhibit space.

It is the newest addition to a technical program well known for its quality and for addressing the most current and important issues in high performance computing, networking, storage and analysis.

"We want to show the SC audience how beautiful science can be and also highlight the important role that visualization plays in understanding scientific data," said Kelly Gaither, director of visualization at the Texas Advanced Computing Center and chair of the SC11 Visualization Showcase.

"The visualizations offer compelling imagery in and of themselves, but this is not art for art's sake; it's about increasing our understanding of science," Gaither continued. "Our brains rely heavily on visual information and sometimes you can understand a concept much more fully if it's presented visually rather than as raw numbers."

A team of volunteers, many of them scientific visualization specialists themselves, reviewed visualization entries from industry and academia and picked the best ones to showcase at the conference.

The featured visualizations capture a wide range of scientific phenomena. Among them are visualizations that illustrate the properties of magnetic fields, turbulence and blood flow, simulations of an asteroid explosion, models that predict the path of a hurricane and the flow of an oil spill, and a virtual recreation of the H1N1 virus.

"Visualization and high performance computing go hand-in-hand in helping scientists analyze their data and make breakthrough discoveries, as well as communicating the

impact of science to their colleagues and the broader community," said Scott Lathrop, SC11 General Chair and education director for the Blue Waters Project at the National Center for Supercomputing Applications. "The Visualization Showcase provides an excellent forum to actively involve the visualization community in our conference. These images will also become the foundation of an SC image archive that can be used to engage, educate and inspire students, researchers, policy makers and the public."

Jim Costa, SC11 Technical Program co-chair and senior manager at Sandia National Laboratory, said the showcase will not only highlight the intrinsic beauty and excitement of scientific discovery but will make clear the relationship between visualization and high performance and data intensive computing.

"If you spend a few minutes looking at these visualizations, I guarantee it will have you thinking about scientific discovery in a new and more imaginative way," said Costa. "Visualization leads to a better understanding of scientific problems that require high performance computing and it helps us make sense of the huge datasets being generated by the health sciences, environmental sensors, telescopes and other scientific instruments. Data intensive science is our thrust this year, and clearly visualization is a key tool for understanding big datasets."

SC11's world-class technical program will also feature technical papers, panels, posters, workshops, tutorials, birds of a feather sessions, disruptive technology presentations, a doctoral research showcase, student cluster competition, and awards. Another new offering will be state of the practice sessions, a venue for exchanging ideas on best practices for using and improving the critical systems and services in high performance computing, networking, and storage.

Participants can register for SC11 by visiting the conference registration page. Attendees who register by Oct. 17 can save as much as $250 on their technical program registration fees. For a full list of technical program content, see the SC11 interactive schedule.

About SC11

SC11, sponsored by the ACM (Association for Computing Machinery) and the IEEE Computer Society, offers a world-class technical program, a comprehensive Communities Program, and an Exhibit Hall that together showcase the latest advances in high performance computing, networking, storage and analysis that are advancing scientific discovery, research, education and commerce. This premier international conference brings together experts from around the world along with people new to the community to share knowledge and information, to form new partnerships and collaborations, and to empower the attendees to enhance their productivity. For more information on SC11, please visit: http://sc11.supercomputing.org/.

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