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Attendees of SC2002 will be treated to a thought-provoking set of panel discussions on topics from homeland security to innovations in high-end computing to the impact of the Earth Simulator, the world's fastest supercomputer. This year's conference, with the theme "From Terabytes to Insights," will convene Nov. 16-22 at the Baltimore Convention Center.

Some of the best-known experts in the field will lead the discussions on significant questions and major accomplishments in high performance computing, including:

\* High End Information Technology Requirements for Homeland Security.  
Panelists: Chaitan Baru, University of California, San Diego; Cray Henry, Larry Davis, DoD High Performance Computing Modernization Program; Russ Graves, MITRE; Joe Picciano, FEMA; Ted Senator, DARPA Information Awareness Office

Panelists will discuss the role of HPC resources in homeland security, including: managing large, heterogeneous databases; balancing the need for information sharing and security; and molecular dynamics simulations as countermeasures to biological threats.

\* Planning for a Homeland Security Research Agenda  
Panelists: Paul Rosenbloom, University of Southern California Information Sciences Institute; Tom DeFanti, University of Illinois at Chicago; Stephen Squires, Hewlett Packard; Lee Holcomb, U.S. Office of Homeland Security; Art L. Money, consultant; Peter Freeman, National Science Foundation  
Experts will examine the issues involved in developing a long-term research and development agenda for homeland security using ideas from recent workshops, emerging industrial technologies, defense department experiences, and academia.

\* The 40 Tflop/s Earth Simulator System: Its Impact on the Future Development of Supercomputing  
Panelists: David Bader, DOE Office of Biological and Environmental Research; David Kahaner, Asian Technology Information Program, Tokyo; Burton Smith, Cray, Inc.; Hisashi Nakamura, Research Organization for Information Science & Technology, Tokyo.  
This panel will look beyond the initial excitement over the introduction of the Earth Simulator System, the world's fastest computer, to the possible scientific advantages that could be gained from such a huge performance leap and the possible impact of ESS on commodity-based supercomputers.

\* HPCS: Achieving high-end computing productivity  
Panelists: Marty Deneroff, SGI; Mootaz Elnozahy, IBM; Richard Kaufmann, Hewlett Packard; Richard Games, MITRE; Burton Smith, Cray, Inc.; Danny Cohen, Sun Microsystems Inc.

Participants will discuss the High Productivity Computing Systems (HPCS) Program, initiated by DARPA to bring a broad spectrum of innovative technologies and architectures into DoD computing systems.

\*Computational biology and high performance computing

Panelists: Chris Johnson, University of Utah; John Reynders, Celera; David Bader, University of New Mexico; Debra Goldfarb, IDC; Rick Stevens, Argonne National Laboratory/ University of Chicago  
Bioinformatics, genomics, and other biological sciences promise to more than double the size of the high performance computing market. This panel will discuss HPC strategies for solving biological and biomedical problems.

\* Truth and Consequences: The Making of Discovery Channel's "Unfolding Universe"

Panelists: Tom Lucas , Tom Lucas Productions, Inc.; Ed Seidel, Max Planck Institute; Neil Tyson, American Museum of Natural History; Michael Norman, University of California, San Diego; Robert Patterson, NCSA  
The Discovery Channel documentary "Unfolding Universe" includes extensive astronomy, astrophysics, computational science and scientific visualizations. This panel promises a lively discussion/debate on how to best present science to the general public.

\* Are Designer Supercomputers an Endangered Species?

Panelists: Thomas Sterling, Center for Advanced Computing Research, California Institute of Technology; Gita Alaghband, University of Colorado, Denver; Jamshed Mirza, IBM; Tadaski Watanabe, NEC; Candace Culhane, NSA.  
Will the emergence of Components Off-the-Shelf (COTS) clusters and distributed computing projects lead to the end of custom-designed machines? Or will the new Earth Simulator System result in a resurgence of specialized vector machines?

\* Desktop Grids: 10,000-fold Parallelism for the Masses

Panelists: Kim Baldridge, San Diego Supercomputer Center; David Ceperley, University of Illinois at Urbana-Champaign; Andrew Chien, University of California at San Diego; David Dixon, Pacific Northwest National Laboratory; John Reynders, Celera  
Internet distributed computing projects have used hundreds of thousands of processors to solve problems and may represent a breakthrough technology. Panelists will explore how to accelerate the use of distributed desktop grids.

More about panels, including abstracts and a schedule, can be found by going to <http://www.sc-conference.org/sc2002/program> and clicking on "panels." To register for SC2002, see <http://www.sc-conference.org/sc2002/attendees>.

SC2002, the annual high performance networking and computing conference, brings together scientists, engineers, educators, visualization artists, programmers, and business leaders to share ideas and glimpse the future of high performance networking and computing, data analysis and management, visualization, and computational modeling. SC2002 is sponsored by the

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the Association for Computing Machinery's Special Interest Group on  
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