Portland, OR -- From cutting-edge research projects, to the most talked about trends in networking, programming, performance analysis, and computer and network security, the SC99 Tutorials Program offers something for everyone with an interest in high performance computing and networking.

SC99, the annual high performance computing and networking conference, takes place Nov. 13-19 at the Oregon Convention Center. The conference's 12 full-day and eight half-day tutorials will be offered Sunday, Nov. 14, and Monday, Nov. 15.

New tutorial topics this year include a full-day session on computer and network security issues, sessions on Linux and NT superclusters and an overview of file systems. The session on security issues, called "Introduction to Cryptography, Security and Privacy Technologies," will provide an overview on the often-discussed issues of computer security and privacy. Topics covered will include the building blocks of computer security and privacy, cryptographic technologies, and protocols used to construct secure and private services and systems. Charlie Catlett, senior associate director for science and technology at the National Center for Supercomputing Applications (NCSA) will conduct this tutorial.

The hot topic of clustering off-the-shelf workstations into machines with supercomputing performance will be discussed in two tutorials. On Sunday William Saphir and Patrick Boseman of Lawrence Berkley National Laboratory/National Energy Research Scientific Computing Center, Remy Evard of Argonne National Laboratory, and Pete Beckman of Los Alamos National Laboratory, will guide participants through the issues involved in setting up and running a Linux cluster. They will present an overview of cluster architectures, system software, and application-level software, with the goal of pointing out software and architectures that work. On Monday afternoon Rob Pennington, of NCSA, and David Bader and Barney Maccabe, of the University of New Mexico, will talk about the NT and Linux superclusters constructed by the National Computational Science Alliance. The NT supercluster, located at NCSA, runs on Windows NT and uses commercial desktop computers from Hewlett-Packard. The New Mexico supercluster, called Roadrunner, runs on Linux and was integrated by Alta Technology. The tutorial will provide details on the construction, configuration and management of these systems as well as details on porting applications to the superclusters.

Another full-day tutorial, called "From Physics to File Systems," will be presented by Rodney Van Meter and Paul Massiglia of Quantum Corp. on Sunday. This tutorial will start with an overview of storage and I/O systems, including buses, networks, disks, and tapes, and will conclude with the latest information on hierarchical storage management systems and distributed file systems. The tutorial will be organized around three

themes: data movement, data storage and distributed file systems.

Several popular tutorials will be back this year with updated information. An introduction to high-performance data mining will be presented by Robert Grossman, of the University of Illinois at Chicago, and Vipin Kumar, of the University of Minnesota. Several tutorials on performance analysis will be offered, as will sessions on visualization of large datasets and the Globus Grid Programming Toolkit. Globus is a software infrastructure for scientific problem solving over computational grids. The Globus Grid Programming Toolkit is designed to help application developers and tool builders overcome the obstacles of remote computing and distributed supercomputing to construct "Grid Enabled" scientific and engineering applications. The tutorial will be presented by Steven Fitzgerald and Carl Kesselman of the University of Southern California's Information Sciences Institute, and Ian Foster, Gregor von Laszewski and Steve Tuecke of Argonne.

"The SC tutorials are always one of the prime events of the conference," said Paul Shahady, chair of the SC99 Tutorials Committee. "This year, the tutorials will offer an incredible range of topics and a huge amount of information that participants can take back with them and use in their own work."

Separate registration is required for tutorials. A one or two-day Tutorial Passport gives attendees the flexibility to attend several tutorials. More information on SC99 tutorials, including a schedule, is available at http://www.SC99.org/

****