

Calendar/Meetings

JUNE

12-16, [11th Annual Meeting of the Organization for Human Brain Mapping](#), Toronto, Canada

16-17, [Globus Toolkit 4 Tutorial](#), University of Illinois, Urbana, Illinois

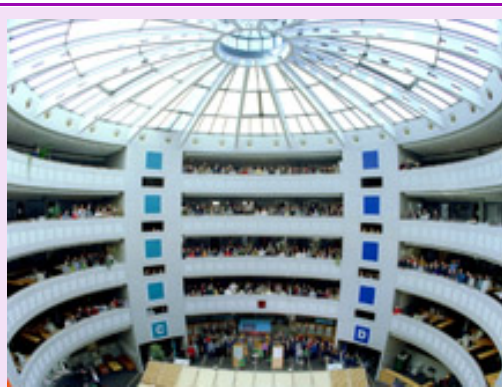
20-23, [GCA'05 - The 2005 International Conference on Grid Computing and Applications](#), Las Vegas, Nevada

22-24, [20th International Supercomputer Conference](#), Heidelberg, Germany

22-24, [First International Conference on e-Social Science](#), Manchester, UK

[Full Calendar](#)

Image of the Week



The ATLAS Collaboration. (Click on image for larger version.)

Courtesy CERN

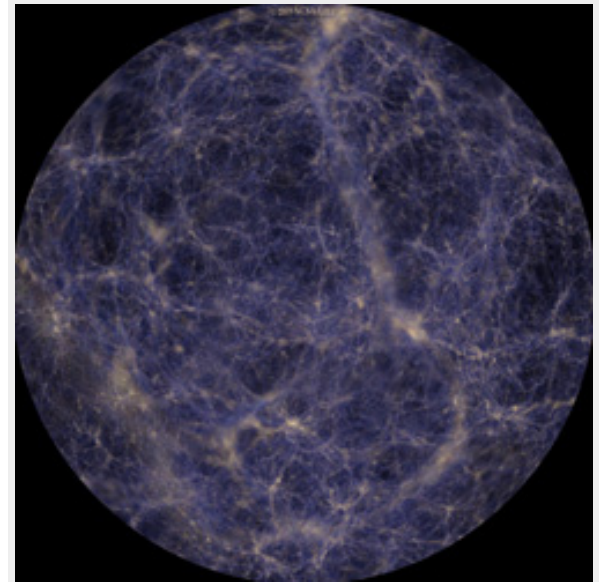
ATLAS is a particle physics experiment that will explore the fundamental nature of matter and the basic forces that shape our universe at the Large Hadron Collider, currently being built in Geneva, Switzerland. The ATLAS collaboration includes 1800 physicists

Feature Story

TeraGrid Resources Simulate 14 Billion Years of Universal Evolution

The highest-resolution simulation of the evolution of matter in the universe ever performed was completed recently using grid computing resources. The simulation followed how matter, dark matter and gases evolved in the universe from right after the Big Bang until the present day. A visualization of the simulation was submitted to the DomeFest 2005 competition, and has been accepted as part of the traveling planetarium show and as part of a subset of entries to be shown at SIGGRAPH 2005.

"We wanted to do an extremely high-resolution calculation of the universe for DomeFest and other planetarium and museum shows," said Brian O'Shea, a graduate student from the University of Illinois at Urbana-Champaign, currently working at Los Alamos National Laboratory. "We simulated how a cube of the universe 250 million light-years on each side developed over 14 billion years, taking a snapshot of the universe every seven million years."



This volume rendered image shows galaxies forming on filamentary structures about seven billion years after the Big Bang.

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New International Partnership for Advanced Computing, Education



Venezuelan visitors visited Austin, Texas, in April to work with TACC's staff. *Courtesy TACC*

Advanced computing centers in Texas,

First Industrial Application Runs on EGEE Project Infrastructure

The seismic processing software Geocluster is the first industrial application successfully running on the computing Grid infrastructure of the Enabling Grids for E-science (EGEE) project. Geocluster is developed and marketed by the Compagnie Générale de Géophysique (CGG) in France, a leading supplier of geophysical products and services to the worldwide oil, gas, mining and environmental industries.

from more than 150 universities and laboratories in 34 countries, and the scientists will be connected to each other and to the physics data through grid computing.

[Link of the Week](#)

Grid Computing Course

Curious about what might be taught in a grid computing course? This collaborative undergraduate grid computing course was broadcast to several North Carolina schools in Fall 2004. Follow the link to view lectures, assignments and reading lists.

[Grids in the News](#)

GÉANT2 Marks a Giant Step Forward for European Research Activity

DANTE Press Release, June 14, 2005

Luxembourg, 14 June 2005 - DANTE has announced that over 3 million researchers across 34 different countries will be better united than ever before in their research efforts following today's launch of the world's first international hybrid research network in Luxembourg.

[Read more...](#)

SDSC Group Supports International GLORIAD Network

SDSC Press Release, June 13, 2005

As the Information Age connects the world, researchers endeavor to understand and improve the performance of the networks that bridge continents, countries, and cultures.

[Read more...](#)

Edinburgh Offering Postgraduate Degree in e-Science

GRIDtoday, June 13, 2005

The University of Edinburgh is offering the world's first postgraduate degree program in e-Science.

[Read more...](#)

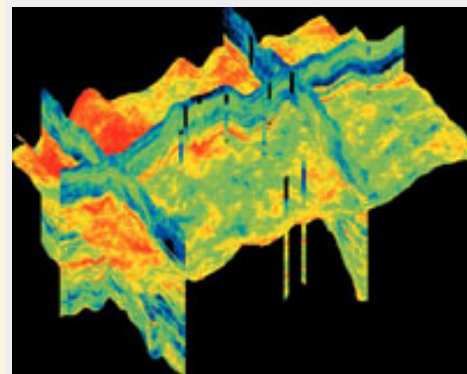
Venezuela and Mexico have formed a new partnership to address some of the world's most challenging problems in computing and science research. Grid computing technologies and their applications to biomedicine and geosciences will be some of the first areas addressed by the International Partners in Advanced Computing program, led by the Texas Advanced Computing Center at The University of Texas at Austin.

The initial participants in IPAC are TACC; Centro Nacional de Cálculo Científico, Universidad de Los Andes (CeCalCULA) in Mérida, Venezuela; and Instituto Potosino de Investigación Científica y Tecnológica (IPICYT) in San Luis Potosí, Mexico.

"Through the IPAC program, the partners will conduct research and development and share information and expertise that advance computational science capabilities, especially in cluster and grid computing," said Jay Boisseau, TACC director. "Education will also be a large part of IPAC as advanced computing technologies require significant training, and workshops are an excellent way to bring experts and students together."

Initiated by TACC, the IPAC program was created to ensure the exchange of information and knowledge across international boundaries and geographic regions. While the first partners are from Venezuela and Mexico, members from other regions will be welcomed in the coming months. Each new participant will adopt the IPAC charter to collaborate on academic and research opportunities, exchange academic materials and information, hold joint seminars and conferences, and provide increased access to advanced computing resources.

[Read more...](#)



The Geocluster software, which runs on the EGEE Grid infrastructure, produces 3D visualizations of the rock properties of the area under study. *Courtesy CERN Courier*

The Geocluster software, which includes several tools for signal processing, simulation and inversion, enables researchers to process seismic data and to explore the composition of the Earth's layers. In addition to Geocluster, which is used only for R&D, CGG develops, markets and supports a broad range of geoscience software systems covering seismic data acquisition and processing, as well as geoscience interpretation and data management.

The EGEE project is developing a Grid infrastructure to provide researchers in both academia and industry with access to major computing resources, independent of their location, 24 hours a day. To date, there are six different scientific disciplines running on the EGEE Grid infrastructure.

Dominique Thomas, CGG software development manager, pointed out: "There are numerous benefits in operating on the EGEE infrastructure, not least the fact that you can share IT resources and software. It frees the researcher from the additional burden of managing IT hardware and software complexity and limitations. Thanks to EGEE, providing the geosciences research community with easy access to comprehensive and commercial seismic processing software is now a reality."

This article, compiled by Hannelore Hemmerle and Nicole Cremel, originally appeared in the June 2005 issue of the [CERN Courier](#).

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