

Calendar/Meetings

June

6-9, [European Grid Conference 2006](#), Brussels, Belgium

12-15, [TeraGrid '06: Advancing Scientific Discovery](#), Indianapolis, Indiana

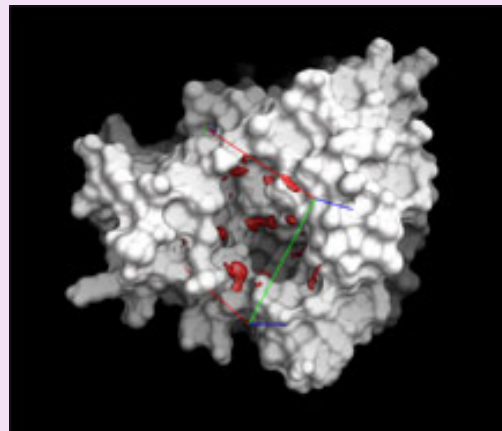
19-23, [HPDC15: The 15th IEEE International Symposium on High Performance Distributed Computing](#), Paris, France

19-23, [Workshop on Workflows in Support of Large-Scale Science](#), Paris, France

21-23, [2006 NEES Annual Meeting: Broadening Participation Throughout NEES](#), Washington, D.C.

[Full Calendar](#)

Image of the Week



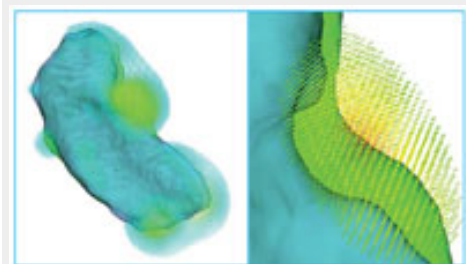
The binding pocket of neuraminidase. (Click on image for larger version.)

Image Courtesy Ying-Ta Wu, Academia Sinica

This image shows the molecular surface of neuraminidase, one of the

Feature Story

Biomedical Research Feels the BIRN



Shape analysis in Alzheimer's disease from the Morphometry BIRN test bed. *Image Courtesy of The John Hopkins University, Center for Imaging Science*

The Biomedical Informatics Research Network is pioneering the use of advanced cyberinfrastructure for biomedical research, starting with the mysteries of the human and animal brain.

The BIRN's main goal is to get biomedical scientists collaborating like never before. Starting with four projects, or test beds, the BIRN is discovering which information technologies are wanted and needed by—and useful for—the biomedical community. The technologies help researchers share ideas, software and data; access high-performance computing resources; and deal with the explosion of data from new research techniques.

"The amount of data we acquire in biomedical research now is huge and dollars are extremely tight," says Mark Ellisman, director of the BIRN Coordinating Center. "The BIRN is a way of distributing and reducing the costs by using advanced technology to make data and resource sharing easier."

BIRN, a National Institutes of Health-funded initiative, already impacts the study of cognitive impairment associated with aging. Researchers use the infrastructure to analyze MRI images of human brains, looking for changes in the size and shape of

Grid Computing on the Rise in Latin America



Workshop attendees flash the University of Texas at Austin "Hook 'Em Horns" sign after a presentation by TACC director Jay Boisseau. *Image Credit TACC*

The National Center for Scientific Calculations (CeCalCULA) in Venezuela recently hosted the Second Annual Latin American Grid Workshop with participants from countries including Brazil, Italy, Spain, France, Venezuela and the United States. CeCalCULA is the first Venezuelan supercomputing center and has been organizing technology workshops like this one for the past 10 years.

Latin America is eager to embrace grid computing technologies to make the most of their computational resources. Grid computing offers increasing capabilities through resource sharing and access to knowledge and expertise through collaboration on the grid. Many Latin American countries realize that progress does not come by trying to build big high-performance computing machines that rival those of the Department of Energy, but rather by adopting grid computing technologies to enhance their ability to access what resources they do have, to aggregate them, and to collaborate in terms of sharing and using them.

[Full article](#)

two major surface proteins of influenza viruses. Neuraminidase helps the influenza virus proliferate and infect more cells, making it a great target for antiviral drug development. In April, a collaboration of Asian and European laboratories analysed 300,000 possible drug components against the avian flu virus H5N1 using the EGEE grid infrastructure, with the goal of finding potential compounds that inhibit the activities of neuraminidase.

[Read more...](#)

Link of the Week

Computing the Future

In this lecture on the future of computing, Dan Reed, the director of the Renaissance Computing Institute, speculates on what the next ten years of technological advances may bring. Reed's May 30 presentation at the University of North Carolina at Chapel Hill covered subjects from personalized medical care and privacy concerns to terabyte networks and the global economy.

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 Office of Science/
U.S. DOE

certain parts of the brain that might signal the onset of Alzheimer's disease. This requires making MRI images collected from different institutions comparable, a great technical challenge.

"If you went out and gave everybody digital cameras from different manufacturers and had them all shoot close-ups of the same thing, each picture would be a little different," explains Ellisman. "In order to do a large, geographically distributed population study using instruments like MRI, you need software tools that allow you to massage all the data to get them aligned in a similar way. Once they're aligned, other tools can be used to extract from these complicated 3D scenes the object you want to compare."

[Full article](#)

Grids in the News

CERN seeks to tighten security for data grid

Computing, June 1, 2006
By Lara Williams

CERN, the world's largest particle physics laboratory and birthplace of the web, is starting a two-year project to improve security for its worldwide data grid.

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Cost and complexity fears hold back grid computing

Silicon.com, May 31, 2006
By Andy McCue

Fewer than one in 10 businesses is planning to adopt grid computing because of concerns about cost, complexity and security, according to a survey of IT managers.

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RENCI Science Gateway Team Unveils TeraGrid Bioportal

Renaissance Computing Institute
Press Release, May 24, 2006

A web-based work environment developed at the Renaissance Computing Institute (RENCI) will give users of the National Science Foundation's TeraGrid easy access to a wide range of bioinformatics and biomedical applications and databases and will allow the national biology research community to access computing, data, and other resources offered through the TeraGrid.

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