

Calendar/Meetings

May

3-6, [GPC 2006: International Conference on Grid and Pervasive Computing](#), Tunghai University, Taiwan

4-5, [Second DEISA Symposium](#), Bologna, Italy

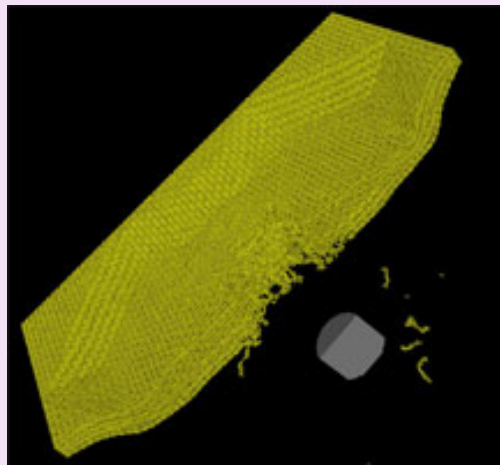
8-10, [NSDI '06: 3rd Symposium on Networked Systems Design & Implementation](#), San Jose, California

10-12, [GGF17: The 17th Global Grid Forum](#), Tokyo, Japan

10-12, [Geoinformatics 2006](#), Reston, VA

[Full Calendar](#)

Image of the Week



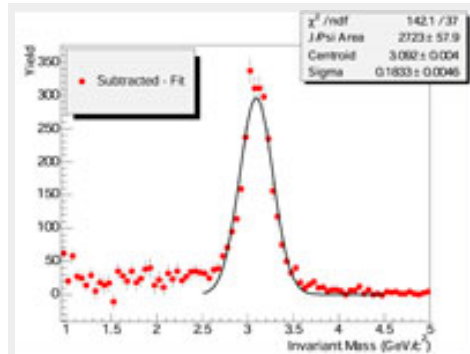
Hypervelocity impact on high-strength fabric. (Click on image for larger version.)

Image Courtesy Texas Advanced Computing Center

Eric Fahrenthold and graduate student Robert Rabb in the Department of Mechanical

Feature Story

PHENIX Data Fly With GridFTP



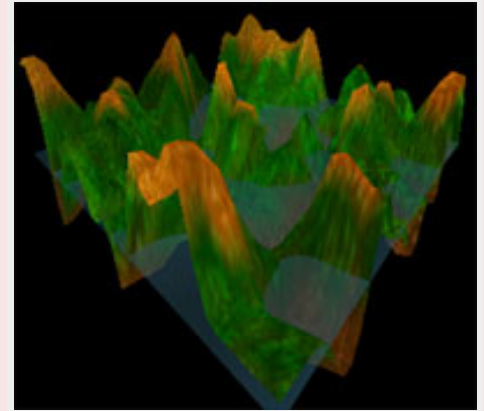
Mass spectrum of $\mu + \mu -$ pairs in the PHENIX detector showing clear evidence of the J/Ψ resonance. *Image Courtesy PHENIX Collaboration.*

The hunt for the quark-gluon plasma, a state of matter that may have existed in the very early universe, is getting a little help from a common grid tool. During the current run of the Relativistic Heavy Ion Collider at Brookhaven National Laboratory, the PHENIX nuclear physics experiment is using GridFTP to transfer data automatically between BNL and Vanderbilt University.

Physicists study the quark-gluon plasma and other nuclear physics phenomena by examining what happens when beams of nuclei collide in the center of the massive PHENIX detector. While identifying new states of matter requires a detailed analysis of years' worth of data, a partial analysis of each day's data gives experimenters insight into the health of the detector and of the beams, ensuring that they collect high-quality data. With PHENIX's computing resources at BNL busy analyzing previously collected data, such partial analyses must take place remotely.

"We've come to rely on these daily remote analyses for real-time data monitoring and quality assurance, and for the jump-start it gives us on our physics analysis," explains PHENIX spokesperson Bill Zajc. "Looking at the partial data sets sharpens our analysis tools, so that

HawkGrid Takes Off



Two-dimensional interpolation image created with the HawkGrid. *Image Courtesy Shaowen Wang.*

When scientists from The University of Iowa need extra computing power to complete an air quality simulation or test a new medical imaging algorithm, they turn to the HawkGrid. Applications from eight departments and three multi-disciplinary research centers run on this three-year-old campus grid, which contains up to 1,000 CPUs dynamically contributed by three schools and the Information Technology Services within the University.

The HawkGrid is the brainchild of Shaowen Wang, a UI research scientist. Wang was a graduate student in computer science and geography when he started learning about grid computing. In 2002, he became a staff member tasked with spearheading grid technologies on the UI campus.

"At that time there were very strong research groups all over campus that were working relatively independently," says Wang. "We found we needed to work together to increase our resources. Now anyone can bring an application to the HawkGrid, they don't need to bring resources. Applications from the physics and astronomy, geography, radiology, statistics and engineering departments now run on the HawkGrid."

Engineering at the University of Texas at Austin developed this image using the Texas Advanced Computing Center's ACES Visualization Laboratory. The image illustrates how high-strength fabrics are used in a variety of applications to protect structures and personnel from the effects of hypervelocity impact.

[Learn more...](#)

Link of the Week

IBM developerWorks: Grid Computing


This site contains a collection of articles, tutorials and code, and a forum for developers to discuss their experiences, frustrations and successes with grid computing. The latest crop of articles and tutorials discusses Condor Web services, managing the TeraGrid and building a unified grid.

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 Office of Science/
U.S. DOE

they are ready to be used on the full data set as soon as it is available."

[Full article](#)

Recommended Reading for Aspiring Grid Programmers



When middleware developers write about grid, they typically describe it in very implementation-centric terms, focusing on very low-level details. When visionaries write about grid, they tend to focus on lofty concepts and future directions. So often lost in the shuffle are the novice application developers that simply want to cut their teeth and start building systems.

With the release of "Globus Toolkit 4, Programming Java Services," developers now have access to the first ever, truly developer-friendly printed guide to GT4. As Ian Foster and Carl Kesselman say in the book's foreword, "The aspiring grid programmer need be frustrated no longer. Borja Sotomayor and Lisa Childers have produced, in 'Globus Toolkit 4: Programming Java Services,' a masterly tutorial text that is surely destined to find a place beside every grid programmer's keyboard."

[Full article](#)

This article originally appeared in the May issue of the Globus Consortium Journal.

[Full article](#)

Grids in the News

NSF Middleware Initiative Release 9 Available

NMI Press Release, May 3, 2006

Providing new event diagnostic, privilege management, and portal-building tools, the ninth release of the National Science Foundation Middleware Initiative (NMI-R9) makes further progress in addressing the challenge of collaborating online in a shared cyberinfrastructure environment.

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Debate praises UK E-Science Programme as grid computing speeds up research

ComputerWeekly, May 2, 2006
By Helen Boddy

The UK's E-Science Programme has been hailed a success by leading researchers at a BCS Thought Leadership Debate.

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Latin American Research Goes Global With RedCLARA Network

ALICE Press Release, April 28, 2006

With new network links in place, the Latin American research community now has an unparalleled ability to access and contribute to global research projects.

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Wear your heart on the screen

The Guardian, April 27, 2006
William Knight

Using grid computing, scientists have developed models of the body's most vital organ to devise better treatment methods.

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