# NCCS

## NATIONAL CENTER FOR COMPUTATIONAL SCIENCES

## SNAPSHOT

### The Week of March 9th, 2009

# Zacharia Takes Science and Technology Posts

Nichols named interim associate laboratory director for computing at ORNL

- Thomas Zacharia, ORNL's associate director for computing and computational sciences, has been named ORNL deputy laboratory director for science and technology (S&T) and UT-Battelle senior vice president for S&T

- As deputy lab director, Zacharia will oversee one of the nation's largest R&D programs, with annual expenditures in excess of $1.3 billion

- Zacharia's appointment is part of a strategic reorganization of resources to make the most of an historic investment by the President and Congress

- ORNL's Jeff Nichols will take over as interim associate laboratory director for computing and computational sciences while a search is conducted for Zacharia's replacement



Thomas Zacharia (pictured above), new ORNL deputy laboratory director for science and technology and UT-Battelle senior vice president for science and technology. Jeff Nichols (pictured at right), was named interim associate laboratory director for computing and computational sciences at ORNL.

# Modeling the weather's extreme mood swings

## Climate scientists look to the past to prepare for the future

- **Researchers at the ORNL's Leadership Computing Facility are using the world's fastest supercomputer for open scientific research to recreate the last century's global climate and examine some of its extremes.**

- **By understanding the past, scientists may be able to more accurately predict future extreme weather under climate change.**

- **The project's "weather maps" discern details of the Earth's surface as close as 100 kilometers apart. Compo and his team plan to zoom in on hurricanes, severe storms, and floods.**



Scientists are using the resources of the NCCS to better understand extreme weather patterns.
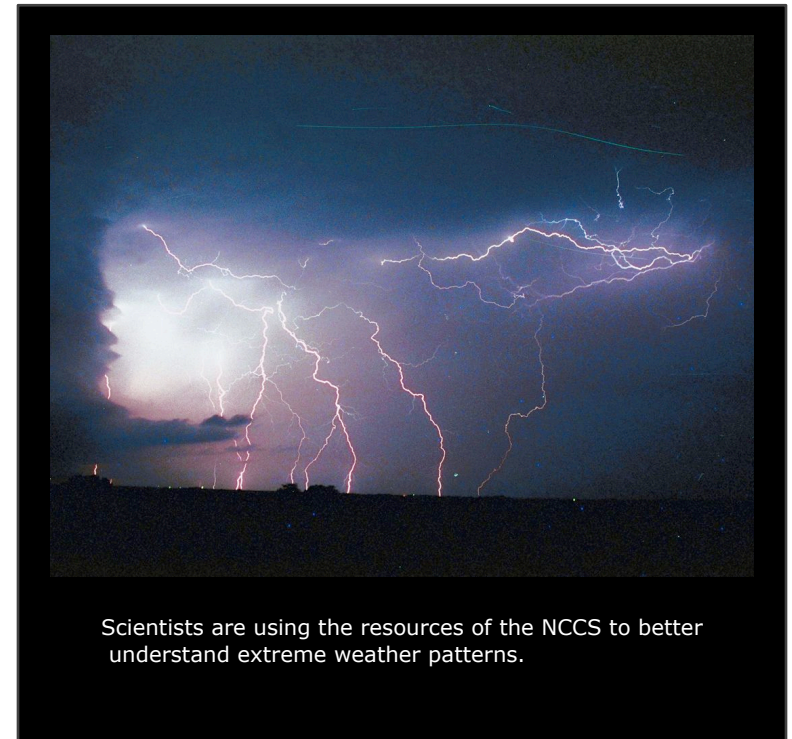
**"To generate the 1850 to 2011 dataset, we expect to need 60 million [processing] hours. Without the supercomputer we couldn't do [the SIRCA study] at all." – Principal investigator Gilbert Compo**

# University profs, students win access to computing resources, staff at NCCS

## First ever winners of ORAU/ORNL research competition

- Four university professors and their students received $25,000 awards in February—winners in the first-ever computational research competition established by ORAU and ORNL.

- Proposals were chosen for their scientific importance and for their alignment with the laboratory's cross-cutting science agenda and various research-related criteria.

- The grants, which are open to ORAU member universities, give faculty and student teams unique access to NCCS's computing resources and staff.



ORAU and ORNL have announced winners in the first-ever High Performance Computing Grants competition. Pictured L to R, front row are grant winners Oleg Zikanov from the University of Michigan, Dearborn; Jesse Ziebarth and Yongmei Wang from the University of Memphis; Shaikh Ahmed from Southern Illinois University, Carbondale; and Ming Ye from Florida State University. Pictured L to R, back row are ORAU Board Chair Win Phillips, Interim ORAU President Homer Fisher, ORAU Council Chair Sandra Degen and Deputy Associate ORNL Lab Director for Computing and Computational Sciences Jeff Nichols.

"These grant recipients are among the first researchers in the world to have access to petascale supercomputing capabilities. We look forward to the scientific discoveries that will emerge from the work that they and others do at ORNL." – ORNL Director Thom Mason

# NCCS science seminars tackle research needing petascale power

## Scientists share simulation tips with research community

- The NCCS has resumed its monthly seminar series, featuring speakers in the sciences which can benefit from simulating research problems on the XT4/XT5 Jaguar supercomputer.

- Guest speakers are typically researchers in the computational sciences fields from outside the NCCS, who collaborate with NCCS staff and may use its Leadership Computing Facility

- Questions and suggested speakers for the seminar series may be directed to Ricky Kendall (kendallra@ornl.gov). The developing series is posted at http://www.nccs.gov/user-support/training-education/nccs-seminar-series/



Researchers gather for one of the recent seminars sponsored by ORNL's NCCS.

# Students engage in science research online

Oak Ridge National Lab connects K-12 students
with breakthrough science research

- SciEdTech, a new outreach and science website sponsored by the NCCS, NICS, and ORAU, aims to bring tomorrow's science to today's kindergarten through 12th-grade students.

- Visualizations of data from simulations done on ORNL supercomputers will be designed for the website to teach basic science to students and introduce them to projects taking place at ORNL.

- Students and teachers will be able to ask questions, post comments, and access other online resources to enhance classroom learning.

- The website can be found at http://sciedtech.org.

**"K-12 is an underrepresented portion of the education pipeline for ORNL."**
**- Ross Toedte of the NCCS's visualization task group**