

## NSF Highlight: CREST Cyber-ShARE Center of Excellence Jul. 1, 2009

The NSF CREST program supports a unique Center at the University of Texas, El Paso that has established the University as the major focal point for access to high-performance, computational resources available throughout eleven TeraGrid organizations. [See TeraGrid map below].

The NSF CREST Program (Centers of Research Excellence in Science and Technology) supports the Cyber-ShARE project at the University of Texas at El Paso. Cyber-ShARE (a Center for the Sharing of Cyber Resources to Advance Science and Education) is under the leadership of Dr. Ann Quiroz Gates. Her project seeks to strengthen the research and education infrastructure at the University of Texas, El Paso (UTEP) and, importantly, respond to the need to accelerate the number of scientists and engineers at UTEP who have the education and training to use TeraGrid high performance computing and visualization resources for interdisciplinary projects. Cyber-ShARE's partnership with TeraGrid also provides the training and resources to faculty and students that can assist them in their research.

In Fall 2008, UTEP enrolled 20,458 students; more than 75% of UTEP's students are Hispanic and approximately 56% of UTEP's students are women. Over the next three years, the CREST Cyber-ShARE project is expected to directly impact the research activities and education of approximately 200 UTEP students from underrepresented groups who will subsequently enter the workforce with knowledge and advanced skills in the use of cyberinfrastructure. The Center (through outreach to middle and high school students in the El Paso area, faculty workshops, and special coursework across important STEM fields such as geology, environment, and computer science and computational science) expects to impact the education and research opportunities for more than 1,000 students over the next three years.

The TeraGrid project has the most powerful distributed cyberinfrastructure for open scientific research in the world. Cyber-ShARE is facilitating creation of start-up accounts, use of resource time allocations, and access to expert knowledge in application porting to HPC resources, performance tuning, and scientific visualization.

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