

On Monday, June 24, 2009, Jernettie Burney, Je'aime Powell, and myself left Elizabeth City State University's campus to attend the fourth annual TeraGrid Conference. The 2009 conference was held in downtown Arlington, Virginia at the Hyatt hotel. The conference lasted a total of five days and brought together students—from high school on up to graduate school—and professionals from different regions. TeraGrid '09 showcased the “capabilities, achievements, and impact of the TeraGrid in research and education” and provided attendees with “hands-on training to enable users of TeraGrid resources to achieve maximum impact.”

This was the first year TeraGrid was able to include a program devoted to students. The student program was added to the conference this year in hopes of exciting students about the potential of computational science and to prepare them to take full advantage of the national cyber infrastructure. This addition was made possible due to additional funding provided by the National Science Foundation (NSF). The funding from NSF allowed the student program to introduce students to TeraGrid and what it stands for, along with some of the resources it provides to the computational science and engineering fields.

Student Day was held on the first day of the conference and was a great help to Jernettie and myself, whom were not very familiar with TeraGrid. After attending the seminars and sessions, I felt more comfortable about TeraGrid. Yan Liu of the National Center for Supercomputing Applications held an interactive tutorial session held for the students, in a presentation titled, “GISolve: Science Gateway for GIS.” The tutorial used infectious disease modeling to illustrate the process of conducting computationally intensive spatial interpolation analysis on TeraGrid. Liu had us use the online Geographic Information Science Gateway Toolkit, or GISolve to map diseases in the United States. Liu's session provided me with the chance to not only see how TeraGrid is used but also to actually use the resource myself.

For the next three days, the conference was broken down into tracks. Attendees could choose between three different science tracks—the varied based on educational level, a technology track, an educational track, and a special presentation track. Each day Jernettie, Je'aime, and myself sat down to pick different tracks to follow and at the end of the day, we would come back together to exchange the information we learned.

Each day I chose a different track to get a feel of how education was used in different areas of research. One common area I noticed TeraGrid is noticed was in the simulation of earthquakes; one science track was devoted to earthquake simulation.

The conference showcased how younger students are being educated about TeraGrid. There are many educators who are starting to introduce TeraGrid into the high schools. Robin Flaus and Philip Blood gave a presentation titled, “Computation Exploration: An Introduction to High-Performance Computing.” In the session they discussed a programming course they created based on “cloud camp” computing—a style of computing in which dynamically scalable and often virtualized resources are provided

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as a service over the Internet (ex. G-mail account). The objective of the course was to teach high school students parallel programming techniques and present them with other examples of high performance computing in their lives. Flaus and Blood ran the course from February 2009 until April 2009. There were nine students—with little to none programming experience—enrolled in the course from February to April 2009. The program received mixed feedback from students and teachers—with most, enjoying the course.

Overall, I enjoyed learning about TeraGrid and how its resources are used in various fields. Next year, TeraGrid will hold its' last conference in Philadelphia, Pennsylvania and I strongly encourage you to attend.