

Research Alliance in Math and Science

<http://www.csm.ornl.gov/Internships/RAMS.html>

Al Geist, Computer Science and Mathematics Division
Debbie McCoy, Computing and Computational Sciences Directorate
Oak Ridge National Laboratory

Summary

Outreach through the Research Alliance in Math and Science (RAMS) program continues to identify students and faculty members in science, mathematics, engineering, and technology disciplines for summer internships and collaborative research in support of the long-term goal of increasing the number of underrepresented minorities with advanced degrees in the workforce. Developing and expanding research and educational relationships with historically black colleges and universities and other minority educational institutions is carried out through the Computing and Computational Sciences Directorate at the Oak Ridge National Laboratory.

Students from 13 colleges and universities participated in the 2006 Research Alliance in Math and Science (RAMS) program which began on May 30 at the Oak Ridge National Laboratory (ORNL). The students from predominantly minority-serving institutions experienced 11 weeks of hands-on research with ORNL's world-class staff as their mentors.

Schools represented in the 2006 class include Alabama A&M University, Dillard University, Fisk University, Florida A&M University, Jackson State University, Knoxville College, North Carolina Central University, Savannah College, Savannah State University, The University of Tennessee at Knoxville, Virginia Tech, Winston-Salem State University, and Wofford College.

Research topics ranged from computational biology to computational materials science to sensor networks to high-end visualization of scientific research and population studies. See http://www.csm.ornl.gov/Internships/rams_06/abstracts.html for individual project abstracts.

Developing and presenting a poster on the summer's research project is one requirement of the RAMS program. Individual student posters can be viewed at http://www.csm.ornl.gov/Internships/rams_06/posters.html.



Christopher Fuller explains his research into quantification and visualization of the human impacts of anticipated extreme events from maps of geo-referenced indices developed during the project. Christopher was part of the ORNL LandScan project team.

* (865) 574-6185, mccoydd@ornl.gov

The 2006 participants included Jana Black, The University of Tennessee, Knoxville (UTK); Nicholas Brabson, UTK; Jarrett Collins, Dillard University; Nekkion Crowder, Fisk University; Paul Donnelly, UTK; James Fletcher, Alabama A&M University (AAMU); Christopher Fuller, Winston-Salem State University (WSSU); Ryan Hurd, Savannah College of Art and Design; Yasmin Jackson, AAMU; Quentoria Leeks, Fisk University; Erin Lennartz, Virginia Tech; Lionel Lovett, Jackson State University; Jessica McGarity and Elizabeth O'Quinn, Wofford College; Jonathan Rann, WSSU; Angela Reedy, AAMU; Jason Roop, North Carolina Central University, Kathryn Walker, Knoxville College; Jessica Williams, Savannah State University; Shana Woods, AAMU; and Albert Wynn, Florida A&M University.



Students experienced the mystery and enlightenment surrounding the High Flux Isotope Reactor at ORNL. Dr. Trent Primm explained the use of the reactor in supplying isotopes for medical and other purposes and gave the students a demonstration of the exacting safety precautions routinely employed at the site.

Student posters were also displayed for parents and faculty members in attendance at the banquet held on August 10. The 2006 interns had the distinct opportunity to hear Dr. Richard Tapia from Rice University share his experiences as a minority during the keynote address at the banquet.



Students pause in front of the entrance sign at the Spallation Neutron Source.



Dr. Richard Tapia, Rice University, gave an inspiring keynote address at the banquet. Dr. Tapia is the founder of the Richard Tapia Diversity in Computing Conference.



Angela Reedy, a student in computational biology, feels the ceramic replacement joint as Elizabeth O'Quinn, another student majoring in computational biology, looks on during the tour of the ORNL High Temperature Materials Laboratory.

For further information on this subject contact:
 Mr. George Seweryniak, Program Manager
 Mathematical, Information, and Computational
 Sciences Division
 Office of Advanced Scientific Computing
 Research
 Phone: 301-903-0071
 seweryni@er.doe.gov