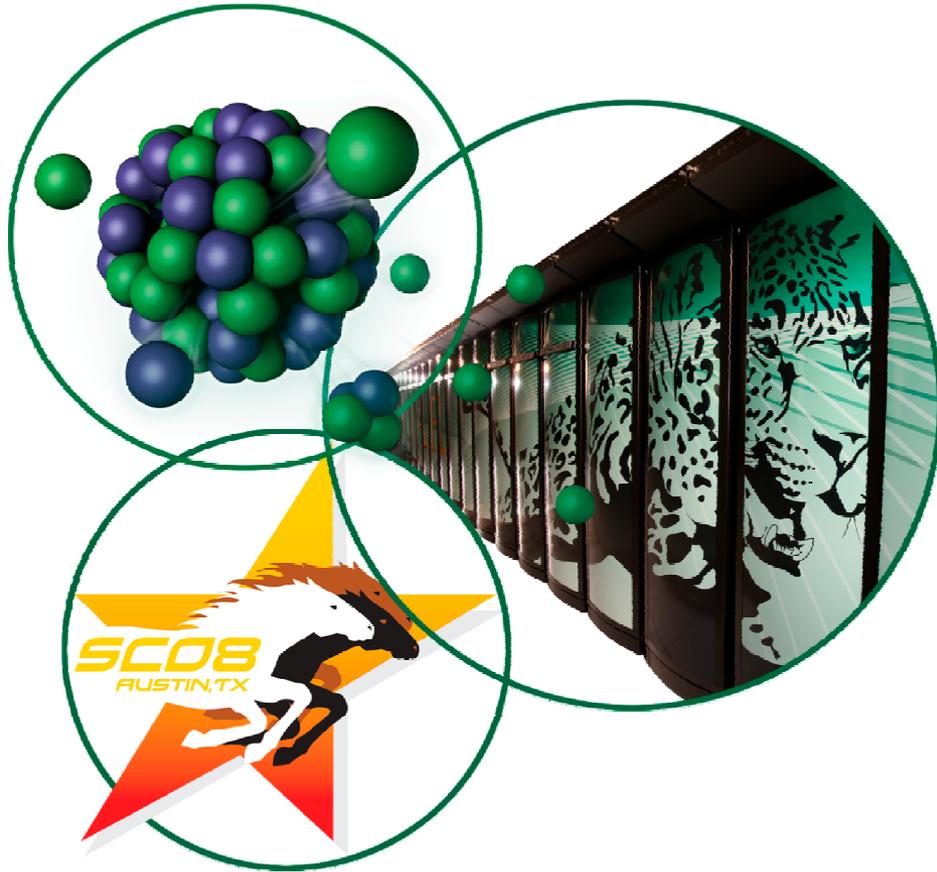


Research Alliance in Math and Science

Presented by

Debbie McCoy

Computing and Computational Sciences



Research Alliance in Math and Science (RAMS) Program



The Research Alliance in Math and Science program is designed to provide collaborative research experiences among faculty and students at colleges or universities and DOE national laboratory researchers. These experiences will improve the U.S. competitive research edge while encouraging and promoting Science, Mathematics, Engineering, and Technology (SMET) research throughout the academic year.

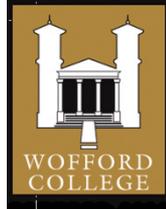
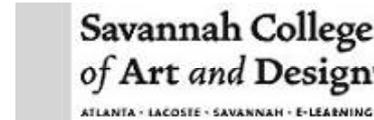
Research Alliance in Math and Science (RAMS) Program



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY



UNIVERSITY OF NOTRE DAME



Research Alliance in Math and Science (RAMS) Program

Targets underrepresented students majoring in computer science, computational sciences, mathematics, engineering, technology



- 10 – 12 weeks (May/August)
- World-class research mentors
- Competitive stipend/housing allowance
- State-of-the-art distance learning
- Daily journal of activities and experiences
- Weekly technical seminars
- Skills-enhancing workshops
- Oral presentation of research results
- Project poster sessions
- Recognition banquet
- May arrange academic credit through college or university

Research Alliance in Math and Science (RAMS) Program

Research opportunities in:



Summer student poster presentations in JICS lobby

Research Alliance in Math and Science Program

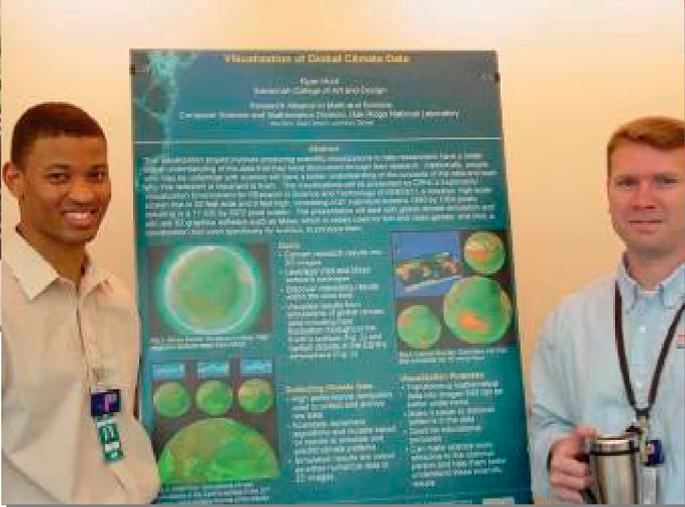
http://www.csm.ornl.gov/Internships/rams_06/posters.html

- Computer Science
- Algorithms and Theory
- Artificial Intelligence
- Communications and Networking
- Computational Biology
- Computer Architecture
- Data Management
- Distributed and Fault-Tolerant Computing
- Graphics and Visualization
- Human Computer Interaction
- Knowledge Discovery/Data Mining
- Mobile Computing
- Multimedia
- Natural Language Processing
- Operating Systems
- Performance Modeling and Analysis
- Programming Languages and Software Engineering
- Security
- User Interface
 - Data Storage
 - Hardware Technologies
 - Mathematical Sciences
- Algorithms and Theory
- Dynamical Systems
- Knowledge Discovery and Data Mining
- Mathematical Modeling
- Numerical Methods
- Operations Research
- Probability and Statistics
- Risk Management
- Stochastic Optimization. . . more

Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:

Poster sessions



Fortran for High Performance Computing taught by John Levesque

Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:



Tour \$1B Spallation Neutron Source



Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:



Opportunities in visualization, applied mathematics, networking research, computer science, computational biology, computational chemistry, computational materials science

Tour **E**xploratory **V**isualization **E**nvironment for **R**esearch in **S**cience and **T**echnology (**EVEREST**)



Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:

National Center for
Computational Sciences



Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:

**High Temperature
Materials Laboratory**



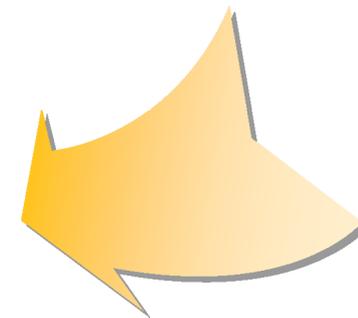
Biomedical engineering students examine ceramic replacement joints developed at ORNL's High Temperature Materials Laboratory

Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:



**Tour
High Flux Isotope
Reactor facility**



Research Alliance in Math and Science (RAMS) Program



Requirements:

- Completed on-line application (website opens in January)
- Completed research proposal (students are encouraged to iterate research proposal with his/her faculty advisor)
- Two faculty recommendations completed online
- Official transcript
- Commitment for full participation

Contact:

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Research Alliance in Math and Science (RAMS) Program

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