

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

JOHNS HOPKINS UNIVERSITY



THE UNIVERSITY of TENNESSEE **UT**
CHATTANOOGA

LeMoyn-Owen
COLLEGE

MIDDLE
TENNESSEE
STATE UNIVERSITY



USF
UNIVERSITY OF SOUTH FLORIDA

TENNESSEE
STATE UNIVERSITY

MOREHOUSE
COLLEGE



Mississippi Valley State University

Savannah College
of Art and Design
ATLANTA · LACOSSE · SAVANNAH · E-LEARNING

THE UNIVERSITY OF
TEXAS
AT AUSTIN

Delaware State University
Making our mark on the world

Alabama A&M
University

JSU
JACKSON STATE UNIVERSITY



Christian Brothers University

LeMoyn-Owen
COLLEGE

POLYTECHNIC
UNIVERSITY
OF PUERTO RICO

WINSTON
SALEM
STATE
UNIVERSITY

MC
MARYVILLE
COLLEGE



TUSKEGEE
UNIVERSITY



Knoxville
College

YORK COLLEGE
The City University of New York

UMKC
UNIVERSITY OF MISSOURI
KANSAS CITY

SSU

Austin Peay
State University

FAYETTEVILLE
STATE UNIVERSITY



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

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

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

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

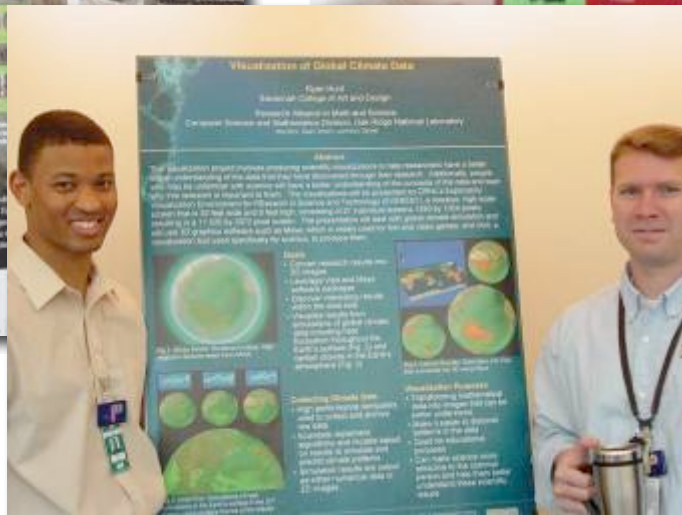
- Programming Languages and Software Engineering
- Security
- User Interface
 - Data Storage
 - Hardware Technologies
 - Mathematical Sciences
- Algorithms and Theory
- Dynamical Systems
- Knowledge Discovery and Data Mining
- Mathematical Modeling
- Numerical Methods
- Operations Research
- Probability and Statistics
- Risk Management
- Stochastic Optimization. . . more

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Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:

Poster sessions



Fortran for High Performance Computing taught by John Levesque

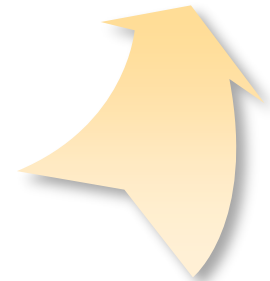
<http://www.csm.ornl.gov/Internships/RAMS.html>

Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:



Tour \$1B Spallation
Neutron Source



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

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**)



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

Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:

**National Center for
Computational Sciences**



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

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

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

Research Alliance in Math and Science (RAMS) Program

Summer student opportunities:



**Tour
High Flux Isotope
Reactor facility**



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

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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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