



2004 Faculty Summer Research Participation Program

A. Program Description

The Oak Ridge National Laboratory (ORNL) and the Oak Ridge Associated Universities (ORAU) are co-sponsoring summer research appointments for faculty of Historically Black Colleges and Universities (HBCUs) and other Minority Educational Institutions (MEIs). The objective is to increase the number of collaborations and to foster long-term relationships between ORNL research staff and HBCU/MEI faculty members. Successful applicants will serve appointments up to 10 weeks at ORNL. They will collaborate with the Laboratory's research staff on one of the research projects listed below and described in detail in the [Research Project Descriptions](#).

Faculty are encouraged to identify qualified students with whom they would like to work. Students will apply through the Department of Energy's Student Undergraduate Laboratory Internships (SULI) Program. STUDENTS SHOULD SELECT ORNL AS FIRST CHOICE LOCATION.

B. Eligibility and Benefits

The program is open to full-time faculty at institutions of higher learning that are designated by the federal government as [HBCUs, Hispanic-Serving Institutions, Tribal Colleges, or Alaska Native or Native Hawaiian Serving Institutions](#) (link is to PDF file listing of institutions). The program will pay a monthly stipend based on the participant's certified academic salary with a minimum of \$4,500/month. In addition, the participant will receive limited reimbursement for inbound and outbound transportation and a monthly dislocation allowance of \$1,000.

C. Duration and Location

Successful applicants will be expected to serve their appointments at ORNL for a continuous 10-week period between May 3, 2004 and Sept. 30, 2004 for faculty alone, or June 7, 2004 through August 13, 2004 for faculty-student teams.

D. Research Areas

Eligible faculty may submit applications in the following research areas (see [Research Project Descriptions](#) for specific projects which can be funded):

Advanced Materials – Nanoscale science, engineering, and technology, nanobiotechnology, and nanocatalysis (one project).

Complex Biological Systems – Characterization and imaging of molecular machines and molecular ecology to support the Department of Energy Genomes to Life initiative (three projects).

Fission to Fusion – Remote handling technology, fission and fusion relevant materials research, advanced high-temperature energy conversion technologies, plasma and RF heating technologies, innovative nuclear fuels technology, advanced inspection technologies for coated particle fuel, and advanced modeling and analysis techniques for design of reactors or fuel fabrication facilities (one project).

National Security – Biological countermeasures, chemical and high explosives countermeasures, critical infrastructure protection, radiological and nuclear countermeasures, and technical intelligence and information analysis (one project).

Neutron Sciences – Applications of neutron scattering, neutron physics, instrumentation concepts, and approaches for power upgrades of spallation neutron source facilities (one project).

Science and Technology for a Hydrogen Economy – Efficient, renewable hydrogen-production technologies; low-pressure, high-hydrogen-storage capacity materials; and hydrogen fueled engine technologies (one project).

Terascale Computing and Simulation Science – Scientific application of high-performance computing to fusion, biology, nanoscience, physics, materials science, chemistry and climate research; distributed and cluster computing; mathematics and algorithms; petascale data analysis; data visualization and analysis; and middleware development (two projects).

The selected research topics are areas in which ORNL currently has active projects and is seeking research collaborations. A successful applicant will have qualifications that complement one of these projects. The section [Research Project Descriptions](#) contains explanations of each project. **Interested faculty should contact the appropriate ORNL lead investigators to discuss their possible participation.**

E. Application Process

A faculty application consists of seven parts as described below. All entries must be submitted electronically in Word format and must contain the following parts.

1. Application

The application form can be completed in Microsoft Word or by hand after printing the PDF file below.



[Application](#) in PDF format ([Click here](#) to download the free Adobe Acrobat Reader).



[Application](#) in Word format

2. Curriculum Vitae

The curriculum vitae should include the applicant's name, address, employment record, education, awards, special skills, and a list of recent publications. Provide a complete reference for each published article (title, authors, journal name, volume, starting page number, and year published). Include a one-page statement of current and past research and your research interest.

3. References

Arrange for two references to be sent via postal mail to :

Ruth Keller
Science and Engineering Education
Oak Ridge Institute for Science and Education
P.O. Box 117, MS 36
Oak Ridge, TN 37831

Or via e-mail to kellerr@ornl.gov.

4. Proposal for Participating in an ORNL Project

Identify the research project and lead investigator with whom you wish to participate. See [Research Project Descriptions](#) for specific research projects. Tell us why you would like to participate in this project and why you are qualified to do so. Emphasize your capabilities for contributing to the proposed research, including any special skills or experience from which the project would benefit. Explain how serving an appointment at ORNL will further your professional career. Please limit this part to three pages.

5. Description of Benefits to ORNL and the Applicant's Institution

Describe how ORNL and your HBCU/MEI will benefit from the collaboration. It is important to explain how this collaboration will lead to an ongoing research partnership. Please limit your description to one page.

6. Certification of Salary

The certification of salary form can be completed in Microsoft Word or by hand after printing the PDF file below.



[Certification of Salary](#) in PDF format ([Click here](#) to download the free Adobe Acrobat Reader).



[Certification of Salary](#) in Word format

7. Names of Students

State the names of students you have selected to serve appointments concurrent with your own as part of the same research project. Students should make application through the DOE Student Undergraduate Laboratory Internships (SULI) Program. A description of the program and an online application can be found at:

<http://www.scied.science.doe.gov/>

You are responsible for ensuring that these students complete the SULI application process. Students must apply online at the above Web site. STUDENTS SHOULD SELECT ORNL AS FIRST CHOICE LOCATION.

F. Deadline for Submission of Applications

The deadline for receipt of **STUDENT** online applications is **February 1, 2004**.

Students who do not apply through the SULI mechanism by the deadline will not be considered for participation in this program with the selected faculty member. They may, however, be considered for the SULI program independent of the faculty member's selection.

The deadline for receipt of **FACULTY** applications is **February 15, 2004**.

G. Selection Process

A committee of ORNL and ORAU staff members will review applications and forward them to the appropriate ORNL lead investigators for consideration.

Faculty appointments will be made on the basis of the following criteria:

- (1) the strength of the applicant's capabilities and experience
- (2) the match between the applicant's qualifications and the research needs of the selected project
- (3) the potential for establishing an ongoing research partnership

A student will be selected to accompany the faculty member based on the match between the applicant's qualifications and the research needs of the selected research project.

Selection of faculty and the students named in the faculty application are independent of each other. A selected faculty member's students, therefore, are not guaranteed selection. It is also possible that students may be selected through the SULI program independent of their association with the faculty member.

H. Submitting Applications

Complete faculty applications should be attached to an e-mail message and sent to kellerr@orau.gov.

Student applications must be submitted through the online SULI application process.

I. Inquiries

For general program information and inquiries, contact:

Steve Stow, ORNL

stowsh@ornl.gov

For inquiries about the application process, contact:

Ruth Keller, ORAU

kellerr@orau.gov