

DOE Notes

Lab Research Program Begins For High School Teachers

Over 150 high school science and math teachers from across the country are spending the summer doing research at 14 DOE laboratories. DOE began the annual eight-week Teacher Research Associates Program this year to help teachers keep pace with developments in science and technology and enhance their teaching skills through hands-on research.

In announcing the program, Secretary of Energy James D. Watkins said, "This is an effective way to recognize that high school science and math teachers are full members of the broad scientific and technical community. The program offers a great return on investment because each teacher reaches a group of 150 new students every year. DOE increasingly will make available the resources of its National Laboratories to help tackle the enormous challenge of improving the quality of math and science education in the U.S."

As research associates, the teachers are members of laboratory teams conducting research in a variety of areas, including superconductivity, sequencing of DNA and global climate warming. They will use their experiences to develop supplemental materials and experiments for use in the classroom. Many of the teachers will also be awarded graduate-level credit by regional universities for participating in the program.

University Research Instrumentation Awards Announced

Under the DOE's University Research Instrumentation Program 22 universities will receive awards totalling \$4.7 million to purchase state-of-the-art scientific instruments for energy-related research. Sponsored by the Office of Energy Research, the program is intended to strengthen the ability of universities and colleges to conduct long-range, energy-related research. This program is part of an interagency effort to help alleviate a shortage of research equipment in universities.

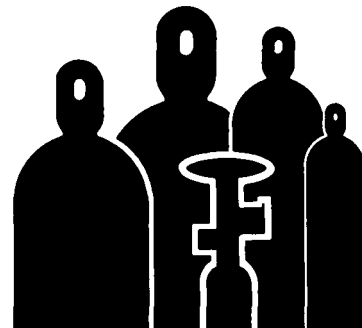
Each instrument awarded under the

program costs more than \$100,000. In addition to the department's award, each university will provide funds toward the instrument's total cost. The department received 208 applications from universities throughout the country in response to its program solicitation. Fiscal year 1989 funds will be used to help meet the needs of universities carrying out DOE-sponsored research in the following areas: biological and environmental research; combustion, conversion and coal science chemistry; energy engineering research; materials research and electro-optical materials; and nuclear physics.

Institutions Receiving DOE Instrumentation Awards for Materials Research and Electro-Optical Materials

Institution and Principal Investigator	Recommended Amount	Instrumentation
California Institute of Technology, Brent Fultz	\$230,000	High performance x-ray diffraction facility
University of California, San Diego, Ivan K. Schuller	\$300,000	Ultrahigh vacuum surface analysis facility
Cornell University, Rudiger Dieckmann	\$141,500	Ceramic materials image furnace
Michigan Technological University, Stephen A. Hackney	\$350,000	Medium-high voltage high resolution transmission electron microscope
Rutgers University, Stephen H. Garofalini	\$184,000	Scanning tunneling microscope and graphics visualization system
State University of New York - Stony Brook, Benjamin Chu	\$190,516	Small angle x-ray scattering facility

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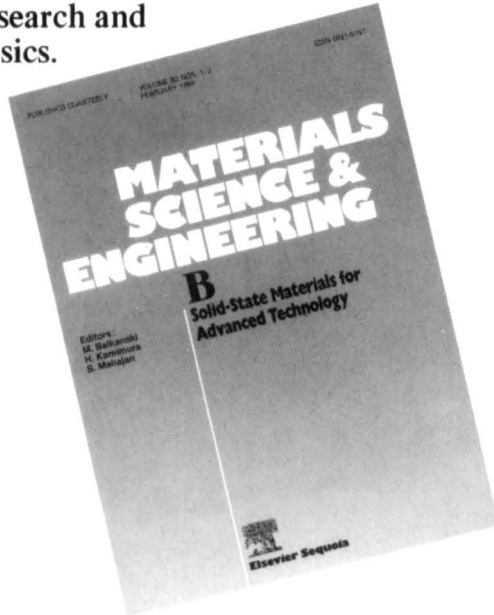
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NSF Notes

Five Major University Computer Research Facilities Funded

Multiyear projects to help establish, enhance, and operate major experimental research facilities at five universities have been funded by the National Science Foundation. Aimed at developing computer research facilities at major universities, the NSF Institutional Infrastructure awards are expected to total over \$8,000,000 by the end of the five-year grant period.

The award to the University of Arizona in Tucson provides \$577,911 in the first year of the grant. Over the five-year period, 10 facilities will be supported, involving research in programming languages, software for molecular genetics, and graphical user interfaces for scientific visualization.

The University of Chicago has been granted \$378,948 in the first year of its five-year award to promote experimental research in a wide variety of areas, including computer vision and graphics, and computer science theory.

A first-year grant of \$576,612 will be made to the University of Pennsylvania as part of a five-year award that will fund facilities for five research areas: artificial intelligence and language processing; machine perception and robotics; graphic interfaces, movement description, and animation; computer communication; and logic and computation, including theory of computation, database systems, and programming languages.

The University of Rochester in New York will be awarded \$365,879 in the first year of its five-year grant. The funds will help the university's scientists develop a laboratory for real-time vision consisting of key robotic components: a "head" containing cameras for visual input; an arm or "neck" that supports and moves the "head"; and a general purpose processor for high-level vision and planning.

The State University of New York at Stony Brook will receive a first-year grant of \$334,000 as part of a three-year award that will provide funds for a network of high-performance graphics workstations. The goal of the research is to create tools that can be used to rapidly generate application-specific, visually-oriented computing environments on high-performance workstations.

These institutions have made a substantial commitment to support the researchers and their projects, and will assume an increasing share of the project costs each year throughout the grant period in anticipation of the facilities becoming self-sufficient. □