

## **Research grants to top \$30 million over five years have been awarded to researchers from Institute for Nonlinear Science, AMES, and SIO, by the Department of Defense**

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### MAJOR DEFENSE CONTRACTS AWARDED TO UCSD

Research grants expected to top \$30 million over a five-year period have been awarded to the University of California, San Diego by the Department of Defense.

The proposals selected emphasize interdisciplinary research programs and will involve researchers from three UCSD units: the Institute for Nonlinear Science, the Department of Applied Mechanics and Engineering Sciences (AMES), and Scripps Institution of Oceanography.

The awards will enable UCSD to conduct major in-depth research into complex fluid dynamics, advanced man-made materials, ocean current behavior and solar activity.

Announcing the grants, Secretary of Defense Caspar W. Weinberger said that the selection process for the grants was highly competitive and wished that he were able "to fund more of the many outstanding proposals that we received."

Almost 1,000 proposals from 175 universities were considered for inclusion in the new University Research Initiative, Weinberger said, and 86 research programs were awarded to 70 institutions.

UCSD Chancellor Richard C. Atkinson said that the University Research Initiative will strengthen university science in important ways.

"This initiative supports unclassified basic research," Atkinson said. "It will also help to update and replace scientific equipment and support the training of graduate students and postdoctoral researchers."

UCSD was chosen to conduct three major research programs and will be a subcontractor to a Johns Hopkins University research project.

The University of California, Santa Barbara was chosen for two projects and the University of California, San Francisco and the University of California, Los Angeles got one each.

Across the nation, only the Massachusetts Institute of Technology, with five projects, the California Institute of Technology, with four, and the University of Illinois, also with four, were selected for more projects than UCSD.

"I am extremely proud of UCSD's success in the DOD research competition," Atkinson said. "UCSD has a long-standing reputation as a leading research university and these contracts are important indicators of our standing in the science community."

One UCSD project will undertake a study of fluid dynamics. If fully funded the program will receive an estimated \$13.5 million over five years and turn UCSD into a major center for the study of complex fluid motions.

Henry Abarbanel, acting director of UCSD's Institute for Nonlinear Science and a research physicist at the marine physical laboratory at SIO, will head the investigation.

Besides being involved in the fluid motion study, Scripps itself expects to receive about \$9.3 million from the Office of Naval Research for a five-year study of the California Current system.

The ultimate goal of this program is to provide long-term forecasts of oceanic currents and density structure. William A. Nierenberg, former director of Scripps and professor emeritus of oceanography, is the principal investigator.

A Center for Advanced Materials of High Quality Dynamic Performance is to be funded at a cost of at least \$6 million over five years. The center will investigate the properties and physical limits of man-made materials such as ceramics, advanced composites and cellular materials.

The center will be directed by Sia Nemat-Nasser, professor of solid and structural mechanics at AMES. Two UCSD research physicists at the Center for Astrophysics and Space Sciences, Hugh Hudson and Bernard Jackson, will cooperate in a solar activity and variability study with the Applied Physics Laboratory at Johns Hopkins University in Baltimore, Md.

"All these programs represent the establishment of national centers of scientific research in important technological areas," Atkinson said.

The University Research Initiative is designed to strengthen the ability of the nation's universities to conduct research and educate scientists and engineers in 10 technologies deemed important to national defense.

Subject to the successful completion of negotiations between DOD and the institutions selected and the availability of funds, approximately \$110 million will be distributed during fiscal year 1986/1987.

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