

UCSD researchers win Sloan Fellowships

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Four members of the faculty of the University of California, San Diego are among 100 outstanding young scientists and economists to be selected to receive Sloan Research Fellowships.

The winners were selected from among hundreds of qualified young scientists in the early stages of their careers on the basis of their exceptional promise to contribute to the advancement of knowledge.

The four new UCSD Sloan Fellows are:

*Robert E. Continetti, an assistant professor of chemistry and biochemistry, is investigating the photochemistry of reactive molecules. This work includes the chemistry of ozone, whose destruction in the upper atmosphere could allow higher levels of cancer-causing ultraviolet radiation to reach the Earth's surface. With the help of pulsed laser beams, Continetti literally blows apart molecules and then watches what happens to the pieces. Using sophisticated detectors, he determines the constituency of the piece and how energy is partitioned among them.

*Dimitri Basov, an assistant professor of physics, is conducting experiments on electron transport in novel materials, in addition to studies on exotic conductors and superconductors using novel spectroscopic techniques involving synchrotron light sources. Basov joined the UCSD faculty last January from the Brookhaven National Laboratory.

*William R. Schafer, an assistant professor of biology, is trying to understand the functional properties of a simple nervous system at the level of specific molecular pathways operating in individual neurons. In his studies, Schafer is using classical and molecular genetics to investigate the molecular and cellular basis for behavior in the nematode *Caenorhabditis elegans*. Shafer joined UCSD in 1995 from the University of California, San Francisco, where he was a postdoctoral fellow.

*Kate Okikiolu, assistant professor of mathematics, is exploring several fields in mathematics including differential geometry, partial differential equations and operator theory. Her work in one area involving what's known as "elliptical differential operators" is considered a major contribution, going well beyond what experts had considered feasible, given the current state of knowledge. Before joining UCSD in 1995, she held an assistant professorship at Princeton University.

The Sloan Research Fellowship Program, now 42 years old, has supported the research of more than 3,200 young researchers, including 21 who eventually won Nobel prizes. Grants of \$35,000 for a two-year period are administered by each Fellow's institution. Once chosen, Fellows are free to pursue whatever lines of inquiry are of most interest to them, and they are permitted to employ fellowship funds in a wide variety of ways to further their research.

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