UC SANTA BARBARA

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NATIONAL SCIENCE FOUNDATION AWARDS INSTITUTE FOR THEORETICAL PHYSICS LARGEST SINGLE FEDERAL RESEARCH GRANT EVER MADE TO UCSB

The Institute for Theoretical Physics at the University of California at Santa Barbara (UCSB) has received $17.3 million from the National Science Foundation (NSF). The five-year award, the result of a comprehensive review by the NSF, is the largest single federal research grant ever made to UCSB. An additional $1 million has been allocated to supplement operating expenses this year.

The Institute for Theoretical Physics (ITP) is a unique international research center, which brings together scientists from throughout the world to pursue research on the most challenging and exciting questions in physics and related sciences. The ITP's innovative mode of operation -- a small superb faculty interacting with a large group of visiting colleagues -- has been widely imitated at other research centers, such as the Isaac Newton Institute at Cambridge University in England and the Mathematical Science Research Institute at Berkeley.

David Gross, ITP director said, "We are delighted to have received a substantial increase in our funding from the National Science Foundation.

The ITP's success derives from its ability to attract the world's leading scientists to participate in our annual programs. One of our particular strengths is that our programs are designed to cross traditional boundaries within physics and other sciences.

For example, a recent program on quantum computing brought together computer scientists, engineers, and physicists in a workshop that ended up transforming this new field."

"Our institute is a national asset for frontier research in theoretical physics," said Henry Yang, chancellor of UCSB. "ITP brings leading physicists from all over the world to our campus. It also reaches out to high school teachers. Through the superb leadership of Director David Gross and the dedication of his outstanding colleagues, the institute has pioneered an innovative way of doing science, one that is being emulated by top institutions around the world."

The ITP's main activities include research programs that typically run five or six months each. Two programs operate in parallel, each with some 22 scientists in residence.

The program topics spanning the range of theoretical physics are chosen by the institute's national advisory board from suggestions made by the international theoretical physics community.

The increased NSF funding will enable the ITP to expand from four to five programs a year. The new grant also will support an expansion of the research in astrophysics and promote the emergent fields of biophysics and mathematical physics. The recent mapping of the human genome poses questions as to the meaning of the code -- questions that physicists with experience in modeling complex structures can help answer.

"We believe that the ITP, in its role as a national institute for theoretical physics, must take the initiative in enabling the scientific community to open new directions for research," said Gross. "Such initiatives

always involve some degree of risk. In any truly novel research enterprise, it can never be clear in advance which problems are ripe for solution or which concepts will be most useful. Because of its unique institutional setup and the administrative infrastructure, the ITP has the flexibility to take such risks -- to explore new areas

and test new concepts -- at a small marginal cost. We have done this in the past and plan to extend these efforts in the future."

In addition to funding visiting scholars and graduate fellows, the ITP undertakes many outreach activities, such as a popular public lecture series and an annual educational forum for high school physics teachers nationwide. For more information about the ITP, see its web site at http://www.itp.ucsb.edu.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.