

UC SANTA BARBARA

# THE *Current*

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## **UC Santa Barbara Physics Professor Lars Bildsten Named Director of Kavli Institute for Theoretical Physics**

After an international search for a new director for the Kavli Institute for Theoretical Physics (KITP) at UC Santa Barbara, the search committee found the best person for the position was already in Santa Barbara: Lars Bildsten, professor of physics and a KITP permanent member. The baton was passed on July 1 from Professor David Gross, a 2004 Nobel laureate, who will remain at KITP as a permanent member.

"I am honored to have been selected," said Bildsten, who joined KITP and UCSB in 1999. "It is also a deep responsibility to maintain the tradition of excellent leadership at the KITP. David Gross very successfully expanded our activities and funding, increased our international prominence, and placed us in a very strong position."

"Lars will be an excellent and dynamic leader of the Institute," said Gross, who served 15 years as director, almost half the life of KITP. "I trust and hope that the KITP will continue to serve the worldwide community of theoretical physicists by running excellent programs." Gross's decision to step down prompted the years-long search that culminated with Bildsten's selection.

"Our Kavli Institute for Theoretical Physics has flourished under the inspired leadership of Professor David Gross, and the brilliant and accomplished directors who preceded him," said Chancellor Henry T. Yang. "I will never forget when we celebrated the Institute's 25th anniversary and dedication of the new wing in 2004, an event that became a double celebration when, that same week, Professor Gross won the Nobel Prize in Physics. Our campus will always be grateful David's visionary and dynamic leadership, and the 15 years he devoted to directing this exceptional Institute. We look forward to his continuing contributions as our distinguished faculty colleague and KITP permanent member."

Chancellor Yang noted that in 2007, a study published in the Proceedings of the National Academy of Sciences ranked UC Santa Barbara's KITP as the number 1 highest-impact national research facility for science impact on non-biomedical research.

"The KITP exemplifies the very best of scientific collaboration, innovation, and insight," Yang continued. "We are tremendously proud of the Institute's excellence and impact, and we are excited about its bright future under the leadership of Lars Bildsten. Professor Bildsten's exceptional strengths and vision as a researcher, teacher, mentor, and leader, and his deep commitment to the KITP, our campus, and the scientific community make him the ideal choice for this important directorship."

Bildsten, who works in the field of theoretical astrophysics, came to UCSB from UC Berkeley, where he was an assistant and associate professor in both the Physics and Astronomy departments. Prior to that, he was a research fellow at Caltech. He received his Ph.D. in theoretical physics from Cornell University in 1991. Throughout his academic and teaching career, he has received various honors, titles, and fellowships, including an Alfred P. Sloan Foundation Fellowship, a Cottrell Scholar of the Research Corporation, the Helen B. Warner Prize, a Compton Fellowship, and a Fannie and John Hertz Graduate Fellowship. Bildsten was also the Biermann Lecturer at the Max Planck Institute for Astrophysics, the Salpeter Lecturer at Cornell University, and was recently elected as a Fellow of the American Association for the Advancement of Science.

Bildsten has also been active on many national panels and committees, including several of the National Research Council, the National Science Foundation, and the

American Physical Society.

"Our mission at KITP is to be the place where theoretical physicists come to collaborate and initiate new ideas," Bildsten said. Established in 1979 with funding from the National Science Foundation, KITP has long been a place for such collaborations, which have resulted in major advances in the field, breakthrough insights, new research, and Nobel Prizes. These accomplishments have come from continuous conversations between some of the brightest minds in the field, promoted by an environment that encourages the trading of ideas through the multitude of conferences and programs that the institute holds each year.

A visit to KITP is all one needs to understand the kind of work that goes on there. Situated on the UCSB campus and overlooking the Pacific Ocean, the institute at any given time hosts two or three programs in which theoretical physicists meet up to learn from their scientific colleagues, collaborate, and discuss the implications of new discoveries. Run by its director (working with two deputy directors and a cadre of excellent staff), the five permanent members, and 12-15 postdoctoral researchers also interact with the 60 daily visitors at what Gross and Bildsten call a "user facility," that attracts scientists from near and far. Nearly half of the visiting physicists are international.

"We evolve every year," said Bildsten, whose main job is to steer the ideas and topics that come into the institute. Some accomplishments -- the prizes and the research, for instance -- are easy to see in hindsight, but the real work, which is harder to document, is in planting the seeds that allow the research to move more quickly, or even to take new directions, such as the more interdisciplinary collaborations in theoretical biology that are growing in presence at KITP.

Now, as director of one of the most influential institutes for the convergence of ideas in theoretical physics, Bildsten counts among his priorities the creation of what he calls the Residence: a place for the many visiting theoretical physicists that come to the institute each year to stay and continue to swap ideas and form collaborations.

"Scientists come from their home institutions to be here for months, away from everyday distractions," said Bildsten, adding that the environment puts them in a different state of mind and encourages them to interact with their colleagues in extended discussions and additional free time for thought.

However, what has been missing, he said, is a place for these scientists -- up to 800 unique visitors a year -- to continue their explorations and interactions after-hours.

Typically they are housed in and around Santa Barbara and Goleta, in accommodations that separate them from one another.

"They would like to keep interacting with one another," he said.

Bildsten's vision is to have a place that can house up to 50 visitors at a time, in accommodations with amenities that will facilitate continued informal interactions. Plans are in the very initial design and scoping stage. Fundraising is a major part of Bildsten's work in the near future.

The ultimate goal of the Residence is to further KITP's mission of continuous collaboration leading to new ideas and scientific breakthroughs.

"Sometimes progress is defined as 'finding the right question to ask,'" said Bildsten.

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## **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.