UC SANTA BARBARA
THE Current

November 30, 2016
Julie Cohen

International Kudos

In the 12 years since David Gross won his Nobel Prize, the UC Santa Barbara theoretical physicist has been celebrated myriad times. His latest accolades come from China and Russia.

This year, the University of Chinese Academy of Sciences awarded Gross an honorary doctorate degree, an event so rare in that country that it requires government approval. And more recently, the Russian Academy of Sciences confirmed Gross as a foreign member and awarded him the Medal of Honor in recognition of his “outstanding and fundamental contributions to quantum chromodynamics.” Gross shared the Nobel Prize in physics with David Politzer and Frank Wilczek for their work in that field. Quantum chromodynamics is the theory of the nuclear force that holds quarks together and binds them inside protons and neutrons.

“It is wonderful to see David recognized for his groundbreaking work and his continued impact on theoretical physics around the world,” said Lars Bildsten, director of the Kavli Institute for Theoretical Physics (KITP). “David is a strong advocate for the value of physics as a pillar in fundamental research, and I look forward to his future term as president of the American Physical Society.” (Gross just began a four-year term at the APS, where he is currently vice president.)

Gross has longtime scientific ties to both China and Russia. Since winning the Nobel in 2004, he has worked with Chinese physicists to improve the country’s Institute of Theoretical Physics and has been an adviser to a project that will build a

supercollider at least twice the size of the Large Hadron Collider in Switzerland.

When the Soviet Union still existed, Gross was a frequent visitor. Last year, he was invited to the Joint Institute for Nuclear Research in Dubna, outside of Moscow, to mark the building of a new heavy-ion accelerator that will be able to create quark matter.

“I did my original work formulating the theory of these quarks and quantum chromodynamics, which is well-tested in many regimes,” said Gross, who is a permanent member of the KITP and its Chancellor’s Chair Professor of Theoretical Physics. “Dubna is going to create an intense heavy-ion beam — with less energy and lower temperature than the Large Hadron Collider but denser — so they can probe a different regime of the physics of this quark matter, one that potentially could be very interesting.”

Gross received his bachelor’s and master’s degrees from Hebrew University in Jerusalem in 1962 and his doctorate from UC Berkeley in 1966. A junior fellow at Harvard University before moving to Princeton University, he joined UC Santa Barbara in 1997 as director of the KITP, where he served until 2012.

In addition to the Nobel Prize, Gross’ many honors and awards include the J.J. Sakurai Prize for Theoretical Particle Physics from the American Physical Society; a MacArthur Fellowship; the Dirac Medal from the International Centre for Theoretical Physics; the Oskar Klein Medal of the Royal Swedish Academy of Sciences; the High Energy and Particle Physics Prize from the European Physical Society; and the Grande Médaille D’or de l’Académie des Science, France.

Gross has delivered lectures around the world and holds numerous honorary doctorates and professorships. He has written hundreds of articles as well as conference proceedings and book chapters.

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.