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David Weld Receives UC President's Research Catalyst Award

UC Santa Barbara's [David Weld](#) leads a team that has been awarded \$300,000 to establish the California Institute for Quantum Emulation. His group is one of five to receive the inaugural [President's Research Catalyst Awards](#) announced today by University of California President Janet Napolitano.

Selected from a pool of almost 200 proposals, the California Institute for Quantum Emulation will mobilize the theoretical and experimental expertise of early-career faculty members at five campuses, enhancing the state's position as a technological leader and advancing research vital to the development of novel materials. In addition to the President's Research Catalyst Award funding, the team will receive \$50,000 in matching funds from the [California Nanosystems Institute \(CNSI\)](#).

Weld, who holds the Richard Whited Endowed Chair in Interdisciplinary Science, proposed the institute with colleagues at UCLA, Berkeley, UCSD and UC Irvine in a submission titled "Advancing physics, materials science and computing through quantum emulation." Quantum emulation uses small collections of ultra-cold atoms, ions and molecules to understand the physical properties of the smallest matter in the universe.

"We're very excited about this news and grateful for the support from UCOP and CNSI," said Weld, an assistant professor in [UCSB's Department of Physics](#). "Our collaboration aims to make the University of California a world leader in the

emerging field of quantum emulation, and the President's Research Catalyst Award is a big step toward that goal."

The recipient of numerous of fellowships, Weld was named a Hellman Family Faculty fellow in 2013 as well as that year's Alfred P. Sloan Research fellow. He also received the Young Investigator Award from the Air Force Office of Scientific Research in 2012 and the Presidential Early Career Award for Scientists and Engineers in 2014.

Weld earned his bachelor's degree in physics from Harvard University in 1998 and his Ph.D. in physics from Stanford in 2007. He was a postdoctoral fellow and a research scientist at the Massachusetts Institute of Technology before joining the faculty at UCSB in 2011.

"The President's Research Catalyst Awards will spur UC research and offer our faculty and students new opportunities for cross-campus, multidisciplinary collaboration," said Napolitano. "We want to support research endeavors that have real-world impact in areas with critical needs."

The projects involve multicampus, multidisciplinary efforts incorporating research, teaching and learning for undergraduate and graduate students. Designed to stimulate UC research in areas that could benefit California and the world, the awards will channel \$10 million over three years to fund research in areas of strategic importance, such as sustainability and climate, food and nutrition, equity and social justice, education innovation and health care.

Other newly funded projects include "Understanding how California ecosystems will be affected by climate change," led by Barry Sinervo, professor of ecology and evolutionary biology at UC Santa Cruz; "Helping California address the prison health care crisis," led by Brie Williams, an associate professor of medicine and associate director of the UC San Francisco Program for the Aging Century; "Tapping big data to inform questions of health, poverty and social justice," led by Sean Young, an assistant professor in UCLA's Department of Family Medicine and director of innovation at the campus's Center for Behavioral and Addiction Medicine; and "Using music to better understand the human brain," led by Scott Makeig, research scientist and director of UCSD's Swartz Center for Computational Neuroscience and the Institute for Neural Computation.

Recipients were chosen through the highly selective Multicampus Research Programs and Initiatives grants process. The awards will be financed through an existing president's fund used to support systemwide initiatives.

According to Napolitano's office, the President's Research Catalyst Awards will strengthen UC's research enterprise by promoting projects that take advantage of the shared facilities, expertise and economies of scale available through UC's 10 campuses and five medical centers. Faculty will benefit from expanded research support, and students will have access to additional training opportunities.

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.