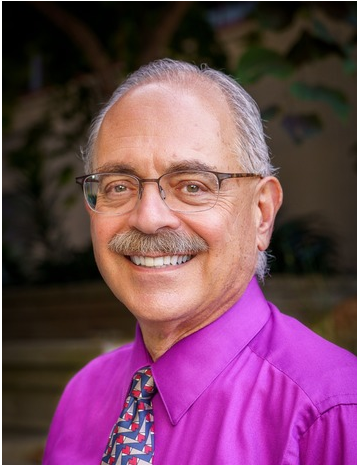


## California DREAMS and DELIVERS



On June 30, 2024 I will retire from the University of California and step down as Dean of the UC San Diego Jacobs School of Engineering. But hey, I'm not diving for the door! I'm going to be around as Dean for the next seven months; and I intend to use that time as profitably as I can for the Jacobs School.

And in this spirit, I am proud to share the column below which describes collaborative work that is critically important to the region, the state and the nation. But before I do, please allow me one quick interlude. I came to UC San Diego in 2013 with an ambitious set of goals for advancing engineering and computer science for the public good through education, research and transfer of innovation to society. Working alongside so many of you both inside and outside the Jacobs School, we have achieved these goals with greater success than I would ever have imagined. And accordingly, I feel that now is an excellent time for me to move on to new ventures.

Now, let's get to it.

### California DREAMS and DELIVERS

The UC San Diego Jacobs School of Engineering is a key member of a new microelectronics superhub called California DREAMS. I can tell you that we are working hard to make sure that the final outcome of California DREAMS is "California DELIVERS!"

I'm talking, of course, about the [U.S. DoD funded Microelectronics Commons project](#) which is led by USC. It is funded at \$27 million in just its first year. California DREAMS stands for the California Defense Ready Electronics and Microdevices Superhub. It is a coalition of academic research and industry organizations working together to accelerate the development and manufacturing of microelectronics in the U.S. The collaborative work involves streamlining the transition of advanced semiconductor research in university labs to DoD-scale industrial fabrication facilities and then hopefully into the U.S. semiconductor industry.

California DREAMS will concentrate its efforts in 5G/6G technologies and on the broader effort to establish advanced communications networks, focusing mainly on hardware. [Click here to read my full California DREAMS and DELIVERS column.](#)

### Warmest Wishes

Please accept my warmest and most sincere wishes for a safe and healthy holiday season. Thank you for all of your support of the Jacobs School of Engineering, and please stay tuned for

much more from me in the first half of 2024!

I can be reached at [DeanPisano@ucsd.edu](mailto:DeanPisano@ucsd.edu)

Sincerely,

Al

Albert ("Al") P. Pisano, Dean

UC San Diego Jacobs School of Engineering



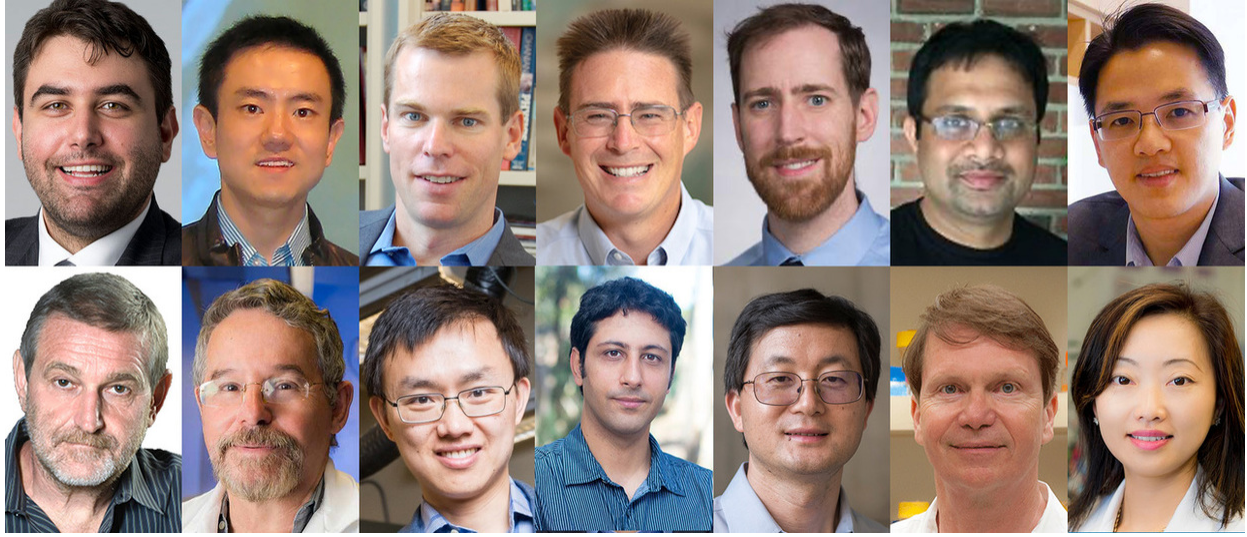
## **\$12.8M Center to Advance Naval Research and Innovation Workforce**

The center, funded by the Office of Naval Research, will build on campus-wide efforts to develop and commercialize innovative research in the service of naval advancements and national security. The center will also refine an innovation-ready workforce, with funding to aid new and emerging research, including 10 or more doctoral student projects at any given time. The grant also includes an emphasis on student entrepreneurship, providing hands-on experience and mentorship.

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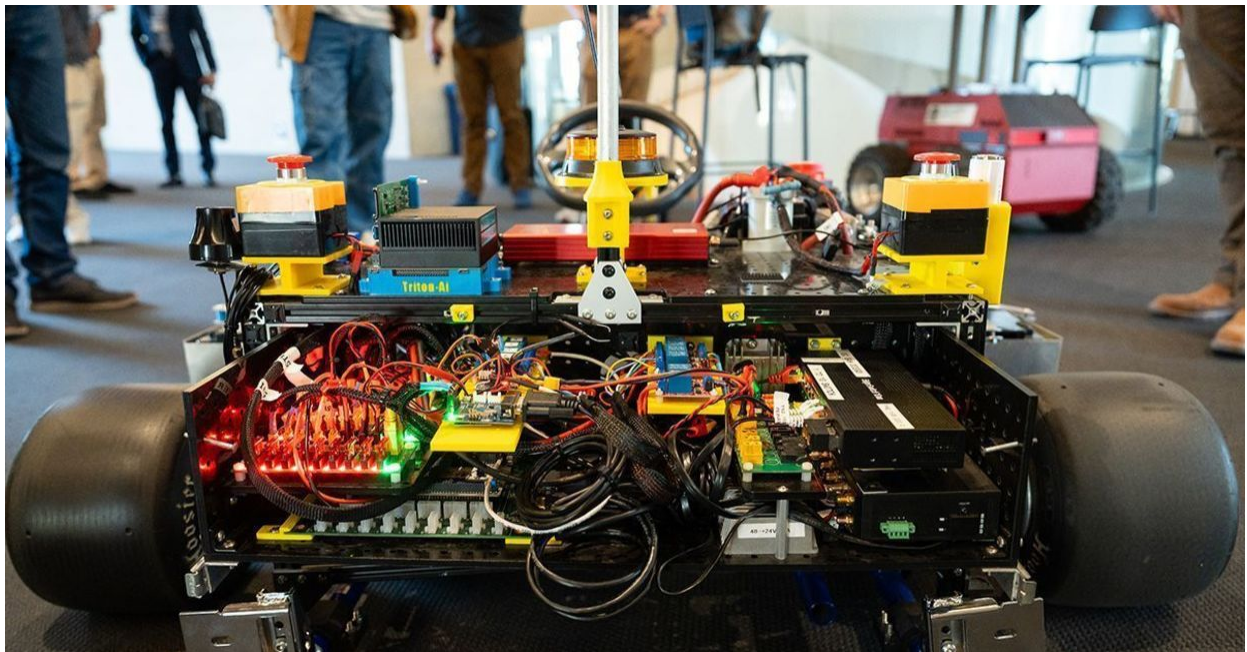




## Jacobs School Researchers Named Most Highly Cited in the World

Yet again, 16 faculty and researchers at the Jacobs School of Engineering were named among the world's most influential in their fields in this year's Clarivate listing of [Most Highly Cited Researchers in the World](#). Citation activity alone is not enough to make the list; the top 1% of researchers based on citations is whittled down by bibliometric experts and data scientists to reflect scientists who truly have a disproportionate level of impact in their fields. UC San Diego as a whole has the seventh highest number of highly cited researchers of any institution in the world. Read coverage in the [San Diego Union Tribune](#).

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## Exploring the Diverse Applications of Robotics Beyond the Lab

The UC San Diego Contextual Robotics Institute hosted its eighth annual forum, bringing together robotics experts from industry and academia to discuss cutting-edge developments in the field that aim to improve our health, safety, and quality of life. The event, themed “Robots in the Wild,”

featured presentations from some of the region's largest robotics companies, as well as faculty talks, posters and demonstrations of the cutting-edge robotics research happening at UC San Diego.

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## **Researchers Receive Close to \$10M from CA Stem Cell Research Agency**

Karen Christman, a professor in the Shu Chien-Gen Lay Department of Bioengineering, received \$4.6 million to advance her work on biomaterials that can repair damage to muscle after a heart attack. The biomaterials can be injected into the bloodstream when a patient is in the catheterization lab undergoing an angioplasty and stent placement. Eric Adler, MD, director of the Strauss-Wilson Center for Cardiomyopathy at UC San Diego Health, received \$5.2 million to advance his research in modified stem cells to help treat Danon Disease.

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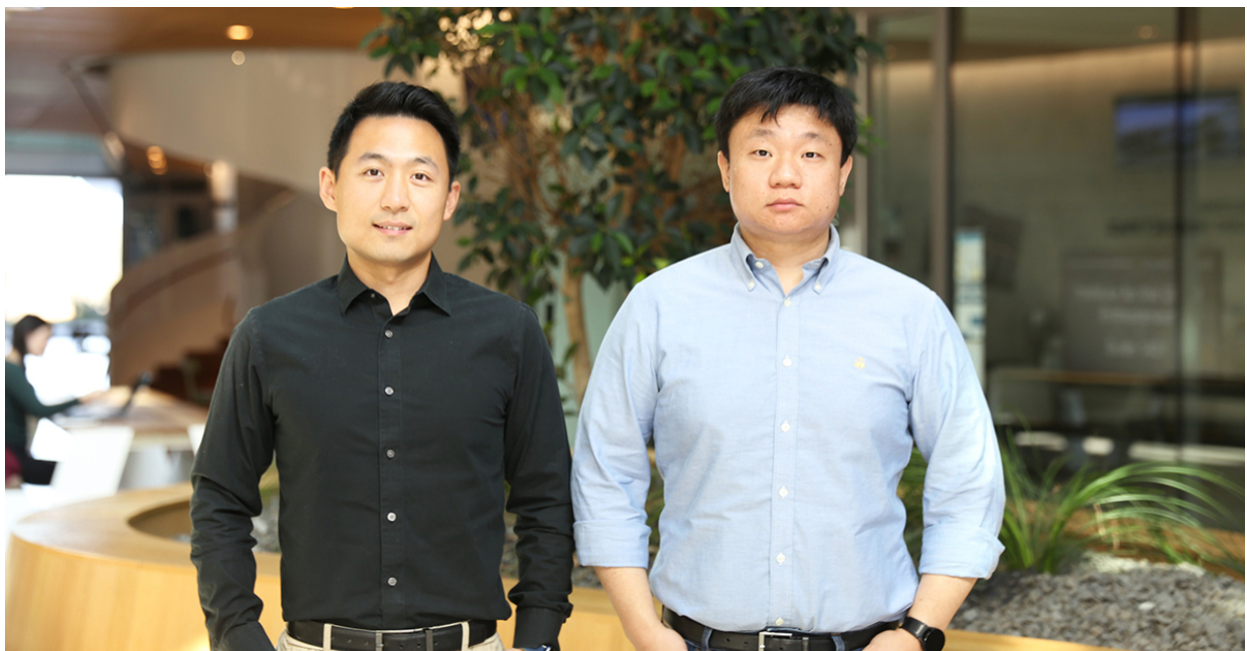




## Larry Smarr Wins 2023 Revelle Medal

Smarr, whose expertise spans astrophysics, computation, AI and biology, joined the UC San Diego Department of Computer Science and Engineering in 2000. Later that year he became the founding director of Calit2, a partnership of UC San Diego and UC Irvine. Calit2 illustrates Smarr's guiding principle: public higher education institutions serve the public good and the community that surrounds them. The Revelle Medal recognizes retired or emeriti UC San Diego faculty members for sustained, distinguished and extraordinary service to the university. [Watch this video tribute to Smarr.](#)

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**Startup Developing Noninvasive Glucose Test Nets \$4M in Seed Funding**

The startup, Persperion, is spun off from a sweat-based diagnostic platform technology developed in the Department of NanoEngineering and the [Center for Wearable Sensors](#). Their initial product, a noninvasive glucose test, uses the omnipresent sweat on fingertips to measure glucose, potentially removing the need for people with diabetes to use painful finger pricks. It is led by Jacobs School alumni Lu Yin and Alan Liu, who were recently named to the [Forbes 30 Under 30 list](#).

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### **\$3.6M Center Supports Next-Gen Air Force Vehicle Design**

The six-year grant supports the new Air Force Research Laboratory-UC San Diego Collaborative Center for Optimal Risk-quantified and robust Design of aerospace vehicles. The goal of the center is to advance the computational design methods that are crucial for the development of next-generation Air Force vehicles, including electric vertical takeoff and landing (eVTOL) aircraft and supersonic air vehicles.

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## This Wireless, Handheld, Non-invasive Device Detects Alzheimer's and Parkinson's Biomarkers

Researchers tested the device, which can transmit results wirelessly to a laptop or smartphone, on in vitro samples from patients. The tests showed the device is as accurate as the state-of-the-art testing methods. Next steps include testing saliva and urine samples. Startup Ampera Life licensed the technology and plans to apply for FDA approval in about six months. The research is led by Ratnesh Lal, a bioengineering, mechanical engineering and materials science professor at the Jacobs School. Read coverage in the [San Diego Union-Tribune](#).

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## Women's Skin Temperature Data is Just as Predictable as Men's

Variations in body signals — such as temperature — due to menstrual cycles were used as an excuse to keep women out of clinical studies for decades. Using data gathered from a wearable device that continuously monitored the skin temperature of 600 people, half female and the other half male, over six months, bioengineers found that women's skin temperature is just as predictable as men's. This demonstrates that women should not be excluded from clinical studies. Read coverage in [The Washington Post](#).

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