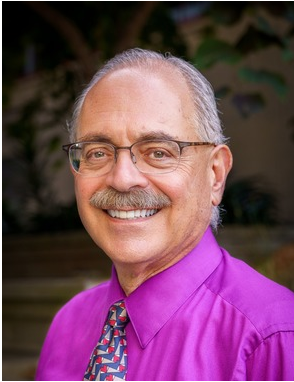


Top 10, Yet Again



Last week our UC San Diego Jacobs School of Engineering rose to #10 in the nation in the influential U.S. News & World Report Rankings of Best Engineering Schools. This is up from #11 last year. We are also the #6 public engineering school in the nation, up from #7 last year.

To our Jacobs School faculty, staff and students CONGRATULATIONS and THANK YOU!

Our work matters now more than ever. Full stop.

Our mission to deliver positive impacts to society by advancing engineering and computer science research, education and entrepreneurship is unwavering. This mission is fueled by the efforts of our incredible faculty, staff and students – in concert with our larger Jacobs School community.

In fact, as a community, we just ranked #2 in the nation among all engineering schools for research expenditures per faculty member.

Also, we earned the #1 ranking in the nation among public engineering schools for citations per publication.

[Earlier this year](#), I noted that our \$316M in Jacobs School research funding is balanced nearly 50/50 between industry/private/philanthropic funding and government funding.

We depend on both of these funding categories equally. Fundamental research surfaces applied research challenges. Tackling these applied challenges inspires even deeper fundamental research questions.

The symbiosis between these dual funding streams at the Jacobs School is more potent than ever. This interplay between fundamental and applied research brings me back to one of my mantras as an engineering dean: **the great engineering schools collaborate their way to relevance.**

This relevance is the fundamental underlying driver behind the statistics that push us up in these rankings. This relevance is what allows us to do the engineering and computer science work that improves lives. ([See this news coverage of our earthquake shake table in light of this week's San Diego quake.](#))

But the balanced funding streams that drive our relevance and positive impacts are now at risk. Our campuswide [Behind Every Breakthrough](#) campaign is an effort to raise awareness and advocate for the work that we do – work that is more important than ever. Engineering schools

need to pursue both fundamental and applied research in order to fulfill our mission to society. Together, we make **bold** possible.

As always, I can be reached at DeanPisano@ucsd.edu

Sincerely,

Al

Albert ("Al") P. Pisano

Dean, UC San Diego Jacobs School of Engineering

Special Adviser to the Chancellor for Campus Strategic Initiatives



Rising in the Rankings

The UC San Diego Jacobs School of Engineering ranks the #10 best in the nation in the influential U.S. News & World Report Rankings of Best Engineering Schools, and #6 among public schools. The Jacobs School has ranked in the Top 10 in this ranking four times in the last six years. The Jacobs School also ranked #1 among public engineering schools for academic paper citations, which is a measure of our thought leadership. We also ranked #2 in the nation for our research expenditures per faculty member. Congratulations to our faculty, staff and students and to our entire community!

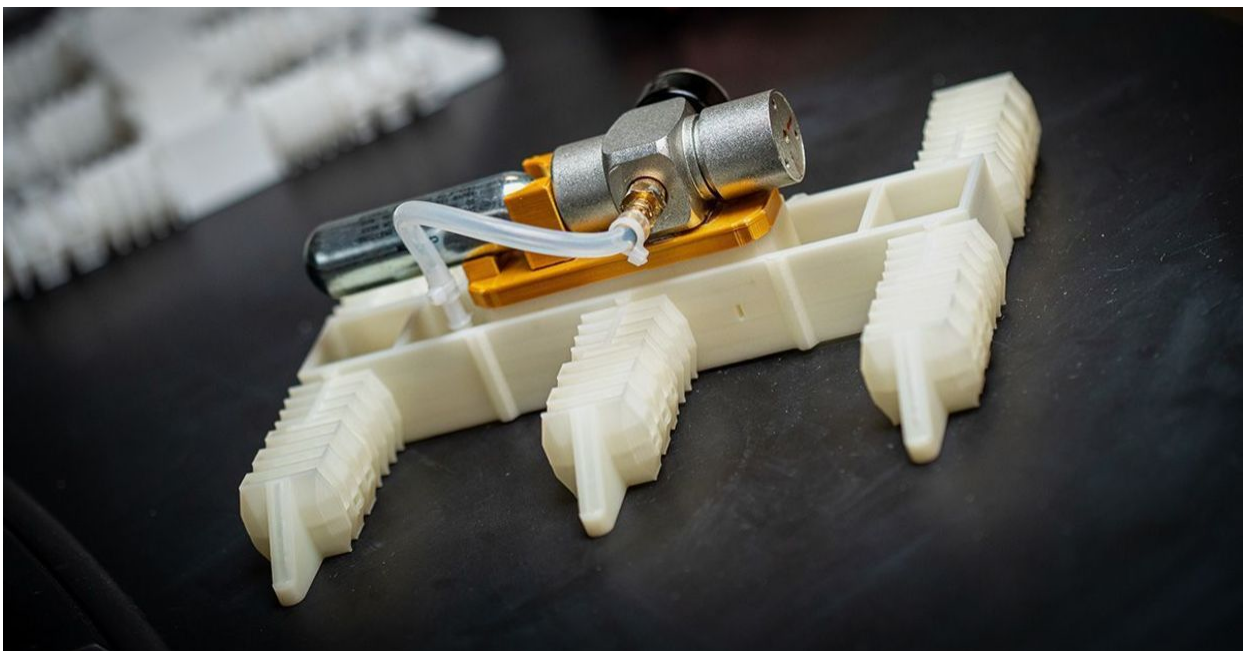
[Read More](#)



San Diego Earthquake Puts Our 10-story Building Test in Spotlight

Structures tested at UC San Diego's shake table usually only experience simulated earthquakes. But on April 14, the 10-story, steel-framed building currently standing on the earthquake simulator got to experience a real 5.2 magnitude earthquake, centered just 40 miles away. Researchers are still analyzing the data they collected during the live quake, which cast a bright light on our upcoming testing of the 10-story building. Tests begin in early June. There were no fatalities and no major structural damage sustained during the earthquake, thanks in part to the rigorous testing performed on this earthquake simulator, which is largely funded by the U.S. National Science Foundation. It is the largest outdoor shake table in the world, and testing on this shake table has resulted in more earthquake-safe buildings, roads and bridges. [Learn more about the upcoming 10-story test.](#)

Watch shake table video from CBS



Robot Walks Right Off the 3D-Printer

Mechanical engineers at UC San Diego developed a robot that can walk right off the 3D-printer using just a cartridge of compressed gas. No electronics are required. The robot can also be printed in one go, from one material. To achieve this feat, the team used the simplest technology available: a desktop 3D-printer and an off-the-shelf printing material. This design approach is not only robust, it is also cheap: each robot costs about \$20 to make. [Watch the robot in action in this video.](#)

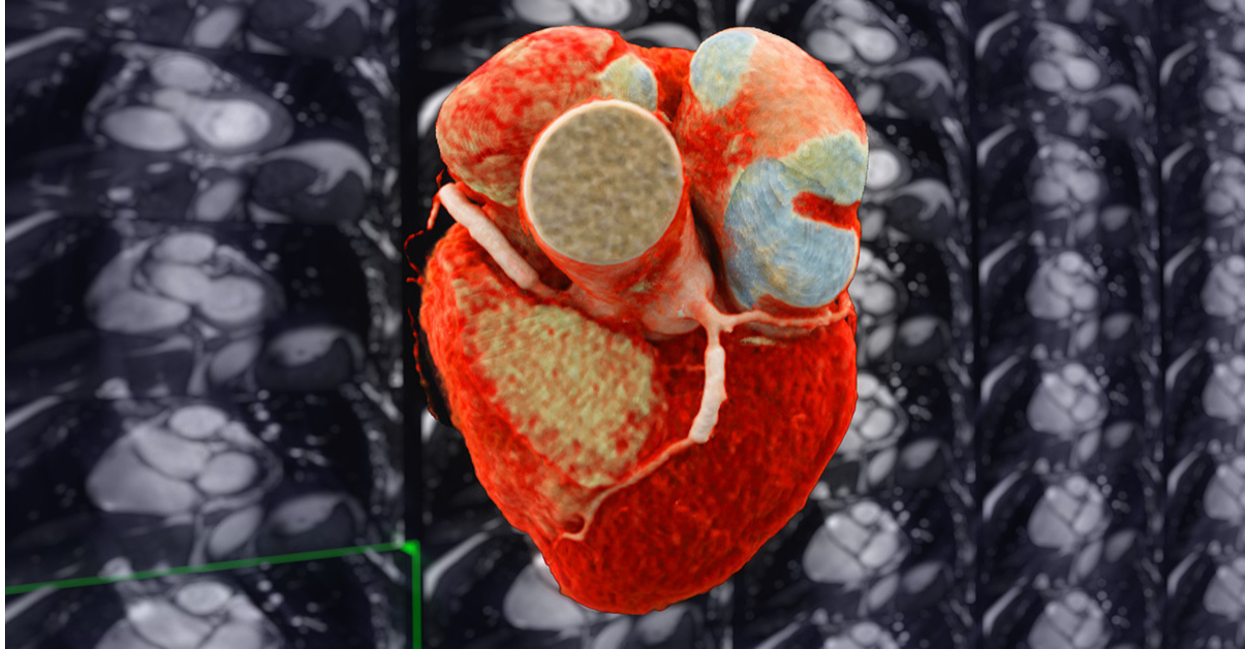
[Read More](#)



Good News for Fusion Energy Workforce Development in San Diego

As part of an updated institutional user agreement with the Office of Science DIII-D National Fusion Facility, UC San Diego personnel – including qualified graduate students – can now apply for access to the DIII-D tokamak facility without being directly tied to a dedicated multi-year grant. The DIII-D tokamak is North America's largest tokamak and an important fusion research facility. Located in San Diego, the DIII-D facility is hosted and run by General Atomics on behalf of the U.S. Department of Energy. Researchers at DIII-D are working to optimize the magnetic confinement approach to achieve practical fusion energy production. **Related:** a new General Atomics–UC San Diego center focused on fusion and AI is [highlighted in the San Diego Business Journal](#).

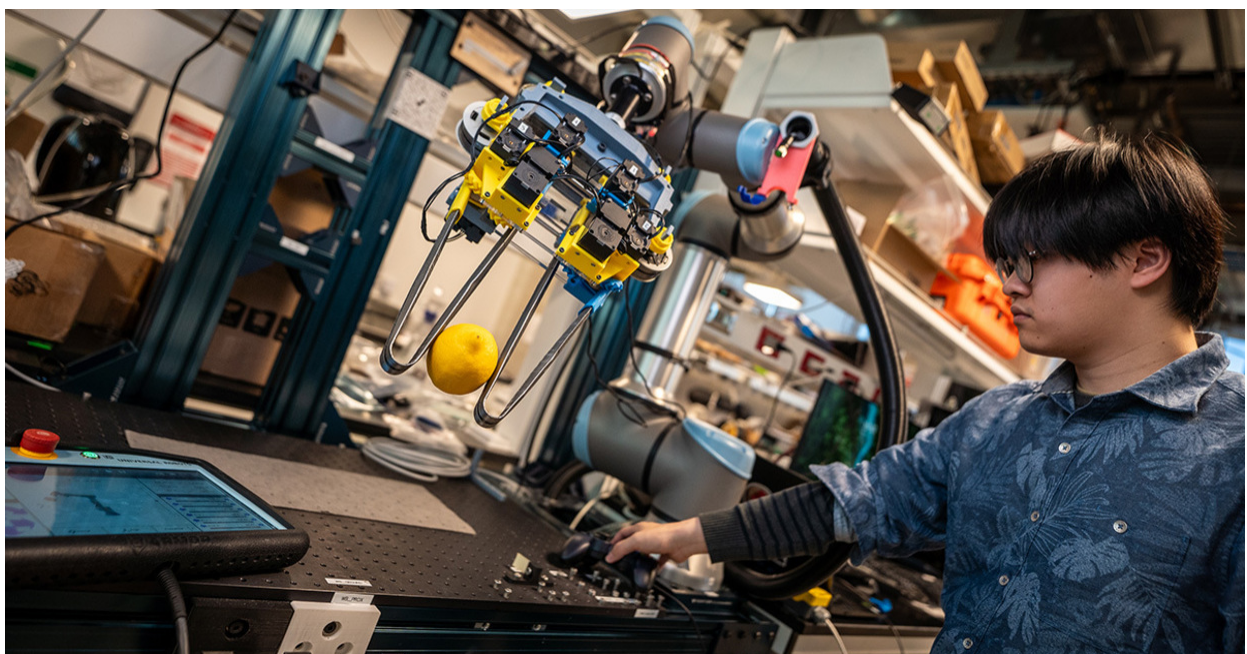
[Read More](#)



Y Chromosome Gene May Shape the Course of Heart Valve Disease

A study led by bioengineers at UC San Diego sheds new light on how a type of heart valve disease, called aortic valve stenosis, progresses differently in males and females. The research reveals that this sex-based difference can be traced to a gene on the Y chromosome. “When we study sex differences in disease, we help everyone,” said study senior author Brian Aguado, professor in the Shu Chien-Gene Lay Department of Bioengineering. “If we’re serious about improving health outcomes for all patients, we need to understand how disease works differently in both males and females.”

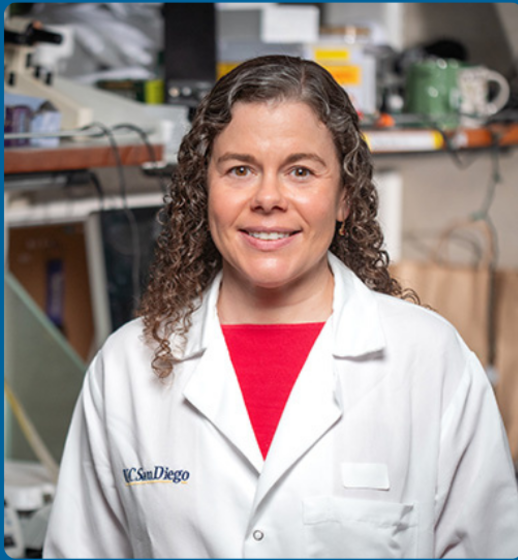
[Read More](#)



Robotic Gripper Provides Solution for Fragile Tasks

Mechanical engineers at UC San Diego took inspiration from measuring tape to design a soft yet robust robotic gripper that is capable of picking fragile fruits and vegetables without damage. It can even change a lightbulb. The gripper has two fingers made of spools of measuring tape bound together. This unique gripper is both robust and flexible. It has a long reach when extended, yet it packs up into a small container when retracted. [Watch the robot in action.](#)

[Read More](#)



Bioengineers Elected to AAAS, AIMBE

Two faculty from our #8 ranked bioengineering department have been honored for their positive impacts by world-renowned scientific organizations. **Karen Christman** is a leader in the creation and use of hydrogels and biomaterials that help heal tissues in the heart and elsewhere in the body. She has been elected a AAAS Fellow. **Daniela Valdez-Jasso** is a pioneer in uncovering the roles that biomechanical forces play in the progression of pulmonary arterial hypertension (PAH), which is a disease characterized by high blood pressure in the arteries of the lungs. Valdez-Jasso has been elected an AIMBE Fellow. Congratulations!

[Read More](#)



Support the Jacobs School on Triton Giving Day

The Jacobs School is participating in UC San Diego's annual Triton Giving Day on April 30. This year, we are featuring giving opportunities from all six departments, as well as two Jacobs School fund challenges: one to support seismic outreach for 4th-6th grade students, and one to support students in our ENLACE binational summer research program.

Empower the Jacobs School

Did someone forward you this email? [Sign up](#) to receive this email in your inbox.

[Connect with the Jacobs School](#)

Newsletter editor, Daniel Kane: dbkane@ucsd.edu

Share this email:



[Manage your preferences](#) | [Unsubscribe](#)

This email was sent to .
To continue receiving our emails, add us to your address book.

UC San Diego

[Subscribe](#) to our email list.