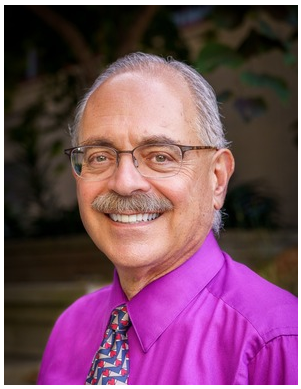
UC San Diego
JACOBS SCHOOL OF ENGINEERING

NEWS
February 2026

Powerful Everyday Impacts



Wow! This 30-second video is powerful. It is powerful because it shows how our advances in wearable technology can improve lives through better and less expensive preventive healthcare.

The video is part of a new effort spanning the entire UC San Diego campus to clearly communicate the real-world impacts of our research and education.

This project resonates with me personally. I chose to study engineering because I wanted to help. One of my early engineering goals was to build machines to help people in construction do their work without damaging their bodies. My research interests and expertise evolved over time. The scale of the machines and systems I worked on shrunk in size, but the scale of my ambition to improve lives through engineering only grew. In fact, it's been 25 years since I was elected to the NAE for my work on MEMS.

As an engineering dean, this desire to advance engineering and computer science for the public good drives me each and every day. Our top-10 ranked UC San Diego Jacobs School of Engineering is packed with similarly dedicated engineers and computer scientists.

Together, we give students incredible educational and research opportunities. And in doing so, we transform our students into the innovation workforce that is the bedrock of our economy, national security and global competitiveness.

In fact, I have been in Washington D.C. this week meeting with elected officials, congressional committees and others. My task was to explain in as straightforward terms as possible how the education and research work that we do at engineering schools like the Jacobs School matters. In particular, how our work contributes to national security and improves the everyday lives of people across the country.

It is our ability to be relevant to the nation through engineering and computer science that keeps me working so hard on behalf of our Jacobs School. This is work of national importance. I am profoundly grateful to everyone inside and outside the Jacobs School who is engaged in these efforts. Thank you!

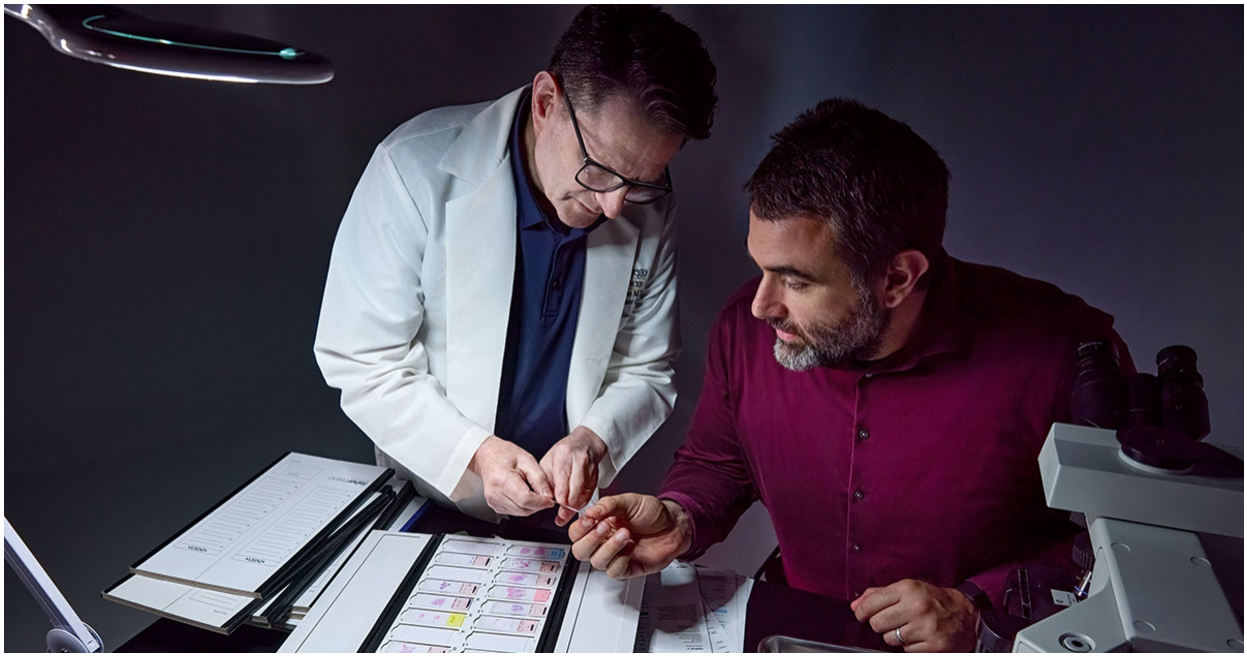
I am pleased to discuss efforts to further empower our students, faculty and staff. As always, I can be reached at: DeanPisano@ucsd.edu

Sincerely,

Al

Albert ("Al") P. Pisano
Dean, UC San Diego Jacobs School of Engineering
Special Adviser to the Chancellor for Campus Strategic Initiatives

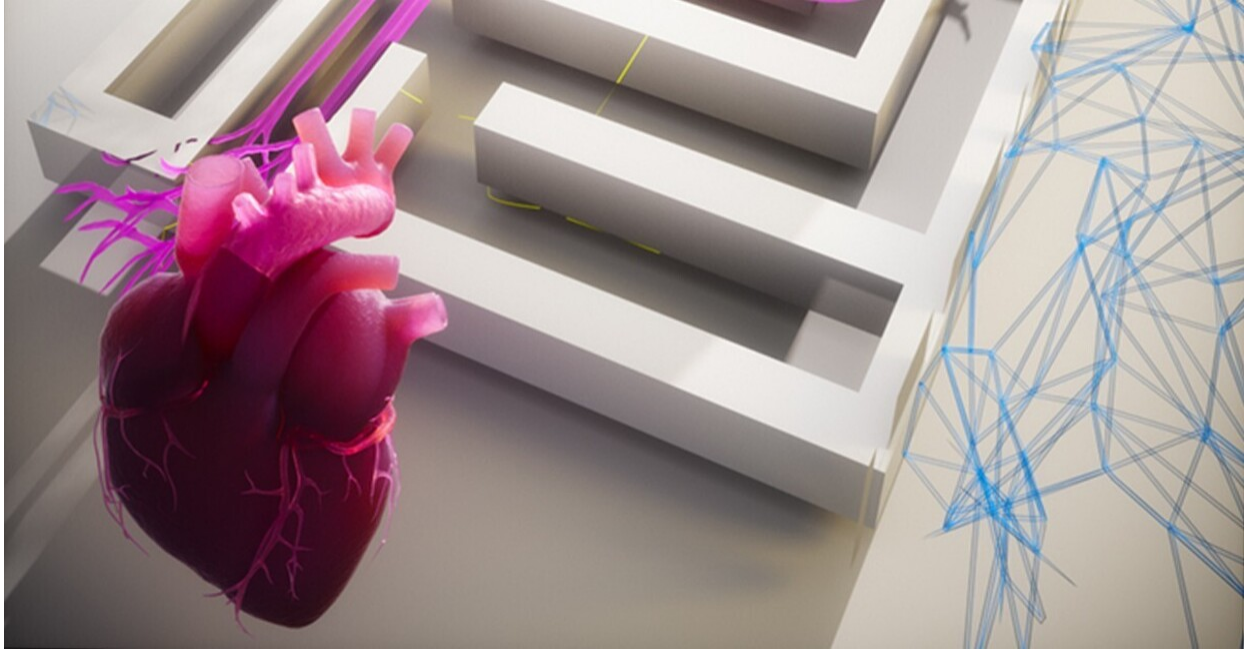
---



Research Impact in Focus

Jacobs School of Engineering research features prominently in UC San Diego's new campaign that communicates the impact of the campus' research. The effort includes powerful videos highlighting our work toward faster, more affordable cancer detection powered by AI; sensors that help doctors detect health issues earlier; translating performance science into new ways to help all of us move better and live healthier; and real-time wildfire intelligence that helps protect communities. Learn more about how UC San Diego's research impacts your life and see our faculty in action in these new videos.

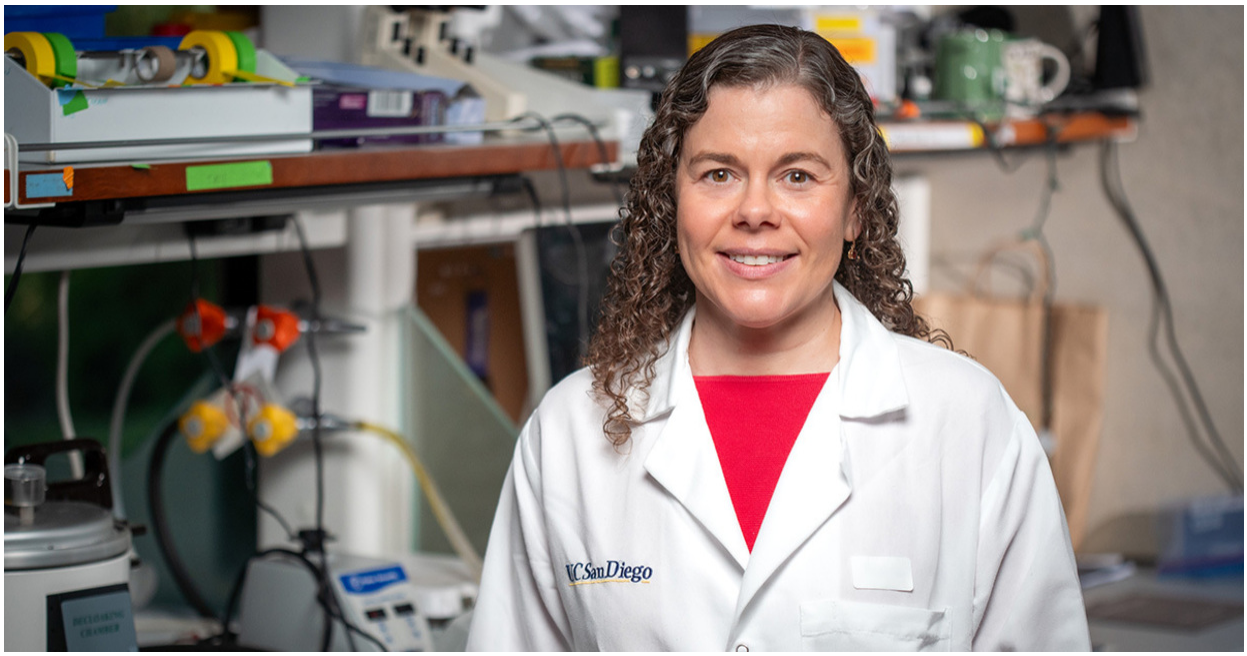
Watch the Videos



New Insights on Heart Attacks

“We tend to think of a heart attack as a plumbing problem that starts and ends in the heart. What this study shows is that the heart immediately engages the brain and immune system, and that conversation can actually make the injury worse,” said Kevin King, M.D. Ph.D. King is a lead author on this groundbreaking paper published in Cell. He is a UC San Diego bioengineering professor and a cardiologist with a faculty appointment in medicine at UC San Diego. See media coverage in NPR and Smithsonian Magazine.

Read More

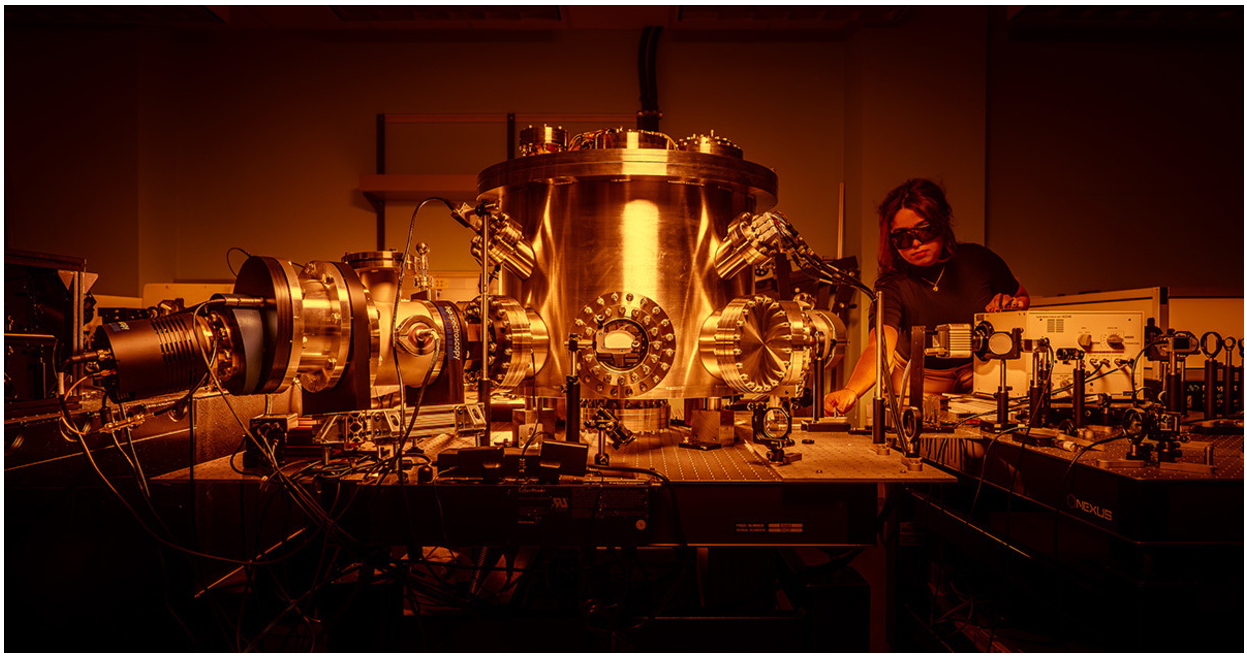


Healing Broken Hearts Through Science

Thanks to Univeristy of California research backed by federal funding, scientists across UC are developing new treatments that don’t just prevent heart damage from getting

worse, but — for the first time in medical history — actually help the heart heal. For example, UC San Diego bioengineering professor Karen Christman has done groundbreaking work treating injured hearts with extracellular matrix, or ECM, a substance our bodies produce to give our tissues shape and form. She's developed a gel made of ECM that can be administered in the aftermath of a heart attack that reduces scarring and preserves living muscle.

Read More



The U.S. Needs a Stronger National Fusion Strategy

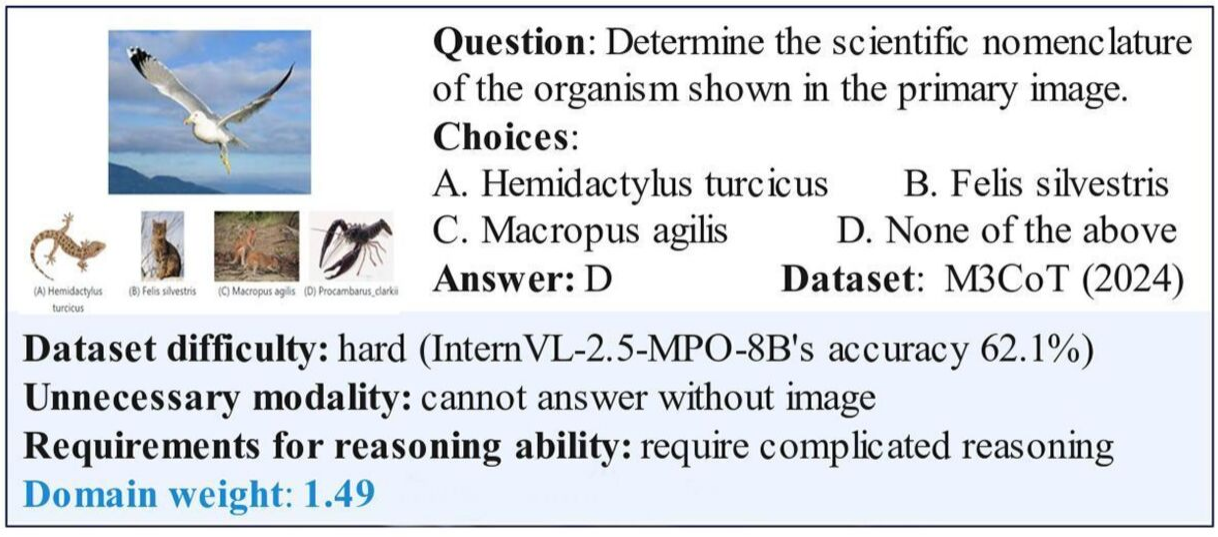
In the Los Angeles Times, Jacobs School fusion researchers explain why the United States needs a stronger national fusion strategy before our global lead in this area slips away. In an opinion piece authored by UC San Diego faculty members Farhat Beg and Mike Campbell, and MIFTI Fusion's Mihir Worah, the researchers argue that isolated breakthroughs won't win the global fusion energy race. Strategy will. Read about what a more robust national strategy for fusion energy could look like in the LA Times.

Read More

Cleanroom to Manufacture Medical Devices is Now Open

A facility for building electronic devices that can be implanted in the human body, especially for brain, eye and spinal applications, has opened at the Jacobs School. This is the first Good Manufacturing Practices (GMP) facility at a university dedicated to producing implantable medical devices for brain surgery. This will allow researchers to move innovations into the prototyping and manufacturing stages — in a single facility — and build devices ready for FDA approval.

Read More



A Smarter Way for AI to Understand Text and Images

Electrical engineers at the Jacobs School developed a new way to train AI systems to solve complex problems more reliably, particularly problems that require interpreting both

text and images. This work could give rise to more capable AI tutors that walk students through solutions step by step while checking their logic along the way. It could also provide more reliable automated analysis of business reports, complex charts or scientific papers — and do so with reduced risk of fabricated information or incorrect interpretations.

Read More

Chatbot Bias Influences Users

Jacobs School computer scientists found that customers are 32% more likely to buy a product after reading a review summary generated by a chatbot than reading the original review written by a human. Why? LLM-generated summaries often contain sentiments that are more positive than the human reviews they summarize. This is the first study to show evidence that cognitive biases introduced by LLMs have consequences on users' decision making, and the first study to measure that impact.

Read More

Burning Hydrogen Safely

Jacobs School mechanical engineers took a major step toward designing better turbines for burning hydrogen fuel. Thanks to an NSF-funded collaboration with the San Diego Supercomputer Center at UC San Diego, the researchers simulated hydrogen combustion in high-pressure conditions to better understand how to increase safety when hydrogen is burned in industrial settings. This is a critical challenge because while hydrogen burns without generating carbon emissions, the speed and intensity of hydrogen combustion are significantly different from the speed and intensity of natural gas combustion.

Read More

You’re Invited to our 44th Annual Research Expo

Join us for the Jacobs School of Engineering's 44th annual Research Expo symposium on Wednesday, April 15. Research Expo is an opportunity to learn about the latest technologies in development, meet the engineering and computer science graduate students and faculty bringing them to fruition, and recruit top tech talent from a Top 10 engineering school. More than 150 graduate students from all six Jacobs School departments will showcase their research and workforce-ready engineering and computer science skills to industry judges and guests from all across our region. Register to join us for a day of networking and discovery.

Read More
