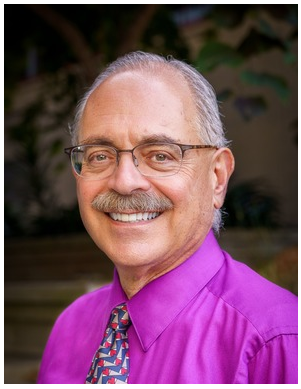
UC San Diego
JACOBS SCHOOL OF ENGINEERING

NEWS

September 2025

New Artificial Intelligence Major



I am pleased to announce that we are launching an Artificial Intelligence (AI) major this fall within our Department of Computer Science and Engineering here at the Jacobs School of Engineering.

This computer science major is in partnership with UC San Diego's new School of Computing, Information and Data Sciences (SCIDS) and others across campus.

Students in the new computer science major will be trained to build novel Artificial Intelligence technologies, assess AI technologies, and integrate AI into larger systems. We have specifically designed their curriculum so that students will graduate as adept, circumspect and ethical users of AI systems.

Here at the Jacobs School, we are committed to training the innovation workforce for the economy to come. We take it upon ourselves to produce the talent streams that fuel emerging industries across the country.

Artificial Intelligence, especially generative AI, is on everyone's mind right now. For many years, faculty across the Jacobs School of Engineering and UC San Diego overall have been at the cutting edge of many interrelated innovations that undergird the AI systems of today and tomorrow. These faculty, in collaboration with faculty leaders in the use of AI systems, are the core educators for this new major, ensuring course curricula remain at the cutting edge despite the fast-changing nature of AI.

Those of you who know the Jacobs School are aware that we have been powering emerging industries for decades. Just look at our key roles in the origins of Qualcomm and Cymer (now part of ASML) for two high-profile examples.

Our work to power emerging industries is stronger than ever. We have recently launched new programs to power the emerging industries of healthcare engineering, future biomanufacturing, fusion engineering, AI/emerging intelligence applications and 3D semiconductors. These efforts build on many other agile research centers and institutes we have launched.

This is all part of our plan of continuous renewal, our plan of ever-enhanced relevance to our industry and public-sector partners, to the regional and national economy, and to our students.

This is all part of our plan to 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

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New Major: Artificial Intelligence

Our new Artificial Intelligence major prepares computer science students to build the next generation of AI systems, improve the foundations of the AI systems currently in use, and operate with awareness of AI's ethical impacts on society. The major resides within the UC San Diego Department of Computer Science and Engineering, with connections across the entire campus, including other academic departments within the Jacobs School of Engineering and connections in partnership with the School of Computing, Information and Data Science (SCIDS).

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Bioengineering Instructional Lab Spaces Double

We have doubled our bioengineering instructional lab capacity in the Shu Chien-Gene Lay Department of Bioengineering. The new Bioengineering Instructional Lab consists of two complementary facilities that bring together different aspects of hands-on bioengineering education. The Instructional Biotech Core Laboratory serves as the home base for core undergraduate lab courses and includes tissue culture facilities. Next door, The BioElectronics and Innovation Laboratory is a workshop-style space for building and testing bioengineering senior capstone design projects. This project was made possible with resources from across campus, as well as the generous support of UC San Diego alumni — including bioengineering alumni — and friends of the department. Thank you!

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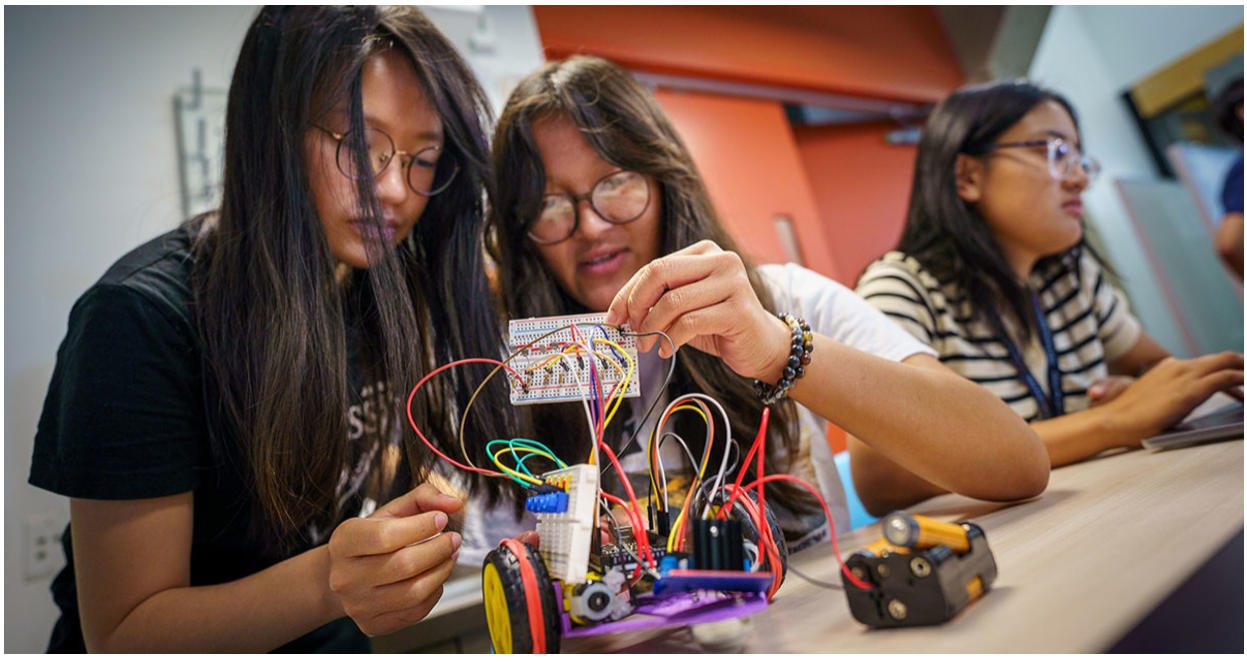

11 Undergraduate Programs Rank Top 10 Among Public Schools

For the 3rd year running, UC San Diego has been named the country's sixth best public university by U.S. News & World Report in its annual Best Colleges rankings. In addition, 11 undergraduate programs at the Jacobs School of Engineering were ranked top 10 among public schools. And four of these were also in the top 10 among all schools in the nation.

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NSF Funds Semiconductor Workforce Development

Engineers at UC San Diego have launched an NSF-funded pilot initiative aimed at growing the number of skilled U.S. workers going into the domestic semiconductor industry. The program provides free access to technical courses in semiconductors through SEMI University, hands-on semiconductor fabrication training in advanced cleanroom labs at UC San Diego, and direct connections to job opportunities within the U.S. semiconductor ecosystem. Engineering and computer science students from UC San Diego and other colleges in the region are invited to apply.

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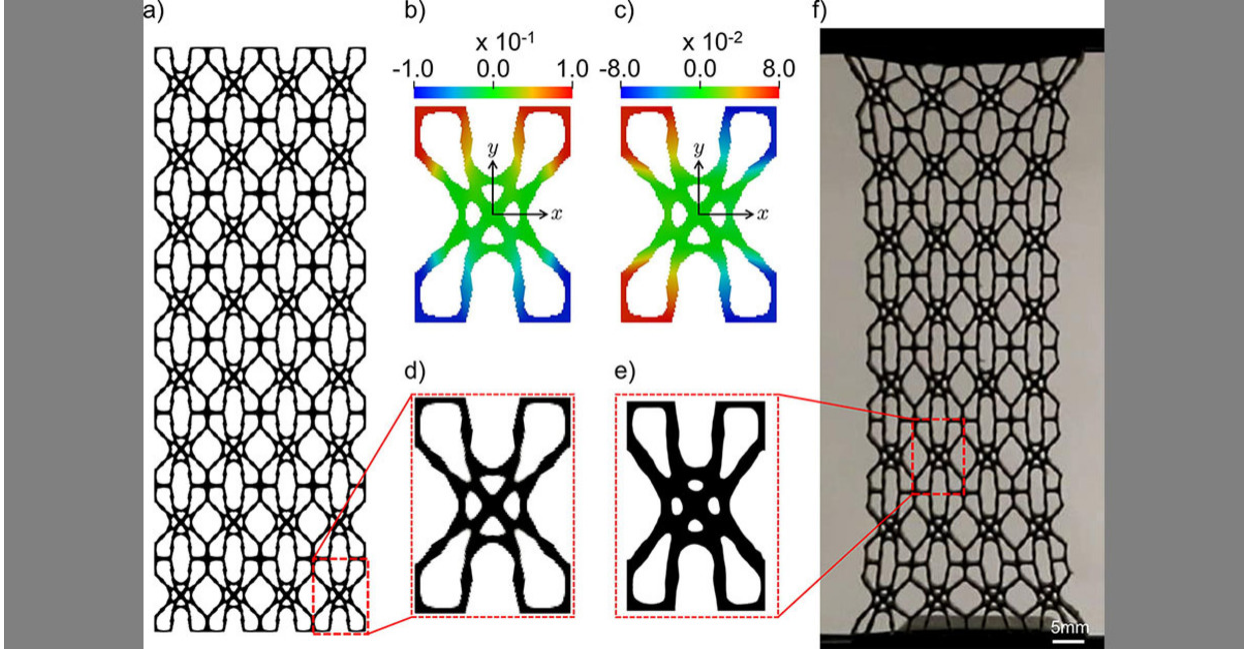

$5M DOE Center for Impact-Resistant Metamaterials

UC San Diego engineers landed a $5 million center award from the National Nuclear Security Administration, part of the Department of Energy, to develop a new class of impact-resistant materials. These materials will have unique internal geometries that give them nonlinear properties. Such impact-resistant materials have direct applications in the space and defense sectors.

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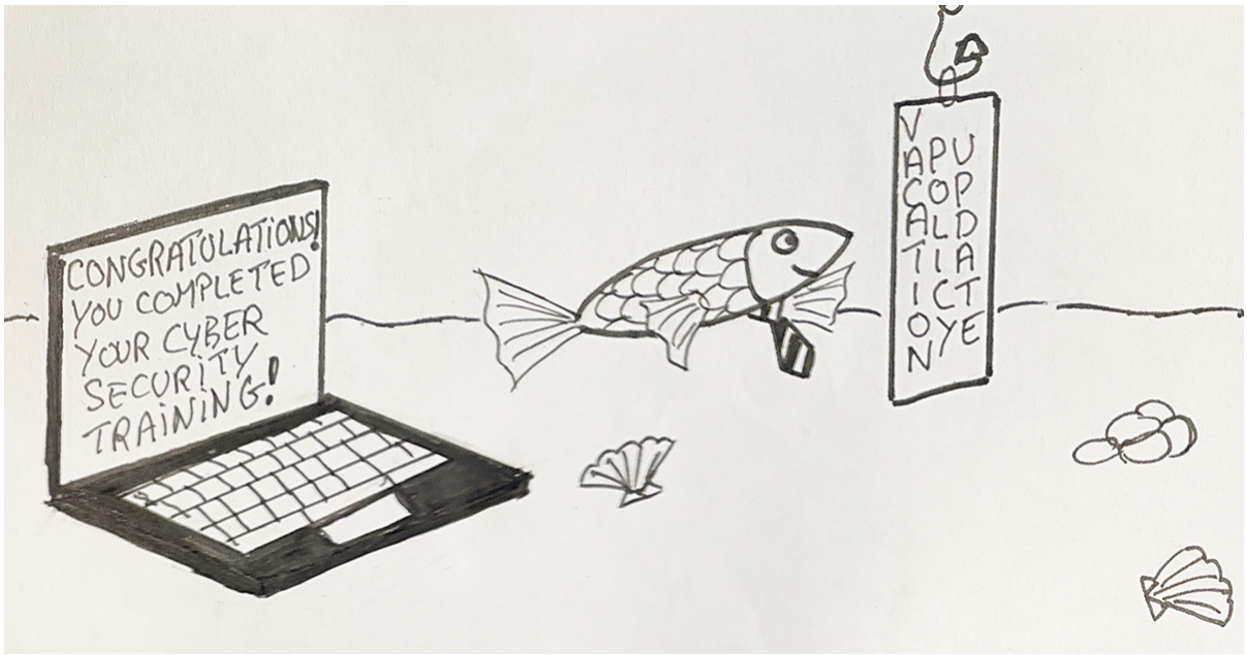

Cybersecurity Training Doesn't Stymie Phishing Scams

UC San Diego computer scientists found that cybersecurity training programs as implemented today by most large organizations do little to reduce the risk that employees will fall for phishing scams. Phishing scams involve malicious emails posing as

legitimate to get victims to share sensitive information. The researchers recommend that organizations refocus their efforts to combat phishing on technical countermeasures such as two-factor authentication for hardware and applications, and password managers that only work on correct domains.

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Trial by Fire – and Simulated Earthquakes

Remember the 10-story building that researchers shook this summer on the world's largest outdoor shaketable here at UC San Diego? After the earthquake tests, researchers set fire to two of the building's floors. Their goal is to learn how to prevent fires from igniting inside buildings that have gone through an earthquake. Researchers are also trying to better understand how buildings can withstand the blazes that can occur after a quake. Sustained support from the NSF and industry and government partners has been critical for these efforts to make structures safer for all of us.

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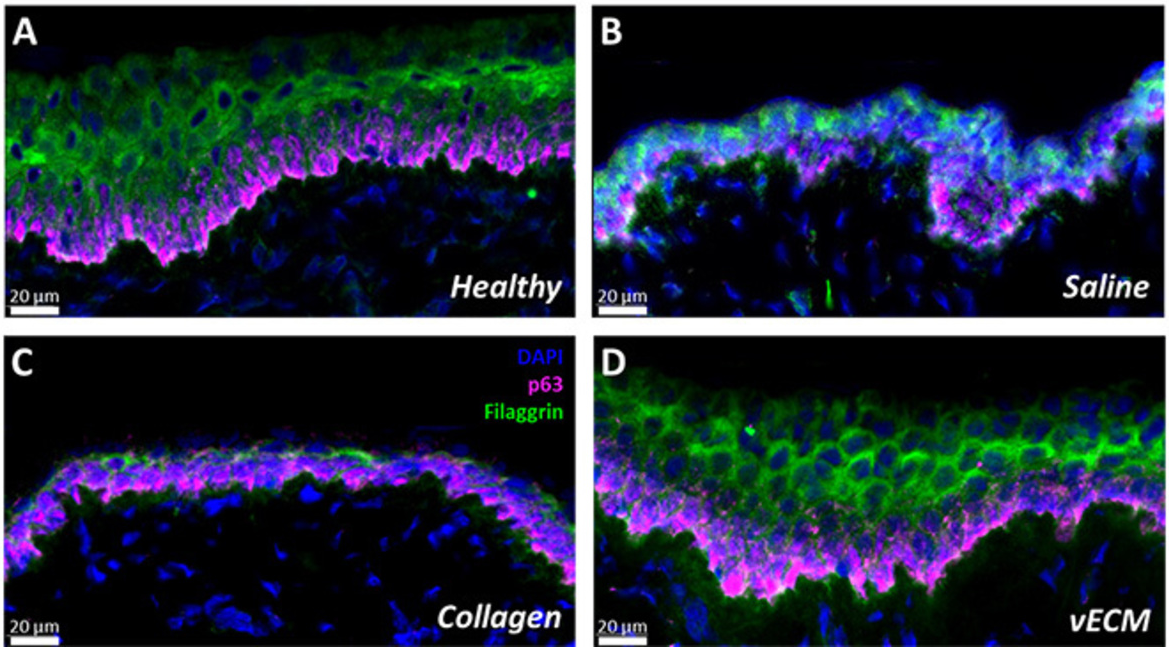

A Biomaterial To Help with Menopause Symptoms

A new hydrogel applied directly to vaginal tissues may help alleviate the negative impacts of menopause, according to a new study from bioengineers and physicians at UC San Diego. The results could pave the way for a hormone-free treatment that alleviates vaginal dryness and pain caused by genitourinary syndrome of menopause (GSM), which negatively impacts quality of life for millions of women.

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Siebel Scholars Advance Human Health Through Engineering

Five Jacobs School graduate students have been selected as 2026 Siebel Scholars in recognition of their outstanding academic performance and leadership. These students are advancing engineering to improve lives through breakthroughs in wearable

ultrasound; cancer immunotherapy; broad-spectrum antivirals; intelligent in-cell electrophysiology; and understanding sex differences in the progression of heart disease.

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Three Data Storage Awards from Western Digital

Three UC San Diego research teams have each been awarded 1.2 petabytes of data storage from Western Digital to advance fusion energy; further spatial genomics; and preserve cultural heritage sites in 3D. These Western Digital Petabyte Innovation Quest (Peak) awards, each more than a million gigabytes of data storage, go to interdisciplinary research teams pursuing innovative data storage projects.

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