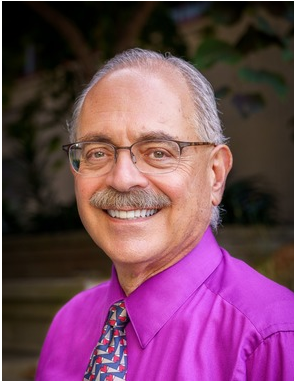


18 New Endowed Chairs!



I am absolutely thrilled to announce that we have created [18 new endowed chairs here at the UC San Diego Jacobs School of Engineering](#). Endowed chairs are a powerful and enabling resource, which is why I'm so proud of this news and why I'm so thankful to Irwin and Joan Jacobs. Their generosity and vision made these new endowed chairs possible, bringing our total number of endowed chairs to approximately 70.

Endowed chairs provide precious resources that accelerate faculty careers and provide research support for students. In

acknowledgement of their great importance, we have already filled 14 of the 18 endowed chairs. We will announce the four remaining inaugural chair holders soon.

There are two interrelated aspects of this new set of endowed chairs that I'd like to share right off the bat.

First, each of the endowed chairs is named for an early faculty member of the Jacobs School of Engineering. My conversations with Irwin led to this strategy for honoring faculty who provided strong foundations for our current Jacobs School of Engineering.

Second, each of the inaugural holders of these endowed chairs have been selected by their peers – and nearly all of the holders of these new endowed chairs are mid-career Jacobs School faculty. Each is hard at work deepening the foundations that will set the tone for tomorrow's Jacobs School – and in this way, we are honoring our foundation builders of the past and the present.

With more than 175 faculty hired into the Jacobs School since I began as Dean, we have generated a community of early and mid-career faculty whose careers need to be accelerated to the greatest extent possible. I firmly believe that it is my responsibility to ensure that our faculty are empowered to have better careers here than anywhere else – and by doing so they will help all of us lift the Jacobs School even higher.

You can be assured I will continue to work ever harder to find the resources and support needed to create additional endowed chairs not just to recognize and celebrate our incredibly deserving Jacobs School faculty – but also to continue to empower and enable them to do the research that makes bold possible.

If you are inspired to be a part of this journey to accelerate engineering and computer science to improve lives and solve the toughest challenges facing society, I hope you will get in touch.

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



18 New Endowed Chairs Created at the Jacobs School of Engineering

The Jacobs School of Engineering is proud to announce the creation of 18 new endowed chairs. These endowed chairs will empower a world-class cohort of faculty to explore new and innovative research directions. These new endowed chairs were made possible by the generous and visionary philanthropic support of Irwin and Joan Jacobs. Each chair is named in recognition of an early member of the Jacobs School faculty — professors who provided the strong foundations for today's Jacobs School of Engineering. The first 14 inaugural chair holders have been announced, with the remaining four appointments to be announced soon.

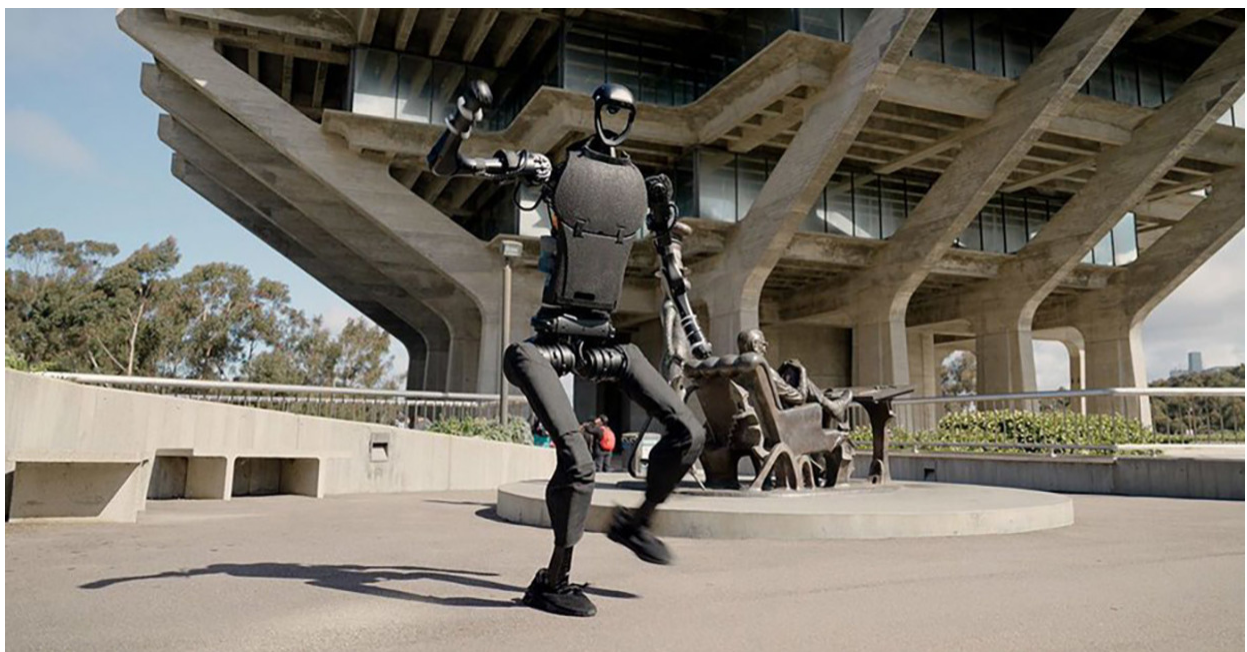
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\$42M Power Grid Testbed Will Help Us Get More Renewables on the Grid

With \$42M from the NSF, the Jacobs School's new power grid testbed will help industry and academic researchers invent, test and deploy the power grids of tomorrow. The new testbed, called DERConnect, is designed to be as flexible as possible in order to help researchers, product developers and utilities integrate more distributed energy sources such as solar panels, wind turbines, smart buildings and electric vehicle batteries into resilient power grids of the future. "We are replicating the entire California power grid in one campus," said Jan Kleissl, a professor in the UC San Diego Department of Mechanical and Aerospace Engineering and the project's principal investigator. The testbed will soon be available for industry and academic research projects.

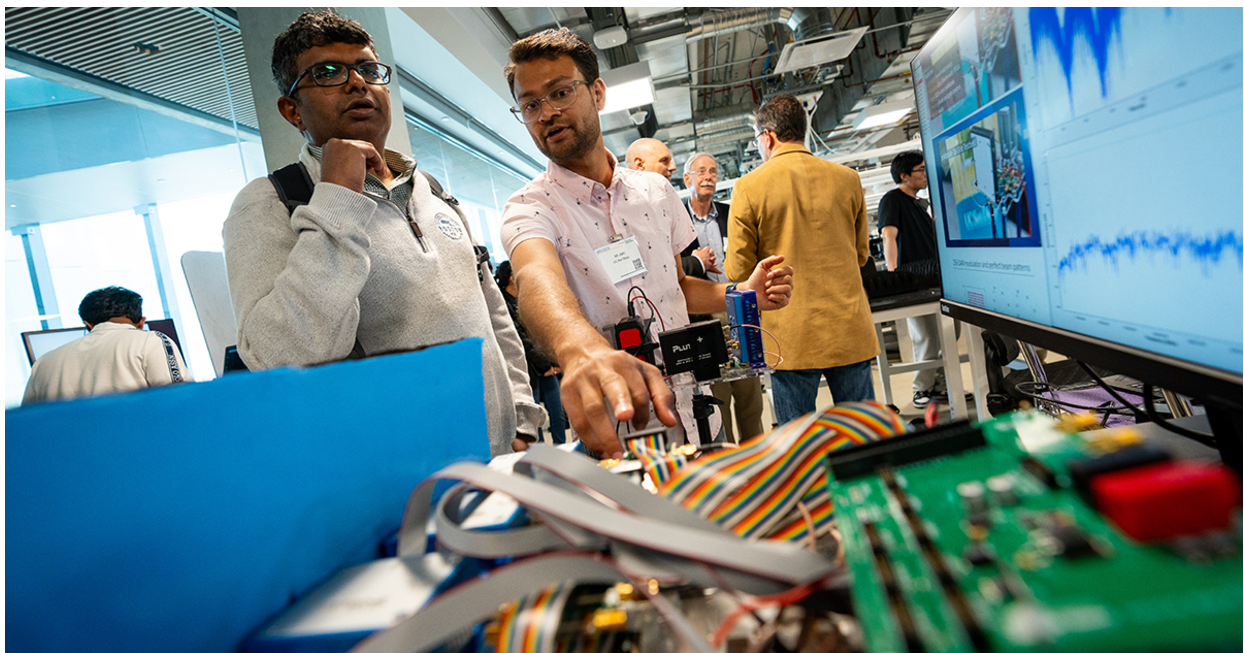
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By Learning to Dance, Robots Could Work Better With Humans

Get ready to groove with this robot! UC San Diego engineers have trained it to bust out dance moves, high-five, shake hands and even signal traffic—all while walking on different terrains. “Through expressive and more human-like body motions, we aim to build trust and showcase the potential for robots to co-exist in harmony with humans,” said electrical and computer engineering professor Xiaolong Wang. Learning more human-like motions can also prepare robots to perform more complex tasks in the future. This bot is here to show that robots can be helpful partners working alongside us, making them potentially useful on factory floors or in our homes. [Watch a video of the robot in action](#), and read coverage from [Fox News](#). Join us on September 19 for our Contextual Robotics Institute's San Diego Robotics Forum. The theme this year is Embodied Intelligence. [Learn more and register here](#).

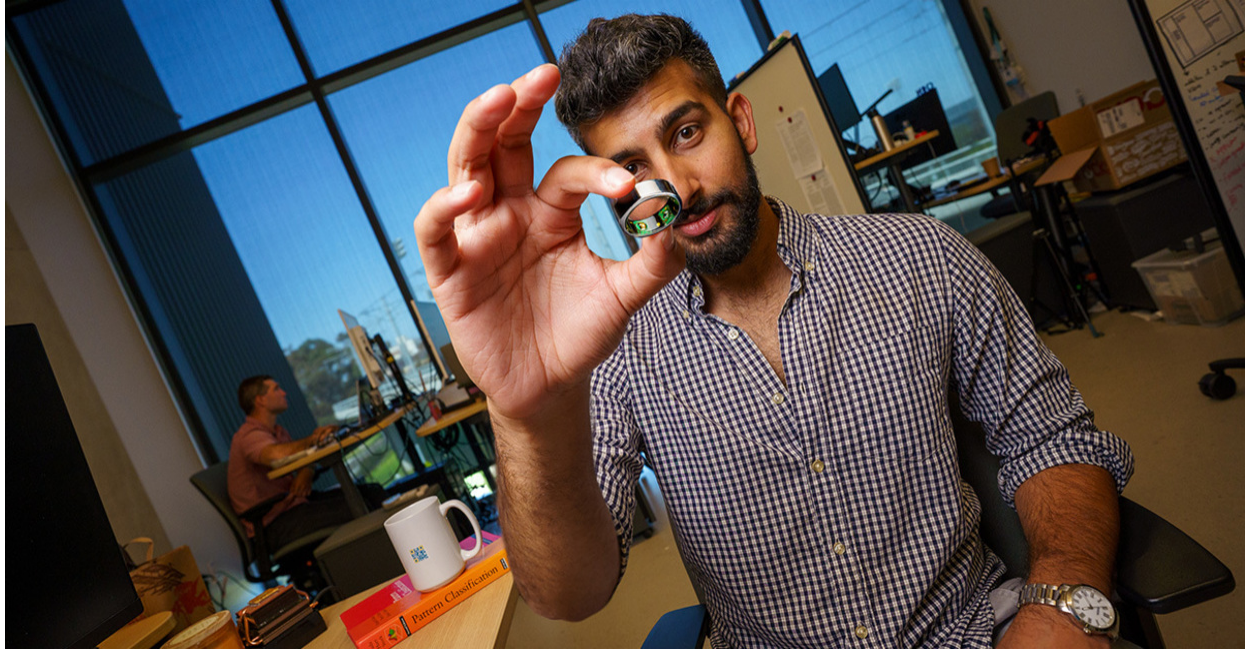
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How will AI Shape Next Generation Wireless?

The San Diego Wireless Summit, organized by our [Center for Wireless Communications](#) and co-hosted for the first time by Qualcomm Technologies, Inc, drew to UC San Diego C-suite executives from mobile operators including AT&T, T-Mobile, Verizon and Docomo, as well as from vendors including Keysight, Ericsson, Nvidia, Qualcomm Technologies, Inc., Nokia Bell Labs, to assess the state of 5G, and focus on how AI could impact the capabilities of next-generation wireless systems in areas from digital health to digital twins. It was a productive day of panels, discussions, demos and networking.

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Your Sleep Patterns Can Tell You About Your Health

An analysis of data from 5 million nights of sleep from roughly 33,000 people shows that there are five main types of sleep. How you move between these sleep types can yield information about your health. Tracking sleep pattern changes over time can provide insights into chronic conditions such as diabetes and sleep apnea, and also acute illnesses like the flu and COVID-19. Using data collected from ŌURA Ring, a smart wearable device, researchers led by bioengineers at UC San Diego found that people often move between the five sleep types over time, reflecting a change in an individual's health conditions, and creating what resembles a person's travel log through the data-driven sleep landscape the researchers created. Read coverage in [The San Diego Union-Tribune](#).

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CARMEN the Robot Helps People with Mild Cognitive Impairment

This small tabletop robot is designed to help people with mild cognitive impairment (MCI) learn skills to improve memory, attention and executive functioning at home. Unlike other robots in this space, CARMEN was developed by the research team at UC San Diego in collaboration with clinicians, people with MCI and their care partners. The researchers deployed CARMEN in the homes of several people with MCI, who engaged in multiple tasks with the robot, such as identifying routine places to leave household items so they don't get lost, and placing tasks on a calendar so they won't be forgotten. [Watch the CARMEN video](#) and read more in the [CyberGuy Report on Fox](#). Join us on September 19 for our Contextual Robotics Institute's San Diego Robotics Forum. The theme this year is Embodied Intelligence. [Learn more and register here.](#)

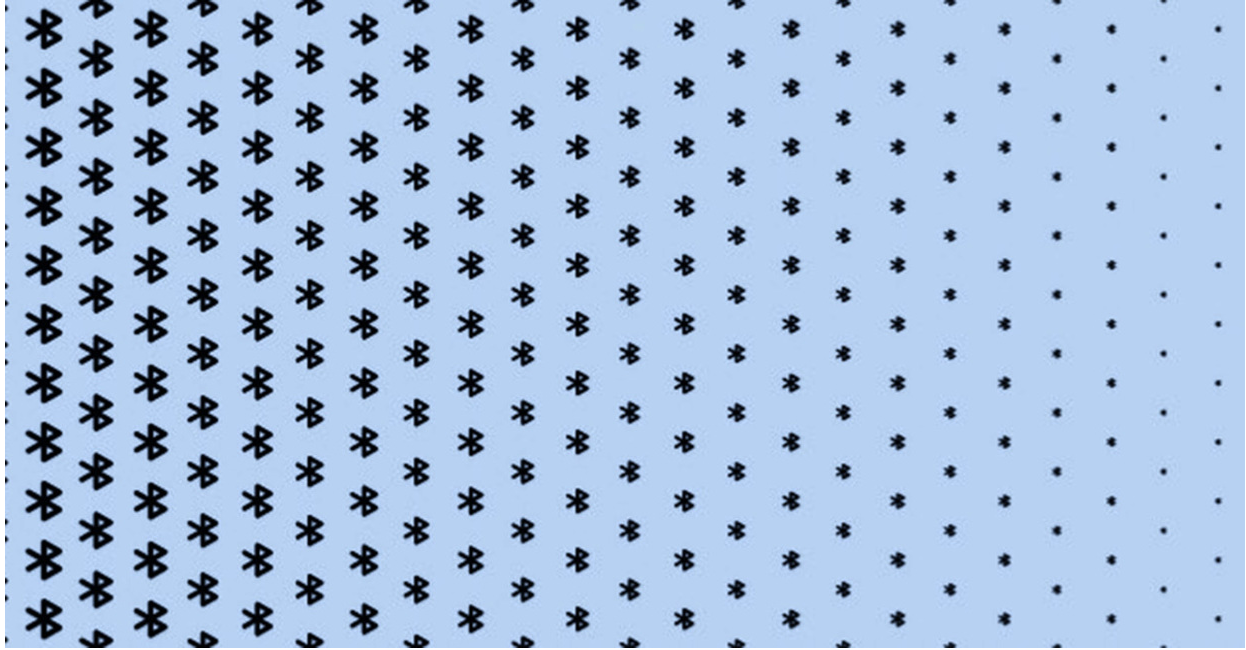
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Improving Lactation Care with Phones and AI

In a step toward using AI to provide faster and more accurate lactation care to breastfeeding mothers, electrical engineers at UC San Diego are developing a tool to identify breastfeeding-related conditions from simple phone images. The tool leverages neural networks to identify and classify an image of a breast as healthy, or having one of six common breastfeeding-related complications. The goal is to use such a tool to allow lactation consultants to virtually and confidentially triage patients based on the urgency of their needs and to help inform mothers when to seek professional help to avoid worsening symptoms.

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Firmware Update Addresses Bluetooth Vulnerability

In 2022, a team of UC San Diego computer scientists and electrical engineers discovered that [a smartphone's unique Bluetooth fingerprint could be used to track the device's user](#). Now, the team has developed a fix: a simple firmware update that can completely hide the Bluetooth fingerprint, eliminating the vulnerability. The math behind the update itself is complex but the implementation is not. The researchers implemented a prototype of this new defense on the Texas Instruments CC2640 chipset currently used in a number of smart devices, such as fitness trackers, tags and lighting systems. They found that the adversary had to observe a device continuously for more than 10 days to achieve the same level of tracking accuracy as they could achieve within a minute without the firmware update. The researchers are now looking for industry partners that can build this technology into their chipsets.

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