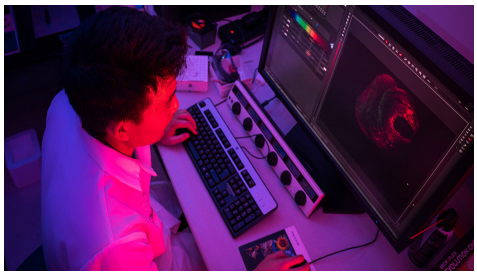
UC San Diego
JACOBS SCHOOL OF ENGINEERING

MONTHLY NEWS DEC 2019

A new engineering building at the Jacobs School

UC San Diego celebrated the groundbreaking of its newest engineering building, Franklin Antonio Hall, on November 15. The 186,000-square-foot building is designed for collaborative research, active learning, and the transfer of innovation to society. Research teams from across the Jacobs School, the campus, and the region will come together in the new building to work in areas including renewable energy technologies, smart cities and smart transportation, wearables, robotics, real-time data analysis and decision making, digital privacy and security, nanotechnology and precision medicine. Franklin Antonio Hall will also serve as an important new facility for undergraduate and graduate-student learning, both inside and outside the classroom. The building is set to open in 2022.

Learn more: bit.ly/FAHtwstory



Ten bioengineers on highly cited researchers list

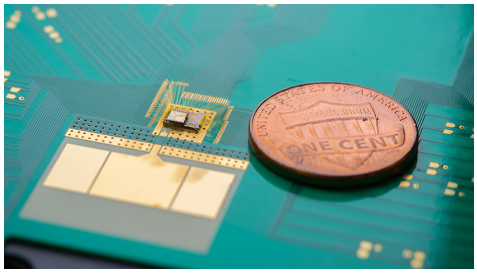
Ten faculty members and affiliates of the Department of Bioengineering at UC San Diego are among the world's most influential in their fields, according to a new research citation report from the Web of Science. UC San Diego played key roles in launching bioengineering 50 years ago, and the new report is yet another indicator that the Department of Bioengineering at the Jacobs School continues to shape the future of bioengineering. The list highlights researchers with the top 1% of most-cited publications in their field over the past 11 years.

Learn more: bit.ly/HighlyCitedBioeng2019

Entrepreneurship gets million-dollar boost

The Institute for the Global Entrepreneur at the Jacobs School received a $1 million philanthropic seed investment from the Legler Benbough Foundation for its new Founders Fund. The fund aims to build a legacy of philanthropy from successful founders who go through entrepreneurship programs at the Jacobs School. The Institute also announced a new MedTech accelerator in collaboration with the Altman Clinical and Translational Research Institute; and the Shah Family Entrepreneurial Fellowship for Jacobs School graduate students. All these announcements were made at a recent showcase featuring 20+ tech teams and startups from across campus and the surrounding San Diego ecosystem.

Learn more: bit.ly/IGEshowcase



Chip for waking up wireless devices extends battery life

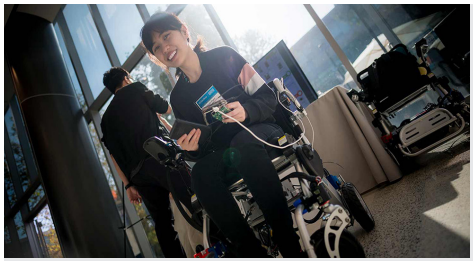
A new power saving chip developed by electrical engineers at UC San Diego could significantly reduce or eliminate the need to replace batteries in Internet of Things devices and wearables. The so-called wake-up receiver wakes up a device only when it needs to communicate and perform its function. It allows the device to stay dormant the rest of the time and reduce power use. The team was led by electrical and computer engineering professors Patrick Mercier, Drew Hall and Gabriel Rebeiz.

Learn more: bit.ly/UCSDWakeUpChip

Self-driving mail delivery begins on campus

As part of autonomous transportation research at the Jacobs School, self-driving vehicles are delivering mail at UC San Diego. "We're trying to understand how we can use vehicles to do 'last mile' logistics: that is, when autonomous vehicles get off the freeway and onto crowded streets that they have to share with other vehicles and pedestrians," said Henrik Christensen, director of the Contextual Robotics Institute at UC San Diego and the lead researcher on the project. The algorithms that enable the vehicles to share the road with cars and people were developed by UC San Diego researchers.

Learn more: bit.ly/UCSDautomail

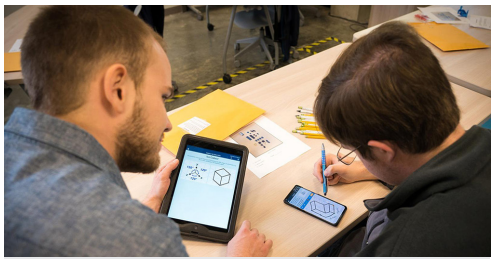


Alumni power San Diego robotics ecosystem

UC San Diego engineering alumni are at the core of the robotics ecosystem here in San Diego County. This was clearly evident at the sixth annual robotics forum organized by the UC San Diego Contextual Robotics Institute, which focused exclusively on local companies this year to showcase the breadth and depth of the region's robotics strengths. UC San Diego plays an important role in the local economy, both by providing engineers and computer scientists for the workforce, and by making discoveries that can be licensed by industry. In order to best prepare students to meet the demands of the local and global robotics industry, the Jacobs School is launching a new robotics master's degree program in summer 2020.

Learn more: bit.ly/SDRoboForumRecap

Spinoff company launches spatial visualization app



Engineering professors at the Jacobs School have developed a touchscreen app to teach students how to sketch 2D projections and 3D views freehand, boosting spatial visualization skills. This is important in many STEM fields, from Computer-Aided-Design in engineering to using ultrasound for medical procedures. The app is produced by eGrove Education Inc., a company co-founded by Nathan Delson, a UC San Diego mechanical engineering teaching professor, and Lelli Van Den Einde, a UC San Diego structural engineering teaching professor. They received a $750,000 SBIR grant from the NSF to develop the app, which is available in the Apple App Store and Google Play Store.

Learn more: bit.ly/SpatialApp

$2.3 million in NSF grants to create personalized healthcare robots

Computer science professor Laurel Riek is the lead researcher on $2.3 million in new grants from the NSF to investigate how intelligent, personalized robots can be used to support neurorehabilitation for adults with mild cognitive impairment and adults recuperating from a stroke. In collaboration with clinical psychologists at UC San Diego, Riek's Healthcare Robotics Lab will develop new methods to deliver and sustain neurorehabilitation and create new approaches to support long-term robot learning in the real world. In a second grant, the team will work with UC Davis to create new intelligent technologies to support people who have had strokes.

Learn more: bit.ly/NeurorehabRobots