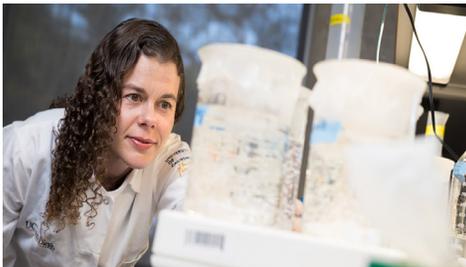


## 18 new faculty hires in Fall 2019

The UC San Diego Jacobs School of Engineering is proud to welcome 18 new faculty in Fall 2019. The Jacobs School hires faculty with clear-eyed determination, technical smarts, creativity, and the openness to collaborate across disciplines and industries. "It's about the people," said Albert P. Pisano, Dean of the UC San Diego Jacobs School of Engineering. "When I think of all the lives that will be inspired and improved by the work of our new faculty, I'm humbled. I'm also thrilled. WOW."

Learn more: [bit.ly/2019NewFaculty](http://bit.ly/2019NewFaculty)



## FDA trial shows heart-healing hydrogel safe in humans

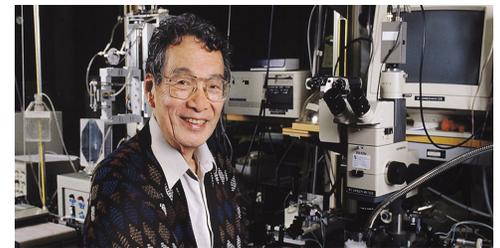
Ventrix, a UC San Diego bioengineering spin-off company, successfully conducted a clinical trial of an injectable hydrogel that aims to repair damage and restore cardiac function in heart failure patients who previously suffered a heart attack. The hydrogel was invented by bioengineering Professor Karen Christman, who is the cofounder of Ventrix. The FDA-approved Phase 1 clinical trial is the first to test a hydrogel designed to repair cardiac tissue, and the first to test a hydrogel made from the natural scaffolding of cardiac muscle tissue known as the extracellular matrix.

Learn more: [bit.ly/ventrigelphase1](http://bit.ly/ventrigelphase1)

## Father of biomechanics, Bert Fung, turns 100

Y.C. Bert Fung realized early on that physics and mechanics apply to living tissues just as they do to aerospace structures. The research, teaching and mentorship that followed made him the father of biomechanics. "I turned to bioengineering, with a focus on people, because I felt that although we know so much about airplanes, we don't know much about ourselves," said Fung in a 2007 speech. The UC San Diego bioengineering professor emeritus turned 100 in September. He is a founder of bioengineering at UC San Diego, which is ranked No. 1 in the nation by the National Research Council. He was the fourth person ever to be elected into all three branches of the National Academies.

Learn more: [bit.ly/Fung100](http://bit.ly/Fung100)



## Two engineers receive NIH Director's Awards

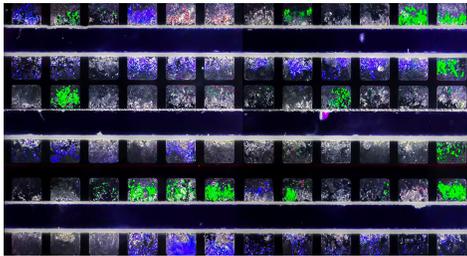
UC San Diego engineers Rob Knight and Shadi Dayeh have received NIH Director's awards. Rob Knight is a professor of pediatrics, bioengineering and computer science; and director of the UC San Diego Center for Microbiome Innovation. He was awarded an NIH Pioneer Award to study how the gut microbiome can be optimized to help prevent and treat infections. Electrical engineering professor Shadi Dayeh was awarded the New Innovator Award to develop new brain mapping technologies that can better guide neurosurgeons to remove brain tumors and epileptogenic tissue more precisely.

Learn more: [bit.ly/NIHEngineerAwards](http://bit.ly/NIHEngineerAwards)

## Bioengineering graduate students honored as Siebel Scholars

UC San Diego is one of just five schools that is honored to name Siebel Scholars in bioengineering each year. The Siebel Scholars program recognizes the most talented students in the world's leading graduate schools of business, computer science, bioengineering and energy science. As 2020 Siebel Scholars, the five bioengineering doctoral students receive \$35,000 toward their final year of school.

Learn more: [bit.ly/UCSDSiebelScholars](http://bit.ly/UCSDSiebelScholars)



## Synthetic biology breakthrough published in *Science*

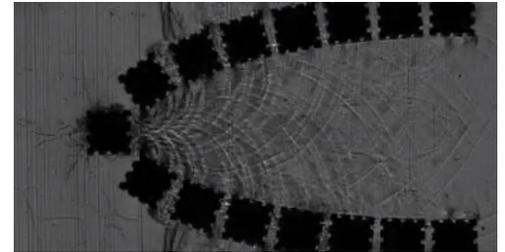
Bioengineers at UC San Diego addressed one of the biggest challenges in synthetic biology: a new way to extend the functional life of gene circuits. The team from Jeff Hasty's lab demonstrated the work with a circuit they are using to develop new cancer therapies, though their approach can be extended to many different applications. "There is still work to do, but we're showing that we can swap populations and keep the circuit running," said Hasty.

Learn more: [bit.ly/RPS\\_Science19](http://bit.ly/RPS_Science19)

## Groovy patterns better mitigate shock waves

Undergraduate engineers discovered a method that could make materials more resilient against massive shocks such as earthquakes or explosions. The students, conducting research in Professor Veronica Eliasson's structural engineering lab, used a shock tube to generate powerful explosions, and captured the results on an ultra high-speed camera. They found that cutting grooves into obstacle materials arranged in a logarithmic spiral diminished the impacts of the reflected shock wave, which could be used to design more sound materials and structures.

Learn more: [bit.ly/GroovyMaterials](http://bit.ly/GroovyMaterials)



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Contact newsletter editor, Daniel Kane: [dbkane@ucsd.edu](mailto:dbkane@ucsd.edu)

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