

In memoriam: Franklin Antonio

I'm extremely sad to share that our alumnus, friend, and collaborator, Franklin Antonio, recently passed away. Franklin Antonio – a co-founder of Qualcomm – was a staunch advocate for our students and a generous supporter of our educational mission. He donated \$30 million to UC San Diego in 2017. In honor of his support for the programmatic expansion of the UC San Diego Jacobs School of Engineering, we named our new building in his honor: Franklin Antonio Hall.

I have never been more determined to make good on our commitments. I have never been more determined to ensure that Franklin Antonio Hall truly serves our students through a design that ensures the circulation of people and ideas. That was the vision that Franklin and I co-created during our walks on the building site, and that is the vision that we will deliver.

We just completed the construction of Franklin Antonio Hall this spring, and research teams are preparing to move into the 13 collaborative research laboratories right now. We are also finalizing our teaching, learning, entrepreneurship, executive outreach, and socializing spaces. We will officially celebrate the building opening in September with a campus-wide event.

Franklin will be dearly missed. At this moment, it's hard to imagine the September celebration without Franklin. We will honor Franklin's engineering legacy at Qualcomm, we will thank him for his advocacy for our students, we will never forget his support of the larger mission of the Jacobs School.

More than 40 donors joined Franklin Antonio in support of this machine for innovation. Recently, many of our Franklin Antonio Hall donors came together for the first time in the new building. A dynamic community has self-assembled around the shared vision behind the project, and I look forward to working with this wonderful, ever growing, group of people and companies to deliver on all the positive outcomes that we planned for when we designed this machine for innovation.

Franklin, we will make you proud.

As always, I can be reached at DeanPisano@eng.ucsd.edu.

~Albert P. Pisano, Dean

UC San Diego Jacobs School of Engineering



Franklin Antonio

UC San Diego to host workshop to diversify engineering faculty

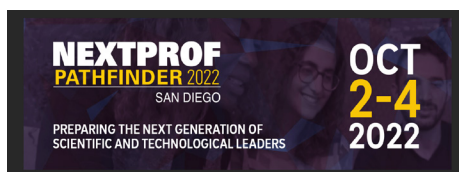
The Jacobs School of Engineering is proud to host the 2022 NextProf Pathfinder workshop this Oct. 2 - 4, in partnership with the University of Michigan. Applications are now open for the workshop, which is designed for 1st and 2nd year Ph.D. students, and master's students intending to apply to a Ph.D. program. NextProf Pathfinder prepares participants for a successful career in academia, and encourages those in groups underrepresented in the engineering and computer science faculty to pursue careers in academia.

Learn more: bit.ly/NextProf2022

Multi-tasking wearable continuously monitors glucose, alcohol and lactate

Engineers at UC San Diego developed a wearable device that can serve as a continuous glucose monitor, Breathalyzer, and fitness monitor all in one. Their prototype is about the size of a stack of six quarters. It can continuously monitor several health stats—glucose, alcohol, and lactate levels—simultaneously in real-time. It is applied to the skin through a Velcro-like patch of microscopic needles that are each about one-fifth the width of a human hair. The device can be worn on the upper arm and sends data wirelessly to a custom smartphone app. The research was led by engineers in our Center for Wearable Sensors.

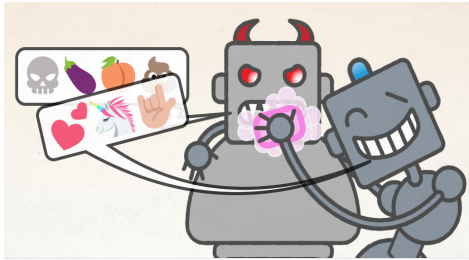
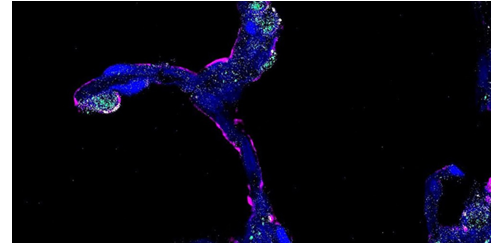
Learn more: bit.ly/MultiTaskingWearable



Mapping lung development after birth into late childhood

How do the lungs develop after their first breaths outside the womb? What cellular changes early in life give rise to lung malfunction and disease? Researchers from UC San Diego and UNC Chapel Hill created the first single-cell-resolution map of postnatal lung development to help answer these questions. The research could help provide a more detailed understanding of which genetic and epigenetic factors affect lung health across the human lifespan, starting from birth.

Learn more: bit.ly/PostnatalLungMap



Cleaning up online bots' speech

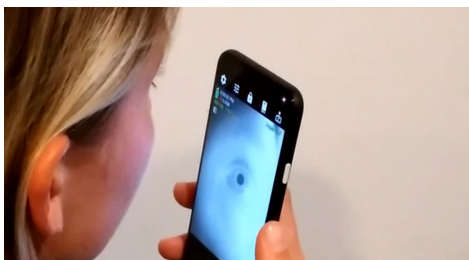
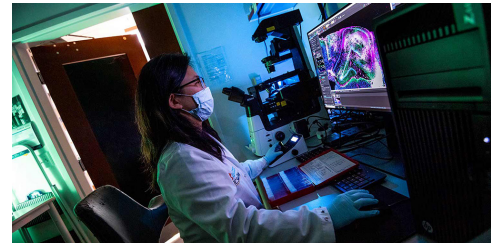
Computer scientists at UC San Diego have developed algorithms to rid speech generated by online bots of offensive language, on social media and elsewhere. To do so, they first fed toxic prompts to a pre-trained language model to get it to generate toxic content. Researchers then trained the model to predict the likelihood that content would be toxic. They call this their "evil model." They then trained a "good model," which was taught to avoid all the content highly ranked by the "evil model."

Learn more: bit.ly/betterbotsspeech

Nano-tools to diagnose and treat traumatic brain injury

Each year, between 2 million and 3 million Americans suffer from traumatic brain injuries (TBI). There are currently no treatments to stop the long-term effects of TBI, and accurate diagnosis requires a visit to a medical center for a CT scan or MRI. UC San Diego bioengineering Professor Ester Kwon aims to change that. Kwon's team is developing nanomaterials that could be used to diagnose traumatic brain injury on the spot, be it a sports field, the scene of a car accident, or a clinical setting. They're also engineering nanoparticles that could target the portion of the patient's brain that was injured, delivering specific therapeutics to treat the injury and improve the patient's long-term quality of life.

Learn more: bit.ly/NanoToolsforTBI



Smartphone app for at-home screening of Alzheimer's, ADHD

Electrical engineers at UC San Diego have developed a smartphone app that could allow people to screen for Alzheimer's disease, ADHD and other neurological diseases and disorders—by recording closeups of their eye. The app uses a near-infrared camera, which is built into newer smartphones for facial recognition, along with a regular selfie camera, to track how a person's pupil changes in size. These pupil measurements could be used to assess a person's cognitive condition.

Learn more: bit.ly/SmartphoneAppNeuroScreening

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Contact newsletter editor, Daniel Kane: dbkane@ucsd.edu

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