UC San Diego
JACOBS SCHOOL OF ENGINEERING

MONTHLY NEWS APR 2017

$75 Million Gift for Data Science at UC San Diego

With a $75 Million gift from computer science alumnus Taner Halicioglu, UC San Diego will establish the Halicioglu Institute for Data Science. Halicioglu's gift will provide the institute with fellowships for faculty, postdocs, and graduate students; undergraduate scholarships; support for lecturers; innovation grants; outreach and networking events; and operations and infrastructure support. At UC San Diego, Halicioglu teaches an undergraduate seminar in computer operations and production engineering where he shares insights he's learned throughout his career, including time at Facebook in the early days. In 2015, Halicioglu made a $2 million gift to support professors and lecturers in the Department of Computer Science and Engineering at the Jacobs School of Engineering.

Learn more: bit.ly/CSEGift

Pinning Down Abuse on Google Maps

A partnership between computer scientists at UC San Diego and Google has allowed the search giant to reduce by 70 percent fraudulent business listings in Google Maps. The researchers worked together to analyze more than 100,000 such listings to determine how scammers had been able to avoid detection—albeit for a limited amount of time—and how they made money. One key finding was that scammers used P.O. boxes to register fake businesses. They also often changed the business' address and category after registration. Researchers detail their findings on the Google Research blog. The research has gained national media attention, including pieces in the New Scientist and Fortune.

Learn more: bit.ly/MapsAbuse

Identifying Nerve Agents with a Glove

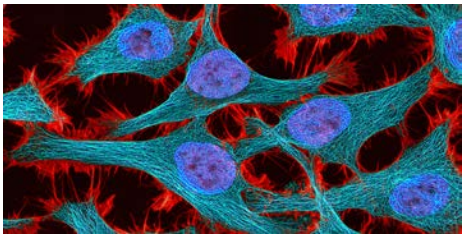
UC San Diego nanoengineers have developed a wearable biosensor glove that can rapidly detect organophosphate-based nerve agents and pesticides with the touch of a finger. The research is led by nanoengineering professor Joseph Wang, director of the UC San Diego Center for Wearable Sensors. Sampling and electrochemical biosensing steps take place on different fingers: the thumb is used for collecting nerve-agent residues and the index finger contains an enzyme that reacts with any collected organophosphate compounds. A user first swipes the thumb of the glove on a surface for testing, and then touches the thumb and index fingers together, creating an electrochemical signal that's detected by the glove's electronics. The research is published in ACS Sensors. News coverage included The Economist.

Learn more: bit.ly/LabOnGlove

Microgrids: Renewables vs Natural Gas

Mechanical engineers and public policy experts at UC San Diego systematically analyzed microgrids in Southern California to better understand the business case for private investment. "Decentralization [of the electric power grid] could radically reduce customer energy costs, but without the right policy framework it could create large numbers of small decentralized sources of gas-based carbon emissions that will be difficult to control if policy makers want to achieve deep cuts in greenhouse gas emissions," the authors from the UC San Diego Deep Decarbonization Initiative write in the April issue of the journal Energy Policy. GreenTech Media covered the story.

Learn more: bit.ly/MicrogridModel



Industry-Focused Biologics Research Center

More than $140 billion in protein-based drugs, called biologics, are produced annually by cells grown in labs. CHO cells are the most commonly used cells for producing protein-based drugs to treat cancers, autoimmune diseases and more. Humira, Avastin and Rituxan are examples. The UC San Diego CHO Systems Biology Center is an industry-focused research center that is improving production and quality of many high-value CHO pharmaceuticals. Some of this new CHO research is detailed in a story linked to the announcement below. At the same time, the Center is developing tomorrow's CHO workforce.

Learn more: bit.ly/CHOresearch

Connect with the Jacobs School at Research Expo

Hiring now? Hiring later? Attend Research Expo 2017 on April 20 to find out what's happening at the Jacobs School of Engineering: San Diego's innovation and technical workforce powerhouse. More than 200 graduate students will showcase their research during the event; poster titles and abstracts are online. In addition, attend 20-minute faculty talks for industry-relevant research highlights from Jacobs School centers designed for collaborations with corporate partners. Network with faculty, students, alumni and industry professionals.

Learn more: jacobsschool.ucsd.edu/re

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