5G Communication with Record-Setting Data Rates

Gabriel Rebeiz’s electrical engineering lab at UC San Diego, with Keysight Technologies and TowerJazz, recently announced record-setting 5G results: the world’s longest bi-directional phased-array link in the 60 GHz band. The engineers demonstrated gigabit-per-second speeds at unprecedented ranges with extremely low power consumption. At a link distance of 300 meters, for example, the 32-element array achieved a data rate of greater than 2 Gbps over all scan angles up to ±45 degrees. Data rates were 4 Gbps at 100 meters and 500 Mbps at 800 meters over most scan angles. Initial tests suggest the system can deliver content to eight homes at a time at up to 300 meters.


Institute for the Global Entrepreneur welcomes new Executive Director

Dennis Abremski, an engineer, entrepreneur and business leader, has been appointed the Executive Director of the Institute for the Global Entrepreneur (IGE). The Institute is a collaboration between UC San Diego’s Jacobs School of Engineering and Rady School of Management. The IGE trains global technology leaders and helps researchers translate university discoveries to market. Abremski will work across the campus and the region to continue the development of leadership and entrepreneurial education and training programs to prepare students and technologists to become change makers, entrepreneurs, and business leaders who drive innovation.


UC San Diego leads U.S. Robotics Roadmap

A recent U.S. Robotics Roadmap calls for better policy frameworks to safely integrate new technologies, such as self-driving cars and commercial drones, into everyday life. Henrik Christensen, Director of the UC San Diego Contextual Robotics Institute and a professor of computer science, is the lead editor of the roadmap, which was released at the Contextual Robotics Institute’s 2016 Forum. The roadmap’s authors, more than 150 researchers from around the nation, call for research to create more flexible robotics systems to accommodate the need for increased customization in manufacturing, for everything from cars to consumer electronics. Christensen’s recent robotics interview with the San Diego Union Tribune has been picked up by media outlets around the world.


Shake Burn and Learn

Full-scale buildings on the earthquake shake table, data-collecting drones, fire tests, and big-data virtual reality are all part of the Jacobs School’s efforts to improve building safety. The Jacobs School’s earthquake engineering and extreme-events-testing facilities enable researchers from academia and industry to make significant impacts on building designs, building codes, and public safety.

Creating Clinical Bioengineers

In a new Jacobs School clinical bioengineering class, undergraduates learn to bring engineering solutions to the practice of medicine. The students observe physicians, identify problems in their clinical practices, and propose engineering-based solutions that close gaps between the bench and the bedside. One of many topics of interest is imaging, which is fundamentally engineering-centric and plays an ever-increasing role in patient management. Jacobs School bioengineering professor Adam Engler teaches the course, which includes rotations at the UC San Diego School of Medicine and Rady Children's Hospital.


Research Expo is April 20: Save the Date

Come to Research Expo 2017 on April 20 and experience leading-edge engineering and computer science research. Talk technology with 200+ graduate students at the poster session. Attend 20-minute faculty talks to get industry-relevant research highlights from Jacobs School centers designed for collaborations with corporate partners. Network with faculty, students, alumni and industry professionals. Event registrations open by March 1. Interested in judging graduate-student posters? Learn more here:

Read more: http://jacobsschool.ucsd.edu/re