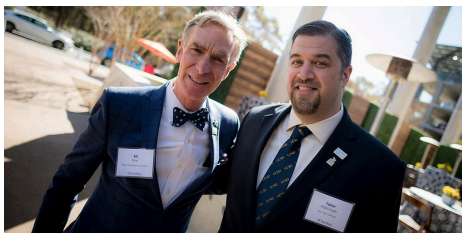## Moving up in the rankings

The Jacobs School of Engineering at the University of California San Diego rose to #12 in the nation and #7 among public universities, according to the new U.S. News graduate program rankings. That #12 spot is up from #13 last year, and #17 the year before. For the second year in a row, the Jacobs School of Engineering faculty ranked #1 in the nation for per-capita research funding among public engineering schools. "We are driving a culture of collaboration, trust, teamwork, inclusion and diversity," said dean Albert P. Pisano. "From this culture, the flow of new ideas has been incredible.".

Learn more: bit.ly/2019GradRankings

New Data Science Institute

UC San Diego launched a cross-disciplinary data science institute thanks to the generosity of Facebook pioneer and Jacobs School computer science alumnus Taner Halicioglu. Bill Nye joined Halicioglu to launch The Halicioglu Data Science Institute, which will train students in the latest data-science techniques and allow researchers across campus to incorporate data science into their respective disciplines to better understand and make predictions about the world around us. Rajesh Gupta, a professor of computer science and engineering, and Jeffrey Elman, professor of cognitive science, are the co-directors of the new institute. Halicioglu's $75 million gift is the largest alumni gift the campus has ever received, and is part of the $2 billion Campaign for UC San Diego.
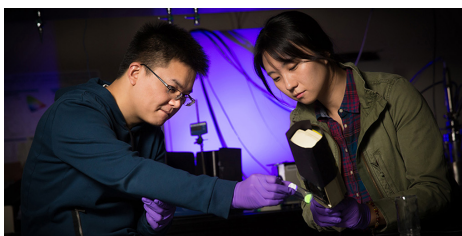
Learn more: bit.ly/DataScienceInstitute

You're invited to Research Expo

We're one month out from the annual Jacobs School of Engineering Research Expo, a chance to connect, collaborate and recruit our graduate students. In the market for top tech talent? Want to see what new technologies are coming down the pike? Looking to connect with the graduate students and professors developing tomorrow's breakthroughs? Then join us on April 19. This year's faculty tech-talk speakers are Boubacar Kante, who developed a topological laser that can propagate light in any shape; Shirley Meng, who is developing high performance batteries for electric vehicles and a green energy grid; and Henrik Christensen, who is spearheading autonomous vehicle research at UC San Diego, including mail delivery by autonomous vehicle on campus. Student research poster abstracts are now posted for review. Reserve your spot today.

Learn more: bit.ly/ResearchExpo18

Supercomputers aid discovery of inexpensive LED material

A team led by nanoengineers at the Jacobs School used data mining and computational tools to discover a new phosphor material for white LEDs that is inexpensive and easy to make. The researchers first used supercomputers and data mining algorithms to predict the new phosphor, then developed a simple recipe to make it in the lab. It performed well in tests and in LED prototypes —just as computations predicted. And while many phosphors in commercial LEDs are made of expensive rare-earth elements, this one could lower costs thanks to its makeup of earth-abundant elements. This research is part of the Jacobs School's Sustainable Power and Energy Center, which works to solve technical challenges in distributed energy generation, storage and power management.

Learn more: bit.ly/SLAOphosphor

Fur real: realistic CGI animals

The next computer-generated animals in King Kong or The Lion King could look a lot more realistic thanks to computer scientists at UC San Diego and UC Berkeley. Their new method could be applied to everything from video games, to computer-generated special effects, to computer-animated movies. The researchers developed a method that dramatically improves the way computers simulate fur, and more specifically, the way light bounces within an animal's pelt. "Our model generates much more accurate simulations and is 10 times faster than the state of the art," said Ravi Ramamoorthi, one of the paper's senior authors and the director of the Center for Visual Computing at UC San Diego.

Learn more: bit.ly/AnimalFur

Grad students build a robotics community

Jacobs School graduate students launched the Association for Robotics Graduate Students to facilitate interdisciplinary answers to technical challenges. The group's weekly robotics seminar series allows students to share research and get feedback from people in other departments, schools and divisions on campus—so far, they've had speakers from 16 departments. "I knew what the other students in my lab were working on, but I had very little idea of what students in the next lab over were working on, or in other departments," said nano-engineering graduate student Caleb Christianson, who co-founded the Association. "There is this growing interest in robotics at UC San Diego. And one way to make it flourish is to build a community for the grad students."
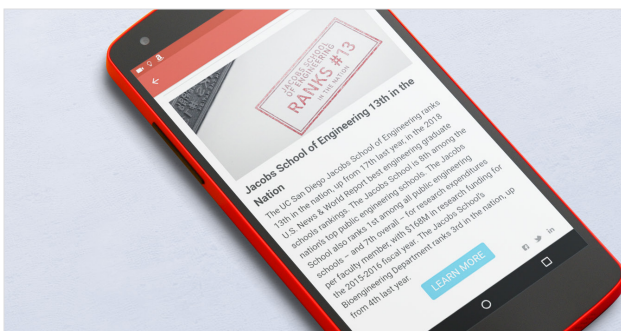

Learn more: bit.ly/RoboGrads

Engineers sweep podium at Ignite pitch competition

Engineers showed up in force at the second annual Ignite Conference pitch competition at UC San Diego. Almost a third of the 29 startups pitching their innovative business ideas during the Entrepreneur Challenge-led elevator pitch competition were founded by engineers—including the first, second and third place winners. The big winners: a smart shoe insole that monitors the weight a patient on crutches or in rehab is bearing on their foot; a device to cure bone cement in orthopedic surgery in seconds; and an artificially intelligent software system to source components for satellites were the big winners.

Learn more: bit.ly/PitchWinners

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UC San Diego – Jacobs School of Engineering Monthly News for March 2018 - jacobsschool.ucsd.edu