Jacobs School of Engineering responds to COVID-19

As Dean of the Jacobs School of Engineering, my daily work involves engaging constituents inside and outside the university to empower our faculty, students and staff. With COVID-19 upon us, it is now more important than ever. I am personally connecting resources with needs and moving conversations forward in many different directions as we respond to the pandemic and continue to deliver on our education and research missions. And I couldn't be more proud of our Jacobs School people and partners who are committed to maintaining and building momentum.

The Jacobs School recently jumped to #9 in the US News Rankings of Best Engineering Schools. This rise from #17 just four years ago reflects the world-class talents, excellence and perseverance of our entire community. I know we are all digging deep and using these qualities to make a difference during this pandemic.

Powerful pivot on education

This week, we launched the Spring Quarter in a fully remote-learning mode. I would like to recognize the grit, hard work and commitment of all the staff, faculty and students who pivoted hundreds of classes into a remote-access education machine in less than two and a half weeks. Thank you for your incredible work.

Research teams stepping up

Faculty, students, staff and alumni from across the entire school are stepping up to the many challenges the SARS-CoV-2 virus has put before us. In this email, we highlight a few of the many projects we are pursuing. Some of our newest faculty hires, here for less than a year, are leading and participating in these projects. I am blown away by this incredible burst of energy, and I look forward to sharing more news with you, as it breaks, regarding the important impact that our teams are having.
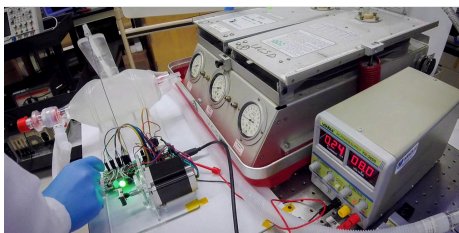
Engineering for the public good

The ethical teaching, development and deployment of engineering and computer science has never been more important than it is right now. In these challenging times, we continue the Jacobs School's work to leverage engineering for the public good -- in both education and research.

I invite you to engage with the Jacobs School and to reach out to me at: DeanPisano@eng.ucsd.edu

Take care and stay safe. We are all in this together.

-Albert P. Pisano, Dean

UC San Diego Jacobs School of Engineering

Engineers and doctors team up to retrofit and 3D-print ventilators

A team of engineers and physicians at UC San Diego is working to turn emergency hand-held ventilators into devices that can work autonomously for long periods of time, without human input. One of the primary symptoms of COVID-19 is difficulty breathing; approximately 1 percent of people who contract the virus require ventilation to support their recovery — sometimes for weeks. "We humbly thank everyone involved in this project. Support from Kratos and ONR came through incredibly quickly. I believe the outstanding effort of everyone involved will save lives," said mechanical engineering professor James Friend.

Learn more: bit.ly/autoBVM

Using robots to combat COVID-19

Can robots be effective tools in combating the COVID-19 pandemic? A group of leaders in the field of robotics, including Henrik Christensen, director of UC San Diego's Contextual Robotics Institute, say yes, and outline a number of examples in an editorial in Science Robotics. They say robots can be used for clinical care such as telemedicine and decontamination; logistics such as delivery and handling of contaminated waste; and reconnaissance such as monitoring compliance with voluntary quarantines. Christensen, a professor in the Department of Computer Science and Engineering, particularly highlighted the role that robots can play in disinfection, cleaning and telepresence.

Learn more: bit.ly/RobotsandCOVID

Wearable device, data analytics enable warning system for COVID-19
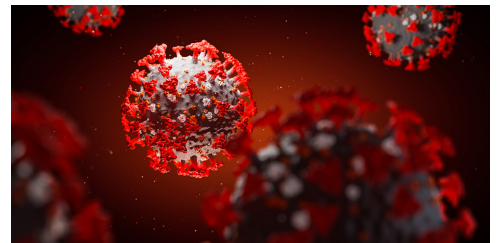
Computer scientists at UC San Diego partnered with Pinterest to develop "Complete the Look," an AI-powered tool that recommends accessories and other fashion items to match an outfit based on just one photo. In terms of the tool's effectiveness, it did as well as four fashion experts who were each asked to complete the same compatibility task as Complete the Look. The project is led by computer science professor Julian McAuley, whose work focuses on better understanding how people behave and express opinions in online communities, including Amazon, Yelp, Reddit and Facebook. Another application of his work is improving recommendation algorithms that power the likes of Amazon and Netflix.

Learn more: bit.ly/COVID19earlywarning

COVID-19: Jacobs School labs engage

In the story below, we are featuring a cross section of additional projects the Jacobs School community has launched in response to COVID-19. Some of these efforts are sure to grow into larger, sustained efforts. Others will morph or conclude as needs and available resources change. Through it all, our commitment to bold innovation for the public good remains.

Learn more: bit.ly/LabsEngageCovid

#9 ENGINEERING SCHOOL IN THE USA
US NEWS AND WORLD REPORT RANKINGS OF
BEST ENGINEERING SCHOOLS (PUBLISHED MARCH 2020)

Jacobs School jumped to #9 in U.S. News Rankings

The UC San Diego Jacobs School of Engineering jumped to the #9 spot in the influential U.S. News and World Report Rankings of Best Engineering Schools. This is up from #11 last year and #17 four years ago. It's the first time the UC San Diego Jacobs School of Engineering has broken into the top 10 of this closely watched ranking.

Learn more: bit.ly/JSranking

Sign up to receive the Jacobs School monthly newsletter: bit.ly/JacobsSchoolMonthlyNews

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

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