10 Case Western Reserve University entrepreneurs to show at CES 2018

CES is the world's largest consumer electronics show, featuring more than 4,000 exhibits this year. Case Western Reserve University is back for a fifth-straight year and has a strong presence with a block of 10 booths in the Eureka Park area in the Sands Hotel for a second-straight show.

Largest university presence at consumer electronics show

Case Western Reserve University will again show off some of its best innovations at CES 2018 Jan. 9-12 in Las Vegas, including self-powered “smart building” sensors and low-cost, hand-held blood analysis devices and more among its 10 exhibits.

“The interest from our students and resulting number of booths speaks to the innovative culture evident on this campus and in the Northeast Ohio community,” said Bob Sopko, who accompanies the students to the trade show as director of the CWRU LaunchNet program.

“We have some impressive new exhibitors, and a few of our veterans are back from previous years.”

CES is considered the world’s premier consumer electronics show, a sprawling annual international tech convention that draws tens of thousands of thought leaders, inventors, investors, companies, consumers and gawkers for multiple days of innovation and media buzz.

Case Western Reserve, back at CES for a fifth-straight year, will again have a strong presence in the Eureka Park display area in the Sands Hotel, sponsored by the National Science Foundation and TechStars.

Case Western Reserve’s 10-booth footprint is the largest among universities at the show, officials said, and the Eureka Park Web page lists CWRU among the top institutions in its University Innovations category.

The university returns the student inventor duo who anchored the 2017 teams and then stunned the South by Southwest crowd in Austin, Texas, two months later by placing second and third in a student start-up competition among more than 200 entries: Xyla Foxlin and Matt Campagna.
Foxlin invented Parihug, the Bluetooth- and Wi-Fi-enabled teddy bears that allow loved ones to virtually “hug” each other from anywhere in the world. Campagna and former high school friends now at Penn State and Cornell universities are growing a company called Reflexion Interactive Technologies, which has developed a rapid concussion-screening technology.

Foxlin will promote her YouTube program “Beauty and the Bolt,” produced by fellow engineer and CWRU student Andrew Dupuis. The program aims to “subliminally tell people that femininity and engineering are not mutually exclusive,” according to its website.

Several of Case Western Reserve’s other exhibitors have also had success in recent years, including CrystalE Sensors and Apollo Medical Devices.

**CrystalE part of ‘Internet of Things’ movement**

Philip Feng, associate professor of electrical engineering and computer science, leads a team at CrystalE Sensors who are developing a suite of wireless sensors and sensor networks powered by vibrations from just about anything—the steady hum of industrial machinery to the intermittent movement of a swinging door.

Initially, the technology was aimed at transforming ordinary office and residential buildings into smart buildings and funded by the U.S. Department of Energy and the State of Ohio’s Third Frontier program. Now, graduate student entrepreneur Ran Wei and others are also turning their attention to various industrial uses, Feng said.

The CrystalE systems would not require a battery, but instead would use existing “vibrational energy” to power sensors that would collect information to adjust lighting, heating, cooling or ventilation, based on temperature, humidity or other factors.

These wireless sensors would immediately help enable the emerging Internet of Things—allowing objects to collect and send data without human involvement—in next-generation smart buildings, factories, and infrastructures.

**Apollo Medical to display hand-held blood analysis tool**

Apollo Medical Devices, a company started in 2014 by recent Case Western Reserve graduate Punkaj Ahuja, burst onto the scene the next year, winning two technology competitions, including at Chicago’s prestigious TechWeek.

The company has since grown to seven employees, raised $1.2 million, and is commercializing a low-cost, rapid blood-testing technology using a single drop of blood.
“We are aiming to make an impact the lives of patients at risk for or with chronic kidney disease or who have to have dialysis,” Ahuja said. “We want to help identify people who can treat their condition with exercise before they would have to have dialysis.”

Blood-chemistry tests are ordered more frequently than any other test by doctors in the United States, and have a turnaround time of anywhere from 30 minutes to 2 hours, according to the National Library of Medicine. Apollo Medical’s point-of-care, blood-chemistry test produces results in less than 5 minutes, allowing faster diagnosis and decision-making.

Other entrepreneurs on display

Other Case Western Reserve/LaunchNet booths planned for CES 2018 include:

- **Intwine Connect LLC** ([http://www.intwineconnect.com/](http://www.intwineconnect.com/)), which provides Internet-backup solutions and cost-effective sensors and controls for lighting, energy management and other uses, allowing small and medium businesses to operate more efficiently.

- **12LeadTrainer** ([http://www.12leadtrainer.com/](http://www.12leadtrainer.com/)), which creates electrocardiogram-simulation software that allows a new way to train emergency personnel and other medical professionals.

- **RVS Rubber Solutions** ([http://www.rvrsrs.com/](http://www.rvrsrs.com/)), a startup company co-founded by Case Western Reserve student Pavel Galchenko, who was among just 36 finalists chosen from around the world to compete in Singapore in September in an international business competition.

- **Enabled Robotics** ([http://www.enabledrobotics.com/]), founded by biomedical engineering student Robert Steward, builds robotic legs to help people with physical limitations walk more easily.

- **New Territory** ([https://www.thisisnewterritory.com/]), which provides virtual and augmented reality solutions for businesses.

- **NE Ohio Immersive Technology** ([http://www.case.edu/ic]) will be the booth where CWRU shows off both science and art applications for the Microsoft HoloLens, the innovative mixed-reality device. In 2017, the university staged a first-of-its-kind augmented reality dance performance where audience members wore the interactive headsets.

- **Larry Sears and Sally Zlotnick Sears think[box]** ([http://thinkbox.case.edu/]), the university’s seven-story, 50,000-square-foot center for innovation and entrepreneurship and the largest university-based, open-access center of its kind in the world.

Small private university plays big

Case Western Reserve and partners are already an important driver in Cleveland’s burgeoning startup movement.

This year, the university’s fifth at CES, the student exhibitors will be arranged in an “avenue,” with five on each side of one row, with “street signs” planned to point visitors to some of university’s most inventive minds.

Students and researchers from nearby and collaborating universities and Northeast Ohio entrepreneurs will join the university’s contingent at the show (exhibit floor at Tech West, Eureka Park, Sands Hall G, 52109 to 52118).
LaunchNet, formerly known as the CWRU Blackstone LaunchPad, was established in 2012 with grants from the Burton D. Morgan Foundation and the Blackstone Charitable Foundation to train the next generation of on-campus entrepreneurs.

“The idea then and now is to show the world that this university and this region are part of an innovation ecosystem,” Sopko said.

For more information, contact Mike Scott at Mike.Scott@case.edu

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Meet the six finalists in CWRU’s first $50,000 Morgenthaler-Pavey Startup Competition (http://thedaily.case.edu/meet-six-finalists-cwrus-first-50000-morgenthaler-pavey-startup-competition/)

JANUARY 25, 2018
Learn how to use the resources at Sears think[box] (http://thedaily.case.edu/learn-use-resources-sears-thinkbox/)

JANUARY 25, 2018
Selective suppression of inflammation could deplete HIV and control HIV activation.

Cleveland Foundation awards $1.75 million to Case Western Reserve University and Cleveland State University to launch IoT Collaborative.
UPCOMING EVENTS

“Opportunity Corridor—Will the opportunity be realized?”
[http://thedaily.case.edu/opportunity-corridor-will-opportunity-realized/]

CWRU Crew Erg-a-thon
[http://thedaily.case.edu/cwru-crew-erg-thon/]

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