

Case Western Reserve appoints Venkataramanan "Ragu" Balakrishnan as engineering dean.

The former leader of one of the nation's top programs for electrical and computer engineering has been appointed the new dean of the Case School of Engineering at Case Western Reserve University.

An accomplished researcher in system and control theory, Venkataramanan “Ragu” Balakrishnan began his tenure as the Charles H. Phipps Dean of the Case School of Engineering on Sept. 1, after spending the last nine years as head of Purdue University’s largest academic unit. Under his leadership, Purdue’s School of Electrical and Computer Engineering experienced dramatic growth in a number of key areas, including a 56-percent increase in undergraduate enrollment and a 44-percent increase in research funding. He also championed increasing diversity among the faculty and spearheaded educational initiatives like flipped classrooms and integrating more experiential learning opportunities into the undergraduate curriculum.

Learn more about the new dean at engineering.case.edu/news/new-dean.

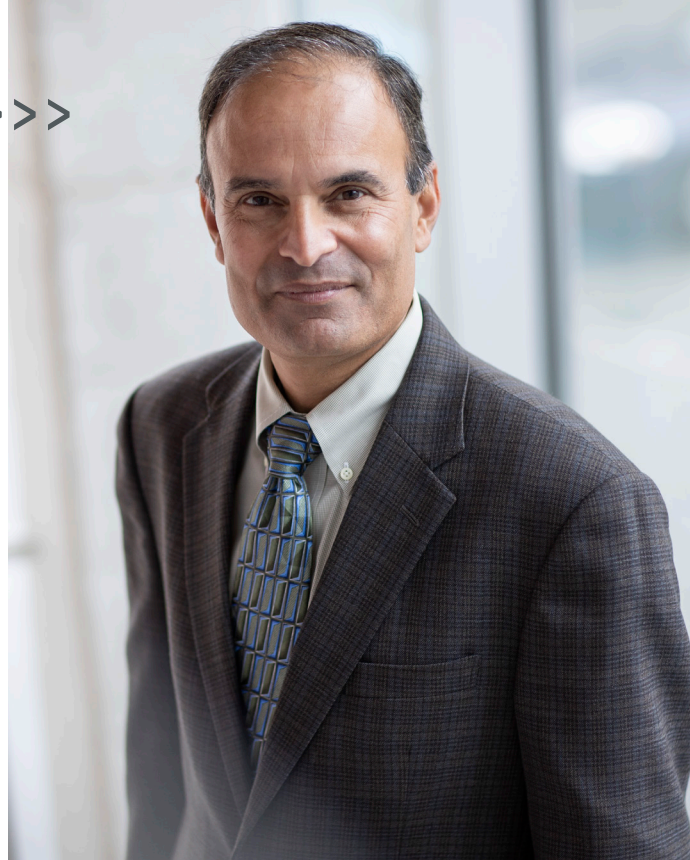


Photo by Russell Lee

FROM THE CASE SCHOOL OF ENGINEERING
AT CASE WESTERN RESERVE UNIVERSITY

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Engineering researchers secure \$10.75M DOE grant to establish energy storage research center.

Renewables are catching up to traditional sources of power in terms of affordability. But advances in the technology needed to store and disperse that energy are lagging behind, creating a barrier to mass adoption of greener means of providing power.

Researchers at Case Western Reserve University received a \$10.75-million grant from the U.S. Department of Energy to establish a new Energy Frontier Research Center (EFRC) dedicated to developing new battery chemistries with the potential to provide large, long-lasting energy storage solutions for the power grid.

The Breakthrough Electrolytes for Energy Storage Center aims to create the next generation of electrolytes that could be incorporated into new, large-scale batteries that store energy more efficiently, more reliably and more cost-effectively, according to Robert Savinell, Distinguished University Professor and the George S. Dively Professor in the Department of Chemical and Biomolecular Engineering.

Savinell will lead the new center, collaborating with fellow chemical engineering faculty members Burcu Gurkan, Jesse Wainright and Rohan Akolkar, and colleagues at the university's College of Arts and Sciences, as well as researchers from seven institutions across the country.

Learn more at engineering.case.edu/news/breakthrough-energy-storage.

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Nick Barendt is tapped to lead university's IoT institute.

Barendt, president and founder of an IoT consulting and product-development firm, will play a lead role in strategic planning, attracting funding, operations and public relations for ISSACS, working closely with university leadership and other constituents to serve the institute's mission and ensure long-term sustainability. He will also co-direct the IoT Collaborative, a partnership with Cleveland State University, supported by the Cleveland Foundation, to lead and foster development of industrial IoT solutions in the public and private sectors in Greater Cleveland.

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Learn more at engineering.case.edu/news/vodafone.

<< INSECT INSIGHT <<<<<<<<<<<<<<

Learn more at engineering.case.edu/news/mosquito-implant.

RAPID-FIRE SCREENING

A new test screens plastics for flame retardancy fast.

Polymer researchers at Case Western Reserve developed a faster way to test flame retardants in plastics. Thanks to project lead Taneisha Deans, who began her career at Case Western Reserve as a high school student in the university’s Polymer Envoys program, a dozen materials can be screened for flame retardancy in an afternoon—work that used to take an entire semester. Deans developed the technique as part of her PhD thesis while working in the lab of department chair David Schiraldi.

Learn more at engineering.case.edu/Taneisha-Deans.



CLEANER WATER

Researcher develops new treatment technologies for water and wastewater.

Huichun (Judy) Zhang, associate professor of civil engineering, received two grants from the National Science Foundation and one grant from the U.S. Environmental Protection Agency, totaling more than \$820,000 to explore new ways to remove contaminants from water. Combined with two active NSF projects she brought with her to the university, she has received \$1.17 million in federal funding, which she is using to develop new water and wastewater treatment technologies and improve the understanding of the behavior of emerging contaminants in the environment.

METAL MATTERS

New insights for alloy processing.

Materials scientists won a TechConnect Defense Innovation Award for research exploring the processing of third-generation aluminum-lithium alloys for use in advanced manufacturing. John Lewandowski, the Arthur P. Armington Professor of Engineering II in the Department of Materials Science and Engineering, led Case Western Reserve’s efforts on the project, in collaboration with other universities, industrial members and government labs with the support of Lightweight Innovations for Tomorrow (LIFT), a public-private partnership dedicated to advancing new lightweight materials manufacturing technologies.

ANTI-SMOKING APP

Wearable sensors and mobile app could help smokers quit the habit.

Tobacco use remains the leading cause of death in the United States, and more than 16 million Americans are living with a disease caused by smoking, according to the Centers for Disease Control and Prevention. Now, thanks to researchers at Case Western Reserve, smokers may have a new high-tech tool to help them quit.

Ming-Chun Huang, assistant professor of electrical engineering and computer science, in collaboration with Monica Webb Hooper, associate director for cancer disparities research at the Case Comprehensive Cancer Center, have created a smoking behavior intervention platform. The system combines wearable technologies that detect specific hand and arm movements associated with smoking with a smartphone app that automatically texts reminders to quit to smokers for a holistic approach to smoking cessation.

Learn more at engineering.case.edu/news/anti-smoking-app.



STUDENT SPOTLIGHT

>>> CWRUBOTIX WINS BIG >>>

University's robotics team dominates at national competitions.

What's cooler than robots? Robots that defeat other robots in national competitions. CWRUbotix, Case Western Reserve's student robotics team, earned top finishes in several robotics competitions this year.

The club sent three teams to the National Robotics challenge, entering the six-pound combat, mini-sumo and autonomous vehicle contests. CWRUbotix' combat robot, Playbot, captured first place in its division for the second year in a row.

The team also placed fourth overall at NASA's annual Robotic Mining Competition, securing a top spot out of 44 other collegiate teams.



>>> BEST IN STEM >>>>

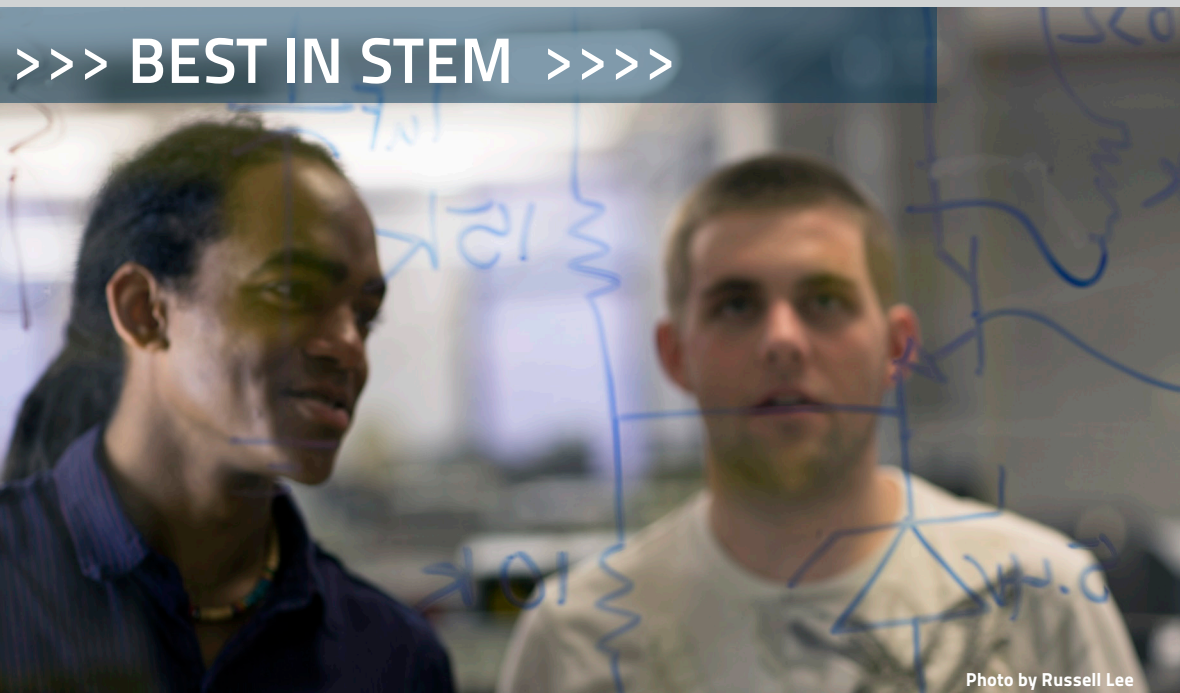


Photo by Russell Lee

Forbes magazine ranked Case Western Reserve University among the nation's top universities that emphasize STEM—science, technology, engineering and math—in their curriculum, putting it in elite company along with MIT, Georgia Tech and Johns Hopkins University. Case Western Reserve was the top school in the Midwest, ranked at No. 13.

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