in this issue:
From the Executive Director | Dominion supports student work in undergraduate research | CWRU BME researchers win a major DARPA award | Research ShowCASE and Events Round Up | Timken Funds Training at CWRU's Swagelok Center | CWRU awarded $1.4 million DOE grant

From the Executive Director

Connection. Our office serves as connectors every day between industry and the university. The 2014-15 Annual Report, aptly titled think: connection, highlights the connections made on our campus every day in many different ways. The connection between CWRU and Microsoft to redefine medical education through their revolutionary HoloLens technology. The connection between the Cleveland Clinic and CWRU to create a new health education campus, encompassing medical, dental and nursing. The connection between engineering students and populations in poverty to create new energy solutions. The connection between a student whose entrepreneurial venture developed at think[box] led him to the White House. These are just a few of the connections highlighted in this year’s annual report.

View the entire video below.
I welcome your feedback on how we can make further connections at corporaterelations@case.edu.

All my best,

Anne Borchert
Asst. VP of Corporate Relations

DOMINION SUPPORTS STUDENT WORK IN UNDERGRADUATE RESEARCH

CWRU Staff Accept Funds from Dominion
Dominion recently provided funding to support the Support of Undergraduate Research and Creative Endeavors (SOURCE) office. The goal of the SOURCE office is to assist and prepare students to engage in research and creative endeavors. They are here to help students learn about research and creative project opportunities, to assist faculty members with undergraduate research program development and funding, provide research educational seminars and information sessions, and to celebrate our students’ accomplishments.

Dominion’s funding will enable women and underrepresented minority men to experience research working directly with faculty mentors and graduate students. Exposure to research during the undergraduate years helps students to further define their fields of interest and future pursuits.

Learn more about SOURCE.

CWRU BME Researchers Win a Major DARPA Award in Collaboration with Medtronic

Case Western Reserve University researchers who helped restore a sense of touch to amputees in a U.S. Department of Veterans Affairs lab in Cleveland have been
awarded a $4.4 million grant from the Defense Advanced Research Projects Agency (DARPA) to speed development of a mobile system amputees can use anywhere. Joining the university and the Louis Stokes Cleveland Veterans Affairs Medical Center are medical device-makers Medtronic and Ardem Medical, Lawrence Livermore National Laboratory, the universities of Chicago and California at San Francisco, and the Providence VA’s Ocean State Research Institute.

If milestones are met during the next 18 months and beyond, the team may be eligible for nearly $16 million in DARPA funding over five years.

“We’d soon like to have a system working outside the lab, so that amputees can touch and feel things out in the community where they live,” said Dustin Tyler, associate professor of biomedical engineering at CWRU and leader of the project. “By the end of five years, we want to have a product people can take home and use daily.”

“It is a bit like when we are young, when we first learned how the nerves responded to touching different things,” Tyler said. “We’re looking to see if that process can be repeated.”

Read more here and watch the video above.

MARKETING AND VISIBILITY

Research ShowCASE and Events Round Up!

Research ShowCASE returns again this year on Friday, April 15. An annual celebration of the research occurring at CWRU, this event features researchers from across disciplines on campus, as well as partner institutions such as the Cleveland Clinic, VA Hospital and MetroHealth. We encourage our corporate partners to attend and discover the breadth of research occurring on campus. The event is free and open to the public.
The Case School of Engineering hosted many activities over the annual Engineers Week (Eweek) celebration this past February. Below are several highlights of corporate activity.

Didier Roux, CTO of Saint-Gobain, delivered the keynote address at the Eweek Banquet to a crowd of more than 600 people. He visited with students and faculty learning more about the entrepreneurial spirit on the campus from students who participated in the Saint Gobain Competition. He shared some of the new advances in energy efficient building materials that Saint Gobain is working on in the US and France during talks with the university’s Great Lakes Energy Institute (GLEI).

Pat Babington, VP for Engineering Services at Rockwell Automation, delivered the keynote address for the Society of Women Engineers Luncheon. Her talk focused on how to prepare oneself to take advantage of opportunities when they arise and to recognize the mentors around you.

Mary Doswell, Senior Vice President of Dominion Energy Solutions, joined students for a community dialogue about the energy industry and her leadership experience there in the changing landscape of energy technology development.
Timken took an innovative approach to advancing its technical proficiencies in materials characterization by working directly with engineers within CWRU's Swagelok Center for Surface Analysis of Materials. Funding provided by Timken presented SCSAM's Amir Avishai and Danqi Wang the opportunity to set aside specific time to become educated and experienced in a cutting edge technique for use on scanning electron microscopes. As experts in SEM techniques already, Amir and Danqi built upon their extensive knowledge base and further developed their expertise so they could then share their knowledge with scientists at Timken. Over the course of a year's worth of bi-monthly, on-site seminars in Canton, Amir and Danqi educated their technical counterparts and transferred their new found knowledge, sharing particulars of lessons learned, demonstrating how to avoid technical traps, and illustrating best practices such that valuable data could be obtained to drive forward the company's research and development initiatives.

This model of direct engagement with engineers within one of CWRU's Core Facilities proved to be an effective and efficient approach toward a mutually beneficial extension of scientific and business partnership. Through this partnership, SCSAM becomes more capable of helping its clientele of CWRU faculty, graduate students, and external partners to learn more about their materials that are brought into the Center and Timken has expanded its company's competency in electron microscopy to become ever more competitive within its industry. Together Timken and CWRU have prepared two publications regarding this engagement and are scheduled to share a stage in future months at a conference to explain further the collaboration and its results.

Learn more about CWRU's Swagelok Center for Surface Analysis of Materials.
CWRU awarded $1.4 million Department of Energy Grant

Case Western Reserve University researchers are bringing impact to campus and the community through a $1.4 million grant from the U.S. Department of Energy’s Advanced Research Projects Agency-Energy (ARPA-E) program to develop software to perform virtual energy audits of light commercial buildings.

The national goals of the project are to help ensure that the United States maintains a technological lead in developing and deploying energy efficient technologies, enhance the nation’s economic and energy security by improving the energy efficiency of buildings, and reduce energy imports as well as harmful emissions.

In addition to audits, the computer program will enable a building owner to assess energy efficiency and elicit the most cost-effective solutions to energy waste.

“Before big data analytics, to pinpoint a building's efficiency problems, we had to walk through a building, read sensors and conduct blower door and smoke tests,” said Alexis Abramson, director of the Great Lakes Energy Institute at CWRU. “By analyzing at least two years of whole building energy use data, we can uncover some of the same information.”

Abramson and Roger French, the F. Alex Nason Professor of Materials Science and Engineering at Case School of Engineering, and Jiayang Sun, professor of epidemiology and biostatistics at Case Western Reserve School of Medicine, will work with Milwaukee-based Johnson Controls Inc., a world leader in building-efficiency equipment, controls and services, to develop the software over the next three years. The software will assess and analyze multiple streams of data, including climate,
weather, the amount of sunshine each day and utility meter records.

“The data streams are like DNA, which has codes embedded in it. It took us a while to understand what these codes meant,” Abramson said. “Similarly, we can find out what’s going on inside a building by uncovering the codes in the data.” This is important for building owners, investors, as well as industrial tenants looking to save and conserve on their energy spend.

Read more here.

Visit Case Western Reserve's industry web site

Read about the latest research news and collaboration successes, and find out how you can imagine and influence the future with Case Western Reserve. Visit case.edu/industry.

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