

Campus Becomes a Laboratory for Sustainability Research and Education

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One of six projects awarded funding from the Campus as a Laboratory for Sustainability includes a Climate Disruption Awareness Generator that uses virtual reality simulation to enable students to understand the embodied energy and greenhouse gas emissions associated with everyday interactions. Image by Fengqi Li, intern at the Interactive Design and Visualization Lab at the Syracuse Center of Excellence

Six faculty and student projects will receive grants totaling \$50,000 this spring through the new Campus as a Laboratory for Sustainability (CALs) funding program. The call for proposals sought projects that address climate disruption and offer opportunities for communication and outreach to the campus and wider community.

Funding for the grants comes from the Syracuse University Climate Action Plan. As energy efficiency efforts have been implemented in recent years, some of the savings have gone into a fund to support CALs grants now and in future years, on the theory that research and education about ways the campus interacts with climate and energy will only serve to enhance the University's sustainability efforts.

Nathan Prior, who oversees the Climate Action Plan as director of Energy Systems and Sustainability Management, sees the initial pool of applications as validation of that idea. “So many of the projects that will receive funding are building off of and enhancing existing efforts by facilities management, such as the planned installation of electric vehicle charging stations, the changing policies regarding de-icing salts on campus, and the expansion of the Climate Garden,” Prior says.

The following awards were made for the spring semester:

- \$20,000 to Steve Chapin, associate professor of computer science in the College of Engineering and Computer Science (ECS), and Peter Wilcoxon, professor of public administration and international affairs in the Maxwell School. They will build a lab at the Syracuse Center of Excellence, where they will research and test ways to connect electric vehicles to the Smart Grid. Their proposal includes establishing a student EV Club and using the lab in a multidisciplinary graduate course on smart grids.
- \$8,460 to Amber Bartosh, assistant professor of architecture in the School of Architecture, and Mark Povinelli, professor of practice in entrepreneurial leadership in ECS and the Whitman School of Management. They will work with their students to develop a Climate Disruption Awareness Generator. This will be a participatory installation in Bird Library that uses virtual reality simulation to enable students to understand the embodied energy and greenhouse gas emissions associated with everyday interactions with technology and engineering and architectural systems.
- \$7,781 to Jeongmin Ahn, associate professor of aerospace and mechanical engineering in ECS, who will work with graduate and undergraduate students to research membrane technology that has the potential to reduce greenhouse gas emissions in power generation facilities. They will present their findings to technical professionals in Central New York.
- \$6,530 to Kristina Gutchess, a graduate student in Earth sciences, and Zunli Lu, assistant professor of Earth sciences in the College of Arts and Sciences. Working together with a number of colleagues in Earth sciences, SUNY College of Environmental Science and Forestry (ESF), and the Newhouse School of Public Communications, they will evaluate the movement of water and de-icing salt across the campus landscape and model expected changes in campus hydrology under various climate disruption scenarios. Their findings will identify optimal locations for sustainable green infrastructure on campus.
- \$4,500 to Jason Fridley, associate professor of biology in the College of Arts and Sciences, and Douglas Frank, professor of biology in the College of Arts and Sciences, who will supervise an undergraduate research project on the impact of plants on ecosystem carbon and nutrient cycling. Dubbed “Project Carbon,” it will utilize a specially designed laboratory facility as well as campus assets like the Climate Garden to enable students to determine the carbon budgets of different plant species across environments. Project Carbon results will be on display in the Life Sciences Complex.

- \$2,679 to graduate students Hugh O. Burnham, School of Education, and Adam Fix, SUNY ESF, who will work with Assistant Professor Gladys McCormick, of the Maxwell School, to develop an oral history of climate activism and the divestment movement at Syracuse University. This will become the basis for campus presentations and part of the archives at Bird Library.

The selection committee, which consisted of faculty from across the schools and colleges at Syracuse University, reviewed ten proposals, totaling over \$120,000 in requested funding.

A second round of funding will be announced in March on the Sustainability website at sustainability.syr.edu.