

## Students and faculty reimagining the future

On Saturday morning December 3, [Vice Provost Reitu Mabokela](#) opened the gathering in the Siebel Center for Design by observing that “this competition embodies our university’s global strategy, called Vision 2030.” She was speaking at the award ceremony of the 2<sup>nd</sup> annual Sustainability Competition for Undergraduates, called “Reimagine our Future”. Vice Provost Mabokela was clearly excited about the competition potentially serving as a bridge to “universities in the Global South” as we “work together to produce sustainable and innovative solutions.”

The 8-week long competition attracted 180 students from across campus, as well as 25 students from the University of Pretoria (South Africa) and 38 students from Zhejiang University (China). The competition challenged students to generate actionable ideas that promote one or more of the United Nations’ Sustainable Development Goals (SDGs). Competitors had to communicate their ideas in no more than 1000 words in a high-impact fact sheet. The entries covered a wide spectrum, including engineering, chemistry, marine and land ecosystems, health sciences, food sciences, education, economics, earth sciences, and art and design.

The overall winners this year were a team comprised of Aman Mehta and Arya Haria (both from Mechanical Science and Engineering) and Ishita Purwar (Physics). The team showcased how lithium could be extracted from geothermal brines, thus reducing extraction of virgin lithium used in products such as batteries, generating clean energy and conserving water resources. They won \$2000 for their innovative ideas. Their faculty advisors were Professors Lili Cai (Mechanical Science and Engineering) and Dr. John R. Abelson (Materials Science and Engineering); they were assisted by Dr. Arpit Dwivedi (Cache Energy).

“The nine finalist judges from academia and industry were unanimous in their decision,” says competition co-founder Professor Leon Liebenberg (Mechanical Science and Engineering). “The judges were especially impressed by the winning team’s holistic problem-solving approach and their superb research. The judges believed that this concept has tremendous potential to help pave the way to a more sustainable future,” said Liebenberg.



**Aman Mehta (right) reflecting on his team’s winning the grand prize. He is joined by teammates Ishita Purwar (center) and Arya Haria (left). In her reflection, Ishita mentioned that “this competition was a challenge for us to overcome the barrier between knowledge and application. We learnt to brainstorm ideas and think about the interdependence between the economic and environmental aspects of sustainability. This competition helped me to grow and left me in awe of the other contestants”. Arya agreed and Aman added that “the competition made me understand the urgency with which we need to act toward climate change and the number of challenges we need to overcome before we truly reach net zero, and for that, we collectively need to reimagine our future.”**

Two second prizes of \$1000 each were awarded. Etienne Sirois (Landscape Architecture) won one such award for his novel ideas about marketing native plants in communities across the USA. Etienne was upbeat after his thought-provoking presentation. He remarked that “the competition has allowed me to learn more about an important area of research and to fully explore problem-solving. The competition has also provided an excellent opportunity to connect and learn from professionals with many years of experience in their respective fields.”

The other second prize was snatched up by Erin Nibeck (Architecture) and Jason Li (Physics) who proposed using phytoremediation mats to treat polluted water and capture carbon dioxide. Erin’s and Jason’s sustainability solutions crossed the boundaries of chemistry and physics and

delved into socio-cultural and governance issues of the use of water. Erin and Jason also won an additional (\$500) award for the most interdisciplinary project.



**Elated second prize winners, Erin Niebeck (left) and Jason Li (right). Jason quipped that “as a physics major partnered with Erin, an architecture major, I wasn’t sure if we could pull off creating a sustainable solution addressing water pollution, which is outside both our expertises. But we did manage to pull it off, and through our interdisciplinary work, I’ve learned that anyone, from any background, can dream of a more sustainable future; never be afraid to speak up and let your ideas be heard.” Erin agreed, and added that “this competition has reminded me that climate action must be executed with an interdisciplinary approach”.**

Three more teams won \$500 each for their innovative ideas for addressing Shanghai’s water shortage, producing sustainable fishing nets made of hemp, and using agrivoltaics in Ethiopia. The entries of the six prize-winners and those of the other six finalists can be viewed on the [competition webpage](#).



**Samuel Rosner, one of the 12 brilliant finalists, presented a novel idea to track minerals to help curb human rights violations in modern minerals mining. Samuel and his fellow contestants presented their ideas during a hybrid event staged at the Siebel Center for Design whilst streaming on Zoom.**

This year the competition was organized and presented by the Student Sustainability Committee, with a great deal of the hard organizational work throughout the competition expertly managed by Allie Cruz (Environmental Economics & Policy, Spanish, Natural Resources Conservation), an Intern with the Student Sustainability Committee. Jack Reicherts (Civil and Environmental Engineering, Natural Resources and Environmental Science), President of the Student Sustainability Committee, introduced all the finalists. He invited all the Illinois contestants to apply to the Student Sustainability Committee for funds to support further development and implementation of their proposals.

In his summary remarks, competition co-founder Professor Robert McKim (Religion, emeritus) mentioned that “our aim is to make the competition available next year on all three campuses of the University of Illinois as well as at some community colleges. And some additional international universities will be invited to participate.” Professor McKim stressed the importance of inviting students across all fields and disciplines to submit ideas and projects that would advance the SDGs in future iterations of the competition.

Professor Warren Lavey (School of Earth, Society & Environment and Law) echoed Professor McKim’s thoughts. And he mentioned our increasing appreciation of the close connection

between human health and ecosystem health and how this is now being reflected in medical education, among others.



**When congratulating the contestants, competition co-founder Professor Warren Lavey asked the following provocative question: “Would it not be great if change could be associated with real progress?” He stressed the importance of improving the quality of lives whilst regenerating nature.**

In his concluding remarks Professor Liebenberg thanked the 70 advisors, one at least of whom the contestants were invited to consult as they developed their projects, and most of whom also agreed to serve as judges. Professor Liebenberg mentioned that the helpful and insightful comments of all the judges were being passed on to the contestants.