

Students Win National EPA Awards



Plastics Team students include Jimmy Pan (CEE), Anamica Srinivasaragavan (ChE), Mary Cheng (CEE), John Bissel (ChE), Ryan Smith (ChE), and Kristen Matsumara (CEE).

Two groups of UC Davis students participated in this year's annual P3 (People, Prosperity, and the Planet) Student Design Competition for Sustainability, held by the Environmental Protection Agency in Washington DC. Both teams received recognition for their efforts, with the Plastics Team winning one of six \$75,000 grants, and the Phosphorus Team winning honorable mention.

There were more than 40 Exhibitors and more than 50 teams represented at this year's National Sustainable Design Expo, held April 20-22 on the National Mall in Washington DC. Each team at the competition begins with an application for a Phase I grant up to \$10,000 from the EPA by submitting their project proposals at the beginning of the academic year. Both teams from UC Davis received a \$10,000 grant in order to research and develop their design projects during the school year. In April, teams must submit their project proposals for phase II funding review before arriving at the competition. The groups are judged at the Expo by a panel convened by The National Academies (advisers to the nation on science, engineering, and medicine), recommending grants for up to \$75,000.

The Plastics team was recommended for and received one of six \$75,000 grants awarded nationally to continue to research and possibly implement their technology that uses microbes to create a bio-degradable plastic from the carbon in wastewater. This technology is unique, and an innovative way to clean wastewater while turning the actual waste into a commodity: a bio-degradable plastic that is not dependent on petroleum for its production. This grant will allow the team members the opportunity to further their research and designs, and begin implementing them in the marketplace. Their funding

does not stop there, however, as winning teams are often able to make professional connections that yield increased funding for their research, sometimes up to \$1 million.

The Phosphorus team, whose goal was to develop a more effective method of removing the phosphorus in wastewater that can contribute to excessive algae growth, received an honorable mention at the competition. Excessive algae growth depletes the oxygen supply in a body of water and suffocates all other life in the area, a process known as eutrophication.

The competition is an important networking opportunity with Congress, educational leaders, and various stakeholders of the industry, since it brings out congressional and EPA (Environmental Protection Agency) representatives. Frank Loge, the advisor for both UC Davis teams, notes the importance of the competition. “You can sit in a classroom and learn about heat transfer and all that,” Loge says. “But if you put these lessons into practice, you begin to understand how knowledge, ideas, and a team of people can actually make an important difference.”