American Society for Engineering Education Recognizes Student Winners of Prestigious National STEM Contests

The American Society for Engineering Education (ASEE) will recognize student winners of national STEM-focused contests at its Annual Conference at the Indiana Convention Center on June 16. ASEE President Kenneth Galloway will recognize seven students for their accomplishments at the main plenary session.

Issac Kim of North Hollywood High School in Los Angeles, CA is being honored as the 2014 Winner of the Air Force Association Cyberpatriot Competition. Kim, an eleventh grader attending the Highly Gifted Magnet at North Hollywood High School, has been working on web windows.

CyberPatriot was created by the Air Force Association to encourage high school students to consider careers in cybersecurity or other STEM disciplines. Kim’s team, Team Azure, won in the national finals which took place from March 25-30 in Washington, D.C. The team found and resolved issues from vulnerabilities to viruses on virtual machines.

Carmel Fiscko, alumna of High Tech High School in San Diego, CA and current student studying electrical engineering at University of California, San Diego, was the 2013 winner of the Championship Chairman’s Award (CCA), the most prestigious at the FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition with her team, The Holy Cows. Her team best represented a model for other teams to imitate and best exemplified the purpose and goals of FIRST.

Fiscko served as the Manager of Awards leading up to the event where she led the preparation and execution of the award submissions and prepared a formal presentation to judges. After winning the CCA, she was selected as one of the team’s two Allaire Medalists, an individual distinction by FIRST for the winner of the CCA.

Rachel Dunkin, a junior also from High Tech High School in San Diego, CA, was one of the 2013 winners of the CCA. Delving into the world of engineering and familiarizing herself with her team’s robot, she took the lead in public relations for her team. Over the past year, Dunkin contributed to the team by speaking at public events and conferences and representing the Holy Cows at FIRST.

Katelyn Sweeney of Natick High School in Natick, MA and incoming member of MIT’s Class of 2018 was a 2013 Lemelson-MIT InvenTeams Grant Awardee. The InvenTeam initiative is designed to thrill high school students about invention, empower students to solve problems, and encourage an innovative culture in the school community. She and her team developed a remotely operated vehicle (ROV) to function on ice for local search and rescue dive teams.
Sweeny was a key player in organizing the team and writing the application for the grant. She met with technical rescue representatives with the Massachusetts Firefighting Academy, field-tested the ROV, and worked with intellectual property lawyers to file for a patent to protect the rights of her team’s unique ROV. These project management, communications, and leadership skills helped her team achieve the grant for the InvenTeam ROV.

**Gerald Meixiong** of Lakeside High School in Lakeside, GA was the 2014 winner of the Siemens Foundation Competition. Meixiong developed a passion for science at a young age, coming from a family deeply involved with scientific research. He volunteers his time at a local hospital and aids nurses in helping with cancer patients.

The Siemens Foundation Competition, administered by Discovery Education and funded by the Siemens Foundation, recognizes students nationally for science research projects completed in high school. Meixiong conducted his project over a span of two years at the Georgia Regents University in his hometown. Focusing his research on mitosis, he used a variety of lab techniques such as microscopy and cell culture to discover a mechanism for more efficient chromosome segregation. Finding new functions of protein which affect the speed of cell division could possibly be applied to therapeutic drugs for cancers or healing.

**Kate Randolph** and **Mallory Miller** of Xavier College Preparatory School in Phoenix, AZ are the 2014 honorees from Engineering Programs in Community Service (EPICS) of Purdue University. The girls participated in the EPICS High program where they worked to design a solution that meets real needs in their communities. The program is meant to enable high school students to connect engineering and computing design with people and local communities in need.

Randolph, a senior planning to pursue a mechanical engineering degree with a minor in sustainability and Miller, a junior who hopes to study chemical engineering in college, have worked on numerous projects. These include “Phoenix Renews,” where a large area of land was transformed to create an educational space as well as “Ovens for Ghana,” which created a sustainable cooking method for villagers using solar energy.

Founded in 1893, ASEE is a nonprofit organization of individuals and institutions committed to furthering education in engineering and engineering technology. It accomplishes this mission by promoting excellence in instruction, research, public service, and practice; exercising worldwide leadership; fostering the technological education of society; and providing quality products and services to members. The ASEE Annual Conference is the only conference dedicated to all disciplines of engineering education. It is committed to fostering the exchange of ideas, enhancing teaching methods and curriculum, and providing prime networking opportunities for engineering and technology education stakeholders such as deans, faculty members, and industry and government representatives.

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