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MEDIA ALERT

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**LOCAL SCIENCE FAIR STUDENT WINS FIRST PLACE IN ENGINEERING AT BROADCOM
MASTERS COMPETITION**

***TWO OF 30 NATIONAL FINALISTS WERE PARTICIPANTS IN CARNEGIE SCIENCE CENTER'S PITTSBURGH
REGIONAL SCIENCE & ENGINEERING FAIR***

PITTSBURGH, October 8, 2013 – **Mihir Tejas Garimella**, an eighth grader at Dorseyville Middle School in Fox Chapel, won First Place in Engineering at the Broadcom MASTERS (Math, Applied Science, Technology, and Engineering for Rising Stars), a prestigious national competition for middle school students.

Mihir and **Emma Ashley Burnett**, a seventh grader at The Ellis School in the Shadyside section of Pittsburgh, were among the competition's 30 finalists. As finalists, they received an all-expenses-paid trip to Washington, DC, presented their projects as part of a four-day science fair, and toured the White House with President Barack Obama.

Broadcom MASTERS features top students nominated by local science fairs affiliated with the Society for Science and the Public. Mihir and Emma were among the nominees sent by Carnegie Science Center's Pittsburgh Regional Science and Engineering Fair (PRSEF).

"It's very exciting to see this caliber of excellence emerging from our science fair, which has been getting kids excited about science for decades," said Ron Baillie, co-director, Carnegie Science Center. "It's really remarkable that two of the 30 national finalists are from a city the size of Pittsburgh."

"The achievements of young people like Mihir and Emma are testaments to the terrific support they get from their parents and from the community," said Ann Metzger, co-director of the Science Center.

Mihir's project, *ScentIt: Digitally Recreating Smells*, won First Place in Engineering/Robotics at the Intermediate (middle school) level at PRSEF this past spring. This project stemmed from video calls with his grandparents in India, which let Mihir see—but not smell-- what he's missing, like their garden. Mihir knew that smell triggers memories like no other sense and realized that computers involve vision, hearing, and touch—but not smell.

To explore ways of adding smells to make the digital experience richer and more interactive, Mihir made a short movie in which specific scents are linked to particular moments. He began by creating a scent

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PRSEF Student Wins Engineering First Place at Broadcom MASTERS Competition

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synthesizer—five microchip-based air fresheners, each linked to a microprocessor. To control the air fresheners, Mihir modified their circuitry so they would respond to signals from the microprocessor. He then programmed the microprocessor so it would interpret signals sent via computer. Mihir next built a library to build and send those instructions, then used the library to create a movie editor that would command scents to be released at precise points during his movie clip. For example, the device released a cinnamon scent during an ad for cinnamon rolls.

Emma's project, *Elements of Fluorescence*, which involved examining samples of feldspar under natural and ultraviolet light and using a spectroscope to determine the elements within the minerals, won Second Place in Earth/Space/Environment at the Intermediate level at PRSEF.

In Washington, Mihir got to meet one of his idols – Eben Upton, the creator of the Raspberry Pi , a credit-card sized single board computer. Mihir and his mentor Peter Pinko, a science teacher at Dorseyville Middle School, also had the honor of having a minor planet named after each of them (28715 Garimella and 28787 Peterpinko, respectively). To date, only 15,000 minor planets have been named after people – and those people include Pythagoras, Albert Einstein, and Thomas Edison.

In 2011, as a sixth grader, Mihir was honored with a Carnegie Science Award for the project he presented that year at PRSEF: a robotic violin tuner, which confirmed his hypothesis that the device was able to tune a violin more accurately than a person could. Mihir's current career interest is robotics engineering.

PRSEF produced eight semi-finalists for the Broadcom MASTERS this year. The Broadcom MASTERS competition closely aligns with Carnegie Science Center's dedication to and continued mission of encouraging young people to pursue education in STEM (science, technology, engineering, and math) fields.

Photos available upon request.

About Carnegie Science Center

Carnegie Science Center is dedicated to inspiring learning and curiosity by connecting science and technology with everyday life. By making science both relevant and fun, the Science Center's goal is to increase science literacy in the region and motivate young people to seek careers in science and technology. One of the four Carnegie Museums of Pittsburgh, the Science Center is Pittsburgh's premier science exploration destination, reaching more than 700,000 people annually through its hands-on exhibits, camps, classes and off-site education programs.

About Carnegie Museums of Pittsburgh

Founded by Andrew Carnegie in 1895, Carnegie Museums of Pittsburgh is a collection of four distinctive museums dedicated to exploration through art and science: Carnegie Museum of Art, Carnegie Museum of Natural History, Carnegie Science Center, and the Andy Warhol Museum. Annually, the museums reach more than 1.2 million people through exhibitions, educational programs, outreach activities and special events.

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