

**Congratulations to these three Alameda County middle school students who have been selected as National Semi-Finalists in the Broadcom competition.**

Synopsys Alameda County Science & Engineering Fair congratulates all semifinalists and nominees on this national honor.

The top 300 middle school students were selected from a pool of 2,343 entrants and more than 6,000 nominees from fairs across the United States.

The next step in the Broadcom MASTERS takes place on September 20, 2016 when 30 finalists will be selected from among the 300 semifinalists. Finalists and one parent or guardian will receive an all-expense paid trip to Washington, DC to attend the Broadcom MASTERS Finals Week competition from October 27 to November 2, 2016. Finalists will present their research and compete in hands-on challenges for top prizes, including funds to attend a STEM summer camp, iPads, and the Samueli Prize of \$25,000.

**Kawazu, Shino** *Grade: 7*

NEA Community Learning Center, Alameda, CA

*Project Title:* The Effect of the Position of Arms on How Well You Execute a Pirouette

**Ramachandran, Shreya** *Grade: 7*

Stratford Middle School, Fremont, CA

*Project Title:* The Effect of Soap Nut Grey Water on the Environment (Soil and Plants: Year 2)

**Shrivastava, Aryansh** *Grade: 6*

Mission Valley Elementary School, Fremont, CA

*Project Title:* Microcontroller Based Bionic Eye for the Blind

The Broadcom MASTERS (Math, Applied Science, Technology and Engineering for Rising Stars) rewards sixth, seventh and eighth grade students who follow their personal passions in science or engineering at 300 regional and state science fairs and inspires them to continue their studies in math and science throughout high school. As the students apply [Project-Based Learning](#) to the scientific method and the engineering process through hands-on challenges and competitions, they learn the 21st century skills of critical thinking, collaboration, communication and creativity.

“Broadcom MASTERS inspires middle school students from all walks of life to envision their future as scientists, engineers and innovators. We are delighted to see growing interest in STEM fields among both girls and boys,” said Paula Golden, President of the Broadcom Foundation. “This year marks the Broadcom MASTERS highest competition pool ever, with thousands of nominees nationwide entering their research projects for consideration by prestigious scientists and engineers throughout the nation. Along with a high-five to the top 300 semifinalists, we

want to send a shout-out to every nominee selected by fair judges around the country. You are all STEM champions and role models in your communities!”

Semifinalists' independent research projects include a broad range of topics such as:

- Wearable Therapeutic Device with Bluetooth for Elderly Sarcopenia Patients and Caregivers
- Cryptic Cryptocurrency: A Statistical Analysis of Possible Factors Driving the Value of Bitcoin
- OpenRoad: A Cost-Efficient Solution to Drowsy Driving
- Bloodstain Pattern Analysis: Accuracy of the Point of Origin Calculation
- Did Juvenile Spinosaurids Spend Time in the Ocean?
- Reducing Adolescent Stress via Predictive Machine Learning Models

Semifinalist Data Points:

- Semifinalists represent 250 middle schools in 37 states, and represent 126 regional and state science fairs across the U.S.
- Semifinalists were selected from more than 6,000 nominees and 2,434 applicants. Each application received three independent readings and evaluations by distinguished scientists, engineers and educators. Nominees qualified to enter the Broadcom MASTERS by placing among the top 10 percent of the participants at their Society-affiliated science fairs.
- The 30 Broadcom MASTERS finalists will be announced on September 20. Finalists will receive an all-expense paid trip to Washington, DC from October 27 – November 2 to showcase their science fair projects and compete in a four-day STEM competition for awards and prizes, including the top education award of \$25,000 presented by the Samueli Foundation.
- Semifinalists represent 37 states including 54 semifinalists from California; 41 from Florida; 28 from Texas; 17 from New York; and 16 from Pennsylvania.

“We are extremely proud to join with the Broadcom Foundation in congratulating the 300 semifinalists selected,” said Maya Ajmera, President and Chief Executive Officer of Society for Science & the Public and Publisher of the *Science News*. “We hope competitions like Broadcom MASTERS inspire them to pursue their passions and become the next generation of scientists and engineers that help make the world a better place.”

Sponsored by Broadcom Foundation, a nonprofit public benefit corporation funded by Broadcom Corporation, the Broadcom MASTERS is a program of Society for Science & the Public. The Society has managed the world's most prestigious science competitions for more than seven decades.

As a semifinalist, each student will receive a prize package containing an award ribbon; semifinalist certificate of accomplishment; Broadcom MASTERS backpack; a Broadcom MASTERS decal; an Inventor’s Notebook and copy of *Howtoons: Tools of Mass Construction* graphic novel, courtesy of The Lemelson Foundation; a one year subscription to Mathematica+

software, courtesy of Wolfram Research; and a one year family digital subscription to *Science News* magazine. In recognition of the role that teachers play in the success of their students, each semifinalist's designated teacher also will receive a Broadcom MASTERS tote bag and a one year subscription to *Science News* magazine, courtesy of KPMG.

**Resources:**

For more information on the Broadcom MASTERS, visit the [Broadcom Foundation](#) and [Society websites](#) or visit Broadcom Foundation's [Newsroom](#) and read the [B-Inspired Blog](#).

To keep up with the Broadcom MASTERS on Twitter, use hashtag #brcmMASTERS or follow [Broadcom](#) and [SSP](#). And to stay connected, visit the [Broadcom MASTERS](#) and [SSP](#) Facebook pages.