**California Science & Engineering Fair Category Awards: 2019**

**Junior Division**

**J1713 — First Place, Physics & Astronomy**

**Isabelle S. Katz**, Grade 8

[**Characterizing Musical Instruments Using Waveform Analysis**](http://csef.usc.edu/Current/Projects/J1713.pdf)

*Advisor:* Mr. Bruce Katz

*School:* Joaquin Moraga Intermediate School, Moraga, Contra Costa County

**J1318 — First Place, Materials Science**

**Allison S. Quan**, Grade 8

[**Reducing Plastic Pollution Brick by Brick: A Sustainable Brick to Combat Plastic Waste in the Water and Environment**](http://csef.usc.edu/Current/Projects/J1318.pdf)

*Advisor:* Mrs. Jen Farrar

*School:* North Creek Academy, Walnut Creek, Contra Costa County

**J1412 — Second Place, Mathematical Sciences**

**Neel S. Redkar**, Grade 8

[**Using Machine Learning to Identify and Sort Waste**](http://csef.usc.edu/Current/Projects/J1412.pdf)
*Advisor:* Mr. Sanjeev Redkar

*School:* Windemere Ranch Middle School, San Ramon, Contra Costa County

**J0208 — Fourth Place, Alternative Energy**

**Riya Kumar**, Grade 7

[**How Poop Can Power the Planet: Microbial Fuel Cells**](http://csef.usc.edu/Current/Projects/J0208.pdf)

*Advisor:* Mrs. Ashley McKinley

*School:* North Creek Academy, Walnut Creek, Contra Costa County

**Senior Division**

**S2207 — First Place, Zoology**

**Sanjita Pamidimukkala**, Grade 10

[**Prevention of Oxidative Stress Induced Diseases through the Effects of Curcumin on Planarial Stem Cells and Regeneration**](http://csef.usc.edu/Current/Projects/S2207.pdf)

*Advisor:* Ms. Tiffany Wu

*School:* Dougherty Valley High School, San Ramon, Contra Costa County

**S1117 — Second Place, Environmental Engineering**

**Melanie E. Quan**, Grade 10

[**Developing Compostable and Water-Soluble Algal Bioplastics by Repurposing Waste Products of Algal Biofuel Production**](http://csef.usc.edu/Current/Projects/S1117.pdf)

*Advisor:* Mrs. Denise Quan

*School:* Las Lomas High School, Walnut Creek, Contra Costa County

**S1501 — Fourth Place, Microbiology (General)**

**Catherine P. Aitken**, Grade 11

[**Effects of Glycerol Solution on Freeze Tolerance and Photosynthetic Efficiency of Cyanobacteria for Use in Terraforming**](http://csef.usc.edu/Current/Projects/S1501.pdf)

*Advisor:* Ms. Kristina Koster

*School:* San Ramon Valley High School, Danville, Contra Costa County

**S1003 — Honorable Mention, Electronics & Electromagnetics**

**Om Anavekar**, Grade 11

**Tarun R. Chichili**, Grade 11

**Arnav Gupta**, Grade 11

[**An Intelligent Glove that Converts Hand Gestures and Sign Language Into Spoken Text**](http://csef.usc.edu/Current/Projects/S1003.pdf)

*Advisor:* Dr. Eugene Mizusawa

*School:* Athenian School (The), Danville, Contra Costa County

**2019 Special Awards**

**Cheryl Saban Self-Worth Foundation Scholar Prizes** – For the top projects by a female scholar providing a positive impact to her community. Two Junior Division place awards of $1,500 and $1,250 and two Senior Division place awards of $2,000 and $1,500. Presented by the Cheryl Saban Self-Worth Foundation for Women and Girls.

**Junior Division, Second Place**: J1318, Allison S. Quan, Walnut Creek, Contra Costa County

**\*\*\*\*\*\*\*\*\*\***

**Biosero Innovation Award** – For the most innovative project in the fields of robotics, biotech, and automation One $500 Senior Division award. Presented by the Biosero, Inc.

**Award:** S0829, Anish Singhani, Danville, Contra Costa County

**\*\*\*\*\*\*\*\*\*\***

**UCLA Brain Research Institute Awards** – For research achievement, innovation, and interpretation in any area related to the brain in health and sickness. Three place awards in each division of $250, $150, and $100. Presented by the Brain Research Institute (BRI), University of California, Los Angeles.

**Senior Division, Second Place**: S1003, the team of Om Anavekar, Tarun R. Chichili, and Arnav Gupta, Danville, Contra Costa County

**Senior Division, Third Place**: S0401, Luke T. Anderson, Concord, Contra Costa County