



62<sup>nd</sup> SCIENCE AND ENGINEERING FAIR OF METROPOLITAN DETROIT INC.  
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**For Immediate Release**

## **Five Detroit-Area Students Win Big at International Science and Engineering Fair**

### **Northville High School Sophomore Brings Home Top Award and Two Category Awards**

**Phoenix, AZ** - May 28, 2019 - Five Detroit-area high school students, Grand Award winners in the 2019 Science and Engineering Fair of Metropolitan Detroit, were recognized for outstanding achievement at the Intel International Science and Engineering Fair (ISEF) in Phoenix this month. Shriya Reddy, Madeleine Yang, Vihaar Nandigala, Collin Wang and Matthew Tan returned to Michigan with a total of seven awards, ranging from a very prestigious top award, to category-specific awards, to a professional organization award.

This year, ISEF hosted in excess of 1,850 high school students from around the world, showcasing innovative science, technology, engineering and math (STEM) projects. For the most part, these high school scholars are winners in local STEM competitions, and are selected for participation in the International Fair by local fair officials.

In the Biomedical and Health Sciences category, Shriya Reddy, from Northville High School, received an ISEF top award of \$10,000, the Craig R. Barrett Award for Innovation, for her project "A Novel, Noninvasive Approach to Melanoma Diagnosis Using Optical Coherence Tomography and Bioconjugated Gold Nanoparticles." Shriya's project also received the Best of Category Award of \$5,000 (plus \$1,000 to her school and \$1,000 to her local science fair), as well as the First-Place Award of \$3,000.

Also in the Biomedical and Health Sciences category, Madeleine Yang, from Detroit Country Day School, received the Second-Place Award of \$1,500 for her project "Enabling Influenza Virus-like Particles (VLPs) as a Universal Vaccine."

In the Behavioral and Social Sciences category, Vihaar Nandigala, from Walled Lake Western High School, received the Third-Place Award of \$1,000 for his project "Data-Driven Optimization of Economic Resource Allocation."

In the Computational Biology and Bioinformatics category, Collin Wang, from Detroit Country Day School, received the Fourth-Place Award of \$500 for his project "Deep Learning to Evaluate the Combinatorial Impact of Genetic Variants on Gene Expression."

Matthew Tan, from Cranbrook Kingswood School, received the Second-Place Professional Organization Award of \$750 from the National Aeronautics and Space Administration (NASA) for his project "Hardware Integrated LiDAR Simulation for the Development of Collision Avoidance Algorithms." In addition to the ISEF award, Matthew was named recipient of the prestigious Weizmann Institute of Science Award for 2019, and will attend the Institute in Rehovot, Israel.

Abstracts of the projects recognized with awards at ISEF can be found on the SEFMD web site at [www.sefmd.org](http://www.sefmd.org)

## **ABOUT SEFMD**

The Science and Engineering Fair of Metropolitan Detroit (SEFMD), in its 62nd year of operation, is a non-profit organization established to give students in the tri-county area (Wayne, Oakland and Macomb counties) as well as Ann Arbor, an opportunity to develop and exhibit science fair projects.

The SEFMD is administered by a Board of Directors and the operations of the Fair are managed by an Operating Council. Both groups meet regularly to plan for the Fair. All members of the Board and the Operating Council are volunteers who give generously of their time, money and other resources. In addition, more than 250 people volunteer their time during the week of the Fair, including judging work, checking in projects, assisting with public viewing and project removal.

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*Caption:*

Ten Detroit-area students were selected to participate in the Intel International Science and Engineering Fair (ISEF) in Phoenix this month. (Front row, from left) Shriya Reddy, Madeleine Yang, Bhuvna Murthy, Neha Narayan. (Second row, from left) Vihaar Nandigala, Collin Wang, Matthew Tan. (Third row, from left) Jakar Dhillon, Peizhi Liu, Kevin Zhou. Students Reddy, Yang, Nandigala, Wang and Tan were recognized with awards for outstanding achievement.



*Caption:*

Shriya Reddy, a sophomore at Northville High School, received three awards for her project at ISEF: the Craig R. Barrett Award for Innovation, a Best of Category Award, and a First-Place Award in the Biomedical and Health Sciences category.