2025 Science Fair Highlights

The **68th Science and Engineering Fair of Metropolitan Detroit** was held on Wednesday, March 12, 2025 at Huntington Place in Detroit. There were 817 projects entered (654 individual and 163 team) from seven counties across southeastern Michigan. The **31st Michigan Science and Engineering Fair** was hosted once again on Saturday, April 5, 2025, by Lawrence Technological University in Southfield and included 57 projects from across the state. During the week of May 11-17, 2025, the grand award winners from SEFMD and MSEF presented their projects at the **75th Regeneron International Science and Engineering Fair** in Columbus, OH, competing against over 1600 students from around the world!

All of the stages of science fair competition (from the local school fairs to the International Fair) would not be possible without the numerous volunteers (judges, mentors, display and safety team), teachers, parents, board members, operating council members, and donors! **Thank you to all**!
Save these dates for 2026:

> **SEFMD: March 16-20, 2026** (Judging day: Wed., 3/18/2026) at Huntington Place
> **MSEF: Saturday, April 11, 2026** at Lawrence Technological University

Regeneron ISEF Finalists from SEFMD, MSEF, and the Southwest Michigan Science & Engineering Fair

Top row: Suraj Dixit, Samarth Dunakhe, Ryan Wei, Arnav Sharma, Maya Hammoud, Aryav Das, Lara Hammoud
Middle Row: Samer Rahman, Nathan Ma, Claire Tong, Joshveer Grewal, Dean Jordan
Bottom row: Aanya Goel, Janelle Yao, Ahyoung Song, Divya Nema, Sunny Rong
(Suraj, Claire, Aanya, and Janelle were finalists from the Southwest Michigan Fair.)

MSEF Grand Award Winners

Arnav Sharma, Aryav Das, & Samarth Dunakhe (grade 10, International Academy – East, Park Tudor School (IN), and Arizona College Prep H.S.): "A Neuro-Spatial Discovery of ALS Biomarkers Using Graph Neural Networks with Applications to Multi-Target Drug Discovery." **ISEF Award**: 1st place ($6,000) category award in Computational Biology and Bioinformatics. Arnav, Aryav, and Samarth were the first three-person team **from three different states** to compete at both the MSEF and the ISEF!

Nathan Ma & Samer Rahman (grade 11, Detroit Country Day Upper School): "Using Per-Channel Energy Normalization to Enhance Accuracy in Machine Learning-Based Lung Sound Classification." **ISEF Award:** 4th place ($600) category award in Embedded Systems.

SEFMD Senior Grand Award Winners

Maya Hammoud & Lara Hammoud (grade 11, Detroit Country Day Upper School): "Decoding ASXL3: A Novel Breakthrough in the Spectrum, Age of Onset, and Restorative Treatment of NDDs." **ISEF Awards**: 3rd place ($1,200) category award in Cellular and Molecular Biology, and a $1000 first place award from TUBITAK (the Scientific and Technological Research Institute of Turkiye).

Haodong (Ryan) Wei (grade 11, Cranbrook Kingswood Upper School): "LLM-Powered Multi-Agent Collaboration for Hexapod-Drone Systems in Task Planning and Optimization." **ISEF Awards:** 4th place ($600) category award in Robotics and Intelligent Machines, and 2nd place ($600) from the Patent and Trademark Office Society.

Joshveer Greewal (grade 12, Northville High School): "Enhancing Symbolic Regression and Universal Physics-Informed Neural Networks with Dimensional Analysis." (Category: Mathematics)

Dean Jordan (grade 10, International Academy - West): "Adapter-Enabled Multimodal Spiking Encoder/Decoder Neural Subnetwork Ensembles for Large-Scale Logical Neuromorphic Accelerators." (Category: Systems Software)

Divya Nema (grade 10, Novi Senior H.S.): "Enhancing Wetland Classification: The Role of Seasonal and Annual Imagery in Remote Sensing." (Category: Earth and Environmental Sciences)

Sunny Rong (grade 11, Greenhills School): "Harnessing Ocean Waves: A Sustainable Approach to Desalination." (Category: Energy: Sustainable Materials and Design)

Ahyoung Song (grade 10, International Academy - East): "Biomarker Identification for RYGB Outcomes." (Category: Computational Biology and Bioinformatics)

SEFMD Junior & Elementary Grand Award Winners

Gabrielle Clark (grade 8, Foreign Language & Immersion Cultural School): "Compost Ecology."
Candice Kassab (grade 7, Oakland Christian M.S.): "Harmonic Hens."
Adrianna Malone-Perkins (grade 7, A.L. Holmes Elementary-M.S.): "Project Soil."
Mila Nguyen (grade 7, Boulan Park M.S.) "How Does the Exposure of Dry Ice Affect the Rate of Plant Growth?"
Aaditya Singh (grade 8, Larson M.S.): "How Effective are Mosquito Repellents on Mosquitoes?"
Varun Swamy (grade 8, Indus Center for Academic Excellence) "Energi-Coin"
Brielle Turner (grade 5, Pleasantview Elementary): "Colorful Plants."

THANK YOU to CODE313 and COMCAST for donating Dell Latitude Computers to all of the Grand Award winners and selected professional award winners at this year's SEFMD! In addition, CODE313 showcased a variety of interactive STEM activities for students during the public viewing days of the Fair.