

Holmdel HS

Report to the HFEE
April 14, 2015

The 40th Jersey Shore Science Fair

The 40th Jersey Shore Science Fair was held at Stockton University on March 21. Ten of our Honors Advanced Research students attended this competition, entering six papers in four categories. Five out of the six papers won ribbons!

The Jersey Shore Science Fair has 17 categories such as Biology, Chemistry, Physics, Math, Engineering, Microbiology, Medicine. There were over 600 papers presented from 35 schools, with entries from middle school all the way to high school. We participated in the Upper Level Microbiology, Medicine, Botany, and Team Projects.

Medicine: THIRD PLACE!!!!

Maya Rukshin:

The Diagnostic Value of the Neutrophil-Lymphocyte Ratio in Stroke Recognition

THIRD PLACE:

David Lin and Shira Li (Livingston High School):

Investigating the Application of Cellulose in Biodegradable Flame Retardant Polymer Blends (partnered with Stony Brook University)

FIRST PLACE!!!!!!

Michael Buontempo and Peter Genovese:

Cost Effectiveness of Magnetically Launched Lower Earth Orbit Satellites

(Thank you, Mr. Keller!)

Maya Rukshin, Michael Buontempo, and Pete Genovese went on to compete in the Delaware Valley Science Fair in Philadelphia.

Pete Genovese, Mike Buontempo and Maya Rukshin won awards at the Delaware Valley Science Fair. Pete, Mike and Maya won in their categories which qualified them to compete in the multi-state level competition.

Pete and Mike worked on a project to compare the cost effectiveness of launching a satellite into orbit using electromagnetic propulsion instead of the conventional chemically fueled propulsion. They constructed their prototype using capacitors culled from disposable cameras (they went to local drugstores like CVS and asked for, and obtained bags of used disposable cameras), constructed their prototype, and were able to launch small metal objects.

They then designed a larger scale prototype that could launch a small satellite into orbit and did a cost analysis comparing the cost of such a system to that of a conventionally fueled rocket (using mainly liquid hydrogen and liquid oxygen) and found that it would be very much cheaper, and cleaner to use electromagnetic propulsion. (Although the main by products from the liquid hydrogen and liquid oxygen is water, which is benign, other fuels such as hydrazine are frequently mixed in). Pete and Mike won first place. This was a tremendous win, considering the number of schools that competed.

Maya Rukshin also a competitor in the Medical Sciences Category in Philadelphia. Her paper: "The Diagnostic Value of Neutrophil-Lymphocyte Ratio in Stroke Recognition" won a special award from the Research Division of Johnson and Johnson, and they have invited her to present her paper at their headquarters!

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Math Moody's Team

Our 5-person Moody's teams received recognition for their papers as follows:

Team 5012:

Semi-Finalist -- Team Prize of \$1,500 in scholarship money
Finished in 7th - 12th place in the country (out of 1,128 papers)

Team Members:

Celine Choo
Matt Ferreira
Hannah Lee
Andrew Li
Laura Lin

Team 5011:

Honorable Mention

One of 53 teams to win honorable mention (out of 1,128 papers)

Team Members:

Kevin Leung
David Lin
David Ohm
Bilal Shaikh
Vivian Tsai

Elizabeth Kenny-Foggin And Doreen Coticelli Attend Conference at Harvard

Elizabeth Kenny-Foggin and Doreen Coticelli attended a very informative conference on central executive functioning skills at Harvard. They have shared and will continue to share latest research and useful strategies for "class" implementation.

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Elizabeth Malolepszy and Twelve students in the Italian Program went to Italy

Twelve students from HHS just returned from a spring trip to Italy. It was an absolutely amazing educational experience. They visited several cities: Verona, Venice, Florence, Assisi, Rome. Based on this picture, mi è venuto , ho visto , ho conquistato (veni, vidi, vici).



ECO Club

The ECO Club is presenting an ECO night at HHS. There will be vendors attending, activities for children, and a presentation by a Nobel Laureate. Dr. Robert Woodrow Wilson along with his wife, Dr. Wilson also, will be presenting information on recycling. ECO Night will be on Friday, April 17 starting at 7 p.m.

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