

2021 AWARD CEREMONY

MERCER SCIENCE AND ENGINEERING FAIR

William Wong

President, Mercer Science and Engineering Club

Ann Wong

Fair Director



AWARD CEREMONY INTRODUCTION

2021 MERCER SCIENCE AND ENGINEERING FAIR

First a few details

- ▶ Thank you for making this year's fair a success
- ▶ Award ribbons, etc. will be mailed to recipients
- ▶ Open house on Zoom, March 27, 1:00 PM
 - ▶ Open to the public
 - ▶ 1st Place winners can provide a 5-minute presentation
 - ▶ Breakout rooms will be provided to these students so the public can ask questions about the project

A FEW STATISTICS

2021 MERCER SCIENCE AND ENGINEERING FAIR

Here are some participation details

- ▶ Junior Division
 - ▶ 6 middle schools
 - ▶ 17 applications
 - ▶ 16 finalists
 - ▶ Senior Division
 - ▶ 11 high schools
 - ▶ 75 applications
 - ▶ 46 finalists
- 
- A series of white diagonal lines of varying lengths and thicknesses are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.

SPECIAL AWARDS

These awards are intended for projects that exhibit attributes specific to the organization providing the awards.

Some target a subset of the project categories while others are applicable to all projects.



HONORABLE MENTION

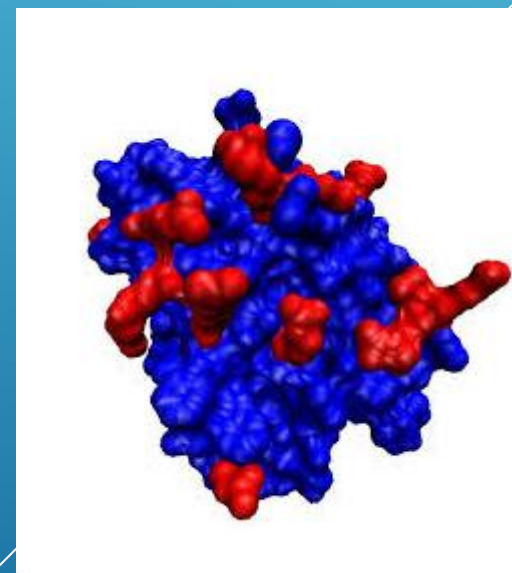
THEOBALD SMITH

A Novel Reconstruction and Expression of Endostatin with pDC316 Plasmid in Eukaryotic Cells

Ziqi Wang

Category: Biochemistry, Biology and Medical

School: Princeton International School of Mathematics and Science



HONORABLE MENTION

THEOBALD SMITH

Effects of Polyphenols on Motor Movement Improvement in Parkinson's Modeled *C. elegans*

Kavya Velliangiri

Category: Biochemistry, Biology and Medical

School: Robbinsville High School



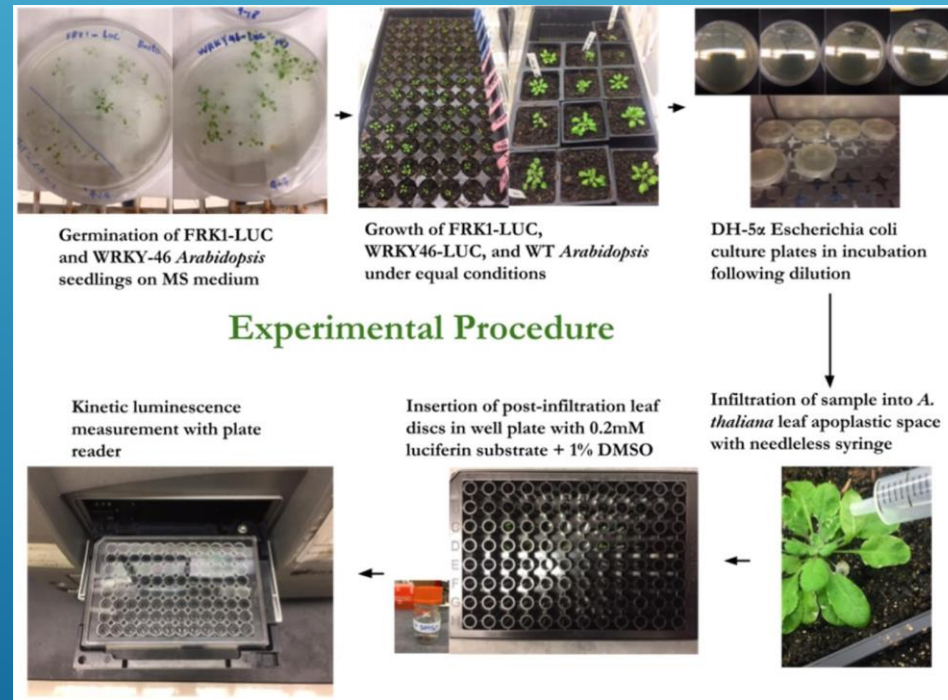
1ST PLACE
THEOBALD SMITH

A Novel Assay to Quantitatively Detect Bacterial Endotoxin by Harnessing PAMP-Triggered Immunity of FRK1-LUC *Arabidopsis thaliana*

Aravind Krishnan

Category: Plant Science

School: Hillsborough High School



ENVIRONMENTAL PROTECTION AGENCY AWARD

ENVIRONMENTAL PROTECTION AGENCY

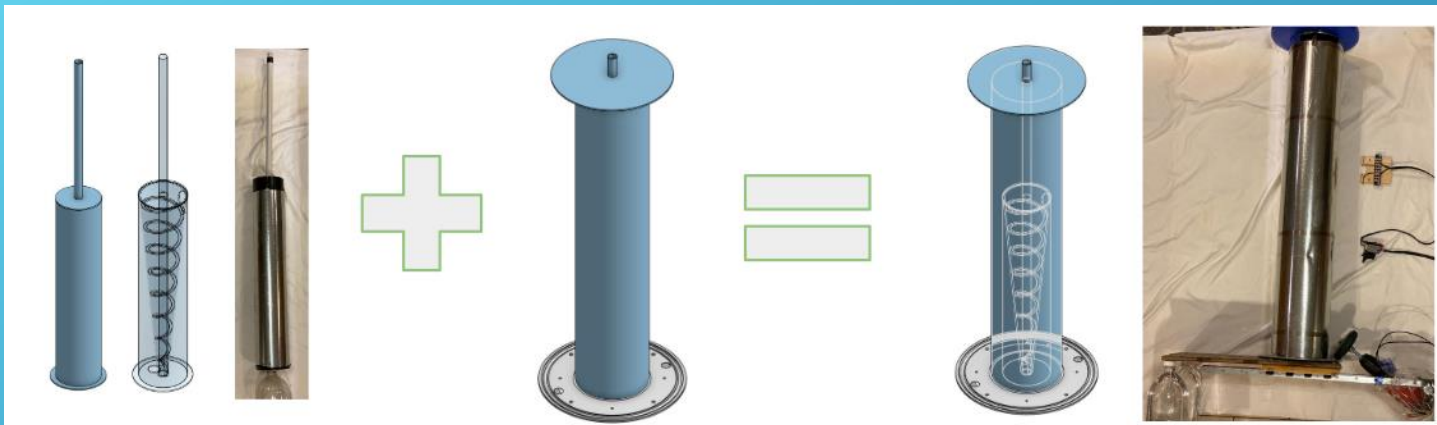


Innovative Climate Change Emissions Reduction: The Cargo Ship Flettner Rotor Centrifugal Vortex Exhaust Scrubber

Charlotte Lenore Michaluk

Category: Environmental Science and Engineering

School: Hopewell Valley Central High



BEST USE OF PHOTOGRAPHY

NEW JERSEY CAMERA & ONE HOUR PHOTO

Desalination and Purification of Water using a Solar Powered Hydrogel Multistage

Kevin Murphy

Category: Environmental Science and Engineering

School: Home School



NAVAL SCIENCE AWARD

U.S. NAVY

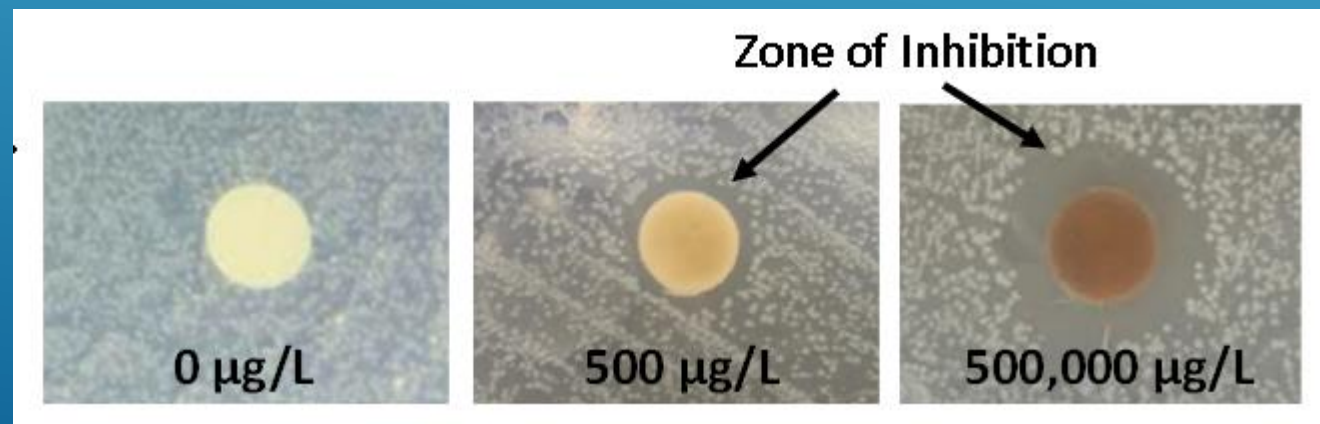


The Effect of Silver Nanoparticles on the Viability of Bacteria, Fungi, Aquatic Organisms and Plants

Jillian Yao

Category: General Engineering

School: St. Ann's School



NAVAL SCIENCE AWARD

U.S. NAVY



The Effect of Balloon Type on Helium Diffusion

Zachary Malus

Category: General Science

School: Chapin School

The Effect of Balloon Type on Helium Diffusion

Zachary Malus



NAVAL SCIENCE AWARD

U.S. NAVY

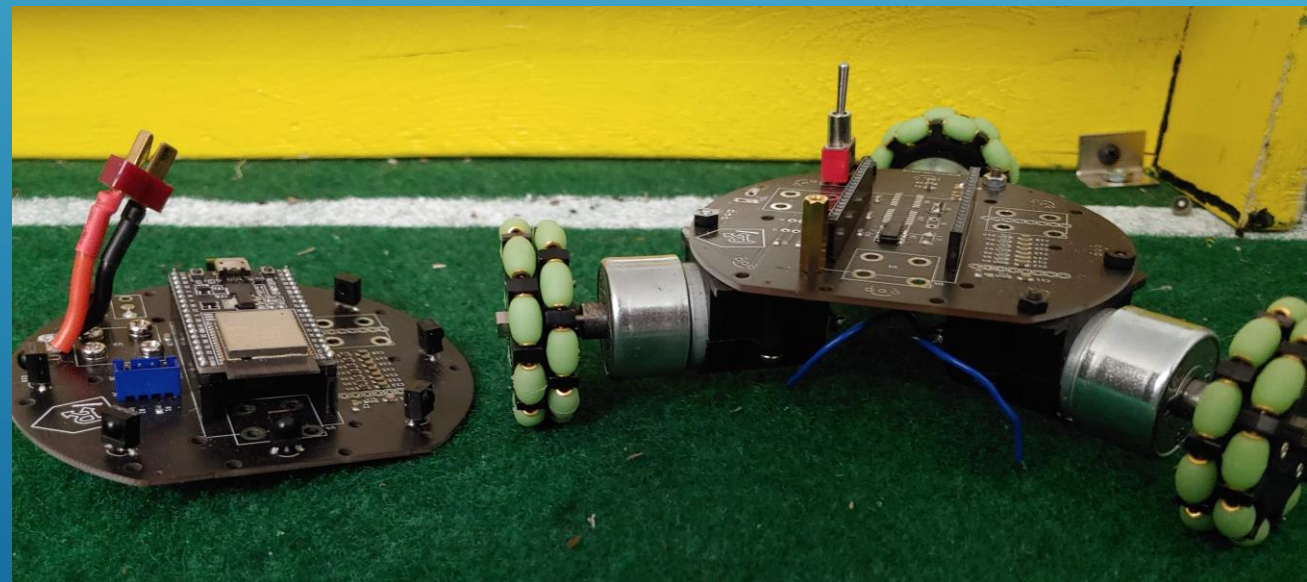


Zircon - An affordable, powerful, and customizable educational soccer robot kit for beginners

Sota Mark Ogata

Category: General Engineering

School: Princeton High School



NAVAL SCIENCE AWARD

U.S. NAVY

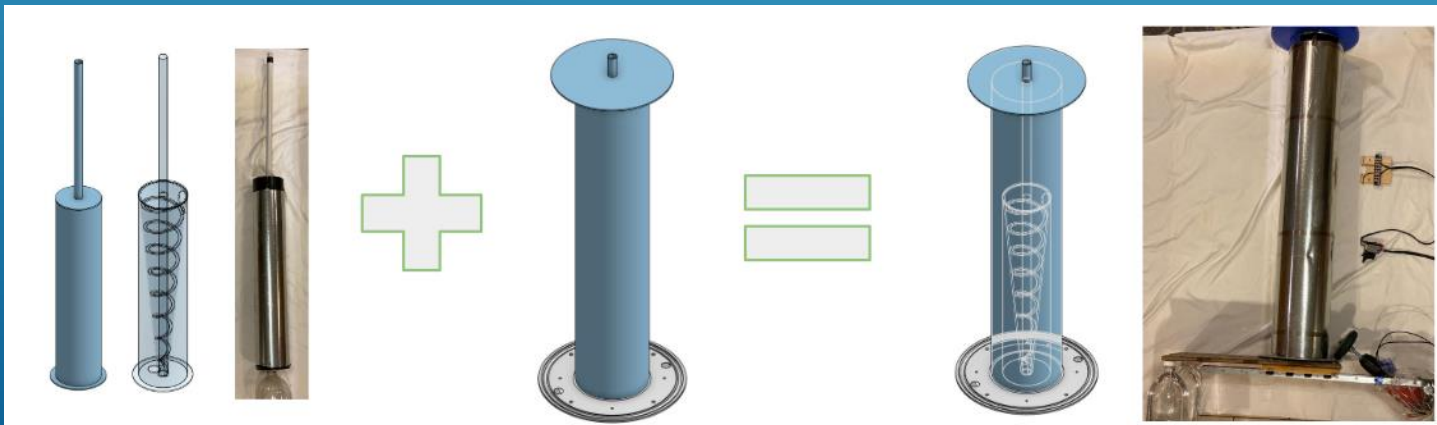


Innovative Climate Change Emissions Reduction: The Cargo Ship Flettner Rotor Centrifugal Vortex Exhaust Scrubber

Charlotte Lenore Michaluk

Category: Environmental Science and Engineering

School: Hopewell Valley Central High



AIR FORCE RESEARCH LABORATORY AWARD

U.S. AIR FORCE

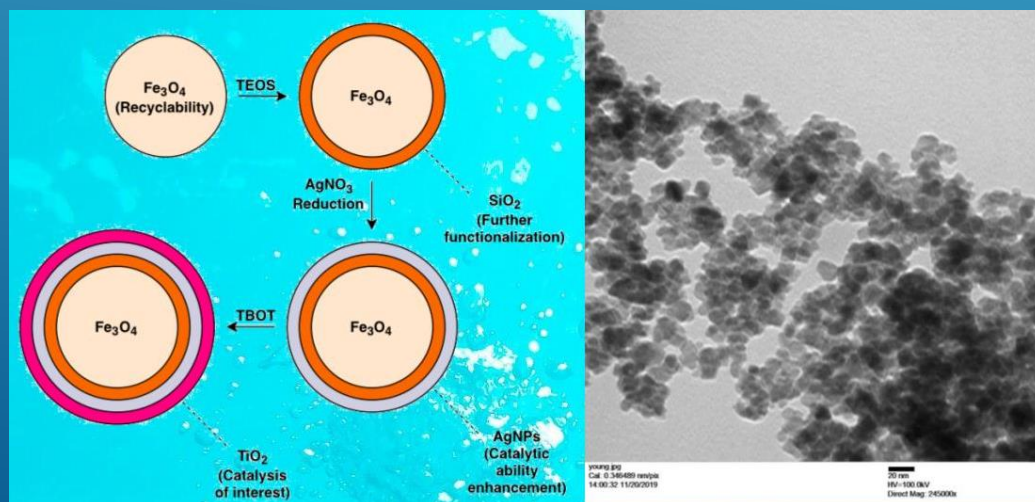


Catalytic Ability of TiO₂ Nanoparticles Functionalized on Ag-coated Fe₃O₄ Microspheres

Qiyang Zhou

Category: Chemistry and Materials

School: Princeton International School of Mathematics and Science



AIR FORCE RESEARCH LABORATORY AWARD

U.S. AIR FORCE

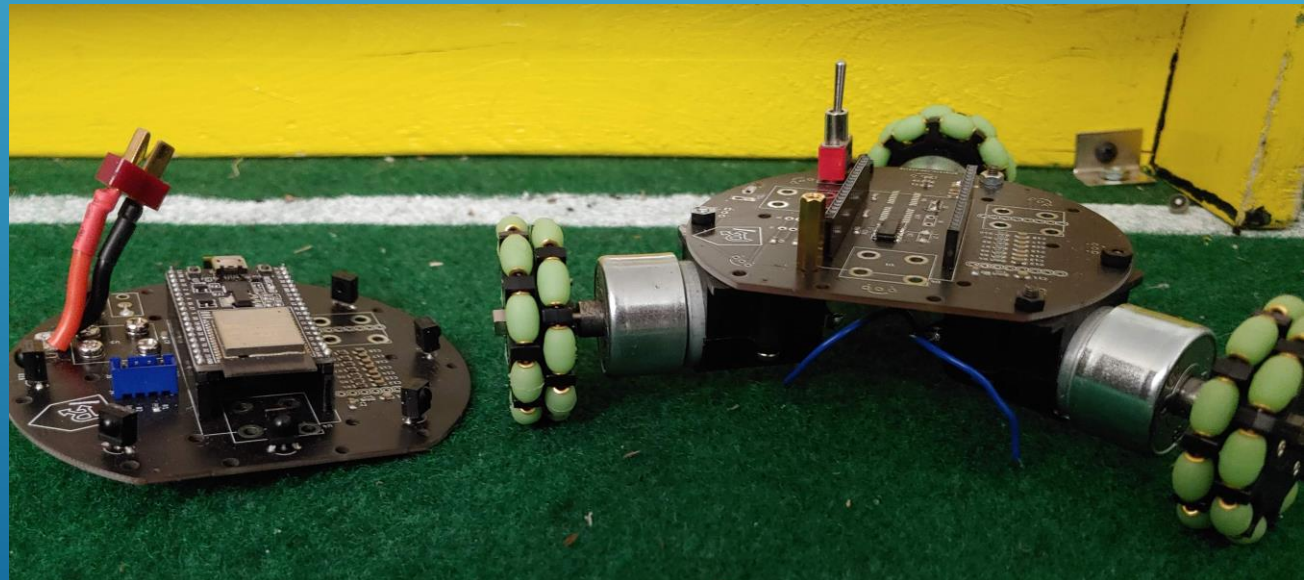


Zircon - An affordable, powerful, and customizable educational soccer robot kit for beginners

Sota Mark Ogata

Category: General Engineering

School: Princeton High School





AIR FORCE RESEARCH LABORATORY AWARD

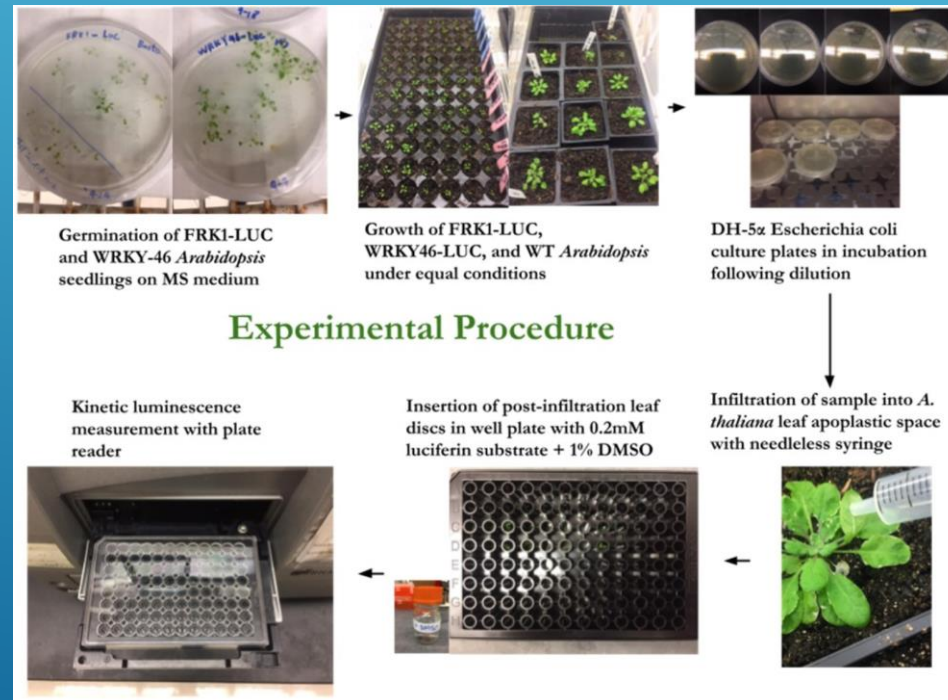
U.S. AIR FORCE

A Novel Assay to Quantitatively Detect Bacterial Endotoxin by Harnessing PAMP-Triggered Immunity of FRK1-LUC *Arabidopsis thaliana*

Aravind Krishnan

Category: Plant Science

School: Hillsborough High School



AIR FORCE RESEARCH LABORATORY AWARD

U.S. AIR FORCE



Sweet Mirage

Adam Benslama

Category: Mathematics, Physics and Astronomy

School: Princeton High School





AIR FORCE RESEARCH LABORATORY AWARD

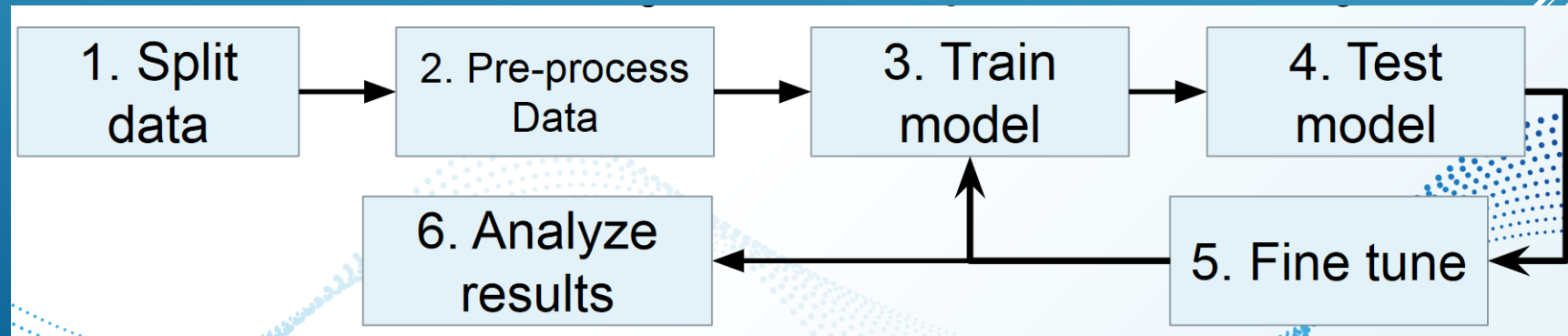
U.S. AIR FORCE

Predicting Alzheimer's Disease: Development and Validation of Machine Learning Models

Jay Fu

Category: Software and Embedded Systems

School: Ivy Mind Academy





AIR FORCE RESEARCH LABORATORY AWARD

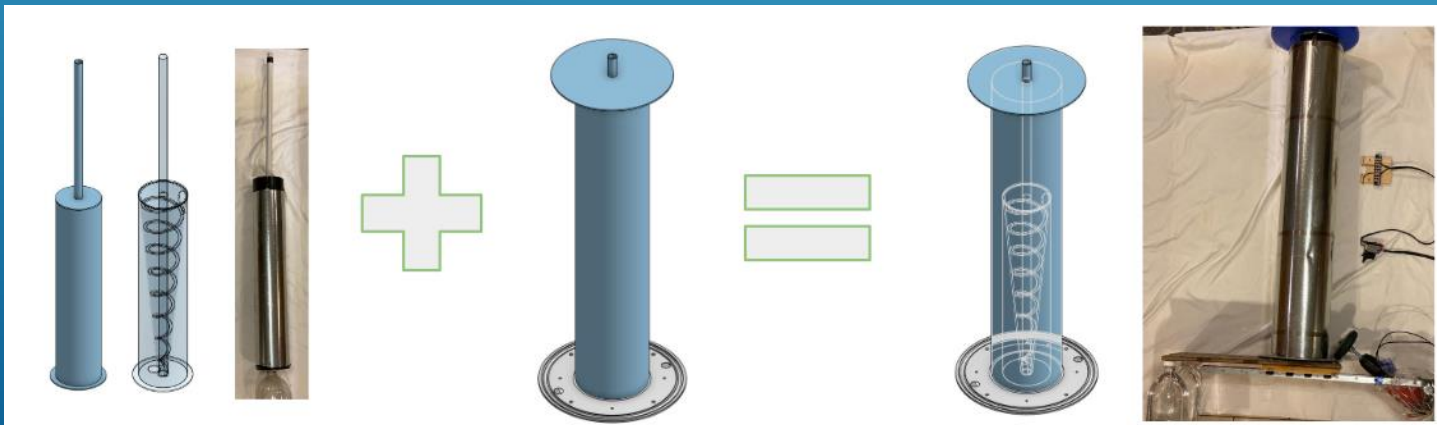
U.S. AIR FORCE

Innovative Climate Change Emissions Reduction: The Cargo Ship Flettner Rotor Centrifugal Vortex Exhaust Scrubber

Charlotte Lenore Michaluk

Category: Environmental Science and Engineering

School: Hopewell Valley Central High



AIR FORCE RESEARCH LABORATORY AWARD

U.S. AIR FORCE

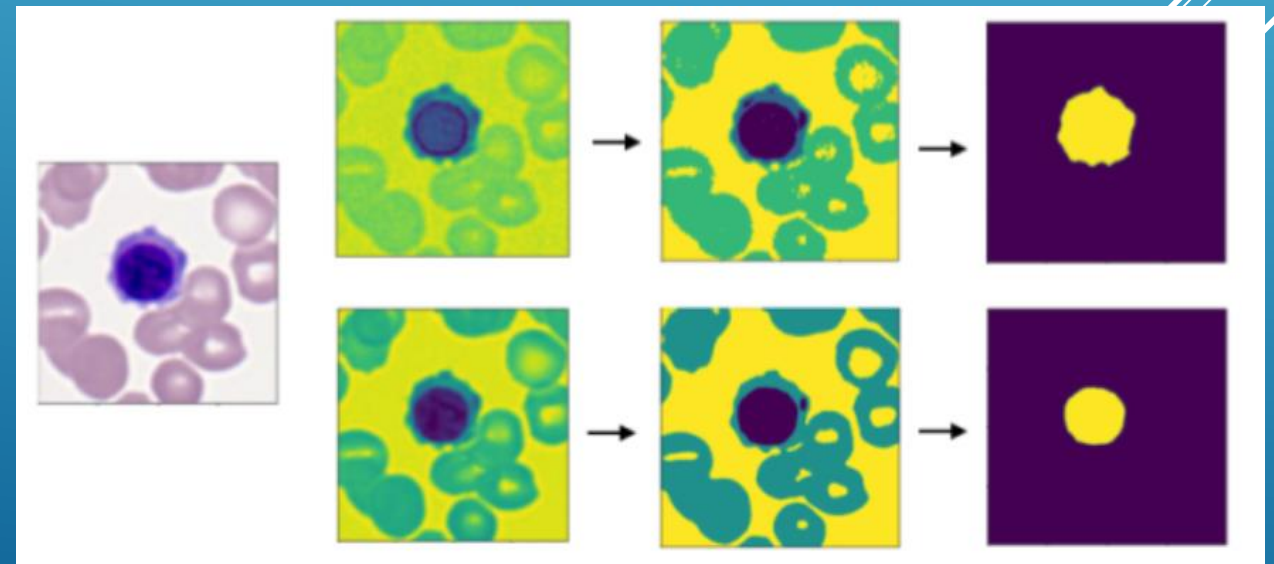


Detection and Classification of Immature Leukocytes for Diagnosis of Acute Myeloid Leukemia

Satvik Dasariraju

Category: Biochemistry, Biology and Medical

School: Lawrenceville School





AIR FORCE RESEARCH LABORATORY AWARD

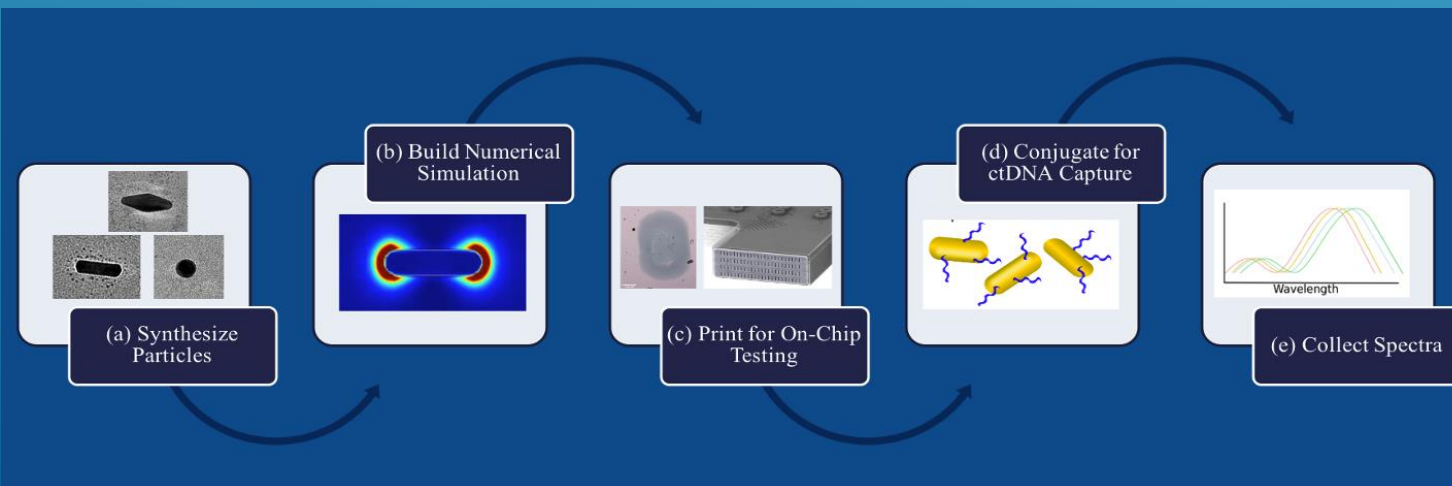
U.S. AIR FORCE

Shape-Tunable Plasmonic Gold Nanosensors for Quantitative Circulating Tumor DNA Screening

Lauren Zhang

Category: Biochemistry, Biology and Medical

School: Lawrenceville School



APA OUTSTANDING RESEARCH

AMERICAN PSYCHOLOGICAL ASSOCIATION



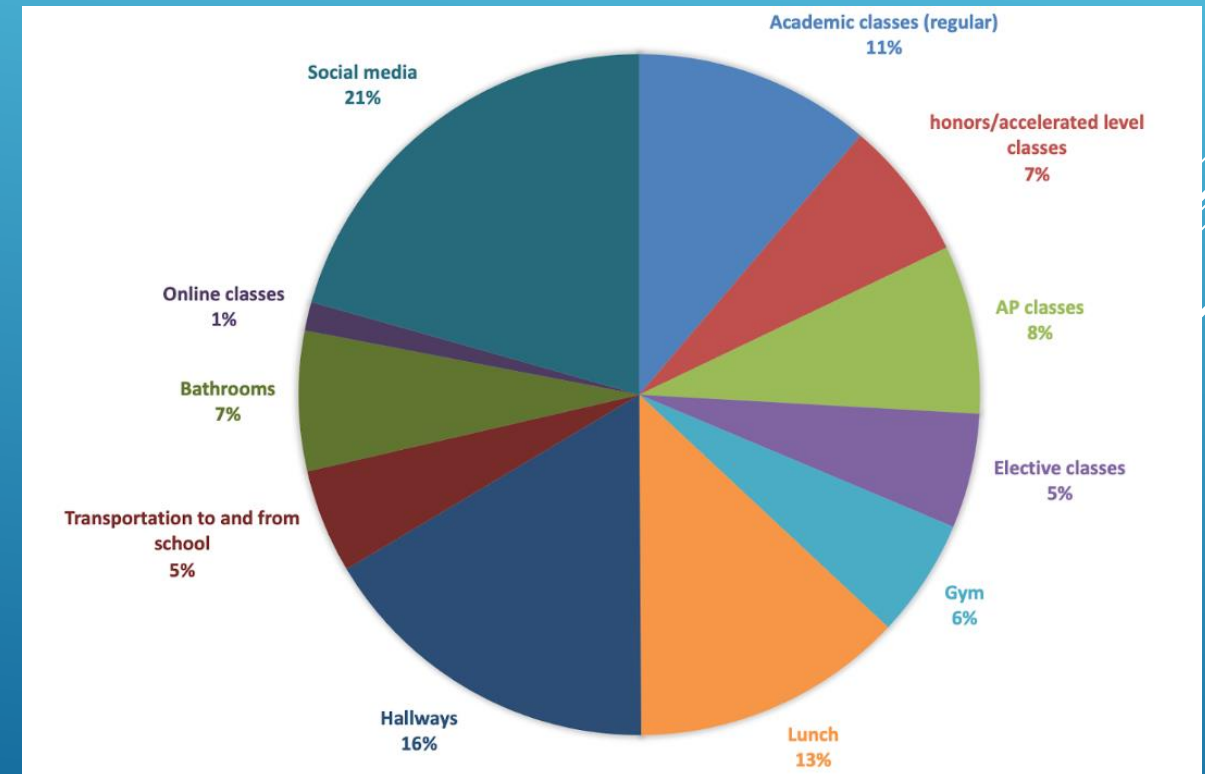
**AMERICAN
PSYCHOLOGICAL
ASSOCIATION**

The Impact of high school student body diversity on perceptions of racism

Susannah Tudor

Category: Behavioral and Social Science

School: Princeton High School



ASM MATERIALS OUTSTANDING AWARD

ASM MATERIALS EDUCATION FOUNDATION



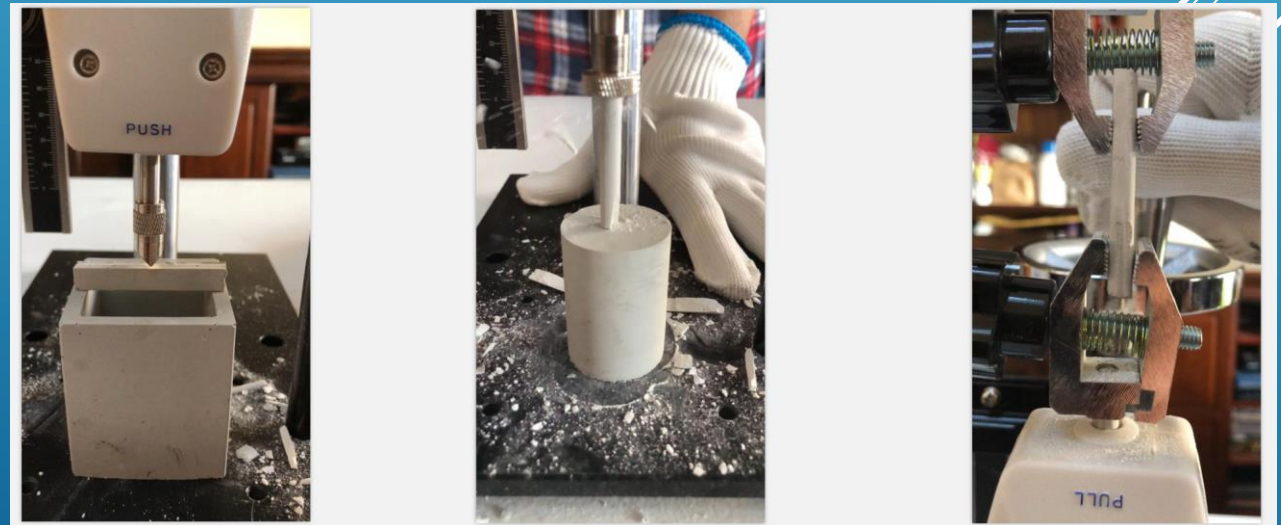
ASM MATERIALS
EDUCATION FOUNDATION

EcoConcrete - The search for and study of a viable alternative to highly energy-intensive and carbon-positive Portland cement

Muhil Thendral

Category: Behavioral and Social Science

School:



NJ WATER ENVIRONMENT ASSOCIATION

NJ WATER ENVIRONMENT ASSOCIATION

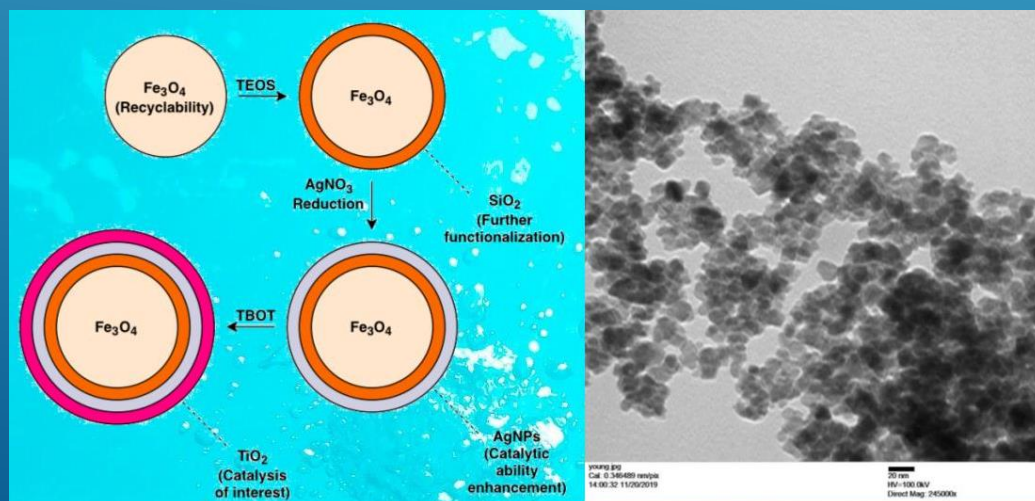


Catalytic Ability of TiO₂ Nanoparticles Functionalized on Ag-coated Fe₃O₄ Microspheres

Qiyang Zhou

Category: Chemistry and Materials

School: Princeton International School of Mathematics and Science



USAID SCIENCE CHAMPION AWARD

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

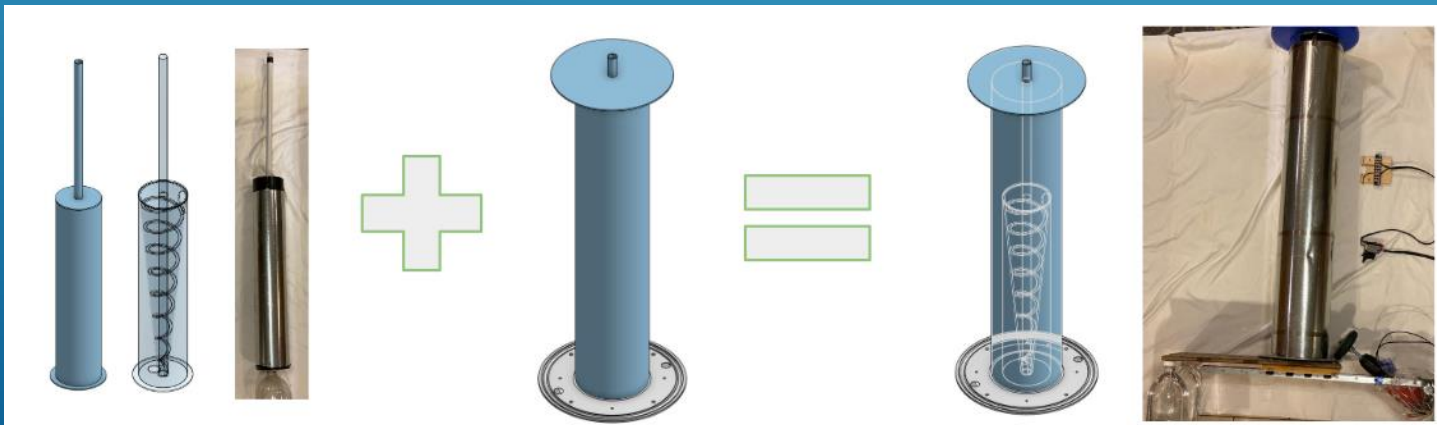


Innovative Climate Change Emissions Reduction: The Cargo Ship Flettner Rotor Centrifugal Vortex Exhaust Scrubber

Charlotte Lenore Michaluk

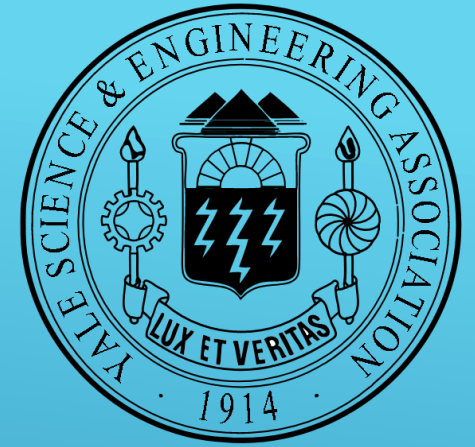
Category: Environmental Science and Engineering

School: Hopewell Valley Central High



YSEA SCIENCE FAIR AWARD

YALE SCIENCE & ENGINEERING ASSOCIATION

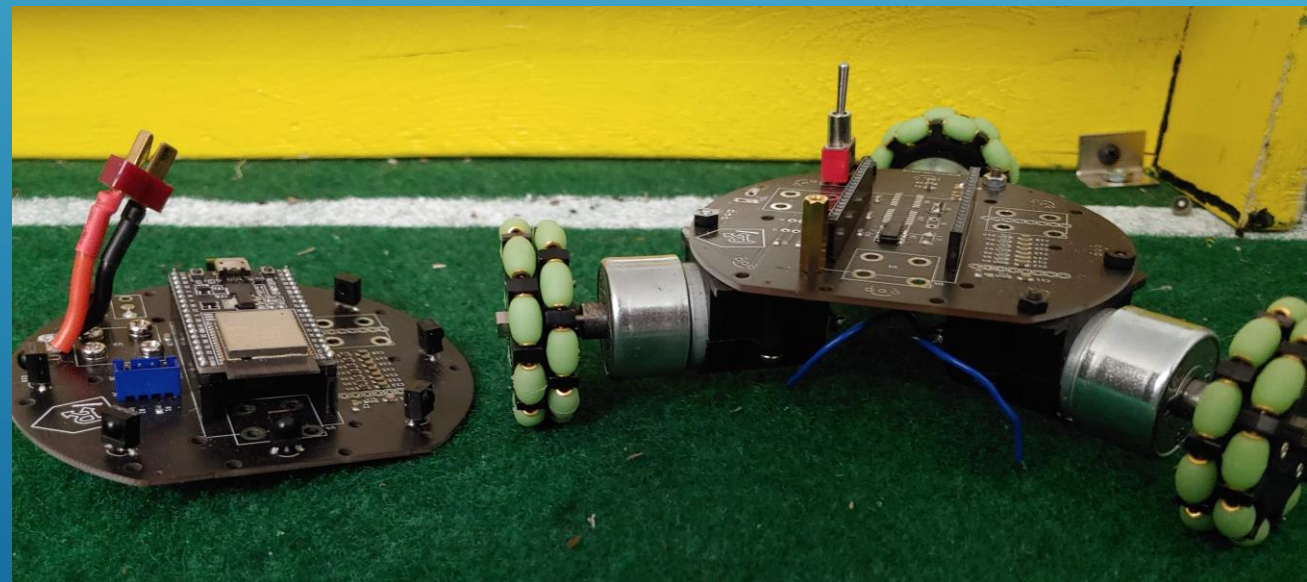


Zircon - An affordable, powerful, and customizable educational soccer robot kit for beginners

Sota Mark Ogata

Category: General Engineering

School: Princeton High School



STOCKHOLM JUNIOR WATER PRIZE

STOCKHOLM INTERNATIONAL WATER INSTITUTE



Desalination and Purification of Water using a Solar Powered Hydrogel Multistage

Kevin Murphy

Category: Environmental Science and Engineering

School: Princeton International School of Mathematics and Science



EARLE S. ROMMEL COMMUNICATIONS AWARD

MERCER SCIENCE AND ENGINEERING CLUB

A novel method for disinfection and sterilization of air and objects using electrified mist

Helena He

Category: Biochemistry, Biology and Medical

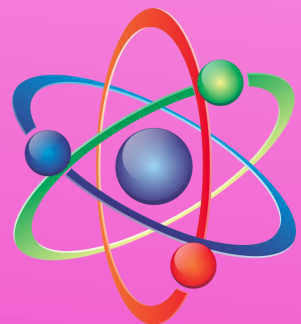
School: Princeton International School of Mathematics and Science



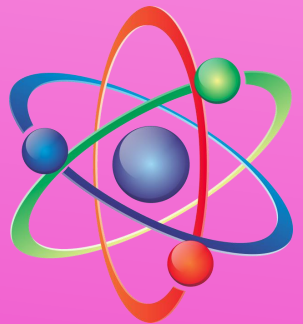
CATEGORY AWARDS

These awards are given by the Mercer Science and Engineering Club to projects in a given category. The following awards may be given in each category based on the quality of the project

- ▶ Honorable Mention
- ▶ 3rd place and Meritorious Achievement
- ▶ 2nd place and Outstanding Achievement
- ▶ 1st place and Superior Achievement
- ▶ 1st Runner up
- ▶ 2nd Runner up
- ▶ Grand Prize - best 1st place project.
The Grand Prize winner and first runner up get to compete in the International Science and Engineering Fair (ISEF).



HONORABLE MENTION



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB



The Effect of the Material of the Physical Obstruction and Distance on the Strength and Speed of the Signal for the WiFi

Joyce Xia

Category: General Science

School: St. Ann's School



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB



The Effect of Magnets on Seed Growth

Ziya Kartar Sangha

Category: General Science

School: Chapin School



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB



The Effect of a Wrapping on the Amount of Mold

Genevieve Gambone

Category: General Science

School: Chapin School



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB

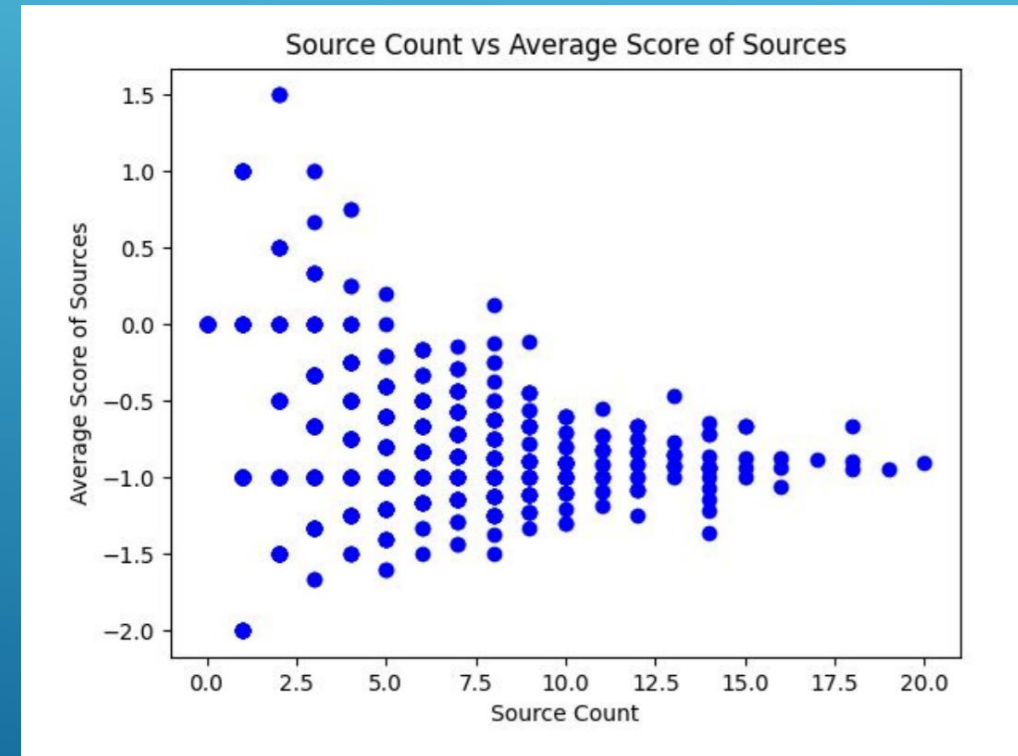


The Relationship Between Media Bias and Political Views of US Adults

Shoshana Henderson

Category: Behavioral and Social Science

School: Princeton High School



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB



Sleep Deprivation in High Schools Around the World

Violeta Gonzalez Toro

Category: Behavioral and Social Science

School: Princeton High School



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB

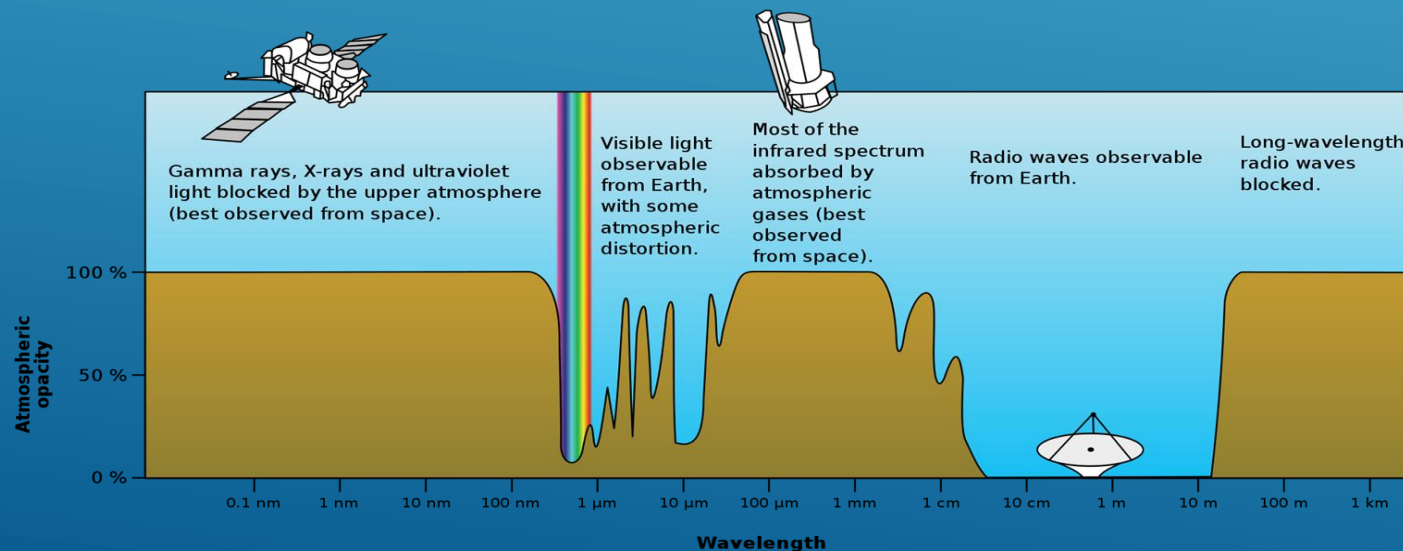


The Influence of Self Interacting Dark Matter on Galactic Formation and the Last Parsec Problem

Jihao Yu

Category: Mathematics, Physics and Astronomy

School: Princeton International School of Mathematics and Science



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB

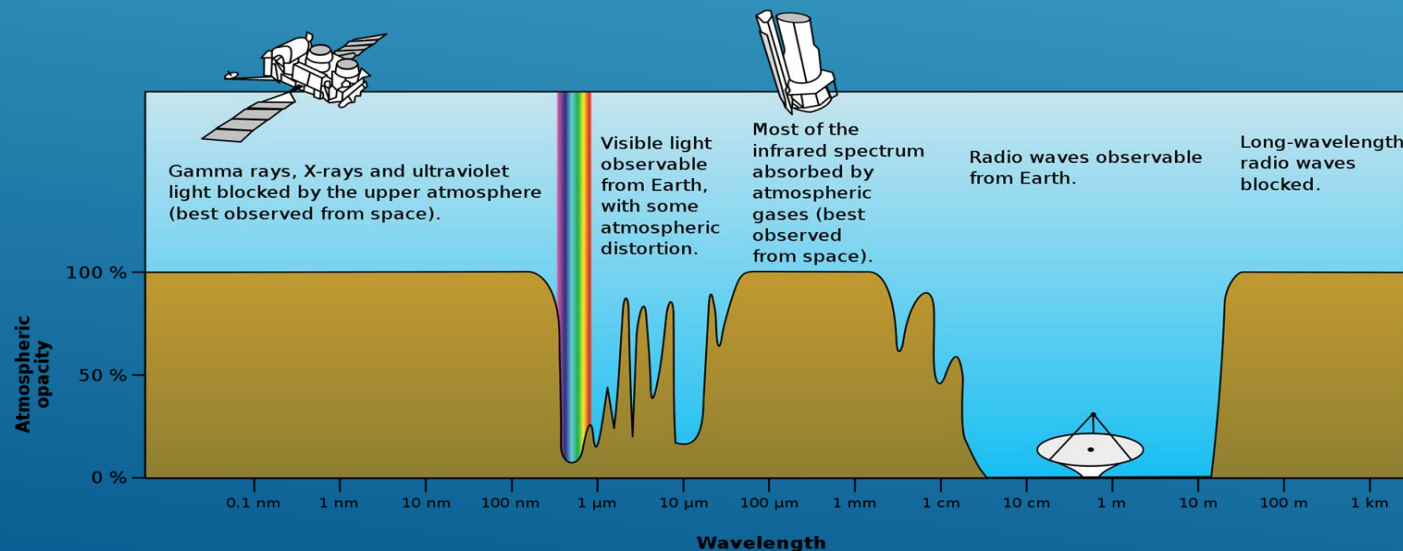


Star, galaxy, quasar and star spectral types classification with broadband photometry

Zhixin Wang

Category: Mathematics, Physics and Astronomy

School: Princeton International School of Mathematics and Science



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB

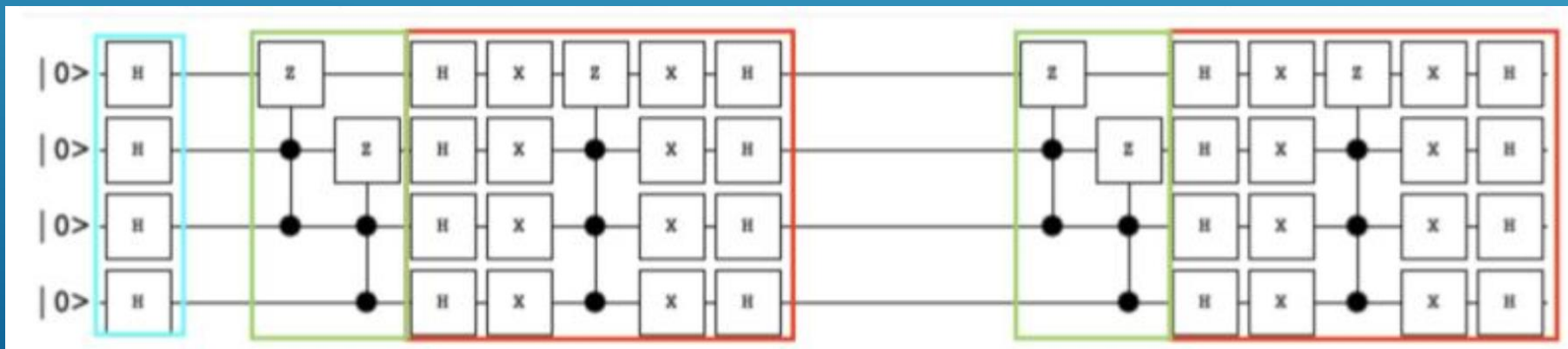


Comparing Grover's Quantum Search Algorithm with Classical Algorithm on Solving Satisfiability Problem

Runqian Wang

Category: Software and Embedded Systems

School: Princeton International School of Mathematics and Science



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB

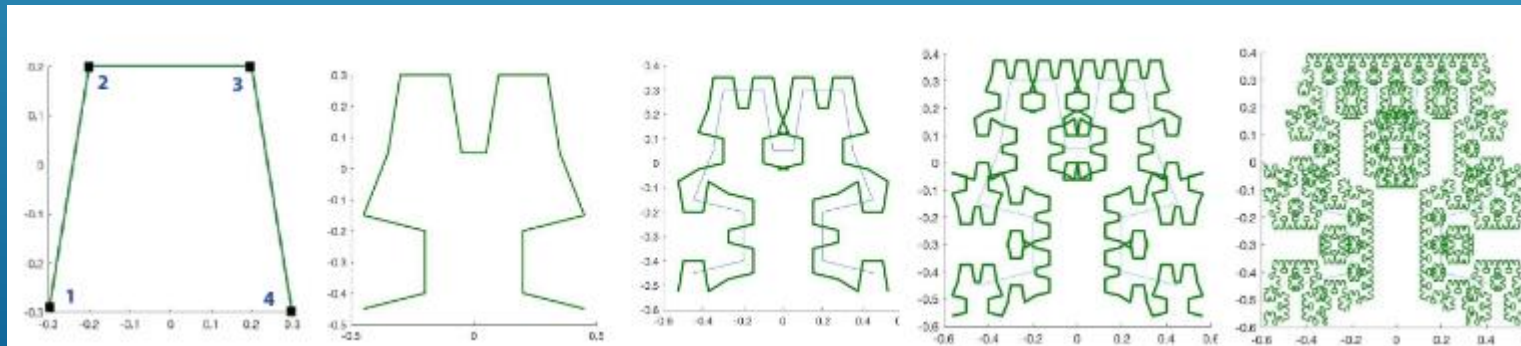


An Efficient Algorithm to Generate Grids Using a Modified Transformation Method

Yunseo Jeong

Category: Software and Embedded Systems

School: Blair Academy



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB



Mitigating Effects of Natural Disasters on Economy

Abhinav Mukherjee

Category: Environmental Science and Engineering

School: West Windsor-Plainsboro High North



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB

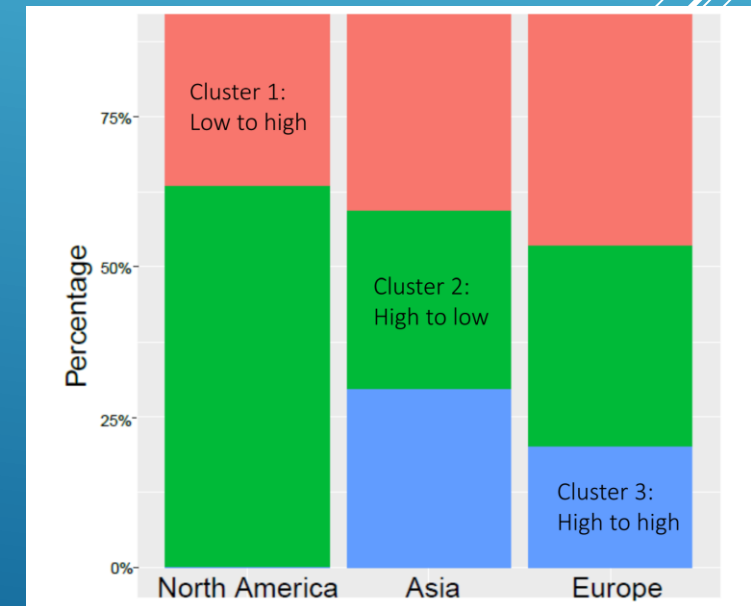


Modeling and visualizing the SARS-CoV-2 mutation based on geographical regions and time

Bomin Wei

Category: Biochemistry, Biology and Medical

School: Princeton International School of Mathematics and Science



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB



A Novel Reconstruction and Expression of Endostatin with pDC316 Plasmid in Eukaryotic Cells

Ziqi Wang

Category: Biochemistry, Biology and Medical

School: Princeton International School of Mathematics and Science



HONORABLE MENTION

MERCER SCIENCE AND ENGINEERING CLUB



Modified Edit Distance on Global SARS-CoV-2 Analysis

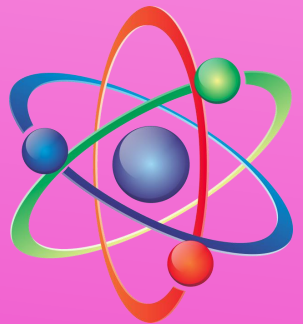
Jenny Fan

Category: Biochemistry, Biology and Medical

School: Princeton Day School

	CHN	ITA	CA	NY	TX	AUS	RUS	BRA
CHN		0.885	1.771	1.771	1.771	3.541	0.885	1.771
ITA	0.885		2.656	0.885	0.885	4.426	0	2.656
CA	1.771	2.656		3.541	3.541	5.312	2.656	3.541
NY	1.771	0.885	3.541		0	5.312	0.885	3.541
TX	1.771	0.885	3.541	0		5.312	0.885	3.541
AUS	3.541	4.426	5.312	5.312	5.312		4.426	5.312
RUS	0.885	0	2.656	0.885	0.885	4.426		2.656
BRA	1.771	2.656	3.541	3.541	3.541	5.312	2.656	

MERITORIOUS ACHIEVEMENT



MERITORIOUS ACHIEVEMENT

MERCER SCIENCE AND ENGINEERING CLUB



The Effect of Liquid Preservatives on Strawberry Decay

Lucy Melchior

Category: General Science

School: Chapin School



MERITORIOUS ACHIEVEMENT

MERCER SCIENCE AND ENGINEERING CLUB

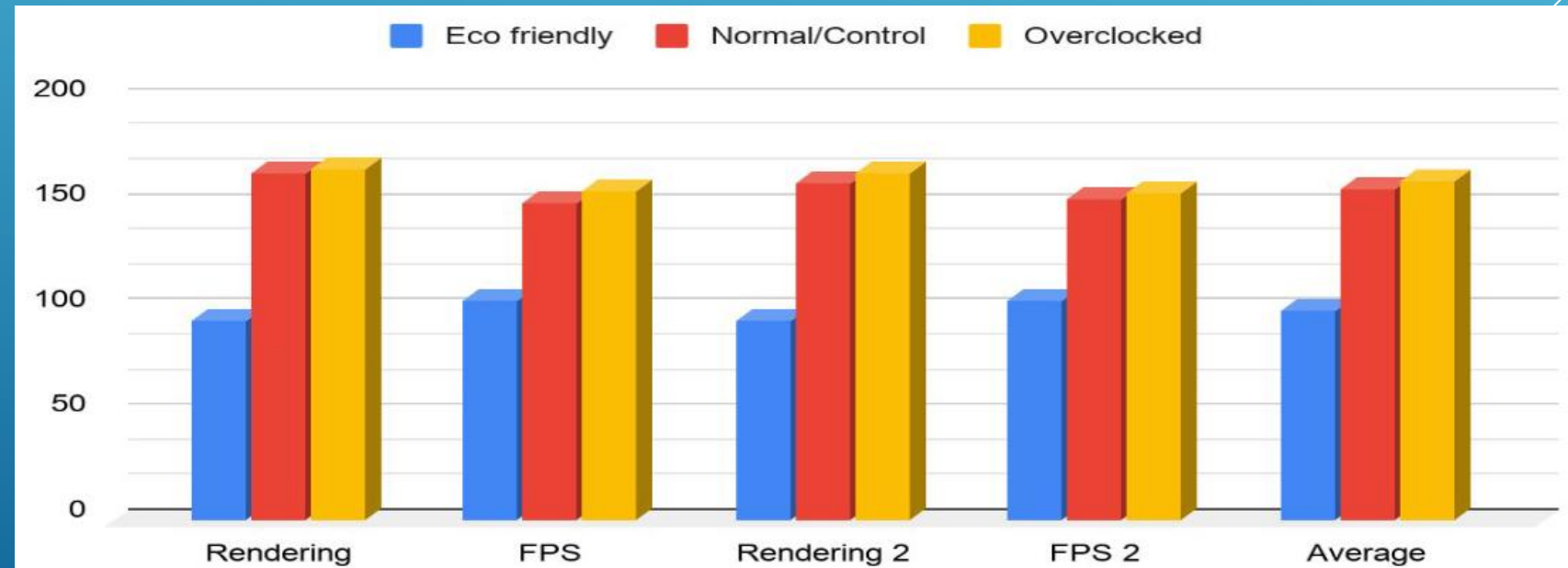


The effect of different settings on a PC on the amount of energy in watts used while running rendering and FPS tests

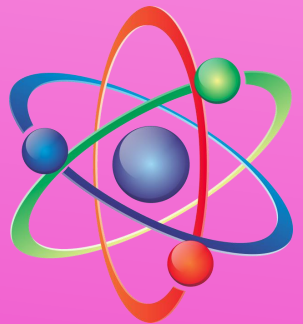
Jamison Tormey

Category: General Science

School: St. Ann's School



3RD PLACE AWARDS



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

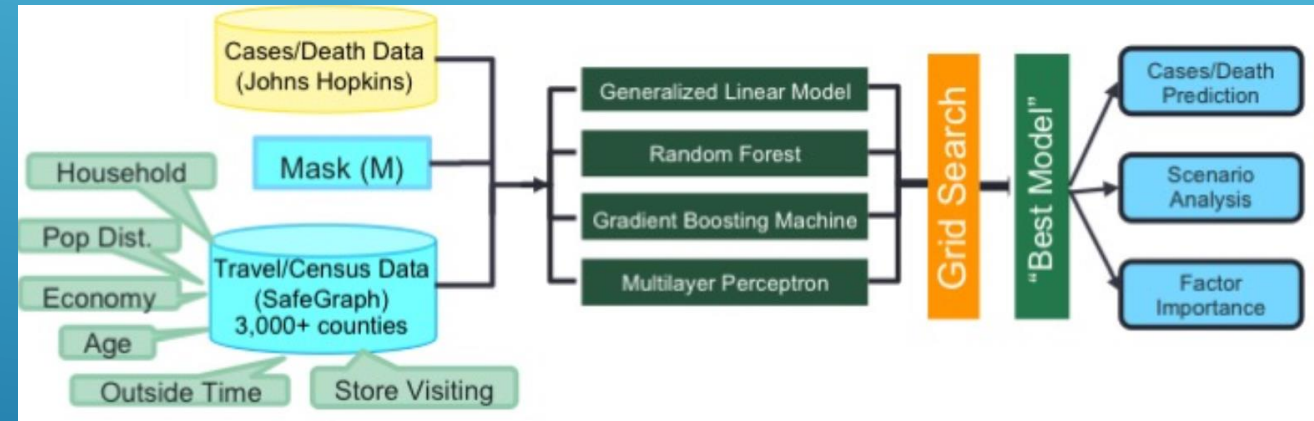


Quantify the Factor Importance and the Effect of Mask Policy on COVID-19 Spread in the United States with Machine Learning

Eddie Chen

Category: Chemistry and Materials

School: West Windsor-Plainsboro High North



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

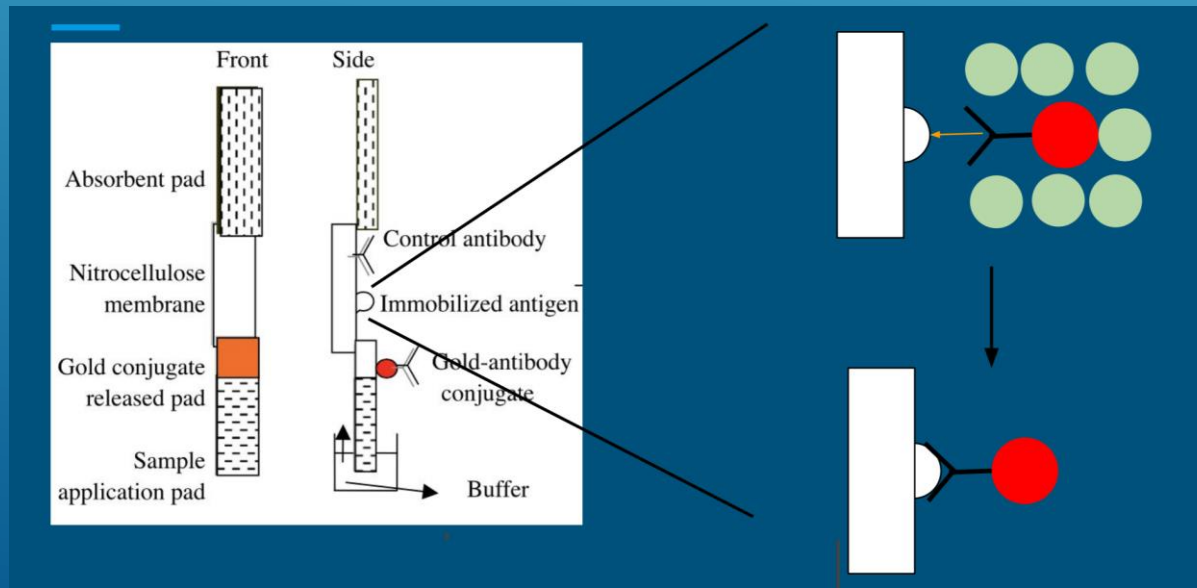


Development of an Immunosensor of Aflatoxin B1 Based on Silica-coated Gold Nanoparticles

William Wu

Category: Chemistry and Materials

School: Princeton International School of Mathematics and Science



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

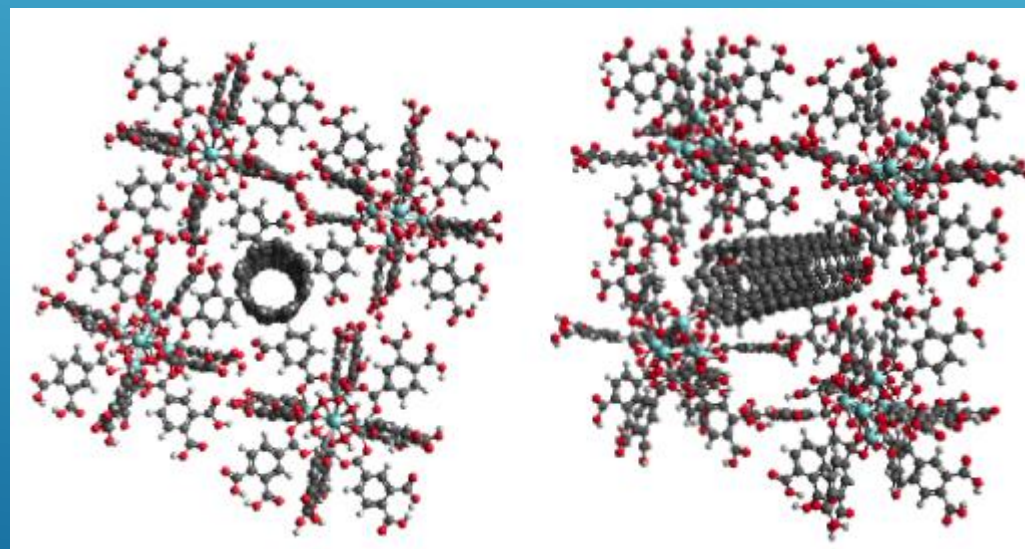


Study on the Organic Nanoparticles for Sustainable Energy Using Computational Simulations

Daniel Sung

Category: Energy

School: The Peddie School



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

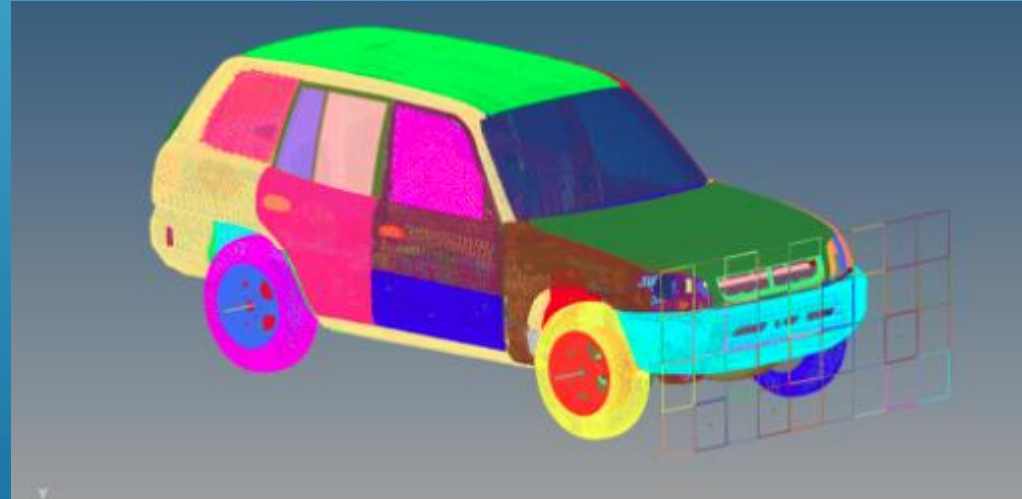


Force Analysis of Car Crash and Potential Improvements

Yi Yan

Category: Chemistry and Materials

School: The Peddie School



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

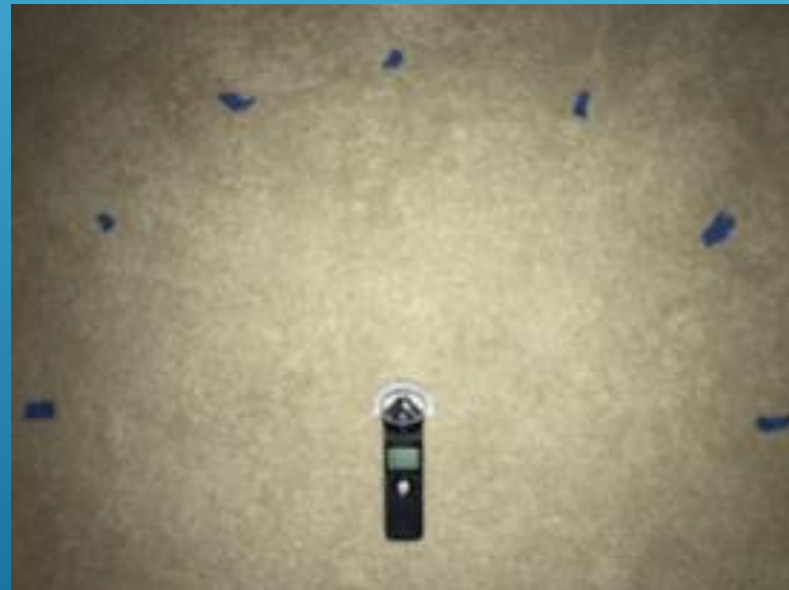


Localization of Natural Disaster Survivors Through Drone-based Sound Source Localization

Ian Lee

Category: General Engineering

School: Lawrenceville School



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

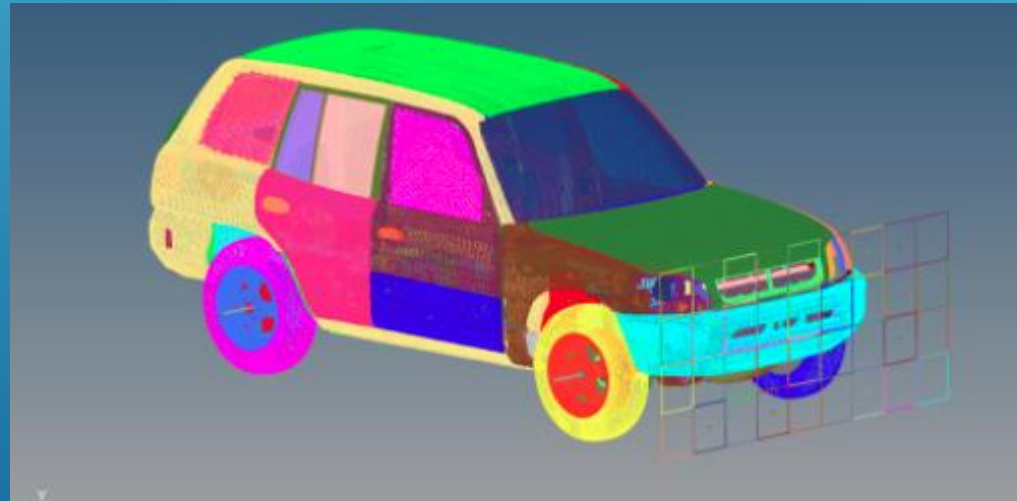


Force Analysis of Car Crash and Potential Improvements

Yunze Li

Category: Chemistry and Materials

School: The Peddie School



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB



Designing and Evaluating the Use of Machine Learning Models and Nearest Neighbor Algorithms to Identify Colors for People Who Have Difficulty Identifying Them.

Lucas Zapata-Sanin

Category: Software and Embedded Systems

School: Hopewell Valley Central High

Lime	Gold
Red	Olive
Royal Blue	Magenta
Silver	Cyan
Green	Dark Gold

3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB



Desalination and Purification of Water using a Solar Powered Hydrogel Multistage

Kevin Murphy

Category: Environmental Science and Engineering

School: Home School



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

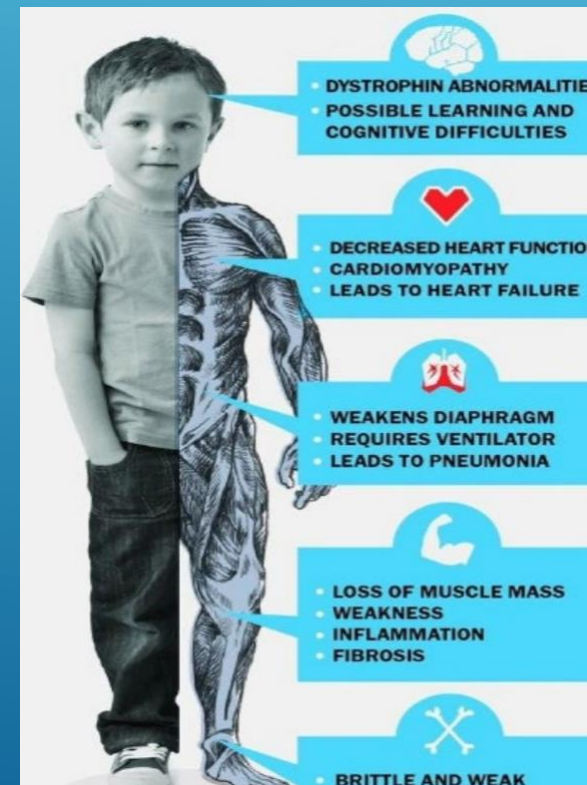


Systematic Analysis of Genetic Variation of Duchenne Muscular Dystrophy and Implication for Cancer

Hubert Chen

Category: Biochemistry, Biology and Medical

School: West Windsor-Plainsboro High South



3RD PLACE

MERCER SCIENCE AND ENGINEERING CLUB

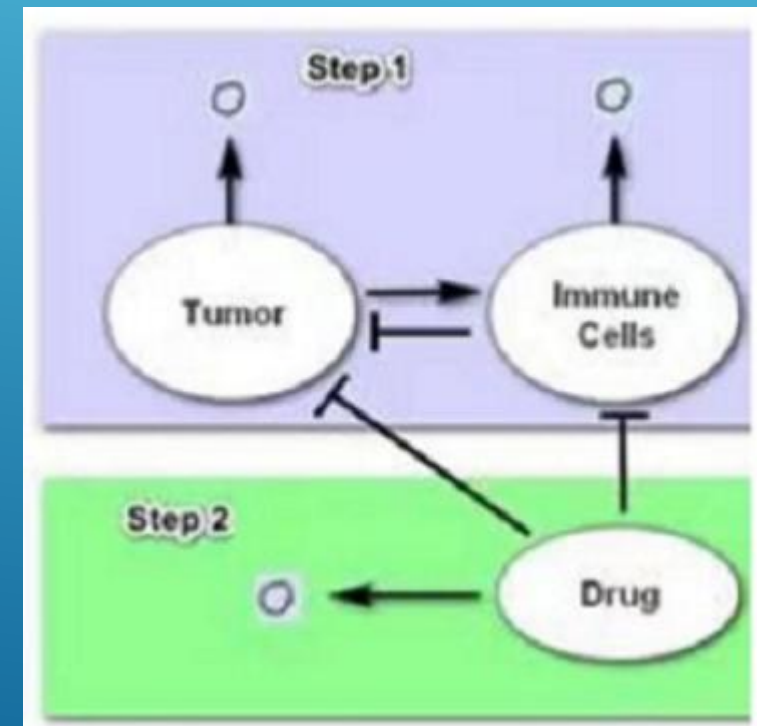


Customized cancer therapy based on the dynamic analysis of the Tumor-Immune-Drug System interaction

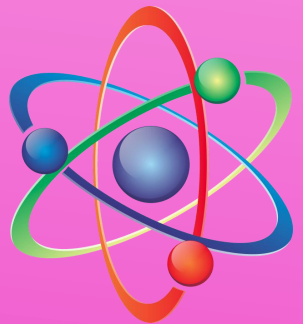
Xin Chen

Category: Biochemistry, Biology and Medical

School: Princeton High School



OUTSTANDING ACHIEVEMENT



OUTSTANDING ACHIEVEMENT

MERCER SCIENCE AND ENGINEERING CLUB



Electrify Your Electrolytes: The Effect Drinks Have on Your Electrolytes

William Black

Category: General Science

School: St. Ann's School



OUTSTANDING ACHIEVEMENT

MERCER SCIENCE AND ENGINEERING CLUB

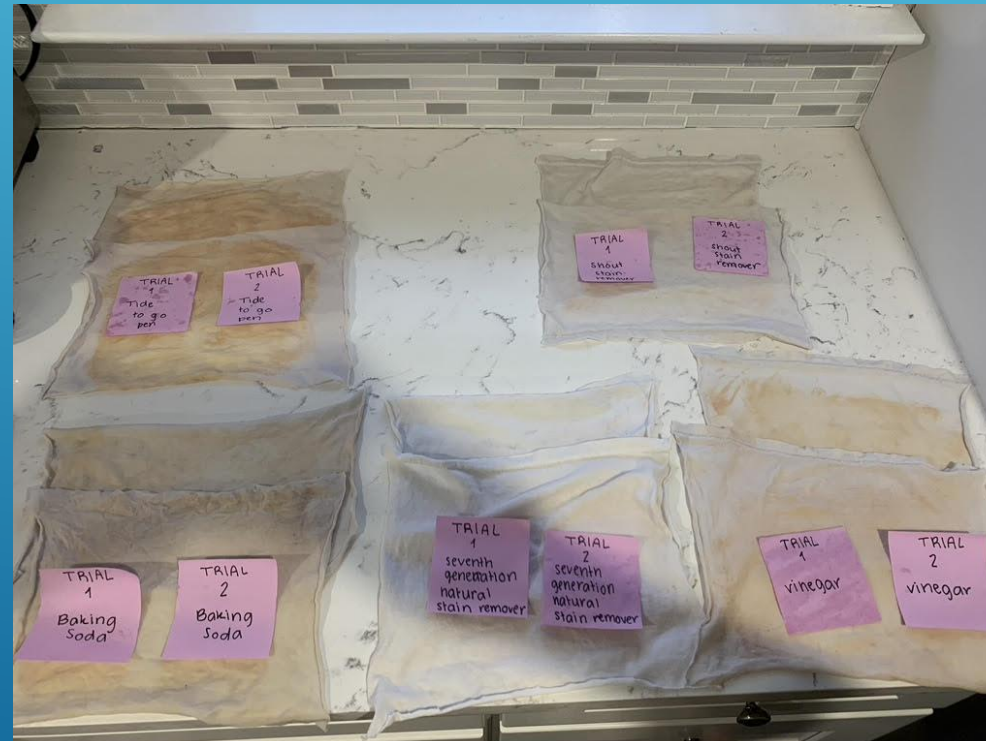


The Effect of Different Cleaning Products on Stain Removal

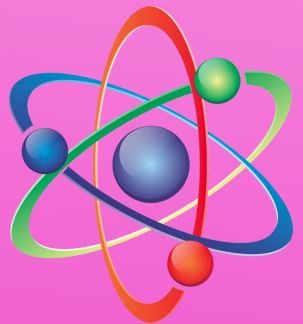
Lily Orn

Category: General Science

School: St. Ann's School



2ND PLACE AWARDS



2ND PLACE

MERCER SCIENCE AND ENGINEERING CLUB



The Impact of high school student body diversity on perceptions of racism

Susannah Tudor

Category: Behavioral and Social Science

School: Princeton High School

	Racism exists at my school	There are racial discrimination issues between students at my school.	Racism needs to be talked about more at school.
There are racial discrimination issues between students at my school.	0.75		
I have seen another student discriminated against at school because of their race.	0.52	0.54	
Racism needs to be talked about more at school.	0.53	0.57	
Having a mandatory racial literacy class as part of my curriculum would help my community.			0.68
I believe in the Black Lives Matter movement.	0.52		0.64

2ND PLACE

MERCER SCIENCE AND ENGINEERING CLUB



EcoConcrete - The search for and study of a viable alternative to highly energy-intensive and carbon-positive Portland cement

Muhil Thendral

Category: Chemistry and Materials

School: Trenton Central High School



Flexural Test



Compression Test



Tensile Test

2ND PLACE
MERCER SCIENCE AND ENGINEERING CLUB

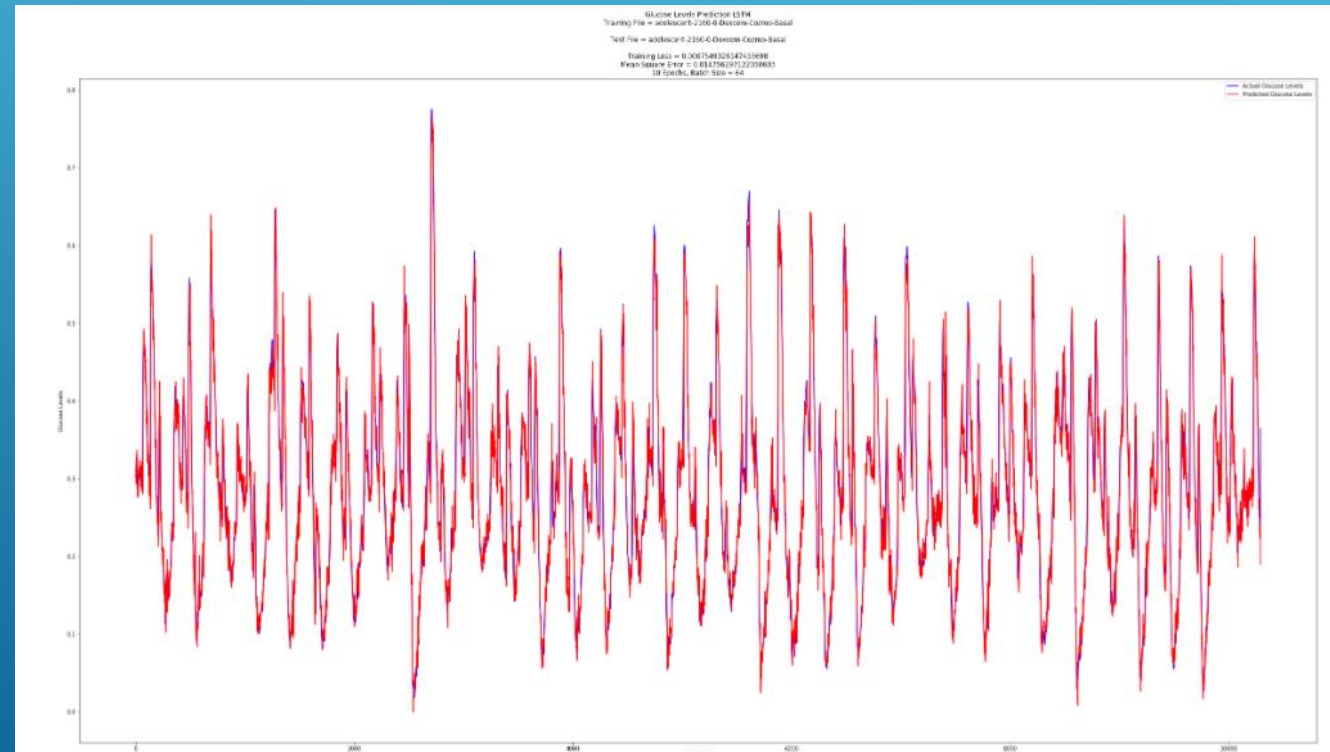


Neural Networks in Glucose Prediction

Minghao (Anna) Zhang

Category: General Engineering

School: The Pennington School



2ND PLACE

MERCER SCIENCE AND ENGINEERING CLUB

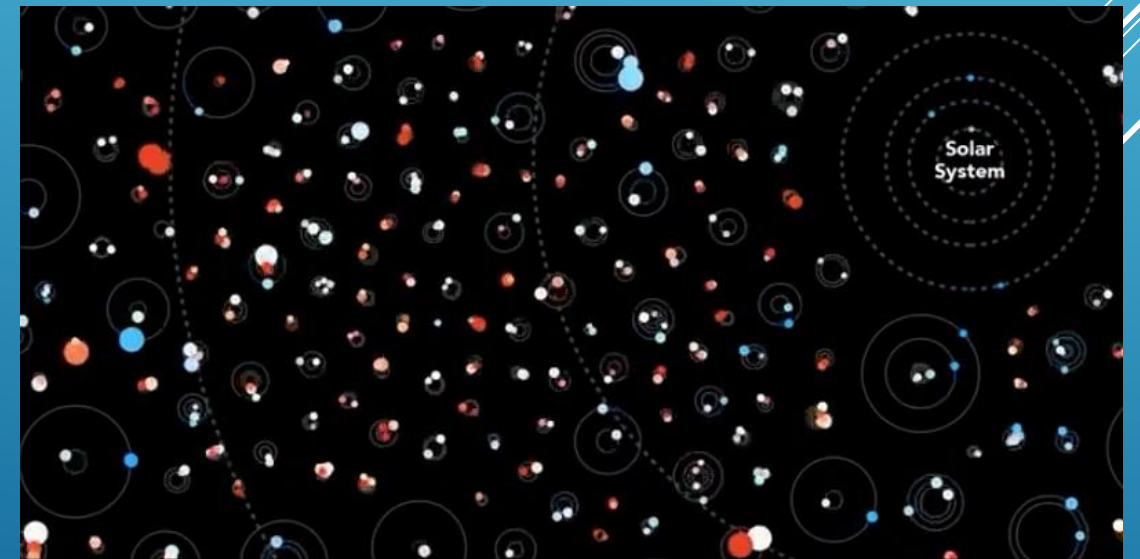


Eject, crash, or survive: Using machine learning to predict orbital instability of exoplanetary systems

Neha Ayyalapu

Category: Mathematics, Physics and Astronomy

School: West Windsor-Plainsboro High South



2ND PLACE

MERCER SCIENCE AND ENGINEERING CLUB

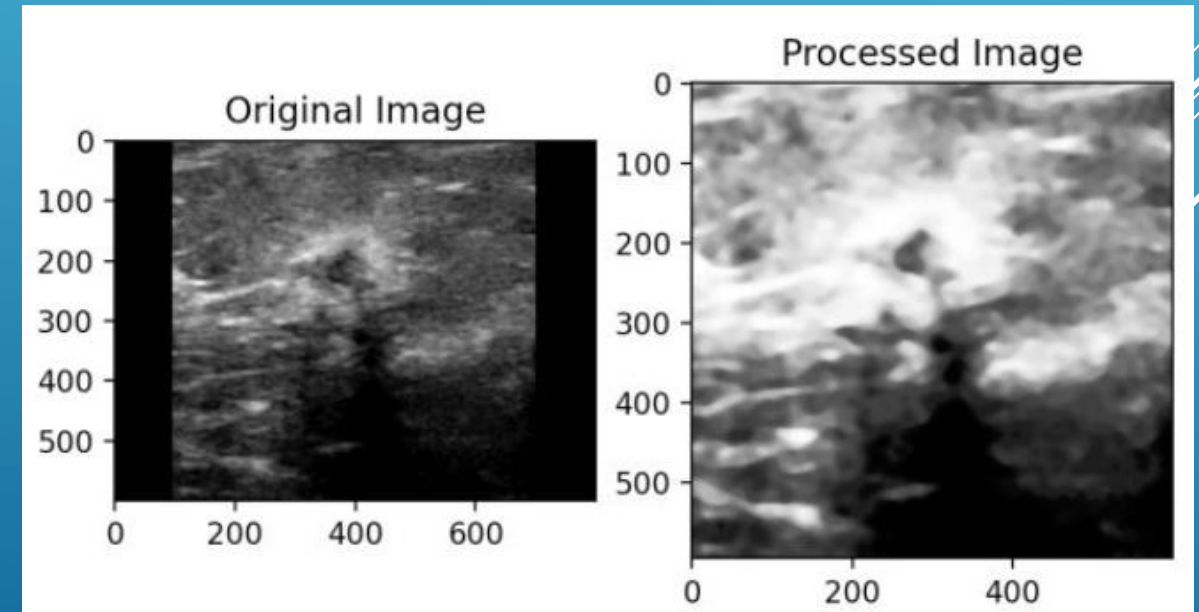


Automatic deep-learning classification models for breast lesions

Sarina Hasan

Category: Software and Embedded Systems

School: Princeton Day School



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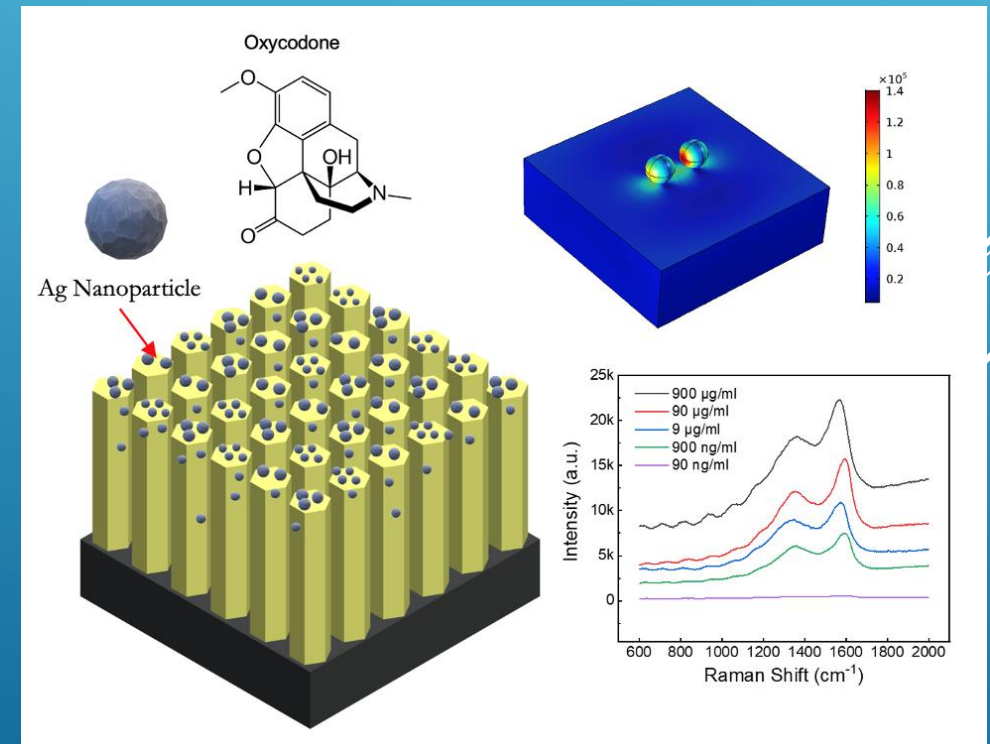


Metal-doped Zinc Oxide Nanochip for Surface-Enhanced Raman Spectroscopic Sensing of Opioids in Liquids

Michael Zhang

Category: Environmental Science and Engineering

School: Lawrenceville School



2ND PLACE

MERCER SCIENCE AND ENGINEERING CLUB

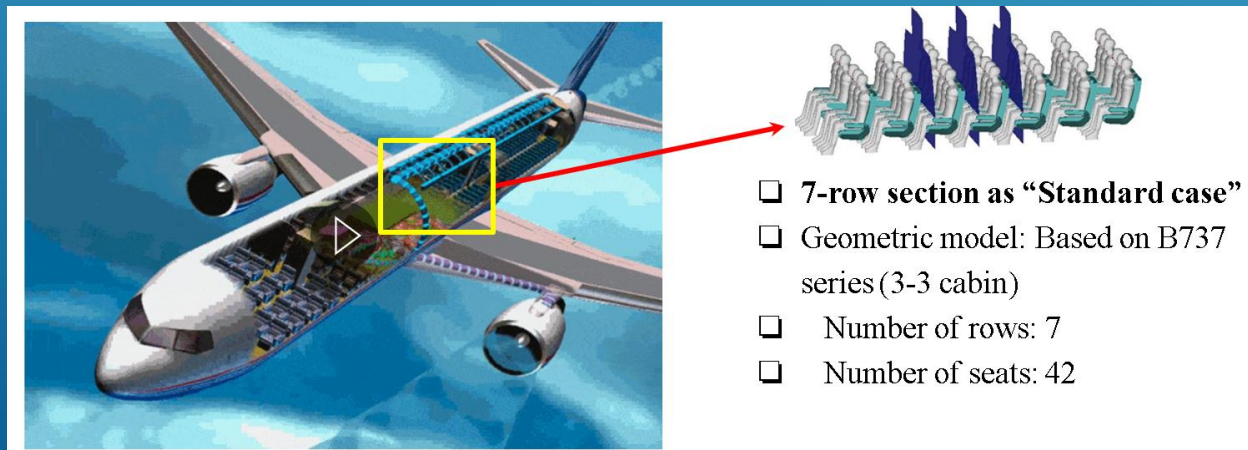


Modeling COVID-19 transmission in aircraft cabin by integrating particle dynamics, dilution effect, and risk assessment

Xinkai Yu

Category: Environmental Science and Engineering

School: Princeton International School of Mathematics and Science



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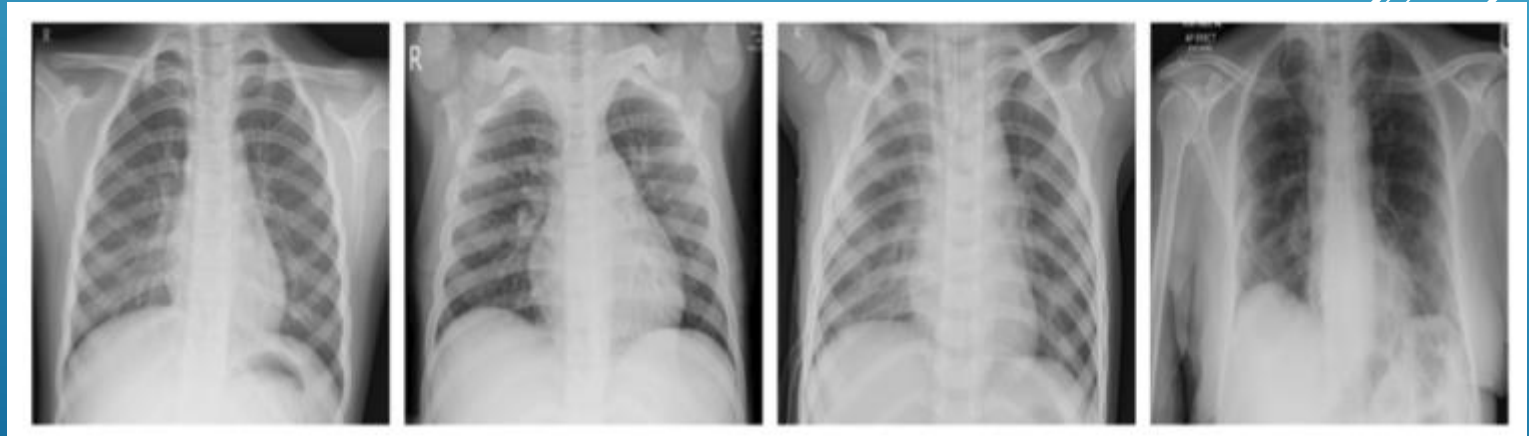


PneumoStack: A Novel Approach to Pneumonia and COVID-19 Diagnosis with Automated Chest X-ray Analysis via Stacked Generalization and Convolutional Neural Networks

Sonya Jin

Category: Biochemistry, Biology and Medical

School: Stuart Country Day School



2ND PLACE

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A novel method for disinfection and sterilization of air and objects using electrified mist

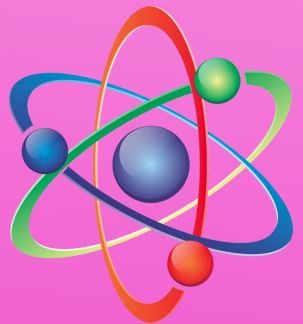
Helena He

Category: Biochemistry, Biology and Medical

School: Princeton International School of Mathematics and Science



SUPERIOR ACHIEVEMENT



BROADCOM MASTERS & SUPERIOR ACHIEVEMENT MERCER SCIENCE AND ENGINEERING CLUB

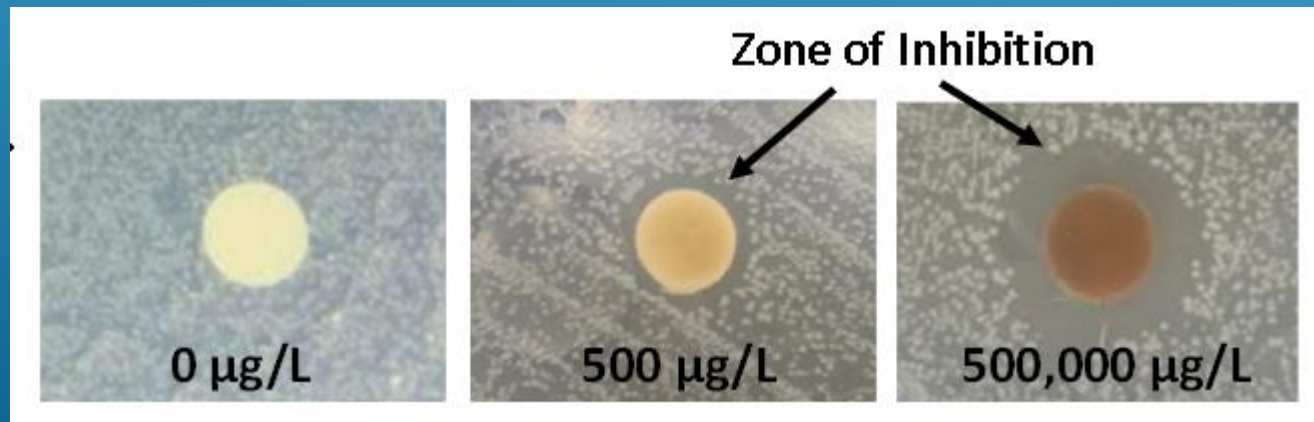


The Effect of Silver Nanoparticles on the Viability of Bacteria, Fungi, Aquatic Organisms and Plants

Jillian Yao

Category: General Engineering

School: St. Ann's School



BROADCOM MASTERS & SUPERIOR ACHIEVEMENT MERCER SCIENCE AND ENGINEERING CLUB



The Effect of Balloon Type on Helium Diffusion

Zachary Malus

Category: General Science

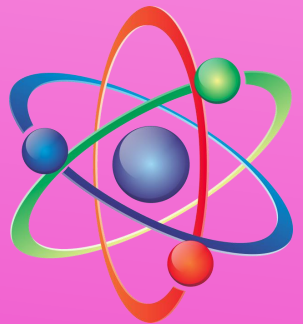
School: Chapin School

The Effect of Balloon Type on Helium Diffusion

Zachary Malus



1ST PLACE AWARDS



1ST PLACE

MERCER SCIENCE AND ENGINEERING CLUB

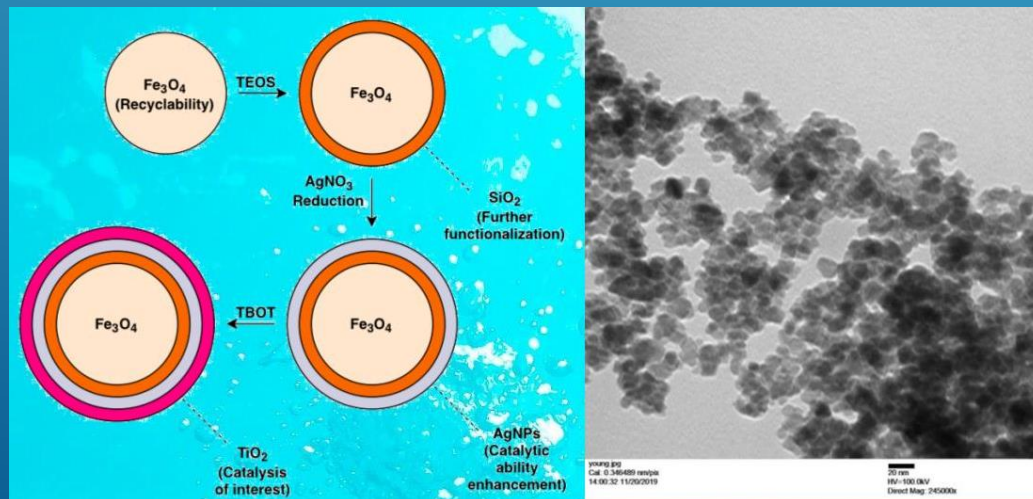


Catalytic Ability of TiO₂ Nanoparticles Functionalized on Ag-coated Fe₃O₄ Microspheres

Qiyang Zhou

Category: Chemistry and Materials

School: Princeton International School of Mathematics and Science



1ST PLACE

MERCER SCIENCE AND ENGINEERING CLUB

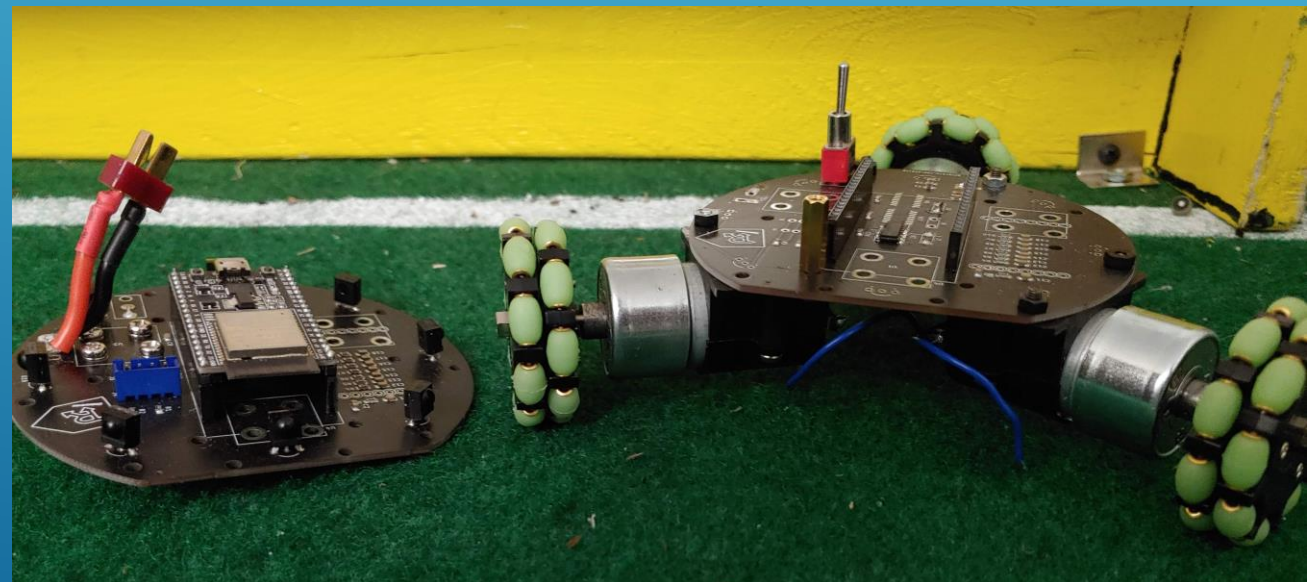


Zircon - An affordable, powerful, and customizable educational soccer robot kit for beginners

Sota Mark Ogata

Category: General Engineering

School: Princeton High School



1ST PLACE

MERCER SCIENCE AND ENGINEERING CLUB

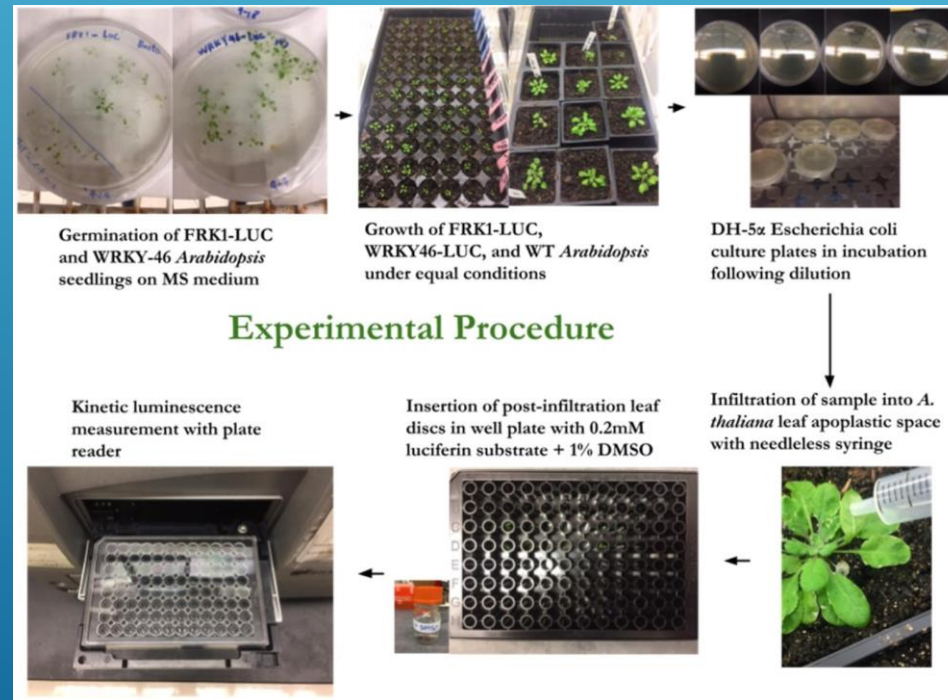


A Novel Assay to Quantitatively Detect Bacterial Endotoxin by Harnessing PAMP-Triggered Immunity of FRK1-LUC *Arabidopsis thaliana*

Aravind Krishnan

Category: Plant Science

School: Hillsborough High School



1ST PLACE

MERCER SCIENCE AND ENGINEERING CLUB



Sweet Mirage

Adam Benslama

Category: Mathematics, Physics and Astronomy

School: Princeton High School



1ST PLACE

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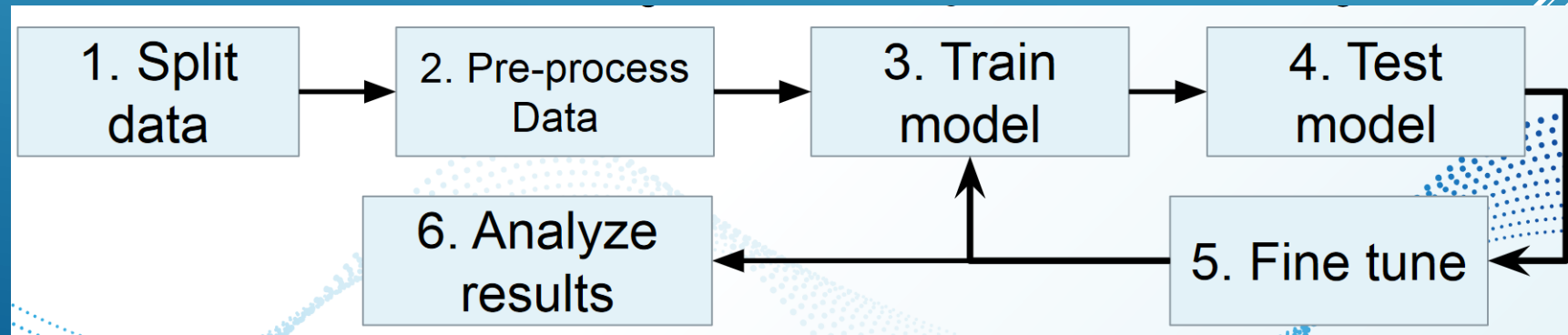


Predicting Alzheimer's Disease: Development and Validation of Machine Learning Models

Jay Fu

Category: Software and Embedded Systems

School:



1ST PLACE

MERCER SCIENCE AND ENGINEERING CLUB

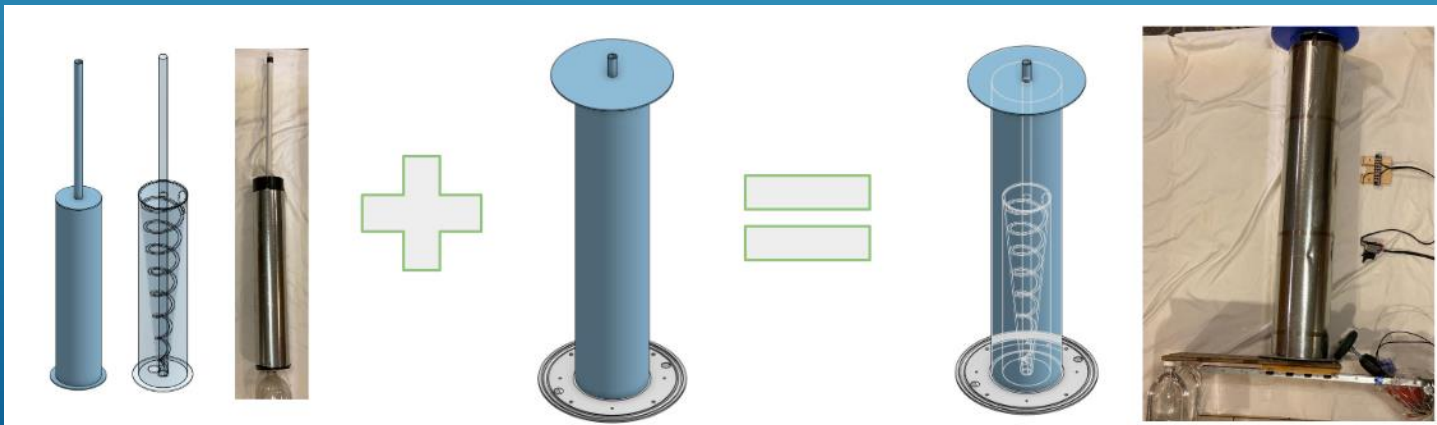


Innovative Climate Change Emissions Reduction: The Cargo Ship Flettner Rotor Centrifugal Vortex Exhaust Scrubber

Charlotte Lenore Michaluk

Category: Environmental Science and Engineering

School: Hopewell Valley Central High



1ST PLACE

MERCER SCIENCE AND ENGINEERING CLUB

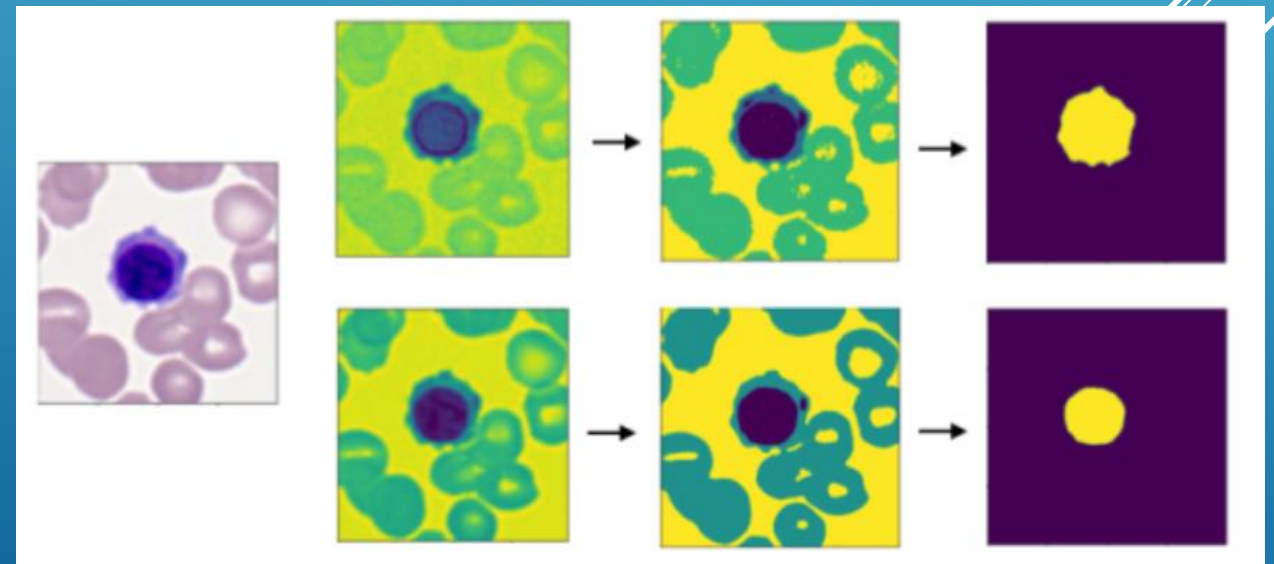


Detection and Classification of Immature Leukocytes for Diagnosis of Acute Myeloid Leukemia

Satvik Dasariraju

Category: Biochemistry, Biology and Medical

School: Lawrenceville School



1ST PLACE

MERCER SCIENCE AND ENGINEERING CLUB

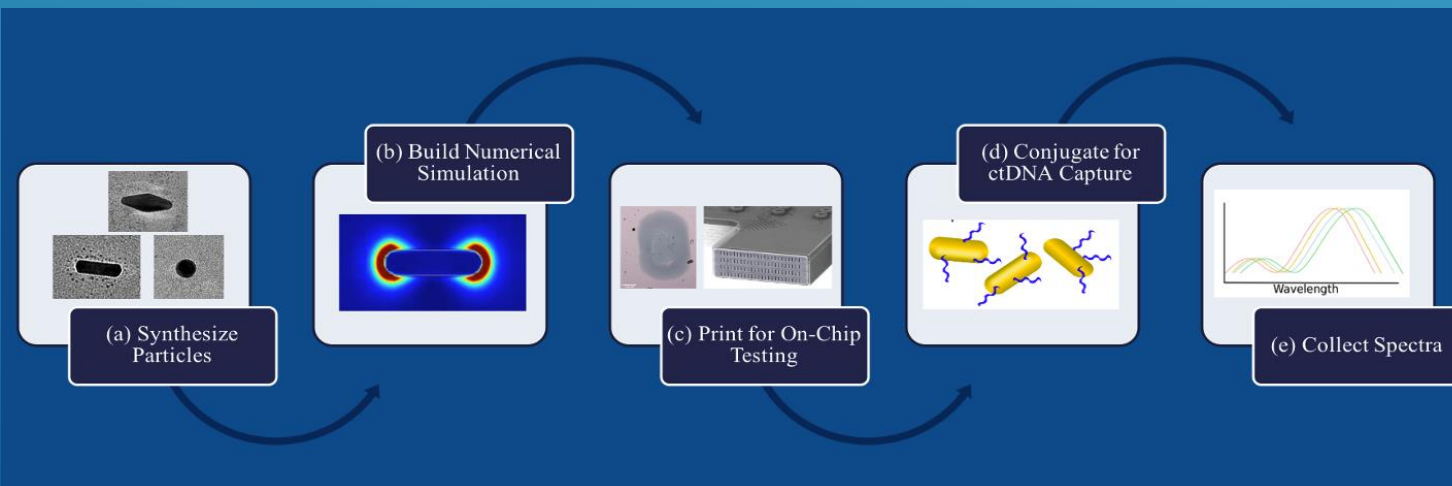


Shape-Tunable Plasmonic Gold Nanosensors for Quantitative Circulating Tumor DNA Screening

Lauren Zhang

Category: Biochemistry, Biology and Medical

School: Lawrenceville School



GRAND PRIZE AWARDS



Grand Prize

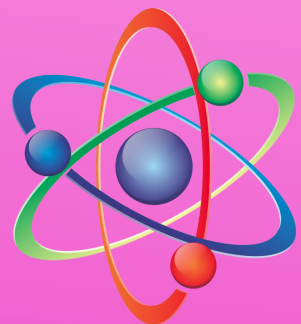
- ▶ Student competes in the 2021 Regeneron International Science and Engineering Fair (ISEF)
- ▶ Receives a \$400 award.

1st runner up

- ▶ Student competes in the 2021 Regeneron International Science and Engineering Fair (ISEF)
- ▶ Receives a \$200 award

2nd runner up

- ▶ Receives a \$100 award.



2ND RUNNER UP

MERCER SCIENCE AND ENGINEERING CLUB

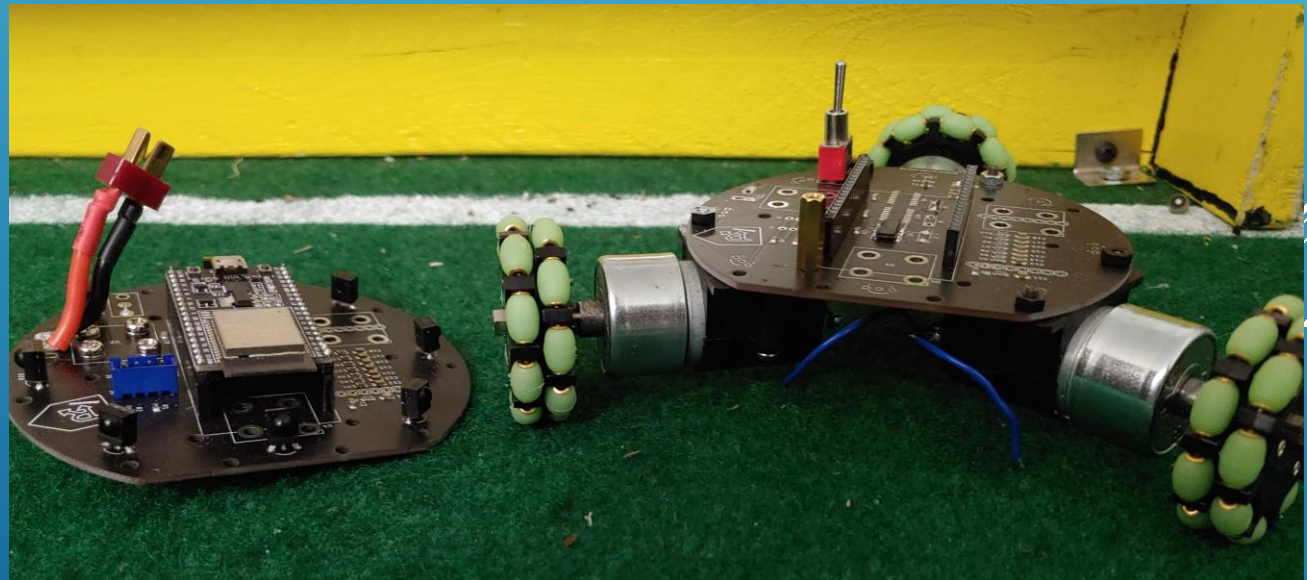


Zircon - An affordable, powerful, and customizable educational soccer robot kit for beginners

Sota Mark Ogata

Category: General Engineering

School: Princeton High School



1ST RUNNER UP

MERCER SCIENCE AND ENGINEERING CLUB

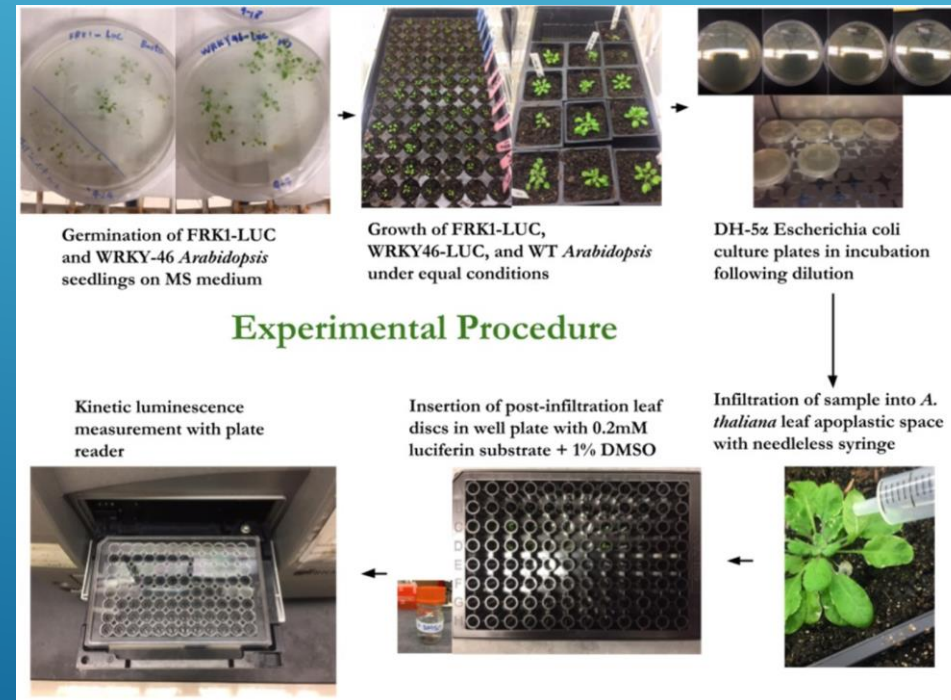


A Novel Assay to Quantitatively Detect Bacterial Endotoxin by Harnessing PAMP-Triggered Immunity of FRK1-LUC *Arabidopsis thaliana*

Aravind Krishnan

Category: Plant Science

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GRAND PRIZE

MERCER SCIENCE AND ENGINEERING CLUB



Innovative Climate Change Emissions Reduction: The Cargo Ship Flettner Rotor Centrifugal Vortex Exhaust Scrubber

Charlotte Lenore Michaluk

Category: Environmental Science and Engineering

School: Hopewell Valley Central High

