



Conn. Science & Engineering Fair

Quinnipiac University

March 11 - 16, 2019

These judging results are unaudited by the fair's Database Committee. The CSEF reserves the right to correct the listings.

Regular Fair Awards - Finalists

Sorted by:
 - School Town
 - School
 - Last Name

[SchTown] [School] [Teacher]
 [Proj#] [Project Title]

Avon Talcott Mountain Academy Brigette Zacharczenko

2520 Defensive Behavior of Tobacco Hornworm Caterpillars

Student(s) Tyler Andrews **Grade 8** **Town** Torrington

- * The Jackson Laboratory Life Sciences Awards --- 2nd Place- Life Sciences 8th grade- \$200 & trophy and Invite to Compete Broadcom MASTERS
- * J.A. Augustine Award --- \$100 for excellence in biology
- * Henderson Award --- Certificate and \$25 Amazon Gift Card given by CSF

Avon Talcott Mountain Academy Brigette Zacharczenko

2530 Survey of Common Types of Cyanobacteria and its Toxins Found in the Recreational Areas of CT

Student(s) Anishka Perera **Grade 8** **Town** Torrington

- * Environmental Sciences Awards with CACIWC --- MS Finalist - CACIWC gifts, CSF Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion
- * NASA EARTH System Science Award --- Certificate and \$25 gift card given by CSEF
- * American Society of Safety Professionals, CT Valley Chapter --- \$100 grade 7-8 project
- * Schoepfer Award for Excellence in Local Aquatic Science --- For excellence in a local water quality study, \$100 cash

Avon Talcott Mountain Academy Lydia Gibb

2515 The Bubble

Student(s) Leo Southam **Grade 8** **Town** Shelton

- * Future Sustainability Awards --- 3rd Place Middle School - \$100 Cash and Trophy
- * Fuss & O'Neill, Inc. --- \$200 Award for Excellence in Environmental Sciences

Avon Talcott Mountain Academy John Lombardo

5028 The Vaccinator

Student(s) Zachary Starr **Grade 7** **Town** Avon

- * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion

Bethany Amity Middle School - Bethany Kevin Berean

4025 Artificial Pancreas to Regulate Blood Sugar Levels

Student(s) Anchal Bahel **Grade 8** **Town** Woodbridge
 Nina Carmeli **Grade 8** **Town** Woodbridge

- * Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences MS Team- \$100 each & trophy, invite to compete Broadcom MASTERS
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * ISA - International Society for Automation - Ct. Valley Section --- 1st - \$125 award

Bethany Amity Middle School - Bethany Kevin Berean

4009 Coral Explorer

Student(s) Zoe Fleischman **Grade 8** **Town** Woodbridge
 Aadya Wijesekera **Grade 8** **Town** Bethany

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion
- * ISA - International Society for Automation - Ct. Valley Section --- 2nd - \$75 award
- * Spirit of Invention Award --- \$100 Cash and Plaque for Inventive Concepts

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Bethany Amity Middle School - Bethany Kevin Berean

2528 Purifying Grey Water Using a Constructed Wetland

Student(s) **Nell Grant** **Grade 8** **Town** Woodbridge

- * Environmental Sciences Awards with CACIWC --- 1st Place MS - \$300, Trophy, CACIWC gifts
- * Future Sustainability Awards --- 2nd Place Middle School - \$200 Cash and Trophy
- * Alexion Biotechnology Awards --- 5th Place- Biotechnology 8th grade- trophy
- * Southeastern New England Marine Educators (SENEME) --- \$100 award and membership in SENEME - 1st Place Junior & T-Shirt
- * **The Karen J. Howell Middle School Award for "Learning and Serving"**
--- The Karen J. Howell Middle School Award for "Learning and Serving" - \$1000

Bethany Amity Middle School - Bethany Kevin Berean

4005 Multifunctional Temperature Sensor

Student(s) **Annie Liu** **Grade 8** **Town** Woodbridge
Melinda Lu **Grade 8** **Town** Woodbridge

- * Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences MS Team- trophy, invite to compete Broadcom MASTERS
- * Applied Technology Awards --- Middle School Finalist - Medallion
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * Dreams Unlimited Award --- \$100 Cash Award + Certificate

Bethany Amity Middle School - Bethany Kevin Berean

5503 Preventing Bicycle Injuries Using an Arduino Microcontroller

Student(s) **Anthony Sharonov** **Grade 8** **Town** Bethany

- * People's United Bank Mathematics Awards - with ATOMIC --- 2nd Place Middle School- \$100 from ATOMIC, and Trophy, \$200 from People's United Bank

Bethany Amity Middle School - Bethany Kevin Berean

5524 Wind Turbine Tree

Student(s) **Mingyue Zha** **Grade 8** **Town** Woodbridge

- * Alternative/Renewable Energy Awards --- 3rd Place Middle School - \$100 Cash and Trophy
- * Future Sustainability Awards --- Middle School Finalist - Medallion
- * Constellation, an Exelon Company --- 2nd: \$50.00 Cash - Grade 7 - 8: For Excellence in clean renewable / sustainable energy
- * Connecticut Association for the Gifted --- Leonardo Davinci 7-8 Grade \$50 Gift Certificate

Bethel St. Mary School Kate McDonald

2016 Does Boiling Vegetables Affect Vitamin C Content?

Student(s) **Jenna Saidman** **Grade 7** **Town** Bethel

- * The Jackson Laboratory Life Sciences Awards --- 2nd Place- Life Sciences 7th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS

Bethel St. Mary School Kate McDonald

5518 #SAVETHESIP

Student(s) **Kerry Tuccinardi** **Grade 8** **Town** Bethel

- * Petit Family Foundation Women in Science & Engineering Awards --- 3rd Place- Middle Schools- \$100 / trophy
- * Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School, Physical Sciences

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Bozrah Fields Memorial School Mrs. E Brown

5526 Piezo Energy Collection from Quake Vibrations

Student(s) Alanna Brady **Grade 8** **Town** Bozrah

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- * Collins Aerospace Engineering Awards --- 3rd Place- Engineering MS \$100 & trophy and Invitation Compete in Broadcom MASTERS
- * POWER Engineers --- \$200 for "Excellence in Electrical Engineering- emphasis on Power Electronics" - Middle School

Bozrah Fields Memorial School Mrs. Evelyn Brown

5530 Facial Recognition using Raspberry Pi and Python

Student(s) Leah Manke **Grade 8** **Town** Bozrah

- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * Robert Francoeur Memorial Award --- Creative or innovative project in electrical engineering or computer science by female students - \$200

Bozrah Fields Memorial School Evelyn Brown

5025 Recovering Energy From an A/C Unit Condenser Exhaust Fan

Student(s) Elle Okoney **Grade 7** **Town** Bozrah

- * Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences 7th Grade Ind. - trophy and Invitation Compete in Broadcom MASTERS
- * Applied Technology Awards --- Middle School Finalist - Medallion
- * Alternative/Renewable Energy Awards --- 1st Place Middle School - \$300 Cash and Trophy
- * Future Sustainability Awards --- 1st Place Middle School - \$300 Cash and Trophy
- * Collins Aerospace Engineering Awards --- 1st Place- Engineering Middle School- \$400 & trophy and Invitation Compete in Broadcom MASTERS
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- * U.S. Air Force --- Laptop backpack, ear buds, 1 GB flash drive, 4 Port USB hub, certificate
- * National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEF
- * The Children's Museum --- 1 family 4-Pack of Admission Passes to the Children's Museum
- * Society of Women Engineers - Hartford Section --- Scientific Calculator
- * Air and Waste Management Association, Connecticut Chapter --- \$100 Junior, Environmental Research, waste recycling related

Bozrah Fields Memorial School Mrs. Evelyn Brown

2508 A Gravimetric and Microscopic Analysis of the Decomposition Rates of Leaves from Different Species of Trees in Varied Climates.

Student(s) Norah Tracy **Grade 8** **Town** Gilman

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- 2nd Place MS- \$200, Trophy, CACIWC gifts
- * Yale Peabody Museum --- One-Year Family Membership to the Yale Peabody Museum

Bridgeport Bridgeport Regional Aquaculture Center Mr. Shadle

6074 Sorption of Hydrogen Sulfide Contaminates Through Methyl Diethanolamine Doped Ceramic Beads Coupled With a Piperazine Catalyst

Student(s) Erica Carpenter **Grade 12** **Town** Trumbull

- * CASE • PepsiCo Urban School Challenge Awards with IBM --- 3rd Place High School - \$ 300 and Plaque, Medallion
- * Future Sustainability Awards --- 1st Place High School - \$500 Cash, Plaque
- * GENIUS Olympiad --- GENIUS Olympiad Competition for 1st Place HS Future Sustainability
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Sustainability

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Bridgeport Bridgeport Regional Aquaculture Center Mr. Shadle
6079 Maximizing Photodynamic Therapy Through Highly Focused Beam of 200 nanometer - 400 nanometer to Promote Cellular Lysis

Student(s) **Jeremy Garskof** **Grade 12** **Town** Fairfield

- * Applied Technology Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Demos R Us Award --- \$200 Cash Award- Clear Execution of Research- High School

Bridgeport Bridgeport Regional Aquaculture Center Mr. Shadle
6001 Enhancing Dye Sensitized Solar Cell Efficiency Through the Application of a Silica Structure Microfilm Layer

Student(s) **Camryn Mazerolle** **Grade 12** **Town** Shelton

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * Alternative/Renewable Energy Awards --- 2nd Place High School - \$300 Cash and Plaque
- * GENIUS Olympiad --- GENIUS Olympiad Competition for 2nd Place HS Alternative/Renewable Energy Project
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Energy & Transportation

Bridgeport Bridgeport Regional Aquaculture Center Mr. Shadle
3027 Phytoremediation of 17 β Estradiol Using Lemna minor in Freshwater Bodies

Student(s) **Joshua Salem** **Grade 12** **Town** Trumbull

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * Air and Waste Management Association, Connecticut Chapter --- \$100 Junior, Environmental Research, air pollution related

Bridgeport Bridgeport Regional Aquaculture Center - BCF Mr. Shadle
6032 Biofiltration of Ferric Iron Utilizing Citrus Biowaste to Mitigate Freshwater Harmful Algal Blooms.

Student(s) **Malcolm Katz** **Grade 12** **Town** Fairfield

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition

Bridgeport Bridgeport Regional Aquaculture Center - BCF Mr. Shadle
6026 Development of Self Adjusting Slip Clutch Vertical Axis Wind Turbine to Eliminate Torque Damage in High Wind Speeds

Student(s) **Gavin Krois** **Grade 12** **Town** Milford

- * Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate given by ONR
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2019 Invention Convention, May 4

Bridgeport Fairchild Wheeler Interdistrict Magnet Mrs. Pearson
3503 Queenswap: an experiment to change the subspecies of an Apis Mellifera queen and her colony to a more northeastern acclimated subspecies.

Student(s) **Victoria LaGuardia** **Grade 12** **Town** Monroe

Lauren Wokanovicz **Grade 12** **Town** Shelton

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion

Bridgeport High Horizons Magnet School Mrs Scott-Thiam
5014 Hydraulic Arm

Student(s) **Deandre Jenkins** **Grade 7** **Town** BRIDGEPORT

- * Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences 7th Grade Individual - trophy

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Bridgeport James Curiale School Patrick Borden

5024 Electric Power Generator

Student(s) **Tajelia Buckley** **Grade 7** **Town** Bridgeport

* Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion

Bridgeport Park City Prep Charter School Jonathan Jaekle

2531 Improving Fuel Economy

Student(s) **David Boudreau Jr** **Grade 8** **Town** Ansonia

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion
* CASE • PepsiCo Urban School Challenge Awards with IBM --- 2nd Place Middle School - \$200 and Trophy, Medallion
* Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion

Bridgeport Park City Prep Charter School Vicky Boudreau

2011 The Balance of Nature

Student(s) **Eva Holleran** **Grade 7** **Town** Bridgeport

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences 7th grade - CSF Medallion

Bridgeport Park City Prep Charter School Mrs. Boudreau

2512 Turmeric as an Antioxidant

Student(s) **Laniyah Schultz** **Grade 8** **Town** Bridgeport

* CASE • PepsiCo Urban School Challenge Awards with IBM --- Middle School Finalist - Medallion
* U.S. Air Force --- Laptop backpack, ear buds, 1 GB flash drive, 4 Port USB hub, certificate

Brookfield Saint Joseph Catholic Academy Mrs. Dimon

2003 The Effect of Ocean Acidification on Crepidula Forficata

Student(s) **Abigail Cristaudo** **Grade 7** **Town** Brookfield CT

* Alexion Biotechnology Awards --- Finalist - Biotechnology 7th grade - CSF Medallion
* Association for Women Geoscientists --- Certificate & \$25 gift card given by CSEF

Brookfield Saint Joseph Catholic Academy Mrs. Dimon

2524 The Effect of Various Combinations of Materials as Biosand Filters on the Filtration of Fresh Water

Student(s) **Shaun McKenna** **Grade 8** **Town** Brookfield

* The Jackson Laboratory Life Sciences Awards --- 3rd Place- Life Sciences 8th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS

Brookfield Saint Joseph Catholic Academy Mrs. Dimon

2023 The Effect of Collector Quantity on Solar Heating

Student(s) **David Mitchell** **Grade 7** **Town** New Milford

* Future Sustainability Awards --- Middle School Finalist - Medallion

Brookfield Saint Joseph Catholic Academy Marde Dimon

5516 HOW DOES THE TYPE OF FILTER AFFECT THE AMOUNT OF PHOSPHORUS SEPARATED FROM LANDSCAPE RUNOFF

Student(s) **Liam TeeKing** **Grade 8** **Town** Brookfield

* Environmental Sciences Awards with CACIWC --- MS Finalist - CACIWC gifts, CSF Medallion
* The Goodwin-Niering Center for the Environment --- \$100 for "Excellence in Environmental Conservation Studies"

Cheshire Dodd Middle School Manish Bhardwaj

5531 Vision Assist 2.0

Student(s) **Siddhant Bhardwaj** **Grade 8** **Town** Cheshire

* Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences 8th Grade Ind. - trophy
* Applied Technology Awards --- Middle School Finalist - Medallion
* Computer Science Awards --- 3rd Place Middle School- \$100, Trophy, Medallion

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Danbury Danbury High School Ms. McClelland

3054 Molecular Modeling and Analysis of Peptides Derived From the Centipede Scolopendra Subspinipes Mutilans (as a Potential Leukemia Targeted Therapy)

Student(s) Sarah Johnson **Grade** 11 **Town** Danbury

* CASE • PepsiCo Urban School Challenge Awards with IBM --- Senior High Finalist - Medallion

Danbury Danbury High School Meghan Bresson

6063 Engineering a Polylectic Biomimetic Micro Aerial Vehicle to Pollinate Flowers

Student(s) Khushi Parikh **Grade** 9 **Town** Danbury

* Petit Family Foundation Women in Science & Engineering Awards --- 2nd Place High School \$250 / plaque

* CASE • PepsiCo Urban School Challenge Awards with IBM --- Senior High Finalist - Medallion

* Meyerand Young Woman Scientist Awards --- \$300 cash - High School, Physical Sciences

Danbury Immaculate High School Bernice Papia

6097 Unprecedented Biofuel Formation by isomerization and Cross Metathesis of Sunflower Oil

Student(s) Elias Haddad **Grade** 10 **Town** Danbury

* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion

Danbury Saint Joseph School Jennifer Reilly

5539 Recycled Plastics As Insulation For Energy Efficient Homes

Student(s) Georen Chirayil **Grade** 8 **Town** Danbury

* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion

* Demos R Us Award --- \$150 Cash Award- Clear Execution of Research- 8th Grade

Danbury St. Gregory the Great School Christine Fahey

5517 Testing Different Nano-Particle Inks as Electrodes in a Sunlight-Seeking. Printed, Bio-Photovoltaic System

Student(s) Maximilien Coisman **Grade** 8 **Town** Danbury

* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion

* Computer Science Awards --- Middle School Finalist - Medallion

* Alternative/Renewable Energy Awards --- 2nd Place Middle School - \$200 Cash and Trophy

* Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion

* Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion

* National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEF

* MIT Club of Hartford K-12 Initiative --- For excellence in science & technology of energy related research, high school, \$100 cash award

Danbury St. Gregory the Great School Mrs. Christine Fahey

2503 The Effects of Oil on the Removal of Microplastics From Water

Student(s) Aiden Doolabh **Grade** 8 **Town** Danbury

* Environmental Sciences Awards with CACIWC --- MS Finalist - CACIWC gifts, CSF Medallion

* Future Sustainability Awards --- Middle School Finalist - Medallion

* Yale Peabody Museum --- Family "six-pack" of free passes to the Yale Peabody Museum

Danbury St. Gregory the Great School Christine Fahey

5010 Green Insulation?

Student(s) Tyler Fahey **Grade** 7 **Town** Danbury

* Future Sustainability Awards --- Middle School Finalist - Medallion

[SchTown] [School] [Teacher]
 [Proj#] [Project Title]

Danbury St. Gregory the Great School Mrs. Fahey

2518 ONE MAN'S TRASH IS ANOTHER MAN'S ENERGY

Student(s) **Thomas Fanelli** **Grade 8** **Town** Danbury

- * The Jackson Laboratory Life Sciences Awards --- 1st Place- Life Sciences 8th grade- \$300 & trophy and Invite to Compete Broadcom MASTERS
- * Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion
- * Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Life Sciences 8th Grade - \$500 and invite to CSTA Award Banquet
- * Alexion Biotechnology Awards --- 2nd Place- Biotechnology 8th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS
- * Sister Mary Christine Life Sciences Award --- \$100 for excellence in the life sciences by a catholic middle school project
- * Frank J. Link Family Award for Energy Related Research --- Frank J. Link Award for Energy Related Research - \$50

Danbury St. Gregory the Great School Christine Fahey

1006 Fire For Farming

Student(s) **Joseph Halas** **Grade 7** **Town** Danbury
Patrick Heslin **Grade 7** **Town** New Milford
Ryan Devin **Grade 7** **Town** Brookfield

- * The Jackson Laboratory Life Sciences Awards --- 3rd Place- Life Sciences MS Team- trophy and Invite to Compete Broadcom MASTERS
- * Future Sustainability Awards --- Middle School Finalist - Medallion

Danbury Westside Middle School Academy Jonathan Neuhausel

2020 Design, testing, and optimization of Kombucha scoby-based biofilms.

Student(s) **Gabriella Brown** **Grade 7** **Town** Danbury

- * The Jackson Laboratory Life Sciences Awards --- 1st Place- Life Sciences 7th grade- \$200 & trophy and Invitation to Compete Broadcom MASTERS
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- Middle School Finalist - Medallion
- * Peer-to-Peer Awards --- 7th Grade Life Sciences - \$300 Amazon Gift Card

Danbury Westside Middle School Academy Mr. Neuhausel

5005 Good Up High, Bad Near By

Student(s) **Annabella Jardim** **Grade 7** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF

Danbury Westside Middle School Academy Jonathan Neuhausel

2523 Impact of Microwave-irradiated Plastic on Microbiological Health Indices

Student(s) **Sharva Karthikeyan** **Grade 8** **Town** Danbury

- * CASE • PepsiCo Urban School Challenge Awards with IBM --- Middle School Finalist - Medallion

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Danbury Westside Middle School Academy Jonathan Neuhausel

5509 The Study of Effectiveness of Different Separation Methods in Removing Suspended Microplastics from Water

Student(s) **Srishti Ramakrishnan** **Grade 8** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- 1st Place- Middle School \$300 / trophy
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- 1st Place Middle School - \$300 and Trophy, Medallion
- * Environmental Sciences Awards with CACIWC --- 3rd Place MS- \$100, Trophy, CACIWC gifts
- * Connecticut Academy of Science and Engineering Middle School Urban School Challenge Award --- Urban School Challenge 1st MS- \$250 Cash Award, Invite to attend CASE's Annual Meeting
- * National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEFF
- * Talcott Mountain Science Center & Academy --- Founder's Award - \$450 Saturday Mentorship Course at TMSC - Middle School Phys Science
- * Air and Waste Management Association, Connecticut Chapter --- \$100 Senior, Environmental Research, waste recycling related
- * Urban School Challenge 1st Place Middle School Awards --- Highest Placing 8th grader- GENIUS-Olympiad Competition -\$500 travel stipend (See Sponsor 421)
- * GENIUS Olympiad --- GENIUS Olympiad Competition for Highest Placing USC 8th grade Project

Danbury Westside Middle School Academy Jonathan Neuhausel

2024 Molecular Health Indices of the Kalmia Latifolia

Student(s) **Maria Eduarda Sousa Lopes** **Grade 7** **Town** Danbury

- * The Jackson Laboratory Life Sciences Awards --- 4th Place- Life Sciences 7th grade- trophy and Invitation Compete in Broadcom MASTERS
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- Middle School Finalist - Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion
- * Talcott Mountain Science Center & Academy --- Founder's Award - \$450 Saturday Mentorship Course at TMSC - Middle School Life Science
- * Alumni Botany Awards --- Alumni Middle School Botany Award- \$100 Cash

Danbury Westside Middle School Academy J. Neuhausel

5027 DIY WiFi Booster

Student(s) **Chase Tomaino** **Grade 7** **Town** Danbury

- * Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- 3rd Place Middle School - \$100 and Trophy, Medallion
- * U.S. Air Force --- Laptop backpack, ear buds, 1 GB flash drive, 4 Port USB hub, certificate
- * Urban School Challenge 1st Place Middle School Awards --- USC Highest Placing 7th grader- Project Oceanology's Ocean Camp

East Hartford St. Christopher School Mr. Golas

5506 Heat It Up!

Student(s) **Ahjeiza Adrian** **Grade 8** **Town** Manchester

- * Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion

Fairfield St. Thomas Aquinas Catholic School Philip Flynn

4007 Wind Energy

Student(s) **Andrew Cimmino** **Grade 8** **Town** FAIRFIELD

Joshua Dixon **Grade 8** **Town** Bridgeport

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion
- * Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Ricoh Americas Corporation --- Certificate, \$25 Amazon gift card given by CSEF
- * J.A. Augustine Award --- \$100 for excellence in physical sciences

[SchTown] [School] [Teacher]
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Glastonbury Glastonbury High School Ms. Diane Pintavalle

6091 SELECTIVE OXIDATION OF BENZYL ALCOHOL TO BENZALDEHYDE USING A VANADIUM DOPED CERIA MESOPOROUS CATALYST

Student(s) Ananya Aggarwal **Grade** 11 **Town** South Glastonbury

- * Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences Senior High Individual - \$200 & Plaque
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Chemistry

Glastonbury Glastonbury High School Diane Pintavalle

3040 Designing a Metal Organic Framework-Nanocapsule for delivering hydrophilic drug cargo

Student(s) Cassandra George **Grade** 12 **Town** Glastonbury

- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

Glastonbury Glastonbury High School Diane Pintavalle

3101 INVESTIGATING THE EFFICACY OF ALPHA-LIPOIC ACID FOR REDUCING SKIN CANCER

Student(s) Athulya Narayanan **Grade** 12 **Town** GLASTONBURY

- * Petit Family Foundation Women in Science & Engineering Awards --- 1st Place- High School \$500 / plaque

Greens Farms Greens Farms Academy Modupe Oshin

1022 Building a Pressurized Submersible to Create a Safe and Sustainable Environment for Marine Life Collected in the "Twilight Zone" and Brought Up to the Surface .

Student(s) Lauren Lior **Grade** 8 **Town** Fairfield

Sophie Galaburda **Grade** 8 **Town** Westport

- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion

Greens Farms Greens Farms Academy Mathieu Freeman

3104 The Effects of Mobile Phone Induced Radiation on Honeybee Behavior

Student(s) Quinn Mullineaux **Grade** 12 **Town** Fairfield

- * The Jackson Laboratory Life Sciences Awards --- 2nd Place- Life Sciences Senior High- \$300 & Plaque
- * Environmental Sciences Awards with CACIWC --- 3rd Place HS- \$100, Plaque, CACIWC gifts
- * Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a High School student, \$200 cash
- * Peer-to-Peer Awards --- High School Life Sciences - \$300 Amazon Gift Card

Greens Farms Greens Farms Academy Modupe Oshin

5008 PediGenerator: Turning Steps Into Energy Using PiezoElectric Generators to harness, convert and store the energy needed to charge a mobile device

Student(s) Tolani Oshin **Grade** 7 **Town** West Haven

- * Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion
- * Constellation, an Exelon Company --- 1st: \$100.00 Cash - Grade 7 - 8: For Excellence in clean renewable / sustainable energy
- * Frank J. Link Family Award for Energy Related Research --- Frank J. Link Award for Energy Related Research - \$50

Greens Farms Greens Farms Academy Ms. Modupe Oshin

5003 Mobility Assistance Device for the Visually Impaired

Student(s) Chad Ruggiero **Grade** 7 **Town** Greenwich, CT

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Alexion Biotechnology Awards --- 3rd Place- Biotechnology 7th grade- \$100 & trophy and Invitation Compete in Broadcom MASTERS
- * Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a Middle School student, \$100 cash

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Greens Farms Greens Farms Academy Mathieu Freeman

6013 The effect of growth temperature and annealing on the degradation rate of AZ31 magnesium alloy for biomedical engineering applications

Student(s) **Eva (Yihua) Zhang** **Grade** 12 **Town** Fairfield

* Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion

Greenwich Brunswick School Dana Montanez

6508 The Use of Piezoelectricity as a Power Source for Light

Student(s) **Tristan Chang** **Grade** 10 **Town** Greenwich
Ryan Winston **Grade** 10 **Town** Greenwich

* Alternative/Renewable Energy Awards --- High School Finalist - Medallion

Greenwich Brunswick School Dana Montanez

3521 Extracting, Cloning, and Targeting the Glyceraldehyde 3-Phosphate Dehydrogenase Gene in Invasive Plant Species

Student(s) **Logan Darrin** **Grade** 11 **Town** Greenwich
David Swigart **Grade** 11 **Town** Greenwich

* The Jackson Laboratory Life Sciences Awards --- 2nd Place- Life Sciences Senior High Team- \$300 (split) & Plaque
* Banning Family Life Science Award --- For excellence in invasive species research, \$100 cash

Greenwich Brunswick School Dana Montanez

6096 Creating a More Efficient Wind Harvester Using Kite Power Technology

Student(s) **Ryan Glanville** **Grade** 11 **Town** Greenwich

* Alternative/Renewable Energy Awards --- High School Finalist - Medallion

Greenwich Brunswick School Dana Montanez

3502 Identifying Segmented Nuclei to Advance Medical Research Using Convolutional Neural Networks

Student(s) **Ali Hindy** **Grade** 10 **Town** Greenwich
Thomas Fouts **Grade** 10 **Town** Rye

* The Jackson Laboratory Life Sciences Awards --- 1st Place- Life Sciences Senior High Team- \$500 (split) & Plaque

Greenwich Brunswick School Dana Montanez

6077 The Utilization Of a Miniaturized Wind Turbine to Charge An Electronic Device Using The Wind Produced By Blowing

Student(s) **Noah Levi** **Grade** 10 **Town** Wilton

* Applied Technology Awards --- Senior High Finalist - Medallion
* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
* Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2019 Invention Convention, May 4

Greenwich Brunswick School Montanez

6504 The Application of the Venturi Effect to Passively Accelerate Wind as a Means to Improve Wind Turbine Efficiency

Student(s) **Eric Meindl** **Grade** 11 **Town** Riverside
William McLaren **Grade** 11 **Town** Greenwich

* Alternative/Renewable Energy Awards --- High School Finalist - Medallion

Greenwich Brunswick School Dana Montanez

3028 Creation and Development of a Neural Network to Diagnose Alzheimer's Disease and Dementia

Student(s) **Jamison Meindl** **Grade** 11 **Town** Riverside

* Computer Science Awards --- 2nd Place High School - \$300, Plaque, Medallion
* Intel Excellence in Computer Science Award --- \$200 & certificate
* Mu Alpha Theta --- Certificate, \$25 gift card given by CSEF

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Greenwich Brunswick School Dana Montanez

3505 Developing an Organic Buffer System to Negate Oceanic Algal Blooms and Acidification

Student(s) **Colin Mulshine** **Grade** 10 **Town** Riverside
Brooks Ferguson **Grade** 10 **Town** Greenwich

- * The Jackson Laboratory Life Sciences Awards --- 3rd Place - Life Sciences Senior High Team - Plaque
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition

Greenwich Greenwich Catholic School Carol Ann Lutz

1023 Breathe Better

Student(s) **William Carragher** **Grade** 7 **Town** Stamford
Joseph Pizzurro **Grade** 7 **Town** Stamford
Ryan McIntire **Grade** 7 **Town** Darien

- * The Jackson Laboratory Life Sciences Awards --- 1st Place- Life Sciences MS Team- \$100 each & trophy and Invite to Compete Broadcom MASTERS
- * Future Sustainability Awards --- Middle School Finalist - Medallion
- * Alexion Biotechnology Awards --- 1st Place- Biotechnology 7th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS

Greenwich Greenwich Catholic School Carol Lutz

1018 Factor Fiction

Student(s) **Carmelia Zuniga** **Grade** 8 **Town** Stamford
Emily Cook **Grade** 8 **Town** Stamford
Catherine May **Grade** 8 **Town** Stamford

- * The Jackson Laboratory Life Sciences Awards --- 2nd Place- Life Sciences MS Team- \$100 each & trophy and Invite to Compete Broadcom MASTERS

Greenwich Greenwich Country Day School Sam Rosenfeld

5553 Tracking Plastic Bottles on Blockchain - Better Environmental Policies and Accountability through Economic and Accurate, Real-Time Management

Student(s) **C. Brooks Harris** **Grade** 8 **Town** Greenwich

- * Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences 8th Grade Ind. - trophy and Invitation Compete in Broadcom MASTERS
- * People's United Bank Mathematics Awards - with ATOMIC --- 1st Place Middle School- \$150 from ATOMIC, and Trophy, \$300 from People's United Bank
- * Computer Science Awards --- 1st Place Middle School - \$300, Trophy and Medallion
- * Society of Women Engineers - Hartford Section --- Scientific Calculator

Greenwich Greenwich High School Andrew Bramante

6047 A Green Nanotechnological Approach for Energy Efficiency and Conservation: Tungsten-doped Vanadium Dioxide Thermochromic Smart Windows

Student(s) **Cynthia Chen** **Grade** 11 **Town** Riverside

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & Plaque
- * Future Sustainability Awards --- 2nd Place High School - \$300 Cash and Plaque
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering in partnership with CCAT --- Physical Sciences 1st HS \$1,000, Solid Silver Medal of Excellence, Invite to CASE Annual Mtg

Greenwich Greenwich High School Andrew Bramante

3053 A Rapid, Solar-Powered, Portable Breast Cancer Diagnosis via Salivary CA15-3 Detection.

Student(s) **Halla Clausi** **Grade** 10 **Town** Cos Cob

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Future Sustainability Awards --- High School Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Alexion Biotechnology Awards --- 4th Place- Biotechnology Senior High- \$200 & plaque

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Greenwich Greenwich High School Andrew Bramante

6068 Measuring Convexnesses of Electoral Districts Using Graph Theory to Flag Potentially Gerrymandered Districts

Student(s) Sam Florin **Grade** 10 **Town** Greenwich

- * People's United Bank Mathematics Awards - with ATOMIC --- High School Finalist - Medallion
- * Computer Science Awards --- 3rd Place High School- \$200, Plaque, Medallion
- * Intel Excellence in Computer Science Award --- \$200 & certificate

Greenwich Greenwich High School Andrew Bramante

6089 Single-Use, Insulative Tableware Made from Cornstarch and a Hydrophobic Edible Thin Film, as a Biodegradable Replacement for Styrofoam

Student(s) Tyler Fox **Grade** 11 **Town** Cos Cob

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * Applied Technology Awards --- Senior High Finalist - Medallion
- * Future Sustainability Awards --- High School Finalist - Medallion
- * Quinnipiac University Scholarships --- \$20,000, 4 year scholarship (\$5000 per year) to Quinnipiac University for HS Student & \$250 cash
- * Connecticut Science Supervisors Association --- \$125 for a high school project
- * Robotics And Beyond --- HS- For Excellence in Material Science- \$200 for Robotics And Beyond STEM Design Camp or Academy

Greenwich Greenwich High School Andrew Bramante

3093 "Magnetically-Positioned, Lipase-Induced Degradation of Arterial Plaques with Simultaneous Smartphone Detection of Post-Dissolution Products."

Student(s) Hiba Hussain **Grade** 11 **Town** Old Greenwich CT

- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion
- * Connecticut Association for the Gifted --- Leonardo Davinci Award 9-12 Grade \$50 Gift Certificate
- * University of Hartford --- University of Hartford Scholarship- For Excellence in Engineering, Science or Mathematics \$26,000

Greenwich Greenwich High School Andrew Bramante

3007 Control of Varroa Destructor Infestation with a Dual-function, Thymol-Emitting Honey Bee Hive

Student(s) Raina Jain **Grade** 11 **Town** Riverside

- * The Jackson Laboratory Life Sciences Awards --- 1st Place- Life Sciences Senior High- \$500 & Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * Environmental Sciences Awards with CACIWC --- 1st Place HS- \$500, Plaque, CACIWC gifts
- * Collins Aerospace Engineering Awards --- 1st Place- Engineering Senior High- \$500 & plaque,
- * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering in partnership with CCAT --- Life Sciences Senior 1st HS- \$1,000, Solid Silver Medal of Excellence, Invite to CASE Annual Mtg
- * Fuss & O'Neill, Inc. --- \$200 Award for Excellence in Alternative/Renewable Energy
- * University of Hartford --- University of Hartford Scholarship- For Excellence in Engineering, Science or Mathematics \$26,000
- * TurnKey Compliance Solutions Environmental Awards --- \$300 Cash Award High School- For excellence in environmental sciences
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Environmental Science
- * University of Connecticut Academic Excellence Scholarship --- Academic Excellence Scholarship - \$6,500 a year for four academic years- (\$26,000 total)
- * Lunch with a Patent Attorney --- Lunch with a Patent Attorney

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Greenwich Greenwich High School Andrew Bramante

3106 Rapid, Low-cost, Paper-based Immunosensor for Early Detection of Dengue Virus via Salivary Dengue NS1 Antigen

Student(s) **Matthew Jester** **Grade 11** **Town** Greenwich

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Alexion Biotechnology Awards --- 2nd Place- Biotechnology Senior High- \$500 & plaque
- * Society for In Vitro Biology --- Certificate and \$25 Amazon gift card given by CSEF

Greenwich Greenwich High School Andrew Bramante

3058 Design of Melittin Encapsulated PLGA Nanoparticles that Cross the Blood-Brain-Barrier to Target (Lipid Simulated) Cancer Cells

Student(s) **Autumn Kim** **Grade 10** **Town** Greenwich

- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

Greenwich Greenwich High School Andrew Bramante

6017 Development of Highly-Efficient, Earth-Abundant Crystalline Perovskite - Carbon Film Solar Cells

Student(s) **Anne-Emilie Rouffiac** **Grade 11** **Town** Greenwich

- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * Future Sustainability Awards --- High School Finalist - Medallion
- * POWER Engineers --- \$200 for "Excellence in Electrical Engineering- emphasis on Power Electronics" - High School
- * Jon Stone Memorial Award --- \$100 cash for Innovative Engineering

Greenwich Greenwich High School Andrew Bramante

6036 Portable, Simple Filtration of (Modeled) V. cholerae Infected Water using Electrified, Silver-SWCNT Nanostructures within a Sari-Cloth Textile

Student(s) **Shun Sakai** **Grade 11** **Town** Greenwich

- * Lockheed Martin Physical Sciences Awards --- 4th Place- Physical Sciences Senior High Individual - Plaque
- * Future Sustainability Awards --- High School Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition

Greenwich Greenwich High School Andrew Bramante

3088 Design of a Dual-Acting Riboflavin and UV-Enhanced Contact Lens Disinfecting System

Student(s) **Justin Speaker** **Grade 11** **Town** Greenwich

- * Alexion Biotechnology Awards --- 3rd Place- Biotechnology Senior High- \$300 & plaque
- * Society for In Vitro Biology --- Certificate and \$25 Amazon gift card given by CSEF

Greenwich Greenwich High School Andrew Bramante

6002 Simple Creation of Portable Renewable Energy using a Recycled/Repurposed Water Bottle – C. reinhardtii Biophotovoltaic System

Student(s) **Zachary Wang** **Grade 11** **Town** Greenwich

- * Applied Technology Awards --- 3rd Place High School - \$ 200 and Plaque, Medallion
- * Alternative/Renewable Energy Awards --- 3rd Place High School - \$200 Cash and Plaque
- * Air and Waste Management Association, Connecticut Chapter --- \$100 Senior, Environmental Research, air pollution related
- * University of Connecticut - Early College Experience --- UCONN Early College Experience Program: Frontiers in Science - Co-Op \$100 Gift Certificate

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Greenwich Greenwich High School Andrew Bramante

3030 Rapid, Smartphone-Based Diagnosis of Skin Melanoma through Differences in Tumor Cell Thermal Regulation Combined with Diffuse Spectroscopic Analysis

Student(s) **Melissa Woo** **Grade** 11 **Town** Riverside

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Collins Aerospace Engineering Awards --- 2nd Place- Engineering Senior High- \$400 & plaque
- * Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High- \$1000 & plaque,
- * Lunch with a Patent Attorney --- Lunch with a Patent Attorney

Greenwich Greenwich High School Andrew Bramante

3022 Early Diagnosis and Tracking of Parkinson's Disease via Supervised Machine Learning Algorithms

Student(s) **Kyle Xiong** **Grade** 11 **Town** Riverside

- * People's United Bank Mathematics Awards - with ATOMIC --- 3rd Place High School - Plaque, \$200 from People's United Bank
- * IEEE, Connecticut Section --- \$100 Honorable Mention

Groton Sacred Heart School Dr. Juan Pacheco

5523 Building a Better Hearing Aid Using Noise Cancellation

Student(s) **Payton Noe** **Grade** 8 **Town** East Lyme

- * Lockheed Martin Physical Sciences Awards --- 3rd Place- Physical Sciences 8th Grade Ind, - \$100 & trophy, invite to compete Broadcom MASTERS
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * Applied Technology Awards --- 1st Place Middle School - \$300 and Trophy, Medallion
- * Alexion Biotechnology Awards --- 4th Place- Biotechnology 8th grade- trophy and Invitation Compete in Broadcom MASTERS
- * American Society of Safety Professionals, CT Valley Chapter --- \$100 grade 7-8 project
- * IEEE, Connecticut Section --- \$250 Honors Award -Junior
- * Connecticut Academy of Audiology --- \$200 Award HS- For Excellence in Audiology and Acoustics, oport. to shadow an audiologist
- * Broadcom MASTERS --- The Lemelson Early Inventor Prize
- * Zepke Awards --- \$100 - For the Best Use of Electronic Circuitry- Middle School

Hamden Hamden Hall Country Day School Dr. Gasparro

2019 Does Dog Saliva Kill Germs & What Else Might?

Student(s) **Lorraine Hillgen-Santa** **Grade** 7 **Town** Stratford

- * The Jackson Laboratory Life Sciences Awards --- 3rd Place- Life Sciences 7th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS
- * Petit Family Foundation Women in Science & Engineering Awards --- 2nd Place- Middle School- \$200 / trophy
- * Alexion Biotechnology Awards --- 5th Place- Biotechnology 7th grade- trophy
- * Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School Life Sciences

Hamden Hamden High School Sophia Michalatos

6004 Diagnosing Parkinson's Disease with Artificial Intelligence

Student(s) **Akshar Agarwal** **Grade** 12 **Town** Hamden

- * CASE • PepsiCo Urban School Challenge Awards with IBM --- Senior High Finalist - Medallion
- * Computer Science Awards --- Senior High Finalist - Medallion
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * Biophysical Society --- Biophysics Award- \$100

[SchTown] [School] [Teacher]
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Hamden Sacred Heart Academy Dr. Sibani Sengupta

3110 Exploring the World of Healing Herbs: Comparison of Antibacterial Properties in Coriandem Sativum, Ocimum Basilicum and Rosmarinus Officinalis

Student(s) Mehr Chhatre **Grade** 9 **Town** Hamden

- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate given by ONR
- * Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to Awards Night Dinner with guest
- * Sister Mary Christine Life Sciences Award --- \$150 for excellence in the life sciences by a catholic high school project
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Microbiology

Kent Kent School Ben Nadire

6048 Intuitive Control Algorithm Development of 4WIS/4WID Using A SpaceMouse

Student(s) Taewook Kim **Grade** 11 **Town** Kent

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Computer Science Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- * IEEE, Connecticut Section --- \$250 Honors Award -Senior
- * Robotics And Beyond --- MS- For Excellence in Engineering Design- \$200 for Robotics And Beyond STEM Design Academy in July
- * Barker Mohandas Awards for Transportation Research --- \$200 Cash & Plaque for Excellence in Transportation Related Research- High School

Manchester Manchester High School Megan Rader

3076 Nitrate absorbing plants effect on acidic water

Student(s) Cambria Andrews **Grade** 12 **Town** Manchester

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition

Manchester Manchester High School Megan Rader

3024 Application of Cyanobacteria Anthrospira Platensis as a Polyfiber Biopaper

Student(s) Tyler Greene **Grade** 12 **Town** Manchester

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * Future Sustainability Awards --- 3rd Place High School - \$200 Cash and Plaque
- * ASM Materials Education Foundation --- Certificate & \$25 gift card given by CSEF
- * Unilever Trumbull R&D --- Shadow Day at Unilever Trumbull R&D Centre

Manchester Saint James School Mary J. Plante

4022 THE BERNOULLI EFFECT

Student(s) Carson Herr **Grade** 7 **Town** South Windsor
Andrew Burnham **Grade** 7 **Town** Mansfield

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion

Manchester Saint James School Mary J. Plante

1002 I'm Dyeing to Find Out

Student(s) Marion Patsalides **Grade** 7 **Town** Manchester
Shreya Senthil **Grade** 7 **Town** South Windsor

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Meriden ACES-Thomas Edison STEM Middle School Caitlin Lombardi

1021 Does Water Temperature Affect Plant Growth

Student(s) **Karry Guo** **Grade 7** **Town** Middletown
Alyssa Arce **Grade 7** **Town** Meriden

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion

Meriden ACES-Thomas Edison STEM Middle School Anker

1003 Natural Sugar Banana Count

Student(s) **Alyssa Tack** **Grade 8** **Town** meriden
Giuliana Mazzarelli **Grade 8** **Town** Waterbury

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion

New Canaan St. Aloysius School Deborah Phillips

5011 Remote Control Ceiling Car

Student(s) **Sofie Brauweiler** **Grade 7** **Town** New Canaan

* Collins Aerospace Engineering Awards --- 2nd Place- Engineering MS- \$200 & trophy and Invitation Compete in Broadcom MASTERS

* Barker Mohandas Awards for Transportation Research --- \$100 Cash & Plaque for Excellence in Transportation Related Research- Middle School

* John S. Kendall Memorial Awards --- \$300 John S. Kendall Award for Excellence In Mechanical Engineering - Middle School

New Haven Betsy Ross Arts Magnet School Ms Macdonald

2008 Salty Plants

Student(s) **Julia Murphy** **Grade 7** **Town** Stratford

* CASE • PepsiCo Urban School Challenge Awards with IBM --- 4th Place Middle School - Trophy, Medallion

* Alexion Biotechnology Awards --- 2nd Place- Biotechnology 7th grade- \$200 & trophy and Invitation Compete in Broadcom MASTERS

New Haven Betsy Ross Arts Magnet School Roisin Macdonald

2532 From Clean to Clean

Student(s) **Matilda Pethrick** **Grade 8** **Town** Stratford

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion

* U.S. Metric Association --- Certificate & \$25 Amazon gift card given by CSEF

* Yale Peabody Museum --- Family "six-pack" of free passes to the Yale Peabody Museum

New Haven Hopkins School Philip Stewart

3107 Finding a therapy for Wolfram Syndrome: Exploring a calcium signaling pathway as a target for a disease without a cure.

Student(s) **Saira Munshani** **Grade 11** **Town** Easton

* The Jackson Laboratory Life Sciences Awards --- 3rd Place- Life Sciences Senior High- \$200 & Plaque

* Society for In Vitro Biology --- Certificate and \$25 Amazon gift card given by CSEF

New Haven Wilbur Cross High School Nick Farrell

3052 Developing a Functional Tracheal Replacement Graft: Studying the Effects of Graft Stiffness on Host Response

Student(s) **Sophie Edelstein** **Grade 12** **Town** New Haven

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion

* CASE • PepsiCo Urban School Challenge Awards with IBM --- 2nd Place High School - \$400 and Plaque, Medallion

* Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion

* Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High- \$100 & plaque

* Otero Family Award --- The Otero Family Award; \$200 cash

* University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Biochemistry

* Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2019 Invention Convention, May 4

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

New Haven Wilbur Cross High School Brendan Hare

3020 Association of Music Perception and Memory

Student(s) **Alexandra Northrup** **Grade** 10 **Town** New Haven

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- Senior High Finalist - Medallion
- * American Psychological Association --- Certificate, \$25 gift card given by CSEF

New Haven Worthington Hooker Middle School Mr. Jones

5540 Saving The Ocean: 700,000 Microplastics at a Time

Student(s) **Athena Brown** **Grade** 8 **Town** New Haven

- * Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences 8th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- 5th Place Middle School - Trophy, Medallion
- * Applied Technology Awards --- 2nd Place Middle School - \$200 and Trophy, Medallion
- * Society of Women Engineers - Hartford Section --- Scientific Calculator

New London Science and Technology Magnet High School Isabella Moniz

3070 The Correlation Between Nitrogenous Species and the Aboveground and Belowground Biomass of *Spartina alterniflora* (common cordgrass) in a restored Salt Marsh, Barn Island, CT

Student(s) **Sara Bouchard** **Grade** 11 **Town** Waterford

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- 5th Place High School - Plaque, Medallion
- * Environmental Sciences Awards with CACIWC --- 2nd Place HS- \$200, Plaque, CACIWC gifts
- * Quinnipiac University Scholarships --- \$20,000, 4 year scholarship (\$5000 per year) to Quinnipiac University for HS Student & \$250 cash
- * Yale Peabody Museum --- One-Year Family Membership to the Yale Peabody Museum
- * Project Oceanology --- Individual - 1 Ocean Camp slot + T-Shirt & cap, First Place Senior
- * GENIUS Olympiad --- GENIUS Olympiad Competition for 2nd Place HS Environmental Project
- * NYUC Pony Club Equine Award --- \$100 Cash Award or excellence in equine studies
- * Fox Pest Control Award for Environmental Management --- \$150 Cash for Excellence in Environmental Management

New London Science and Technology Magnet High School Charles Mulligan

3021 The Efficiency Of Copper Removal Using Phytoremediation Techniques

Student(s) **Skyler Hatter** **Grade** 10 **Town** GROTON

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * Future Sustainability Awards --- High School Finalist - Medallion
- * University of Connecticut - Early College Experience --- UCONN Early College Experience Program: Life Sciences - Co-Op \$100 Gift Certificate

Newtown St. Rose of Lima School Mrs. Valerie Petrillo

5029 How Does the Shape of an Airplane Affect Its Speed and Lift?

Student(s) **Rohan Carey** **Grade** 7 **Town** Sandy Hook

- * Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF
- * American Institute of Aeronautics & Astronautics - Connecticut Section --- \$200 award, certificate

Norwich Norwich Technical High School Aleatha Pelloni

3518 Effects of Metformin on the Regeneration in Planarians

Student(s) **Leslie Garcia** **Grade** 11 **Town** Taftville

Angela Datilus **Grade** 11 **Town** Norwich

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Norwich Norwich Technical High School Ms. Pelloni

3507 Generation of probiotic strains with increased lactose degradation capabilities for lactose-free yogurt production

Student(s) **Jace Goodrow** **Grade** 11 **Town** Lisbon
Michel Hernandez **Grade** 11 **Town** Norwich
Hailey Bill **Grade** 12 **Town** Baltic

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion
- * Institute of Food Technologists, Nutmeg Section --- \$50 award + invitation to Awards Night Dinner with guest

Norwich Norwich Technical High School Aleatha Pelloni

3522 The Effect of Biochar on Microbial Growth and Plant Growth

Student(s) **Jared Michaud** **Grade** 11 **Town** Norwich
Douglas Rediger **Grade** 12 **Town** Hanover
Joshua McConnell **Grade** 12 **Town** Baltic

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion

Pawcatuck St. Michael School Anna-Helene Grossomanides

5006 LEGO MINDSTORMS EV3 - Can Accuracy Be Improved?

Student(s) **Matthew Drago** **Grade** 7 **Town** Pawcatuck

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion
- * Applied Technology Awards --- Middle School Finalist - Medallion
- * Computer Science Awards --- Middle School Finalist - Medallion

Pawcatuck St. Michael School Anna-Helene Grossomanides

2007 The Articulated Hand

Student(s) **Lauren Vossler** **Grade** 7 **Town** Pawcatuck

- * The Jackson Laboratory Life Sciences Awards --- 5rd Place- Life Sciences 7th grade- trophy
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 7h grade - CSF Medallion

Redding CT STEM Fair - Amity Regional High School Deborah Day

6005 Real-Time Sinkhole detection using Civil Engineering techniques, the Internet of Things (IoT), and Artificial Intelligence

Student(s) **Sophia Wang** **Grade** 11 **Town** Woodbridge

- * Applied Technology Awards --- 1st Place High School - \$500 and Plaque, Medallion
- * Computer Science Awards --- Senior High Finalist - Medallion
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- * Yale Science & Engineering Association, Inc. --- 1 Certificate, Medallion and 1- \$25 gift card given by CSEF
- * Society of Women Engineers - Hartford Section --- Scientific Calculator
- * Geology/Historic Project of Merit Award --- \$50 - Earth Science - Field work with Geologic or historic value
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2019 Invention Convention, May 4

Redding CT STEM Fair - Greenwich High School Andrew Bramante

6090 Al(III)-Mediated Ionic Conduction in New Abundant Metakaolin Solid Electrolyte for Safe, Efficient Power Grid Na-Ion Batteries

Student(s) **Alexander Kosyakov** **Grade** 12 **Town** Riverside

- * Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Individual - \$300 & Plaque
- * Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Redding CT STEM Fair - Greenwich High School Andrew Bramante
6024 Open-source, In-field Android and iOS Detection and Mapping of Waterborne Diseases via Time-Based Spectroscopic Sensing and RGB Luminance with a New 3D Printable Optical Interface

Student(s) Nicholas Liu **Grade** 12 **Town** Greenwich

- * Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences Senior High Individual - Plaque
- * Applied Technology Awards --- Senior High Finalist - Medallion
- * Computer Science Awards --- Senior High Finalist - Medallion

Redding Joel Barlow High School Paul Testa
3077 Detrimental Ecological Impacts on Eruca Vesicaria Sativa

Student(s) Olivia Fassman **Grade** 11 **Town** Redding

- * The Jackson Laboratory Life Sciences Awards --- 5th Place- Life Sciences Senior High- Plaque

Redding Joel Barlow High School Katherine Nuzzo
3032 The effect of inoculating Rhizobium bacteria into Helianthus annuus L. to increase drought tolerance.

Student(s) Kathryn Liu **Grade** 11 **Town** Easton

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * Future Sustainability Awards --- High School Finalist - Medallion

Redding Joel Barlow High School Paul Testa
3061 The effect of Deuterium oxide (D2O) on the viability of Coliphage bacteriophages under Low temperatures as a model for stability in live attenuated viral vaccines

Student(s) Annika Morgan **Grade** 12 **Town** Redding

- * The Jackson Laboratory Life Sciences Awards --- 4th Place- Life Sciences Senior High- Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion
- * Meyerand Young Woman Scientist Awards --- \$300 cash - High School, Life Sciences
- * Peer-to-Peer Awards --- High School Life Sciences - \$300 Amazon Gift Card

Redding Joel Barlow High School Paul Testa
3049 Analysis of PHA Plastic Biodegradation in Marine Environments

Student(s) Zachary Shortt **Grade** 11 **Town** Easton

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate given by ONR
- * Yale Peabody Museum --- Family "six-pack" of free passes to the Yale Peabody Museum

Sandy Hook Newtown High School Timothy DeJulio
6083 Computational Fluid Dynamics Study of Turbulence

Student(s) Bryan Ingwersen **Grade** 12 **Town** Sandy Hook

- * Computer Science Awards --- Senior High Finalist - Medallion
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate given by ONR
- * John S. Kendall Memorial Awards --- \$500 John S. Kendall Award for Excellence In Mechanical Engineering - High School
- * Maplesoft Awards for Applied Mathematics and Modeling --- Maple software - For Excellence in Mathematics

Shelton Shelton High School Ernest Pagliaro
6021 Clean Screen

Student(s) Kyle Young **Grade** 11 **Town** Shelton

- * Applied Technology Awards --- Senior High Finalist - Medallion
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2019 Invention Convention, May 4

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Stamford Bi-Cultural Hebrew School Christopher Grasek

1001 Drought Tolerance of Herbs

Student(s) **Charlotte Moreen** **Grade 7** **Town** Stamford
Jason Kwalwasser **Grade 7** **Town** Stamford

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences Middle School Team - CSF Medallion

Stamford Scofield Magnet Middle School Louise McMinn

5022 Water Quality of the Rippowam River

Student(s) **Aryan Pandalai** **Grade 7** **Town** Stamford

* Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences 7th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS

* Ricoh Americas Corporation --- Certificate, \$25 Amazon gift card given by CSEF

Storrs E.O. Smith High School Cheryl Granger

6053 Designing an Efficient Roof-Mounted Wind Turbine System

Student(s) **Mathew Chandy** **Grade 10** **Town** Storrs

* Alternative/Renewable Energy Awards --- High School Finalist - Medallion

* Constellation, an Exelon Company --- 2nd: \$100.00 Cash - Grade 9 - 12: For Excellence in clean renewable / sustainable energy

* GENIUS Olympiad --- GENIUS Olympiad Competition for HS Environmental, Energy, Ecology, or Biodiversity Project

* Tunxis Community College --- \$623 Course Tuition Voucher for HS Senior Sustainable Energy Project

Stratford St. Mark School Mrs. Olins

5504 Erosion in Motion

Student(s) **Peter Pigliucci** **Grade 8** **Town** Shelton

* Environmental Sciences Awards with CACIWC --- MS Finalist - CACIWC gifts, CSF Medallion

* Ricoh Americas Corporation --- Certificate, \$25 Amazon gift card given by CSEF

Trumbull Christian Heritage School Mr. Cote

6042 The Effect of Magnets on the Performance of Bike Suspensions

Student(s) **William Parrish** **Grade 11** **Town** Milford

* Applied Technology Awards --- Senior High Finalist - Medallion

* Samantha Freeman Award for Excellence in Sports Science or Engineering --- For Excellence in Sports Science or Engineering by a High School student, \$125 cash

Trumbull Christian Heritage School Daniel Cote

2529 Use of Bioluminescent Dinoflagellates to Detect Water Contaminants

Student(s) **Samuel Tsao** **Grade 8** **Town** OLD GREENWICH

* The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion

* Environmental Sciences Awards with CACIWC --- MS Finalist - CACIWC gifts, CSF Medallion

* Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion

* NASA EARTH System Science Award --- Certificate and \$25 gift card given by CSEF

* TurnKey Compliance Solutions Environmental Awards --- \$200 Cash Award Middle School- For excellence in environmental sciences

Trumbull Hillcrest Middle School Jennifer Bauer-Tibor

5519 Integrating Intelligence Systems into Humanoid Robot Using Raspberry Pi

Student(s) **Nicholas Lee** **Grade 8** **Town** Trumbull

* Applied Technology Awards --- Middle School Finalist - Medallion

* Computer Science Awards --- 2nd Place Middle School - \$200, Trophy and Medallion

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Wallingford Choate Rosemary Hall Betty Wang

6073 Enhanced Photocatalytic Activity of Carbon Dots Grafted TiO₂ Nanorods

Student(s) Shimin Cai **Grade** 11 **Town** wellesley

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Future Sustainability Awards --- High School Finalist - Medallion

Wallingford Choate Rosemary Hall Ben Small

3090 Investigating Action Potentials of *L. terrestris* for Pharmacological Effects

Student(s) Hyunseo Kim **Grade** 11 **Town** Wallingford

- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

Watertown The Taft School Jim Mooney

6529 On the Polygon Determined by the Short Diagonals of a Convex Polygon.

Student(s) Yi Won Kim **Grade** 11 **Town** Watertown

Andrew Lee **Grade** 10 **Town** Wallingford

- * People's United Bank Mathematics Awards - with ATOMIC --- 2nd Place High School- \$100 from ATOMIC, Plaque, \$300 from People's United Bank

West Hartford Bristow Middle School Janice LaVangie

5012 A low-cost and efficient way to harvest biomechanical energy: Generating electricity from people during daily activities

Student(s) Angela Zhang **Grade** 7 **Town** West Hartford

- * Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion
- * Alexion Biotechnology Awards --- 4th Place- Biotechnology 7th grade- trophy and Invitation Compete in Broadcom MASTERS
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2019 Invention Convention, May 4

West Hartford St. Brigid-St. Augustine Partnership School Mr. Donald Fay

2014 Plants on the Move

Student(s) Kaylana Caguitlea **Grade** 7 **Town** West Hartford

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences 7th grade - CSF Medallion

Westport Bedford Middle School NA

2511 Analysis of SNPs' association with early onset of Alzheimer's disease

Student(s) Aalok Bhattacharya **Grade** 8 **Town** Westport

- * The Jackson Laboratory Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology 8th grade - CSF Medallion

Westport Staples High School Karen Thompson

6510 Optimization of High-Efficiency Organic-Inorganic Lead Halide Perovskite Solar Cells via a Novel Polycaprolactone Additive Pathway

Student(s) Sirina Prasad **Grade** 12 **Town** Westport

Anisa Prasad **Grade** 12 **Town** Westport

- * Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences Senior High Team- \$500 (split) & Plaque
- * Alternative/Renewable Energy Awards --- 1st Place High School - \$500 Cash and Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * U.S. Metric Association --- Certificate & \$25 Amazon gift card given by CSEF
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * MIT Club of Hartford K-12 Initiative --- For excellence in science & technology of energy related research, middle school, \$100 cash award

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Wilton Middlebrook Middle School Mrs. Mallozzi

5510 Fighting Wildfires with Data from Satellite Remote Sensors.

Student(s) **Gayathri Kaimal** **Grade 8** **Town** Wilton

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- * American Meteorological Society --- Certificate & \$25 gift card given by CSEF
- * Connecticut Science Supervisors Association --- \$125 for a middle school project

Wilton Middlebrook Middle School Debbie Mallozzi

5514 Medibox

Student(s) **Varun Vadhera** **Grade 8** **Town** Wilton

- * Applied Technology Awards --- 3rd Place Middle School - \$100 and Trophy, Medallion
- * Computer Science Awards --- Middle School Finalist - Medallion

Wilton Middlebrook Middle School Mrs. Garcia

5502 Alternative Household Method to Extinguish Fires

Student(s) **Keerthi Vijay** **Grade 8** **Town** Wilton

- * Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences 8th Grade Ind.- \$300 & trophy, invite to compete Broadcom MASTERS
- * Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Sciences 8th Grade - \$500 and invite to CSTA Award Banquet
- * Alexion Biotechnology Awards --- 1st Place- Biotechnology 8th grade- \$500 & trophy and Invitation Compete in Broadcom MASTERS
- * American Society of Safety Professionals, CT Valley Chapter --- \$100 grade 7-8 project
- * Jon Stone Memorial Award --- \$100 cash for Innovative Engineering

Windsor Academy of Aerospace and Engineering Dr. Bellinger

6506 Effect of varying shape memory alloys on the folding mechanism of a pollination device and the efficiency of the collection and dispersion using electrostatic forces.

Student(s) **Gianna Guzzo** **Grade 11** **Town** Suffield

Andrea Lacunza **Grade 11** **Town** Avon

- * Petit Family Foundation Women in Science & Engineering Awards --- 3rd Place- High School- \$150 / plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * ASM Materials Education Foundation --- Certificate & \$25 gift card given by CSEF

Windsor Academy of Aerospace and Engineering Michelle Bellinger

6530 Optimizing Archimedian screw geometry to increase the energy conversion efficiency of a micro hydropower plant.

Student(s) **Devesh Kakkar** **Grade 11** **Town** South Windsor

Johnathan Bell **Grade 11** **Town** Glastonbury

- * Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Team- \$300(split) & Plaque
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- 4th Place High School - Plaque, Medallion
- * Collins Aerospace Engineering Awards --- 3rd Place- Engineering Senior High- \$200 & plaque
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- * Connecticut Association of Physics Teachers --- \$100 Senior project
- * Environmental / Energy Award- New Haven Public School Award --- \$100 Award for top environmental or alternative energy project from a New Haven public school
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Engineering: Mechanical

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Windsor Academy of Aerospace and Engineering Dr. Bellinger

6092 The Effect of Piezoelectric Cantilever Beam Design and Spatial Positioning in a Network on the Efficiency and Maximum Energy Output of a Vibro Wind Unit.

Student(s) **Jean Pasato** **Grade** 12 **Town** Middletown

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Applied Technology Awards --- Senior High Finalist - Medallion
- * Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- * Constellation, an Exelon Company --- 1st: \$150.00 Cash - Grade 9 - 12: For Excellence in clean renewable / sustainable energy
- * Robotics And Beyond --- HS- For Excellence in Physics- \$200 for Robotics And Beyond STEM Design Camp or Academy

Windsor Academy of Aerospace and Engineering Dr. Bellinger

6511 The Effect of Hydrofoil Design Parameters on Dynamic Behavior and Energy Extraction Efficiency of an Oscillating Hydrofoil Power Generation Unit

Student(s) **Christopher Rinaldi** **Grade** 12 **Town** Enfield

Abhiram Tirumala **Grade** 12 **Town** South Windsor

- * Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences Senior High Team - Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Mu Alpha Theta --- Certificate, \$25 gift card given by CSEF

Windsor Academy of Aerospace and Engineering Michelle Bellinger

6521 Development of In-situ Fabrication Methods of Martian Construction Material

Student(s) **Cristian Rodriguez** **Grade** 12 **Town** East Hartford

Srikar Godilla **Grade** 12 **Town** Newington

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- 1st Place High School - \$500 and Plaque, Medallion
- * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering in partnership with CCAT --- \$500 to 1st HS Urban School Challenge Science Department for Equipment/Supplies
- * Arthur Mensing Award --- \$1000 cash award for Excellence in the Physical Sciences

Windsor Academy of Aerospace and Engineering Dr. Bellinger

6058 The Effect of Design Parameters and Operating Conditions on Optimal Energy Conversion and Force Generation in a Magnetohydrodynamic Drive

Student(s) **Vishakh Talanki** **Grade** 12 **Town** South Windsor

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- Senior High Finalist - Medallion
- * Applied Technology Awards --- Senior High Finalist - Medallion
- * United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate given by ONR

Windsor Academy of Aerospace and Engineering - MS Dr. Bellinger

4012 What is the Effect of the Frequency of "Oobleck" on its Flow?

Student(s) **Cody Chivinski** **Grade** 8 **Town** Torrington

Ronak Ramesh **Grade** 7 **Town** Middletown

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion

[SchTown] [School] [Teacher]
[Proj#] [Project Title]

Windsor Academy of Aerospace and Engineering - MS Dr. Bellinger

4028 Do Contaminants Effect the Strength of Concrete at Construction Sites?

Student(s) Justin Ho **Grade 8** **Town** Suffield
Nicholas Sattan **Grade 8** **Town** Suffield

- * Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences MS Team- \$100 each & trophy, invite to compete Broadcom MASTERS
- * CASE • PepsiCo Urban School Challenge Awards with IBM --- Middle School Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Alexion Biotechnology Awards --- 3rd Place- Biotechnology 8th grade- \$200 & trophy and Invitation Compete in Broadcom MASTERS
- * ASM Materials Education Foundation --- Certificate & \$25 gift card given by CSEF
- * Garg Consulting Services Award for Excellence in Construction Engineering --- \$250 cash and plaque

Windsor Madina Academy Mrs. Rania

4004 Using copper instead of stainless steel to build an hho generator to prevent the production of toxic chromium ions.

Student(s) abdulmalik ajdinoski **Grade 8** **Town** windsor locks
Ahmad Zoghol **Grade 8** **Town** Enfield

- * Future Sustainability Awards --- Middle School Finalist - Medallion

Windsor Madina Academy Mr. Coleman

4008 An innovative way to remove oil from water.

Student(s) Amer Kabatilo **Grade 8** **Town** Windsor
Zain Kabatilo **Grade 8** **Town** Windsor

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion

Windsor The Loomis Chaffee School Koby Osei-Mensah

6052 A Novel Activation Function for a Convolutional Neural Network Implemented Without Machine Learning Libraries

Student(s) Aresh Pourkavoos **Grade 10** **Town** Avon

- * People's United Bank Mathematics Awards - with ATOMIC --- 1st Place High School- \$150 from ATOMIC, Plaque, \$500 from People's United Bank
- * Computer Science Awards --- 1st Place High School - \$400, Plaque, Medallion
- * Intel Excellence in Computer Science Award --- \$200 & certificate
- * Mu Alpha Theta --- Certificate, \$25 gift card given by CSEF
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Computer Science
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Mathematics
- * Maplesoft Awards for Applied Mathematics and Modeling --- Maple software - For Excellence in Mathematics

Woodbridge Amity Regional High School Catherine Piscitelli

6029 Analyzing Particulate Matter Atmospheric Pollution Trends in Connecticut

Student(s) Ella Marin **Grade 11** **Town** Woodbridge

- * Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- * American Meteorological Society --- Certificate & \$25 gift card given by CSEF

Woodbridge Amity Regional High School Catherine Piscitelli

6040 Degree Centrality and Betweenness Centrality: Predicting Viral Videos Based on Social Connectedness

Student(s) Kayla Morgan **Grade 11** **Town** Woodbridge

- * Petit Family Foundation Women in Science & Engineering Awards --- High School Finalist - Medallion

[SchTown] [School] [Teacher]

[Proj#] [Project Title]

Woodbridge Amity Regional High School Catherine Piscitelli

6064 Designing and Testing an Aid for the Visually Impaired

Student(s) **Shyam Viswanathan** **Grade** 10 **Town** Woodbridge

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Applied Technology Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Zepke Awards --- \$125 - For the Best Use of Electronic Circuitry- Senior High
- * University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Engineering: Electrical

Woodbridge Amity Regional High School Catherine Piscitelli

6012 Developing Age Detection Software Based on Touch Behavior

Student(s) **Kate Yuan** **Grade** 12 **Town** Woodbridge

- * Applied Technology Awards --- 2nd Place High School - \$300 and Plaque Medallion
- * Robert Francoeur Memorial Award --- Creative or innovative project in electrical engineering or computer science by female students - \$200