



Connecticut Science & Engineering Fair

Quinnipiac University

March 8 - 20, 2021

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

Final Judging Results

Award Legend

Plaque Winners = 1, 2, ...
 Medalists = m
 Winners = w

Applied Technology Awards

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

Middle School

5501 P8 Implementation of Metal-Oxide-Induced Agglomeration and Electromagnetic Filtration for Removal of Microplastics

Award 1 Student(s) Snigtha Mohanraj Grade 8 Town Ansonia

- * Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences 8th Grade Ind.- \$300 & plaque, invitation to compete in Broadcom Masters
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 1st Place Middle School - \$300 and plaque, Medallion
- * Stanley Black & Decker Applied Technology Awards --- 1st Place Middle School - \$300 and Plaque, Medallion
- * Environmental Sciences Awards with CACIWC --- 1st Place MS - \$300, plaque
- * Future Sustainability Awards --- 3rd Place Middle School - \$100 Cash and plaque
- * 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
- * Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Sciences 8th Grade - \$500 and invite to CSTA Award Banquet
- * Association for Women Geoscientists --- Certificate & \$25 gift card given by CSEF
- * Society of Women Engineers - Hartford Section --- Scientific Calculator
- * Urban School Challenge 1st Place Middle School Awards --- USC Highest Placing 8th grader- Project Oceanology's Ocean Camp
- * TurnKey Compliance Solutions Environmental Awards --- \$200 Cash Award Middle School- For excellence in environmental sciences
- * GENIUS Olympiad --- GENIUS Olympiad Competition for Highest Placing USC 8th grade Project
- * Environmental / Energy Award- Urban Public School Award --- Environmental / Energy Award- Urban Public School Award - \$431.40

4003 PT Toilet Power: Capturing Wasted Energy From Home Fixtures

Award 2 Student(s) Lincoln Marshaus Grade 8 Town Suffield
 Chloe Walker Grade 8 Town Somers
 Francesca Lamattina Grade 8 Town Somers

- * Lockheed Martin Physical Sciences Awards --- 1st Place- Physical Sciences MS Team- \$100 each & plaque
- * Stanley Black & Decker Applied Technology Awards --- 2nd Place Middle School - \$200 and Plaque, Medallion
- * Future Sustainability Awards --- Middle School Finalist - Medallion
- * American Meteorological Society --- Certificate & \$25 gift card given by CSEF
- * Constellation, an Exelon Company --- 1st: \$100.00 Cash - Grade 7 - 8: For Excellence in clean renewable / sustainable energy
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

4004 PT How the science of thermoelectricity can improve warmth in colder climates.

Award 3 Student(s) Rhys Wilson Grade 7 Town Somers
 Jacek Cieslak Grade 7 Town Monson
 Oliver Kolb Grade 7 Town East Longmeadow

- * Stanley Black & Decker Applied Technology Awards --- 3rd Place Middle School - \$100 and Plaque, Medallion



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5002 P7 A Covid-19 Social Distancing Device Using a PIR Motion Sensor and a US-100 Ultrasonic Distance Sensor
Award m Student(s) Suchita Srinivasan Grade 7 Town Cheshire, CT

- * Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences 7th Grade Ind. - \$100 & plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- 3rd Place- Middle Schools- \$100 / plaque
- * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion
- * Computer Science Awards --- 1st Place Middle School - \$300, plaque
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF
- * American Society of Safety Professionals, CT Valley Chapter --- \$100 grade 7-8 project
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * Robert Francoeur Memorial Award --- Creative or innovative project in engineering or computer science by female students - \$200
- * Zepke Awards --- \$100 - For the Best Use of Electronic Circuitry- Middle School
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

5008 P7 Remote Learning on a Budget
Award m Student(s) Joseph Benin Grade 7 Town Pawcatuck

- * Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences 7th Grade Individual - plaque
- * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion
- * Computer Science Awards --- 2nd Place Middle School - \$200, plaque
- * IEEE, Connecticut Section --- \$250 Honors Award -Junior
- * Susan and Stanley Lessoff Memorial Award --- Susan and Stanley Lessoff Memorial Award - \$250 Cash and Plaque MS

High School

6508 PST The Development of an Auto-Disable Syringe to Combat the Spread of Bloodborne Diseases via Intravenous Injection Drug Use

Award 1 Student(s) Aidan Marks Grade 11 Town Riverside
Samuel Guadalupe Grade 11 Town Greenwich

- * Lockheed Martin Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Team- \$300(split) & Plaque
- * Stanley Black & Decker Applied Technology Awards --- 1st Place High School - \$500 and Plaque, Medallion

6021 PS The Fabrication of a Cost-Effective Paper LIB with Increased Voltage and Longevity

Award 2 Student(s) Jackson Rassias Grade 12 Town Fairfield

- * Stanley Black & Decker Applied Technology Awards --- 2nd Place High School - \$300 and Plaque Medallion
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift card given by ONR



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6058 PS Design of a MFe₂O₄/Bentonite/Graphite Coated Polyurethane Sponge for Economical and Eco-Friendly Oil Spill Recovery

Award 3 **Student(s)** Autumn Kim **Grade** 12 **Town** Greenwich

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & Plaque
- * Stanley Black & Decker Applied Technology Awards --- 3rd Place High School - \$ 200 and Plaque, Medallion
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- * Future Sustainability Awards --- High School Finalist - Medallion
- * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering --- Physical Sciences 1st HS \$1,000, Solid Silver Medal of Excellence, Invite to CASE Annual Mtg
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift card given by ONR
- * National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEFF
- * The Goodwin-Niering Center for the Environment --- \$100 for "Excellence in Environmental Conservation Studies"

6027 PS Project Regrow: Cutting-Edge Technology to Fight Deforestation

Award m **Student(s)** Siddhant Bhardwaj **Grade** 10 **Town** Cheshire

- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion

6071 PS Robotic Pancreatoduodenectomy (PD) vs. Open PD: A Meta-analysis-driven Algorithm to Enhance Surgical Decision Making

Award m **Student(s)** Ethan Zhang **Grade** 12 **Town** Darien

- * Mathematics Awards - with ATOMIC --- 3rd Place High School - \$200 and Plaque
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

6512 PST Harnessing and Repurposing Processing Heat Gradient Produced by a Computer to Reduce the Battery Lost to a Cooling Fan

Award m **Student(s)** Gregory Kapp **Grade** 11 **Town** Greenwich
Michael Montgomery **Grade** 11 **Town** Greenwich

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * John S. Kendall Memorial Awards --- \$500 John S. Kendall Award for Excellence In Mechanical Engineering - High School



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3037 LS Rapid, Noninvasive, Fluorescence-Based Detection for Elevated Levels of Nitric Oxide in Exhaled Breath, As a Marker for Hazardous PM2.5 Exposure

Award **m** Student(s) **Ambika Grover** Grade 10 Town **Riverside**

- * PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences Senior High- \$500 & Plaque
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * H. Joseph Gerber Award of Excellence presented by the Connecticut Academy of Science and Engineering --- Life Sciences Senior 1st HS- \$1,000, Solid Silver Medal of Excellence, Invite to CASE Annual Mtg
- * Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High- \$500 & plaque
- * Connecticut Science Supervisors Association --- \$125 for a high school project
- * Susan Lessoff Award for Excellence In Chemistry --- Susan Lessoff Excellence In Chemistry Award -\$200 Cash and Plaque - High School
- * Biophysical Society --- Biophysics Award- \$100
- * Lunch with a Patent Attorney --- Lunch with a Patent Attorney

3111 LS Prolonged, Smart Treatment of Multi-Drug Resistant Bacteria of Chronic Wounds via an EGCG-AgNP HydroMed Dressing

Award **m** Student(s) **Yurika Sakai** Grade 10 Town **Greenwich**

- * PepsiCo / Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- 2nd Place- Engineering Senior High- \$400 & plaque
- * Regeneron Biomedical Science Award --- Certificate & \$500.00 cash

3504 LST Development of a WatchOS Application that uses HRV and Vibrational Pulses to Reduce Stress

Award **m** Student(s) **Sheehan Munim** Grade 10 Town **Orange**
Allen Liu Grade 10 Town **Woodbridge**

- * PepsiCo / Pfizer Life Sciences Awards --- 1st Place- Life Sciences Senior High Team- \$500 (split) & Plaque
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion

6060 PS Building a Machine to Test Whether Certain Facemasks Are Protective or Not

Award **m** Student(s) **Maxwell Barbagallo** Grade 11 Town **Sandy Hook**

- * Lockheed Martin Physical Sciences Awards --- 5th Place- Physical Sciences Senior High Individual - Plaque
- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * American Society of Safety Professionals, CT Valley Chapter --- \$150 grade 9-12 project