



Connecticut Science & Engineering Fair

Quinnipiac University

March 7 - 19, 2022

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

Engineering Awards

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

Middle School

5509 P8 A Domestic Violence Alerting Device Comprised of an Analog Sound Level Meter OLED Display and iOS Mobile App built using Swift

Award 1 Student(s) Suchita Srinivasan Grade 8 Town Cheshire

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- 3rd Place - Middle Schools- \$100 / Plaque
- * Collins Aerospace Engineering Awards --- 1st Place- Engineering Middle School- \$400 & Plaque
- * Society of Women Engineers - Hartford Section --- Scientific Calculator
- * Connecticut Academy of Audiology --- \$200 Award MS- For Excellence in Audiology and Acoustics, oport. to shadow an audiologist
- * Robert Francoeur Memorial Award --- Creative or innovative project in engineering or computer science by female students - \$100
- * Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a Middle School Student
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

5505 P8 Design and Testing of an Integrated 360 Degree Pi Camera System for Deep Well Rescue Mission

Award 2 Student(s) Sandhya Sudarsanam Grade 8 Town Danbury

- * Lockheed Martin Physical Sciences Awards --- 4th Place - Physical Sciences 8th Grade Ind. - Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- 2nd Place - Middle School- \$200 / Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 4th Place Middle School - Plaque, Medallion
- * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion
- * Computer Science Awards --- 1st Place Middle School - \$300, Plaque
- * Collins Aerospace Engineering Awards --- 2nd Place- Engineering MS- \$200 & Plaque
- * Raytheon Corporation Awards --- \$500, Plaque
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF
- * IEEE, Connecticut Section --- \$250 Honors Award -Junior
- * Jon Chapis Memorial Award --- John Chapis Spirit of Innovation Award - MS \$100
- * Zepke Awards --- \$100 - For the Best Use of Electronic Circuitry- Middle School
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

2517 L8 The Latch

Award 3 Student(s) Neev Makin Grade 8 Town Hamden

- * PepsiCo Life Sciences Awards --- Finalist - Life Sciences 8th grade - CSF Medallion
- * Stanley Black & Decker Applied Technology Awards --- 2nd Place Middle School - \$200 and Plaque, Medallion
- * Computer Science Awards --- 3rd Place Middle School- \$100, Plaque
- * Collins Aerospace Engineering Awards --- 3rd Place- Engineering MS \$100 & Plaque
- * Connecticut Invention Convention "Next Step Inventors" --- Next Step Inventor Trophy & Invitation to compete at the 2020 Invention Convention, May 2



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5525 P8 Pellet-"O"-Trap: Capturing Plastic Pellets Through a Multi-Filter System & Analyzing Their Progression Using Binary Image Processing

Award **m** Student(s) **Sia Reddy** Grade 8 Town Avon

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences 8th Grade Ind.- \$300 & Plaque
- * Stanley Black & Decker Applied Technology Awards --- Middle School Finalist - Medallion
- * Environmental Sciences Awards with CACIWC --- 2nd Place MS- \$200 and Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Sciences 8th Grade - \$500 and invite to CSTA Award Banquet
- * Society of Women Engineers - Hartford Section --- Scientific Calculator
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

5514 P8 Model System Design For Technology-Assisted Insulin Regulation

Award **m** Student(s) **Sydney Borst** Grade 8 Town Danbury

- * Lockheed Martin Physical Sciences Awards --- 3rd Place - Physical Sciences 8th Grade Ind. - \$100 & Plaque
- * Petit Family Foundation Women in Science & Engineering Awards --- Middle School Finalist - Medallion
- * Pfizer Computational Biology and Bioinformatics Awards --- 1st Place Middle School - \$300, Plaque
- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 2nd Place Middle School - \$200 and Plaque, Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Alexion Biotechnology Awards --- 2nd Place- Biotechnology 8th grade - \$200 & Plaque
- * IEEE, Connecticut Section --- \$100 Honorable Mention
- * GENIUS Olympiad --- GENIUS Olympiad Competition for Highest Placing USC 8th grade Project with \$700 stipend
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS

5007 P7 Wall climbing soft robot

Award **m** Student(s) **Thomas Gerlach** Grade 7 Town Ellington

- * Lockheed Martin Physical Sciences Awards --- 2nd Place - Physical Sciences 7th Grade Ind. - \$100 & Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering Middle School - CSF Medallion
- * Quinnipiac University Scholarships --- \$30,000, 4 year scholarship (\$7,500 per year) to Quinnipiac University for MS Student
- * CT Architecture Foundation - The William M. Mack, AIA Award --- \$250 Gift Certificate to Barnes and Noble from the Connecticut Architecture Foundation, William M. Mack, AIA Award.
- * Demos R Us Award --- \$150 Cash Award-- Clear Execution of Research- 7th Grade
- * Broadcom MASTERS --- Invitation to compete in Broadcom MASTERS



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High School

3030 LS Design of a Novel, Dual-Functioning Tissue Plasminogen Activator and Anticoagulant Therapeutic for Rapid Ischemic Stroke Treatment

Award 1 Student(s) Ambika Grover Grade 11 Town Riverside

- * PepsiCo Life Sciences Awards --- 1st Place- Life Sciences Senior High - \$500 & Plaque
- * 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 --- Life Sciences Senior 1st HS- \$1,000, Solid Silver Medal of Excellence, Invite to CASE Annual Mtg
- * Alexion Biotechnology Awards --- 2nd Place- Biotechnology Senior High - \$300 & Plaque
- * U.S. Metric Association --- Certificate & \$25 gift card given by CSEF
- * Society for In Vitro Biology --- Certificate and \$25 gift card given by CSEF

6082 PS Biomimetic Removal of Microspheres Water Contaminants, via Calcite-Infused, Coral-like Melamine Sponges

Award 2 Student(s) Naomi Park Grade 10 Town Riverside

- * Lockheed Martin Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & Plaque
- * Environmental Sciences Awards with CACIWC --- HS Finalist - CSF Medallion
- * Collins Aerospace Engineering Awards --- 2nd Place- Engineering Senior High- \$400 & Plaque
- * 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
- * Association for Women Geoscientists --- Certificate & \$25 gift card given by CSEF
- * Stockholm Junior Water Prize --- Certificate, \$25 gift card by CSEF, possible advance to further competition
- * National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEF
- * Southeastern New England Marine Educators (SENEME) --- \$100 award and membership in SENEME - 1st Place Senior & T-Shirt

6049 PS JARVITS: A Novel Deep Learning IoT Traffic Control System for Real-time Detection and Signal Optimization

Award 3 Student(s) Ryan Kim Grade 11 Town New Haven

- * Computer Science Awards --- 3rd Place High School- \$200, Plaque
- * Collins Aerospace Engineering Awards --- 3rd Place- Engineering Senior High- \$200 & Plaque
- * Raytheon Corporation Awards --- \$500, Plaque
- * Quinnipiac University Scholarships --- \$30,000, 4 year scholarship (\$7,500 per year) to Quinnipiac University for HS Student

6067 PS Optimizing Desalinization of Industrial Brine Through Temperature Swing Solvent Extraction

Award m Student(s) Jackson Warters Grade 12 Town Milford

- * CASE • The Jackson Laboratory Urban School Challenge Awards --- 3rd Place High School - \$ 300 and Plaque, Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion



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6030 PS How Raspberry Pi Microcomputers and Computer Vision Artificial Intelligence Can Be Utilized to Provide Aid to the Visually Impaired Community

Award **m** Student(s) **Siddhant Bhardwaj** Grade 11 Town Cheshire

- * Stanley Black & Decker Applied Technology Awards --- 2nd Place High School - \$300 and Plaque Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Zepke Awards --- \$125 - For the Best Use of Electronic Circuitry- Senior High
- * Jon Stone Memorial Award --- Jon Stone Award for Innovative Engineering- \$100

6027 PS Simple Remediation of Heavy Metal and Fertilizer Runoff Water Contaminants via Carbon Nanotube Infused Pinus strobus Xylem Filtration

Award **m** Student(s) **Justin Bernstein** Grade 9 Town Greenwich

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- 3rd Place HS- \$100 and Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * American Meteorological Society --- Certificate & \$25 gift card given by CSEF
- * National Oceanic and Atmospheric Administration --- Certificate and \$25 gift card given by CSEF
- * John S. Kendall Memorial Awards --- \$500 John S. Kendall Award for Excellence In Mechanical Engineering - High School

3025 LS Rapid, Visual Detection of Benadryl Cocktails via Competitive, Amine-Responsive Fluorophores

Award **m** Student(s) **Angelina Fogarty** Grade 11 Town old greenwich

- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Alexion Biotechnology Awards --- 3rd Place- Biotechnology Senior High - \$300 & Plaque
- * Connecticut Science Supervisors Association --- \$125 for a high school project

6039 PS Eco-Friendly Remediation of Polycyclic Aromatic Hydrocarbons in Stormwater via Magnesium-Infused Calcite Crystal, Supramolecular Hydrogel Scaffolding

Award **m** Student(s) **Audrey Lin** Grade 10 Town Riverside

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Environmental Sciences Awards with CACIWC --- 2nd Place HS- \$200 and Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * GENIUS Olympiad --- GENIUS Olympiad Competition for HS Environmental, Energy, Ecology, or Biodiversity Project with \$700 stipend



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6060 PS Increasing Elasticity, Durability, and Function of Wearable PANI-Sense pH Health Monitors via a Superhydrophobic, Textile Framework

Award m Student(s) Madeline Minichetti Grade 11 Town Greenwich

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * University of Hartford Scholarships --- University of Hartford Scholarship- For Excellence in Engineering, or Technology, \$30,000 (\$7,500 per year)

3063 LS Design of a Wearable, Skin-Specific UVB Sensor for Instantaneous Detection of Skin-Damaging Radiation

Award m Student(s) Yurika Sakai Grade 11 Town Greenwich

- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High - Plaque
- * U.S. Metric Association --- Certificate & \$25 gift card given by CSEF
- * American Society of Safety Professionals, CT Valley Chapter --- \$200 grade 9-12 project
- * University of Connecticut Academic Excellence Scholarship --- Academic Excellence Life Sciences scholarship
- * Jon Stone Memorial Award --- Jon Stone Award for Innovative Engineering- \$100

6003 PS Flexibility with Flying: Replicable and Attachable Aerial Robot with Multi-Degree-of-Freedom

Award m Student(s) Siyi Lu Grade 11 Town Kent

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Petit Family Foundation Women in Science & Engineering Awards --- 2nd Place - High School \$250 / Plaque
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * University of New Haven Scholarship Awards --- University of New Haven 4 year scholarship - \$96,000 (\$24,000 per year)

6032 PS Flexible mechanical worm based on steering gear

Award m Student(s) Xinyi Xie Grade 11 Town Middlebury

- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Raytheon Corporation Awards --- \$500, Plaque
- * Wisner Memorial Award --- \$ 1000 cash + Silver Bowl (\$2000 cash if a team) High School
- * Jon Chapitis Memorial Award --- John Chapitis Spirit of Innovation Award - HS \$200

6054 PS Real-Time Motion Tracking System and Data Analytics for Live Insects Using Three-Wheeled Servosphere Robot

Award m Student(s) Nicholas Lee Grade 11 Town Trumbull

- * Lockheed Martin Physical Sciences Awards --- 2nd Place - Physical Sciences Senior High Individual - \$300 & Plaque
- * Computer Science Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Yale Science & Engineering Association, Inc. --- 1 Certificate, Medallion and 1- \$25 gift card given by CSEF
- * IEEE, Connecticut Section --- \$100 Honorable Mention



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6069 PS Short-Term Biodegradation Analysis of Greener Alternatives to Plexiglass Pilot Study
 Award m Student(s) Evia Rodriguez Grade 12 Town Ridgefield

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

6090 PS The Optimization of a Ground Collision Avoidance System and Application to Inhibit Controlled Flight Into Terrain Accidents For Single Engine Aircraft
 Award m Student(s) Mason Beaudette Grade 12 Town Orange

- * Stanley Black & Decker Applied Technology Awards --- Senior High Finalist - Medallion
- * Computer Science Awards --- Senior High Finalist - Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift card given by ONR
- * American Institute of Aeronautics & Astronautics - Connecticut Section --- \$200 award, certificate

6031 PS Theoretical Modelling and Parameterization of a Novel-Actuator-Based Transtibial Pediatric Prosthetic
 Award m Student(s) Aditi Bhattamishra Grade 10 Town Orange

- * Lockheed Martin Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion
- * Stanley Black & Decker Applied Technology Awards --- 1st Place High School - \$500 and Plaque, Medallion
- * Collins Aerospace Engineering Awards --- Finalist - Engineering High School - CSF Medallion
- * IEEE, Connecticut Section --- \$250 Honors Award -Senior
- * Wisner Chairman's Award --- \$500 cash & Plaque HS
- * Otero Family Award --- The Otero Family Award; \$250 cash