



# Connecticut Science & Engineering Fair

## Quinnipiac University

March 14 - 18, 2017

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### Final Judging Results

#### Award Legend

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

## UTAS Engineering Awards

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

### 7th Grade

5038 P7 Slip Hazard Alarm Robot--H2OhNobot

**Award** 1 **Student(s)** Theodore Zhang **Grade** 7 **Town** West Hartford

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 1st Place- Engineering 7th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS
- \* American Society of Safety Engineers, CT Valley Chapter --- \$100 grade 7-8 project
- \* Connecticut Invention Convention "Next Step Inventors" --- \$50 gift certificate & invitation to present at CT Invention Convention as "CIC Next Step Inventors"

5001 P7 Building Tesla Coils

**Award** 2 **Student(s)** Lucas Santo **Grade** 7 **Town** Bozrah

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 2nd Place- Engineering 7th grade- \$200 & trophy and Invitation Compete in Broadcom MASTERS
- \* The Children's Museum --- 1 family 4-Pack of Admission Passes to the Children's Museum
- \* Wisner Award --- \$250 cash and plaque

4027 PT Mars Exploration

**Award** 3 **Student(s)** Kaloyan Dimitrov **Grade** 7 **Town** Norwalk  
Andrew Tully **Grade** 7 **Town** Norwalk  
Alex Lanzillotti **Grade** 7 **Town** Stamford

- \* Pepsico Physical Sciences Awards --- 1st Place- Physical Sciences MS Team- \$100 each & trophy, invite to compete Broadcom MASTERS
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 3rd Place- Engineering 7th grade- \$100 & trophy and Invitation Compete in Broadcom MASTERS
- \* ISA - International Society for Automation - Ct. Valley Section --- 1st - \$125 award

5008 P7 Orb Characteristics and Containment

**Award** 4 **Student(s)** Elijah Ramthun **Grade** 7 **Town** Bozrah

- \* Pepsico Physical Sciences Awards --- 5th Place- Physical Sciences 7th Grade Individual - trophy
- \* People's United Bank Mathematics Awards - with ATOMIC --- 1st Place Middle School- \$150 from ATOMIC, and Trophy, \$300 from People's United Bank
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 4th Place- Engineering 7th grade- trophy
- \* Alexion Biotechnology Awards --- 3rd Place- Biotechnology 7th grade- \$100 & trophy and Invitation Compete in Broadcom MASTERS
- \* Talcott Mountain Science Center & Academy --- Founder's Award - \$450 Saturday Mentorship Course at TMSC - Middle School Phys Science



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[Proj#] [FCat] [Project Title]

2005 L7 "Watts" the efficiency of solar cells?

Award 5 Student(s) Kaitlyn Szczepanski Grade 7 Town Stratford

- \* Pfizer Life Sciences Awards --- 2nd Place- Life Sciences 7th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 5th Place- Engineering 7th grade- trophy
- \* U.S. Air Force --- Laptop backpack, ear buds, 1 GB flash drive, 4 Port USB hub, certificate

5004 P7 Environmental Monitoring System for Dog Safety

Award m Student(s) Morgan Tainter Grade 7 Town Gilman

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion
- \* Xerox Computer Science Awards --- 3rd Place Middle School- \$100, Trophy, Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering 7th grade - CSF Medallion
- \* Society of Women Engineers - Hartford Section --- Scientific Calculator
- \* Connecticut Science Supervisors Association --- \$125 for a middle school project
- \* John B. Trevor Award in Electrical Engineering --- \$500 cash award for an innovative electronic or electrical project

5022 P7 Strength of Electromagnets

Award m Student(s) Samuel Hammond Grade 7 Town New London

- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering 7th grade - CSF Medallion

## 8th Grade

5508 P8 Natural Plastic: Milk Plastic Biodegradation vs. Commercial Plastic Degradation

Award 1 Student(s) Madison Lee Grade 8 Town Rocky Hill

- \* Pepsico Physical Sciences Awards --- 5th Place- Physical Sciences 8th Grade Ind. - trophy
- \* CASE Urban School Challenge Awards with Aetna, IBM, & Travelers --- 1st Place Middle School - \$300 and Trophy, Medallion
- \* Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 1st Place- Engineering 8th grade- \$500 & trophy and Invitation Compete in Broadcom MASTERS
- \* 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 Mtg & \$500 to School Science Department for Equipment/Supplies
- \* Alexion Biotechnology Awards --- 2nd Place- Biotechnology 8th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS
- \* NASA EARTH System Science Award --- Certificate and \$25 gift card given by CSEF
- \* Air and Waste Management Association, Connecticut Chapter --- \$100 Junior, Environmental Research, waste recycling related
- \* Urban School Challenge 1st Place Middle School Awards --- Highest Placing 8th grader- GENIUS-Olympiad Competition -\$500 travel stipend
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for Highest Placing USC 8th grade Project



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## UTAS Engineering Awards

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[Proj#] [FCat] [Project Title]

5545 P8 Constructing a CoreXY Dual Extrusion Fused Filament Fabrication Apparatus  
Award 2 Student(s) Conner Larocque Grade 8 Town Hamden

- \* Pepsico Physical Sciences Awards --- 2nd Place- Physical Sciences 8th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS
- \* CASE Urban School Challenge Awards with Aetna, IBM, & Travelers --- 5th Place Middle School - Trophy, Medallion
- \* Barnes Aerospace Applied Technology Awards --- Middle School Finalist - Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 2nd Place- Engineering 8th grade- \$300 & 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
- \* IEEE, Connecticut Section --- \$100 Honorable Mention

5530 P8 Making concrete more energy efficient and lightweight.  
Award 3 Student(s) Angela Sadlowski Grade 8 Town Unionville

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 3rd Place- Engineering 8th grade- \$100 & trophy and Invitation Compete in Broadcom MASTERS
- \* Alexion Biotechnology Awards --- 5th Place- Biotechnology 8th grade- trophy
- \* Society of Women Engineers - Hartford Section --- Scientific Calculator
- \* GCS Award for Excellence in Transportation Engineering --- \$250 cash and plaque

4025 PT The Clean Drain  
Award 4 Student(s) William Livesay Grade 8 Town Woodbridge  
Joshua Feuerstein Grade 8 Town Woodbridge  
Arnav Paliwal Grade 8 Town Woodbridge

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion
- \* Barnes Aerospace Applied Technology Awards --- 1st Place Middle School - \$300 and Trophy, Medallion
- \* Environmental Sciences Awards with CACIWC --- MS Finalist - CACIWC gifts, CSF Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 4th Place- Engineering 8th grade- trophy
- \* TurnKey Compliance Solutions Environmental Awards --- \$200 Cash Award Middle School- For excellence in environmental sciences

4020 PT Investigating Novel Methods of Generating Electricity Using a Double Plated Magnetic Generator with Springs Compared to a Miniature Axial Rounded Tip Tidal Stream Generator  
Award 5 Student(s) AIYaman Zoghol Grade 8 Town Enfield  
Ahmad Mohammed Grade 8 Town Windsor

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion
- \* Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 5th Place- Engineering 8th grade- trophy
- \* United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, and Annual Report



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4004	PT	Water Turbine
<b>Award</b>	<b>m</b>	<b>Student(s)</b> Christopher Hill Benjamin Lee
		<b>Grade 8</b> <b>Town</b> Woodbridge
		<b>Grade 8</b> <b>Town</b> Woodbridge

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion
- \* Energize CT/eesmarks Alternative/Renewable Energy Awards --- 3rd Place Middle School - \$100 Cash and Trophy
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering 8th grade - CSF Medallion
- \* Dreams Unlimited Award --- \$200 Cash Award + Certificate

5519	P8	Extinguish-Bot
<b>Award</b>	<b>m</b>	<b>Student(s)</b> Weiss Yuan
		<b>Grade 8</b> <b>Town</b> Woodbridge

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion
- \* Barnes Aerospace Applied Technology Awards --- Middle School Finalist - Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering 8th grade - CSF Medallion
- \* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$25 gift card given by CSEF
- \* Ricoh Americas Corporation --- Certificate, \$25 Amazon gift card given by CSEF
- \* American Society of Safety Engineers, CT Valley Chapter --- \$100 grade 7-8 project

5536	P8	INDUCED LEVITATION AND MOVEMENT APPLYING LENZ'S LAW
<b>Award</b>	<b>m</b>	<b>Student(s)</b> Michael Luzzio
		<b>Grade 8</b> <b>Town</b> Groton

- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering 8th grade - CSF Medallion
- \* IEEE, Connecticut Section --- \$100 Honorable Mention
- \* Barker Mohandas Awards for Transportation Research --- \$100 Cash & Plaque for Excellence in Transportation Related Research- Middle School
- \* Bob Harris Fix It Award --- \$75 and Certificate for ingenuity in using material and tools

## High School

3013	LS	Formulation of Gelatin-Hyaluronic Acid Blend Cross-Linked Gels for Potential Tissue Applications: Cost-Effective, Patient Specific, Alternative Treatment of Labral Tears of the Hip
<b>Award</b>	<b>1</b>	<b>Student(s)</b> Sophie Edelstein
		<b>Grade 10</b> <b>Town</b> New Haven

- \* Pfizer Life Sciences Awards --- 2nd Place- Life Sciences Senior High- \$300 & Plaque, Trip to compete at Intel ISEF
- \* CASE Urban School Challenge Awards with Aetna, IBM, & Travelers --- 4th Place High School - Plaque, Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 1st Place- Engineering Senior High- Trip to compete at Intel ISEF, \$500 & plaque,
- \* Alexion Biotechnology Awards --- 2nd Place- Biotechnology Senior High- \$500 & plaque
- \* Otero Family Award --- The Otero Family Award; \$200 cash
- \* Lunch with a Patent Attorney --- Lunch with a Patent Attorney
- \* University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Biochemistry



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### UTAS Engineering Awards

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

6005 PS A Novel Rapid Diagnostic Test for Zika Virus NS1 Protein using Nanoribbon Microfluidics  
**Award 2** Student(s) **Lauren Low** Grade 12 Town Hamden

- \* Pepsico Physical Sciences Awards --- 4th Place- Physical Sciences Senior High Individual - Plaque
- \* CASE Urban School Challenge Awards with Aetna, IBM, & Travelers --- Senior High Finalist - Medallion
- \* Barnes Aerospace Applied Technology Awards --- 1st Place High School - \$500 and Plaque, Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 2nd Place- Engineering Senior High- \$500 & plaque
- \* Quinnipiac University Scholarships --- \$20,000, 4 year scholarship (\$5000 per year) to Quinnipiac University for HS Student & \$250 cash
- \* IEEE, Connecticut Section --- \$100 Honorable Mention
- \* Arthur Mensing Award --- \$1000 cash award for excellence in the physical sciences

6053 PS Renewable Energy Generation of a Hybridized Saltwater Electrochemical and Hydrokinetic Energy System  
**Award 3** Student(s) **Bennett Hawley** Grade 10 Town Cos Cob

- \* Energize CT/eesmarts Future Sustainability Awards --- High School Finalist - Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 3rd Place- Engineering Senior High- \$300 & plaque
- \* IEEE, Connecticut Section --- \$100 Honorable Mention
- \* Mystic Aquarium - Sea Research Foundation --- \$100 and 4 Admission Tickets to Mystic Aquarium

6013 PS Optimization of Vertically Aligned Boron Nitride Nanotube Membranes via Magnetic Arrangement in a Lyotropic Precursor for Water Transport Applications  
**Award 4** Student(s) **Connor Li** Grade 12 Town Cos Cob

- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 4th Place- Engineering Senior High- \$200 & plaque
- \* Connecticut Association of Physics Teachers --- \$100 Senior project

3060 LS Cost-Effective, Portable Paper-Based Diagnosis of Alzheimer's Disease: Targeting A $\beta$  Oligomers Using Curcumin-PLGA-Ceria Nanoconjugates as Artificial Biomarkers  
**Award 5** Student(s) **William Yin** Grade 12 Town Riverside

- \* UTC Aerospace Systems Awards for Excellence in Engineering --- 5th Place- Engineering Senior High- \$100 & plaque
- \* Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High- \$100 & plaque



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 [Proj#] [FCat] [Project Title]

6003 PS AN INVESTIGATION INTO THE CAPABILITY OF GRAPHENE TO PRODUCE ELECTRICITY DURING RAINSTORMS AS AN ADDITION TO A TRADITIONAL SOLAR PANEL

Award **m** Student(s) **Steven Siveyer** Grade 10 Town Monroe

- \* CASE Urban School Challenge Awards with Aetna, IBM, & Travelers --- 2nd Place High School - \$400 and Plaque, Medallion
- \* Energize CT/eesmarts Future Sustainability Awards --- 1st Place High School - \$500 Cash, Plaque, and Trip to Compete I-SWEEEP, Houston
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering Senior High - CSF Medallion

6505 PST Using Piezoelectricity to Harness Energy into a Battery

Award **m** Student(s) **Harold Barringer** Grade 10 Town Greenwich  
**Thomas Foley** Grade 10 Town Greenwich

- \* Pepsico Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering Senior High - CSF Medallion

3109 LS Platelet Membrane Coating Bio-interfacing of Pravastatin to Increase Removal of Arterial Plaque

Award **m** Student(s) **Haley Stober** Grade 11 Town Old Greenwich

- \* Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering Senior High - CSF Medallion
- \* Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion

6033 PS A Novel N-Doped Carbon Nanotube/Copper Electrode for the Reduction of CO2 to Biofuel

Award **m** Student(s) **Michelle Woo** Grade 11 Town Riverside

- \* Energize CT/eesmarts Alternative/Renewable Energy Awards --- 2nd Place High School - \$300 Cash and Plaque,
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering Senior High - CSF Medallion
- \* The Connecticut Technology Council Young Woman Innovation Award --- \$150 Cash Award for Technological Innovation
- \* GENIUS Olympiad --- GENIUS Olympiad Competition for 2nd Place HS Alternative/Renewable Energy Project



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 [Proj#] [FCat] [Project Title]

6015 PS Development of a CNT/ZnO/TiO<sub>2</sub> membrane for visible-light induced photocatalytic filtration of water-borne organic and bacterial pollutants

**Award** m **Student(s)** Michelle Xiong **Grade** 11 **Town** Riverside

- \* Pepsico Physical Sciences Awards --- 5th Place- Physical Sciences Senior High Individual - Plaque
- \* Environmental Sciences Awards with CACIWC --- HS Finalist - CACIWC gifts, CSF Medallion
- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering Senior High - CSF Medallion
- \* Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High- Trip to compete at Intel ISEF, \$1000 & plaque,
- \* Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate given by ONR
- \* Stockholm Junior Water Prize --- Certificate, \$25 gift card to Amazon given by CSEF, possible advance to further competition
- \* Society of Women Engineers - Hartford Section --- Scientific Calculator
- \* Coherent, Inc. Richard Hart Award for Excellence in Photonics --- \$300 cash, plaque, invitation to lunch and tour Coherent factory

6088 PS The Effect of Center of Mass and Center of Pressure Locations of Model Rocket Performance

**Award** m **Student(s)** Siddharth Jain **Grade** 9 **Town** Shelton

- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering Senior High - CSF Medallion
- \* John S. Kendall Memorial Awards --- \$500 John S. Kendall Award for Excellence In Mechanical Engineering - High School

6089 PS Study of Size Separation of Sub-Millimeter Sizes Granular Material Using Vibro-Fluidization

**Award** m **Student(s)** Jethin Gowda **Grade** 12 **Town** Orange

- \* UTC Aerospace Systems Awards for Excellence in Engineering --- Finalist - Engineering Senior High - CSF Medallion