



Connecticut Science & Engineering Fair

Quinnipiac University

March 10 - 14, 2015

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Final Judging Results

United Technologies Corporation Awards

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

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

High School

Greenwich Greenwich High School Andrew Bramante

6015 PS Synthesis of an Electromagnetically-Controlled Corn-Starch/PVA Biopolymer Microstructure for Extended and Targeted Drug Delivery

Award Student(s) **Margaret Cirino** Grade 10 Town Greenwich

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Individual - \$300 & Plaque, trip to compete at Intel ISEF
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- Alexion Biotechnology Awards --- 3rd Place- Biotechnology Senior High- \$300 & plaque
- U.S. Metric Association --- Certificate & \$50 gift card to Amazon given by CSEF
- Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate

Oxford Oxford High School Mrs. Scheuer

6030 PS Electrically Independent, Low Cost, Self-Filling Water Bottle for use in Water Locked Regions

Award Student(s) **Zachary Frew** Grade 12 Town Oxford

- Connecticut Science & Engineering Fair Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- Barnes Aerospace Applied Technology Awards --- 1st Place High School - \$500 and Plaque, Medallion
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- Stockholm Junior Water Prize --- Certificate, \$50 gift card to Amazon given by CSEF, possible advance to further competition
- Connecticut Invention Convention "Next Step Inventors" --- \$50 gift certificate & invitation to present at CT Invention Convention as "CIC Next Step Inventors"

Greens Farms Greens Farms Academy Dr. Freeman

6039 PS Optimization of Reflectivity of GaN for Solar Applications

Award Student(s) **Matthew Lichtenberg** Grade 11 Town Satmford

- Connecticut Science & Engineering Fair Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Chemistry

Norwich Norwich Free Academy Stephani Jones

6056 PS A Field Study Analysis of Carbon Fiber Electrode Weaves and Conductors in the Design of Sedimentary Microbial Fuel Cells

Award Student(s) **Katie Provost** Grade 9 Town Bozrah

- Connecticut Science & Engineering Fair Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- Environmental Sciences Awards with CACIWC --- 3rd Place HS- \$100, Plaque, CACIWC gifts
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report



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[SchTown] [School] [Teacher]
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Greenwich Greenwich High School Andrew Bramante

6101	PS	Low Grade Waste Heat Recovery and Carbon Sequestration using an Innovative Reverse Electrodialysis (RED) and Pressure Retarded Osmosis (PRO) System
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Award **Student(s)** **Ethan Novek** **Grade** 10 **Town** Greenwich

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & Plaque, trip to compete at Intel ISEF
- Energize CT/eesmarts Future Sustainability Awards --- 1st Place High School - \$800 Cash, Plaque, and Trip to Compete I-SWEEEP, Houston
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- H. Joseph Gerber Medal of Excellence, an award of 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
- Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
- MIT Club of Hartford K-12 Initiative --- For excellence in science & technology of energy related research, high school, \$100 cash award



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Final Judging Results

UCONN Academic Excellence Scholarship

Award Legend

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 Medalists = m
 Winners = w

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

Hartford Greater Hartford Academy of Math & Science Dr.Aramli

3039	LS	Zeolite Zaps Cancer Cells
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Student(s) Jacqueline Klepinger

Grade 11 **Town** Wethersfield

- CASE Urban School Challenge Awards with Travelers --- Senior High Finalist - Medallion and acrylic award
- Quinnipiac University Scholarships --- \$20,000, 4 year scholarship (\$5000 per year) to Quinnipiac University for HS Student & \$500 cash
- University of Connecticut Academic Excellence Scholarship --- Academic Excellence Scholarship - \$5000 a year for each of four academic years- \$20,000 total



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UTC Aerospace Systems Awards for Excellence in Engineering

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

Middle School

Danbury St. Joseph School Mrs. Reilly

5054 P7 Development of a technique to detect explosive residue for use in avoiding terrorism threats.

Award Student(s) **Bradley Kerr** Grade 7 Town Danbury

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 5th Place- Physical Sciences 7th Grade Individual - trophy
- Barnes Aerospace Applied Technology Awards --- 3rd Place Middle School - \$100 and Trophy, Medallion
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering

Orange Southern CT Hebrew Academy Karen Howell

5512 P8 Design, build and program a robot using an Arduino Mega 2560 R3 through an Android app to cheer up or relax children at a hospital

Award Student(s) **Ben Bruder** Grade 8 Town New Haven

- Barnes Aerospace Applied Technology Awards --- 2nd Place Middle School - \$200 and Trophy, Medallion
- Xerox Computer Science Awards --- 2nd Place Middle School - \$200, Trophy and Medallion
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering

Plantsville J.F. Kennedy Middle School Mrs. Pepin

2010 L7 "Pore" My Way to Cleaner Water: The use of flocculants and porous ceramic pots for purifying drinking water in developing countries

Award Student(s) **Matthew Maciejewski** Grade 7 Town Plantsville

- Pfizer Life Sciences Awards --- 1st Place- Life Sciences 7th grade- \$200 & trophy and Invitation to Compete Broadcom MASTERS
- Energize CT/eesmarts Sustainable Resources and Practices Awards --- 1st Place Middle School - \$500 Cash and Trophy
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- Alexion Biotechnology Awards --- 1st Place- Biotechnology 7th grade- \$300 & trophy
- Ricoh Corporation/Society for Science & the Public --- Certificate, Lapel Pin, \$50 gift card to Amazon given by CSEF
- Talcott Mountain Science Center --- Founder's Award - \$450 Saturday Mentorship Course at TMSC - Middle School Phys Science
- The Children's Museum --- 1 family 4-Pack of Admission Passes to the Children's Museum
- Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a High School student, \$200 cash



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UTC Aerospace Systems Awards for Excellence in Engineering

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

High School

Greenwich Greenwich High School Andy Bramante

3096 LS Temperature-Independent, Portable, and Rapid Field Detection of Ebola via a Silk-Derived Lateral-Flow System

Award Student(s) **Olivia Hallisey** Grade 10 Town **Greenwich**

- Pfizer Life Sciences Awards --- 1st Place- Life Sciences Senior High- \$500 & Plaque, Trip to compete at Intel ISEF
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering
- H. Joseph Gerber Medal of Excellence, an award of the Connecticut Academy of Science and Engineering in partnership with CCAT --- Life Sci. Senior 1st HS- \$1,000, Solid Silver Medal of Excellence, invite to CASE Annual Mtg
- Alexion Biotechnology Awards --- 1st Place- Biotechnology Senior High- Trip to compete at Intel ISEF, \$1000 & plaque,
- Connecticut Invention Convention "Next Step Inventors" --- \$50 gift certificate & invitation to present at CT Invention Convention as "CIC Next Step Inventors"

Greenwich Greenwich High School Andy Bramante

3114 LS A Novel Antibody-Functionalized Graphene Transistor Lab-On-A-Chip for Selective Detection of Malaria Pathogens

Award Student(s) **Paul Hansel** Grade 11 Town **Old Greenwich**

- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High - CSF Medallion & Acrylic Award
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering
- Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High- \$100 & plaque
- Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a Middle School student, \$100 cash

Greenwich Greenwich High School Andrew Bramante

6101 PS Low Grade Waste Heat Recovery and Carbon Sequestration using an Innovative Reverse Electrodialysis (RED) and Pressure Retarded Osmosis (PRO) System

Award Student(s) **Ethan Novek** Grade 10 Town **Greenwich**

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 1st Place - Physical Sciences Senior High Individual - \$500 & Plaque, trip to compete at Intel ISEF
- Energize CT/eesmarts Future Sustainability Awards --- 1st Place High School - \$800 Cash, Plaque, and Trip to Compete I-SWEEEP, Houston
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- H. Joseph Gerber Medal of Excellence, an award of 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
- Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
- MIT Club of Hartford K-12 Initiative --- For excellence in science & technology of energy related research, high school, \$100 cash award



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UTC Aerospace Systems Awards for Excellence in Engineering

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

Greenwich Greenwich High School Andrew Bramante

6087 PS Application of Manganese-Based Ionic Liquid for Optimized Performance of Non-aqueous / Aqueous Redox Flow Batteries

Award Student(s) **Nicholas Szabo** **Grade 11** **Town** Glenville

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 3rd Place- Physical Sciences Senior High Individual - \$200 & Plaque
- Barnes Aerospace Applied Technology Awards --- 2nd Place High School - \$300 and Plaque Medallion
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering
- Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate



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Xerox Computer Science Awards

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

Middle School

Bozrah Fields Memorial School Evelyn Brown

5507 P8 Music Metrics and Fractals: Analyzing Different Genres of Digitized Music to Identify Input Metrics for Programming Fractal Representations of the Music with Mathematica

Award 1 Student(s) Genevieve Buckridge Grade 8 Town Bozrah

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 3rd Place- Physical Sciences 8th Grade Ind, - \$100 & trophy, invite to compete 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
- Xerox Computer Science Awards --- 1st Place Middle School - \$300, Trophy and Medallion
- Connecticut Association for the Gifted --- Leonardo Davinci 7-8 Grade \$50 Gift Certificate
- Stanley Lessoff Award for Excellence In Analytical Technique --- \$100 Cash and Plaque

Orange Southern CT Hebrew Academy Karen Howell

5512 P8 Design, build and program a robot using an Arduino Mega 2560 R3 through an Android app to cheer up or relax children at a hospital

Award 2 Student(s) Ben Bruder Grade 8 Town New Haven

- Barnes Aerospace Applied Technology Awards --- 2nd Place Middle School - \$200 and Trophy, Medallion
- Xerox Computer Science Awards --- 2nd Place Middle School - \$200, Trophy and Medallion
- UTC Aerospace Systems Awards for Excellence in Engineering --- \$1,000 cash and plaque for excellence in engineering

Avon Talcott Mountain Academy Alyson Tockstein

5522 P8 Thermodynamics of the Stirling Cycle: Testing the Effects of the Relative Temperature Difference on Stirling Engine Output

Award 3 Student(s) Varun Aggarwal Grade 8 Town South Glastonbury

- Xerox Computer Science Awards --- 3rd Place Middle School- \$100, Trophy, Medallion

Bethany Amity Reg Middle School, Bethany Campus Mr. Kevin Berean

4033 PT BabyBot: Creating a Robot to Soothe a Crying Infant

Award m Student(s) Neha Sudhir Grade 8 Town Woodbridge
 Rosie Du Grade 8 Town New Haven
 Allison Fischman Grade 8 Town Woodbridge

- Connecticut Science & Engineering Fair Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion & Acrylic Award
- Xerox Computer Science Awards --- Middle School Finalist - Medallion, Acrylic Award
- Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School, Physical Sciences



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Xerox Computer Science Awards

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

Bethany Amity Reg Middle School, Bethany Campus Kevin Berean

4017 PT The Sensing Cane

Award m

Student(s) Kate Yuan

Grade 8 Town Woodbridge

Catalina Betancur

Grade 8 Town Woodbridge

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 3rd Place- Physical Sciences MS Team-trophy, invite to compete Broadcom MASTERS
- Barnes Aerospace Applied Technology Awards --- 1st Place Middle School - \$300 and Trophy, Medallion
- Xerox Computer Science Awards --- Middle School Finalist - Medallion, Acrylic Award
- American Society of Safety Engineers, CT Valley Chapter --- \$100 grade 7-8 project
- ISA - International Society for Automation --- 2nd - \$75 award

Bethel St. Mary School Mrs. McDonald

5043 P7 A Matter of Facts: Designing a Math App to Help Kids Learn Their Math Facts

Award m

Student(s) Kevin Legnard

Grade 7 Town Bethel

- People's United Bank Mathematics Awards - with ATOMIC --- 2nd Place Middle School- \$100 from ATOMIC, and Trophy, \$200 from People's United Bank
- Xerox Computer Science Awards --- Middle School Finalist - Medallion, Acrylic Award



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Xerox Computer Science Awards

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

High School

Woodbridge Amity Regional High School Deborah Day

6509 PST Echocardiogram-Based Wireless Left Ventricular Assist Device (LVAD) with Mobile Application Monitoring and Control

Award 1 **Student(s)** Daniel Giebisch **Grade** 12 **Town** Woodbridge
 Noah Gallant **Grade** 12 **Town** Bethany

- Connecticut Science & Engineering Fair Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Team- \$300(split) & Plaque
- Xerox Computer Science Awards --- 1st Place High School - \$400, Plaque, Medallion
- Intel Excellence in Computer Science Award --- \$200 & certificate
- IEEE, Connecticut Section --- \$100 Honorable Mention
- University of New Haven High School Awards in Engineering & Science --- \$100 For High School Project in Computer Science

Bristol St. Paul Catholic High School Mr Alberti

6076 PS Novel Approches of Making Human to Robot Interaction Possible for the Handicapped.

Award 2 **Student(s)** Kamila Krawczuk **Grade** 9 **Town** New Britain

- Xerox Computer Science Awards --- 2nd Place High School - \$300, Plaque, Medallion
- Intel Excellence in Computer Science Award --- \$200 & certificate
- Leask/Francoeur Family Awards --- Award for excellence and innovation in electrical engineering or computer science - \$200 cash

Putnam Putnam Science Academy Serdar Haytiyev

6071 PS Designing a Braille E-Book For the Visually Impaired and Blind People

Award 3 **Student(s)** Abdulkadir Yilmaz **Grade** 11 **Town** Putnam

- Connecticut Science & Engineering Fair Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- Barnes Aerospace Applied Technology Awards --- Senior High Finalist - Medallion and acrylic award
- Xerox Computer Science Awards --- 3rd Place High School- \$200, Plaque, Medallion
- Connecticut Association for the Gifted --- Leonardo Davinci 9-12 Grade \$50 Gift Certificate
- ISA - International Society for Automation --- 3rd - \$50 award
- Leask/Francoeur Family Awards --- Award for excellence and innovation in electrical engineering or computer science - \$200 cash
- Education Connection- Center for 21st Century Skills Awards --- \$100 For innovative use of technology to advance science or engineering
- Connecticut Invention Convention "Next Step Inventors" --- \$50 gift certificate & invitation to present at CT Invention Convention as "CIC Next Step Inventors"

Avon Avon High School Galuska

6025 PS Program your Diet

Award m **Student(s)** Nivedha Natchiappan **Grade** 10 **Town** Avon

- Xerox Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award



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[SchTown] [School] [Teacher]
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Glastonbury Glastonbury High School Ms. Pintavalle
6073 PS Chef NAO: The Humanoid Cooking Robot
Award **m** Student(s) **Kiele Sacco** Grade 12 Town Glastonbury

- Xerox Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award

Ridgefield Ridgefield High School Patrick Hughes
6047 PS The Effect of Different Checkerboard Sizes on Steady State Visually Evoked Potentials
Award **m** Student(s) **Randy Deng** Grade 12 Town Ridgefield

- Xerox Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award
- Connecticut Association of Physics Teachers --- \$100 Senior project
- IEEE, Connecticut Section --- \$100 Honorable Mention

Salisbury Salisbury School Tobias Ayer
6014 PS The physics of the space elevator construction.
Award **m** Student(s) **Kyungmin Lee** Grade 11 Town Salisbury

- People's United Bank Mathematics Awards - with ATOMIC --- 3rd Place High School - Plaque, \$200 from People's United Bank
- Xerox Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award
- Barker Mohandas Award for Transportation Research --- \$200 Cash & Plaque for Excellence in Transportation Related Research- High School

Woodbridge Amity Regional High School Deborah Day
6082 PS Creating a Semantic Search Engine with Voice Integration
Award **m** Student(s) **David Wang** Grade 11 Town Bethany

- Xerox Computer Science Awards --- Senior High Finalist - Medallion, Acrylic Award
- U.S. Coast Guard Research and Development Center --- Summer internship to conduct research aboard ship or at a USCG base + \$50 Amazon Gift Card given by CSEF.