

2016 Central Sound Regional Science and Engineering Awards

Special Awards

American Institute for Aeronautics and Astronautics

- Natalie Roberts, Madeline LaPorte (Cedarcrest)- Aquatic Drone Vehicle
- Benjamin Benson (Cedarcrest)- Designation and Coherence of Novel Conglomerate Propulsion Methods Optimized for Preeminent Interplanetary Space Applications
- Sanchit Singh, William Zhu (Newport)- Interstellar Travel using Solar Sails

American Chemical Society

1. Dyuti Shreya Nandy (Newport)- A Novel Approach for the Treatment of Type 2 Diabetes with PTP1B Inhibitor: Design, Synthesis and Biological Activity
2. Sriharshita Musunuri (Henry M. Jackson)- Molecularly Imprinted Polymeric Nanoparticles: A Novel Theranostic System to Detect and Neutralize Endotoxins

American Meteorological Society

- Helen Carson (Home School)- A Survey of Mars Dust Devil Activity in CTX Images of Amazonia Planitia

American Psychological Society

- Christine Pham, Elena Rettig, Varsha Veeramachanei (Tesla STEM)- The Effects of Social Media Usage on Stress Levels

ASM Materials Education Foundation

- Jesse Wu (Newport)- Effect of Ca²⁺ and Ba²⁺ on the Mechanical Property of Bulk Alginate Hydrogels

Association for Women Geoscientists

- Alissa Acheson, Agata Skarbek, Caylynn Berosik (Tesla STEM)- The Analysis of Water Variation in Various Populated Areas Based on pH, Turbidity, Total Dissolved Solids, Dissolved Oxygen, and Nitrates

ASU Walton Sustainability Solutions Award

- Maheck Jerez, Margo Nanneman, Ben Zabback (Tesla STEM)- SODIS Support Device
- Dhruvik Parikh (Henry M. Jackson)- Simultaneous Hydrogen Production and Wastewater Treatment by Photocatalytic Titanium Dioxide

Inspiring Excellence

- Dyuti Shreya Nandy (Newport)- A Novel Approach for the Treatment of Type 2 Diabetes with PTP1B Inhibitor: Design, Synthesis and Biological Activity
- Zoey Richards (Newport)- Family Cold and Flu Prevention: Knowledge, Actions, and Outcomes
- Sarah Tarta, Neav Topaz (Tesla STEM)- Bioremediation of Soil and Conversion of Expanded Polystyrene (ESP) Solvated by D-Limonene to Fungal Sugars (AKA Bioavailable Carbon) by *Pleurotus Ostreatus* Fungi
- Rishabh Jain (Skyview)- BoshGlove
- Shifa Somji (Newport)- Domination of Queens on a Hexagonal Chess Board
- Helen Maslen, Maanasa Nandula, Priyanka Taneja (Tesla STEM)- The Effect of Placebo on Menstrual Pain Reduction

Intel Excellence in Computer Science

- Bradley Hoefel, Nathan Wacker (Todd Beamer)- Using AZURE and Cloud Compute for Nuclear Reactor Telemetry and Control

Mu Alpha Theta

- Nina Anikeeva (Overlake School)- Periodic Continued Fractions on the Heisenberg Group

NASA Earth System Science

- Helen Carson (Home School)- A Survey of Mars Dust Devil Activity in CTX Images of Amazonia Planitia

National Oceanic and Atmospheric Association

- Alissa Acheson, Agata Skarbek, Caylynn Berosik (Tesla STEM)- The Analysis of Water Variation in Various Populated Areas Based on pH, Turbidity, Total Dissolved Solids, Dissolved Oxygen, and Nitrates

Office of Naval Research

- Eshika Saxena (Interlake)- A Portable Optoelectronic System to Identify Spectral Fingerprints for Non-invasive Blood Analysis, Impurity Detection, and Food Quality Assessment using Chemometrics Techniques Enhanced with Machine Learning
- Adeline Hillier (Newport)- Communication by Ultrasound using Radio Modulation Techniques
- Vishal Baskar (Redmond)- Fabrication and Characterization of Silicide Fuels
- Terrance Li (Newport)- Wearable Direct Contact Heating and Cooling

Ricoh Americas Corporation

- Dhruvik Parikh (Henry M. Jackson)- Simultaneous Hydrogen Production and Wastewater Treatment by Photocatalytic Titanium Dioxide

Society for In Vitro Biology

- Dyuti Shreya Nandy (Newport)- A Novel Approach for the Treatment of Type 2 Diabetes with PTP1B Inhibitor: Design, Synthesis and Biological Activity

Stockholm Junior Water Prize

- Hemil Gajjar, Apoorv Khandelwal (Tesla STEM)- Optimizing Water Permeability in Nanoporous Graphene Membranes for Reverse Osmosis Water Desalination
- Maheck Jerez, Margo Nanneman, Ben Zabback (Tesla STEM)- SODIS Support Device
- Dhruvik Parikh (Henry M. Jackson)- Simultaneous Hydrogen Production and Wastewater Treatment by Photocatalytic Titanium Dioxide

Tableau

- Helen Carson (Home School)- A Survey of Mars Dust Devil Activity in CTX Images of Amazonia Planitia

U. S. Air Force Science and Technology

- Gurleen Gill, Gabrielle McDaniel, Kanae Lancaster (Tesla STEM)- Bio-Photovoltaic Solar Panels from Micro Photosynthetic Power Cells Using Blue-Green Algae
- Andrew Wang, Effie Jia (Tesla STEM)- The Implementation of Polystyrene and Graphene in the Active Layer of PCDTBT:PCBM Inverted Organic Solar Cells to Increase Energy Conversion Efficiency
- Jack Markowitz (O'Dea)- Turning Waste into Power
- AsiaLee Donnelly (Mountlake Terrace)- Phylogenetic Tree of Chloroplast Markers in Plants

Yale Science and Engineering Association

- Adeline Hillier (Newport)- Communication by Ultrasound using Radio Modulation Techniques