2018 Central Sound Regional Science and Engineering Fair Category Awards

2018 Grand Champion		Next Generation Morphological and Molecular Analysis of the Toxicity of Pharmaceutical-Derived Aquatic Contaminants (PPCPs)	Interlake	Ronit	Jain
2018 First Runner Up		FARMING FROM THE SKY: Design, Fabrication and Testing of a Smart Precision Agriculture End-to-End System to Boost Global Food Security and Environmental Sustainability	Interlake	Veenadhari	Kollipara

CATEGORY	PLACE	PROJECT NAME	School	FIRST NAME	LAST NAME
Animal and Plant Sciences	1st Place	Using Computer Vision to Assist Conservation Biologists	sammamish	Manoj	Sarathy
Animal and Plant Sciences	2nd Place	Investigating the Effects of Prozac (Fluoxetine) on Daphnia Heartrate	Annie Wright	Sasha	Chang
Animal and Plant Sciences	3rd Place	Pillbugs Traveling Light	Annie Wright	Nerissa, Jin	Lien, Huang
Animal and Plant Sciences	Honorable Mention	The chemotaxis responses to the Esters and Aromatic compounds in Caenorhabditis elegans with cilia defects and the genes associated with human disease syndromes by abnormal infraglabellar transport	Forest Ridge of the Sacred Heart	Verona	Yue
Behavioral and Social Sciences	1st Place	The Effects of Changing Behavioral Tendencies Towards a Person with Schizophrenia or Psychosis NOS	Tesla STEM	Catherine	Benson
Behavioral and Social Sciences	2nd Place	Perceived Credibility of Political Advertisements on Facebook	Tesla STEM	Claire	Whiteside
Behavioral and Social Sciences	2nd Place	Incorporation of self-esteem enhancement strategies in social media and their effects on adolescents suffering from depression	Tesla STEM	Kyra	Bethune
Behavioral and Social Sciences	3rd Place	Transthesia		Jay	Pierce
Behavioral and Social Sciences	Honorable Mention	Determining the effects of psychological states on high schoolers performance in chess	Tesla STEM	Toma, Eric	Itagaki, Yin

Biochemistry, Cellular & Mol Bio, Micro	1st Place	Siderocalin and Its Interaction with Different Cell Types	Tesla STEM	Sarah	Suhy
Biochemistry, Cellular & Mol Bio, Micro	2nd Place	Improving the Production of the Anti-Cancer Drug Paclitaxel Through Biosynthesis in Bacteria	Tesla STEM	Eudoxie , Nisha	Hudry , Thottam
Biochemistry, Cellular & Mol Bio, Micro	3rd Place	The Application of Hexosaminidase-A Replicating Enzymes in the Facilitation of the Degradation of GM2 Gangliosides in Tay-Sachs	Redmond	Suraj, Maneesh	Dhulipalla, Rajagopal
Biochemistry, Cellular & Mol Bio, Micro	Honorable Mention	Flushing with Hands or Feet?	Annie Wright	Aimee, Simran	Xu, Rakhra
Biomedical and Health Sciences, Translational Medicine Chemistry	1st Place	A Theranostic Solution to Gram-Negative Sepsis	Henry M. Jackson	Sriharshita	Musunuri
Biomedical and Health Sciences, Translational Medicine Chemistry	2nd Place	Generating a Machine Learning Model to Determine the Metastatic Potential of Lung Cancer Tumors with Lactate Dehydrogenase-A Enzyme Concentrations	Tesla STEM	Sashwatha	Shankar
Biomedical and Health Sciences, Translational Medicine Chemistry	3rd Place	AORTIC ANEURISM FAILURE PREDICTION BY NON LINEAR FINITE ELEMENT ANALYSIS	Kentwood	Karthikeyan	Malmurugan
Biomedical and Health Sciences, Translational Medicine Chemistry	Honorable Mention	Thorax Disease Diagnosis with Radiologist-level Performance using Deep Learning	Newport	Eashver	Elango
Biomedical Engineering, Material Science	1st Place	Viability of Urinary Polyamine Levels as a Preliminary Test for Cancer	Tesla STEM	Ishika, Eesha	Mukherjee, Murali
Biomedical Engineering, Material Science	2nd Place	Thermal transport properties of 2-dimensional transition metal dichalcogenide heterostructures	Newport	Terrance	Li
Biomedical Engineering, Material Science	3rd Place	Innovative Algorithms and Device to Detect and Measure Peripheral Veins to Guide an Intravenous (IV) Catheter	Mountlake Terrace	Eugene, Ethan, Vivian	Seubert, Pyke, Nowka-K(
Biomedical Engineering, Material Science	Honorable Mention	Dielectric Elastomer Actuator in 3-D Printed Prosthetic Finger	Tesla STEM	Sarah	Berg
Computational Biology and Bioinformatics	1st Place	Development of Semi-Supervised Machine Learning Models to Predict Enhancer Regions in Polygenic Developmental Diseases	Interlake	Savitha	Srinivasan

Category	Award	Title	School	First	Last
Computational Biology and Bioinformatics	2nd Place	Accurate and Early Detection of Metastatic Breast Cancer: A Deep Learning Analysis of Invasive Tissue Lesions in Multispectral Histopathological Images	Newport	Shifa	Somji
Computational Biology and Bioinformatics	3rd Place	Gene Expression Levels of Carboplatin Sensitive and Resistant Ovarian Cancer Tumors and Its Implications on Precision Medicine	Tesla STEM	Amrita	Narasimhan
Computational Biology and Bioinformatics	Honorable Mention	How the CYP2D6*1 and CYP2D6*4 alleles affect the metabolism of the antidepressant fluoxetine (Prozac)	Forest Ridge of the Sacred Heart	Laura	Ludena
Earth and Environmental Science	1st Place	Next Generation Morphological and Molecular Analysis of the Toxicity of Pharmaceutical-Derived Aquatic Contaminants (PPCPs)	Interlake	Ronit	Jain
Earth and Environmental Science	2nd Place	Analyzing the Effects of Anthropogenic Pollution on the Net Primary Productivity of Oceanic Phytoplankton using Satellite Data and In Vitro Models	Interlake	Sagarika	Samavedi
Earth and Environmental Science	3rd Place	The Effect of Various Ferromagnetic Nanoparticles on Aquatic Organisms and pH in Motor Oil-Contaminated Seawater	Mountlake Terrace	Stefiena, Ryan	Roesli, Berry
Earth and Environmental Science	Honorable Mention	The Application of Infrared Thermography to Architecture to Identify Heat-Emitting Building Materials	Tesla STEM	Ritika	Iyer
Earth and Environmental Science	Honorable Mention	The Study of Air Quality Conditions in Relation to Renal Transplantations Through a Data Analysis Approach	Tesla STEM	Betty, Emma	Park, Drapp
Embedded Systems, Robotics and Intelligent Machines	1st Place	MRI Multiple Sclerosis Lesion Segmentation using Deep Learning	Tesla STEM	Neha	Hulkund
Embedded Systems, Robotics and Intelligent Machines	2nd Place	Fast training of neural networks for biological images		Brianna	Platt
Embedded Systems, Robotics and Intelligent Machines	3rd Place	Generating Haptic Feedback Based Upon Calculated Data And User Information	Tesla STEM	Jack, Yukito	Tribolet, Shida

Embedded Systems, Robotics and Intelligent Machines	Honorable Mention	Magic Hand: A Translator for Sign Language	Annie Wright	Eva, Xinzhuoyun	Gleitz, Li
Energy: Chemical and Physical	1st Place	A Novel Sol-Gel Derived SPEEK/SiO2 Composite Membrane for the Vanadium Redox Flow Battery	Henry M. Jackson	Dhruvik	Parikh
Energy: Chemical and Physical	2nd Place	Micro-hydroelectric generator for free-flowing water	Mountlake Terrace	Jacob, Brandon , Joshu	Peters, Elias, Ernst
Energy: Chemical and Physical	3rd Place	Gutter Water Runoff-based Pico Hydroelectric Generator	Mountlake Terrace	Isaac, Samuel	Hain, Bowman
Energy: Chemical and Physical	Honorable Mention	Fuel from fruit: Fermentation of rotten and wasted fruit into ethanol	Mountlake Terrace	Ashley, Nina, Eliza	Klippert, Berry, Sandova
Engineering Mechanics and Environmental Engineering	1st Place	FARMING FROM THE SKY: Design, Fabrication and Testing of a Smart Precision Agriculture End-to-End Systemto Boost Global Food Security and Environmental Sustainability	Interlake	Veenadhari	Kollipara
Engineering Mechanics and Environmental Engineering	2nd Place	Implementation of Gyroscopically Leveled Spherical Drones Optimized Through Neural Networks for Reconnaissance and Imaging of Martian Environments	Tesla STEM	William	Wang
Engineering Mechanics and Environmental Engineering	3rd Place	Langmuir Plasma Research	NW Nuclear Labs	Daniel , Michaela	Christensen, Fennell
Engineering Mechanics and Environmental Engineering	Honorable Mention	Augmented Malleability in Pipeline Joints for Improved Resistance to Seismic Ground Forces	Tesla STEM	Niranjan, Aditya	Sahi, Balasubramanian
Physics and Astronomy, Mathematics	1st Place	The Application of Microwave Satellite Data to the Statistical Hurricane Intensity Prediction Scheme (SHIPS)	Tesla STEM	Aashna	Sheth
Physics and Astronomy, Mathematics	2nd Place	Micro:Bit Strength	Forest Ridge of the Sacred Heart	Ariana, Alyssa	Tucker, Kiehn

Systems Software	1st Place	HemaCam: A Computer Vision-Enhanced Mobile Phone Imaging System for Automated Hematological Disease Screening with Deep Convolutional Neural Networks	Interlake	Eshika	Saxena
Systems Software	2nd Place	Pop Dungeon - A Gamified Approach to Learning in Our Digital World	Tesla STEM	Jeremy	Yang
Systems Software	3rd Place	911 Framework Expansion	Mountlake Terrace	Emilee, Austin	Kirkman, White
Systems Software	Honorable Mention	Analyzing the viability of novel infrared spectrometers for measurement of glucose levels in water.	Henry M. Jackson	Arkaprabha	Bhattacharya