

Central Sound Regional Science and Engineering Fair 20

Category Awards

Grand Champion with Distinction			
	Christine Ye	Eastlake	Applications of Helium-4 Doubly Forbidden Singlet-Triplet Transition Lines in Astronomical Spectroscopy
Grand Champion			
	Aditi Subramanyam	Tesla STEM	Identifying TEAD Proteins and Disrupting the YAP1/TEAD Complex to Inhibit Oncogenic YAP1 Fusion Proteins
Grand Champion			
	Aum Upadhyay	Interlake	Improvement of Perovskite Solar Cell Efficiency

Behavioral and Social Sciences presented by Premera Blue Cross			
1st	Madison Messina Eden Netz	Tesla STEM	Assessing the Effects of Posting Publicly on Social Media in Correlation to Anxious Sleep Patterns in Teenagers
2nd	Roshni Srikanth	Tesla STEM	App to Improve the Mental Health of Refugees
3rd	Rachel Alwan Anika Ghelani	Tesla STEM	A Behavioral and Neurophysiological Analysis of False Memories
HM	Marton Teichner	Tesla STEM	Investigating the Effects of Education on the Impact of Astroturfing

Biomedical & Health Sciences; Translational Medicine			
1st	Aditi Subramanyam	Tesla STEM	Identifying TEAD Proteins and Disrupting the YAP1/TEAD Complex to Inhibit Oncogenic YAP1 Fusion Proteins
2nd	Siddharth Vijay	Redmond	An In-Silico Approach to Kinase Inhibitor Mechanism Deconvolution in Hepatocellular Carcinoma
3rd	Ananya Rajagopalan	Redmond	Rapid Detection of Heart Rate Fragmentation and Cardiac Arrhythmias
HM	Anirudh Iyer	Tesla STEM	Identifying Candidate Biomarkers in Epithelial Ovarian Cancer

Biomedical Engineering			
1st	Meredith Hillier	Newport	Stimulating gamma brain waves via the visual system using flashing LED lights
2nd	Neha Dalia	Eastlake	A System Utilizing Convolutional Neural Networks and Segmentation to Diagnose Cardiovascular Diseases

3rd	Nitisha Gautam Arundhati Basu	Tesla STEM	Genomic Differences Between E-Cigarette Vapor and Cigarette Smoke and its Relation to Tumor Development
HM	Brenna Mohagen	Mountlake Terrace	Portable and Hands Free Fall Prevention Device

Biochemistry, Cellular & Molecular Biology; Microbiology

1st	Mirra Chinta	Tesla STEM	Synergism or Antagonism between Docetaxel and Finasteride in Prostate Cancer model
2nd	Anusha Srivastava	Tesla STEM	Assessing the Apoptotic Effect of the Bacteriocin Nisin on Metastatic Breast Cancer Cell Viability
3rd	Aditi Ekbote Vidhi Jain	Tesla STEM	Drug Combinations with Antibiotics and Curcumin to Combat Antibiotic Drug Resistance
HM	Semira Beraki	Mountlake Terrace	Lactic Acid Bacteria Producing Interferon

Chemistry; Chemical Energy; Materials Sciences

1st	Aum Upadhyay	Interlake	Improvement of Perovskite Solar Cell Efficiency
2nd	Reiden Chea Dominique Pittman-Kidd Teresa Bonilla	Mountlake Terrace	Re-engineering Polyethylene Polymers to Decompose in the Presence of Ocean Microbes
3rd	Mintra Frazzini Saketh Dhulipalla	Tesla STEM	Engineering Environmentally Friendly Sunscreen Using Metal Organic Frameworks
HM	Yuchen Li	Tesla STEM	Access to Clean Potable Water via Fog Harvesting

Software Systems; Computational Biology & Bioinformatics

1st	Gabriella Lui	Newport	Fully-Automated Real-Time Precise Student Location Tracking Safety Systems
2nd	Eshika Saxena	Interlake	Early Detection of Lung Cancer from Hidden Gist Signals in CT Scans with Deep Neural Networks and Transfer Learning
3rd	Maanas Peri	Eastlake	Implementing Computer Vision as a Means of Preventing Distracted Driving
HM	Sunya Mohammed	Tesla STEM	Implementing Eye-Tracking Technology For The Advancement Of Driver Training

Animal Sciences; Plant Sciences; Earth & Environmental Science

1st	Ronit Jain	Interlake	Characterization of Epigenetic and Subcellular Responses to Multi-Stressor Global Warming Exposure in Pacific Oysters
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2nd	Annie Denton	Tesla STEM	Forecasting the effects of climate change on the distribution of the Pacific Sideband snail
3rd	Elisabeth Berger	Tesla STEM	Powering a Solid State Fermenter with Compost Cogeneration to Produce Spores for Use as a Mycopesticide
HM	Sagarika Samavedi	Interlake	Evaluating Available Fresh Water Resources Using Remote Sensing Methodologies
HM	Elsa Rediger Alice Brashers	Ballard	Ocean Cleanup Project

Environmental Engineering

1st	Romanpreet Kaur	Tesla STEM	Menstrual Hygiene Period
1st	Iris Bordman Alyssa Hawkins	Vashon Island	Drone Attachment With Water Sample System (DAWWSS)
2nd	Audrey Gruian	Eastlake	UVPDetect - A Novel Approach to the Detection of Microplastics (A Two-Year Study)
3rd	Max Reisman	Tesla STEM	Solar Desalination System Utilizing Salt-Rejecting and Solar Absorber Technology for Quick and Efficient Desalination
HM	Kishan Baliga	Tesla STEM	Using Synthetic Aperture Radar Data to Create a Machine Learning Algorithm Capable of Identifying Oil Spills

Mechanical Engineering

1st	Dora Burbank Cole Goodnight	Mountlake Terrace	Optimizing the Design and Use of Wheels, Body, Bearings, Axles, Surface Finish, and Fins in CO2 Dragsters.
1st	Thomas Bioren Jaimie Richards	Ballard	Grease Ceaser
2nd	Tristan Stevens Maxwell Wang	Tesla STEM	Using a Bi-layer Geogrid System to Decrease Vertical Stress and Deflection of Pavement Applications
3rd	Runjeet Narula Raunak Narula Shreyas Krishnan	Redmond	Stirling Engine Generator

Physica & Astronomy; Mathematics; Physical Energy; Embedded Systems

1st	Christine Ye	Eastlake	Applications of Helium-4 Doubly Forbidden Singlet-Triplet Transition Lines in Astronomical Spectroscopy
2nd	Caroline Wu	Newport	An Actively-Switched Electro-Optical Laser Pulsing System for Practical Applications

3rd	Isabela Cenicerros	Kamiak	Analysis of Grid Geometry on Ion Engine Output Thrust
HM	Akshay Murthy	Tesla STEM	GreetSense: A Facial Recognition and Obstacle Detection Device for the Visually-Impaired and Blind

Robotics & Intelligent Machines			
1st	David Hyun	Henry M. Jackson	Disaster Supply Robot
2nd	Mathias Foster	Tesla STEM	Development of a Perpetual Solar-Powered Blimp to Aid Urban Search and Rescue
3rd	Alexander Mous	Homeschool	Bigger, Better, Faster: Designing and Building an Improved Budget 3D Printer
HM	Meghan Park Stephen Yang	Mountlake Terrace	Eat Smart: An AI Software to Aid Eating Disorder Patients' Interface with Their Doctors