

## **Junior Division CA State Awards**

### **Applied Mechanics and Structure**

Jeyanth Narayan Parthasarathy Reducing Motion Sickness Caused by Regenerative Braking Systems Pacific Trails MS **4<sup>th</sup>**

### **Chemistry**

Zhizhen Chen Effect of Temperature on Oxidation Speeds Cambridge School **3<sup>rd</sup>**

### **Cognitive Science**

Emily Diep Single Case Pilot Study of AI-driven Speech Therapy Game Connect Academy **2<sup>nd</sup>**

### **Electronics and Electromagnetics**

Declan Henckels and Guhan Senthil Smart Walker Pacific Trails MS **1<sup>st</sup>**

Oliver Cottrell Automatic Hockey Puck Passer Machine La Jolla Country Day School **2<sup>nd</sup>**

### **Environmental Engineering #1**

Steven Chen Synthesizing Living Materials for Coral Reef Regeneration Pacific Trails MS **Honorable Mention**

### **Mammalian Biology**

Omar Abdulaziz and Anabia Ehsan Early Detection of Bradykinesia and Tremors Thurgood Marshall MS **1<sup>st</sup>**

### **Material Science**

Samuel Sternson Passive Cooling with Infrared Reflective Crystals Rhoades School **1<sup>st</sup>**

Alexander Allport Can Coffee Grounds Save Homes? The Children's School **Honorable Mention**

### **Mathematical Sciences**

Yaalini Kathiravan and Arunachalam Vinayagam Early Detection of Scalp and Facial Diseases Pacific Trails MS **Honorable Mention**

### **Microbiology**

Amaya Fernandez Bacterial on City Buses Chula Vista MS **3<sup>rd</sup>**

### **Physics and Astronomy**

Alfonso Sanchez Gathering Static Electricity Extraordinary Private Home School **3<sup>rd</sup>**

### **Plant Biology**

Ritam Sen Can Elemental Sulfur Influence in Lunar Regolith? Francis Parker **1<sup>st</sup>**

### **Product Science**

Olivia Spenia How Effective are Child Proof Containers? Nazareth School **Honorable Mention**

### **Zoology**

Embry Blais and Ariana Samady Documenting Native Fauna in Aquatic Suburban Setting Rhoades School **2<sup>nd</sup>**

Sydney O'Donnell Can Domestic Chickens Be Trained to Respond to Color? Rhoades School **Honorable Mention**

## **Senior Division CA State Awards**

### **Applied Mechanics and Structure**

Angelina Kim Autonomous Unmanned Aerial Vehicle for Ocean Hazard Bishop's School **1<sup>st</sup>**

Demetrios Desios and Vassilios Dresios Flexible Resin for Micro-Photolithography Carlsbad HS **3<sup>rd</sup>**

### **Behavioral and Social Sciences**

Steve Zhang Eyes on the Page: Study of Visual Attention During Storytime Francis Parker **Honorable Mention**

### **Biochemistry and Molecular Biology**

Zinia Khattar Integrated Stress Response ..Mitochondrial Dysfunction Del Norte HS **2<sup>nd</sup>**

Marianthe Dresios Integrated Chemistry and Cell-Free Synthetic Biology for Advanced Diagnostics Carlsbad HS **Honorable Mention**

Shreeya Patel Activation of Tumor Suppressor p53 in Senescence Del Norte HS **Honorable Mention**

### **Computational Systems and Analysis #1**

Riya Khushu Using AI to Automatically Detect Gunshots and Their Location Francis Parker **3<sup>rd</sup>**

William Gao Transformer-Based Generative Models for Carbon Capture Canyon Crest Academy **Honorable Mention**

### **Computational Systems and Analysis #2**

Shounak Ray Chaudhuri Using Computer Vision for Object Detection on Roads in Developing Countries **Honorable Mention**

### **Computational Systems: Medical #1**

Sydney Zhang Design and Usability of Point of Care for Dry Eye Screening Westview HS 2<sup>nd</sup>

Kayley Xu Comprehensive Approach to Addressing Respiratory Disease Bishop School. **Honorable Mention**

### **Environmental Engineering #2**

Krish Pai Reducing Pollution through Discovery of Novel Plastic Biodegrading Microorganisms Enzyme Engineering 1<sup>st</sup> **and also picked to go to ISEF**

Sarah Gao From Trash to Treasure: Hydrogels from Food Waste Canyon Crest Academy 3<sup>rd</sup>

Emily Zhang Plant Seed Mucilage: Textile Dye Removal **Honorable Mention**

### **Mammalian Biology**

Anirudh Kalyanaraman Fluid Shear Stress human colon cancer cells: Nitric Oxide Mt. Carmel HS 3<sup>rd</sup>

### **Mathematical Sciences**

Arnav Dagar ARFSNet-Deep Learning for Amblyopia Risk Factor Screening Canyon Crest Academy 2<sup>nd</sup>

### **Microbiology**

David He Utilizing Genetically Engineered Ocean Bacteria to Degrade Microplastics Westview HS 2<sup>nd</sup>

### **Physics and Astronomy**

Trevor Chen Developing Gratings to Create the Shortest Infrared Laser Pulse Westview HS 4<sup>th</sup>

Nandana Madhukara Analyzing the Effects of Higher-Order Terms in the Nonlinear Dynamics of Galactic Systems Canyon Crest Academy **Honorable Mention**

Vikramaditya Chandra Astronomical Image Deconvolution Using Novel Deep /CNN Architecture San Marcos HS **Honorable Mention**

### **Plant Biology**

Max Lau Use of Limited Reflectance Spectroscopy as Measure of Plant Stress Soil Salinity Westview HS **Honorable Mention**

### **Zoology**

Leanne Fan Photobiomodulation on In-Vivo and In-Citro Wound Models under Simulated Microgravity Westview HS 4<sup>th</sup>

**Broadcom Coding With Commitment**

Abdulaziz	Omar	San Diego	8	Thurgood Marshall Middle School
Ehsan	Anabia	San Diego	7	Thurgood Marshall Middle School

**Air and Waste Management Assoc. West Coast**

Arulsevan	Adhiban	San Diego	8	Thurgood Marshall Middle School
Vinayagam	Vishwanathan	San Diego	8	Pacific Trails Middle School

**California Shore and Beach Preservation Assoc.**

Kim	Angelina	Del Mar	11	The Bishop's School
-----	----------	---------	----	---------------------