

Greater East Alabama Regional Science and Engineering Fair- General Award Script - Senior Divisions (grades 9-12)

Senior Divisions (grades 9-12)

0100 Animal and Plant Sciences

3rd Place

Minlu Wang-He - GEARSEF direct high school

SR-0100-0009 - Identifying Biological Control Agents for Bacterial Spot Disease

2nd Place

Annie Bao - Auburn High School

SR-0100-0002 - Evaluation of Premature Platelet Aging or Platelet Desialylation in Dogs with Immune Thrombocytopenia

1st Place

Claire Huang - Auburn Jr. High School

SR-0100-0098 - Why Is the Male-Female Ratio in Mealworms Not 50:50 — Does Diet Play a Role?

0200 Behavioral & Social Sciences

3rd Place

Kennedy Bonds - Wetumpka High School

SR-0200-0131 - Do servers make more money when they wear certain hairstyles?

2nd Place

Parker Thompson - Wetumpka High School

SR-0200-0005 - Perceived Access vs. Actual Access: Mental Health Resource Utilization Among College Students

1st Place

Aesha Mulani - Northridge High School

SR-0200-0094 - Effect of Saffron and Curcumin on Age-Based Behavioral Patterns in *Drosophila melanogaster*

0300 Cell, Molecular, Microbiology & Biochemistry

3rd Place

Jatin Banna, Yujin Bong - LAMP

SR-0300-0029-T - Investigating the Novel Oncogenic Potential of Colibactin-Producing *Escherichia coli* in Breast Tumorigenesis

2nd Place

David Bong, Jun Kim - LAMP

SR-0300-0027-T - Growth Environment Shapes Antifungal Drug Responses in *Candida auris*

1st Place

Amelie Hixson - GEARSEF direct high school

SR-0300-0010 - PRMT5 Inhibition Induces Metabolic Reprogramming and Disrupts Blood-Brain Barrier Gene Expression in Human Brain Endothelial Cells

0400 Chemistry

3rd Place

Junehyuk Lee - Auburn Jr. High School

SR-0400-0001 - Oxygen Supplier Leak Detection System

2nd Place

Gabrielle Saffold - Carver 9th Grade Academy

SR-0400-0018 - Enhancing Composite Resin Strength for Durable Tooth Restorations

1st Place

Kaylee Oh - Auburn High School

SR-0400-0003 - The Influence of KOH-Activated Lignin-Derived Carbon on Methyl Orange

0500 Engineering

3rd Place

Christopher Thomas - Auburn High School

SR-0500-0022 - Laser Power: Beam Based Power Application in Space

2nd Place

Ezra Hall, Armaan Sagar - Auburn High School
SR-0500-0116-T - Responsive Aero

1st Place

Jessica Shu - Auburn High School
SR-0500-0004 - ThermalPvpils: A Passive Power-Saving Artificial-Intelligence Driven Shell that Makes your Building Cooler in Summer and Warmer in Winter

0600 Energy

3rd Place

Gabriel Betke - Central High School, Phenix City
SR-0600-0107 - Thermal Expansion in 1/4 In Round Bars

2nd Place

Minseung Lee - Auburn Jr. High School
SR-0600-0021 - The Effect of Sodium Sulfate Concentration on the Rate of Hydrogen Gas Production During Water Electrolysis

1st Place

Andrew Zhang - Auburn High School
SR-0600-0017 - Facile Microwave Nanomanufacturing of Novel Graphene Based Catalyst for High Performance, Low-Cost Hydrogen Evolution Reaction

0700 Earth and Environmental Sciences & Environmental Engineering

3rd Place

McKenzie Martinez - Lafayette High School 9-12th
SR-0700-0054 - Ocean Bioluminescence, Investigating when and How Dinoflagellates Glow

2nd Place

Jaxon Hutto, Jeremiah Ray - Wetumpka High School
SR-0700-0014-T - Simulating Narcotic Introduction in a Micro-Ecosystem: Effects of Diphenhydramine on Crickets and Worms

1st Place

Maddie Lee - Northridge High School
SR-0700-0053 - Terrestrial Impacts of Agriculture Runoff on Soil Rhizosphere Acidity and Microbial Diversity

0800 Biomedical Engineering & Biomedical and Health Sciences

3rd Place

Lauren Williams - LAMP
SR-0800-0026 - Synergistic Effects of Cannabidiol on Growth Suppression and Biofilm Disruption in Multidrug-Resistant *Candida auris*

2nd Place

Alexis Saffold - Dothan High School
SR-0800-0020 - Using Arduino Pressure Sensors And SJ Accelerometer To Determine The Least Painful Backpack Strap Length

1st Place

Mira Menon - LAMP
SR-0800-0023 - Identifying Seizure Onset Zones Using Time-Frequency and Entropy-Based EEG Biomarkers

0900 Physics, Astronomy & Mathematics

1st Place

Mason Hilburgh - Wetumpka High School
SR-0900-0063 - Blast Off The Torpedo (Bats)!!!

1100 Robotic Systems & Communication Technology

3rd Place

Dylan Chavez, Liam Felio - Stanhope Elmore High School

SR-1100-0133-T - How can machine learning be used to identify different types of water contamination from photos of water-testing strips

2nd Place

Michael Birkhead, Gabriel Stutheit - Pike Road High School

SR-1100-0141-T - Animal Go!

1st Place

Sungbin Park - Auburn High School

SR-1100-0016 - The Effect of Prompt Engineering on Accuracy and Consistency in Financial News Sentiment Classification Using Large Language Models

1200 Computational and Bioinformatics Sciences

1st Place

Arnav Aggarwal - LAMP

SR-1200-0024 - AI/ML-driven systems-level analysis identifies CEACAM1 as a neuroinflammatory metabolic signaling vulnerability in Parkinson's disease