

46th Georgia Junior Science & Humanities Symposium

February 28 - March 2, 2021



ANNOUNCEMENT OF AWARDS

Congratulations to all students selected to participate in the 2021 Georgia Junior Science & Humanities Symposium. The Georgia JSHS provides an opportunity for high school students from across the state to present the results of their original science, engineering, technology, or mathematics research before a panel of judges to compete for military-sponsored scholarships and other awards. The top five presenters are selected to advance to the National JSHS.

The Departments of the Army, Navy and Air Force jointly sponsor undergraduate tuition scholarships and cash awards for student finalists in the Regional and National Symposia. Additionally, one teacher from each region is recognized for their exceptional contributions to promoting student research. The following undergraduate tuition scholarship and cash awards are supported by the Tri-Service sponsors. All scholarships are payable upon matriculation to college and upon meeting the JSHS scholarship conditions.

ORAL PRESENTATION COMPETITION AWARDS

1ST PLACE

\$2,000 scholarship, invitation to participate in the oral presentation competition at the National JSHS, and featured in the Fernbank Science Center's At-Home Planetarium Show

SAMAD HAKANI

Gwinnett School of Mathematics, Science & Technology
Observation of Kibble-Zurek Scaling Across a Classical First-Order Phase Transition

2ND PLACE

\$1,500 scholarship, invitation to participate in the oral presentation competition at the National JSHS, and featured in the Fernbank Science Center's At-Home Planetarium Show

JOHN PREWITT

Gwinnett School of Mathematics, Science & Technology
Kinect Analysis of Obstacles and Feedback for the Visually-Impaired

3RD PLACE

\$1,000 scholarship, invitation to participate in the poster presentation competition at the National JSHS, and featured in the Fernbank Science Center's At-Home Planetarium Show

AMEYA JADHAV

Denmark High School
My Skin: A Deep Convolutional Neural Model for Skin Cancer Identification with Coarse-to-Fine Contextual Memory (CFCM)

4TH PLACE

Invitation to participate in the poster competition at the National JSHS

AADITYA SAHA

Chamblee Charter High School
Designing Impact Resistant STF Composites for Various Weather Conditions

5TH PLACE

Invitation to participate in the poster competition at the National JSHS

SRIHITHA DASARI

Denmark High School
Improving Multiclass Classification of Alzheimer's Disease using Cortical Volumetry and Inter-Cortical Ratios as Combined Markers

6TH PLACE

Alternate to participate in the National JSHS, in the event 1st through 5th place cannot attend.

KRISH MATHUR

Lakeside High School Evans
Effects of Embryological Exposure to Cortisol on Gene Expression during Tailfin Regeneration in Adult Zebrafish

REGIONAL TEACHER AWARD

Dr. Peluchi Flores
Atlanta International School

POSTER COMPETITION AWARDS

BIOMEDICAL SCIENCE

1ST PLACE

DEEKSHA KHANNA

Chamblee Charter High School

Identification of a Viable Combination of Transcription Factors to Facilitate Cell Reprogramming to Generate Mature Hepatocytes

CHEMISTRY

1ST PLACE

AADITYA SAHA

Chamblee Charter High School

Designing Impact Resistant STF Composites for Various Weather Conditions

ENGINEERING & TECHNOLOGY

1ST PLACE

AADHAV PRABU

Chattahoochee High School

A Machine Learning Approach to Diagnose Cardiopulmonary Diseases utilizing a Digital Auscultation Device and Audio Biomarkers

ENVIRONMENTAL SCIENCE

1ST PLACE

ROMIL MEHTA

Wheeler High School

Green-Bricks: A Sustainable Solution to COVID-19 Waste

2ND PLACE

AMY PHAM

Elite Scholars Academy Jonesboro

Microplastics Everywhere: Quantifying the Difference in the Number of Microplastics in Point and Nonpoint Sources of Pollution in Metro-Atlanta

LIFE SCIENCES

1ST PLACE

KRISH MATHUR

Lakeside High School Evans

Effects of Embryological Exposure to Cortisol on Gene Expression during Tailfin Regeneration in Adult Zebrafish

MATHEMATICS & COMPUTER SCIENCE

1ST PLACE

AMEYA JADHAV

Denmark High School

My Skin: A Deep Convolutional Neural Model for Skin Cancer Identification with Coarse-to-Fine Contextual Memory (CFCM)

MEDICINE & HEALTH / BEHAVIORAL SCIENCE

1ST PLACE

VELDA WANG

Parkview High School

Association Rule Mining to Determine Pharmaceutical and Supplement Usage Associated with Alzheimer's Disease

2ND PLACE

KRISH WADHWANI

Denmark High School

Using Neuromarkers to Develop Molecular Biosynthetic Treatment Network

3RD PLACE

ASHIKA SRIVASTAVA

Chamblee Charter High School

A Tool to Alleviate Perceived Stress in Adolescents

PHYSICAL SCIENCES

1ST PLACE

VINOD RUPPA-KASANI

Chattahoochee High School

Rapid and Low-Cost Method to Determine the Efficacy of Facemasks in Preventing the Spread of COVID-19

ORAL PRESENTATION COMPETITION FINALISTS

Listed Alphabetically

ALEXANDRA CAREY

The Walker School

The Effects of Preoperative Meditation on Propofol Dosage for Wisdom Tooth Extraction Surgery

SRIHITHA DASARI

Denmark High School

Improving Multiclass Classification of Alzheimer's Disease using Cortical Volumetry and Inter-Cortical Ratios as Combined Markers

SAMAD HAKANI

**Gwinnett School of Mathematics,
Science & Technology**

Observation of Kibble-Zurek Scaling Across a Classical First-Order Phase Transition

AMEYA JADHAV

Denmark High School

My Skin: A Deep Convolutional Neural Model for Skin Cancer Identification with Coarse-to-Fine Contextual Memory (CFCM)

KRISH MATHUR

Lakeside High School Evans

Effects of Embryological Exposure to Cortisol on Gene Expression during Tailfin Regeneration in Adult Zebrafish

ROMIL MEHTA

Wheeler High School

Green-Bricks: A Sustainable Solution to COVID-19 Waste

NATHANIEL MORGAN

**Gwinnett School of Mathematics,
Science & Technology**

Automated UVC Sanitization of Money

JOHN PREWITT

**Gwinnett School of Mathematics,
Science & Technology**

Kinect Analysis of Obstacles and Feedback for the Visually-Impaired

AADITYA SAHA

Chamblee Charter High School

Designing Impact Resistant STF Composites for Various Weather Conditions

KRISH WADHWANI

Denmark High School

Using Neuromarkers to Develop Molecular Biosynthetic Treatment Network