
Lucy Funk & Eva Randolph.....Biology

Christ Presbyterian Academy, Nashville
"The Effects of Various Concentrations of Liquid Nicotine on the Sinusoidal Movement of *C. elegans*"

Elise Russ.....Chemistry

Hillsboro High School, Nashville
"Concrete Durability"

Gideon Torode.....Physics

Hillsboro High School, Nashville
"Quantifying Perceivable Effects of Alterations in Trumpet Design"

Madalyn Dye.....Chemical Engineering

Pope John Paul II High School, Hendersonville
"Development of an Inexpensive Device to Measure Lactic Acid Concentration"

Vanessa Ajualip, Anna Chen & Sana Fatah.....Biology

School for Science and Math at Vanderbilt, Nashville
"Effects of Antibiotic Treatment on *Nasonia vitripennis* Sex Ratios and Birth Rates"

Helana Khalif, Parwan Ahmed Machingal, Milen Negasi & Kartik Rachakonda....Biology

School for Science and Math at Vanderbilt, Nashville
"Drug-induced Synergism and Acute Sterotypy in Planaria (*Dugesia tigrina*)"

Rionna Anderson & Sofia Tennent.....Biology

School for Science and Math at Vanderbilt, Nashville
"The Effects of Population Density and Feeding Frequency on Growth and Resource Allocation in the Purple Sea Urchin, *Strongylocentrotus purpuratus*"

Sadaf Shahebrahimi.....Environmental Science

Hillsboro High School, Nashville
"Identifying Microplastics Prevalence in High-End Bottled Water Using Nile Red Dye"

Grace Maddox.....Environmental Science

Cleveland High School, Cleveland
"Assessing Stream Health as it Pertains to Salamanders at Four Sites in Polk County, TN"

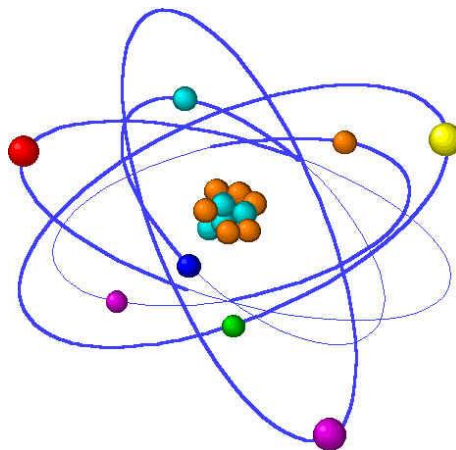
Lindsay Damon, Trent Jones, Garrett Scott, & Xiyang Zhu.....Computer Engineering

School for Science Math at Vanderbilt, Nashville
"Design and Prototype of an Educational Augmented Reality Scavenger Hunt for the Nashville Zoo"

Lydia Guertin.....Physics

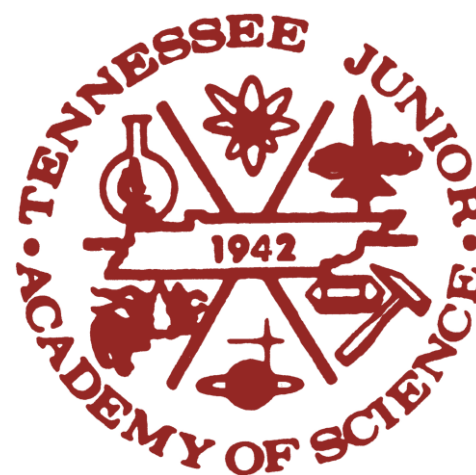
Fred Page High School, Franklin
"Dielectric Elastomer Actuators: Impact of Foam Tape Density on Flexibility and Feasibility of Future Prosthetics"

**117
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Tennessee**



TENNESSEE JUNIOR ACADEMY OF SCIENCE

ANNUAL MEETING



Via Zoom!

Across Tennessee; from
Memphis to Kingsport!

Friday, April 17th 2020

Sponsored by the
Tennessee Academy of Science

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READING COMMITTEE

- Dr. Preston MacDougall**....Middle Tennessee State University

NON-LOCAL ARRANGEMENTS

- Zoom Video Communications**.....San José, California

JUDGES

- Dr. M. Gore Ervin** Middle Tennessee State University
- Dr. Dorothy Phillips** American Chemical Soc, Director-at-Large
- Dr. Paul Koehler** Los Alamos National Laboratory

PROGRAM

Friday, April 17th, 2020

- 9:00 - 9:30 am..... Logging-on to Zoom Meeting
- 9:30 - 9:40 am.....Welcome
- 9:40 - 12 noonPaper Presentations
- 12:00 noon - 1:00 pm.....Lunch
- 1:00 pm - 4:00 pm.....Paper Presentations
- 4:00 pm.....Adjournment

TENNESSEE JUNIOR ACADEMY OF SCIENCE

Papers to be Presented

Student's Name, Research Classification,
School, City, and Title of Paper

Aman Pokal, Elijah Tidwell, Jacob Phillips & Maxwell Styler.....Biology

Fred J. Page High School, Franklin
"Indole 3 Acetic Acid, Naphthalene, and Abscisic Acid
Effects on the Growth of the Cyanobacteria (*Anabaena*)"

Sidney Hinson and Scarritt Purdy.....Biology

Christ Presbyterian Academy, Nashville
"The Effects of GMO Foods and Organic Foods on the
Mass, pH, and Reaction Time of *Lumbricus terrestris*"

Andrew Spencer, Genevieve Jean-Pierre & Julian Killius.....Biochemistry

School for Science and Math at Vanderbilt, Nashville
"Cellobiase Production by Fruiting *Pleurotus* Fungi
Cultivated in Varying Substrate Compositions"

Jennie Bulawa.....Physics

Greeneville High School, Greeneville
"Construction and Analysis of a Directional Antenna"

Henry Kunath.....Biology

Montgomery Bell Academy, Nashville
"Development of a "Parkinson's-like" Disease in
C. elegans Using Dextrose and a 6-OHDA Neurotoxin"

Melanie Lick.....Engineering

Sullivan South High School, Kingsport
"Designing and Building a Solar-powered
Mechanical Prosthetic Arm"

Kathryn Isabella Parks.....Botany

Chattanooga School for the Arts and Sciences
"The Effect of Available Phosphate in a Hydroponic
System on the Production of L-Ascorbic Acid in
Brassica oleracea var. Acephala"

Talya Bulut.....Science Education

Hillsboro High School, Nashville
"Teaching Students through STEAM Animation"

Brinly Gray.....Environmental Management

Columbia Academy, Columbia
"How to Make Biodiesel more Widespread and Accessible"

Daniel Chizikov.....Nutritional Physiology

White Station High School, Memphis
"The Effect of Different Dietary Fats on the Development
of Obesity-related Health Problems and Lipid Metabolism
Gene Expression in *Drosophila*"

Emma Fuller.....Science Education

Hillsboro High School, Nashville
"Effects of Interactive Learning vs. Traditional
Learning on High School Physics Students"

Clayton Winder.....Computer Science

Hillsboro High School, Nashville
"Creating a Markov-chain based Dungeons and
Dragons Module Generator"

*Lunch Break - while
Socially Distanced!*
