
Elizabeth Keylon, Sara Lewis & Matthew Pugh
.....**Chemistry**

Greenfield High School, Greenfield
"Analyzing Iron, Lead, and Cadmium Concentrations
in Weakley County Soils"

Ella Halbert, Jaressa Hawkins, Nancy Hoang & Cecily Shi.....**Geology**

School for Science and Math at Vanderbilt, Nashville
"Analysis of Rainfall, Speleothem Drip Rates, and Karst
System Trace Elements at Blue Spring Cave"

Roshan Soni.....**Environmental Science**

Cleveland High School, Cleveland
"Assessing the Presence of Microplastics in Mouse
Creek, Cleveland, Tennessee"

Lauren Proctor.....**Environmental Science**

Cleveland High School, Cleveland
"Constructed Wetlands: A Comparison of Inflowing and
Outflowing Water Sources to Determine Effectiveness"

Jackson Hasty.....**Chemistry**

Hillsboro High School, Nashville
"Teaching Renewable Energy in ISR through Biodiesel
Production"

Sarah Cory.....**Nanoscience**

Hillsboro High School, Nashville
"Improving Glass Surfaces' Hydrophobic Abilities
with Carbon-based Nano Materials"

Julia An & Jack Allen.....**Physics**

School for Science and Math at Vanderbilt, Nashville
"Determining Variation Periodicity of Pulsar
Scintillation Utilizing Dynamic Spectra"

Cliff Syner.....**Engineering**

Clarksville Christian School, Clarksville
"Arduino Eye"

Thomas Link.....**Biology**

Hillsboro High School, Nashville
"Developing a Mobile Application for the
Identification of Invasive Plants"

Tony Jeong.....**Biology**

Davidson Aacdemy, Nashville
"Effects of Flavonoids from Onion Extract on
Planaria (*Dugesia tigrina*) Regeneration"

**Jacob Reed, Celeste Davis, Natalie Shull,
Hannah Brack, Raegan Van Wirt, Caroline
Tracy, Britney Xiong, Cole Bozeman & Tyler
Smith**.....**Biology**

Fred J. Page High School, Franklin
Fecal Coliform and *Escherichia coli* Levels in
Water and Sand of a Beach on Percy Priest
Reservoir"

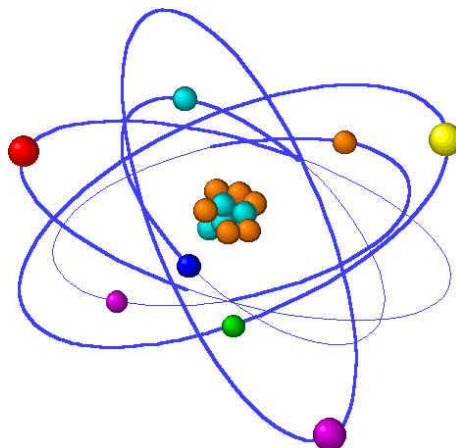
Obang Lwangmianga.....**Mathematics Education**

Hillsboro High School, Nashville
"Analyzing High School Senior's Familiarity and
Notion of Statistics by Surveying"

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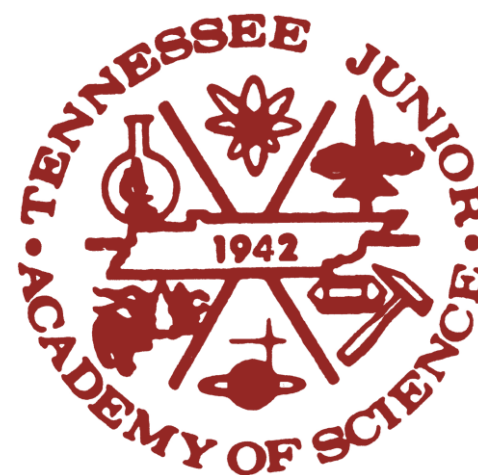
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Tennessee



TENNESSEE JUNIOR ACADEMY OF SCIENCE

ANNUAL MEETING



BELMONT UNIVERSITY

Nashville, Tennessee

FRIDAY, APRIL 20TH 2018

Sponsored by the
Tennessee Academy of Science

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- Dr. Joel Harp**Vanderbilt University
- Dr. Norma K. Dunlap**.....Middle Tennessee State University

PROGRAM
Friday, April 20th, 2018

- 9:00 - 9:30 am.....Registration
- 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
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Papers to be Presented

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

Michael Montoya & Ryne Montoya.....Biology

Siegel High School, Murfreesboro
"The Effects of Disturbance on Invertebrate Diversity
in Cedar Glade Habitats in the Fall and Spring Seasons"

Shaohannah Chapman.....Biology

Christ Presbyterian Academy, Nashville
"The Effects of Natural and Artificial Sweeteners on
the Mass and Reaction Time of *Lumbricus terrestris*"

Samuel Lee, Maria Osipovich & Briza Vazquez...

.....Biology
School for Science and Math at Vanderbilt, Nashville
"RIG-I Activation in Neuroblastoma Cells with Retinoic
Acid and Viral-Mimicking Derivatives"

Ana Delgado, Ruby Kinkel & Carlos Salas.....
.....Computer Science

School for Science and Math at Vanderbilt, Nashville
"Developing a Cellphone Application for Identification,
of Svalbard Zooplankton"

**Leila Capozzi, Aidan Cloonan, Walden Ferrell &..
Maya Johnson**.....Computer Science

School for Science and Math at Vanderbilt, Nashville
"Analyzing Ball Movement in Basketball: Using Machine
Learning to Predict Offensive Performance"

Matthew Collins.....Microbiology

Sullivan South High School, Kingsport
"The Presence of Bacteria on Packaged Meat"

Ben Smith & Grant Smith.....Biology

The McCallie School, Chattanooga
"Total Sponge and Coral Proteins Show Promise for
Slowing N2a Cancer Cell Division"

Brian Chong & Jamie Dethero.....Biology

McCallie School, Chattanooga
"Optimizing Husbandry and Spawning Conditions and
Growing Primary Cell Cultures from the Apical Organs
and Tentacle Bulbs of the Ctenophore *Mnemiopsis leidyi*"

Rebecca Firth.....Astronomy

Sullivan South High School, Kingsport
"The Age and Distance of the Open Cluster NGC 559"

Hanson ZhangComputer Science

The McCallie School, Chattanooga
"Predicting Risk of Stroke using Artificial Neural Network
and Logistic Regression in Big Health Data"

Allen Liu.(unavoidably absent)....Computer Science

The McCallie School, Chattanooga
"Neural Networks without Multiplications"

Max Yudkin.....Chemistry

Hillsboro High School, Nashville
"Detection of Ethoxyquin in Rawhide Dog Chews"

Lunch Break!
