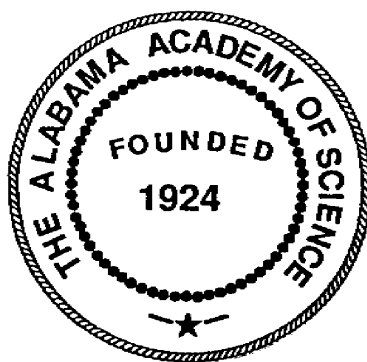


NINETY-THIRD ANNUAL MEETING
of the
ALABAMA ACADEMY OF SCIENCE, INC.



Meeting Jointly With

ALABAMA JUNIOR ACADEMY OF SCIENCE
GORGAS SCHOLARSHIP COMPETITION

February 17-19, 2016
Science and Engineering Technology Building
The University of North Alabama
Florence, AL



www.alabamaacademyofscience.org

Tips for a safe stay:

- *When walking, stick to the main thoroughfares and well-lit areas.
- *If walking, don't wear fancy jewelry in plain sight.
- *Don't wear your meeting badge outside the motels.
- *Be cognizant and alert to surroundings. Look alert.
- *When walking after dark, don't hug the buildings or cars; walk in the open or near the curb
- *Carry your purse close to your body.
- *Don't leave valuables in your room. Get a motel safe deposit box.
- *Travel in groups. Don't be a loner, particularly in the evening.
- *Abide by common sense: If something looks suspicious, report it and/or avoid it.

****On-campus police, fire, medical service:**

- All Emergencies (Fire, Ambulance, Police): 911
- UNA POLICE:(256) 765-HELP (4357)
- Eliza Coffee Memorial Hospital:(256) **768-9400, (256) 768-9191**
- Crisis Center 24 hour Hotline:(256) 767-1100**
- Riverbend Center for Mental Health: (256)764-3431
- Sexual Assault Services, University Police:(256) 765-HELP (4357), (256) 765-0025

***Off-campus emergencies (Police, Fire, Medical): 911**

- Florence Police Department: (256) 760-6500 (Ext. 5)
-

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94 th Annual Meeting (2017).....	Inside Back Cover



Dear AAS, AJAS, and Gorgas Participants,

I would like to personally welcome each of you to the University of North Alabama for the 93rd Annual Meeting of the Alabama Academy of Science. We are thrilled to host the state's most influential scientists, researchers, educators, and students. The Academy's emphasis on scientific matters and education is of great value to our institution as we develop innovative academic programs and research experiences to prepare the next generation for the growing workforce.

This is evident in many ways, from how our exceptional faculty mentor students to the many international study opportunities; and even to the opening of the new Science and Technology Building this academic year. It features cutting edge laboratories including the brand new nuclear magnetic resonance spectrometer. The overall design of the facility includes collaborative learning and research space for students and faculty in the Biology, Chemistry and Industrial Hygiene, Engineering Technology, and Physics and Earth Science departments. I encourage you to take a moment to tour this state of the art facility while you are on our beautiful campus.

Thank you for promoting the significance of science in our great state. We at the University of North Alabama support your efforts and are glad you chose to journey to Florence, Alabama to meet. May your time here be effective and productive as the Academy prepares to move forward in 2016.

Again welcome; I hope that you enjoy every moment on our campus and explore the rich history and warmth that inspires us to identify as part of the Lion Pride.

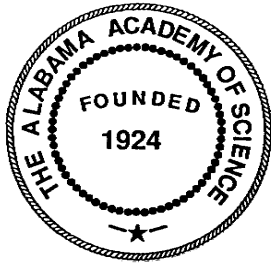
Sincerely,

A handwritten signature in black ink, appearing to read "Carmen Burkhalter".

Dr. Carmen Burkhalter, Dean
College of Arts and Sciences
University of North Alabama

COLLEGE of ARTS *and* SCIENCES
UNA Box 5021, Florence, AL 35632-0001
P: 256.765.4288 | F: 256.765.4778 | www.una.edu

Equal Opportunity / Equal Access Institution



ALABAMA ACADEMY OF SCIENCE, INC

Colleagues,

Welcome to the 93rd meeting of the Alabama Academy of Science! It is a great privilege to be a part of a tradition of excellence in science that dates back to the early 1900s in Alabama.

In 1924, forty charter members gathered in Mobile, AL, to organize the Alabama Academy of Science. Three years later, AAS became affiliated with the American Association for the Advancement of Science and has maintained that affiliation for 88 years. The Academy now numbers almost 400 members, representing all disciplines of science from across the state. More importantly, AAS has become an important force moving science forward in Alabama.

The role of AAS in fostering the development of science over the past ninety years has been manifold. In 1930, the Academy first began publishing the Journal of the Alabama Academy of Science, and in 1933 the Alabama Junior Academy of Science was established. In 1946, AAS started a program offering scholarships to deserving students. In 1954, the Academy began the sponsorship of regional science fairs. A visiting scientist program for high schools was developed in 1985, followed by a Science Teachers Fellowship program in 1989. In 1990, AAS began the Science Olympiad program in the state.

Membership in the Alabama Academy of Science is an important step to unify the efforts of scientists throughout the state to advance science in its many disciplines. But it is also especially important to unify efforts to improve education in STEM fields, which continue to lead the way in improving our knowledge of the universe and opening new horizons for humanity.

Finally, it is also a privilege to extend a welcome from our gracious hosts here at the University of North Alabama who have provided this excellent venue for our annual meeting. I am sure it is going to be another great meeting and example of the excellence in science homegrown right here in Alabama.

Sincerely,

Brian Toone

LOCAL ARRANGEMENTS COMMITTEE

The Academy expresses its appreciation to The University of North Alabama and the Local Arrangements Committee for their efforts in planning and hosting this 93rd Annual Meeting.

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GENERAL INFORMATION

- Registration badges will be required for admission to paper/poster scientific sessions, the Thursday evening sci-mix, and the banquet.
- Applications for membership and payments of annual dues will be accepted at registration. Payment must be separate from registration payment. At least one of the authors of a presented paper or poster must be a member of the Academy.
- Tickets for the Joint AJAS/AAS banquet may be purchased at the registration desk until 9:30 Thursday morning.
- Computers will be provided where needed for presentations (PCs for PowerPoint). If presenters bring their own, they are responsible for their computer.
- Parking is in the designated space at the corner of Circular Road and Stewart Avenue behind Flowers Hall on the University of North Alabama campus.
- A map of the UNA campus can be found on page 64 of the program booklet. Also, an interactive map of the UNA campus can be found at <https://www.una.edu/map/index.html>.

POSTERS

Posters are to be available for viewing in the **Science and Engineering Technology (SET) Building** on Thursday from 9:00 AM until 4:30 PM. Each poster is allotted 3' x 4' of display space. Prior to the joint banquet, **Gorgas Scholars and Junior Academy posters** will be available for viewing at the **Sci-Mix** from 6:00 – 7:00 PM on Thursday in the **Loft on the second floor of the Guillot University Center (GUC)**. Authors for the section posters should be present for discussions with viewers and competition judges as shown below

Poster Viewing

Thursday:

<i>Biological Sciences, I (SET Building, 1st Floor)</i>	10:30 AM – 1:00 PM
<i>Chemistry, II (SET Building, 4th Floor)</i>	10:00 AM – Noon
<i>Physics and Mathematics III (SET Building, 2nd Floor)</i>	10:45 AM – 12:30 PM
<i>Engineering & Computer Science, IV (SET Building, 4th Floor)</i>	9:45 – 11:45 AM
<i>Social Sciences, V (SET Building, 3rd Floor)</i>	11:00 AM – 2:00 PM
<i>STEM Education, VII (SET Building, 2nd Floor)</i>	3:20 – 3:40 & 4:40 – 5:30 PM
<i>Environmental and Earth Sci., VIII (SET Building, 2nd Floor)</i>	9:00 – 10:00 AM
<i>Health Sciences, IX (SET Building, 3rd Floor)</i>	11:30 AM – 1:00 PM

Friday:

<i>Anthropology, VI (SET Building, 2nd Floor)</i>	1:00 – 2:00 PM
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NOTE: Posters may be set up in the SET Building beginning at 8:00 AM. Locate posters by cards on poster boards indicating Section and poster # in program booklet (eg. V-10).

Thursday Evening

<i>Gorgas Scholars and Junior Academy (GUC, Loft)</i>	6:00 – 7:00 PM
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**Program of the Alabama Academy of Science
February 17-19, 2016
Science and Engineering Technology (SET) Building**

Wednesday, February 17, 2016

5:00 – 7:00 PM	Registration.....	SET 2 nd Floor Foyer
6:00 – 7:00 PM	Executive Committee Dinner	Guillot University Center Loft
7:00 – 9:00 PM	Executive Committee Meeting	Guillot University Center Loft
9:00 PM	Planetarium Show	UNA Planetarium

Thursday, February 18, 2016

7:00 AM – 4 PM	Registration.....	2 nd Floor Foyer
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8:00 AM – Noon: Academy of Science Program Paper Sessions (All rooms are in SET Building)

8:00 AM	Biological Sciences I (Section I).....	SET 136
8:00 AM	Health Sciences (Section IX)	SET 311
8:20 AM	Physics and Mathematics (Section III)	SET 219
9:00 AM	Chemistry (Section II)	SET 447
9:00 AM	Engineering and Computer Science (Section IV).....	SET 439
9:00 AM	Social Sciences I (Section V)	SET 152
10:00 AM	Environmental and Earth Science (Section VIII)	SET 221

10:00 AM	Coffee and Refreshments	Foyer Areas of Floors 1-4
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AAS Posters

8:00 – 10:30 AM	Poster Set-Up (All Sections)	SET Building
9:00 AM – 5:30 PM	Poster Viewing (All Sections).....	SET Building
(All posters, except for STEM Education must be removed by 4:30 PM)		

Authors present:

9:00 – 10:00 AM.....	Environmental and Earth Science (Section VIII), SET 2 nd floor
9:45 – 11:45 AM.....	Engineering and Computer Science (Section IV), SET 4 th floor
10:00 AM – Noon.....	Chemistry (Section II), SET 4 th floor
10:30 AM – 1:00 PM.....	Biological Sciences (Section I), SET 1 st floor
10:45 AM – 12:30 PM.....	Physics and Mathematics (Section III), SET 2 nd floor
11:00 AM – 2:00 PM.....	Social Sciences (Section V), SET 3 rd floor
11:30 AM – 1:00 PM.....	Health Sciences (Section IX), SET 3 rd floor
3:20 – 3:40 & 4:40 – 5:30 PM.....	STEM Education (Section VII), SET 2 nd floor

12:00 Noon – 1:00 PM	Lunch; Box Lunches	Lion’s Den, Second Floor SET Building
12:00 Noon:	Trustees Luncheon	SET 287
12:15 – 12:45 PM	<i>Special Lunch Presentation of The American Chestnut Foundation</i>	SET 133
12:50 PM	Group Photograph,	Outside the front of SET Building
1:00 – 2:00 PM	<i>Special Programs and Panel Discussion with the NASA STEM Outreach Group</i>	SET 133
1:00 - 5:00 PM: Academy of Science Program Sessions (All rooms are in SET Building)		
1:00 PM	Biological Sciences II (Section I)	SET 136
1:00 PM	Social Sciences II (Section V)	SET 152
1:20 PM	Bioethics & History & Philosophy of Science (Section X)	SET 114
2:00 PM	STEM Education (Section VIII)	SET 133
3:00 PM	Coffee	SET 1 st and 2 nd Floor Foyers
4:00 – 4:30 PM	Remove all AAS posters from SET Building	
5:00 – 5:15 PM	AJAS/AAS Annual Business Meeting	SET 136
6:00 – 7:00 PM	Sci-Mix; Viewing of AJAS and Gorgas Scholars’ Posters	Guillot University Center Loft
7:00 PM	Joint AJAS/AAS Banquet	Guillot University Center, 2 nd floor Banquet Halls
	<p>Brian Toone (AAS President), Lucas Lynn (AJAS President), and Mark Jones (AJAS Counselor), Welcome</p> <p>Dr. Carmen Burkhalter, Dean of the College of Arts and Sciences, University of North Alabama, Welcome</p> <p>David L. Edwards Ph.D., Chief Engineer, Science and Technology Directorate NASA / Marshall Space Flight Center <i>The Future is Bright for Exploration</i></p> <p>Presentation of Alabama Academy of Science Honors and Awards</p> <p>Presentation of Gorgas Finalists</p>	
9:00 PM	Planetarium Show	UNA Planetarium

Friday, February 19, 2016

7:00 – 10:00 AM Registration..... SET 2nd Floor Foyer

9:00 – Noon Featured Symposium SET 136

“Sustainability in Higher Education”

This symposium is featuring faculty from six Alabama institutions where sustainability plays a prominent role in the University and the community. Each set of speakers will address the role of sustainability at their undergraduate institution and its significance and long-range benefits for the academic environment and students.

- 9:00 AM *Rachel Brinks*, Alabama County Extension Service, Anniston
 - 9:20 AM *Susan Caplow*, Assistant Professor of Environmental Studies, University of Montevallo
 - 9:40 AM *Roald Hazelhoff*, Director of Southern Environmental Center, Birmingham-Southern College
 - 10:00 AM *Bambi Ingram*, Sustainability, University of Alabama Birmingham
 - 10:20 AM *Mike Kensler*, Director, Office of Sustainability
 - 10:40 AM *Julie Price*, Coordinator of Sustainability, UAB
 - 11:00 AM Panel Discussion and Audience Questions
-
-

10:00 AM Coffee..... SET 1st and 2nd Floor Foyers

9:00 AM– 12:00 Noon Academy of Science Program Sessions

9:00 AM – 11:40 AM Anthropology (Section VI) SET 221

Noon – 1:00 PM Lunch; Box Lunches SET 149

1:00 – 2:00 PM Registration SET 2nd Floor Foyer

AAS Posters

8:00 AM – 1:00 PM Poster Set-Up

Authors Present:

1:00 – 2:00 PM.....Anthropology (Section VI) SET 2nd Floor

ALABAMA JUNIOR ACADEMY OF SCIENCE
February 18-19, 2016
Science and Engineering Technology (SET) Building

Thursday, February 18, 2016

3:00 – 5:00 PM	Registration	SET 2 nd Floor Foyer
3:00 – 5:00 PM	Poster Set-up and Orientation	Guillot University Center Loft
5:00 – 5:15 PM	Joint AAS/AJAS Business Meeting.....	SET 136
6:00 – 7:00 PM	“Sci-Mix” Viewing of AJAS and Gorgas Scholars’ Posters	Guillot University Center Loft
7:00 PM	Joint AJAS/AAS Banquet	Guillot University Center, 2 nd floor Banquet Halls

Brian Toone (AAS President), Lucas Lynn (AJAS President), and Mark Jones (AJAS
Counselor), Welcome

Dr. Carmen Burkhalter, Dean of the College of Arts and Sciences,
University of North Alabama, Welcome

David L. Edwards Ph.D., Chief Engineer, Science and Technology Directorate
NASA / Marshall Space Flight Center
The Future is Bright for Exploration

Presentation of Alabama Academy of Science Honors and Awards
Presentation of Gorgas Finalists

9:00 PM	Planetarium Show	UNA Planetarium
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ALABAMA JUNIOR ACADEMY OF SCIENCE
February 18-19, 2016
Science and Engineering Technology (SET) Building
Friday, February 19, 2016

Breakfast on your own; hotel and town locations

7:00 AM	Registration	SET 2 nd Floor Foyer
7:30 AM	Paper Reading Orientation	SET 136
7:30 AM	AJAS Judges Orientation	SET 133
8:00 AM	Paper Competition	
	Life Sciences	SET 120
	Physical Science	SET 111
	Engineering and Mathematics and Computer Science	SET 122
	Environmental Science, Earth Science, and Space Science	SET 114
	Medicine and Health, Behavioral, and Social Sciences	SET 152
11:30 AM	Elections and Business Meeting	SET 133
12:00 Noon	Lunch; Box Lunches	SET 149
	Lunch Speaker	SET 136
	Woodrow "Woody" Garmon, 1969 Gorgas Winner, Chemical Engineer in Worldwide Petroleum Industry, <i>Innovation</i>	
1:00 PM	Group Photograph.....	Outside the front of SET Building
1:15 PM	AJAS Paper Competition Finals	SET 136
2:55 – 3:15 PM	AJAS Judges meeting:	SET 136
3:15 PM	Awards Reception, Joint AJAS/Gorgas	SET 136

GORGAS SCHOLARSHIP COMPETITION
February 18-19, 2016
Science and Engineering Technology (SET) Building
Thursday, February 18, 2016

3:00 – 5:00 PM	Registration.....	SET 2 nd Floor Foyer
3:00 – 5:00 PM	Poster Set-up and Orientation	Guillot University Center Loft
5:00 PM	AJAS Orientation	Guillot University Center Loft
6:00 – 7:00 PM	“Sci Mix” Viewing of AJAS and Gorgas Scholars’ Posters	Guillot University Center Loft
7:00 PM	Joint AJAS/AAS Banquet.....	Guillot University Center, 2 nd floor Banquet Halls

Brian Toone (AAS President), Lucas Lynn (AJAS President), and Mark Jones (AJAS
Counselor), Welcome

Dr. Carmen Burkhalter, Dean of the College of Arts and Sciences,
University of North Alabama, Welcome

David L. Edwards Ph.D., Chief Engineer, Science and Technology Directorate
NASA / Marshall Space Flight Center
The Future is Bright for Exploration

Presentation of Alabama Academy of Science Honors and Awards
Presentation of Gorgas Finalists

9:00 PM	Planetarium Show	UNA Planetarium
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GORGAS SCHOLARSHIP COMPETITION
February 18-19, 2016
Science and Engineering Technology (SET) Building
Friday, February 19, 2016

Breakfast on your own; hotel and town locations

7:00 AM	Registration.....	SET 2 nd Floor Foyer
7:30 AM	Gorgas Judges Orientation	SET 133
7:30 – 8:45 AM	Set Up Science Exhibits/Display/Poster/Orientation	SET Building, 1 st Floor
8:45 – 9:45 AM	Demonstrations for Judges	SET Building, 1 st Floor
10:00 AM – Noon	Individual Interviews with Judges will be conducted at the poster presentation sites	
12:00 Noon	Lunch; Box Lunches	SET 149
Lunch Speaker	SET 136	
	Woodrow "Woody" Garmon, 1969 Gorgas Winner, Chemical Engineer in Worldwide Petroleum Industry, <i>Innovation</i>	
12:00 – 1:00 PM	Gorgas Judges Executive Session.....	SET 122
1:00 PM	Group Photograph.....	Outside the front of SET Building
1:15 PM	AJAS Paper Competition Finals.....	SET 136
2:45 PM	Remove Posters and Displays.....	SET Building, 1 st Floor
3:15 PM	Awards Reception, Joint AJAS/Gorgas	SET 136

The Alabama Science Scholar Talent Search and Gorgas Scholarship Competition is supported by the Alabama Power Foundation, Incorporated, and administered by the Alabama Academy of Science, Inc.

The Gorgas Scholarship Competition website, www.GorgasScholar.org, contains detailed information on the annual competition and awards available to winners and finalists.

SECTION I – BIOLOGICAL SCIENCES

Paper Session I

Thursday Morning

136 SET Building

Drew Hataway, Presiding

1. 8:20 Microbial source-tracking of *Escherichia coli* in Little Lagoon, Alabama. *Brian S. Burnes*, University of West Alabama.
2. 8:40 Selected Physiological Responses of Roselle (*Hibiscus sabdariffa*) to Drought Stress and Evaluation of Antioxidant and Nutrient Content. *Safaa Al-Hamdani* and Dawn Evans, Jacksonville State University.
3. 9:00 **uh STRESSED? How FKBP Proteins Can Help! *Caroline Thomas* and Tina Hubler, University of North Alabama.
4. 9:20 A comparison of electronic and traditional cigarette butt leachate on the development of *Xenopus laevis* embryos. *James Rayburn*¹, *Tatiana C. Tatum Parker*², 1 Jacksonville State University, 2 Saint Xavier University.
- 9:40 BREAK
5. 10:00 **u A water assay and molecular biological survey of the microbiota of a sulfur spring in western Blount County, AL. *Langley Dillenberger*, David A. Johnson, and David M. Frings, Samford University.
6. 10:20 Microbial source-tracking of *Escherichia coli* in Lake Martin, Alabama. *Brian S. Burnes*, University of West Alabama.
7. 10:40 Tyrosinemia type I and not treatment with NTBC causes slower learning and altered mouse behavior in the Barnes maze. *Gordon G. MacGregor*, Sarah B. Coker, Ashton E. Koenig, Marissa E. Moore, Elizabeth Barnby and Megan A. Hillgartner. University of Alabama in Huntsville.
- 11:00 BUSINESS MEETING
- 11:10 LUNCH

SECTION I – BIOLOGICAL SCIENCES

Paper Session II

Thursday Afternoon

136 SET Building

Drew Hataway, Presiding

8. 1:00 **u Hypoxic coma as a strategy to survive inundation across ground hunting arachnid taxa. *Fhallon Ware-Gilmore*¹ and Drew Hataway, 1 University of West Alabama, 2 Samford University.
9. 1:20 **g Microbial distribution in decadal growth layers of large conical microbial mats in Lake Untersee, Antarctica attributes proxies for ancient stromatolites. *Hyunmin Koo*¹, Dale Andersen², and Asim Bej¹, 1 University of Alabama at Birmingham, 2 SETI Institute, CA.
10. 1:40 Recovery of floristic diversity and basal area in natural forest regeneration and planted plots in a Costa Rican wet forest. *Rita M. Fincher*¹, Alex Gilman², Susan G. Letcher³, Felix Corrales-Araya⁴, Ashley I. Perez³, Tyler W. Madell³, and Alex L. Finkelstein³, 1 Samford University, 2 EARTH University, 3 Purchase College, 4 Finca Los Nacientes.
11. 2:00 A Preliminary Assessment of Geologic Control and Selected Plant Populations in the Bibb County Glades in Alabama. *David M. Frings* and L. J. Davenport, Samford University.
12. 2:20 **g Integrated Aquaculture of Sea Urchins and Shrimp. *Karen E. Jensen*, J. Christopher Taylor, Yuan Yuan, Robert J. Barry, Mickie L. Powell, D. Allen Davis, and Stephen A. Watts, University of Alabama at Birmingham.
13. 2:40 **g Long Term Effects of Incubation Moisture on Desiccation Rate in the Brown Anole Lizard (*Anolis sagrei*). *Corey Cates* and Daniel Warner, Auburn University.
- 3:00 Break
14. 3:20 **g A Semi-Automated Zebrafish Model of Inflammatory Chronic Pain: Effect of Nutritional History on Pain Response. J. Chris Taylor, Savannah L. Dewberry, Lindsey Yessick, Stacie K. Totsch, Stephen A Watts, and Robert E. Sorge, University of Alabama at Birmingham.
15. 3:40 **g Do seasonal changes in developmental temperature have season-specific fitness consequences in a lizard? *Phillip R. Pearson* and Daniel A. Warner, Auburn University.
16. 4:00 **g Nutrient allocation as a function of dietary macronutrients in the cultured sea urchin *Lytechinus variegatus*. *Yuan Yuan*, Laura E. Heflin, Mickie L. Powell, and

Stephen A Watts. University of Alabama at Birmingham.

17. 4:20 **g Nutrient Density Influences Satiety in the Sea Urchin, *Lytechinus variegatus*.
Marlee Hayes, Laura E. Heflin, John M. Lawrence, Mickie L. Powell, David Raubenheimer, and Stephen A. Watts, University of Alabama at Birmingham.

SECTION I – BIOLOGICAL SCIENCES

Poster Session I

Thursday

1st Floor SET

Drew Hataway, Presiding

Authors Present 10:30 AM – 1:00 PM for Viewing and Judging

18. A molecular analysis of herbivory in early and late adult kudzu bugs, *Megacopta cribraria*. David A. Johnson and Ying Yan, Samford University.
19. **u Urban forestry: an analytical outlook on the environmental status of Athens State University using technologies such as the LIDAR mapping system. Jared M. Boyd, Keighan Melton, Chris Otto, and Sara Cline, Athens State University.
20. **u Discovering and identifying bacteria at lagoon park. Caleb W. Douglas and Uduak Afangideh, Faulkner University.
21. **u Ccs6, a candidate assembly factor of cytochromes c in plastids of the green lineage. Sara Cline¹, Antonio Bradley¹, Max Sgro², Sara Johnson¹, Lora Morris¹, Ryan Watson², and Patrice Hamel², 1 Athens State University, 2 Ohio State University.
22. **u Quantity of protozoa in lagoon park. Aaron Duncan and Uduak Afangideh. Faulkner University.
23. Trichocyst 1 genes found in Cryptomonads in fresh-water and marine sample in Alabama. David A. Johnson and Yue Wang, Samford University.
24. **u Effects of a chicken processing plant on water quality on Graves Creek in Blount County, Alabama. Emily A. Bridge and Elizabeth G. Dobbins, Samford University.
25. **u Fire regime effects on nutrient concentrations, detritivore diversity, and decomposition in mountain longleaf pine forest. Hannah E. Shuffett, Patrick A. Buszka, Lucas Irvin, Chelsea G. Jamieson, Karson D. Jones, Emily M. Meitz, Grant L. Gentry. Samford University.
26. **u Plant physiology and gene expression in hardwood tree species exposed to ozone. Sydney J. Melson and Shakira T.A. Young, University of West Alabama.
27. **u The effects of dep on the embryonic stages of grass shrimp, *Palaemonetes pugio*. Kirsten N. Humphries and James R. Rayburn, Jacksonville State University.
28. **u DNA quantification of various fruit samples using spectrophotometry. Loran T. Hill and Uduak Afangideh, Faulkner University.

29. **u Tyrosinemia type i mice show alterations in short term memory. *Marissa E. Moore*, Ashton E. Koenig, and Gordon G. MacGregor, University of Alabama in Huntsville.
30. **u Antibiotic resistance profiles of bacteria found on cell phones and the hands of their owners. A. Breanna Littrell and Lisa Ann Blankinship, University of North Alabama.
31. **u Biological sample detection using a uv crime light. Julie Corsby, Sarah Tingle, and Lisa Ann Blankinship, University of North Alabama.
32. **u Cranberries and kale: do they really aid in immunity?. Larissa J. Strath¹, Dr. Uduak Afangideh², Jason White² and *Larissa J. Strath*², 1 Faulkner University, 2 Tuskegee University.
33. **g Effects of gluten enriched diet on gut microbiome of laboratory cultured zebrafish, *Danio rerio*. *Hyunmin Koo*, Joseph Hakim, Mickie Powell, Ranjit Kumar, Casey Morrow, Stephen Watts, and Asim Bej, University of Alabama at Birmingham.
34. **u Environmental analysis of the Cahaba River in Perry County. *Laura M. Thompson* and Kristopher H. McConnell, Judson College.
35. **u Meiofaunal communities from sand and mud substrates of a barrier island: a preliminary comparison. *Joshua D. Millwood* and Dr. John McCall, University of West Alabama.
36. **u Mice with tyrosinemia type i do not discriminate between a novel and familiar mouse in the crawley sociability maze. *Ashton E. Koenig*, Megan A. Hillgartner, Gordon G. MacGregor, The University of Alabama in Huntsville.
37. **u Oxidation of endocrine disrupting chemical by *Trametes versicolor* laccase. *Hannah Patterson*¹ and Corey M. Johnson², 1 Judson College, 2 Samford University.
38. **u Preliminary characterization of the dermal mucosal microbiome of red drum (*Sciaenops ocellatus*). *Tyler Newburn*, Brittany Butcher, and Michael Sandel. The University of West Alabama.
39. **u Resistance to beta lactam antibiotics: development of a rapid, paper-based detection test. *Allison Shelton* and Lisa Ann Blankinship, University of North Alabama.
40. **g Selective enrichment of Campylobacteraceae in the gut microbiota of the sea urchin, *Lytechinus variegatus*, in their natural habitat. *Joseph Hakim*, Hyunmin Koo, Ranjit Kumar, Elliot Lefkowitz, Casey Morrow, Asim Bej, and Stephen

Watts. University of Alabama at Birmingham.

41. **u Sugars and boogers. *Jeffrey D. Milner II* and Carlos J. Orihuela, University of Alabama at Birmingham.
42. **u The effects of the essential oil lavender on different hair textures. *Paige S Seaton* and Uduak Afangideh, Faulkner University.
43. **u Sources of *E. coli* in Little Lagoon. Kimberly Hernandez, University of West Alabama.
44. **g The epigenetic impact of combinatorial wa and sfn on breast cancer cells. *Kendra J Royston* and Trygve O Tollefsbol, University of Alabama at Birmingham.
45. **u Characterization of the venom delivery mechanism and proteome for the wandering spider, *Ctenus hibernalis (Aranea: Ctenidae)*. *Jeffrey Cole¹*, *Patrick A. Buszka¹*, *Robert A. Hataway¹*, *Ronald N. Hunsinger¹*, and *James A. Mobley²*, 1 Samford University, 2 University of Alabama at Birmingham.
46. **u Exploring trapping methodology in species richness estimation of rodents and insectivores at oak mountain state park. *Victoria P. Van de Vuurst* and David M. Frings. Samford University.
47. **g Foxi3: a sly regulator of bone development, promotes prostate cancer. *Angana Mukherjee¹*, *Oluwasina George Williams¹*, *Jacqueline Jones¹*, and *Shaniece Theodore²*, 1 Troy University, 2 Centers for Disease Control and Prevention.
48. Market forces drive the evolution of altruism in a microbial public goods game. *Sarah Jeanne Adkins¹*, *Colleen Clark²*, *Richard Lenski²*, *Jeffrey Morris¹*, 1 University of Alabama at Birmingham, 2 Michigan State University.
49. Population assessment of the northern bobwhite in northwest Alabama, 1968-2014. *Thomas Haggerty¹*, *Paul Kittle¹*, *Rob Hurt²* and *Dwight Cooley²*, 1 University of North Alabama, 2 Wheeler National Wildlife Refuge, U.S. Fish and Wildlife Service.
50. **u Role of oligomerization in gbf1 (a sec7 gef) function. *Akhil C Kaushik*, *Jay M Bhatt*, and *Elizabeth S Sztul*, University of Alabama at Birmingham.
51. Reproductive schedule of the silver shiner (*Notropis photogenis*) in the Flint River of Alabama. *Kelly Hodgskins*, *Stephanie Greenleaf*, *Johnathan Hillman* and *Bruce Stallsmith*, University of Alabama in Huntsville.
52. Synthesis of dithiophosphoric acid and iodoform complexes, their

characterization and antibacterial activity. Adnan Elkhaldy and *Afef Janen*, Alabama A&M University.

53. **g Dietary lipid effects on weight gain and adiposity in zebrafish visualized using linear modeling and contour plots. *Lauren A. Fowler*¹, Robert Makowsky², James L. Davis¹, and Stephen A. Watts¹, 1 University of Alabama at Birmingham, 2 Tucson, AZ.

**u or **g denotes presentation entered in undergraduate/graduate student paper competition

SECTION II – CHEMISTRY

Session I

Thursday Morning

447 SET Building

Amanda Coffman, Presiding

1. 9:00 Women at war: Female workers in TVA's chemical plant during World War II. *Richard C. Sheridan* (retired), TVA National Fertilizer Development Center, 105 Terrace Street, Sheffield, AL 35660.
- 9:30 BUSINESS MEETING (Elect Vice-Chair; February 2016 to February 2018 term)

SECTION II – CHEMISTRY

Poster Session

Thursday Morning

4th floor SET Building

Authors Set-up: Begin at 8:00 AM

Authors Present: 10:00 AM – Noon; Viewing and Judging

2. **u Ab initio study of the molecular structure of two polyphenols: quebecol and (+)-catechin. *Amber E. Johnson* and Lawrence A. Covick, Department of Mathematical, Computer and Natural Sciences, Athens State University, Athens, AL 35611.
3. **u Characterization of antioxidants in coffee as influenced by brewing techniques. *Arnold Jele* and *Emanuel Waddell*, University of Alabama in Huntsville, Department of Chemistry, 301 Sparkman Dr. NW, Huntsville, AL 35899
NO SHOW
4. **u Addition of sweeteners to tea: effect on antioxidant potential. *William M. Hollingsworth* and Nixon Mwebi, Jacksonville State University, Department of Physical & Earth Sciences, Jacksonville AL, 36265
5. **g Epr of cytochrome p450 enzymes. *Molly M. Lockart*, Department of Chemistry, University of Alabama, Tuscaloosa, AL 35487. *Shawna M. Blankenship*, Department of Chemistry, Wofford College, Spartanburg, SC 29303. *Alex A. Cruce* and *Michael K. Bowman*, Department of Chemistry, University of Alabama, Tuscaloosa, AL 35487.
WITHDRAWN
6. Synthesis, functionalization, and characterization of cellulose nanofibrils and nanocrystals. *Donald H White*, Md S Islam, Chemar J Huntley, and Michael L Curry, Department of Chemistry, Tuskegee University, Tuskegee; Department of Materials Science and Engineering, Tuskegee University, Tuskegee.

7. **g Progress towards n-type thermoelectric hybrid films. *Tabitha Sutch*, Luke Presson, Greg Szulczewski, and Tabitha Hopka Sutch, University of Alabama, Tuscaloosa; Centre College; University of Alabama, Tuscaloosa.
8. **g Chromium supplements effects on wound healing. *Pandora E. White*, Tsung-Sheng Chen, Yi-Ting Chen, Chia-Hsin Liu, Chi-Ching Sun, John Vincent, Frank Chiahung Mao and Wei-Ming Lee, Department of Chemistry, The University of Alabama, Tuscaloosa, AL, Department of Veterinary Medicine, National Chung Hsing University, Taichung, Taiwan, Department of Research and Development, Maxluck Biotechnology Corporation, Taichung, Taiwan
9. **g Fluorescence and digital imaging characterization of langmuir films of quantum dots. *Zachary Whitfield*, Hemang Jani, Jeffrey J. Weimer, and Lingze Duan, University of Alabama in Huntsville, Huntsville, AL 35899.
10. **g Investigations of langmuir and langmuir-schaefer films of quantum dots with n-heptyl acetate. *Cuong V. Nguyen* and Jeffrey J. Weimer Material Science Program, University of Alabama in Huntsville.
11. **g The effectiveness of methods to functionalize glass-based substrates. *Aniket Maharanwar* and Jeffrey J Weimer, Materials Science Program, University of Alabama in Huntsville, Huntsville, AL.
12. Hybridized carbon orbitals and structures of carbon cage clusters. *Arjun Tan*, Vernessa Edwards, and Marius Schamschula, Alabama A & M University, Normal, AL 35762.

**u and **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively

SECTION III – PHYSICS AND MATHEMATICS

Session I

Thursday Morning, 8:20 – 10:40 AM

219 SET Building

Zengjun Chen, Presiding

1. 8:20 **Invited Talk:** Relativistic Electron Scattering by Electromagnetic Ion Cyclotron Waves in the Radiation Belts. *Kaijun Liu*, Auburn University.
2. 9:00 **u Development of Pyroelectric IR Sensors and Energy Harvesters via Smart Materials. *Mary E. McDaniel*, Department of Physics and Earth Science, University of North Alabama, Florence, AL 35632. Ashok Batra, Department of Physics, Alabama A&M University, Normal, AL 35762.
3. 9:20 **u Spectroscopy of Glasses Doped with Rare Earth Ions. *Devin J. Hicks*, Akshaya Kumar and Prakash C. Sharma, Department of Physics, Tuskegee University, Tuskegee, AL.
4. 9:40 **u Holographic Image Reproducing an Opal's Iridescence. *Taylor J. Myrick*, Nealey Sims, Mary McDaniel, and David B. Thompson, Department of Physics, University of North Alabama, Florence, AL, 35630.
5. 10:00 Computational modeling of protein transport in bacterial cells. *Chitra R Nayak*, Department of Physics, Tuskegee University, Tuskegee, AL, 36088. Aidan Brown, Dalhousie University, Nova Scotia, Canada. Andrew Rutenberg, Dalhousie University, Nova Scotia, Canada.
6. 10:20 Gold's nobleness: Its unsuspected origin. *Marisol Alcántara Ortigoza*, Department of Physics, Tuskegee University, Tuskegee, Alabama 36088, USA. Sergey Stolbov, Department of Physics, University of Central Florida, Orlando, Florida 32816, USA.

SECTION III – PHYSICS AND MATHEMATICS

Poster Session

Thursday Morning

2nd Floor SET Building

Authors Present: 10:45 AM – 12:30 PM

7. **u Detection of fuel additives using raman spectroscopy. *Brianna Kenney*, Eshirdanya McGhee, ~~Carlton Faley~~, Anup Sharma, Department of Physics, Alabama A&M University, Normal, AL 35762. Aschalew Kassu, Department of Engineering, Construction Management & Ind. Tech, Alabama A&M University, Normal, AL 35762.

8. **u UNA Society of Physics students' public outreach. *James H. McKee*, Angel M. Gray, Nealey E. Sims, Jennifer L. Van Tassel, Mel Blake, University of North Alabama, Florence, AL 35630.
9. Defining the roundness of a plane figure. *Arjun Tan*, Marius Schamschula and Vernessa Edwards, Department of Physics, Alabama A & M University, Normal, AL 35762.
10. **u Dielectric properties of pvd/pmn-pt composite films for embedded capacitors, *Marylyn Creer*, Almuatasim Alomar, Kyana McKay, A. K. Batra, Department of Physics, Chemistry, Mathematics, Alabama A&M University, Normal, Al. 35762, and Mary McDaniel, Department of Physics, University of North Alabama, Florence, Al. 35632
11. **u Piezoelectric energy harvesting using polyvinylidene fluoride nanocomposite films and lead zirconate titanate. *Kyana McKay*, Department of Chemistry, Alabama A&M, Normal, AL 35762.; Almuatasim Alomari, Ashok K. Batra, and K. J. Arun, Department of Physics, Alabama A&M University, Normal, AL 35761; M.D. Aggarwal Department of and Mathematics, Alabama A&M University, Normal, AL 35762.; and Sree Kerala, Varma College, Thrissur 680011, Kerala, India.
12. Roundness of irregular plane figures and figures with fractal characteristics. *Arjun Tan*, Marius Schamschula and Vernessa Edwards, Department of Physics, Alabama A & M University, Normal, AL 35762.
13. **u Stand off detection of melamine in baby formula. Eshirdanya B. Mcghee, Department of Physics, Alabama A&M University, Normal, AL 35762.

**u and **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively

SECTION IV- ENGINEERING AND COMPUTER SCIENCE

PAPER SESSION 1

439 SET Building

Thursday Morning, 9:00 AM- 9:40 AM

Pradeep Lall, Auburn University, Presiding

1. 9:00 **g Processing of Nanoclay/Graphine Reinforced PLA/PHBV Polymer Blend Thin Film. *Samira Shaily*, Mohammad Kamal Hossain, Terrie Mickens, Hadiya Harrigan Department of Mechanical Engineering, Tuskegee University
2. 9:20 Why Mars? *J. Wayne McCain*, College of Business, Athens State University, Athens, AL 35611.

POSTER SESSION

Thursday Morning

4th Floor, SET Building

Authors Present: 9:45 AM- 11:45 PM

Pradeep Lall, Auburn University, Presiding

3. **g Ag Sintering for Die Attach for High Temperature Application. *Fang Yu*, Wayne Johnson, Michael Hamilton, and Fang Yu, Auburn University.
4. **g Quantum Phase-Slip Junctions and Flux-Based Logic. *Uday S Goteti* and Michael C Hamilton, Auburn University.
5. **g Raman Spectroscopy and Optical Characterization of Thermoelectric Devices *Richard A. Hammond Jr.* College of Engineering, Technology & Physical Sciences; Alabama A&M University, Normal, AL 35762
6. **g Fabrication of PLA/PHBV Thin Film Modified with Nanoclay. *Terrie Mickens*, Mohammad Kamal Hossain, Samira Shaily, Hadiya Harrigan Department of Mechanical Engineering, Tuskegee University
7. **g Thermal Interface Materials. *Chandan K. Roy*, Department of Mechanical Engineering, Auburn University, Auburn, AL 36849. Sushil Bhavnani, Department of Mechanical Engineering, Auburn University. Michael C. Hamilton Department of Electrical and Computer Engineering, Auburn University. R. Wayne Johnson, Department of Electrical and Computer Engineering, Tennessee Technical University, Cookeville, Tennessee 38505, Roy W. Knight, Dept. of Mechanical Engineering Auburn University, Daniel K. Harris, Department of Mechanical Engineering Auburn University
8. **g Exploration of nickel gold finishing for high temperature packaging. *Jinzi Cui*, Michael C. Hamilton, Department of Electrical Engineering, Auburn

University, AL 36830 and Wayne R. Johnson, Department of Electrical Engineering, Tennessee Tech University

9. **g Characterization of Selective and Non-Selective Carbon Nanotubes (cnts) Grown on Ceramic Substrates. *Baha Yakupoglu*, Michael Moxley and Hulya Kirkici, Electrical and Computer Engineering Department, Auburn University, Auburn, AL 36849.
 10. **g Diffusion Barrier for Thin Film Flexible Cable. *Vaibhav Gupta*, John Sellers, Michael C. Hamilton, Charles D. Ellis, and Simin Zou, George Hernandez, Rujun Bai, Auburn University.
 11. **g Fabrication and Characterization of Thermoelectric Devices. *Jada Gray*, Xaiver Crutcher, Tiara Strong, Joe'l Johnson, Richard Hammond, Zhigang Xiao, Aschalew Kassu and Satilmis Budak College of Engineering, Technology & Physical Sciences; Alabama A&M University, Normal, AL 35762
 12. **g Gamma-Ray Irradiation Effect and Temperature-Dependent of sol-gel Derived ZNO Thin-film Transistors I-V Characteristics. *Shiqiang Wang*, Vahid Mirkhani, Ran Cheng, Minseo Park, Michael C. Hamilton. Auburn University, Auburn, AL 36849 and Mobbassar H. Sk, Qater University, Doha 2713, Qatar.
 13. **g A machine learning approach for improving safety of pedestrians and bicyclists. *Hamidreza Ahady Dolatsara* and Fadel Megahed, Industrial and System Engineering, Auburn University, Auburn, Alabama, 36849
 14. **g Influence of Fatigue and Bending Strain on Critical Currents of NB Superconducting Flex Cable Using TI and CU Thin Film Layers. *Simin Zou*, Rujun Bai, George Hernandez, Vaibhav Gupta, and Charles Ellis, Yang Cao, David Tuckerman and Michael C. Hamilton, Auburn University.
 15. **g Solution-Based Fabrication of Carbon Nanotube Coplanar Waveguide. *Ran Cheng*, Shiqiang Wang, and Michael C. Hamilton, Auburn University, Auburn.
 16. **g Superconducting RF-Flex Cables. *George A. Hernandez*, Rujun Bai, Charles D. Ellis, Michael C. Hamilton, Auburn University, AL 36849.
 15. **g Superconductor Resonator on Thin Film Substrate. *Rujun Bai*, George A Hernandez, Charles Ellis, Michael Hamilton, Department of Electrical Engineering, Auburn University, Auburn, AL36849.
 17. Design of an Adaptive Filter on a Time Domain Impedance Probe for Real Time System Identification of Ionospheric Plasma Parameters. *Ravi P. Gollapalli*, Edmund A. Spencer, Department of Electrical & Computer Engineering, University of South Alabama, Mobile, AL 36688; David Clark, Department of Electrical & Computer Engineering, University of South Alabama, Mobile, AL 36688.
- 11:45 BUSINESS MEETING: Elect a Vice Chair for February 2016 to February 2018 term
- 12:00 Noon LUNCH

SECTION V – SOCIAL SCIENCE
Paper Session I
Thursday Morning 9:00 – 11:00 AM
152 SET Building
Lonnie Hannon, Presiding

1. 9:00 Is courage a necessary factor in union leadership? R. Bryan Kennedy, Susan D. Herring, and *Thomas Pieplow*, Athens State University, Athens, AL 35611.
 2. 9:20 **u Are 12-step programs suitable for treating behavioral addictions? Susan D. Herring, R. Bryan Kennedy, *Dalton Farmer*, and Michael Essary, College of Business, Athens State University, Athens, AL 35611.
 3. 9:40 Lessons learned from doing field research with mobile target populations. *Richard A. Hudiburg* and Larry W. Bates, University of North Alabama, Florence, AL 35632.
 4. 10:00 Marriage and the renegotiation of gender and intergenerational identities, roles, and relations in urban China. *Arianne M. Gaetano*, Department of Sociology, Anthropology, and Social Work, Auburn University, Auburn, AL 36849.
 5. 10:20 The general manager's dilemma: A perfect storm of ethics violations: A case study. R. Bryan Kennedy, Susan D. Herring, and *Charles R. Roberts*, College of Business, Athens State University, Athens, AL 35611.
 6. 10:40 Sarah Rosetta Wakeman: Her mindset during the Civil War. *Jacqueline R. Childress*, Auburn University Alumni.
- 10:45 BUSINESS MEETING

Elect a Vice-Chair for March 2016 - February 2018 term

SECTION V – SOCIAL SCIENCE
Poster Session
Thursday Morning/Afternoon
3rd Floor SET Building
Authors Present: 11:00 AM – 12:00 noon & 1:00 – 2:00 PM

7. **u Differential effects of background music on memory recall in college freshmen. *Victoria M. West*, Department of Natural and Physical Science, Faulkner University, Montgomery, AL 36106.

8. **u Gender: Social obstacle or cultural necessity? *Caitlyn I. Martin*, Auburn University, Auburn, AL 36849.
9. **u Bystander attitudes and rape myth acceptance among college students. *Christiana Vedder-Abrams*, Erin Cooper, Ellen Mannon, Nick Lang, Brooke Leonard, and Andrea Hunt, Department of Sociology and Family Studies, University of North Alabama, Florence, AL 35632.
10. **g Assessment of urban growth and the generation of greenhouse gases in the Huntsville MSA. Berneece S. Herbert, *Nicholas Johnson*, *Reginald Robinson* and *Olayemi Babalola*, Department of Community & Regional Planning, Alabama A&M University, Normal AL 35762.
11. **u High school graduation rates and the presence of food deserts in Huntsville, Alabama. *Dwight Tigner* and Berneece Herbert. Department of Community & Regional Alabama A&M University, Normal, AL 35762.
12. Meeting Alabama's behavioral healthcare needs in the 21st century. *Beverly J. Myers*, Sandra Jemison, Alex Morris, and Eric Childs, Department of Psychology, Stillman College, Tuscaloosa, AL 35401.
13. **g Climate change impacts on road safety. *Lady Franciscar Kassama* and Jacob Oluwoye, Department of Community and Regional Planning, Alabama A&M University, Normal AL 35762.

SECTION V – SOCIAL SCIENCE
Paper Session II
Thursday Afternoon 2:00 – 4:00 PM
152 SET Building
Lonnie Hannon, Presiding

14. 2:00 Legal ethics in acquisitions and contracting: Why doing the right thing matters. *Charles R. Roberts*, Susan D. Herring, and R. Bryan Kennedy, College of Business, Athens State University, Athens, AL 35611.
15. 2:20 **u The three-legged stool of economic development. *Margaret A. Brown*, College of Business, Athens State University, Athens, AL 35611.
16. 2:40 The use of simulation to teach suicide prevention. *Beverly J. Myers* and Sandra Jemison, Department of Psychology, Stillman College, Tuscaloosa, AL 35401.
17. 3:00 **g Development and planning of telecommuting: A pilot study of feelings and commuting to work. Jacob O. Oluwoye and *Ngozi O. Ajufu*, Dept of Community and Regional Planning, Huntsville, AL 35762.

18. 3:20 Differentiated learning practices in a local HBCU. *Dana Wilchcombe*, School of Education, Oakwood University, Huntsville, AL 35896.
19. 3:40 Food deserts and access to healthy food in Alabama counties. *Berneece S. Herbert*, Nicholas Johnson, Reginald Robinson, and Olayemi Babalola, Dept of Community & Regional Planning, Alabama A&M University, Normal AL 35762.

****u** or ****g** Denotes presentation entered in competition by an undergraduate or graduate, respectively

SECTION VI – ANTHROPOLOGY

Paper Session I

Friday Morning 9:00 AM – 11:40

221 SET Building

Harry O. Holstein Presiding

2016 Anthropology Session

In Memoriam

To

Dr. John W. Cottier

Professor of Anthropology

Auburn University

He was a

friend and strong supporter

of the Academy for thirty plus years.

We Will Miss You John!

- 9:00 Welcome: Harry O. Holstein
1. 9:10 The secret of my success: Penny capitalism and occupational multiplicity in rural Costa Rica, 1770-1970. *James Sewastynowicz*, Department of Physical and Earth Sciences, Jacksonville State University, Jacksonville, AL 36265.
 2. 9:30 **u Immigration Policy in Alabama: Unintended Consequences. *David S. Rickless* and L. Joe Morgan, Jacksonville State University, Jacksonville, AL 36265.
 3. 10:00 **u An Ethnography on the Birmingham Punk Subculture. *Arianne Gaetano, Kevin Koziol*, Auburn University, Department of Sociology, Anthropology, and Social Work, Auburn, AL 36849
- 10:20 *BREAK*
4. 10:40 **u The effects of ub-b on the growth of salvania minmia: human-environmental implications. *Randee Mae Jeske*, Jacksonville State University.
 5. 11:00 **u China's Environmental Crisis: Causes, Consequences, and Cultural-Political Context. *Hadden A. Bennett* and *Arianne M. Gaetano*, Department of Sociology, Anthropology, and Social Work, Auburn University, Auburn, AL 36849.
 6. 11:20 **u Tracking Industrial Metals and Contamination in the Chattahoochee River: Potential Point and Non-Point Source Pollution to the Apalachicola Blueway. *Thomas J. Eyler* and *Larry Joe Morgan*, Department of Physical and Earth Sciences, Jacksonville State University., Jacksonville, AL 36265.
 7. 11:40 Creating skateboarding spaces or corralling skaters: Analyzing the rise of public skate parks in northeast Alabama. *Mark Allen Jones, Jr.* and *Stephen G. Tsikalas*, Jacksonville State University, Jacksonville, AL 36265.

noon *LUNCH*

SECTION VI – ANTHROPOLOGY

Poster Session

Friday Afternoon, 1:00 – 2:00 PM

2nd Floor, SET Building

Harry O. Holstein Presiding

8. **u Autism and medical anthropology. *Alec J Williams*, Department of Anthropology, Auburn University, Auburn, AL 36832.
9. **u A vehicle for development: historic streetcar systems and economic growth. *Connor Martin*, Department of Geography, University of North Alabama, Florence, AL 35630.
10. **g Spatial equity and access to amenities: a gis approach. *Robert B. Thompson* and *Francis T. Koti*, Department of Geography, University of North Alabama, Florence, AL 35630.

SECTION VI – ANTHROPOLOGY

Paper Session II

Friday Afternoon 2:00 PM – 4:00 PM

221 SET Building

Harry O. Holstein Presiding

11. 2:00 Assessing the International Humanitarian and Anthropological Applications of Geospatial Technologies. *Payten M. Samuels*, Department of Geography, Jacksonville State University, Jacksonville, AL 36265.
12. 2:20 **g Developing a Multi Agent based Model to Solve Parking Problems. *Sayed, Md Abu* and *Sunhui, Sim*, Dept of Geography, University of North Alabama, Florence AL 35632
13. 2:40 Hopewell Moundbuilder Culture in South Central Ohio. *Phillip E. Koerper*, Department of History, Jacksonville State University, Jacksonville, Al 36265
14. 3:10 **u A Preliminary GIS Investigation of the Morton Hill Stone Structure Complex, 1CA671, Calhoun County, Alabama. *Xavier C. DeKarske*, Jacksonville State University, Jacksonville, AL 36265.
15. 3:30 Native American and Christian Religious Acculturation in Northern Alabama. *Harry O. Holstein*, Jacksonville State University, Jacksonville, Al 36265
- 3:50 Concluding Remarks Harry O. Holstein

**u or **g denotes presentations entered in competition by an undergraduate or graduate

SECTION VII: STEM EDUCATION

Paper Session

Thursday Afternoon 1:00 – 5:00 PM

133 SET Building

Mel Blake Presiding

- 1:00 SPECIAL NASA STEM Panel
- 2:00 BUSINESS MEETING
1. 2:20 Style of Instruction As It Affects Student Performance: A Comparative Analysis of a Non-majors Biology Class at Faulkner University. *Uduak Afangideh*, Leslie Cowell, Faulkner University, Montgomery, Alabama, 36109.
 2. 2:40 Four years of stem outreach by UNA math and computer science departments. *Cynthia L Stenger*, James A Jerkins, Jessica Stovall, and Janet T Jenkins, University of North Alabama, Florence, Alabama, 35630.
 3. 3:00 Reform In Teaching Science, Mathematics, and Engineering Concepts To Smart But Under-Prepared Students. *Matthew Edwards*, Dept. Of Physics. Salam Khan, Dept. of Mathematics. and Mohamed Gadalla, Dept. Of Mechanical Engineering, Alabama A&M University, Normal, AL 35762.
- 3:20 BREAK – Poster Viewing
4. 3:40 Geoscience teaching and learning with youtube video - here come the drones. *Scott Brande*, University of Alabama at Birmingham, Birmingham, Alabama, 35294.
 5. 4:00 **u SARA/JOVE activities in a college-level, management of technology (MOT) curriculum. J. Wayne McCain and *Kevin Keenan*, College of Business, Athens State University, Athens, AL 35611.
 6. 4:20 Public Outreach at UNA Planetarium. *Mel Blake*, Department of Physics and Earth Science University of North Alabama, Florence, Alabama, 35630.
 7. 4:40 Phenomenological Study of Teachers Who Were Victims of Student Violence. *Debra B. Pearson*, Argosy Univ., Atlanta, GA 30328. Matthew E. Edwards, Dept. of Physics, Chemistry, and Mathematics, Alabama A&M Univ., Normal, AL 35762.

SECTION VII: STEM EDUCATION

Poster Session

Thursday Afternoon

2nd Floor SET Building

Authors Present 3:20 – 3:40 & 4:40 PM– 5:30 PM

8. Biorubebot: a cross discipline, project-based learning approach to designing a mobile device game for teaching protein interactions. *Sara G. Cline*, Adam W. Lewis, and Leigh C. Hester, Dept. of Math, Computer, and Natural Science, Athens State University, Athens, AL 35611.
9. Engineering with NASA's best: implementation of a NASA based engineering design curriculum for middle school. *Susan A. Currie* and John F. Weis, NASA Marshall Space Flight Center, Huntsville, AL 35812.
10. **g STEM teacher training using heat dissipation simulation with raspberry pi. *Anthony G. Winchester*, Veronica L. Baugh, Saleh S. Allehaibi, Sazia Eliza, Murat M. Tanik, University of Alabama at Birmingham, Birmingham, AL 35294.
11. **u UNA Society of Physics Students Public Outreach. *James H. McKee, Angel M. Gray, Jennifer Van tassel, Nealy E. Sims, Ronald M. Blake*, Department of Physics and Earth Science, University of North Alabama, Florence, Alabama, 35630.
12. **u Global STEM Alliance Initiative - AAMU and Nigerian Universities. Celeste Madison Mcrae¹, Ruth Gabriel-Ajobiwe², Dosu Malomo², Stephen Babalola¹, Modele Eletta³, 1. Alabama A&M University, Normal, AL; 4900, Meridian Street N, Normal, AL 35762, 2. Federal University, Oye-Ekiti, Oye-Are Road, Oye-Ekiti, Nigeria; 3. University of Ilorin, Ilorin, Nigeria

SECTION VIII –ENVIRONMENTAL AND EARTH SCIENCE

Poster Session

Thursday Morning 9:00 – 10:00 AM

2nd Floor, SET Building

Authors Present: 9:00 AM-10:00 AM

1. **u Mantle wedge flow beneath Bolivia using teleseismic s-waves. *Nealey E. Sims* and Melissa M. Moore-Driskell, Department of Physics and Earth Science, University of North Alabama, Florence, AL. and Douglas Christensen, Geophysical Institute, University of Alaska Fairbanks, Fairbanks, AK
2. **u Ozone effects on plant physiology and gene expression of hardwood trees. *Sydney Melson¹, Shakira Young¹, Lianna Johnson², Teodora Best², Ketia Shumaker¹ and John Carlson²*, ¹University of West Alabama, Livingston, AL 35470 ²Pennsylvania State University, University Park, PA 16802

SECTION VIII –ENVIRONMENTAL AND EARTH SCIENCE

Paper Session

Thursday 10:00 – 11:40 AM

221 SET Building

JJ Wedgworth, Presiding

3. 10:00 Mercury concentrations and speciation in soils at a contaminated industrial site. *Carrie Miller*, Troy University, Troy, AL 36082 and David Watson, Oak Ridge National Laboratory, Oak Ridge, TN, 37831
4. 10:20 Hartselle Sandstone Mineral Development. *Joel S. Mize*, P.E., University of Alabama, Tuscaloosa AL 33555. David D. Cope, University of North Alabama, Florence, AL 35630.
5. 10:40 **u Management in additive manufacturing/3D printing. *Tammie Clark* and J. Wayne McCain, Athens State University, Athens, AL 35611.
6. 11:00 Factors of Urbanization and Its Impact on the Agricultural Land of North Alabama, 1980-2010. *Tesome Gabre*, Mezemir Wagaw, and Lakesha Stewart, Alabama A&M University, Normal, AL 35762
7. 11:20 **u Power grid at risk. *Benjamin Subjectt* and J. Wayne McCain, College of Business, Athens State University, Athens, AL 35611.
8. 11:40 BUSINESS MEETING (Elect a Section VIII Vice-Chair)

**u or **g Denotes paper or poster is entered in the student paper/poster competition

SECTION IX: HEALTH SCIENCES

Session I

Thursday Morning

311 SET Building

Melinda L. Carter, Presiding

1. 8:00 Addressing Health Disparities in Asthma for Middle School Students in a Medically Underserved Area in Mobile County. *Ellen Buckner*, Tim Opholt, Kristina Miller, and Donna Copeland. University of South Alabama, Mobile, AL 36688.
2. 8:15 Diagnostic Imaging in Child Abuse. *Donna G. Cleveland* and Cherie L Pohlmann, Dept of Radiologic Sciences, University of South Alabama, Mobile, AL 36688.
3. 8:30 Using Cause of Death to Enhance Educational Experience in Clinical Gross Anatomy Laboratory. *Melinda L. Carter*, Krissy Wood, and James Foster, Alabama College of Osteopathic Medicine, Dothan, 36303.
4. 8:45 Teaching and Evaluation in a Transitioned Traditional to Accelerated Mental Health Nursing (BSN) Course. *Bettina H. Riley*, Joe Farmer, Suzanne Bihan, Jeanene Cockrell, Margaret Moore-Nadler, Allison Rudd, and James Harris, College of Nursing, University of South Alabama, Mobile, Alabama 36688.
5. 9:00 **uh Efficacy of Triclosan and povidone-iodine as disinfectants against *Escherichia coli* isolated from neonatal oronasopharyngeal suctioning devices. *Linda A. Hanson* and Pamela O'Neal, College of Nursing, and Joseph G. Leahy, Department of Biological Sciences, University of Alabama, Huntsville, AL 35899.
6. 9:15 **uh Patient's Perceptions of Visiting a Student Run Free Health Clinic, *Zane A. Cooley*, University of South Alabama, College of Nursing, Mobile, AL 36688.
- 9:30 BREAK
7. 9:45 Evaluation of *Centella asiatica* Selected Triterpenes (CAST) on Locomotion, Anxiety, Hippocampal-Learning/Memory and –Neuronal Morphology in Mecp2 Mice, An Animal Model of Rett Syndrome. *Ronald N. Hunsinger*, Suzanne D. Oberholster, Julie K. Grishman, David A. Johnson, Department of Biological and Environmental Sciences, Samford University, Birmingham, AL 35229 Stefan Arroyo, Li Wie and Lucas Pozzo-Miller, Department of Neurobiology, University of Alabama at Birmingham, Birmingham, AL 35294.
8. 10:00 **uh Knowledge and Perceptions of Hand Hygiene in Nursing Students. *Stephen J. Knowles*, Department of Nursing, University of South Alabama, Mobile, AL 36688.

9. 10:15 ****u** Bacteriophage as Keystones of the Breastmilk Microbiome. *Timothy Odom* and Michael Sandel, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470. Rune Toms, Department of Pediatrics, University of Alabama at Birmingham, Birmingham, AL 35233. Casey Morrow, Department of Cell Developmental and Integrative Biology, University of Alabama at Birmingham, Birmingham, AL 35294.
10. 10:30 Tobacco-Free Implementation at the University of South Alabama Health System. Bettina H. Riley, College of Nursing, University of South Alabama, and Valerie Heinl, *Kortni Crook-Kennell*, and Tracee Andrews, University of South Alabama Medical Center, Mobile, AL 36617.
11. 10:45 ****uh** Caring for Children with Special Needs. *Heidi Evans*, Ashley Marass, Misty Guy, College of Nursing, University of South Alabama, Mobile, AL 36688.
12. 11:00 Palliative Care Is Underutilized in Patients with Severe Intracerebral Hemorrhage. *Sindhu Lakkur*, April Sisson, Karen Albright, Michael Lyerly, Kara Sands, Mark Harrigan, Marie Bakitas, Kathryn Burgio, University of Alabama at Birmingham. Michelle Peck and Linh Nguyen, University of Texas. Amelia Boehme, Columbia University.
- 11:15 BUSINESS MEETING (election of new Vice-Chair, February 2016 to February 2018 term)

Poster Session

Thursday Morning

3rd Floor, SET Building

Authors Present: 11:30 am – 1:00 pm for Viewing and Judging

13. ****u** Caffeine and cognitive abilities of rats. *Jennie L. Monosky* and Uduak Afangideh, Department of Biology, Faulkner University, Montgomery, AL 36109
14. ****u** Gender differences in manual dexterity and how it relates to hand therapy. *Leslie Parrish* and Uduak Afangideh, Department of Biology, Faulkner University, Montgomery, AL 36109.
15. Bacteriophage as keystones of the breastmilk microbiome. *Timothy Odom* and Michael Sandel, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470. Rune Toms, Department of Pediatrics, University of Alabama at Birmingham, Birmingham, AL 35233.
16. ****g** Lessons from Ecuador to Alabama: Experiences from ACOM's first medical outreach program. *Daphne L. Wong*, Christopher Z. Mabini, Taylor Martin, Heather Theobald, Julie Marie V. Timple and Jessica White, Alabama College of Osteopathic Medicine, Dothan, AL 36303.

17. **uh Pretty nails, crooked nose: an assessment of air quality. *Rebecca Stillwell* and Azita Amiri College of Nursing, University of Alabama in Huntsville, Huntsville, AL 35899.
18. **g Effects of the indoor thermal environment on human food intake: a pilot randomized controlled trial *Molly C. Bernhard1*, Peng Li¹, David B. Allison¹ and Julia M. Gohlke² ¹University of Alabama at Birmingham, Birmingham, AL; ²Virginia Polytechnic Institute and State University, Blacksburg, VA.
19. Herbal extract on microbial organisms. Uduak Ufangideh and *Sarah L. Burroughs*, Faulkner University, Montgomery, AL 36109.

**u, **uh or **g Denotes presentation is entered in competition as undergraduate, undergraduate honors or graduate student

SECTION X. BIOETHICS AND HISTORY & PHILOSOPHY OF SCIENCE

Paper Session

Thursday Afternoon, 1:20-3:20

114 SET Building

Clark Lundell, Presiding

1. 1:20 Biology from the Beginning: A history of biology course at the University of West Alabama. *Brian S. Burnes*, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL, 35470.
 2. 1:40 CRISPR Critters are Coming: Better Get Ready. *James T. Bradley*, Department of Biological Sciences, Auburn University, Auburn, AL, 36849.
 3. 2:00 Moving from DNR to AND: An ethical imperative. Alice Younce, Bettina Riley, Tyler Sturdivant, *Ellen Buckner*, Pam Johnson, Kortni Kennell, University of South Alabama, Mobile, AL, 36688-0002
 4. 2:20 Science as a Synthesis of the Dual Nature of Experience. *Clark E. Lundell*, School of Industrial + Graphic Design, Auburn University, AL, 36849.
 5. 2:40 The Other Side of STEM - Preparing a New Generation for an Uncertain Future. *Brian J. LaHaie*, College of Environment and Design, University of Georgia, Athens, GA, 30602, and Clark E. Lundell, School of Industrial + Graphic Design, Auburn University, Auburn AL, 36849
 6. 3:00 New Roles for Imperfect Vaccines. *Kenneth Nusbaum*, College of Veterinary Medicine, Auburn University, AL, 36849
- 3:30 BUSINESS MEETING

ALABAMA JUNIOR ACADEMY OF SCIENCE

Mark Jones, State Director

Posters at Sci-Mix Session

Thursday Evening, 6:00-7:00 PM

Guillot University Center Loft

Engineering and Math

1. *Drew, Prevost**, Development of Scalable, Adaptable, and Reusable Solutions to Electric and Hybrid Vehicle Power Electronics and Active Battery Management, *Covenant Christian Academy*, Hazel Green.
2. *Maya Padmalayam*, Focused Ultrasound-mediated Targeted Delivery of Polymer-encapsulated Drugs: A Novel Therapeutic Strategy for Cancer, *Alabama School of Fine Arts*, Birmingham.
3. *Lucas Lynn*, Shear Radial Strength: Using Web Geometry to Create a Better Body Armor, *Wetumpka High School*, Wetumpka.
4. *Benjamin Atwood*, The Development of Hand Movement Assisted User Verification and Reverse Turing Test, *Alabama School of Fine Arts*, Birmingham.
5. *Rahul, Lall*, Prognostication of Flexible Batteries for Wearable Electronics, *Auburn High School*, Auburn.
6. *Blaine LaGory*, Mutation Rate and Its Effect on Genetic Algorithm Efficiency, *Jefferson County International Baccalaureate*, Birmingham.

Environmental, Earth and Space Science

7. *Megan Lange**, Removal of BTEX from Storm Water using Nanoparticle Enhanced Reactive Porous Concrete, *Auburn High School*, Auburn.
8. *Maya Samuels-Fair**, Restoring Urban Sites with Locally Sourced Native Saplings, *Alabama School of Fine Arts*, Birmingham.
9. *Zena Banker**, Freshwater not Frackwater: the Effect of Hydraulic Fracturing on the Chlorophyll Content in Peas and the Survival of Freshwater Algae, *Wetumpka High School*, Wetumpka.
10. *Rowan ELqishawi*, Coal Energy or Pure Water but Maybe Both...Alabama to Choose, *Hoover High School*, Hoover.
11. *Briganna Abernathy*, The Removal of Oil from Water Utilizing Ferrofluid and Neodymium Magnets, *Jefferson County International Baccalaureate*, Helena.
12. *Adriane, Rodriguez*, Soft Shell Whirley Bird, *Wetumpka High School*, Wetumpka.
13. *Quinn McCormick*, The Effect of Bisphenol A (BPA) on Oxidative Stress Enzymes in *Atemia salina* and *Neocaridina heteropoda*: A Potential Mechanism of Increased Risk for Breast Cancer from Environmental Exposure, *Jefferson County International Baccalaureate*, Birmingham.

Life Science

14. *Katherine Stahlhut**, The Effect of Commercial Arbuscular Mycorrhizal Fungi Inoculant on *Phaseolus vulgaris* 'Kentucky Wonder', *Jefferson County International Baccalaureate*, Birmingham.
15. *Samantha Harris*, A study on color inclination of variant *Rhopalocera* species, *Jefferson County International Baccalaureate*, Birmingham.
16. *Alexis Jones*, Macro and Micro Nutrient Assessment in Recycled Canine Food Supplements, *Auburn High School*, Auburn.
17. *Ernald Jules Aloria*, The Effects of Ocean Acidification on Marine Life, *Wetumpka High School*, Wetumpka.

Medicine, Health, Behavioral and Social Science

18. *Hannah James**, The Effects of a Natural Extract (Allyl disulfide) on Lymphocyte Activation, *Wetumpka High School*, Wetumpka.
19. *Ronnie Festok**, Observing the Mechanisms through Which Liver Cancer Cells Fight Oxidative Stress, *Jefferson County International Baccalaureate*, Birmingham.
20. *Ava Michl**, The Association of Detectable Viral Load and Increased Heat Pain Sensitivity in Individuals with HIV, *Alabama School of Fine Arts*, Helena.
21. *Arjun and Maya Guru*, Determination of Activity of Kinases in Muscle-invasive Bladder Cancer Compared to adjacent Normal Bladder to Identify Drivers of Cancer Growth and Therapeutic Targets, *The Altamont School*, Vestavia.
22. *Lauryn Polito*, The Effect of FroggTogg® Bracelet on Lowering Body Temperature, *Jefferson County International Baccalaureate*, Trussville.
23. *Avinash Anshumali*, Investigating the Anticancer Activities of Auraptene, *WP Davidson High School*, Mobile.
24. *Zoe Brown*, Eucalyptus Oil Remedy, *Wetumpka High School*, Wetumpka.
25. *Avinask Anshumali*, Investigating Anticancer Activities of Auraptene, *WP Davidson High School*, Mobile.
26. *Rohan Badve*, Ability of Different Carrier Substances to Protect HaCat Skin Cells from Apoptosis., *WP Davidson High School*, Mobile.
27. *LaRissa Duke*, My Favorite Beverage Ruined My Teeth, *Wetumpka High School*, Wetumpka.

Physical Science

28. *Adam He**, Investigation of the Orbital Stability of Circumbinary Planets in the Habitable Zone of the Double-star System Kepler-16, *Alabama School of Fine Arts*, Birmingham.
29. *Michael McGinnis**, Measurement and Growth of Microfilm Ices for Application in Terahertz Spectroscopy of Ices, *Jefferson County International Baccalaureate*, Moody.
30. *Kaitlyn Lawrence**, Can the direction of a vehicle's applied force increase centripetal force and affect fuel efficiency?, *Wetumpka High School*, Wetumpka.
31. *Noel Lange*, Kinetic Evaluation of Metal Impregnated Non-Woven Cotton Fabric Capable of Reducing Sulfur Dioxide in Flue Gas, *Auburn Junior High School*, Auburn.

32. *Michael McGinnis**, Measurement and Growth of Microfilm Ices for Application in Terahertz Spectroscopy of Ices, *Jefferson County International Baccalaureate*, Moody.
33. *Rupa Palanki*, Analysis of Glycerol Reactor to Produce Hydrogen for Fuel Cell Applications, *W.P. Davidson High School*, Mobile.
34. *Varsha Sridhar*, The Determination and Bioremediation of Potential Carcinogens, Bisphenol A (BPA) and Bisphenol S (BPS), *Jefferson County International Baccalaureate*, Birmingham.

* Denotes AJAS student who is also entered in the Gorgas Scholarship Competition.

GORGAS SCHOLARSHIP COMPETITION

Sci-Mix Session
Thursday Evening, 6:00-7:00 PM
Guillot University Center Loft

Ellen Buckner, Presiding

Finalists in the 2016 Alabama Science Scholar Search and Gorgas Scholarship Program will discuss their projects.

1. Ernard Jules Aloria, The Effects of Ocean Acidification on Marine Life. *Wetumpka High School*, Wetumpka.
2. Zena Banker, Freshwater not Frackwater: the Effect of Hydraulic Fracturing on the Chlorophyll Content in Peas and the Survival of Freshwater Algae, *Wetumpka High School*, Wetumpka.
3. Ronnie Festok, Observing The Mechanisms Through Which Liver Cancer Cells Fight Oxidative Stress. *Jefferson County International Baccalaureate*, Birmingham
4. Adam He*, Investigation Of The Orbital Stability Of Circumbinary Planets In The Habitable Zone Of The Double-Star System Kepler-16. *Alabama School of Fine Arts*, Birmingham.
5. Hannah James, The Effects Of A Natural Extract (Allyl Disulfide) On Lymphocyte Activation. *Wetumpka High School*, Wetumpka.
6. Megan Lange, Removal Of Btex From Storm Water Using Improved Nanoparticle Enhanced Porous Concrete. *Auburn High School*, Auburn.
7. Ava Michl, Viral Load Is Associated With Increased Heat Pain Sensitivity In Individuals With HIV. *Alabama School of Fine Arts*, Birmingham.
8. Om Patel, Basal And Maximal Oxygen Consumption Rates Of Human Umbilical Venous Endothelial Cells (Huvec) Are Decreased In Infants Who Die Or Develop Bronchopulmonary Dysplasia (bpd). *Alabama School of Fine Arts*, Birmingham.
9. Drew Prevost* , Development of Scalable, Adaptable, and Reusable Solutions to Electric and Hybrid Vehicle Power Electronics and Active Battery Management. *Covenant Christian Academy*, Hazel Green.
10. Maya Samuels-Fair, Restoring Urban Sites With Locally Sourced Native Saplings. *Alabama School of Fine Arts*, Birmingham
11. Katherine Stahlhut, The Effect Of Commercial Arbuscular Mycorrhizal Fungi Inoculant On *Phaseolus Vulgaris* 'Kentucky Wonder'. *Jefferson County International Baccalaureate*, Birmingham.
12. Neelu Varghese, The Role Of Oxidative Stress And Mitochondria On Skeletal Muscle Differentiation. *Alabama School of Fine Arts*, Birmingham.

**Intel National Science Talent Search Semi-Finalist*

OBJECTIVES OF THE ALABAMA ACADEMY OF SCIENCE

The objectives of the Academy are to:

- Promote the development of interest in scientific matters in the state,
- Provide means for publication of papers and abstracts,
- Provide opportunity for increased cooperation and fellowship among its members,
- Cooperate with other organizations having similar aims,
- Render public service in scientific matters,
- Promote the interest in and study of science by the youth of Alabama,
- Provide for and award scholarships to deserving youth of Alabama.

In fulfilling these objectives, the Academy is devoted to nearly all aspects of science and science education.

EDUCATIONAL ACTIVITIES OF THE ACADEMY

The Academy sponsors

- Alabama Junior Academy of Science, a statewide organization of high school science clubs
- Junior Science and Humanities Symposium, an activity supported by the United States Army, U.S. Navy, U.S. Air Force, and the U.S. Coast Guard
- Seven Regional Science Fairs at which high school students exhibit the results of their research or study projects. Regional Finalists compete in the Alabama State Science & Engineering Fair. Winners go to the International Science and Engineering Fair (ISEF)
- Science Olympiads in which regional winners compete at the state level. Alabama winners go to the National Competition.
- Visiting Scientist Network in which volunteer members, upon invitation by a teacher, go to high schools to present talks, demonstrations, or workshops
- Travel grants to enable students to attend the annual meetings where they can present their research results in the Student Research Award Competition
- Research grants to enable students to carry out mentored research

2016 REGIONAL SCIENCE FAIRS

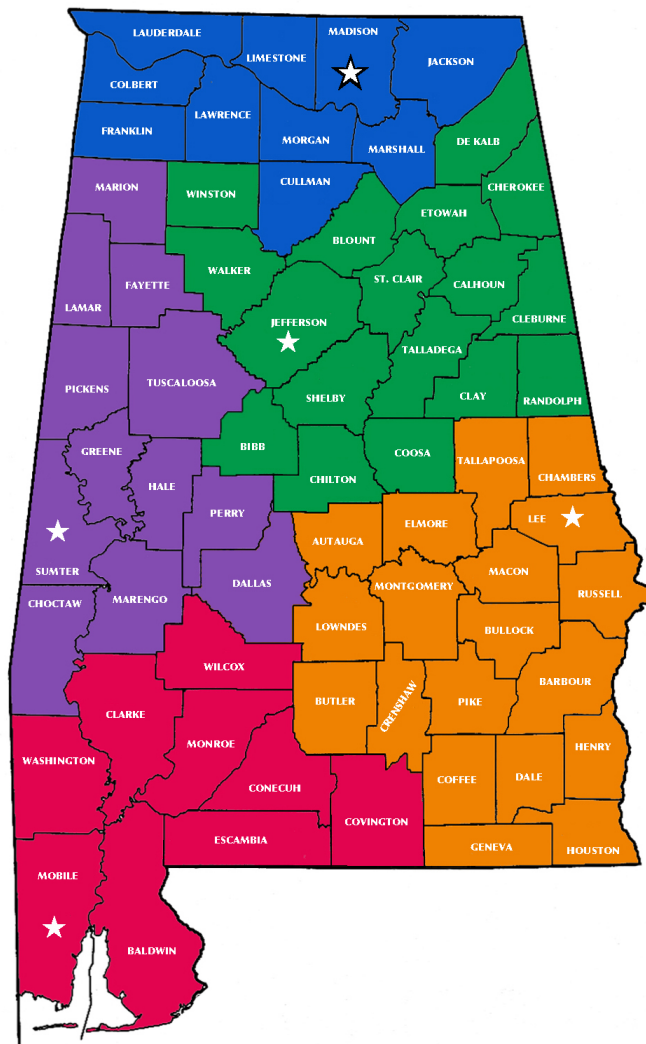
1. **Central Alabama Regional Science & Engineering Fair, [web](#)**, March 5, 2016
Kevin Jarrett, coordinator
The University of Alabama at Birmingham
Community Outreach, 5th Fl., CHSB 19
933 19th Street South
Birmingham, AL 35294-2041
2. **West Alabama Regional Science Fair, [web](#)**, March 4-5, 2016.
Roger Campbell, Ph.D. rcampbell@uwa.edu
Chairperson, Department of Physical Sciences
The University of West Alabama
Station 23
Livingston, AL 35470
(205) 652-3873
3. **North Alabama Regional Science and Engineering Fair, [web](#)**, March 8-14, 2016
Jacob Kerstiens, coordinator
jacob.kerstiens@uah.edu
The University of Alabama in Huntsville
College of Engineering
Huntsville, AL 35899
4. **Greater Eastern Alabama Regional Science and Engineering Fair, [web](#)**, March 10, 2016
Josh King
GEARSEF Fair Coordinator
334-844-8123
josh.king@auburn.edu
5. **Mobile Regional Science and Engineering Fair, [web](#)**, March 11, 2016
Engineering@southalabama.edu
David T. Allison, Ph.D.
Department of Earth Sciences
136 LSCB, 307 N. University Blvd.
University of South Alabama
Mobile, AL 36688
6. **Alabama Science & Engineering Fair, [web](#)**, March 31-April 2, 2016
Vanessa Colebaugh, coordinator
vanessa@nsstc.uah.edu
The University of Alabama in Huntsville
Earth System Science Center, CRH 3078
Huntsville, AL 35899

2016 INTERNATIONAL SCIENCE AND ENGINEERING FAIR

An activity of Intel Science Service, 1719 N Street, NW, Washington, DC 20036, (202) 785-2255, FAX (202) 785-1243. <https://student.societyforscience.org/intel-isef> .

The Intel 2016 ISEF will be held May 8-13, 2016 at the [Phoenix Convention Center](#), Phoenix, Arizona

Virginia Vilardi, Intel/ISEF and State Coordinator, 1251 Coosa River Parkway, Wetumpka H. S., 36092, (334) 799-0104, Virginia.vilardi@elmore.k12.al.us.



ALABAMA SCIENCE OLYMPIAD 2015-2016

The Alabama Science Olympiad site is at <http://www.alabamaso.org/>. Individuals can visit the [Tournaments](#) page for details. The following is the listing of tournaments with hot links to the various sites:

Division A2, Elementary Science Olympiad, Grades 3-6

Elementary Science Olympiad at Jacksonville High School

Saturday, February 20th

Details at the <http://www.esoatjhs.org/> web site.

Maximum of one team per school.

ESO at the University of West Alabama

Tuesday, October 20th

ESO at Auburn University

Saturday, February 20th

Details at the

<http://www.auburn.edu/academic/cosam/departments/outreach/programs/Science%20Olympiad/science-olympiad-home-page.htm>

web site.

Division B, Middle School Science Olympiad, Grades 6-9

University of Alabama, Tuscaloosa

Saturday, February 20th

Link to additional information <http://scienceolympiad.as.ua.edu/>

Auburn University, Auburn

Saturday, February 27th

Link to additional information

<http://www.auburn.edu/academic/cosam/departments/outreach/programs/Science%20Olympiad/science-olympiad-home-page.htm>

University of Alabama at Huntsville

Saturday, February 20th

Link to additional information <http://nsstc.uah.edu/scienceolympiad/>

Spring Hill College, Mobile

Saturday, March 5th

Link to additional information <http://adminblogs.shc.edu/scienceolympiad>

University of Alabama at Birmingham

Saturday, February 20th - Date Change

Link to additional information [UAB Regional Information](#).

Division C, High School, Grades 9-12

University of Alabama, Tuscaloosa

Saturday, February 20th

Link to additional information <http://scienceolympiad.as.ua.edu/>

University of Alabama at Huntsville

Saturday, February 20th

Link to additional information <http://nsstc.uah.edu/scienceolympiad/>

Spring Hill College, Mobile

Saturday, March 5th - FULL as of 9/28

Link to additional information <http://adminblogs.shc.edu/scienceolympiad/>

University of Alabama at Birmingham

Saturday, February 20th - Date Change

Link to additional [UAB Regional Information](#).

State Tournaments

Huntingdon College, Montgomery

Division B and C State Olympiads

Saturday, April 9, 2016

http://oiac.huntingdon.edu/so/scienceolympiad/default_frame.html

ASO State Policies can be found at:

- [Registration Information: http://www.alabamaso.org/registration.html](http://www.alabamaso.org/registration.html)
- [Registration Form \(PDF\): http://www.alabamaso.org/asoreg15.pdf](http://www.alabamaso.org/asoreg15.pdf)
- [Coaches Handbook and Policies: http://www.alabamaso.org/handbook.html](http://www.alabamaso.org/handbook.html)
- [Division Descriptions: http://www.alabamaso.org/divisions.html](http://www.alabamaso.org/divisions.html)
- [ASO News and Notes: http://www.alabamaso.org/index.html](http://www.alabamaso.org/index.html)

National Science Olympiad Tournament

The Science Olympiad National Tournament for divisions B and C will be hosted by the University of Wisconsin - Stout on May 19-21, 2016. Visit scienceolympiad2016.org for more information.

State Director: Jane Nall, 31110 Wakefield Drive, Spanish Fort, AL 36527 (251) 621-2911, email drnall@hotmail.com

Alabama Science Olympiad web page: <http://alabamaso.org/>

National Science Olympiad web page: <http://soinc.org/about>

WILLIAM H. MASON SCIENCE TEACHER FELLOWSHIPS

The William H. Mason Science Teacher Fellowship Fund honors the late Dr. Mason's dedication and leadership in the Academy. Contributions may be made online on the Alabama Academy of Science website. Michael B. Moeller serves as Chair of the Mason Science Teacher Fellowship Committee, UNA, Box 5049, (256) 765-4479, mbmoeller@una.edu. Downloadable applications and further information can be found on the Academy web site, www.alabamaacademyofscience.org.

Fellowships have been awarded to these individuals for study at the indicated institutions:

1990 - 1991	Mrs. Amy Livengood Sumner, UAB
1991 - 1992	Mrs. Leella Holt, UNA.
1992 - 1993	Mrs. Joni Justice Shanklee, Samford University.
1993 - 1994	Jeffrey Baumbach, Auburn University.
1994 - 1995	Not Awarded.
1995 - 1996	Laura West Cochran, University of Montevallo.
1996 - 1997	Tina Anne Beams, UA.
1997 - 1998	Carole Collins Crabbe Clegg, UAB
1998 - 1999	Cynthia Ann Phillips, UNA
1999 - 2000	Ruth Borden, UAB
2000 - 2001	Amy K. Murphy, UAB, Karen L. Celestine, AL A&M
2001 - 2002	Jeannine Ott, Eubanks, Auburn University
2002 - 2003	Not Awarded
2003 - 2004	Kanessa Miller, Auburn University
2004 - 2005	Not Awarded
2005 - 2006	Mary Busbee, UAB, and Bethany Knox, UAB
2006 - 2007	Kelly Harbin, UAB
2007 - 2008	Michael Hallman, UA
2008 - 2009	Sherri Sanders Grosso, UNA
2009 - 2010	Not Awarded
2010 - 2011	Danielle Brooke Morlan, UWA
2011 - 2012	Cory Goble, University of Montevallo
2012 - 2013	Amber Foster, UA
2013 - 2014	Amy Bolding
2014 - 2015	Arpan Bosmia, UAB
2015 - 2016	Lacey McEwen, Samford

WRIGHT A. GARDNER AWARDEES

Recipients Are Selected For Their Outstanding Contributions to Science While in Residence in Alabama

- 1984 Robert P. Bauman, Physics, University of Alabama at Birmingham
- 1985 Nolan E. Richards, Research Scientist, Reynolds Metals Company, Sheffield
- 1986 S. T. Wu, Mechanical Engineering and Aeronautic Research, University of Alabama in Huntsville
- 1987 Herbert H. Winkler, Microbiology, University of South Alabama
- 1988 Richard W. Compans, Microbiology and Senior Scientist, University of Alabama at Birmingham
- 1990 Max Cooper, Medicine and Immunology, University of Alabama at Birmingham
- 1991 Dan Urry, Biochemistry, University of Alabama at Birmingham
- 1992 Gail Cassell, Microbiology, University of Alabama at Birmingham
- 1994 Frank Rose, Electrical Engineering, Space Power Institute, Auburn University
- 1996 Prakash Sharma, Physics, Tuskegee University
- 1997 Robert E. Pieroni, Internal and Family Medicine, University of Alabama, Tuscaloosa
- 1998 Thomas J. Wdowiak, Physics and Space Exploration, University of Alabama at Birmingham
- 1999 Samuel B. Barker, Physiology, and Dean Emeritus, University of Alabama at Birmingham
- 2000 George Crozier, Dauphin Island Sea Lab, Mobile
- 2001 James B. McClintock, Biology, University of Alabama at Birmingham
- 2002 Sara C. & Wayne H. Finley, University of Alabama at Birmingham Medical School
- 2003 Leven S. Hazlegrove, Samford University, Executive Director, Alabama Academy of Science
- 2004 William J. Barrett, Southern Research Institute, Retired, Birmingham
- 2005 Eugene Omasta, Professor Emeritus, Troy University.
- 2006 Dan Holliman, Professor Emeritus, Birmingham Southern College
- 2007 No award
- 2008 No award
- 2009 No award
- 2010 No award
- 2011 J. Michael Wyss, Director of CORD, University of Alabama at Birmingham
- 2012 No award
- 2013 David B. Allison, Associate Dean for Science, School of Public Health, UAB, Birmingham.
Ram Gupta, Chemical Engineering, Auburn University.
- 2014 Arnold Luterman, Ripps-Meisler Professor of Surgery, University of South Alabama
- 2015 Shaik Jeelani, Chair, Department of Materials Science & Engineering; Tuskegee University

FELLOWS OF THE ALABAMA ACADEMY OF SCIENCE

- 2007 Ellen Buckner (University of Alabama at Birmingham), Leven Hazlegrove (Samford University), Richard Hudiburg (University of North Alabama), Larry Krannich (University of Alabama at Birmingham), Eugene Omasta (Troy University), Prakash Sharma (Tuskegee University).
- 2008 Ram B. Gupta (Auburn University), Harry O. Holstein (Jacksonville State University), Adriane G. Ludwick (Tuskegee University), Ken Marion (University of Alabama at Birmingham), Michael B. Moeller (University of North Alabama)
- 2009 Stephen A. Watts (University of Alabama at Birmingham) and Jane Nall (State Director, Science Olympiad Program)
- 2010 George Cline (Jacksonville State University), David H. Nelson (University of South Alabama), and Virginia Vilardi (State Coordinator, Science Fairs, Wetumpka High School)
- 2011 James T. Bradley (Auburn University), Anne Cusic (University of Alabama at Birmingham), James B. McClintock (University of Alabama at Birmingham)
- 2012 Benjamin J. Bateman (Troy University) and Edward E. Thomas (Auburn University)
- 2013 Safaa H. Al-Hamdani (Jacksonville State University) and Catherine D. Shields (Jefferson County International Baccalaureate School)
- 2014 Brian Burnes (University of West Alabama), Ronald N. Hunsinger (Samford University), and Pradeep Lall (Auburn University)
- 2015 Mickie Powell (University of Alabama at Birmingham) and David Brian Thompson (University of North Alabama)

SECTION OFFICERS, 2015-2016

Section I: Biological Sciences:

- Chair: (2017) Drew Hataway, Department of Biology, Samford University, Birmingham, AL 35229, (205)-726-4190, rahatawa@samford.edu
- Vice Chair: (2017) Gordon MacGregor, Department of Biology, University of Alabama in Huntsville, Huntsville, AL 35899, (256)-824-4925, gm0009@uah.edu

Section II: Chemistry:

- Chair: (2016) Amanda Coffman, Department of Chemistry and Industrial Hygiene, University of North Alabama, Florence, AL 35632, alhofacker@una.edu.
- Vice Chair: (2016) Cameron Gren, Department of Chemistry and Industrial Hygiene, University of North Alabama, Florence, AL 35632, (256)-765-5027, cgren@una.edu

Section III: Physics and Mathematics:

- Chair: (2017). Zengjun Chen, Department Of Physics, Tuskegee University, Tuskegee, AL 36088, (334)-727-8299 chenz@mytu.tuskegee.edu
- Vice Chair: (2017) Mel Blake, Department of Physics and Earth Science, University of North Alabama, Florence, AL 35630, (256)-765-4284, rdblake@una.edu

Section IV: Engineering and Computer Science:

- Chair: (2017), Pradeep Lall, Mechanical Engineering, Auburn University, Auburn, AL, 36849, 334-844-3424, lall@auburn.edu
- Vice Chair: (2017), Vacant

Section V: Social Sciences:

- Chair: (2016) Lonnie Hannon, III, Department of Sociology and Psychology, Tuskegee University, Tuskegee, AL 36088, (205) 276-3065, lhannon@mytu.tuskegee.edu
- Vice Chair: (2016). Susan Herring, (256)-851-8036, sdherring@att.net

Section VI: Anthropology:

- Chair: Harry Holstein, Department of Geography, Jacksonville State University, Jacksonville, Al 36265, (256)-782-5656 holstein@jsu.edu.
- Vice Chair: Phillip Koerper, Department of History, Jacksonville State University, Jacksonville, Al 36265, (256)-782-5604 pkoerper@jsu.edu.

Section VII: STEM Education:

- Chair: (2017) Mel Blake, Department of Physics and Earth Science, University of North Alabama, Florence, AL 35630, (256)-765-4284, rdblake@una.edu
- Vice Chair: (2017) Vacant

Section VIII: Environmental and Earth Science:

- Chair: (2016) Kevin Morse, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470, kmorse@uwa.edu
- Vice Chair: (2016) J. J. Wedgworth, Office of Sponsored Programs, Station 47, University of West Alabama, Livingston, AL 35470, (205)-652-5459, jjwedgworth@uwa.edu

Section IX: Health Sciences:

- Chair: (2016) Melinda Carter, 445 Health Science Boulevard, Alabama College of Osteopathic Medicine, Dothan, AL 36308, (334)-944-4046, mcarter@acomedu.org
- Vice Chair: (2016) Donna Cleveland, Department of Radiologic Sciences, University of South Alabama, Mobile, AL, dcleveland@southalabama.edu

Section X: Bioethics and History and Philosophy of Science:

- Chair: (2017) Stephen Sodeke, Department of Allied Health, Tuskegee University, Tuskegee, AL 36608, (334)-727-8210, sodeke@mytu.tuskegee.edu.
- Vice Chair: (2017) Clark Lundell, Department of Industrial & Graphic Design, Auburn University, Auburn, AL 36849, (334)-844-2369, lundece@mail.auburn.edu.

ELECTED OFFICERS, 2015-2016

President: Brian Toone, Department of Computer Sci., Samford University, Birmingham, AL 35229 (205) 726-2960, brtoone@samford.edu.

President-Elect: Akshaya Kumar, Department of Physics, Tuskegee University, Tuskegee, AL 36088, (334) 727 8968 akumar@mytu.tuskegee.edu.

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Executive Director: Larry Krannich, Department of Chemistry, University of Alabama at Birmingham, Birmingham, AL 35294 (205) 934-8017, krannich@uab.edu.

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- Anne Cusic, Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170 (205) 934-9686, acusic@uab.edu.

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Auditing Junior Academy

- Mark Jones, J. F. Drake Middle School, 655 Spencer Ave., Auburn, AL 36832, (334) 444-3099 mtjones@auburnschools.org.

Budget and Finance

- Ken Marion, Chair, (2016) Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294-1170, kmarion@uab.edu
- Ellen Buckner, (2018) College of Nursing, University of South Alabama, Mobile, AL 36688, ebuckner@southalabama.edu.
- Melia Fincher, (2017) Department of Biology, Samford University, 900 Lakeshore Dr., Birmingham, AL 35229, (205) 726-2928 rmfinche@samford.edu.
- Bettina Riley, (2016) USA College of Nursing, 161 N. Section Street, Suite C, Fairhope, AL 36532, briley@usouthal.edu.
- Mark Jones, (2016) Coordinator of AJAS, J. F. Drake Middle School, 655 Spencer Ave., Auburn, AL 36832, (334) 444-3099 mtjones@auburnschools.org.
- Larry Krannich, Department of Chemistry, University of Alabama at Birmingham, Birmingham, AL 35294, krannich@uab.edu

Editorial Board: (staggered 3-yr terms)

- Jim Bradley, (2016) Department of Biology, Auburn University, Auburn, AL , bradljt@auburn.edu
- David Myer, (2017) English Department, Jacksonville State University, Jacksonville, AL 37276, dmyer@jsu.edu
- Prakash Sharma, (2017) Department of Physics, Tuskegee University, Tuskegee, AL 36088, pcsharma@tuskegee.edu

Electronic Media: (3-yr terms)

- Brian Toone, Editor, (2016) Department of Computer Science, Samford University, Birmingham, AL 35229, brtoone@samford.edu
- Richard Hudiburg, Associate Editor, (2017) Department of Psychology, University of North Alabama, Box 5187, Florence, AL 35632, rahudiburg@una.edu

Emmett B. Carmichael Award: (staggered 2-yr terms)

- Richard Hudiburg, Chair, (2016) Department of Psychology, University of North Alabama, Box 5187, Florence, AL 35632, rahudiburg@una.edu
- David Nelson, (2018) Department of Biology, University of South Alabama, Mobile, AL 36688, dnelson@usouthal.edu
- Safaa Al-Hamdani, Editor (ex officio), (2014) Department of Biology, Jacksonville State University, Jacksonville, AL 36265, sah@jsu.edu
- Larry Davenport, (2017) Department of Biological Sciences, Samford University, Birmingham, AL 35229, ljdavenp@samford.edu

Gorgas Scholarship Program: (staggered 3-yr terms)

- Ellen Buckner, Co-chair, College of Nursing, University of South Alabama, Mobile, AL 36688, ebuckner@southalabama.edu
- Larry Krannich, Co-chair, Department of Chemistry, University of Alabama at Birmingham, Birmingham, AL 35294, krannich@uab.edu
- Elizabeth Dobbins, (2018) Department of Biology, Samford University, Birmingham, AL 35229, egdobbin@samford.edu
- David H. Nelson, (2017) Department of Biology, University of South Alabama, Mobile, AL 36688, dnelson@usouthal.edu
- Prakash Sharma, (2019) Department of Physics, Tuskegee University, Tuskegee, AL 36088, pcsharma@mytu.tuskegee.edu.
- Diane Tucker, (2016) Science and Technology Honors Program, University of Alabama at Birmingham, Birmingham, AL 35294, dtucker@uab.edu.
- Peggy Burnett, Alabama Power Foundation, 600 North 18th Street, Birmingham, AL 35203, PEBURNET@southernco.com.
- Vacant

Junior Academy:

- Mark Jones, J. F. Drake Middle School, 655 Spencer Avenue, Auburn, AL 36832, mtjones@auburnschools.org

Junior Academy Regional Counselors:

- Virginia Valardi, Wetumpka High School, Wetumpka, AL, virginia.vilardi@elmore.k12.al.us

Local Arrangements at University of North Alabama

- Amanda Coffman, Department of Chemistry & Industrial Hygiene, University of North Alabama, UNA Box 5049, Florence AL (256) 765-4344 alhofacker@una.edu

Long Range Planning: (staggered 4-yr terms, committee elects chair)

- Matthew Edwards, Chair, (2018) Department of Physics, Chemistry and Mathematics, PO Box 338, Alabama A&M University, Normal, AL 35762, (256) 372-8119 matthew.edwards@aamu.edu
- John McCall, (2019) Dean & Professor, Department of Biology, University of West Alabama, Livingstone, AL 35470 jmccall@uwa.edu
- Anne Cusic, (2014) Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294-1170, acusic@uab.edu
- Yong Wang (2018) Center for Forestry and Ecology, Alabama A&M University, Normal, AL 35752 yong.wang@aamu.edu

Mason Scholarship: (staggered 3-yr terms)

- Michael Moeller, Chair, Department of Chemistry, University of North Alabama, Box 5049, Florence, AL 35632, mbmoeller@una.edu
- Ronald Hunsinger (2018) 1070 Crest Rd., Leads, AL rnhunsin@samford.edu
- Mickie Powell (2016) Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294 mpowell@uab.edu
- Jane Roy, (2018) School of Education, University of Alabama at Birmingham, Birmingham, AL 35294-1250, jroy@uab.edu
- R. Melvin Blake, (2017) Department of Physical and Earth Science, University of North Alabama, Florence, AL 35632, rdblake@una.edu

Membership: Vacant, Chair

Nominating:

- Ketia Shumaker, Dept. of Biology, University of West Alabama, Livingston, AL 35470, kshumaker@uwa.edu
- Section Chairs

Place and Date of Meeting: (5 members, staggered 5-yr terms)

- Rekha Lall (2017) Auburn Primary Care, East Alabama Medical Center, 1719 Catherine Ct, Auburn, AL 36830, 334-826-722-, rlall@eamc.org, Chair,
- Larry Krannich, (2016) Department of Chemistry, University of Alabama at Birmingham, Birmingham, AL 35294, krannich@uab.edu
- George Cline, (2015) Department of Biology, Jacksonville State University, Jacksonville, AL 36265, gcline@jsu.edu
- Jimmy Triplett, (2016) Department of Biology, Jacksonville State University, Jacksonville, AL 36265, jtriplett@jsu.edu
- vacant

Public Relations: (staggered 4-yr terms)

- Brian Burnes, Chair (2018) Department of Biology, University of West Alabama, Livingstone, AL 35470, bburnes@uwa.edu
- Ellen Buckner, (2015) College of Nursing, University of South Alabama, Mobile, AL 36688, ebuckner@southalabama.edu
- Ronald Hunsinger, (2017) 1070 Crest Road, Leeds, AL 35094, rnunsin@samford.edu
- Mickie Powell, (2016) Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294, mpowell@uab.edu
- vacant

Research: (5 members with staggered 5-yr terms)

- Brian Burnes, Chair (2016) Department of Biology, University of West Alabama, Livingston, AL35470, bburnes@uwa.edu
- Bruce Smith, (2018) Scott-Ritchey Research Center, Auburn University, Auburn, AL 36849, smithbf@auburn.edu
- Stephen Watts, (2018) Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294, sawatts@uab.edu
- Yong Wang, (2016) Center for Forestry and Ecology, Alabama A&M University, Normal, AL 35762, yong.wang@aamu.edu
- Vacant
- Vacant

Resolutions:

- Ketia Schumaker, (2016) Department of Biology, University of West Alabama Station #7, Livingston, AL 35470, kshumaker@uwa.edu

Science and Public Policy:

- Scott Brande, Chair, (2016) Department of Geology, University of Alabama at Birmingham, Birmingham, AL 35294, sbrande@uab.edu
- Steven Carey, (2017) Department of Natural Sciences, University of Mobile, Mobile, AL 36616,
- Boakai Robertson, (2017) Department of Biology, Alabama State University, Montgomery, AL 36101, brobertson@alasu.edu

- James Bradley, (2016) Department of Biological Sciences, Auburn University, Auburn, AL 36849, bradljt@auburn.edu

Steering:

- John McCall (2016) Department of Biological and Environmental Sciences, University of West Alabama, 35470, jmccall@uwa.edu.
- Brian Toone (2017) Department of Computer Sci., Samford University, Birmingham, AL 35229 (205) 726-2960, brtoone@samford.edu.
- Akshaya Kumar (2018) Department of Physics, Tuskegee University, Tuskegee, AL 36088, (334) 727 8968 akumar@mytu.tuskegee.edu.
- Bettina Riley, (2017) USA College of Nursing, 161 N. Section Street, Suite C, Fairhope, AL 36532, briley@southalabama.edu.
- Melia Fincher, (2017) Department of Biology, Samford University, 900 Lakeshore Dr., Birmingham, AL 35229, (205) 726-2928 rmfinche@samford.edu

Wright A. Gardner Award: (4 members with staggered 2-yr terms)

- Prakash Sharma, Chair, (2018) Department of Physics, Tuskegee University, Tuskegee, AL 36088, pcsharma@mytu.tuskegee.edu
- Anne Cusic, (2016) Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294, acusic@uab.edu
- Gene Byrd, (2017) Department of Physics, University of Alabama, Tuscaloosa, AL 35487, byrd@possum.astr.ua.edu
- Vacant

PAST PRESIDENTS

NAME	TERM
Wright A. Gardner (2 terms).....	1924-26
Stewart J. Lloyd	1926-27
John R. Sampey	1927-28
Walter C. Jones	1928-29
Fred Allison	1929-30
Emmett B. Carmichael.....	1930-31
George J. Fertig	1931-32
J.F. Duggar	1932-33
J.L. Brakefield	1933-34
Russell S. Poor	1934-35
A.G. Overton	1935-36
Walter B. Jones	1936-37
Roger W. Allen	1937-38
P.H. Yancey	1938-39
George D. Palmer	1939-40
C.M. Farmer	1940-41
Paul D. Bales	1941-42
W.M. Mobley	1942-43
E.V. Jones	1943-44
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J.M. Robinson	1945-46
James L. Kassner	1946-47
John Xan	1947-48
Eugene D. Emigh	1948-49
C.A. Basore	1949-50
Harold E. Wilcox	1950-51
Henry Walker	1951-52
John A. Fincher	1952-53
Joseph F. Volker	1953-54
William T. Wilks	1954-55
Ralph Chermock	1955-56
J. Allen Tower	1956-57
Howard Carr	1957-58
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G.O. Spencer	1971-72
Joseph C. Thomas	1972-73
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James C. Wilkes	1977-78
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Kenneth Ottis	1981-82
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Philip G. Beasley	1986-87
H. Dean Moberly	1987-88
Richard L. Shoemaker	1988-89
Adriane G. Ludwick	1989-90
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Prakash Sharma	1993-94
Eugene Omasta	1994-95
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Thomas S. Jandebour	1996-97
Ellen B. Buckner	1997-98
Moore Asouzu	1998-99
Larry R. Boots	1999-00
Richard Hudiburg	2000-01
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Anne M. Cusic	2003-04
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George Cline	2007-08
Kenneth Roblee	2008-09
D. Brian Thompson	2009-10
Brian Burnes	2010-11
Mickie Powell	2011-12
Ronald N. Hunsinger	2012-13

Emanuel Waddell.....	2013-14
John McCall.....	2014-15
Brian R. Toone.....	2015-16

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