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

Meeting Jointly With

ALABAMA JUNIOR ACADEMY OF SCIENCE
GORGAS SCHOLARSHIP COMPETITION
ALABAMA HONORS PROGRAMS

March 11-13, 2015
Lyon Hall
The University of West Alabama
Livingston, 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
   Bryan W. Whitfield Memorial Hospital: (334) 289-4000, (334) 287-2100

Crisis Center 24 hour Hotline:
   West Alabama Mental Health Center: (205) 289-2410
   Alliance Health Center of Meridian: (601) 581-9901
   Sexual Assault Services, University Police: (205) 652-3602

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

   Livingston Police Department: (205) 652-9525
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Dear AAS, AJAS, and Gorgas Participants,

It is my great pleasure to welcome you to the campus of The University of West Alabama for the 92nd Annual Meeting of the Alabama Academy of Science. The faculty and staff of the University could not be prouder to host this meeting of the state’s finest scientific minds – both old and young. The Academy has played, and still plays, a vital role in the advancement of the sciences in our state, and we are delighted to help support that role. This institution, like many others in Alabama, has historically embraced a largely educational role and has been an agent of positive change in the West Alabama region. We firmly believe, however, that learning is best achieved through doing. Our faculty are increasingly engaged in research, and we are particularly proud of the number of our students, both graduate and undergraduate, that are taking part in scientific research. The focus of this year’s symposium, undergraduate research, is a topic near and dear to our hearts. This Academy can play a fundamental role in fostering the growth of this endeavor.

We hope you enjoy your stay on our beautiful campus. We believe that you will discover that there is, in fact, “something about this place.”

Again, thank you for traveling to Livingston to participate in this year’s meeting and to join in this organization’s vital role of promoting the sciences in the state of Alabama. It is my sincere hope that you have the most productive and enjoyable meeting possible.

Sincerely,

Tim Edwards
Colleagues,
It is my distinct pleasure to welcome you to the 92nd meeting of the Alabama Academy of Science here at The University of West Alabama. I hope you enjoy, and take full advantage of, this opportunity to interact with your fellow scientists from around the state.
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.

Now, we find ourselves at a critical juncture in education in Alabama – most notably education in the STEM fields. I believe that the membership of this organization must play a major role in moving this state forward. Your skills are needed.

Again, welcome to our annual meeting. On behalf of the Local Arrangements group here at UWA, I hope you have a great meeting.

Thank you,

John McCall
Dean, College of Natural Sciences and Mathematics, University of West Alabama
President, Alabama Academy of Science
The Academy expresses its appreciation to The University of West Alabama and the Local Arrangements Committee for their efforts in planning and hosting this 92nd Annual Meeting.

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<tr>
<th>Local Arrangements Chair</th>
<th>University of West Alabama Herbarium Tour</th>
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<tr>
<td>John McCall</td>
<td>Brian Keener</td>
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<td>205-652-3414</td>
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<td>Kevin Morse</td>
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<td>Mustafa Morsy</td>
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<td>Brian Burnes</td>
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<td>Kevin Morse</td>
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<td>Ketia Shumaker</td>
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<td>Michael Sandel</td>
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<td>Roger Campbell</td>
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<td>Lee Stanton</td>
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<td>Joan Rundles</td>
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<td>Jeffery Merida</td>
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<td>Thomas Ratkovich</td>
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GENERAL INFORMATION

- Registration badges will be required for admission to all scientific paper sessions, the Thursday evening social, 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, PowerPoint 2007). If presenters bring their own, they are responsible for their computer.
- Parking is in the designated parking around Lyon Hall on the University of West Alabama campus.
- A map of the UWA campus can be found on page 64 of the program booklet. Also, an interactive map of the UWA campus can be found at http://secure.uwa.edu/map/index.html.

POSTERS

Posters are to be available for viewing in Hughes Gymnasium on Thursday from 10:30 AM until 4:00 PM. Each poster is allotted 3’ x 4’ of display space and may be set up beginning at 8:00 AM.

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 Hughes Gymnasium. Authors for the section posters should be present for discussions with viewers and competition judges as follows:

Poster Viewing

Thursday:
12:30 – 2:00 PM .................................................. Health Sciences, IX (Hughes Gymnasium)
11:00 AM – Noon ... Industry, Environment, and Earth Science, VIII (Hughes Gymnasium)
10:30 – Noon .................................................. Chemistry, II (Hughes Gymnasium)
11:30 AM – 1:15 PM ........................................... Biological Sciences, I (Hughes Gymnasium)
1:00 AM – 2:30 PM ............................................ Physics and Mathematics III (Hughes Gymnasium)
11:30 – 1:30 PM .................................................. Social Sciences, V (Hughes Gymnasium)
3:30 – 4:30 PM ................................................. STEM Education, VII (Hughes Gymnasium)

NOTE: Posters may be set up in Hughes Gymnasium beginning at 8:00 AM and AAS posters must be removed at 4:30 PM

6:00 – 7:00 PM ......................... Gorgas Scholars and Junior Academy (Hughes Gymnasium)
Program of the Alabama Academy of Science
March 11-13, 2015
Lyon Hall

Wednesday, March 11

5:00 - 7:00 PM: Registration................................................................. Lyon Hall Foyer
6:00 - 7:00 PM: Executive Committee Dinner ..................................... Danner Private Dining Room
7:00 - 9:00 PM: Executive Committee Meeting ................................. Danner Private Dining Room

Thursday, March 12

7:00 - Noon: Registration Foyer

8:00 AM- Noon: Academy of Science Program Sessions (All rooms are in Lyon Hall)

8:00 - Noon:
   9:00 AM  Biological Sciences (Sect. I) ........................................ A128
   9:00 AM: Chemistry (Sect. II) ..................................................... A141
   8:20 AM: Physics and Mathematics (Sect. III) ............................. A130
   10:00 AM: Social Sciences (Sect. V)  ........................................ A138
   10:00 AM: Industry, Environmental and Earth Science (Sect. VIII) .. B132
   9:00 AM: Health Sciences (Sect. IX)  ......................................... B133

10:00 Coffee and Refreshments .................................................... Lyon Hall Foyer

AAS Posters

8:00 - 10:30: Poster Set-Up (All Sections) ........................................ Hughes Gymnasium

10:30 AM- 4:00 PM: Poster Viewing (All Sections) ............................. Hughes Gymnasium
   (All posters must be removed by 4:30 PM)

Authors present:
   11:30 AM – 1:15 PM ................................................................. Biological Sciences (Section I)
   10:30 – Noon ................................................................. Chemistry (Section II)
   1:00 – 2:00 PM ................................................................. Physics and Mathematics (Section III)
   11:30 – 1:30 PM ................................................................. Social Sciences (Section V)
   3:30 – 4:30 PM ................................................................. STEM Education (Section VII)
   11:00 AM – Noon ................................................................. Industry, Environmental, and Earth Science (Section VIII)
   12:30 – 2:00 PM ................................................................. Health Sciences (Section IX)

Noon: Lunch on your own (meal ticket for cafeteria)

Noon: Trustees Luncheon.................................................................

12:50 PM: Group Photograph, ................................................. Outside steps of Bibb Graves Hall
2:00 – 4:00 PM:
Authors’ Reception and Book Signing
Tutwiler Conference Center

1:00 - 5:00 PM: *Academy of Science Program Sessions (All rooms are in Lyon Hall)*

- **1:20 PM:** Biological Sciences II (Section I) ................................................................. A128
- **2:40 PM:** Physics and Mathematics II (Section III) ..................................................... A130
- **1:00 PM:** Engineering and Computer Science (Sect. IV) ........................................... B132
- **1:30 PM:** Social Sciences II (Section V) ........................................................................... A138
- **1:00 PM:** STEM Education (Section VIII) ................................................................. B133
- **1:00 PM:** Bioethics and History & Philosophy of Science (Section X) ................. A141

*3:00 PM: Coffee .................................................................................................................... Lyon Hall Foyer*

- **4:00 -- 4:30 PM** Remove all AAS posters from Hughes Gymnasium
- **5:00 – 5:15 PM** AJAS/AAS Annual Business Meeting ............................................... A130
- **6:00 – 7:00 PM** Sci-Mix; Viewing of AJAS and
  Gorgas Scholars’ Posters ......................................................... Hughes Gymnasium
- **7:00 PM** Joint AJAS/AAS Banquet ...................................................... Bell Conference Center

John McCall (AAS President) and Rohan Palanki (AJAS President), Welcome
Professor Tim Edwards, Provost, University of West Alabama
Welcome
John Hall, Director of the Black Belt Museum and Special Guest
*“William Bartram and Alabama”*
Presentation of Alabama Academy of Science Honors and Awards
Presentation of Gorgas Finalists
Friday, March 13

7:00 – 10:00 AM  Registration.................................................................Lyon Hall Foyer

9:00 – Noon Featured Symposium ...................................................... Lyon Hall Auditorium

“Undergraduate Research: Importance and Benefits”

This symposium is featuring faculty from five Alabama institutions where undergraduate research plays a prominent role in the science curricula. Each set of speakers will address the role of undergraduate research in their undergraduate science curricula and its significance and long-range benefits for the programs and students.

9:00 AM  Mustafa Morsy & Brian Burnes, University of West Alabama
9:30 AM  Peter Van Zandt, Birmingham Southern College
10:00 AM  Christine Sestero, University of Montevallo
10:30 AM  Malia Fincher & Betsy Dobbins, Samford University
11:00 AM  Lisa Keys-Mathews, University of North Alabama
11:30 AM  Panel Discussion and Audience Questions

10:00 AM: Coffee .................................................................................Lyon Hall Foyer

9:00 AM – 5:00 PM Academy of Science Program

9:00 AM – Noon  Biological Sciences (Section I) .....................................A128
11:00 AM – 4:30 PM Anthropology (Section VI) .....................................A130

Noon – 1:00 PM  Lunch on your own (meal ticket for cafeteria)
1:00 – 2:00 PM  Registration.................................................................Lyon Hall Foyer
Thursday, March 12

3:00 -- 5:00 PM  Registration ................................................................. Lyon Hall Foyer
3:00 – 5:00 PM  Poster Set-up and Orientation ........................................ Hughes Gymnasium
2:00 – 4:00 PM  Authors’ Reception and Book Signing ........................... Tutwiler Conference Center
5:00 — 5:15 PM  Joint AAS/AJAS Business Meeting ................................. B132

6:00 – 7:00 PM  “Sci-Mix” Viewing of AJAS and Gorgas Scholars’ Posters ........................................ Hughes Gymnasium

7:00 PM  Joint AJAS/AAS Banquet ............................................................ Bell Conference Center

John McCall (AAS President) and Rohan Palanki (AJAS President) Welcome
Professor Tim Edwards, Provost, University of West Alabama

Welcome
John Hall, Director of the Black Belt Museum and Special Guest
“William Bartram and Alabama”

Presentation of Alabama Academy of Science Honors and Awards
Presentation of Gorgas Finalists
Breakfast on your own, Hotel and town locations (see listing in program)
7:00 AM Registration, .................................................................Lyon Hall Foyer
7:30 AM Paper Reading Orientation, ....................................................B133
7:30 AM AJAS Judges Orientation, .......................................................B133
8:00 AM Paper Competition
  Life Sciences, ..................................................................................B133
  Physical Science ...............................................................................B132
  Engineering and Mathematics and Computer Science ......................B131
  Environmental Science, Earth Science, and Space Science ...............A141
  Medicine and Health, Behavioral, and Social Sciences ......................A138
11:30 AM Elections and Business Meeting .............................................B133
12:00 Noon Lunch with Guest Speakers ..............................................Tutwiler Conference Center
  Blake Cleckler “Undergraduate Research at West Alabama.”
  Michael Sandel “Career Opportunities in Science and Engineering
  with the United States Armed Forces.”
1:00 PM Group Photograph.................................................................Outside steps of Bibb Graves Hall
1:15 PM AJAS Paper Competition Finals ..............................................B133
2:55 – 3:15 PM AJAS Judges meeting: ..................................................B133
3:15 PM Awards Reception, Joint AJAS/Gorgas .....................................B133
GORGAS SCHOLARSHIP COMPETITION
March 12 & 13, 2015
Lyon Hall
Thursday, March 12

3:00 - 5:00 PM  Registration.................................................................Lyon Hall Foyer
3:00 – 5:00 PM  Poster Set-up and Orientation ...............................Hughes Gymnasium
2:00 – 4:00 PM  Authors’ Reception and Book Signing ...............Tutwiler Conference Center
5:00 PM  AJAS Orientation ...............................................................Hughes Gymnasium
6:00 - 7:00 PM  “Sci Mix” Viewing of AJAS and Gorgas
                   Scholars’ Posters ............................................................Hughes Gymnasium

7:00 PM  Joint AJAS/AAS Banquet .................................................Bell Conference Center
         John McCall (AAS President) and Rohan Palanki (AJAS President) Welcome
         Professor Tim Edwards, Provost, University of West Alabama
         Welcome
         John Hall, Director of the Black Belt Museum and Special Guest
         “William Bartram and Alabama”

         Presentation of Alabama Academy of Science Honors and Awards
         Presentation of Gorgas Finalists
GORGAS SCHOLARSHIP COMPETITION
March 12 & 13, 2015
Lyon Hall
Friday, March 13

Breakfast on your own, Hotel and town locations (see listing in program)

7:00 AM Registration .........................................................Lyon Hall Foyer
7:30 AM Gorgas Judges Orientation ...........................................B133
7:30 - 8:45 AM Set Up Science Exhibits/Display/Poster/Orientation................Hughes Gymnasium
12 rectangular tables near posters
8:45 – 9:45 AM Demonstrations for Judges ....................................Hughes Gymnasium
10:00 AM– 12:00 Individual Interviews with Judges ...........................Hughes Gymnasium
12 numbered stations set up around perimeter with two chairs at each station
12:00 Noon Lunch with Guest Speaker ......................................Tutwiler Conference Center

Blake Cleckler “Undergraduate Research at West Alabama.”
Michael Sandel “Career Opportunities in Science and Engineering with the United States Armed Forces.”

12:00 - 1:00 PM Gorgas Judges Executive Session ..................................B133
1:00 PM Group Photograph ..............................................Outside steps of Bibb Graves Hall
1:15 PM AJAS Paper Competition Finals ........................................B133
2:45 PM Remove Posters and Displays ......................................Hughes Gymnasium
3:15 PM Awards Reception, Joint AJAS/Gorgas ..................................B133

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.
1.  **9:00** Altered wheel running and exploratory activity in a mouse model of tyrosinemia type I. Gordon G. MacGregor, Timley Watkins, Sarah Coker, Beth Barnby, Eric M. Mendenhall. Department of Biological Sciences & School of Nursing, University of Alabama in Huntsville, AL 35899.

2.  **9:20** Host origin analysis of fecal microbes. Brian S. Burnes, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470.

3.  **9:40** Integration of DNA replication, chromatin modification, and development during Drosophila oogenesis. Kristopher H. McConnell, Biology Department, Judson College, Marion, AL 36756.

4.  **10:20** A novel method to cultivate Sommerstorffia spinosa (oomycota), an obligate predator of loricate rotifers. Maisey E. Hunter, Caleb G. Lane, and Paul G. Davison, Department of Biology, University of North Alabama, Florence, AL 35632.

5.  **10:40** Annual variation in fish assemblages using brackish pools on a northern Gulf of Mexico barrier island. Caitlyn E. Bonham and John McCall, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470.

6.  **11:00** Seasonal changes in fish communities in near-shore habitats in Santa Rosa Sound, FL. Hannah R. Shirley and John N. McCall, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470.

7.  **11:20** Evidence for or against phototaxis in Sommerstorffia spinosa (oomycota) zoospores. Caleb G. Lane, Maisey E. Hunter, Paul G. Davison, and David B. Thompson, Department of Biology, University of North Alabama, Florence, AL 35632.

12:00 **Noon** LUNCH

**u** or **g** denotes presentation entered in undergraduate/graduate student paper competition
SECTION I – BIOLOGICAL SCIENCES
Poster Session
Thursday Morning/Afternoon, 11:30 AM – 1:15 PM
Hughes Gymnasium

1. **u Exposure to Candida in a college environment. Tamara C. Smoot, Brian Burnes, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470.

2. **u Feeding habits of early juvenile sciaenid fishes of Santa Rosa Sound, FL. Joshua D. Millwood and John McCall, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL 35470.

3. **g Natural thermal environments experienced by eggs affect morphology and performance of hatchling lizards (Anolis sagrei). Phillip R. Pearson, Daniel A. Warner, Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294

4. **g Effects of dietary compounds sulforaphane and withaferin a on mcf-7 breast cancer cells. Kendra J. Royston1,2 Trygve O. Tollefsbol2,3,4,5,6 1The Division of Equity and Diversity, University of Alabama at Birmingham, Birmingham AL, 35294, 2Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294, 3Center for Aging, 4Comprehensive Cancer Center, 5Nutrition Obesity Research Center, 6Comprehensive Diabetes Center, University of Alabama Birmingham, Birmingham, AL 35294, USA

5. **u Toxic effects of acetaminophen by caffeine using fetax. Kameron N. Blair and James Rayburn, Department of Biology, Jacksonville State University, Jacksonville, AL 36265.

6. Impact of adult density on juvenile growth and survival in brown anoles. Agam Dhawan, David Delaney, and Daniel Warner, Department of Biology, University of Alabama Birmingham, Birmingham, AL 35294.

7. **u Temperature facilitates longleaf pine persistence in fire-suppressed montane habitats. Nicole V. Huie1, R. Malia Fincher1, Scot Duncan2, Dreshun Buford2; Kevin Wilson3; Hannah Gousse4; 1Department of Biological and Environmental Sciences, Samford University, Birmingham, AL, 35229; 2Department of Biology, Birmingham Southern College, Birmingham, AL, 35244; 3University of Maryland, College Park, MD, 20742; University of Connecticut, Storrs, CT, 06269.

8. **g Using spotted salamander embryos as models for assessing environmental toxicity of hexavalent chromium. Steven T. Gardner, James Rayburn, and George Cline, Department of Biology, and Nixon Mwebi, Department of Physical and Earth Sciences, Jacksonville State University, Jacksonville, AL 36265.

10. A new method for growing hypoxic cells: the gradient coverslip (gcvs) method. Brenda S. Wright, Dr. Debra M. Moriarity, Department of Biological Sciences, The University of Alabama in Huntsville, AL, 35899.


12. Least snout bean (Rhynchosia Minima (Linnaeus) A.P. de Candolle; Fabaceae) rediscovered in Alabama. Alvin R. Diamond Jr., Department of Biological and Environmental Sciences, Troy University, Troy, AL 36082.

13. Novel genomic target for specific & sensitive identification of Salmonella serovars from retail meat samples. Khaled Aldahami, Sayma Afroz, Abiodun Adesiyun, Temesgen Samuel, and Woubit Abdela, Tuskegee University, Tuskegee, AL, 36088; University of the West Indies, St. Augustine, Trinidad and Tobago.

14. Transfer of Staphylococcus aureus from gym equipment to hands. Essence Parrish and Brian Burnes, Department of Biological and Environmental Sciences, University of West Alabama, Livingston, AL. 35470.

15. Prostate cancer epithelial cells (murine tramp-c) grow affected by Ganoderma mushroom extract. Laila Ghazwani, Janis Beaird and Jeffery Merida, Department of Biological & Environmental Sciences, University of West Alabama, Livingston, AL 35470.

16. Prostate cancer epithelial cells (murine tramp-c) growth affected by omega-3 fatty acids. Fatimah Alhassan, Janis Beaird and Jeffery Merida, Department of Biological & Environmental Sciences, University of West Alabama, Livingston, AL 35470.

17. Prostate cancer epithelial cells (murine tramp-c) growth affected by orange extract. Laila Alonazi, Janis Beaird and Jeffery Merida, Department of Biological & Environmental Sciences, University of West Alabama, Livingston, AL 35470.

18. Prostate cancer epithelial cells (murine tramp-c) growth affected by pomegranate extract. Tamara Smoot, Janis Beaird and Jeffery Merida, Department of Biological & Environmental Sciences, University of West Alabama, Livingston, AL 35470.

19. Tetracycline testing in Grave’s Creek downstream of a Tyson Foods chicken
processing plant in Blount County, Alabama. *Trey Ingram, Chandler Ancona,* and Elizabeth Dobbins, Department of Biological and Environmental Sciences, Samford University, Birmingham, AL 35229

20. **g** Comparison of the gut microbiome composition of the zebrafish (*Danio rerio*), fed with gluten and gluten-free diets. *Hyunmin Koo, Joseph Hakim, Mickie Powell, Ranjit Kumar, Casey Morrow, Asim Bej,* and *Stephen Watts,* University of Alabama Birmingham, Birmingham, AL 35294


22. Digitization of fungal herbarium at the University of South Alabama. *Stacie L. Carr,* Hank T. Carr, and Juan L. Mata. Department of Biology, University of South Alabama, Mobile, AL 36688.

23. **g** Elucidating the role of the pro-survival to pro-death molecular switch in the ire1a signaling pathway in *Arabidopsis thaliana.* *Marie E. Vollmer,* Camilla J. Koerner, and Karolina M. Mukhtar, Department of Biology, University of Alabama Birmingham, Birmingham, AL., 35205.

24. **g** Fosmid clonal library used to screen for a novel variant of fcgr2b. *T.C. Howton,* Travis Ptacek, David T Redden, Xinrui Li, Chuanyi Ji, Jeffrey C Edberg, Shahid Mukhtar, Robert P Kimberly, University of Alabama Birmingham, Birmingham, AL 35205.


27. **g** Structure-function investigation of the c-terminal hds domains of the sec7 guanine nucleotide exchange factor gbfl. *Jay M. Bhatt* and Elizabeth Sztul. Department of Cell, Developmental and Integrative Biology, University of Alabama at Birmingham, Birmingham AL., 35205.

28. **u** Actin cytoskeleton in schizophrenia. *Bhambhvani, H; Meador-Woodruff, J.,* University of Alabama School of Medicine, Birmingham, AL 35233
29. **u** Monitored growth and ovary condition of grass shrimp kept under laboratory conditions. Kirsten N Humphries, James R Rayburn, Department of Biology, Jacksonville State University, Jacksonville, AL 36265.

**u** or **g** denotes presentation entered in undergraduate/graduate student poster competition
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SECTION I – BIOLOGICAL SCIENCES
Paper Session II
Thursday Afternoon, 1:20 PM – 5:00 PM
Lyon Hall Room A-128
Drew Hataway, Presiding

30. 1:20 **g Dietary protein source and quantity affects growth and body composition of juvenile Danio rerio. Michael B. Williams¹, Nathan D. Miyasaki², Robert J. Berry¹, Mickie L. Powell¹, Stephen A. Watts¹, Daniel L. Smith, Jr.² Department of Biology, Department of Nutrition Sciences², University of Alabama at Birmingham, Birmingham, AL 35294.

31. 1:40 **g Emergence pattern of hatchling Kemp’s Ridley (Lepidochelys kempii) sea turtles at their natural nesting beach. Amy N. Bonka and Thane Wibbels, Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35205. Mauricio H. Hernandez, Gladys Porter Zoo, Brownsville, Texas, 78520

32. 2:00 **u Caterpillar saliva mediates herbivore defense gene expression in maize. Brittany D. Harry¹, Swayamjit Ray², Flor Acevedo³, Shan Jin³, Michelle Peiffer³, Dawn S. Luthe¹, Gary Felton³ ¹The Department of Natural Sciences and Mathematics, The University of West Alabama, Livingston, AL 35470. ²The Plant Science Department, The Pennsylvania State University, University Park, PA 16802. ³The Entomology Department, The Pennsylvania State University, University Park, PA 16802.

33. 2:20 **g The adaptive significance of developmental plasticity in the wild: an experimental test using the brown anole lizard (Anolis sagrei). Corey Dale Cates and Daniel Warner, Department of Biology, University of Alabama, Birmingham, AL 35294

2:40 BREAK and BUSINESS MEETING: Elect a Vice Chair for 2015-2016 term

34. 3:00 **g The sea urchin, Lytechinus variegatus, gut microbiome manifests selective attribute following feeding with a formulated standard reference diet. Joseph Hakim, Hyunmin Koo, Lacey Dennis, Ranjit Kumar, Travis Ptacek, Casey Morrow, Elliot Lefkowitz, Mickie Powell, Asim Bej and Stephen Watts. University of Alabama at Birmingham, Birmingham, AL., 35294


36. 3:40 Ascorbic acid effects on the antibody response in Rhinella marina. Mashika Tempero, Krista Hagan, and Chelsea Ward, Department of Biology, Auburn University Montgomery, Montgomery, AL 36117.
37. 4:00 **g Does inter-age class competition influence habitat use in a territorial lizard? David M. Delaney and Daniel A. Warner, University of Alabama, Birmingham, AL 35294.

38. 4:20 **u Trichomes: The first line of defense against herbivores. Fhallon Ware-Gilmore\textsuperscript{1}, Michelle Peiffer\textsuperscript{2}, Ketia Shumaker\textsuperscript{1}, Dawn Luthe\textsuperscript{2}, Gary Felton\textsuperscript{2} \textsuperscript{1}The University of West Alabama, Livingston, Al 35470 \textsuperscript{2}Pennsylvania State University, University Park, PA 16802.

**u or **g denotes presentation entered in undergraduate/graduate student paper competition
SECTION I – BIOLOGICAL SCIENCES
Paper Session III
Friday Morning, 9:00 AM – Noon
Lyon Hall Room A-128
Malia Fincher, Presiding

39. 9:00 **u Dietary macronutrients affect gonad composition in cultured sea urchins, Lytechinus variegatus. Yuan Yuan, Laura E. Heflin, Mickie L. Powell, Stephen A Watts. Department of Biology, University of Alabama Birmingham, Birmingham, AL 35294

40. 9:20 **g The multifaceted role of Arabidopsis thaliana GCN2 (AtGCN2) kinase in plant hormone signaling and immune responses. Xiaoyu Liu, Maggie E McCormack, Azim Merchant, Kristin Schwarzaurer Rockett, Karolina Pajerowska-Mukhtar. Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294.


10:00 BREAK

42. 10:20 **u Gene expression in hardwood trees species exposed to ozone. Rebecca A. Carroll¹, Chicko Jones¹, Teodora Best², Ketia Shumaker¹ and John Carlson² ¹The University of West Alabama Livingston, AL 35470 USA ²Pennsylvania State University, University Park, PA 16802 USA

43. 10:40 **g Evaluation of municipal wastewater in the vicinity of Birmingham, Alabama for estrogens using vitellogenin gene expression in large scale stonerollers (Campostoma oligolepis). Shara B. Legg and Robert A. Angus, Department of Biology University of Alabama at Birmingham, Birmingham, AL 35233.

44. 11:00 The challenges and progress of a novel method for measuring dietary intake in the zebrafish Danio rerio. J. Christopher Taylor, Mickie L. Powell, Stephen A. Watts, Department of Biology, University of Alabama Birmingham, Birmingham, AL 35294.

45. 11:20 Development of husbandry protocols for the turquois killifish an emerging model organism. Mickie L. Powell, Lindsay White, Stephen N. Austad, David B. Allison, and Stephen A. Watts University of Alabama Birmingham Department of Biology, Birmingham, AL 35294

12:00 Noon LUNCH

**u or **g denotes presentation entered in undergraduate/graduate student paper competition
SECTION II – CHEMISTRY
Session I
Thursday Morning, 9:00 – 10:00 AM
Lyon Hall A141
Amanda Coffman, Presiding

1. **u** 9:00 Extraction from zanthoxylum clava-herculis bark: n-(n-anisyk)ethyl-n-methylcinnamamide. *Yun Ho Kim* and *Zachary l. Riley*, Dept. of Physical Science, Univ. of West Alabama, Livingston, AL 35470. *Kwangyul Moon*, Dept. of Chemistry and Biochemistry, Univ. of Arkansas, Fayetteville, AR 72701

2. **u** 9:20 Green Synthesis and characterization of silver-calcium carbonate nanocomposite material and their antimicrobial studies for water filtration applications. *Vijaya Rangari*, *Vitus Apalangya*, *Boniface Tiimob*, *Shaik Jeelani*, Department of Material Sciences, College of Engineering, Tuskegee University, Tuskegee AL 36088. *Temesgen Samuel*, Department of Pathobiology, College of Veterinary Medicine, Nursing and Allied Health, Tuskegee University, Tuskegee AL 36088.

9:45 BUSINESS MEETING

SECTION II – CHEMISTRY
Poster Session
Thursday Morning
Hughes Gymnasium
Authors Set-up: Begin at 8:00 AM
Authors Present: 10:30 AM – Noon; Viewing and Judging

3. **g** Effects of chemical treatments on reducing compounds causing channel catfish off-flavor. *Truman Williams Jr.*, *Zachary S. Harvey*, *Shaoyang Liu*, Departments of Chemistry and Physics, Troy University, Troy, Alabama 36082, USA.

4. **g** Quantum dot Langmuir film vs. Spin-Casting Films. *Zachary Whitfield*, University of Alabama in Huntsville, Huntsville, AL 35899. *Jeffrey Weimer*, University of Alabama in Huntsville, Huntsville, AL 35899.


**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 AM - Noon
Lyon Hall A-130
Prakash C. Sharma, Presiding

1. 8:20 Applications of laser induced breakdown spectroscopy. Akshaya Kumar and Prakash C. Sharma, Department of Physics, Tuskegee University, Tuskegee, Alabama.

2. 8:40 Invited Talk: The channel mobility problem in sic metal-oxide-semiconductor technology. Sarit Dhar, Department of Physics, Auburn University, Alabama

3. 9:20 **u Comparison of R-line fluorescence of emeralds with their elemental composition concentrations. Christian J. Bayens, Matthew B. Morgan, Tomoyuki Yara, Joshua D. Kidd, and David B. Thompson, University of North Alabama, Florence, Alabama

4. 9:40 **u Investigating Cardano’s irreducible case. Alex Edwards, Jessica Stovall, and Michael Beaver, Department of Mathematics, University of North Alabama, Florence, Alabama

5. 10:00 **u Variability of Hα, Hβ, and Hγ equivalent widths in Delta Scorpius between 2001 and 2014 Mary McDaniel, Ronald M. Blake, Department of Physics and Earth Science, University of North Alabama, Florence, Alabama


10:40 Break

7. 10:50 **g Determining the electrical surface resistivity of multiwall and single-wall carbon nanotube doped polyvinyl alcohol (PVA) thin films. Jemilia R. Polius, Matthew Edwards, Department of Physics, Chemistry and Mathematics, Alabama A&M University, Normal, Alabama

8. 11:10 **g Growth of lead iodide single crystals synthesized using low temperature solution technique. Raja Surabhi, Kamala Bhat, Ashok Batra and Mohan Aggarwal, Department of Physics, Chemistry and Mathematics, Alabama A & M University, Normal, Alabama
11:30 BUSINESS MEETING: Election of Chair and Co-chair for 2015- term

9. 11:40 **u Laser induced breakdown spectroscopy for identification of rare earth ions in glass. Eduvie Ojegba, Akshaya Kumar, Prakash C. Sharma, Department of Physics, Tuskegee University, Tuskegee, Alabama

12:00 Noon - 1:00 PM LUNCH

SECTION III - PHYSICS AND MATHEMATICS
Poster Session I
Thursday Afternoon
Hughes Gymnasium
Authors Present – 1:00 PM – 2:30 PM

10. **u Correlation of band gap energies in visible spectrum and silicon to solar cell efficiency. Leah S. Sanks, Physics, Tuskegee University, Tuskegee, Alabama.

11. **u Decreasing the defects density at the silicon carbide interface through plasma annealing. Maurice McGee, Zengjun Chen, and Prakash C Sharma, Tuskegee University, Tuskegee, Alabama.

12. **u Absorption and emission properties of rare earth ions doped in glass. Kumasi Salimu, Akshaya Kumar and Prakash C. Sharma, Department of Physics, Tuskegee University, Tuskegee, Alabama.

13. **g Transportable hybrid solar and wind energy system for education and public awareness. Kyle D. Rose Sr., Mohan Aggarwal, Ashok Batra, Dept. of Physics, Chemistry and Mathematics, Alabama A&M University, Normal, AL 35762, and Dennis R. Wingo, President, SkyCorp Inc., P.O. Box 375, Moffett Field, CA 94035.


15. Use of confocal Raman spectroscopy to investigate interaction of encapsulated butylated hydroxyanisole (BHA) with phospholipid liposomes. Afef Janen, Dept. of Physics, Chemistry and Mathematics, Lloyd T. Walker, Department of Food and Animal Sciences, Alabama A&M University, Normal, Alabama.

17.  2:40  Most likely path to the shortfall risk under the optimal hedging. Jing Chen, Department of Mathematics, University of West Alabama, Livingston, AL 35470. Zhijian Wu, Dept. of Mathematical Sciences, Xi’an Jiaotong-Liverpool University, Suzhou, P.R. China 215123.

18.  3:00  Computational insights into folded protein transport by dynamic channel formation in bacteria. Chitra Nayak, Department of Physics, Tuskegee University, Alabama. Aidan I Brown, Dalhousie University, NovaScotia, Canada, B3H3J5. Andrew D Rutenberg, Dalhousie University, NovaScotia, Canada, B3H3J5.


**u and **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
SECTION IV – ENGINEERING AND COMPUTER SCIENCE
Paper Session
Thursday Afternoon, 1:00 – 3:00 PM
Lyon Hall B-132
Maurice Dawson Presiding
1:00 – 3:00 PM

1. 1:00 Design science research to assess cyber threat impacts and situational awareness. 
*Maurice Dawson*, Walden University, 100 South Washington Avenue #900, Minneapolis, MN 55401

2. 1:20 Discovering the reason for information technology project failure. 
Gokulakrishnan Ramaswamy and *Maurice Dawson*, Walden University, 100 South Washington Avenue #900, Minneapolis, MN 55401.


4. 2:00 **g** Mining Low-duplicate Social Media Images for Criminal Forum Detection. 
*Xinpeng Liao*, Pradip Chitrakar, Chengcui Zhang, Gary Warner, Dept. of Computer and Informational Sciences, Univ. of Ala., Birmingham, AL 35233.

2:30 BUSINESS MEETING (Elect a Vice-Chair for 2015-term)
SECTION V – SOCIAL SCIENCES

Session I
Thursday Morning, 10:00 – 11:30 AM
Lyon Hall A-138
R. Bryan Kennedy, Presiding

1. 10:00 Association experiment of C. G. Jung: Its use in identifying inner psychological processes. Melissa Werner, College of Education, Athens State University.

2. 10:30 Game notifications: you are doing great! Effect of performance analysis on player retention. Shao-Yu Chen, Dept. of Computer Science and Information Systems, University of North Alabama.

3. 11:00 The general manager's dilemma: A perfect storm of ethics violations: A case study. R. Bryan Kennedy, Susan D. Herring, and Thomas Pieplow, College of Business, Athens State University.

SECTION V – SOCIAL SCIENCES
Poster Session
Thursday Morning/Afternoon, 11:30 AM – 1:30 PM
Hughes Gynmasium


SECTION V – SOCIAL SCIENCES

Session II
Thursday Afternoon, 1:30 – 4:00
Lyon Hall A-138
R. Bryan Kennedy, Presiding

8. 1:30 Addicted or irresponsible? Diane Hammond, R. Bryan Kennedy, and Susan D. Herring, College of Business, Athens State University.
9.  2:00  **u Alternative dispute resolution (ADR) versus the court system. Austin Ray, R. Bryan Kennedy, Susan D. Herring, and Michael Essary, College of Business, Athens State University.

10. 2:30  Differentiated instruction: Characteristics of teachers who differentiate reading instruction. Dana L. Wilchcombe, Oakwood University.


**u or **g Denotes presentation entered in competition by an undergraduate or graduate, respectively.
SECTION VI – ANTHROPOLOGY  
Session I  
Friday Morning/Afternoon 11:00 AM – 12:30 PM 
Lyon Hall A-130 
Harry O. Holstein, Presiding

11:00 Welcome. Harry O. Holstein


3. 11:50 Family History or History of a Nation? The strange case of the Elizondo Monge family in Costa Rica. James Sewastynowicz, Dept. of Physical and Earth Sciences, Jacksonville State University.


12:30 LUNCH

SECTION VI – ANTHROPOLOGY  
Session II  
Friday Morning/Afternoon 1:30 AM – 4:30 PM  
Lyon Hall A-130  
Harry O. Holstein, Presiding

5. 1:30 **u Excavation of the French Barracks at Fort Tombecbe. Natalie Mooney, University of West Alabama.


7. 2:20 Rural Southeastern Medical Practices The 'Unofficial' Medical Practices of the Eighteenth Century in the Southeastern United States. John W. Cottier, Dept. of Anthropology, Auburn University, Emily J. White, Archaeology Laboratory, Auburn, AL 36832

8. 2:40 **u Spatio-temporal Investigation of E-coli Contamination of Tributary Creeks: from Tallaseehatchee to the Coosa. Kaila Brown and Larry J. Morgan, Jacksonville, State University.
9. 3:00 Archaeology of the French Bakery and Palisade at Eighteenth-Century Fort Tombecbe. Ashley Dumas, University of West Alabama.

10. 3:20 Continued Archaeological Research Along the Federal Road. John W. Cottier, Dept. of Sociology and Anthropology, Auburn University.

11. 3:40 The Battle of Point Pleasant; History and Archaeology of the First Battle of the American Revolution. Phillip E. Koerper, Jacksonville State University.

12. 4:00 Sacred Stone Structure Sites in Alabama: Thirty Years of Archaeological Research Coupled with Changing Public Awareness as to Stone Structure Sites Importance for Native American Cosmology. Harry O. Holstein, Dept. of Earth and Physical Sciences, Jacksonville State University.

**u** denotes paper entered in competition by an undergraduate
SECTION VII – STEM EDUCATION

Paper Session
Thursday Afternoon, 1:00 – 4:00 PM
Lyon Hall B-133
Matthew E. Edwards, Presiding

1. 1:00 Outreach activities at UNA planetarium. Mel Blake, Department of Physics and Earth Science, University of North Alabama, Florence, Alabama 35630.

2. 1:20 A collaboration between Alabama A&M University and high schools in preparing physics teachers: alliance for physics excellence Mohan D. Aggarwal, Marius Schamschula, Vernessa Edwards, Barbara Cady and Dianne Kirnes, Department of Physics, Chemistry and Mathematics, Alabama A&M University, Normal, AL 35762.

3. 1:40 Documentary films: using film to enhance writing skills and biological concepts in a general science classroom. Diann Jordan, Timetria Bonds, and Sabita Saldanha, Department of Biological Sciences, and Shirley M. Jordan, Department of Languages and Literatures, Alabama State University, Montgomery, AL 36101.

4. 2:00 A qualitative study of mathematical practices by pre-service mathematics teachers. Hazel Truelove, Department of Mathematics, Univ. of West Alabama, Livingston, AL 35470

5. 2:20 The negative or crippling results of multiple-choice test questions on effective teaching and learning. Matthew E. Edwards, Department of Physics, Chemistry and Mathematics, Alabama A&M University, Normal AL. 35762

6. 2:40 Teaching human anatomy and physiology: a comparison of student response system quizzes to conventional paper tests (multiple choice) at Jacksonville State University. James R. Rayburn, Department of Biology, Jacksonville State University, Jacksonville, AL 36265.

3:00 BUSINESS MEETING (Elect a vice-chair for 2015- term)

Poster Session
Thursday Afternoon
Hughes Gymnasium
Authors Present 3:30 – 4:30 PM

8. Thinking outside the box: the effect of an informal setting on student. Yun Ho Kim, Carey L. Moore, Department of Physical Sciences, University of West Alabama, Livingston, AL 35470

9. Interdisciplinary approach to environmental education. Shuntele N. Burns, Department of Biological Sciences, Alabama State University, Montgomery, AL 36104.
SECTION VIII – INDUSTRY, ENVIRONMENTAL, AND EARTH SCIENCE

Paper Session
Thursday Morning, 10:00 – 11:00 AM
Lyon Hall B-132
Kevin Morse, Presiding

1. 10:00 Water quality assessment of rural water supplies in Alabama: temporal and spatial trends. Jessica C. Wedgworth, Office of Sponsored Programs, University of West Alabama, Livingston, AL 35470. Joe Brown, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, GA 30332. Julie B. Olson, Department of Biological Sciences, University of Alabama, Tuscaloosa, AL 35487. Pauline Johnson, Mark Elliott and Phillip Grammer, Department of Civil, Construction and Environmental Engineering, University of Alabama, Tuscaloosa, AL 35487. Christine E. Stauber, Division of Environmental Health, School of Public Health, Georgia State University, Atlanta, GA 30302.


3. 10:40 Ichnotology of horseshoe crabs (limuloidea) in modern and ancient environments. Andrew K. Rindsberg, Dept. of Biological & Environmental Sciences, Station 7, Univ. of West Ala., Livingston, AL 35470. Anthony J. Martin. Dept. of Environmental Studies, Emory Univ., Atlanta, GA 30322.

11:00 BUSINESS MEETING (Elect a vice-chair for 2015- term)

SECTION VIII – INDUSTRY, ENVIRONMENTAL, AND EARTH SCIENCE

Poster Session
Thursday Morning
Hughes Gymnasium
Authors Present: 11:00 AM – 12:00 Noon


**u or **g Denotes poster is entered in the student poster competition as undergraduate or graduate
1. 9:00 Frontline engagement: A quantitative analysis of workforce development factors. Bettina H. Riley, Ellen B. Buckner, Lisa Mestas, and Valorie Dearmon.  
   1College of Nursing, University of South Alabama, Mobile.

2. 9:20 The role of free fatty acids in the increase in fatty liver disease. Michael W. Bradbury, Department of Molecular Medicine, Alabama College of Osteopathic Medicine, Dothan, AL.

   1University of South Alabama, Mobile;  
   2American Lung Association of the Southeast, Inc., Birmingham, AL;  
   3Alabama Asthma Coalition.

4. 10:00 No idling: Alabama Asthma Program intervention evaluation report. Debra Hodges and Ellen B. Buckner.  
   1Alabama Department of Public Health;  
   2University of South Alabama;  
   3Alabama Asthma Coalition.

5. 10:20 Discourse analysis: Studying nurse-nurse communication at bedside handoffs. Mary M. Hays, Charlene A. Pope, Boyd H. Davis, and Bertha North-Lee, AA, University of Alabama, Huntsville; Ralph H. Johnson VA Medical Center & Medical University of South Carolina; University of North Carolina-Charlotte; Ralph H. Johnson VA Medical Center.

6. 10:40 INTERMISSION

7. 10:55 BUSINESS MEETING
   Elect Section Vice-Chair for 2015- term

8. 11:15 Infection transmission risk posed by heating appliances used to fabricate thermoplastic immobilization devices. Patricia A. Brewer, Dept. of Radiologic Sciences, Terrence J. Ravine and Sarah Bru, Dept. of Biomedical Sciences, Univ. of South Ala., Mobile, AL 36688


10. 11:55 Simulation in mental health nursing: Preparation for the clinical experience. Bettina H. Riley, James Harris, Todd Harlan, Margaret Moore-Nadler, and Suzanne Bihan, University of South Alabama, Mobile.

    1University of South Alabama, Mobile;

2. **g** Thermal exposure influences food intake in a sedentary office setting. *Molly C. Bernhard Richardson*¹², David B. Allison², Peng Li², Julia M. Gohlke¹², ¹Environmental Health Sciences, School of Public Health, ²Nutrition Obesity Research Center, University of Alabama at Birmingham


5. **g** Healthy steps challenge at UAB. *Anne Caroline Durena*, Sunil VanGaikwad, and Jacqueline Upp, University of Alabama, Birmingham.

6. Preventing Transmission of Infectious Agents in Healthcare Setting: Clearing Isolation Precautions with a History of MRSA. *Erica Massey*, Theresa Wright, Amanda Toris, University of South Alabama Medical Center, Mobile, AL.

**g** Denotes presentation is entered in competition as graduate student
SECTION X. BIOETHICS AND HISTORY & PHILOSOPHY OF SCIENCE
Session 1
Thursday Afternoon, 1:00 – 3:30 PM
Lyon Hall, A-141
James Bradley and Gerard Elfstrom, Presiding

1. 1:00 Design serves as society’s response to the practical challenges of the age. Clark E. Lundell, School of Industrial and Graphic Design, Auburn University.

2. 2:00 GMO containment via synthetic biology. James T. Bradley, Dept. of Biological Sciences, Auburn University.

3. 2:30 Are chimpanzees persons? Gerard Elfstrom, Auburn University.

4. 3:00 Ebola, chikungunya, and the end of infection. Kenneth E Nusbaum, Auburn University.

3:30 BUSINESS MEETING (Elect a vice-chair for 2015- term)
ALABAMA JUNIOR ACADEMY OF SCIENCE
Mark Jones, State Director
Posters at Sci-Mix Session
Thursday Evening, 6:00-7:00 PM
Hughes Gymnasium

And

Paper Competition Presentations
Friday, 8:00 – 11:30 AM
Lyon Hall

Engineering and Math........................................................................................................... Room B-131

6. Rahul Lall, Algorithm for Prognostication of Electronics Failures in Hybrid and Electric Vehicles, Auburn High School, Auburn.
10. Maria Trifas, Math in the Universe, Alabama School of Math and Science, Mobile.

Environmental, Earth or Space Science .............................................................................. Room A-141

14. Tabitha Hood, pH Affects on the Native Species Populations and the Loach, Munford
16. Tucker Jones, Effects of DBP on Developmental Growth of the Xenopus laevis, Munford High School, Munford.
17. Megan Lange, Removal of BTEX from Storm Water Using Improved Nano-Particle Enhanced Porous Concrete (Phase I), Auburn High School, Auburn.

Life Science .................................................................................................................................................. Room B-133
23. Megan Hendrix, Habitats of Parasitized and Non Parasitized Snails, Munford High School, Munford.
25. Kaitlyn Lawrence, Animals that Eat as a Model for Humans We Treat: A Study on MC4R "The Hunger Gene," Wetumpka High School, Wetumpka.
27. Stacy Madison, The Effect of Natural and Chemical Preservatives of Meat, Decatur High School, Decatur.

Medicine, Health, Behavioral and Social Science .................................................................................. Room A-138
29. Claire Crane, Computational Exploration of Protein Function, Decatur High School, Decatur.
30. Macy-Beth Lee, Lead Poisoning, Decatur High School, Decatur.
34. Amy Zhao, Gene Expression in Primary and Metastatic Kidney Cancer to Discover Drivers of Metastasis and Targets for Drug Development, Vestavia Hills High School, Birmingham.
44. Cade Thomas, Brick Busters, *Pike Liberal Arts School*, Troy.

*Denotes AJAS students who are also entered in the Gorgas Scholarship Competition
GORGAS SCHOLARSHIP COMPETITION

Sci-Mix Session
Thursday Evening, 6:00-7:00 PM
Hughes Gymnasium

Ellen Buckner, Presiding

Finalists in the 2015 Alabama Science Scholar Search and Gorgas Scholarship Program will discuss their projects.


10. Shivani Rangari, Bio-Based Calcium Carbonate (Caco3) Nanoparticles For Drug Delivery Applications. Auburn High School, Auburn.


12. Emily Ryan, Chemical Signaling in Mosquito fish Gambusia holbrooki. Wetumpka High School, Wetumpka.
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
2015 REGIONAL SCIENCE FAIRS

   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 7, 2015.
   Roger Campbell, Ph.D. Assistant Professor of Chemistry
   rcampbell@uwa.edu
   Chairperson, Department of Physical Sciences
   The University of West Alabama
   Station 23
   Livingston, AL 35470
   (205) 652-3873

   Jacob Kerstiens, coordinator
   jacob.kerstiens@uah.edu
   The University of Alabama in Huntsville
   College of Engineering
   Huntsville, AL 35899

   Allison Tjelmeland
   GEARSEF Fair Coordinator
   334-844-7449
   Alt0008@auburn.edu
   Erin Percival GEARSEF Fair Director
   334-844-7449
   Erin.percival@auburn.edu

   Engineering@southalabama.edu
   David T. Allison, Ph.D.
   Dept. of Earth Sciences
   136 LSCB, 307 N. University Blvd.
   University of South Alabama
   Mobile, AL 36688
Vanessa Colebaugh, coordinator
vanessa@nsstc.uah.edu
The University of Alabama in Huntsville
Earth System Science Center, CRH 3078
Huntsville, AL 35899

**2015 INTERNATIONAL SCIENCE AND ENGINEERING FAIR**


Virginia Vilardi, Intel/ISEF and State Coordinator, 1251 Coosa River Parkway, Wetumpka H. S., 36092, (334) 799-0104, [Virginia.vilardi@elmore.k12.al.us](mailto:Virginia.vilardi@elmore.k12.al.us)
ALABAMA SCIENCE OLYMPIAD 2014-2015

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 21, 2015
http://www.esoatjhs.org/
ESO at the University of West Alabama
Tuesday, October 21, 2014
ESO at Auburn University
Saturday, February 21, 2015

Division B, Middle School Science Olympiad, Grades 6-9
University of Alabama, Tuscaloosa
Saturday, February 21, 2015
http://scienceolympiad.as.ua.edu/
Auburn University, Auburn
Saturday, March 7, 2015
See Auburn website above.
University of Alabama at Huntsville
Saturday, February 28, 2015
http://nsstc.uah.edu/scienceolympiad/
Spring Hill College, Mobile
Saturday, March 7, 2015
http://adminblogs.shc.edu/scienceolympiad
University of Alabama at Birmingham
Saturday, February 14, 2015
http://sciolyuab.org/2015-tourney/

Division C, High School, Grades 9-12
University of Alabama, Tuscaloosa
Saturday, February 21, 2015
http://scienceolympiad.as.ua.edu/
University of Alabama at Huntsville
Saturday, February 28, 2015
http://nsstc.uah.edu/scienceolympiad/
Spring Hill College, Mobile
Saturday, March 7, 2015
http://adminblogs.shc.edu/scienceolympiad
University of Alabama at Birmingham
Saturday, February 14, 2015
State Tournaments

**Huntingdon College, Montgomery**
Division B and C State Olympiads
Saturday, April 11, 2015
[http://oiac.huntingdon.edu/so/scienceolympiad/default_frame.html](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)
- 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**


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

National Science Olympiad web page: [http://soinc.org/about](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.
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
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, Director, Center for Advanced Materials, 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  David Brian Thompson (University of North Alabama) and Mickie Powell, University of Alabama at Birmingham
SECTION OFFICERS, 2014-2015

Section I: Biological Sciences:
- Chair: (2014) Malia Fincher, Dept. of Biology, Samford University, Birmingham, Al 35229, (205) 726-2928 mf@finche@samford.edu.
- Vice Chair: (2014) Drew Hataway, Dept. of Biology, Samford University, Birmingham, AL 35229, (205) 726-4190 rahatawa@samford.edu

Section II: Chemistry:
- Chair: (2015) Amanda Hofacker, Dept. of Chemistry, Univ. of North Alabama, Florence, AL 35632, ahofacker@una.edu.
- Vice Chair: (2015) Cameron Gren, Dept. of Chemistry, Univ. of North Alabama, Florence, AL 35632, (256) 765-5027 egren@una.edu

Section III: Physics and Mathematics:
- Chair: (2014) Prakash Sharma, Dept. of Physics, Tuskegee Univ., Tuskegee, AL 36088, (334) 727-8998 pesharma@tuskegee.edu.
- Vice Chair: Vacant

Section IV: Engineering and Computer Science:
- Chair: (2015) Maurice Dawson, Jr., Management Information Sciences, Alabama A&M Univ., Normal, AL, 35761, maurice.dawson@aamu.edu, maurice.e.dawson@gmail.com
- Vice Chair: (2015) Pradeep Lall, Mechanical Engineering, Auburn University, Auburn, AL, 36849, 334-844-3424, lall@auburn.edu

Section V: Social Sciences:
- Chair: (2015) Lonnie Hannon, III, Dept. of Sociology and Psychology, Tuskegee Univ., Tuskegee, AL 36088, (205) 276-3065, lhannon@mytu.tuskegee.edu.
- Vice Chair: Susan Herring, (256) 851-8036 sdherring@att.net

Section VI: Anthropology:
- Chair: Harry Holstein, Dept. of Geography, Jacksonville State Univ., Jacksonville, Al 36265, (265) 782-5656 holstein@jsu.edu.
- Vice Chair: Phillip Koerper, Dept. of History, Jacksonville State Univ., Jacksonville, Al 36265, (265) 782-5604 pkoerper@jsu.edu

Section VII: Science Education:
- Chair: (2015) Matthew Edwards, Dept. of Physics, Chemistry and Mathematics, PO Box 338, Alabama A&M University, Normal, AL 35762, (256) 372-8119 matthew.edwards@aamu.edu
- Vice Chair: (2015) Vacant

Section VIII: Industry, Environmental, and Earth Science:
- Chair: (2015) Kevin Morse, Dept. of Biology, University of West Alabama, Livingston, AL 35470, kmorse@uwa.edu
- Vice Chair: Vacant

Section IX: Health Sciences:
- Chair: (2015) Melinda Carter, 445 Health Sciences Boulevard, Alabama College of Osteopathic Medicine. Dothan, AL 36308, 334-944-4046 mcarter@acomedu.org
- Vice Chair: Vacant

Section X: Bioethics and History and Philosophy of Science:
• Chair: (2014) James Bradley, Department of Biological Sciences, Auburn Univ., Auburn, AL 36849, (334)-844-9262, bradljt@auburn.edu.
• Vice Chair: (2014) Stephen Sodeke, Department of Allied Health, Tuskegee University, Tuskegee, AL 36088, (334) 727-8210 sodeke@mytu.tuskegee.edu
ELECTED OFFICERS, 2014-2015

President: John McCall, Dept. of Biology, University of West Alabama, Livingston, AL 35470, jmccall@uwa.edu.

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

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

Secretary: Kevin Morse, Dept. of Biology, University of West Alabama, Livingston, AL 35470, (205) 652-3804 kmorse@uwa.edu.

Treasurer: Bettina Riley, USA College of Nursing, 161 N. Section Street, Suite C, Fairhope, AL 36532, briley@southalabama.edu.

Editor: Safaa Al-Hamdani, Dept. of Biology, Jacksonville State University, Jacksonville, AL 36265 (256) 782-5801, sah@jsu.edu.

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

Associate Counselor to the Junior Academy: Mary Williams, Altamont School, 4801 Altamont Rd., Birmingham, AL 35222, (205) 879-2006, mawilliams@altamontschool.org.

Associate Counselor to the Junior Academy: Wanda Phillips, Brooks High School, 4300 Highway 72, Killen, AL 35645 (256) 757-2115, wanda.phillips@lchs.org.

Coordinator of State Science Fairs: Virginia Valardi, Wetumpka High School, 1251 Coosa River Parkway, Wetumpka, AL 36092 (334) 799-0104, (334) 514-1770 virginia.vilardi@elmore.k12.al.us.

Coordinator of State Science Olympiad: Jane D. Nall, 31110 Wakefield Drive, Spanish Fort, AL 36527 (251) 621-2911, drnall@hotmail.com; jdnall@bcbe.org.

AAAS Representative: Stephen Watts, Dept. of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170 (205) 934–2045, sawatts@uab.edu.

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

TRUSTEES:

- Ken Marion, Dept. of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170, kmarion@uab.edu.
- Prakash Sharma, Dept. of Physics, Tuskegee University, Tuskegee, AL 36088 (334) 727-8998, pcsharma@tuskegee.edu.
- James Bradley, Dept. of Biological Sciences, Auburn University, Auburn, AL 36849, bradljt@auburn.edu.
- David Nelson, Dept. of Biology, University of South Alabama, Mobile, AL 36688 (252) 460-6331, dnelson@usouthal.edu.
- Brian Burnes, Dept. of Biology, University of West Alabama, Livingston, AL 35470 (205) 652-3442, bburnes@uwa.edu.
• Mike Howell, Dept. of Biological Sciences, Samford Univ., Birmingham, AL 35229, wmhowell@samford.edu.
• Richard Hudiburg, Dept. of Psychology, University of North Alabama Box 5187, Florence, AL 35632 (256) 765-4572, rahudiburg@una.edu.
• Adriane Ludwick, Dept. of Chemistry, Tuskegee University, Tuskegee, AL 36088, aludwick@tuskegee.edu.
• Brian Toone, Dept. of Computer Sci., Samford Univ., Birmingham, AL 35229 (205) 726-2960, brtoone@samford.edu.
• Ellen B. Buckner, 5721 USA Drive North, College of Nursing, University of South Alabama, Mobile, AL, 36688, (205) 910-9877, ebuckner@southalabama.edu.
• Stephen Watts, Dept. of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170 (205) 934–2045, sawatts@uab.edu.
• Anne Cusic, Dept. of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170 (205) 934-9686, acusic@uab.edu.
APPOINTED COMMITTEES 2014-15

Archives
- Troy L. Best, Chair, (2014) Dept. of Biological Sciences, 331 Funchess Hall, Auburn Univ., Auburn, AL 36849-5414, besttro@auburn.edu

Auditing Senior Academy
- vacant

Auditing Junior Academy
- Govind Menon, (2013) Dept. of Mathematics and Physics, Troy Univ., Troy, AL 36081, gmenon@troy.edu.
- 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, (2014) Dept. of Biology, Univ. of Alabama at Birmingham, Birmingham, AL 35294-1170, kmarion@uab.edu
- Ellen Buckner, (2014) College of Nursing, Univ. of South Alabama, Mobile, AL 36688, ebuckner@southalabama.edu.
- Akshaya Kumar, Second Vice-President (2014) Dept. of Physics, Tuskegee University, Tuskegee, AL 36088, (334) 727 8968 akumar@mytu.tuskegee.edu
- Kevin Morse, (2014) Dept. of Biology, University of West Alabama, Livingston, AL 35470, kmorse@uwa.edu
- Bettina Riley, (2014) USA College of Nursing, 161 N. Section Street, Suite C, Fairhope, AL 36532, briley@usouthal.edu.
- Larry Krannich, Dept. of Chemistry, Univ. of Alabama at Birmingham, Birmingham, AL 35294, krannich@uab.edu

Editorial Board: (staggered 3-yr terms)
- Jim Bradley, (2015) Dept. of Biology, Auburn Univ., Auburn, AL , bradljt@auburn.edu
- David Myer, (2016) English Dept., Jacksonville State Univ., Jacksonville, AL 37276, dmyer@jsu.edu
- Prakash Sharma, (2017) Dept. of Physics, Tuskegee Univ., Tuskegee, AL 36088, psharma@tuskegee.edu

Electronic Media: (3-yr terms)
- Brian Toone, Editor, (2015) Dept. of Computer Science, Samford Univ., Birmingham, AL 35229, btoone@samford.edu
- Richard Hudiburg, Associate Editor, (2016) Dept. of Psychology, Univ. of North Alabama, Box 5187, Florence, AL 35632, rahudiburg@una.edu

Emmett B. Carmichael Award: (staggered 2-yr terms)
- Richard Hudiburg, Chair, (2016) Dept. of Psychology, Univ. of North Alabama, Box 5187, Florence, AL 35632, rahudiburg@una.edu
- David Nelson, (2014) Dept. of Biology, Univ. of South Alabama, Mobile, AL 36688, dnelson@usouthal.edu
• Robert Pitt, (2015) Civil & Environmental Engineering, Univ. of Alabama, PO Box 870205, Tuscaloosa, AL 35482, rpitt@coe.eng.ua.edu
• Safaa Al-Hamdani, Editor (ex officio), (2014) Dept. of Biology, Jacksonville State Univ., Jacksonville, AL 36265, sah@jsu.edu
• Larry Davenport, (2015) Dept. of Biological Sciences, Samford Univ., Birmingham, AL 35229, ljdavenp@samford.edu

Gorgas Scholarship Program: (staggered 3-yr terms)
• Ellen Buckner, Co-chair, College of Nursing, Univ. of South Alabama, Mobile, AL 36688, ebuckner@southalabama.edu
• Larry Krannich, Co-chair, Dept. of Chemistry, Univ. of Alabama at Birmingham, Birmingham, AL 35294, krannich@uab.edu
• Elizabeth Dobbins, (2013) Dept. of Biology, Samford Univ., Birmingham, AL 35229, egdobbins@samford.edu
• David H. Nelson, (2013) Dept. of Biology, Univ. of South Alabama, Mobile, AL 36688, dnelson@usouthal.edu
• Prakash Sharma, (2014) Dept. of Physics, Tuskegee Univ., Tuskegee, AL 36088, pcs Sharma@tuskegee.edu,
• Diane Tucker, (2014) Science and Technology Honors Program, Univ. 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:
• Catherine Shields, Mortimer Jordan High School, Kimberly, AL 35091, (205) 379-5356 catherine_shields8@gmail.com
• Virginia Valardi, Wetumpka High School, Wetumpka, AL, virginia.vilardi@elmore.k12.al.us

Local Arrangements at University of West Alabama
• John McCall, Dept. of Biology, University of West Alabama, Livingston, AL 35470, jmccall@uwa.edu.

Long Range Planning: (staggered 4-yr terms, committee elects chair)
• Matthew Edwards, Chair, (2017) Dept. of Physics, Chemistry and Mathematics, PO Box 338, Alabama A&M University, Normal, AL 35762, (256) 372-8119 matthew.edwards@aamu.edu
• Adriane Ludwick, (2012) Dept. of Chemistry, Tuskegee Univ., Tuskegee, AL 36088, aludwick@tuskegee.edu
• Anne Cusic, (2014) Dept. of Biology, Univ. of Alabama at Birmingham, Birmingham, AL 35294-1170, acusic@uab.edu
• Ken Marion, (2014) Dept. of Biology, Univ. of Alabama at Birmingham, Birmingham, AL 35294-1170, kmarion@uab.edu
• Eugene Omasta, (2011) 113 Dendron, Troy, AL 36081, eomasta@troy cable.net

Mason Scholarship: (staggered 3-yr terms)
• Michael Moeller, Chair, Dept. of Chemistry, Univ. of North Alabama, Box 5049, Florence, AL 35632, mbmoeller@una.edu
• Charles Eick, (2012) Dept. of Curriculum and Teaching, 5058 Haley Center, Auburn Univ., Auburn, AL 36849, eickcha@auburn.edu
• Malcom Braid, (2013) Dept. of Biology, Univ. of Montevallo, Montevallo, AL ,
• Jane Roy, (2011) School of Education, Univ. of Alabama at Birmingham, Birmingham, AL 35294-1250, jroy@uab.edu
• Brian Burnes, (2014) Dept. of Biology, Univ. of West Alabama, Livingston, AL 35470, bburnes@uwa.edu
• Loretta Cormier, (2013) Dept. of Anthropology, Univ. of Alabama at Birmingham, Birmingham, AL, lcormier@uab.edu
• R. Melvin Blake, (2012) Dept. of Physical and Earth Science, Univ. of North Alabama, Florence, AL 35632, rmblake@una.edu

Membership: Vacant, Chair

Nominating:
• Brian Toone, Dept. of Computer Sci., Samford Univ., Birmingham, AL 35229 (205) 726-2960, brtoone@samford.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) Dept. of Chemistry, Univ. of Alabama at Birmingham, Birmingham, AL 35294, kfrannich@uab.edu
• Yong Wang, (2014) Center for Forestry and Ecology, Alabama A&M Univ., Normal, AL 35762, yong.wang@aamu.edu
• George Cline, (2015) Dept. of Biology, Jacksonville State Univ., Jacksonville, AL 36265, gcline@jsu.edu
• Jimmy Triplett, (2016) Dept. of Biology, Jacksonville State Univ., Jacksonville, AL 36265, jtriplett@jsu.edu

Public Relations: (staggered 4-yr terms)
• Ellen Buckner, (2015) College of Nursing, Univ. of South Alabama, Mobile, AL 36688, ebuckner@southalabama.edu
• Larry Davenport, (2012) Dept. of Biology, Samford Univ., Birmingham, AL 35229, ljdavenp@samford.edu
• Ken Marion, (2015) Dept. of Biology, Univ. of Alabama at Birmingham, Birmingham, AL 35294, kmarion@uab.edu
• vacant

Research: (5 members with staggered 5-yr terms)
• Brian Burnes, Chair (2016) Dept. of Biology, University of West Alabama, Livingston, AL35470, bburnes@uwa.edu
• Bruce Smith, (2015) Scott-Ritchey Research Center, Auburn Univ., Auburn, AL 36849, smithbf@auburn.edu
• Stephen Watts, (2013) Dept. of Biology, Univ. of Alabama at Birmingham, Birmingham, AL 35294, sawatts@uab.edu
• Alan Sprague, (2015) Dept. of Computer and Information Science, Univ. of Alabama at Birmingham, Birmingham, AL 35294-1170, sprague@cis.uab.edu
• Robert Thacker, (2015) Dept. of Biology, Univ. of Alabama at Birmingham, Birmingham, AL 35294, thacker@uab.edu
• Yong Wang, (2016) Center for Forestry and Ecology, Alabama A&M Univ., Normal, AL 35762, yong.wang@aamu.edu

Resolutions:
• Ketia Schumaker, (2014) Dept. of Biology, Univ. of West Alabama Station #7, Livingston, AL 35470, kshumaker@uwa.edu

Science and Public Policy:
• Scott Brande, Chair, (2014) Dept. of Geology, Univ. of Alabama at Birmingham, Birmingham, AL 35294, sbrande@uab.edu
• Steven Carey, (2014) Dept. of Natural Sciences, Univ. of Mobile, Mobile, AL 36616,
• Boakai Robertson, (2013) Dept. of Biology, Alabama State Univ., Montgomery, AL 36101, brobertson@alasu.edu
• James Bradley, (2014) Dept. of Biological Sciences, Auburn Univ., Auburn, AL 36849, bradljt@auburn.edu

Steering:
• Emanuel Waddell, (2015) Dept. of Chemistry, John Wright Drive, Univ. of Alabama in Huntsville, Huntsville, AL 35899, ewaddell@chemistry.uah.edu
• John McCall (2016) Dept. of Biological and Environmental Sciences, Univ. of West Alabama, 35470, jmccall@uwa.edu.
• Brian Toone (2017) Dept. of Computer Sci., Samford Univ., Birmingham, AL 35229 (205) 726-2960, brtoone@samford.edu.
• Akshaya Kumar, Dept. of Physics, Tuskegee University, Tuskegee, AL 36088, (334) 727 8968 akumar@mytu.tuskegee.edu.
• Bettina Riley, (2014) USA College of Nursing, 161 N. Section Street, Suite C, Fairhope, AL 36532, briley@southalabama.edu.
• Kevin Morse, (2014) Dept. of Biological and Environmental Sciences, Univ. of West Alabama, Livingston, AL 35470, kmorse@uwa.edu

Wright A. Gardner Award: (4 members with staggered 2-yr terms)
• Prakash Sharma, Chair, (2013) Dept. of Physics, Tuskegee Univ., Tuskegee, AL 36088, p��harmarar@tuskegee.edu
• Anne Cusic, (2012) Dept. of Biology, Univ. of Alabama at Birmingham, Birmingham, AL 35294, acusic@uab.edu
• Gene Byrd, (2012) Dept. of Physics, Univ. of Alabama, Tuscaloosa, AL 35487, byrd@possum.astr.ua.edu
• Vacant
# PAST PRESIDENTS

<table>
<thead>
<tr>
<th>NAME</th>
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<tbody>
<tr>
<td>Wright A. Gardner (2 terms)</td>
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<td>Emanuel Waddell</td>
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