Ninety-Fourth Annual Meeting of the Alabama Academy of Science, Inc.

Meeting jointly with
Alabama Junior Academy of Science
Gorgas Scholarship Competition

February 22-24, 2017
University of South Alabama | Student Center
Mobile, AL

www.alabamaacademyofscience.org
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Welcome to the University of South Alabama. I am honored that our University is serving as the official host for the 94th Annual Alabama Academy of Sciences Meeting.

At South, our mission is to make a difference in the lives of those it serves through promoting discovery, health, and learning. Through our pursuit of academic excellence in the science fields, we are positively impacting the Gulf Coast region and beyond.

In 2016, Valeria King received an Alabama National Science Foundation Graduate Scholarship for her research on malignant cancers; 18 undergraduates (along with 3 Biology graduate students and 3 Professors) recently carried out an innovative project resulting in the identification of 58 entirely novel genes in Salmonella; Dr. Kelly Dorgan, Assistant Professor of Marine Sciences and senior marine scientist at the Dauphin Island Sea Lab, is one of five U.S. scientists to receive the prestigious National Academy of Sciences Gulf Research Program Early-Career Research Fellowship; our Chemistry Department under the leadership of Dr. David Forbes had four (4) faculty receive Top Professor Awards through the Azalea Chapter of Mortar Board, and due to the success of our Marine Sciences program, we have expanded the program to include an undergraduate minor in marine sciences (to encourage students in physical, natural and social science areas to focus on marine related careers) and a professional master’s degree in marine conservation and resource management.

As a fellow scientist, I know the level of rigor and discipline that excellence in our field requires. If you are competing in this year’s conference, I would like to personally say congratulations on your academic achievements. Also, I would also like to extend thanks to the parents, guardians and sponsors who have personally driven many participants to regional competitions in addition to this meeting. As you visit with us, I invite you take advantage of a parent/visitor tour designed just for you on Friday, February 23 at 9:00 a.m. departing from the Student Center Lobby.

Finally, I want to express my appreciation and admiration for Dr. E. O. Wilson, Professor Emeritus, Harvard University for returning to the University to deliver Thursday evening’s keynote address. Also, I would like to say welcome back to South graduate Catherine Zivanov, a chemistry graduate and past 2014 Goldwater Scholarship who will provide closing remarks at Friday’s luncheon.

While you are with us, my hope is that you fully enjoy the next couple of days, get to know the University, and perhaps steal a moment to participate in some of the local Mardi Gras festivities. It’s a great time to be at the University and the city of Mobile.

I welcome the opportunity to hear from you about your experience anytime at president@southalabama.edu.

Regards,

Tony G. Waldrop, Ph.D.
President
Welcome from Dr. David Johnson, Provost and Senior Vice President for Academic Affairs at the University of South Alabama

Dear AAS, AJAS, and Gorgas Participants,

I would like to personally welcome you to the University of South Alabama for the 94th Annual Meeting of the Alabama Academy of Sciences. It is a great honor and privilege for us to host this distinguished group of scholars, industry leaders, bright students, parents, and honored guests to our campus. We are natural partners with the Academy here at South Alabama, and share its mission of promoting awareness of scientific matters throughout the state of Alabama and beyond. At South we are committed to developing innovative programs and research experiences to prepare the next generation of scientists.

Here at South Alabama our mission is to provide outstanding education and excellence in health care for Alabama and the greater gulf coast region. Home to more than 16,000 students and more than 100 academic programs, our University is a dynamic community of leaders and learners who support and challenge one another to be actively engaged citizens who advance the Gulf Coast region and the world.

Founded in 1963, South’s vision is to foster an environment that couples engaging learning experiences with high-level research, enabling our faculty and students to be leaders in their disciplines. The unique and beautiful Gulf Coast region is a catalyst for discovery and innovation, and South’s 1,200-acre campus has been transformed over the past decade with new facilities and resources for housing and recreation, health sciences, the arts, engineering, computer science and athletics.

The coastal region is healthier because of the USA Health system. Through its five components — USA Children’s & Women’s Hospital, USA Medical Center, USA Mitchell Cancer Institute, USA Physicians Group and the College of Medicine — USA Health provides care to hundreds of thousands of people and is a training ground for future physicians and health care professionals.

We are also very proud of our newly founded Office of Undergraduate Research (OUR), your host for this meeting. Dr. Shelley-Tremblay has launched the new Student Organization for Undergraduate Research, garnered continued support from NASA, started the new Journal of Undergraduate Research and Creative Activities, and expanded the paid Summer Undergraduate Research Fellows program to 60 participants annually, each doing mentored research with top faculty.

Thank you for advocating for the value of science and factual thinking, and for your advocacy for evidence-based decision-making. We thank you also for coming to Mobile, the birthplace of Mardi Gras, here at Mardi Gras season. I wish you a stimulating, safe, and enjoyable conference and stay in Mobile.

Again, welcome, and we welcome you to our newly renovated student center and campus, and hope that you feel right at home in Jaguar country.

G. David Johnson
Provost and Senior Vice President for Academic Affairs
Welcome from Dr. Andrzej Wierzbicki  
Dean of the College of Arts and Sciences at the University of South Alabama  

Dear Participants of the 94th Annual Meeting  
of the Alabama Academy of Science:  

On behalf of the College of Arts and Sciences at the University of South Alabama, I cordially welcome you to the 94th Annual Alabama Academy of Science Meeting in Mobile.  

We are excited to host the members of the scientific community of the State of Alabama this year, and we wholeheartedly welcome all researchers, educators, and students from our State's many research and education institutions. This time-honored meeting is a great showcase of the strength of the scientific community in our State, and we are delighted to have you here.  

I would like to take this opportunity to introduce to you the faculty and students in our College, many of whom you will meet at this conference. The emphasis on excellence in science is one of the highest priorities in the College of Arts and Sciences, and we are very proud of our faculty and students who are highly accomplished in their scientific endeavors at the regional, national, and international levels. All our science departments work closely together to create new knowledge, to advance the protection of the coastal environment and its resources, and to improve the health and living conditions of the community. Our location on the Gulf of Mexico gives us a unique opportunity to conduct research in the ecologically rich -- and yet very fragile -- coastal region of our State. During your stay here, I invite you to take a moment to tour our beautiful campus and visit our excellent research facilities as well as to meet our faculty and students. I am sure that they will be more than happy to invite you into their labs and to talk with you about their ongoing research.  

Thank you for promoting the importance of science in the State of Alabama. I hope that you enjoy your stay on our campus, and I wish you a very productive and enjoyable meeting.  

Sincerely,  

Dr. Andrzej Wierzbicki, Dean  
College of Arts and Sciences  
University of South Alabama
Welcome from Dr. Akshaya Kumar
President, Alabama Academy of Science

Dear AAS Members and Guests,

Welcome to 94th annual meeting of the Alabama Academy of Science. Since its inception in 1924, the academy has been very instrumental in bringing students, researchers and educators from across the state of Alabama and giving opportunity to nurture their scientific interest. I feel very proud of being a part of this academy.

There are oral and poster presentations in ten different sections (disciplines) of the senior academy. The students in senior academy will compete in poster and oral presentation sessions.

The young researchers from the different schools in the state of Alabama will also be presenting their research in the junior academy paper contest and Gorgas Competition.

I am sure you will find these presentations very interesting and full of new scientific research ideas. In addition, you can take some time to go out and look at different attractions in the University of South Alabama (USA) campus and throughout the city of Mobile. I wish your stay in this meeting to be very fruitful and convenient.

The local organizing committee members have done huge amount of work to organize this meeting. I want to appreciate and extend my special thanks to Dr. John (Jack) F. Shelley-Tremblay from University of South Alabama (USA), Dr. Ellen Buckner from the Samford University and all the members of the local arrangement committee from USA campus.

I want to express my sincere thanks to the trustee, officers, committee members; section chairs all those made immense contribution to make this event very special and successful. Dr. Larry Krannich (AAS Executive Director) has been playing a very special role to make this academy run successfully for past many years and a very special thanks to him for putting his efforts and time.

After the meeting when you return to your institution, please share your experience with your colleagues and students and encourage them to join as member of the Alabama Academy of Science and be part of the next meeting.

Sincerely,

Akshaya Kumar, Ph.D.
President, Alabama Academy of Science
The Academy expresses its appreciation to the University of South Alabama and the Local Arrangements Committee for their efforts in planning and hosting this 94th Annual Meeting.

Local Arrangements Chair
Dr. Jack Shelley-Tremblay
Professor of Psychology
Director of Undergraduate Research

AAS Program Coordinator
Donna Cleveland
Professor, USA Pat Capps
Covey College of Allied Health Professions

AJAS/Gorgas Coordinator
Dr. Bettina Riley, RN,
Assistant Professor, Mental Health Nursing Coordinator,
Community Mental Health, College of Nursing

AJAS Local Judge Chair
Dr. Doug Haywick, Associate Professor, Earth Sciences

University Liaison Officer, Registration and Signage
Melva L. Jones, CMP
Director, University Special Events

Posters
Dr. Doug Haywick, Associate Professor, Earth Sciences

Promotion & Publicity
Joy Crawford-Washington
Associate Director, Marketing and Communications

Speaker Coordination
Dr. David Forbes, Chair, USA Chemistry Department
Dr. Tom Meyer, Associate Professor, USA College of Nursing

Audio Visual and Venue Management
Rachael Bolden, Associate Director, USA Student Center

Parent Program
Christopher Lynch
Associate Vice President, Enrollment Services

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 not be accepted at registration. Payment must be made at http://www.alabamaacademyofscience.org/join-aas-2/ and is separate from conference registration payment. At least one of the authors of a presented paper or poster must be a member of the Academy.

- Pending availability, tickets for the Joint AJAS/AAS banquet may be purchased at the registration desk.

- 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 (entrance on USA South Drive just after the intersection with Campus Drive) indicated on the downloadable, http://www.southalabama.edu/programs/our/aas2017/images/aasparkingpass.pdf parking pass, which shows you exactly where to park in the Humanities Parking lot. Also, here are instructions from the conference hotel to the Student Center (or paste http://www.southalabama.edu/programs/our/aas2017/images/mapfromhotel.pdf into your browser. The last page of this booklet contains a tear out page of the parking pass.

- A map of the USA campus can be found on the outside cover of the program booklet. Also, an interactive map of the USA campus can be found at http://www.southalabama.edu/campusmap/

LOCAL RESOURCES

On-campus police, fire, medical service:

All Emergencies (Fire, Ambulance, Police): .......................................................... 911
USA POLICE: ......................................................................................................... (251) 460-6312
USA Medical Center: ............................................................................................ (251) 471-7000
USA Children’s and Women’s Hospital ................................................................. (251) 415-1000
USA Sexual Assault Victim Advocacy ................................................................. (251) 460-7151
Lifeline Counseling Services: Rape Crisis ......................................................... (251) 473-7273

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

Mobile Police Department: .................................................................................. (251) 208-1700
Poster set-up can begin at 8:00 AM in the **Student Center 2nd Floor Lobby**. Each poster is allotted 3’ x 4’ of display space. Posters are to be available for viewing on Thursday from 10:00 AM until 4:30 PM. Prior to the joint banquet, **Gorgas Scholars and Junior Academy posters** will be available for viewing at the **Sci-Mix** from 5:10 – 6:30 PM on Thursday in the **Student Center 2nd Floor Lobby**. Authors for the section posters should be present for discussions with viewers and competition judges as shown below:

**Poster Viewing Times**

Thursday: Student Center 2nd Floor Lobby

- **Section I — Biological Sciences** ................................................................. 11:30 AM – 1:30 PM
- **Section II — Chemistry** ........................................................................... 10:00 AM – 12:00 PM
- **Section III — Physics and Mathematics** ............................................... 12:00 PM – 2:00 PM
- **Section IV — Engineering & Computer Science** ..................................... 2:00 PM – 4:00 PM
- **Section V — Social Sciences** .................................................................. 1:00 PM – 3:00 PM
- **Section VI — Anthropology** ................................................................... 3:00 PM – 4:00 PM
- **Section VII — STEM Education** ............................................................... 3:30 PM – 4:30 PM
- **Section VIII — Environmental and Earth Science** ................................. 9:00 AM – 10:00 AM
- **Section IX — Health Sciences** ................................................................. 1:00 PM – 3:00 PM
- **Gorgas Scholars and Junior Academy** .................................................... 5:10 PM – 6:30 PM

**NOTE**: Posters may be set up in the **Student Center 2nd Floor Lobby** beginning at 8:00 AM. Locate posters by cards on poster boards indicating Section and poster # in program booklet (eg. V-10).
PROGRAM OF THE ALABAMA ACADEMY OF SCIENCE
February 22-24, 2017 | Student Center (SC)

Wednesday, February 22, 2017
5:00 – 7:00 PM .......................................................... Registration .......................................................... Student Center Lobby
6:00 – 7:00 PM .................................................. Executive Committee Dinner ................................................. Wintzell’s Oyster House
7:00 – 9:00 PM .................................................. Executive Committee Meeting ................................................. Wintzel’s Oyster House

Thursday, February 23, 2017
7:00 AM – 4:00 PM .......................................................... Registration .......................................................... SC Lobby
8:00 AM – 12:00 PM ........................................ Academy of Science Morning Paper Sessions
8:00 AM .......................................................... Section I – Biological Sciences I .................................................. SC Terrace
8:00 AM .......................................................... Section IX – Health Sciences ................................................. SC 253
8:00 AM .......................................................... Section III – Physics and Mathematics ................................ SC 203
9:00 AM .......................................................... Section VI – Anthropology .................................................. SC 146
9:00 AM .......................................................... Section II – Chemistry .......................................................... SC 254
9:00 AM .......................................................... Section VIII – Environmental and Earth Science ........ SC 146
9:30 AM .......................................................... Section V – Social Sciences I ................................................. SC 212
10:00 AM .......................................................... Coffee and Refreshments .................................................. SC Lobby

AAS Posters
8:00 AM – 10:30 AM ...... Poster Set-Up (All Sections) .......................................................... SC 2nd Floor Lobby
9:00 AM – 4:30 PM ...... Poster Viewing (All Sections) .......................................................... SC 2nd Floor Lobby

10:00 AM – 4:30 PM .................................................. Academy of Science Poster Session, Authors Present
10:00 AM – 12:00 PM .................................................. Section VIII – Environmental and Earth Science
10:00 AM – 12:00 PM .................................................. Section II – Chemistry
11:30 AM – 1:30 PM .................................................. Section I – Biological Sciences
12:00 PM – 2:00 PM .................................................. Section III – Physics and Mathematics
1:00 PM – 3:00 PM .................................................. Section V – Social Sciences
1:00 PM – 3:00 PM .................................................. Section IX – Health Sciences
2:00 PM – 4:00 AM .................................................. Section IV – Engineering and Computer Science
3:00 PM – 4:00 PM .................................................. Section VI – Anthropology
3:30 PM – 4:30 PM .................................................. Section VII – STEM Education

12:00 PM ......................... AAS/AJAS Joint Annual Business Meeting .................................................. SC Ballroom
12:00 PM – 1:00 PM ........ Lunch .......................................................... On Your Own

1:00 PM – 5:00 PM .................................................. Academy of Science Afternoon Paper Sessions
1:00 PM .................................................. Section VI – Anthropology .................................................. SC 146
1:00 PM .................................................. Section IV – Engineering and Computer Science ........ SC 211
1:15 PM .................................................. Section VII – STEM Education .................................................. SC 211
1:40 PM .................................................. Section I – Biological Sciences .................................................. SC Terrace
1:40 PM .................................................. Section X – Bioethics and History & Philosophy of Science ........ SC 102
Thursday, February 23, 2017 continued

3:00 PM ............................Coffee.......................................................................................................................... SC Lobby
4:00 – 4:30 PM ................Remove all AAS posters.................................................................................................SC 2nd Floor Lobby
5:00 PM .............................Group Photograph AAS/AJAS........................................................................SC Northside Lobby
5:10 – 6:30 PM .................Sci-Mix; Viewing of AJAS and Gorgas Scholars’ Posters ..................SC 2nd Floor Lobby
7:00 PM..............................Joint AJAS/AAS Banquet.......................................................................................SC Ballroom

Welcome – Akshaya Kumar (AAS President), Lucas Lynn (AJAS President), and Mark Jones (AJAS Director)

Opening Remarks – Dr. David Johnson, Provost and Senior Vice President for Academic Affairs,
University of South Alabama

Keynote Address – Dr. E. O. Wilson, University Professor Emeritus, Harvard University

Presentation of Alabama Academy of Science Honors and Awards

Presentation of Gorgas Finalists

Friday, February 24, 2017

7:00 – 10:00 AM..............Registration ................................................................................................................ SC Lobby
10:00 AM........................Coffee.......................................................................................................................... SC Lobby
12:00 PM – 1:00 PM...........Keynote Luncheon .................................................................................................SC Ballroom
Thursday, February 23, 2017

12:00 PM .................. Joint AAS/AJAS Business Meeting .................................................................................. SC Ballroom
3:00 – 5:00 PM ............... Registration ................................................................................................................ SC Lobby
3:00 – 5:00 PM ............... Poster Set-up and Orientation .................................................................................. SC 2nd Floor Lobby
5:00 PM ...................... Group Photo AAS/AJAS ............................................................................................ Northside Lobby
5:10 – 6:30 PM ............... Sci-Mix Viewing of AJAS and Gorgas Scholars’ Posters ........................................ SC 2nd Floor Lobby
7:00 PM ...................... Joint AJAS/AAS Banquet .......................................................................................... SC Ballroom

Welcome – Akshaya Kumar (AAS President), Lucas Lynn (AJAS President), and Mark Jones (AJAS Director)

Opening Remarks – Dr. David Johnson, Provost and Senior Vice President for Academic Affairs, University of South Alabama

Keynote Address – Dr. E. O. Wilson, University Professor Emeritus, Harvard University

Presentation of Alabama Academy of Science Honors and Awards

Presentation of Gorgas Finalists

Friday, February 24, 2017

Breakfast On Your Own ................................................................................................................................. Hotel and Town Locations
7:00 AM ...................... Registration ................................................................................................................ SC Lobby
7:30 AM ...................... Paper Reading Orientation ........................................................................................ SC 211
7:30 AM ...................... AJAS Judges Orientation .............................................................................................. SC 212
8:00 AM ...................... AJAS Paper Competition ................................................................................................ SC 205
Life Sciences ................................................................................................................................. SC 205
Physical Science ............................................................................................................................ SC 102
Engineering and Mathematics and Computer Science ................................................................. SC 203
Environmental Science, Earth Science, and Space Science ....................................................... SC 146
Medicine and Health, Behavioral, and Social Sciences ................................................................. SC 253
8:00 AM ...................... Prepare for AJAS 2019 (Mentoring for Future Paper Competitions) ..................... SC 254
11:30 AM ...................... Elections and Business Meeting ........................................................................ SC 212
12:00 PM ................. Luncheon (Box Lunches) ............................................................................................ SC Ballroom

Lunch Keynote Speaker – Catherine Zivanov, Goldwater Scholar, Phi Kappa Phi Marcus L. Urann Fellow

1:00 PM ...................... Group Photograph (AJAS/Gorgas) ........................................................................ SC Northside Lobby
1:15 PM ...................... AJAS Paper Competition Finals ........................................................................ SC Ballroom
2:55 – 3:15 PM .............. AJAS Judges meeting ............................................................................................... SC 212
3:15 PM ...................... Awards Reception, Joint AJAS/Gorgas ................................................................ SC Ballroom
Thursday, February 23, 2017

3:00 – 5:00 PM .................Registration ................................................................................................................ SC Lobby
3:00 – 5:00 PM .................Poster Set-up and Orientation ..............................................................SC 2nd Floor Lobby
5:00 PM .............................Group Photograph (AAS/AJAS) ..............................................................SC 2nd Floor Lobby
5:10 – 6:30 PM .................Sci-Mix Viewing of AJAS and Gorgas Scholars’ Posters ....................SC 2nd Floor Lobby
7:00 PM .............................Joint AJAS/AAS Banquet.......................................................................................SC Ballroom

Welcome – Akshaya Kumar (AAS President), Lucas Lynn (AJAS President), and Mark Jones (AJAS Director)

Opening Remarks – Dr. David Johnson, Provost and Senior Vice President for Academic Affairs, University of South Alabama

Keynote Address – Dr. E. O. Wilson, University Professor Emeritus, Harvard University

Presentation of Alabama Academy of Science Honors and Awards

Friday, February 24, 2017

Breakfast On Your Own............................................................................................................ Hotel and Town Locations
7:00 AM..............................Registration ................................................................................................................ SC Lobby
7:30 AM..............................Gorgas Judges Orientation ...........................................................................................SC 212
7:30 – 8:45 AM..................Set Up Science Exhibits/Display/Poster/Orientation......................................SC Ballroom
8:45 – 9:45 AM .................Demonstrations for Judges ................................................................................SC Ballroom
10:00 AM – 12:00 PM .......Individual Interviews with Judges will be conducted
at the poster presentation sites..........................................................................SC Ballroom
12:00 PM ............................Luncheon (Box Lunches)......................................................................................SC Ballroom

Lunch Keynote Speaker – Catherine Zivanov, Goldwater Scholar, Phi Kappa Phi Marcus L. Urann Fellow

12:00 – 1:00 PM..............Gorgas Judges Executive Session ................................................................SC 212
1:00 PM ..............................Group Photograph (AJAS/Gorgas).......................................................... SC Northside Lobby
1:15 PM ..............................AJAS Paper Competition Finals .................................................................SC Ballroom
2:45 PM ..............................Remove Posters and Displays ...............................................................SC Mall
3:15 PM ..............................Awards Reception, Joint AJAS/Gorgas ..................................................SC Ballroom

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.
Mary Anne Sahawneh, Presiding

1. 8:00 Ecology of Bald Eagles (Haliaeetus leucocephalus) in Alabama. Andrew Coleman, Alabama A&M University, Birmingham Audubon Society.

2. 8:20 Subtle Temperature Differences May Well Determine Who Wins: A Story of Four Submerged Aquatic Plant Species. Molly Miller, University of South Alabama, University of South Alabama; David Nelson, University of South Alabama; James Mahan, Plant Stress and Water Conservation Laboratory USDA/ARS; Timothy Sherman, University of South Alabama.

3. 8:40 Molecular Cloning of a cDNA Encoding A Sarco/Endoplasmic Reticulum Ca2+ ATPase (SERCA) From Y-Organs Of The Blue Crab (Callinectes Sapidus) And Analysis Of Spatial And Temporal Patterns Of Mrna Abundance. Megan Roegner, University of Alabama at Birmingham; HY Chen, Japanese International Research Center for Agricultural Sciences; RD Watson, University of Alabama at Birmingham.

4. 9:00 Capturing Cavity-Nesting Ants with Artificial Nest Trap Constructed out of Plaster. Isaac Heinkel, Glenn Marvin, Paul Davison, University of North Alabama.

5. 9:20 Age Specific Patterns in Window Mortality in Avian Populations. Emma Rhodes, Joel Borden, John McCreadie, University of South Alabama.

9:40 BREAK

6. 10:00 Impaired Social Behavior In Mice With Tyrosinemia Type I Is Associated With Increased Myelination Of The Cerebral Cortex. Marissa Moore, Gordon MacGregor, University of Alabama in Huntsville.


10:40 BUSINESS MEETING
Elect a Section Vice-Chair for the 2017-19 term.

11:00 LUNCH

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
Brad Bennett, Presiding

8. 1:40  **g Analysis Of Manatee Periotic Bone Microchemistry As A Tool To Track West Indian Manatee Migrations In The Northcentral Gulf of Mexico. Kayla DaCosta, Ruth Carmichael, Dauphin Island Sea Lab/University of South Alabama; Katie Brill, NOAA Affiliate.

9. 2:00  Citizen-Science Provides Data On Seasonal Occupancy Of West Indian Manatees (Trichechus Manatus) In The Northcentral Gulf of Mexico. Elizabeth Hieb, Dauphin Island Sea Lab; Ruth H. Carmichael, Dauphin Island Sea Lab, University of South Alabama; Allen Aven, Dauphin Island Sea Lab, University of South Alabama; Courtney Nelson-Seely, Dauphin Island Sea Lab; NicoleTaylor, Dauphin Island Sea Lab.


11. 2:40  **g The Effect of Incubation Temperature on Sex and Morphology in a Lizard. Ariel Steele, Auburn University; Daniel Warner, Auburn University.

12. 3:00  Sedimentary Records of Recurrent Phosphate Spills to a Coastal Estuary. Ruth Carmichael, University of South Alabama, Dauphin Island Sea Lab; Jacob Hall, Dauphin Island Sea Lab; Elizabeth Hieb, Dauphin Island Sea Lab; Pavel Dimens, Dauphin Island Sea Lab; Elizabeth D.Condon, University of North Carolina at Wilmington; Kimberly Cressman, Grand Bay National Estuarine Research Reserve.

3:20  BREAK

13. 3:40  **g Thermal Spikes Caused By The Urban Heat Island Effect Result In Differential Egg Survival Of A Non-Native Lizard (Anolis cristatellus). Joshua Hall, Daniel Warner, Auburn University.

14. 4:00  **u Geographical Distribution of Animal-Road Mortality Incidents in Mobile County, Alabama: A Preliminary Analysis. Adam Stern, Stephanie Jett, University of South Alabama.

15. 4:20  **g Optimizing Body Composition In Laboratory Fed Sea Urchin Lytechinus Variegatus. Yuan Yuan, Laura Heflin, Mickie Powell, Stephen Watts, University of Alabama at Birmingham.

16. 4:40  Trouble in the Galapagos: Are Black Flies Native Or Invasive. John McCreadie, University of South Alabama; C. Brockhouse, Crieghton University; P. H. Adler, Clemson University.

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
Drew Hataway, Presiding
Authors Present: 11:30 AM – 1:30 PM, Viewing and Judging

17. Current Status of ALNHS: The Herbarium of the Alabama Natural Heritage Section. Wayne Barger, Chris Taylor, Natural Heritage Section, AL-DCNR.
18. A State Record For The Mygalomorph Spider Sphodros Abboti (Araneae: Atypidae) From Baldwin Co., AL. Mike Howell, Samford University; Kristin Bakkegard, Samford University; Jim Egbert, Orange Beach, AL.
22. Differential Production and Secretion of Potentially Toxigenic ECPs from an Epidemic Strain of Aeromonas hydrophila. Priscilla Barger, Joseph Newton, Mark Liles, Auburn University.
23. 50 Shades of Morality. Cassandra Fignar, University of South Alabama.
24. Survey and Phylogenetic Identification of Endophytic Fungi on two Aquatic Plants found in Mobile Bay. Gray F. Scarbrough, Joseph M. Cortopassi, Juan L. Mata, University of South Alabama.
25. Evidence of Climate Change: Reduction in Sugar Maple Growth. Brittany Butcher, University of West Alabama; Ketia Shumaker, University of West Alabama; Carolyn Copenheaver, Virginia Tech.
28. Testing the Cytotoxicity Effects of the Raw Venom from Ctenus hibernalis. Brad Bennett, Samford University; Jonathan Berkuta, Samford University; Adam Krahn, Hope College; Shannon Gilstrap, Samford University; Robert Hataway, Samford University; Mary Anne Sahawneh, Samford University.
30. Using Video Manipulation And Video Playback To Study The Influence Of Color On Communication In Geckos. Nathan Katlein, Ylenia Chiari, Maria Byrne, University of South Alabama.
31. Factors Directing Feed Intake and Satiety in the Sea Urchin Model, Lytechinus variegatus. Marlee Hayes, University of Alabama at Birmingham; Ben McCafferty, University of Alabama at Birmingham; Laura Heflin, University of Alabama at Birmingham; John M. Lawrence, University of South Florida; David Raubenheimer, University of Sydney; Stephen A. Watts, University of Alabama at Birmingham.
32. Identification and Initial Characterization of Triclosan Degradation Genes in Bacteria Isolated from Alabama Soils. Trenton O’Neal, Sinéad M. Ní Chadhainn, University of South Alabama.

33. Evolution of the GCH Gene Family In Vertebrates And Its Importance For Xanthophore Differentiation. Trenton O’Neal, University of South Alabama; Scott Glaberman, University of South Alabama; Tony Gamble, Marquette University; Ylenia Chiari, University of South Alabama.


36. Interactions Of Nitrogen And Carbon Metabolism In The Submerged Aquatic Plant, Hydrilla Verticillata. Molly Miller, Nelson, Kelly Major, Timothy Sherman, University of South Alabama.

37. The Structure And Organization Of Tentacular Bulb And Tentilla Of Ctenophore Mnemiopsis Leidyi. Dong Gen, Anthony Moss, Auburn University.


40. Genomic Variation Of Breeding Meta-Populations Of Cerulean Warblers (Setophaga cerulea). Richard Borthwick, Yong Wang, Alabama A&M University.

41. Anabolic Glucose Metabolism is Significantly Enhanced in Pancreatic Cancer During the Evolution of Distant Metastasis. Alex Coley, University of South Alabama; Oliver McDonald, Vanderbilt University; Glen Borchert, The University of South Alabama.

42. C. Elegans Thick Filaments Assemble With A Decapitated Myosin A. Hallea Ward, Ryan Littlefield, University of South Alabama.


44. Amino Acid Residue Movement Similarities Between Plant, Invertebrate, And Vertebrate MBD Proteins. C. Joy Shepard, Athens State University; Sara Cline, Athens State University; Jeremy Prokop, HudsonAlpha Institute for Biotechnology.

45. The Study of E-Coli in Lake Martain. Artchandra Marks, Brian Burnes, University of West Alabama.

46. The Impact of Soil Compaction and Soil Moisture on Silphid Abundance Along an Urban Rural Gradient. Hope Reamer, Samford University; Tori Mezbish, University of Maryland:College Park; Grant Gentry, Samford University.


49. **u Anabolic Glucose Metabolism is Significantly Enhanced in Pancreatic Cancer During the Evolution of Distant Metastasis. Alexander Coley, University of South Alabama; Oliver McDonald, Vanderbilt University; Glen Borchert, University of South Alabama.

50. **u Estimates of Relative Preferred Temperatures in Turtles. Austin Ray, University of South Alabama; Ylenia Chiari, University of South Alabama; Scott Glaberman, University of South Alabama; Pierre Moisson, A Cupulatta, Véro, 20133 Ucciani, Corsica, France; Miguel Carretero, CIBIO/Universidade do Porto Campus Agrário de Vairão 4485-661 Vairão, Portugal.


52. **u Chicken Processing Plant Contributions To Nutrient Pollution In Graves Creek Were Modified By Rainfall And Seasonal Growth Of Wetland Plants. Emily Bridge, Annie Smith, Samford University; Betsy Dobbins, Samford University.

53. **u Antibiotic Discovery In The Saline Gradient Of The Simpson Wild Life Sanctuary Via Understanding The Biological Diversity Of Bacteria, Riley King, Mara Deluca, Mustafa Morsy, University of West Alabama.

54. **u Crop Production On The Rise As Fungal Endophytes Help With The Cause, Mantricia Densmore, Austin Tubbs, Mustafa Morsy, University of West Alabama.

55. Source-tracking *E. coli* in Lake Windermere, England, Brian Burnes, University of West Alabama.

56. **g Intercellular Signaling by Microparticles Containing Cyclic AMP, April Scruggs, Thomas Rich, Natalie Bauer, University of South Alabama.

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
Cameron Gren, Presiding

1. 9:00 **u Environmental Remediation of Cadmium, Chromium and Copper using Tea waste. Micaela Truett, Nicholas Helms, Nixon Mwebi, Jacksonville State University.
2. 9:20 **u Solvent Effect on the Extraction of Antioxidants. Wyvolyn Kirkland, Nixon Mwebi, Jacksonville State University.
9:30 BUSINESS MEETING

Authors Present: 10:00 AM – 12:00 PM, Viewing and Judging

8. **u Survey of Active Biomolecules in Fertility Plants. Amanda Crumpton, Nixon Mwebi, Jacksonville State University.
9. **u Investigation of Adsorptive Materials for Use in Remediating Crude Oil Spills. Kenneth Livermore, Christopher Bates, Ashlee Milam, Alfred Nichols, David Steffy, Jacksonville State University. [from SECTION VIII]

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
Zengjun Chen, Presiding

1. 8:00  **Invited Talk:** On Schur’s Unitary Triangularization Theorem. Wen Yan, Tuskegee University.
2. 8:40  **u** Creating Diffraction Gratings with Transmission Holography. James McKee, David Thompson, University of North Alabama.
3. 9:00  An Inversion Algorithm for Subsurface Sensing Problem. Yijun Yu, Tuskegee University; Nailong Guo, Benedict College.
5. 9:40  A Novel Theoretical Model for Atoms Inspired by Communication Theory. Serkan Güldal, Lurong Pan, Murat Tanik, University of Alabama at Birmingham.
10:00  BUSINESS MEETING. [Elect a Vice-Chair for 2017-19]
6. 10:20  **g** XPS Studies of Surface Degradation of CZT Due to Thermal Treatments. Jonathan Lassiter, Raequane Jones, Robert Smith II, Beatriz Gutierrez-Cerezo; Kalen Mumford; Melissa Smith; Stephen Babalola, Alabama A&M University.
7. 10:40  **g** Effects of CNT/MWCNT on PVDF Optical Characteristics. Powell Rachel, Padmaja Guggilla, Alabama A&M University.
8. 11:00  **g** A Consideration Of the Soliton Solution to the Korteweg-DeVries Equation and the Use of Green’s Functions to Solve Inhomogeneous Differential Equations With Variant Boundary Conditions. Samuel Uba, Matthew Edwards, Fayequa Majid, Yinshu Wu, Alabama A&M University.
10. 11:40  **u** Hamiltonian Structures on Spin(7)-Geometry. Kevin Ingles, A. J. Todd, University of South Alabama.

**u** or **g** Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
SECTION III – PHYSICS AND MATHEMATICS | POSTER SESSION
Thursday Morning | SC 2nd Floor Lobby

Authors Present: 12:00 PM – 2:00 PM


15. **u Infrared Microscopy and Image Analysis of CZT. Melissa Smith, Beatriz Gutierrez-Cerezo,; Kalen Mumford; Robert Smith II; Kristina Williams; Jonathan Lassiter; Stephen Babalola, Alabama A&M University.


17. **u Nanomaterials Driven Energy. Salimu Kumasi, Prakash Sharma,; Akshaya Kumar, Tuskegee University.


19. **g Energy Harvesting and Storage Using Smart Nanocomposite Films, Jamilia Polius, Mohan Aggarwal, Alabama A&M University.

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
Brian Toone, Presiding

1. 1:00  **g Vehicle detection using convolutional neural networks for semantic segmentation and multitask learning on a limited dataset of multispectral satellite images. David Odaibo, Zheng Zhang, Murat Tanik, University of Alabama at Birmingham.


2:00 BUSINESS MEETING [Elect Section Chair and Vice-Chair, 2017-2019 term]

Brian Toone, Presiding

Authors Present: 2:00 PM – 4:00 PM, Viewing and Judging

4. **g Field Emission Characteristics of Selective and Non-Selective Carbon Nanotubes (CNTs) Grown on Ceramic Substrate for High Temperature Applications. Baha Yakupoglu, Auburn University; Hulya Kirkici, University of South Alabama.

5. **u Micro-prism Based Multi-/Hyper-spectral Imaging System. Dallas Guffey, Ravi Gollapalli, University of South Alabama.

6. **g Graphene Based Spectral Amplification for Increased Sensitivity in Glucose Content Measurement in Diabetes Patients. Anthony Portella, University of South Alabama.

7. **u Optimizing System Design Using SystemC and VHDL. Tristen Higginbotham, University of South Alabama.


9. **u Predicting Soil Moisture In North Alabama Using An Artificial Neural Network. Darius Keith, Alabama A&M University, Calhoun Community College. [from SECTION VIII]


**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
Susan D. Herring, Presiding

2. 10:00 Place and Identity in the 2016 Taiwanese Presidential Election. Daniel McGowin, Jacksonville State University.
3. 10:25 Soccernomics: Salaries for World Cup Soccer Athletes. Morgan Garris, Bill Wilkes, Athens State University.
4. 10:50 The Unruly Advocate. Thomas Pieplow, R. Bryan Kennedy, Susan D. Herring, Athens State University.
11:40 BUSINESS MEETING

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
SECTION V – SOCIAL SCIENCE  | POSTER SESSION
Thursday Afternoon  | SC 2nd Floor Lobby

Authors Present: 1:00 PM – 3:00 PM, Viewing and Judging

6. Perceptions of the Use of Differentiated Instruction. Dana Wilchcombe, Alabama A&M University, Oakwood University.
7. Retrospective Evaluation of a Teacher’s Training Program. Yanling Ma, Yuantao Sun, Auburn University.
8. Validation of an Anti-White Prejudice Scale in a Rural Area. Kelly Pivik, Clinton Williams, Hakima Amerg, Alexis Harris, Victoria Harris, Jarius Rembert, University of West Alabama.
11. **u Racial Perceptions of Car Locking Behaviors. Mary Rivers, Kelly Pivik, LaMia Hernandez, University of West Alabama.
12. **g The Relation Between the Mental Clutter Scale and Self-Reported Executive Dysfunction. Sarah Taylor, Stephen Aita, Benjamin Hill, Jameson Beach, Jo Holcombe, University of South Alabama.
13. **g Inconsistency in Responding is Associated with Greater Self-Reported Executive Dysfunction. Jameson Beach, Stephen Aita, Benjamin Hill, Sarah Taylor, Jo Holcombe, University of South Alabama.
14. **g Need for Cognition and its Relation to Self-Reported Executive Dysfunction. Stephen Aita, Benjamin Hill, Sarah Taylor, Jameson Beach, Jo Holcombe, University of South Alabama.
15. **u Understanding the Psychosocial Factors that Influence Undergraduate Student Retention at Tuskegee University. Jaleah Rutledge, Adetoyosi Obikoya, Tuskegee University.
17. **u Dog Days: University Animal Programs and Students’ Mental Health. Trenton Adams, Catherine Clark, Victoria Crowell, Kolleen Duffy, Margaret Green, Selena McEwen, Allison Wrape, Frank Hammonds, Troy University.

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
SECTION VI – ANTHROPOLOGY  |  PAPER SESSION I
Thursday Morning  |  SC 146

Harry O. Holstein, Presiding

9:00  Introduction -- Harry Holstein

1.  9:10  Current Cultural Resources Research USACE Mobile District. **u Matthew Grunewald, USACE Mobile District; Michael Fedoroff, USACE Mobile District; Alexandria Smith, USACE Mobile District.

2.  9:30  **u Oldowan Stone Tools and Hominin Cognition: What Can Stone Age Technology Tell Us About Contemporary Learning?. **u Brittney Highland, University of South Alabama; Philip Carr, University of South Alabama.

3.  9:50  **u The Potential for Archaeology at Antebellum Slave Houses in Alabama’s Black Belt. **u Natalie Mooney, University of West Alabama.

10:10  BREAK


5.  10:50  **u Utilizing GIS to gain a better understanding of Native features in Northeast Alabama: Morton Hill, Calhoun Co., Ala. (site-1CA671). **u Jacob Bramlett, Jacksonville State University; Mark Jones, Jacksonville State University; Harry Holstein, Jacksonville State University; Joe Morgan, Jacksonville State University.

6.  11:10  Archaeological Investigations of Native American Stone Structure Prayer Seats Located Atop Choccolocco Mountain, Calhoun County, Alabama. **u Harry Holstein, Jacksonville State University.

7.  11:20  **u Tracking Industrial Metals and Contamination in the Chattahoochee River: Potential Point and Non-Point Source Pollution to the Apalachicola Blueway. **u Emily Powell, Joe Morgan, Jacksonville State University. [from Section VIII]

11:40  LUNCH / USA Museum Visit 1.5 hours

**u or **g Denotes a paper or poster that entered in the student paper/poster competition.
Harry O. Holstein, Presiding

8. 1:00 The Thrash Site: An Introduction to a Gulf Formational site in Pike County, Alabama. Jason Mann, Troy University.
9. 1:20 **u Steatite Fragments at the Thrash Site. Ray Jefcoat, Troy University.
10. 1:40 **u Gulf Formational Lithic Tools Found at the Thrash Site. Rachel Daly, Troy University.
11. 2:00 **u Pottery at the Thrash Site. Elizabeth Garrett, Troy University.
12. 2:20 **u An Investigation of a Wall Trench Structure at the Thrash Site. Jessica Helms, Troy University.

3:00 CLOSING REMARKS – Harry Holstein

Harry O. Holstein, Presiding

**u The Organization of Early Archaic Technology in Southwest Alabama: An Aggregate Analysis of 1WN106. James Norris, University of South Alabama; Philip Carr, University of South Alabama.

**u El Niño Southern Oscillation and Tornado Frequency in Alabama. Tiffany DeBoer, Jacksonville State University; Stephen Tsikalas, Jacksonville State University.

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
Mel Blake, Presiding

1. 1:15  BUSINESS MEETING. [Elect Section Chair and Vice-Chair, 2017-19]
2. 1:40  STEM Outreach Opportunities for the August 2017 Total Solar Eclipse. Mel Blake, University of North Alabama.
3. 2:00  Combining an Authentic Research Experience with Discussion of the Primary Literature in an Undergraduate Microbiology Course. Sinead Ni Chadhain, University of South Alabama.
4. 2:20  **g Microbial Art: An Emerging Scientific Inquiry Model. Sarah Adkins, Rachel Rock, J. Jeffrey Morris, University of Alabama at Birmingham.
5. 2:40  A Relationship Between Hamming Distance and 8-Queens Problem: A STEM Exercise. Serkan Guldal, Zekai Demirezen, Michael Limpcomb, Murat Tanik, University of Alabama at Birmingham.
6. 3:00  **Invited Talk:** Outreach at Dauphin Island Sea Lab. Dr. Tina Miller-Way, Director, Discovery Hall Programs, Dauphin Island Sea Lab.

Mel Blake, Presiding

Authors Present: 3:30 PM – 4:30 PM

1.  **g Integrating Research-Based Teaching in Secondary and Undergraduate Science Courses. Nikki Patel, Faulkner University; Uduak Afangideh, Faulkner University.
2.  **g Courseware Engagement in STEM and non-STEM Disciplines. Robert Faulk, Laura Powell, Charles Brown, University of South Alabama.
3.  **u Effectiveness of Study Habits in Undergraduate Introductory Biology. Heather Sprowl, Heather Tinsley, University of Montevallo.
4.  Training The Next Generation: An Analysis And Comparison Of Curricula In Instrumental Music Education. Destin Hinkel, University of South Alabama.

**u or **g Denotes a paper or poster that entered in the student paper/poster competition.
Harry O. Holstein, Presiding

1. 11:20 **u Tracking Industrial Metals and Contamination in the Chattahoochee River: Potential Point and Non-Point Source Pollution to the Apalachicola Blueway. Emily Powell, Joe Morgan, Emily Powell, Jacksonville State University. [See ANTHROPOLOGY, SECTION VI]

SECTION VIII – ENVIRONMENTAL AND EARTH SCIENCE | POSTER SESSION
Thursday Morning | SC 2nd Floor Lobby

Authors Present: 9:00 AM – 10:00 AM, Viewing and Judging

1. **u Predicting Soil Moisture In North Alabama Using An Artificial Neural Network. Darius Keith, Alabama A&M University, Calhoun Community College; Huntsville Huntsville, Huntsville. [See ENGINEERING AND COMPUTER SCIENCE, SECTION III Poster Session, 2:00 PM – 4:00 PM]

2. **u Investigation of Adsorptive Materials for Use in Remediating Crude Oil Spills. Kenneth Livermore, Jacksonville State University; Christopher Bates, Jacksonville State University; Ashlee Milam, Jacksonville State University; Alfred Nichols, Jacksonville State University; David Steffy, Jacksonville State University. [See CHEMISTRY, SECTION II Poster Session, 10:00 AM - Noon]

**u or **g Denotes presentation entered in student competition as an undergraduate or graduate student, respectively.
### SECTION IX: HEALTH SCIENCES | PAPER SESSION  
**Thursday Morning | SC 253**

**Donna Cleveland, Presiding**

1. **8:00** Computed Tomography Contrast Injections. *Donna Cleveland*, University of South Alabama.
3. **8:40** School-based Interprofessional Asthma Self-Management Program for Middle School Students: A Feasibility Trial. *Donna Copeland*, University of South Alabama; Ellen Buckner, Samford University; Tim Op’t Holt, Kristina Miller, Kim Norris, Rhonda Lucas, University of South Alabama.
4. **9:00** Homelessness: Attitudes of Nursing Students. *Meghan Sergeant*, University of South Alabama.
5. **9:20** Self-Efficacy and Self-Management of Children Transitioning to Insulin Pumps. *Anesha Lee*, University of South Alabama.
7. **10:00** Ileal Interposition Surgery Cannot Prevent the Onset of Type 2 Diabetes in Rats. *Ping Zhao*, University of North Alabama; April Strader, Southern Illinois University Carbondale.

10:20 **BREAK and JUDGES MEETING**

### SECTION IX: HEALTH SCIENCES | POSTER SESSION  
**Thursday Afternoon | SC 2nd Floor Lobby**

**Authors Present: 1:00 PM – 3:00 PM**

10. **u Fusion Imaging in Endomyocardial Biopsy. *Jason Oman*, Hanna Johnson, University of South Alabama.

2:30 PM **JUDGES MEETING**

**u, **uh, **g Denotes presentation is entered in competition as undergraduate.
Clark Lundell, Presiding

1. 1:40 Periodic Table of Design: Elements and Principles. Brian LaHaie, University of Georgia; Clark Lundell, Auburn University.

2. 2:00 Creation. Clark Lundell, Auburn University.

3. 2:20 Changing the Definitions for the Kilogram and the Chemical Mole. Michael Moeller, University of North Alabama.

4. 2:40 Biotechnology and Humankind’s Need for Long-Range Goals. James T. Bradley, Auburn University.

5. 3:00 Keeping Playing Fields Level: Drugs, Cheaters, and Other Ethical Issues in Sports, Lewis Barker, Auburn University.

6. 3:20 Peter Rabbit Meets the Deadly Myxomatosis Virus which Hints at the Red Queen Hypothesis. Kenneth Nusbaum, Auburn University; Ormond Beach.

3:40 BUSINESS MEETING [Elect a Section Vice-Chair for 2017-19 term]
Engineering/Mathematics


Environmental Earth and Space Science


Life Science


Medicine, Health, Behavioral, and Social Science

19. *Leila Yang, Can Norcantharidin Derivatives Substituted not at C5 but at C2 be Developed as Selective, Yet Potent Inhibitors of PP5 which can be Utilized as Breast Cancer Drugs? W.P. Davidson High School, Mobile.

20. Sarathi Shah, The Effect of Phosphoric, Sulfuric, and Hydrochloric Acid on the formation of Acetylsalicylic Acid as a Precursor to Aspirin, Jefferson County IB, Irondale.


**Physical Science**


31. Hunter Wingard, We Put the TT in Lettuce! Got Pee? Wetumpka High School, Wetumpka.

* Denotes AJAS student who is also entered in the Gorgas Scholarship Competition.
Ellen Buckner, Presiding

Finalists in the 2017 Alabama Science Scholar Search and Gorgas Scholarship Program will discuss their projects.

1. Skandan Ananthasekar, Bacterial Profile of Various Illnesses in Order to Determine Distinct Bacterium, St. Paul’s Episcopal School, Mobile
2. Noel Dudeck, Examining the Polymorphs of Single Crystal Paracetamol under High Pressure, Alabama School of Fine Arts, Birmingham
3. Tomeka Frieson, The Effect of Burned Soil on Lolium perenne and Soil Properties, Jefferson County International Baccalaureate School, Birmingham
4. Davina Ho, The effects of Catalysts in the Depolymerizations of Chitin using ionic liquid, Murphy High School, Mobile
5. Tyler Huang, Central Nervous System Sensitization is Associated with Chronic Pain in HIV, Alabama School of Fine Arts, Birmingham
6. Ethan Kinnaird, Is CRISPR/cas9 a Viable Genome Editing Tool to be Used for Clinical Genetic Treatments?, Jefferson County International Baccalaureate School, Birmingham
7. Margaret Knight, Impact of Ocean Acidification on Relative Fitness and Interspecies Interactions of Picophytoplankton, Alabama School of Fine Arts, Birmingham
9. Varsha Sridhar, The Determination and Applications of Potential Carcinogens, Bisphenol A (BPA) and Bisphenol S (BPS), Jefferson County International Baccalaureate School, Birmingham
10. Hemant Srivastava, ABT263 (Navitoclax) and the IPF-Treatment Drugs for a Healthier Aging, Alabama School of Fine Arts, Birmingham
12. Leila Yang, Can norcantharidin derivatives substituted not at C5 but at C2 be developed as selective, yet potent inhibitors of PP5 which can be utilized as breast cancer drugs?, W.P. Davidson High School, Mobile

*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.
1. **Central Alabama Regional Science & Engineering Fair**  
   web, March 4, 2017  
   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 3, 2017  
   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 22-23, 2017  
   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 9, 2017  
   Josh King  
   GEARSEF Fair Coordinator (334) 844-8123  
   josh.king@auburn.edu

5. **Mobile Regional Science and Engineering Fair**  
   web, March 10, 2017 Engineering@southalabama.edu  
   David T. Allison, Ph.D. Department of Earth Sciences  
   University of South Alabama  
   136 LSCB, 307 N. University Blvd.  
   Mobile, AL 36688

6. **Alabama Science & Engineering Fair**  
   web  
   Vanessa Colebaugh, coordinator  
   vanessa@nsstc.uah.edu  
   The University of Alabama in Huntsville  
   Earth System Science Center  
   CRH 3078  
   Huntsville, AL 35899

The Intel 2017 ISEF will be held May 14-19, 2017 in Los Angeles, CA at the Los Angeles Convention Center.

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 2016-2017

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
Science Olympiad at Jacksonville High School
Saturday, February 18, 2017
Details at the http://www.esoatjhs.org/ web site. Maximum of one team per school.

ESO at the University of West Alabama
Tuesday, October 18, 2016

ESO at Auburn University
Saturday, February 4, 2017.

Division B, Middle School Science Olympiad,
Grades 6–9
University of Alabama, Tuscaloosa
Saturday, February 18, 2017
Link to additional information http://scienceolympiad.as.ua.edu/.

University of Alabama at Huntsville
Saturday, March 4, 2017
Link to additional information http://nsstc.uah.edu/scienceolympiad/.

University of Alabama at Birmingham
Saturday, February 18, 2017
Link to additional information UAB Regional Information.

Division C, High School, Grades 9–12
University of Alabama, Tuscaloosa
Saturday, February 18, 2017
Link to additional information http://scienceolympiad.as.ua.edu/.

University of Alabama at Huntsville
Saturday, March 4, 2017
Link to additional information http://nsstc.uah.edu/scienceolympiad/.

University of Alabama at Birmingham
Saturday, February 18, 2017
Link to additional UAB Regional Information.
STATE TOURNAMENTS
Auburn University
Division B and C State Olympiads Saturday, April 1, 2017
http://www.auburn.edu/cosam/departments/outreach/programs/Science%20Olympiad/

ASO State Policies can be found at:

Registration Information: http://www.alabamaso.org/registration.html.
Division Descriptions: http://www.alabamaso.org/divisions.html.
ASO News and Notes: 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.
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, 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
2016 - 2017 Tyler Rice, Auburn
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. Compins, 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
2016  Pradeep Lall, John and Anne MacFarlane Endowed Professor, Department of Mechanical 
        Engineering, Director, NSF-CAVE3 Electronic Research Center, Auburn University.
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 Burns (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)

2016  No award
SECTION I: Biological Sciences:
- Chair: (2017) Drew Hataway, Dept. 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: (2018) Cameron Gren, Dept. of Chemistry and Industrial Hygiene, Univ. of North Alabama, Florence, AL 35632, (256)-765-5027, cgre@una.edu.
- Vice Chair: (2018) Christopher Stopera, Dept. of Chemistry, Univ. of North Alabama, Florence, AL 35632, (256)-765-4479, cstopera@una.edu

SECTION III: Physics and Mathematics:
- Chair: (2017). Zengjun Chen, Dept. Of Physics, Tuskegee Univ., Tuskegee, AL 36088 (334)-727-8299 chenz@mytu.tuskegee.edu
- Vice Chair: (2017) Mel Blake, Dept. of Physics and Earth Science, Univ. of North Alabama, Florence, AL 35630, (256)-765-4284, rmblake@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: (2018) Susan Herring, (256)-851-8036, sdherring@att.net
- Vice Chair: (2018) Bryan Kennedy, Dept. of Management and Psychology, Athens State Univ., Athens, AL 35611, (256) 216–5363, Bryan.Kennedy@athens.edu

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

SECTION VII: STEM Education:
- Chair: (2017) Mel Blake, Dept. of Physics and Earth Science, Univ. of North Alabama, Florence, AL 35630 (256)-765-4284, rmblake@una.edu
- Vice Chair: (2017) Vacant

SECTION VIII: Environmental and Earth Science:
- Chair: (2018) J. J. Wedgworth, Office of Sponsored Programs, Station 47, University of West Alabama, Livingston, AL 35470, (205)-652-5459, jwedgworth@uwa.edu
- Vice Chair: (2016) Vacant

SECTION IX: Health Sciences:
- Chair: (2018) Donna Cleveland, Department of Radiologic Sciences, University of South Alabama, Mobile, AL, dcleland@southalabama.edu
- Vice Chair: (2018) Ron Hunsinger, rhunsin@samford.edu

SECTION X: Bioethics and History and Philosophy of Science:
- Chair: (2017) Clark Lundell, Department of Industrial & Graphic Design, Auburn University, Auburn, AL 36849, (334)-844-2369, lundece@mail.auburn.edu.
- Vice Chair: (2017) Vacant
ELECTED OFFICERS, 2016-2017

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

President-Elect: Ketia Shumaker, Department of Biology, University of West Alabama, Livingston, AL 35470, (205) 652-3406 kshumaker@uwa.edu.

Second Vice-President: Nixon Mwebi, Department of Physical and Earth Sciences, Jacksonville State University, Jacksonville, AL 36265, (256) 726-2928 nmwebi@jsu.edu.

Secretary: Malia Fincher, Department of Biology, Samford, University, 900 Lakeshore Dr., Birmingham, AL 35229, (205) 726-2928 rmfinche@samford.edu.

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

Editor: Safaa Al-Hamdani, Department 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, Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170 (205) 934–2045, sawatts@uab.edu.

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

TRUSTEES

- Ken Marion, Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170, kmarion@uab.edu.
- Prakash Sharma, Department of Physics, Tuskegee University, Tuskegee, AL 36088 (334) 727-8998, pcsharma@mytu.tuskegee.edu.
- James Bradley, Department of Biological Sciences, Auburn University, Auburn, AL 36849, bradljt@auburn.edu.
- David Nelson, Department of Biology, University of South Alabama, Mobile, AL 36688 (252) 460-6331, dnelson@usouthal.edu.
- Brian Burns, Department of Biology, University of West Alabama, Livingston, AL 35470 (205) 652-3442, bburnes@uwa.edu.
- Mike Howell, Department of Biological Sciences, Samford University, Birmingham, AL 35229, wmhowell@samford.edu.
- Richard Hudiburg, Department of Psychology, University of North Alabama Box 5187, Florence, AL 35632 (256) 765-4572, rahudiburg@una.edu.
TRUSTEES (Continued)

- Adriane Ludwick, Department of Chemistry, Tuskegee University, Tuskegee, AL 36088, aludwick@tuskegee.edu.
- Brian Toone, Department of Computer Sci., Samford University, 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, Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170 (205) 934–2045, sawatts@uab.edu.
- Anne Cusic, Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294–1170 (205) 934–9686, acusic@uab.edu.

ACTIVE PAST PRESIDENTS

Adriane G. Ludwick ................................................................. 1989–90
Ken R. Marion ........................................................................ 1991–92
Michael B. Moeller ............................................................... 1992–93
Prakash Sharma ..................................................................... 1993–94
Eugene Omasta ................................................................. 1994–95
Ellen B. Buckner .................................................................. 1997–98
Richard Hudiburg ................................................................ 2000–01
Stephen A. Watts .......................................................... 2002–03
Anne M. Cusic .................................................................... 2003–04
Larry Davenport ............................................................. 2005–06
David Nelson ...................................................................... 2006–07
George Cline ....................................................................... 2007–08
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
Two members appointed by the President
APPOINTED COMMITTEES 2016-17

Archives
- John McCall (2018) Department of Biological and Environmental Sciences, University of West Alabama, 35470, jmccall@uwa.edu.

Auditing Senior Academy
  Budget and Finance Committee

Auditing Junior Academy
  Budget and Finance Committee
- 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.
- Larry Krannich, Department of Chemistry, University of Alabama at Birmingham, Birmingham, AL 35294, krannich@uab.edu

Development:
- Larry Krannich, co-Chair, 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

Ad-Hoc Steering Committee formed for developing a mission statement and objectives for the journal and create a mechanism for assessing the success of the journal moving forward. Report at Spring 2017 Executive Committee meeting:
  Drew Hataway, Ellen Buckner, Cameron Gren, Jack Shelley-Tremblay, Jim Bradley, Akshaya Kumar, Adriane Ludwick, and Brian Toone.

Electronic Media: (3-yr terms)
- John Shelley-Tremblay, editor (2019), Department of Psychology, University of South Alabama, UCOM 1123, (251) 460-6883 Mobile, AL 36688, jstremblay@southalabama.edu
- Richard Hudiburg, Associate Editor, (2017) Department of Psychology, University of North Alabama, Box 5187, Florence, AL 35632, rahudiburg@una.edu

Ad Hoc Committee for Electronic Media to consider Bylaw concerning associate editors, online JAAS publication, and Journal indexing:
  Brian Toone, John Shelley-Tremblay, and JAAS Editors

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, egdobbins@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.
• Andrea Hunt, (2019) Sociology and Family Studies, University of North Alabama, Florence, AL. 35632, ahunt3@una.edu

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 South Alabama
• John Shelley-Temblay, co-Chair (2017), Department of Psychology, University of South Alabama, UCOM 1123, (251) 460-6883 Mobile, AL 36688. jstremblay@southalabama.edu
• Ellen Buckner, co-Chair (2017), Ida V. Moffett School of Nursing, (205) 726-2092, Samford University, (205) 726-2092 ellen.buckner@samford.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, Biringham, 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, rmblake@una.edu

Membership: Vacant, Chair

Nominating:
- Nixon Mwebi, Department of Physical and Earth Science, Jacksonville State University, Jacksonville, AL 36265, (256) 782-5336, nmwebi@jsu.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

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, rnhunsin@samford.edu
- Mickie Powell, (2016) Department of Biology, University of Alabama at Birmingham, Birmingham, AL 35294, mpowell@uab.edu

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
- Afef Janen, (2021) Alabama A&M University, afef.janen@gmail.com
- Berneece Herbert, (2021) Department of Community and Regional Planning, Alabama A&M University, Normal, AL 35762 (256) 372-4988, berneece.herbert@ammu.edu

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
• 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:
• 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.
• Ketia Schumaker, (2016) Department of Biology, University of West Alabama Station #7, Livingston, AL
  35470, kshumaker@uwa.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. Sampley .............................................. 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
Russel 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
J.T. McKenzie .............................................. 1944-45
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
Herbert A. McCullough ...................................... 1958-59
Samuel B. Barker ........................................... 1959-60
James R. Goetz .............................................. 1960-61
Paul C. Bailey .............................................. 1961-62
Louis J. Eisele .............................................. 1962-63
E. Carl Sensenig ............................................. 1963-64
William J. Barrett ........................................... 1964-65
James F. Sulzby, Jr ........................................... 1965-66
David L. DeJarnette ........................................... 1966-67
H. Elsworth Steele ........................................... 1967-68
Ruric E. Wheeler ........................................... 1968-69
Wilbur B. DeVall ........................................... 1969-70
W.L. Furman .............................................. 1970-71

NAME ............................................................ TERM
G.O. Spencer .............................................. 1971-72
Joseph C. Thomas ........................................... 1972-73
Robert T. Gudauskas ........................................... 1973-74
Reuben B. Boozer ........................................... 1974-75
Thomas E. Denton ........................................... 1975-76
Urban L. Diener ........................................... 1976-77
James C. Wilkes ........................................... 1977-78
William F. Arendale ........................................... 1978-79
Jack H. Moore .............................................. 1979-80
Geraldine M. Emerson ........................................... 1980-81
Kenneth Ottis .............................................. 1981-82
Charles M. Bough ........................................... 1982-83
Raymond E. Isbell ........................................... 1983-84
John F. Pritchett ........................................... 1984-85
Stanley T. Jones ........................................... 1985-86
Philip G. Beasley ........................................... 1986-87
H. Dean Moberly ........................................... 1987-88
Richard L. Shoemaker ........................................... 1988-89
Adrian G. Ludwick ........................................... 1989-90
Michael E. Lisano ........................................... 1990-91
Ken R. Marion ........................................... 1991-92
Michael B. Moeller ........................................... 1992-93
Prakash Sharma ........................................... 1993-94
Eugene Omasta ........................................... 1994-95
Dan C. Holliman ........................................... 1995-96
Thomas S. Jandebeur ........................................... 1996-97
Ellen B. Buckner ........................................... 1997-98
Moore Asouzu ........................................... 1998-99
Larry R. Boots ........................................... 1999-00
Richard Hudiburg ........................................... 2000-01
Roland Dute ........................................... 2001-02
Stephen A. Watts ........................................... 2002-03
Anne M. Cusic ........................................... 2003-04
Ronald L. Jenkins ........................................... 2004-05
Larry Davenport ........................................... 2005-06
David Nelson ........................................... 2006-07
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
Akshaya Kumar ........................................... 2016-17
HOSTS FOR FUTURE ALABAMA ACADEMY OF SCIENCE MEETINGS

2018 – College of Health Sciences, Samford University

2019 – Tuskegee University

2020 – Alabama A&M University

2021 – University of South Alabama

The Local Arrangements Manual for planning Academy annual meeting can be found on the Academy website: www.alabamaacademyofscience.org.

EXHIBITORS

The University of Alabama Press
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February 22-24, 2017
University of South Alabama