PROGRAM

EIGHTY-FIFTH ANNUAL MEETING

of the

ALABAMA ACADEMY OF SCIENCE, INC.

Meeting Jointly With

ALABAMA JUNIOR ACADEMY OF SCIENCE

GORGAS SCHOLARSHIP COMPETITION

ALABAMA STATEWIDE CHEMISTRY UNDERGRADUATE RESEARCH SYMPOSIUM

March 19 - 22, 2008
Samford University
Birmingham, 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:
  Samford University police/Security number: 726-2020 or 2020 from campus phones
  Campus Emergency:  726-2020 or 2020 from campus phones
  Emergencies (Police, Fire, Medical):  726-2020 or 2020 from campus phones

*Off-campus emergencies (Police, Fire, Medical):  911 or 332-6240
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Inside Back Cover
March 19, 2008

Dear Friends:

I am pleased to welcome you to the campus of Samford University for the 85th meeting of the Alabama Academy of Science. Our students, faculty, and staff have been actively involved in preparations for your visit, and we hope that you enjoy our Samford hospitality.

It is an honor for us to host this particular meeting, calling together men and women committed to science as a means to understanding our universe and bringing hope to a world in need.

Our best wishes to you for a successful conference.

Sincerely,

Andrew Westmoreland
Dear AAS Members and Guests;

Welcome to the 85th annual meeting of the Alabama Academy of Science. Through the years, the state Academy meetings have played key roles in my development as a scientist and as an educator. I always look forward to these meetings for the opportunity to review good science, meet new people, and to renew old friendships. This year we return to Samford University, whose faculty have long been active supporters of the Academy. Poster sessions, presentations, and workshops highlight scientific research in twelve sections of the Senior Academy. Young researchers will present their results in regular sessions, and special sessions of the Alabama Undergraduate Research Symposium (Chemistry), and the Junior Academy of Science. Outstanding High school students will compete for awards in the prestigious Gorgas Scholarship Program. Paper competitions, travel awards, and research grants are all parts of the Academy experience. On Friday morning, we will feature a symposium titled “Information Security Issues”. Given the rising threat of identity theft, this is a very relevant topic for discussion. I’m looking forward to seeing you there.

If you are attending these meetings for the first time, please introduce yourself to the Officers and Trustees of the Academy. If you are a new faculty member and want to get involved in the academy, see me. There are committee slots that need filled. This is your Academy, get involved.

These meetings require considerable time and energy to organize. I want to thank all of the section chairs, committee members, officers, and trustees for their efforts. Without all of you, this program would never happen. Special thanks go to Dr. George Keller and the members of the local arrangements committee at Samford University for their planning and coordination. As always, Dr. Larry Krannich (AAS Executive Director) deserves kudos for keeping us on task and on time. Please take a moment thank these people when you see them in the halls during the meeting. I hope that you find the meetings well organized, well executed, and above all, exciting. May the presentations and subsequent discussions help improve science and science education in Alabama. Spread the word about the Academy among your students and colleagues. Let’s make next year’s meeting bigger and better than ever.

Sincerely,

George R. Cline, Ph.D.
President; Alabama Academy of Science

An Equal Opportunity / Affirmative Action Employer
LOCAL ARRANGEMENTS COMMITTEE

The officers and members of the Academy express their appreciation to Samford University and
the Local Arrangements Committee for their efforts in planning and hosting this
85th Annual Meeting.

Local Chair
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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 by the Secretary in the registration area. 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. If presenters bring their own, they are responsible for their computer.

POSTERS

Posters are to be available for viewing in the Sciencenter on boards on the walls of the Ground, 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> floor hallways. Each hallway board (6’ x 4’) must accommodate two posters. Authors for the session posters should be present for discussions with viewers as follows:

Thursday:
- 10:30 AM – 12 noon, Chemistry (2<sup>nd</sup> & 3<sup>rd</sup> floor hallway boards)
- 12:15 – 1:30 PM Biological Sciences I (Grd lobby & 038 & 1<sup>st</sup> Flrs)
- 1:00 – 2:00 PM Engineering and Computer Science (1<sup>st</sup> Flr N wing)
- 1:30 – 2:30 PM Health Sciences (3<sup>rd</sup> Flr)
- 3:45 – 4:30 PM Earth Science (2<sup>nd</sup> Flr N wing)
- 3:45 -- 4:30 PM Geography, Forestry, Conservation & Planning (2<sup>nd</sup> Flr N wing)
- 3:45 – 4:30 pm Behavioral and Social Sciences (2<sup>nd</sup> Flr N wing)
- 4:45 – 5:30 PM Physics and Mathematics (2<sup>nd</sup> Flr S wing)

Friday:
- 10:30 -- 11:30 PM Science Education (2<sup>nd</sup> Flr N wing)
- 12:30 – 1:30 PM Biological Sciences II (Grd lobby & 038 & 1<sup>st</sup> Flrs)

NOTE: Posters must be removed as soon as your respective poster session has concluded to make space available for the next poster session.
Wednesday

4:00 - 6:00 PM  Registration................................................................. Second Floor Hallway

6:30 - 10:00 PM  Executive Committee Dinner/ Meeting.................................Room 033

Thursday Morning

7:00 - Noon
Registration............................................................................... Second Floor Hallway
Refreshments............................................................................. Second Floor Hallway
8:30 AM Academy of Science Program Sessions ..........................................................Sciencenter

*Section Program Sessions:*
8:30  Chemistry Undergraduate Research Symposium .........................Room 314
8:30  Biological Sciences I (Section I).................................................Room 109
8:30  Physics and Mathematics I (Section V).......................................Room 230
9:00  Chemistry (Section II).................................................................Room 315
8:30  Health Sciences I (Section IX) ..................................................Room 311
9:00  Engineering and Computer Science (Section X).......................Room 238

Slide Preview Room .................................................................................Room 308

10:45 AM – 1:30 PM  Poster Viewing ... Grd (lobby & 038), 1st, 2nd, & 3rd Floor Hallway Boards
Authors present to discuss these section posters from
10:45 AM – 12 noon................................................................. Chemistry (Section II) (2nd & 3rd Flrs)
10:45 AM – 12 noon .......Chemistry Undergrad. Research Symposium (2nd & 3rd Flrs)
12:15 PM – 1:30 PM..............Biological Sciences (Grd lobby & 038) & 1st Flrs

Thursday Afternoon

Noon – 1:00 PM Workshop

*Planning for Graduate Study in Chemistry and the Sciences*.................Room 314
This workshop, which is presented by the University of Alabama's Department of Chemistry, will focus on the advantages of obtaining a graduate degree in chemistry, things to consider in selecting and applying for graduate school, and what to expect once enrolled in graduate school. The information presented will also apply in general to the other sciences. Students and educators from all areas of science are welcome to attend. A box lunch will be provided free of charge to all attendees.
Noon – 1:00 PM
Lunch ............................................................................................................. Second Floor Hallway
Lunch (Trustees, Elected Officers, Exec. Dir.) .........................................................Room 033

12:45 PM Group Picture ............................................................................. Sciencenter, Main Entrance

1:00 - 4:00 PM
Registration........................................................................................................2nd Floor Hallway
Refreshments........................................................................................................2nd Floor Hallway

1:00 – 5:00 PM Academy of Science Program Sessions.................................Sciencenter

Program Sessions:

1:30 Biological Sciences II (Section I)................................................................. Room 109
1:15 Geography, Forestry, Conservation, & Planning (Section IV) ................. Room 213
1:30 Chemistry (Section II) .............................................................................. Room 314
1:00 Physics and Mathematics II (Section V) ...................................................... Room 230
1:15 Behavioral and Social Sciences II (Section VIII) ......................................... Room 213

Slide Preview Room ..........................................................................................Room 308

1:00 - 5:00 PM Poster Viewing ......................................................................... Ist, 2nd, & 3rd Floor Hallway Boards
Authors present to discuss these section posters from

1:00 – 2:00 PM .......................................................Engineering and Computer Science (1st Flr N wing)
1:30 – 2:30 PM .................................................................Health Sciences (3rd Flr)
3:45 – 4:30 PM .............................................................................. Earth Science (2nd Flr N wing)
3:45 – 4:30 PM ....... Geography, Forestry, Conservation & Planning ( 2nd Flr N wing)
3:45 – 4:30 pm .............................................................. Behavioral and Social Sciences (2nd Flr N wing)
4:45 – 5:30 PM ....................................................... Physics and Mathematics (2nd Flr S wing)
Thursday Evening

5:30 PM  Section Officer's Meeting ................................................................. Room 011

6:00  AJAS/AAS Annual Business Meeting ......................................................... Room 011

7:00  Joint AJAS/AAS Banquet ........................................................................... Samford Cafeteria
Located on the 2nd Floor of the Ralph W. Beeson University Center (Bldg. #9, pg 63)

George Cline, Presiding

Dr. W. Michael Howell
*Steroids and Fishes: A Scientific Detective Story*

Presentation of the Academy Awards
George Cline, Richard Hudiburg, Prakash Sharma

Presentation of Gorgas Finalists
Ellen Buckner
Friday Morning

7:00 – Noon
Registration........................................................................................................2nd Floor Hallway
Refreshments....................................................................................................2nd Floor Hallway

8:15 – Noon SYMPOSium..................Dwight Beeson Hall (Bldg #33), Brock Forum (DBH)

8:15 AM to 12:00 noon
Brock Forum (DBH)
Dwight Beeson Hall (Bldg #33)

Symposium Sponsored by Physics and Mathematics (Section V); Engineering and Computer Science (Section X)

“Information Security Issues”

8:00 – 8:40 AM Computer Security Ethics: Key Concepts and Themes Change, Yet Stay the Same. Connie Price, Tuskegee University.


INTERMISSION


11:45 – 12:05 PM Infusing Ethics in the Information Technology Age. Cynthia Lester, Tuskegee University.

9:00 - 11:30 AM Academy of Science Program Session .............................................Sciencenter

Program Sessions:

8:30 Physics and Mathematics III (Section V).................................................. Room 230
9:00 Science Education (Section VII)................................................................. Room 238
9:00 Anthropology I (Section XI).................................................................Room 213
10:30 Biological Sciences III (Section I)..........................................................Room 109
Slide Preview Room .................................................................Room 204

10:30 - 11:30 AM Poster Viewing........................................... Sciencenter, 1st & 2nd Floor Hallways
Authors present to discuss these section posters from
10:30 -- 11:30 PM .................................................................Science Education (2nd Flr N wing)

Noon – 1:00 PM Lunch .........................................................Sciencenter, 2nd Floor Hallway

Friday Afternoon

1:00 - 2:00 PM Registration.................................................Sciencenter, 2nd Floor Hallway

12:15 – 1:30 PM Poster Viewing........................................... Sciencenter, Grd. & 1st Floor Hallways
Authors present to discuss these section posters from
12:15 – 1:30 PM .........................................................Biological Sciences (Grd lobby & 038 & 1st Flrs)

12:30 – 5:00 PM Academy of Science Program Sessions.................................Sciencenter

Program Sessions:

1:00 Anthropology II (Section XI).................................................Room 213
1:00 Bioethics and History & Philosophy of Science (Section XII)........... Room 230
1:30 Biological Sciences IV (Section I) ..............................................Room 109

Slide Preview Room .................................................................Room 204
PROGRAM of the
ALABAMA JUNIOR ACADEMY OF SCIENCE
B.J. Bateman, State Counselor
March 20 and 21, 2008
Sciencenter, Building #42

Thursday

3 - 5:00 PM  Early Arrival Registration.........................Sciencenter, 2nd Floor Hallway

6:00 PM   AJAS/AAS Annual Business Meeting .................................Room 011

7:00 PM   Joint AJAS/AAS Banquet.................................................Samford Cafeteria
  Located on the 2nd Floor of the Ralph W. Beeson University Center (Bldg. #9, pg 63)

See page 4 for Banquet Program

Friday

7:00 AM  Continental Breakfast .................................................................

7:45 AM  Registration ..................................................Sciencenter, 2nd Floor Hallway

7:45 AM  Paper Reading
  Orientation ...............................................................Room 011
  Judges Orientation ..................Ground Floor Conference Room, Room 033

8:15 AM  Paper Competition
  Biology.................................................................Room 308
  Humanities ..........................................................Room 314
  Mathematics/Engineering ........................................Room 311
  Physical Science ..................................................Room 315

11:30 AM  Caucus.................................................................Room 315

12:00 Noon  Lunch ...........................................................Sciencenter, 2nd Floor Hallway

2:00 PM  Paper Competition Finals.................................................Room 315

3:30 PM  Elections and Business Meeting .................................Room 315
  Group Photograph .......................................................Front of Sciencenter

4:00 PM  Awards Reception, Joint AJAS/Gorgas..........................Room 109
GORGAS SCHOLARSHIP COMPETITION
Thursday, March 20, 2008

Ellen Buckner, Chair, Judges

7:00 PM Joint AJAS/AAS Banquet....................................................Samford Cafeteria
Located on the 2nd Floor of the Ralph W. Beeson University Center (Bldg. #9, pg 63)

Joint Banquet and Recognition of Gorgas Finalists
See page 4 for Banquet Program

Friday, March 21, 2008

Final Competition: Finalists’ Presentations to Judges and Interviews
Russell Hall, Building #44

Ellen Buckner, Chair, Judges

9:30 AM Set Up Science Exhibits....................................................Russell 125
10:30 AM Demonstrations for Judges ..............................................Russell 125
11:30 AM Refreshment Break......................................................Russell-Ingalls Foyer
12:00 – 2:00 PM Individual Interviews with Judges ................Russell 1st Floor Offices
11:30 – 2:00 PM Public Showing of Exhibits ...............................Russell 125
2:00 PM Remove Exhibits............................................................Russell 125
4:00 PM Awards Reception, Joint AJAS/Gorgas..............Sciencenter, Room 109
Sciencenter is Building #42 on page 63 map

Announcement of Winners
Ellen Buckner

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

The Gorgas Scholarship Competition website, www.GorgasScholar.org, contains detailed information on the annual competition and awards available to winners and finalists.
SECTION I – BIOLOGICAL SCIENCES
Session I
Thursday Morning, 8:30 – 11:45 AM
Room 109
Mickie Powell, Presiding

1. 8:30 Comparison of the masculinizing potencies of methyltestosterone and spironolactone in female western mosquitofish, *Gambusia affinis*. Samiksha Raut and Robert Angus, University of Alabama at Birmingham.

2. 8:45 Analysis of the transcriptional regulators of hTERT in neoplastically transformed human mammary epithelial cells. *Tyson DeAngelis*, Yuanyuan Li, Anna Pendleton, and Trygve Tollefsbol, University of Alabama at Birmingham.

3. 9:00 Phylogenetic and taxonomic distinctness of populations of Caribbean mangrove root sponge species. *Steven JA Kimble*, and Robert W. Thacker, University of Alabama at Birmingham.


6. 9:45 Serum induced expression of a 36 kDa protein by *Corynebacterium jeikeium*. *Rusty L. Yates*, Nazia Mojib, and Asim K. Bej, University of Alabama at Birmingham.

7. 10:00 Factors leading to cannibalism in lab-reared *Lytechinus variegatus* (*Echinodermata*). *Cristina M. Richardson*, and Stephen A. Watts, University of Alabama at Birmingham.

8. 10:15 INTERMISSION

9. 10:30 Computational and Biological Screening Assays for Endocrine Disruptors. *Jonathan L. Catrett* and Philip D. Reynolds, Troy University.

10. 11:00 Optimization of a Discriminant Function for Microbial Source Tracking. Brian S. Burnes, Judson College.


11:45 LUNCH

SECTION I – BIOLOGICAL SCIENCES
Poster Session
Thursday Afternoon
Ground Floor Lobby, Room 038 & 1st Floor Hallway Boards
Authors Present: 12:15 PM – 1:30 PM


*18. The presence of diosgenin in *Smilax* (Smilacaceae). Jordan A. Beard, Elizabeth O. Dobbins, and L. J. Davenport, Samford University; Samford University.
*19. In Vitro 3 body wear of 5 composite resins. Ayesha Swarn, Deniz Cakir, and John O. Burgess, University of Alabama at Birmingham.


*21. Survey of Toxoplasma gondii infection in feral cats of Sumter County, AL. Domoneek McCoy and Tracy Duckworth, University of West Alabama.


*23. ING4 attenuates the activity of NF-κB. John Ryan Colvin, Travis Laver, Susan E. Nozell, and Etty N. Benveniste, Samford University; University of Alabama at Birmingham.


*28. 1:30 Genetic variation in walleye populations. Sonia D. Lyle and Neil Billington, Troy University.

*29. 1:45 Monitoring watersheds in Bibb and Perry counties. Rosalia Foster, Stacey Lawton, and Brian S Burnes, Judson College.

*30. 2:00 Temporal Instability of Human E. coli Antibiotic Resistance Profiles from 2001 to 2004. Stacey Lawton and Brian S. Burnes, Judson College.

*31. 2:15 Seasonal variation of reproductive steroids in the diamondback terrapin, Malaclemys terrapin, and implications for their conservation. Andrew T Coleman, Thane Wibbels, Willem Roosenburg, Ken Marion, David Nelson, Joel Borden, Gabe Langford, and John Dindo, University of Alabama at Birmingham, University of Alabama at Birmingham, Ohio University, University of Alabama at Birmingham, University of South Alabama, University of South Alabama, University of South Alabama, and Dauphin Island Sea Lab.


*33. 2:45 Caffeine affects embryological development of the sea urchin, Lytechinus variegatus. Alicia L Kindred, Anita Patel, Victoria K Gibbs, Addison L. Lawrence and Stephen A. Watts, University of Alabama at Birmingham; Texas A&M University.

*34. 3:00 Cause of injury and status of raptors brought into the rehabilitation facility of the Mobile county environmental studies center in Mobile, Alabama. Shannon K, Markey, University of South Alabama.


*36. 3:30 Microbial load of selected college professors. Diane Jowers, Tia McClennen, Ellen Russell, and Brian S. Burnes, Judson College.

*37. 3:45 Mitochondrial DNA markers for identifying southern and northern strains of Alabama walleye. Amy M. Wotawa and Neil Billington, Troy University.

*38. 4:00 Phototactic responses of larvae from the marine sponge Xestospongia proxima. Andrew S Mobley, Linnet B. Lopez, Sally P. Leys, Maria C. Diaz, Rachel Collin,
and Robert W. Thacker, University of Alabama at Birmingham; Instituto de
Oceanología, Cuba; University of Alberta, Canada; Museo Marino de Margarita,
Venezuela; Smithsonian Tropical Research Institute, Bocas del Toro Research
Station, Panama; University of Alabama at Birmingham.

*39. 4:15 Treatments with an amyloid-beta 42 binding D-amino acid peptide affect amyloid
deposition and reduce inflammation in APP/PS1 mutant mice. Amy R. Nelson,
Inga Kadisha, D. Willbold, and Tom van Groen, University of Alabama at
Birmingham; Forschungscentrum Jülich, Germany.

4:45 BUSINESS MEETING (Elect a Vice Chair)

SECTION I – BIOLOGICAL SCIENCES
Session III
Friday Morning, 10:30 – 11:45 AM
Room 109
David Nelson, Presiding

40. 10:30 Road-kill mortality of Alabama red-bellied turtles along the Mobile Bay
causeway. David H. Nelson and Cynthia B. Scardamalia-Nelson, University of
South Alabama.

41. 10:45 Pacific sands: The quest for life. Karl J. Fernandez, Angela L. Smith, and George
Williams, Athens State University.

42. 11:00 Spectacular specimens in a speck of sand. Angela L Smith, Karl J. Fernandez, and
George Williams, Athens State University.

43. 11:15 Whole-cell saccharification of lignocelluloses. Benedict C. Okeke, Auburn
University Montgomery.

44. 11:30 Identifying antarctic pseudomonads. Genola R. R. Burke, University of Alabama
at Birmingham.

11:45 LUNCH
45. *Ex vivo* assay predicts therapeutic response to TRA-8 (death receptor 5 antibody) treatment in xenograft model of colon and pancreas carcinoma. Zachary Griffith, Donald Buchsbaum, Patsy Oliver, Jeff Sellers, Lacey McNally, and Peter Kulesza, University of Alabama at Birmingham.


47. The expression of Erbb3 influences the sensitivity or resistance to treatment with erlotinib (Tarceva TM). Rebecca Baggott, Zachary Griffith, J. Pablo Arnoletti, Andy Frolov, and Peter Kulesza, University of Alabama at Birmingham.

48. Marine fungi on seagrass beds in two Florida lagoons. Linda A. Collier, Juan L. Mata, and Just Cebrian, University of South Alabama and Dauphin Island Sea Lab.

49. The fishes of Oak Mountain State Park. David M. Frings, Robert A. Stiles, and Jason L. Heaton, Samford University.


54. Herpetology at Jacksonville State University. George Cline, James Rayburn, and Chris Murdock, Jacksonville State University.


57. Mass spectrometric analysis of glycosylation abnormalities of IgA: Implications for IgA nephropathy. *Stephanie B. Wall*, Stacy Hall, Bruce A. Julian, Jan Novak, and Matthew B. Renfrow, University of Alabama at Birmingham.

58. Temperature dependent vitellogenin mRNA production in the male western mosquitofish, *Gambusia affinis*. *Paul D. Melvin* and Robert A. Angus, Clayton State University; University of Alabama at Birmingham.


### SECTION I – BIOLOGICAL SCIENCES

**Session IV**  
**Friday Afternoon, 1:30 – 4:45 PM**  
**Room 103**  
**George Cline, Presiding**


61. 1:45 Status of the sandhill crane, snow goose and canada goose on Wheeler National Wildlife Refuge, Decatur, AL. *Todd Cook* and George O. Williams, Jr., Athens State University.

62. 2:00 Study of differentially expressed proteins in Antarctic bacteria at cold temperature. *Nazia Mojib* and Asim K. Bej, University of Alabama at Birmingham.

63. 2:15 Survey of aerospora at different heights: Qualitative and Quantitative Assessment. *Marian A. Wehby* and Wayne Shew, Birmingham-Southern College.

64. 2:30 Analysis of southeastern herpetological communities: salamanders. *Brett Macek*, George Cline, and Robert Carter, Jacksonville State University.

2:45 BREAK

65. 3:00 Analysis of southeastern herpetological communities: snakes. *Chris Edmondson*, George Cline, and Robert Carter, Jacksonville State University.

67. 3:30 Distribution and habitat characteristics of the confederate daisy, *Viguiera porteri*, in the valley and ridge province of Alabama. David M. Frings, Samford University.

68. 3:45 Detection of salmonella using real-time PCR and the study of their antibiotic profile. Maulshree Gangwar, Ms. and Asim Bej, University of Alabama at Birmingham.

69. 4:00 Mesofauna associated with the subtropical/tropical marine sponge *Amphimedon viridis*: Are faunal associations likely to provide refuge from fish predation due to physical or chemical feeding deterrent properties of this sponge? Jonathan P. Huang, James B. McClintock, Charles D. Amsler, and Yusheng Huang, University of Alabama at Birmingham.

70. 4:15 The effects of Phloxine B in *Tetrahymena pyriformis* morphology and physiology *in vitro*. Misty A. Chapman, Mark E. Meade, Benjie G. Blair, and Charles P. Olander, Jacksonville State University.
SECTION II – CHEMISTRY
Session I
Thursday morning, 9:00 – 10:30 M
Room 315
Michael Moeller, Presiding

1.  9:00 Complete basis extrapolation calculation on nitrogen monoxide. Yangying Lin and Tracy Hamilton, University of Alabama at Birmingham.

2.  9:15 Novel and robust photolabile protecting group for carbonyl compounds. Yun Wang, Huayou Hu, and Pengfei Wang, University of Alabama at Birmingham.

3.  9:35 The conformational analysis and steric contributions of 9-cis-UAB30, a Retinoic acid analogue. Bryan D Cox, Tracy P Hamilton, Donald D Muccio, and Kenny F Nguyen, University of Alabama at Birmingham.


5.  10:15 Planning experiments using six thinking hats. Michael B. Moeller, University of North Alabama.

Poster Session
Thursday Morning
2nd and 3rd Floor Hallway Boards
Authors Present - 10:45 AM – 12:00 Noon

6.  A thermodynamic and kinetic study of actinomycin D binding to atypical – T(G)nT- sequences in double stranded DNA. Jason S. Hudson and David E. Graves, University of Alabama at Birmingham.


SECTION II – CHEMISTRY
Session II
Thursday Afternoon, 1:30 – 3:30 PM
Room 314
Daniel Kim, Presiding

17. 1:30 Correlated molecular motions in dynamic secondary conformers. *Amanda L Hofacker*, and Jon Parquette, University of North Alabama and The Ohio State University.

18. 2:00 Reaction of 1,4-dicyclopentyl-1,3-butadienes with 4-methyl-1,2,4-triazoline-3,5-dione (MTAD). *Duk K Kim*, Kevin E O'Shea, and Christopher Gomez, Auburn University at Montgomery and Florida International University.


*20. 2:40 Binding of all-trans retinoic acid to retinoic acid receptor. *Alexander E Vaughn* and Tracy P Hamilton, University of Alabama at Birmingham.


3:30 BUSINESS MEETING (Elect a Vice Chair)
CHEMISTRY UNDERGRADUATE RESEARCH SYMPOSIUM
Sponsored by all of the ACS Local Section in the State of Alabama: Alabama, Auburn, Mobile, North Alabama, and Wilson Dam
Thursday Morning, 8:30 – 10:30 AM
Room 314
Larry Krannich, Presiding

1. 8:30 Heavy metal mobilization from compost manure. Jacob W Boydston, Megan Dingler, and Nixon O Mwebi, Jacksonville State University.

*2. 8:45 Modification of polycarbonate by excimer radiation. Stephen Shreeves, Christopher Perry, Holly A. Carrell, and Emanuel A. Waddell, University of Alabama in Huntsville and Oakwood College.

*3. 9:00 Palladium catalyzed Suzuki coupling with water-soluble phosphine ligands to promote activation of aryl halides. M. Quentin Sonnier and Kevin H. Shaughnessy, The University of Alabama.

*4 9:15 Quasicrystals: structural, physical, & mechanical properties, innovations, and applications. Meriem Zettili and Nagarajan Vasumathi, Dr., Jacksonville State University, Jacksonville, AL.

*5. 9:30 Buffering capacity of some common foods. Keri Reeves, Stantafferta McFee, and Brian S Burnes, Judson College.

6. 9:45 Preparation of phenol/formaldehyde Nanocomposites with Tetraethylorthosilicates. Zachary Whitfield, Mary Rogers, and Adriane Ludwick, Tuskegee University.

*7. 10:00 Ionic liquids for energy storage. Stephen A. Fordham, Jacksonville State University.

CHEMISTRY UNDERGRADUATE RESEARCH SYMPOSIUM
Poster Session
Thursday Morning
2nd & 3rd Floor Hallway Boards
Authors Present - 10:45 AM – 12:00 Noon


*12. Solvent and catalytic effects on the addition of bromine to dimethyl maleate. Christopher H Moore, Oluseyi O Hambolu, Nixon O Mwebi, and Nagarajan Vasumathi, Jacksonville State University.*


*Denotes presentation is entered in competition
8. A comparison of large woody debris effects on stream channel morphology. 
   Christopher F Labosier, University of Alabama.


11. Analysis of factors associated with the municipal bankruptcy of Prichard, Alabama. Christopher Robin Kelley, Auburn University.


* Denotes presentation is entered in competition, Section IV

** Denotes presentation is entered in competition, Section VIII
JOINT SESSION:
SECTION IV – GEOGRAPHY, FORESTRY, CONSERVATION, AND PLANNING
SECTION VIII – BEHAVIORAL AND SOCIAL SCIENCES
Thursday Afternoon, 1:15 – 3:40 PM
Room 213
Richard A. Hudiburg, Presiding


2. 1:40 Global warming, fact or hoax? Oscar Essenwanger, University of Alabama in Huntsville.

3. *2:00 An examination of social stress in a population of white-tailed deer. Clint McCoy and Stephen Ditchkoff, Auburn University.

4. 2:20 Seasonal variation in the stress response of feral pigs. Brian L. Williams, Stephen S. Dirchkoff, Michael S. Mitchell, James B. Grand, Joshua J. Millsapau, and Roderick M. Thornton, Auburn University; Montana Cooperative Wildlife Department of Fisheries and Wildlife; University of Missouri; U. S. Army (Fort Benning)


6. 3:00 Program instruction as an approach to teaching. Saramma T. Mathew, Troy University.


3:40 BUSINESS MEETING (Selection of Section VIII Chair, Vice-Chair)

*Denotes presentation is entered in competition, Section IV
JOINT SESSION:
SECTION IV – GEOGRAPHY, FORESTRY, CONSERVATION, AND PLANNING
SECTION III – EARTH SCIENCE
SECTION VIII – BEHAVIORAL AND SOCIAL SCIENCES
Poster Session
Thursday Afternoon
2nd Floor North Wing Hallway
Authors Present - 3:45 – 4:30 PM

8. A comparison of large woody debris effects on stream channel morphology. Christopher F Labosier, University of Alabama.


11. Analysis of factors associated with the municipal bankruptcy of Prichard, Alabama. Christopher Robin Kelley, Auburn University.


* Denotes presentation is entered in competition, Section IV

** Denotes presentation is entered in competition, Section VIII
SECTION V - PHYSICS AND MATHEMATICS
Session I
Thursday Morning, 8:30 – 10:55 AM
Room: 230
Akshaya Kumar, Presiding


2.  9:00 **Invited Talk:** Optical characterization and device fabrication of wide band gap semiconductors. Minseo Park, Dake Wang, Yi Zhou, An-jen Cheng, and Hui Xu, Auburn University; Furman University; University of California, Los Angeles; Auburn University.


4.  10:00 The hyperbolic number plane. Ryan T Henry and Jared M Ballinger, Birmingham-Southern College.

10:20 INTERMISSION

*5.  10:35 Whispering-Gallery-Mode resonances in fluorescent microspheres. Mary E. Williams and D. Brian Thompson, University of North Alabama.

12:00 LUNCH

SECTION V - PHYSICS AND MATHEMATICS
Session II
Thursday Afternoon, 1:00 – 4:40 PM
Room: 230
M. D. Aggarwal, Presiding

*6.  1:00 Study of a Brownian heat engine. Ronald Benjamin and Ryoichi Kawai, University of Alabama at Birmingham.


*8.  1:40 Statistical analysis of heartworm incidence in urban and rural Alabama. Megan Green and Jan Case, Jacksonville State University.

9.  2:00 A theoretical study of optical spatial soliton propagation in a waveguide with a refractive index profile perturbation. Sihon H Crutcher and Albert J. Osei, Army RDEC, Huntsville; Oakwood University.


12. 2:50 A mathematical model for the human circulatory system. *Cameron H Daniel* and Bryant K Allen, Birmingham-Southern College.

3:10 INTERMISSION


16. 4:25 Detection of spatially extended sources in high energy astrophysics with special applications to the lunar occultation observer (LOCO). *Peter A. Jenke* and Richard S. Miller, University of Alabama in Huntsville.

* Denotes presentation is entered in competition.

**SECTION V - PHYSICS AND MATHEMATICS**

**Poster Session**

**Thursday, Afternoon**

2nd Floor South Wing Hallway Boards

Authors Present - 4:45 – 5:30 PM

17. Advancements in scintillator readout technology for high-energy astrophysics. *J. Michael Burgess*, University of Alabama in Huntsville.

18. Calculation of number of free and bound electrons in doped semiconductors in intermediate concentration region. *Akshaya Kumar* and Prakash C Sharma, Tuskegee University.

20. Exploration of the radio-loud/radio-quiet dichotomy for QSOs: Using radio morphology and 4D Eigenvector I. Sebastian Zamfir, Jack W. Sulentic, Paola Marziani, and Deborah Dultzin, University of Alabama; INAF-Osservatorio Astronomico di Padova, Italy; Instituto de Astronomia, Universidad Nacional Autonoma de Mexico, Mexico.

21. Exploring the structure of some of the most isolated galaxies. Adriana Durbala, Jack W. Sulentic, and Lourdes Verdes-Montenegro, University of Alabama; Instituto de Astrofiisica de Andalucia, Granada, Spain.


24. Superconductivity and application to modern science world. Akshaya Kumar and Prakash C Sharma, Tuskegee University.
SECTION V – PHYSICS AND MATHEMATICS
Friday Morning
8:15 AM to 12:00 noon
Brock Forum (DBH)
Dwight Beeson Hall (Bldg #33)

Symposium Sponsored by Physics and Mathematics (Section V); Engineering and Computer Science (Section X)

“Information Security Issues”

8:00 – 8:40 AM  Computer Security Ethics: Key Concepts and Themes Change, Yet Stay the Same. Connie Price, Tuskegee University.


INTERMISSION


11:45 – 12:05 PM  Infusing Ethics in the Information Technology Age. Cynthia Lester, Tuskegee University.

26. 8:45 Wave equation as equivalent Laplace's equation in a higher dimension. Arjun Tan, Dr., Fayeqa Majid, Ph.D, and Matthew Edwards, Ph.D, Alabama A & M University.

27. 9:00 High speed photography in shock wave plasma dynamics. Aaron C LoCascio, Nirmol K Podder, and Anastasia V Tarasova, Troy University.


29. 9:55 Estimating the average exospheric temperature. Arjun Tan, Dr., Vin Bhatnagar, Dr., Tian Xi Zhang, Dr., and Sonya Lyatskaya, Mrs., Alabama A & M University.

30. 10:10 Double pulse laser induced breakdown spectroscopy in liquid samples. Akshaya Kumar, Prakash Sharma, Tuskegee University.

10:30 BUSINESS MEETING
SECTION VI – INDUSTRY AND ECONOMICS

No Program in 2008
1. 9:00 Nanotechnology and ethics in a general education college course. Michelle Sidler and James Bradley, Auburn University; Auburn University.

2. 9:15 Sea turtle CSI: A teaching module in sea turtle genetics. Jennifer Estes and Thane Wibbels, University of Alabama at Birmingham; University of Alabama at Birmingham.

3. 9:30 The interactive technology of classroom communication systems as an approach to actively engage science students and assess learning in the science classroom. Nicholas Daniel*, Marian J. Parker, and Janet L. Gaston, Luverne High School, Luverne, AL; Troy University.


5. 10:00 So, you're a science major? Then, act like one: Some experiences in developing a scientific method curriculum. Brian Burnes, Judson College.

10:15 BUSINESS MEETING (Elect a Section Chair & Vice-Chair)

6. 10:30 Aladdin: the UAB Alice, Linear Algebra, Dynamic Dimensional Information Network for high school students. J. Michael Wyss, Jeff Gray, Alan Shih, John Mayer, and David Radford, University of Alabama at Birmingham.


* Denotes presentation is entered in competition.
## JOINT SESSION:

**SECTION VIII – BEHAVIORAL AND SOCIAL SCIENCES**

**SECTION IV – GEOGRAPHY, FORESTRY, CONSERVATION, AND PLANNING**

**Thursday Afternoon**

**Room 213**

Richard A. Hudiburg, Presiding

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<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter(s)</th>
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<tr>
<td>1:40</td>
<td>Global warming, fact or hoax?</td>
<td>Oscar Essenwanger, University of Alabama in Huntsville.</td>
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<td>An examination of social stress in a population of white-tailed deer.</td>
<td>Clint McCoy and Stephen Ditchkoff, Auburn University.</td>
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<td>Seasonal variation in the stress response of feral pigs.</td>
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<td>Program instruction as an approach to teaching.</td>
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<tr>
<td>3:40</td>
<td>BUSINESS MEETING (Selection of Section VIII Chair, Vice-Chair)</td>
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</tbody>
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8. A comparison of large woody debris effects on stream channel morphology. *Christopher F Labosier*, University of Alabama.


* Student poster competition Section IV

** Student poster competition Section VIII
SECTION IX – HEALTH SCIENCES
Thursday Morning, 8:30 – 11:45 AM
Room308
Virginia Hughes, Presiding


2. 8:45 A review of sudden cardiac death and the pre-participation screening of student athletes at Troy University. Jennifer L Smith and Janet L Gaston, Troy University.

*3. 9:00 Perceptions and experiences of HIV-positive, African-American women from HIV diagnosis to primary care. Larry Z Slater, University of Alabama at Birmingham.


5. 9:30 Alabama HIV school health policies: Relating content standards to vital statistics. Gayle Bush, Terry Watkins, and Vernon Shank, MS, Gayle Bush, Troy University, Troy; Terry Watkins, Troy University, Montgomery; Vernon Shank, Charles Henderson Child Health Care Center, Troy.

*6. 9:45 A comparison of the perceptions of domestic violence of women in urban and rural areas. Chelsie N. Noland, University of Alabama at Birmingham.

10:00 INTERMISSION

7. 10:15 Learning styles of RNs enrolled in an online nursing program. Anita J Smith, University of South Alabama.

8. 10:30 Environmental effects of air quality: The Impact of Air on Asthma. Linda M Gibson, Lisa South, Debra Baldwin, Blaire Jones, and Ellen B Buckner, University of Alabama at Birmingham.

*9. 10:45 Lung capacities at Judson College. Jessica Lawson, Tia McClenney, Tonya Morgan, Jessica Mosley, and Britanny Porter, Judson College.

*10. 11:00 Process and meaning in Medicare Part D decision-making. Katherine B. Tilden, University of Alabama at Birmingham.

*11. 11:15 Sex education: What is it good for?. Nancy C. Clark, University of Alabama at Birmingham.


11:45 BUSINESS MEETING (Elect Vice-Chair)

SECTION IX – HEALTH SCIENCES

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**Poster Session**  
**Thursday Afternoon**  
**3rd Floor Hallway Boards**  
**Authors Present - 1:30 – 2:30 PM**


*18. User satisfaction from the perspective of acceptability in the family health scenario, Brazil. *Vanessa P. Gaioso* and Silvana M. Mishima, University of Alabama at Birmingham; University of Sao Paulo, Brazil.

*Denotes presentation is entered in competition*
SECTION X – ENGINEERING AND COMPUTER SCIENCE

Friday Morning
8:15 AM to 12:00 noon
Brock Forum (DBH)
Dwight Beeson Hall (Bldg #33)

Symposium Sponsored by Physics and Mathematics (Section V); Engineering and Computer Science (Section X)

“Information Security Issues”

8:00 – 8:40 AM Computer Security Ethics: Key Concepts and Themes Change, Yet Stay the Same. Connie Price, Tuskegee University.


INTERMISSION


11:45 – 12:05 PM Infusing Ethics in the Information Technology Age. Cynthia Lester, Tuskegee University.

SECTION X – ENGINEERING AND COMPUTER SCIENCE
Thursday Morning, 9:00 – 10:30 AM
Room 238
Brian Toone, Presiding

1. 9:00  A neural network expansion of the solution set produced by a multiobjective particle swarm optimizer. Andrew Maise and Aaron Garrett, Jacksonville State University.

2. 9:15  Heterogeneous computing architectures. Srinivasarao Krishnaprasad, Jacksonville State University, Jacksonville.


5.  10:00  Talking games: Toward speech as a mainstream modality. *David C Thornton,* Auburn University, Auburn; Jacksonville State University, Jacksonville.

10:30  BUSINESS MEETING (Elect Vice Chair)

**SECTION X – ENGINEERING AND COMPUTER SCIENCE**
**Poster Session**
**Thursday Afternoon**
**1st Floor North Wing**
**Authors Present – 1:00 – 2:00 PM**


*7.  Biomimetic self-assembled nano matrix for bone tissue regeneration. *Joel M Anderson,* Ho-wook Jun, Meenakshi Kushwaha, Ajay Tambralli, Bryan A. Blakeney, Derrick D. Dean, and Susan L. Bellis, University of Alabama at Birmingham, Birmingham, AL.

*8.  Skin temperature increase during MMW irradiation; effects of blood-flow. *Carmen D. Zirlott* and David Nelson, University of South Alabama.

*Denotes presentation is entered in competition
9:00 INTRODUCTION

1. 9:10 Preliminary archaeological investigations of three stone structure sites along Choccolocco Mountain, Calhoun County, Alabama. Harry Holstein, Jacksonville State University.

2. 9:30 A preliminary look at the Blue Hole site located in Calhoun County, Alabama. Lori A Ray and Rebecca T. Ridley, Jacksonville State University.

3. 9:50 A ceramic analysis of two protohistoric domestic structures at Hickory Ground, 1EE89. Cameron W Gill and Sean M Blough, Auburn University.

10:10 INTERMISSION

*4. 10:30 Social contexts of the Hemphill Style at Moundville. Erin Phillips, University of Alabama.

5. 10:50 Examination of 19th century land surveys in the Tallapoosa River Valley. Christina M Breeden, Auburn University.


11:40 LUNCH

*Denotes presentation is entered in competition

SECTION XI – ANTHROPOLOGY
Session II
Friday Afternoon, 1:00 – 2:20 PM
Room 213
Harry O. Holstein, Presiding

7. 1:00 British pipe tomahawks in Alabama archaeology. John W. Cottier, Auburn University.

8. 1:20 Comparison of winter houses from two Central Alabama protohistoric settlements. Elizabeth M. Anton, Auburn University.

10. 2:00 The ethnoarchaeology of fishing in Fiji's Lau Group. Sharyn Jones, University of Alabama at Birmingham.
1. 1:00. Think before you test! Ethical issues and genetic testing. R. Lynn Holt, University of Alabama at Birmingham.

2. 1:40 Gene matters in cancer research. Isaac M.T. Mwase, Tuskegee University National Center for Bioethics in Research and Health Care.

2:15 INTERMISSION


4. 3:15 Science as 21st century mythology, or not. James T. Bradley, Auburn University.

5. 3:40 Biotechnology and ethics in technical communication. Michelle A. Sidler, Auburn University.

3:55 BUSINESS MEETING (Elect a Vice-Chair)
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
- Annual Science Teacher Fellowships ($1,000) to individuals in the fifth year program leading to Class A certification.
2008 REGIONAL SCIENCE FAIRS

N Alabama  March 12-14  University of Alabama in Huntsville, Jorge Aunon (256) 824-3564, dean@eng.uah.edu; web site: www.narsef.uah.edu

W Alabama  March 7-8  University of West Alabama, Becky Graham (205) 652-3804, bcg@uwa.edu

Central  March 8  University of Alabama at Birmingham, J. Michael Wyss (205) 934-5171, jmwyss@uab.edu, web site: www.uab.edu/images/cord/CRSEF/

Mobile  March 14-15  University of South Alabama, James J. Connors, (251) 460-7575, jconnors@usouthal.edu; web site: http://www.southalabama.edu/mrsf/

Northeast  Feb. 23-24  Talladega College, Mrs. Gladys Mayers Swain 256.761.6308, gswain@talladega.edu

Greater East  Winners in Barbour, Bullock, Coffee, Dale, Geneva, Henry, Houston, and Pike counties may apply to any of the above Alabama regional fairs or directly to the state science and engineering fair.

2008 ALABAMA STATE SCIENCE AND ENGINEERING FAIR

April 3 – 5, The University of Alabama in Huntsville; Coordinator, Donald Perkey, Department of Atmospheric Science, (256) 961-7734, donald.perkey@uah.edu.

Alabama Science and Engineering Fair web site: http://www.uah.edu/ASEF/asef.htm

2008 INTERNATIONAL SCIENCE AND ENGINEERING FAIR

ALABAMA SCIENCE OLYMPIAD 2007-2008

Division A2 Grades 3-6 Olympiad Tournaments

University of West Alabama, Saturday, November 8, 2007. Grades 3-6, Dr. Ketia L. Shumaker, Department of Biology, Univ. of West Alabama, Station 7, Livingston, AL 35470. (205) 652-3406, kshumaker@uwa.edu; http://eso.uwa.edu/


Auburn University, March 8, 2008. Grades 3-6, Greg Harris, Department of Mathematics, 218 Parker Hall, Auburn, AL 36830 harriga@auburn.edu; http://www.auburn.edu/~harriga/olympiad/

Division B Grades 6-9 Olympiad Tournaments

University of Alabama, February 23, 2008. Dr. Milt Ward, Coordinator, mward@as.ua.edu (205) 348-7007; Kevin Whitaker, Co-coordinator, kwhitaker@eng.ua.edu (205) 348-1598. http://www.as.ua.edu/public/deans_office/ward/science_olympiad?

Auburn University, February 23, 2008, Dr. Steve Stuckwisch, Department of Geology, 108 Tichenor Hall, Auburn University, AL 36830. (251) 844-6575 sstuckwisch@charter.net; http://www.auburn.edu/~stuckse/ScienceOlympiad/

University of Alabama at Huntsville, February 9, 2008, Mrs. Vanessa Colebaugh, 5019 Willow Creek Drive, Owens Cross Roads, AL 35763. (256) 922-5747 nessacita@comcast.net, http://www.uah.edu/sciolympiad/index.php

University of South Alabama, March 1, 2008, Dr. Cindy Stanfield, Dept. of Biomedical Science, UCOM 6000, Univ. of South Alabama, Mobile, AL 36608 (251) 380-2710 ethursto@usouthal.edu, http://www.southalabama.edu/alliedhealth/biomedical/SO/Index.htm

Division C Grades 9-12 Olympiad Tournaments

University of Alabama, February 23, 2008. Dr. Milt Ward, Coordinator, mward@as.ua.edu (205) 348-7007; Kevin Whitaker, Co-coordinator, kwhitaker@eng.ua.edu (205) 348-1598. http://www.as.ua.edu/public/deans_office/ward/science_olympiad?

Auburn University, February 23, 2008. Dr. Steve Stuckwisch, Department of Geology, 108 Tichenor Hall, Auburn University, AL 36830. (251) 844-6575 sstuckwisch@charter.net; http://www.auburn.edu/~stuckse/ScienceOlympiad/
Jacksonville State University, February 9, 2008, Brent Helms, Department of Physical and Earth Sciences, Jacksonville State University, 700 Pelham Road North, Jacksonville, AL 36265, 256-782-5223, ahelms@jsu.edu.

University of Alabama at Huntsville, February 9, 2008. Mrs. Vanessa Colebaugh, 5019 Willow Creek Drive, Owens Cross Roads, AL 35763. (256) 922-5747, nessacita@comcast.net, http://www.uah.edu/sciolympiad/index.php

University of South Alabama, March 1, 2008. Dr. Cindy Stanfield, Dept. of Biomedical Science, UCOM 6000, Univ. of South Alabama, Mobile, AL 36608 (251) 380-2710 cthursto@usouthal.edu.

State Science Olympiad Tournaments

Huntingdon College, March 15, 2008. Division B, Dr. Sidney Stubbs, 1500 E Fairview Ave, Montgomery, AL 36106 (334) 833-4430. sstubbs@huntingdon.edu http://216.186.205.33/scienceolympiad/default_frame.html

Samford University, March 29, 2008. Division C, Dr. Brian Toone, Department of Physics, Samford University, 800 Lakeshore Drive, Birmingham, AL 35229-2245, (205) 726-2960, dbtoone@samford.edu; http://physics.samford.edu/Science_Olympiad.htm

National Science Olympiad Tournament


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

Alabama Science Olympiad web page: http://aso.jsu.edu/
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 to support this fund may be sent to Dr. Taba Hamissou, Dept. of Biology, Jacksonville State University, Jacksonville, Alabama 36265, Treasurer, AAS. Gifts are tax deductible. Dr. 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 the following individuals:

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

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, 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

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).
<table>
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<tr>
<th>Section Officers</th>
<th>Chairs</th>
<th>Vice Chairs</th>
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<tr>
<td>Biological Dept. of Biology</td>
<td>Univ. of AL at B’ham</td>
<td>Auburn Univ. Montgomery</td>
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<tr>
<td>Sciences</td>
<td>Birmingham, AL 35294</td>
<td>PO Box 244023</td>
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<td></td>
<td>205.934.8313</td>
<td>Montgomery, AL 36124</td>
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<tr>
<td><a href="mailto:mpowell@uab.edu">mpowell@uab.edu</a></td>
<td>234.244.3329</td>
<td><a href="mailto:dkim@mail.aum.edu">dkim@mail.aum.edu</a></td>
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<tr>
<td>Chemistry Dept. of Chemistry</td>
<td>University of Montevallo</td>
<td>Dept. Physics &amp; Earth Science</td>
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<td>Montevallo, AL 35115</td>
<td>Univ. of North AL</td>
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<td>Florence, AL 35632</td>
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<td><a href="mailto:byrdh@montevallo.edu">byrdh@montevallo.edu</a></td>
<td>256.765-4481</td>
<td>256.765.4588</td>
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<td>Earth Science Dept. of Geography</td>
<td>Univ. of N. Alabama,</td>
<td>Dept. of Physics</td>
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<td><a href="mailto:npodder@troy.edu">npodder@troy.edu</a></td>
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<tr>
<td>Geography Dept. Econ/Finance/OSM</td>
<td>Economics AL A&amp;M University</td>
<td>Normal, AL 35762</td>
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<td>Normal, AL 35762</td>
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</tr>
</tbody>
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<table>
<thead>
<tr>
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<th>TERM</th>
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<tbody>
<tr>
<td>Wright A. Gardner (2 terms)</td>
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<td>Stewart J. Lloyd</td>
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<td>John R. Sampey</td>
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<td>Fred Allison</td>
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<td>Emmett B. Carmichael</td>
<td>1930-31</td>
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<td>George J. Fertig</td>
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<td>J.F. Duggar</td>
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<td>Russell S. Poor</td>
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<td>A.G. Overton</td>
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<td>Walter B. Jones</td>
<td>1936-37</td>
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<td>Roger W. Allen</td>
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<td>P.H. Yancey</td>
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<td>1939-40</td>
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<td>C.M. Farmer</td>
<td>1940-41</td>
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<td>Paul D. Bales</td>
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<td>W.M. Mobley</td>
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<td>E.V. Jones</td>
<td>1943-44</td>
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<td>J.T. McKenzie</td>
<td>1944-45</td>
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<td>J.M. Robinson</td>
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<td>James L. Kassner</td>
<td>1946-47</td>
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<td>John Xan</td>
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<td>Eugene D. Emigh</td>
<td>1948-49</td>
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<td>C.A. Basore</td>
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<td>Harold E. Wilcox</td>
<td>1950-51</td>
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<td>Henry Walker</td>
<td>1951-52</td>
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<td>John A. Fincher</td>
<td>1952-53</td>
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<td>Joseph F. Volker</td>
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<td>William T. Wilks</td>
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<td>Ralph Chermock</td>
<td>1955-56</td>
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<td>J. Allen Tower</td>
<td>1956-57</td>
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<td>Howard Carr</td>
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<td>Herbert A. McCullough</td>
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<td>Samuel B. Barker</td>
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<td>James R. Goetz</td>
<td>1960-61</td>
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<td>Paul C. Bailey</td>
<td>1961-62</td>
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<td>Louis J. Eisele</td>
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<td>E. Carl Sensenig</td>
<td>1963-64</td>
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<td>William J. Barrett</td>
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<td>James F. Sulzby. Jr.</td>
<td>1965-66</td>
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<tr>
<td>David L. DeJarnette</td>
<td>1966-67</td>
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</tbody>
</table>
H. Ellsworth Steele ................................................................. 1967-68
Ruric E. Wheeler ................................................................. 1968-69
Wilbur B. DeVall ................................................................. 1969-70
W.L. Furman ................................................................. 1970-71
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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
Hosts for Future Alabama Academy of Science Meetings

2009 – Judson College
2010 – Alabama A&M University
2011 – Jacksonville State University

The Local Arrangements Manual for planning Academy annual meeting can be found on the Academy website: www.alabamaacademyofscience.org
Samford Cafeteria is located on the second floor of the Ralph W. Beeson University Center (Bldg #9 on map). If you park near Talbird circle, then the entrance puts you on the second floor already. You’ll walk through the door, head past the information booth towards a large room called the “Flag Colonnade”, and then bear right. You’ll see the cafeteria in front of you. If you are coming from the central part of campus, however, you’ll enter building #9 on the ground floor at the door kitty-corner to building #33, and you will need to make your way up the staircase located on your left. The entrance to the cafeteria is at the top of the stairs.
EIGHTY-SIXTH ANNUAL MEETING

of the

ALABAMA ACADEMY OF SCIENCE, INC.

JOINT MEETING

with the

ALABAMA JUNIOR ACADEMY OF SCIENCE

GORGAS COMPETITION AWARDS

March 2009

Judson College
Marion, AL