

2012

Business meeting report (Secretary's and Treasurer's Report)

Academy Editors

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JOURNAL ARKANSAS ACADEMY OF SCIENCE

Annual Meeting April, 2012
Southern Arkansas University

Anthony K Grafton
President

Marc Seigar
President-Elect

Bill Doria
Vice-President

Jeff Robertson
Secretary

Mostafa Hemmati
Treasurer

Mostafa Hemmati
JAAS Editor-in-Chief

Collis Geren
Historian

Secretary's Report MINUTES OF THE 96th MEETING

ARKANSAS ACADEMY OF SCIENCE
96th ANNUAL MEETING
SUMMARY OF BUSINESS MEETING
Southern Arkansas University
April 14, 2012

1. The meeting was called to order by President Kurt Grafton
2. Local Arrangements Committee: Abdel Bachri
Registration information, campus orientation, and meeting schedules for the 96th Academy meeting were presented by Abdel Bachri, LOC. There were ~178 registered participants, 56 oral presentations and 53 posters.
3. Secretary's Report: Jeff Robertson
Minutes from the 2011 Fall Executive Committee Meeting in November were reviewed and accepted. The Academy has 143 members (50 of which are life members).
4. Treasurer's Report: Mostafa Hemmati
An accounting of the AAS "net worth" for 2011 was presented and discussed by the membership. The report was reviewed by an auditing team made of selected members of the Academy and accepted by the membership.
5. Historian's Report: Collis Geren
The spring meeting of the Arkansas Academy of Science at Southern Arkansas University (SAU) is the 96th annual meeting of the Academy. This meeting marks only the second time that the Academy has held its annual meeting in Magnolia. The first time was in 1975 when the 59th Annual

Meeting was held at the campus then named Southern State College.

Southern Arkansas University began in 1909 as the Third District Agricultural School, a district agricultural high school for southwest Arkansas. In 1925 the Arkansas Legislature approved adding two years of college work to the school and authorized the name to change to Agricultural and Mechanical College, Third District (Magnolia A&M). The high school courses were discontinued in 1937. Starting in 1949 the state legislature authorized addition of additional years of college work to be added so that by 1951 four-year degrees could be obtained by students. The name was also changed to Southern State College in 1951. With the addition of Master of Education Degrees in 1975, the name was again changed this time to Southern Arkansas University.

The Academy gratefully acknowledges the accomplishment of SAU in obtaining Nobel Laureate Professor David Goss as the Keynote Speaker for the 96th Annual Meeting of the Arkansas Academy of Science.

6. Journal (JAAS #65) Report: Editor-In-Chief Mostafa Hemmati
During the spring 2011 semester, 22 manuscripts were submitted for consideration for publication in volume 65 of the *Journal of the Arkansas Academy of Science (JAAS)*. Soon after receiving the manuscripts, all manuscripts were sent to three reviewers and Associate Editors. The reviewers sent all manuscripts and their comments back before the end of July 2011.
Reviewers' comments were sent to the authors between July 15, 2011, and July 30, 2011. That process was completed by July 30, 2011. The

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authors were asked to respond to the reviewers' comments and return their manuscript back by August 31, 2011. That allowed more than a month of time to the authors to respond to the reviewers' comments. In the same letter, the authors were also asked to mail a check for their page charges. August 31, 2011, was also the deadline for receipt of the payment of the page charges.

Four manuscripts required major revisions, while the rest needed minor revisions. Two additional manuscripts which were submitted for publication in volume 64 of the Journal were also accepted for publication in volume 65 of the Journal. Therefore, volume 65 of the Journal contains 24 manuscripts. In the process of manuscript submission, no manuscripts were lost. Three obituaries were submitted for publication in volume 65 of the Journal. One of the obituaries will be published in volume 65 of the Journal.

Three Associate Editors helped considerably with locating possible reviewers for the manuscripts or serving as reviewer for more than one manuscript. Dr. Glenn Manning from the University of Arkansas in Monticello, helped considerably in collecting the information from last year's AAS annual meeting. I am grateful for Dr. Manning and all three Associate Editors' assistance. All activities relating to the handling of the manuscripts were performed electronically, and on the whole this expedited the review process. Managing editor post was performed by Dr. Ivan H. Still and he did an excellent job completing the process. The Journal was completed before December 30, 2011.

Printing of the Journal started in January 2012 and was completed on March 13, 2012. 200 copies of volume 65 of the Journal were printed, and 27 copies have already been delivered to the University of Arkansas' Library. The total printing cost of volume 65 of the Journal was \$2,915.12.

Managing Editor Ivan Still

22 manuscripts were submitted for consideration of publication in volume 65 (2011) of the JAAS.

By the end of May these manuscripts were checked for style, grammar, format, etc. This is still necessary as some authors still fail to follow the "Instructions to Authors". Abstracts were sent to potential reviewers at the end of May. Dr. Hemmati handled Physical Science papers and recruited Drs. Collis Geren, Dr. Salomon Itza and Dr. Bill Doria to serve as Associate Editors, while Biological Science

manuscripts were handled by Dr. Still. Manuscripts were sent out electronically for review at the beginning of June. These were returned to the Managing Editor at the end of June/middle of July. I am using a Yahoo account specifically for JAAS to correspond with reviewers and this has improved response rates and handling of the review process.

Most authors were contacted by e-mail by the last week of July 2011 at the latest and informed if their paper was accepted with the need for minor or major revision or whether their paper was rejected. Most manuscripts required minor revision while four required major revisions. All authors were asked to return their revisions to the Managing Editor electronically by August 31, with the page charges being submitted to Dr. Hemmati, Editor-in-Chief. Two manuscripts that had been accepted in previous years, but that had not been resubmitted in time for volume 64, were accepted for publication in this year's journal, so the total number of articles published this year to 24. The Journal, totaling 190 pages was assembled by the end of December.

I would like to thank the reviewers and Assistant/Associate Editors for their help in the preparation of volume 65, and finally the corresponding authors of submitted manuscripts and the reviewer for the mostly successful implementation of journal submission requirements.

7. Arkansas Junior Academy of Science Report:

In September of 2011, long-time director of the ARJAS Nolan Carter stepped down. David Pace, at Lyon College, agreed to take over and was officially appointed the new director in December. Upon discovering that there was no financial oversight of the money held by ARJAS, and after learning that the AAS was unwilling to provide that oversight, Pace resigned as director. Due to the need to start planning the annual ARJAS meeting, and because I was unwilling to see the funds of the ARJAS transferred to someone who was not an officer of AAS and put in a private bank account, I assumed the role of director myself in January of 2012. Nolan Carter sent me a check for the balance of the funds controlled by ARJAS, which totaled \$5502.86. I have since established a checking account and linked that account to PayPal, which, in combination with an all-online registration process, has greatly simplified the process by which students sign up to participate in the state meeting.

The annual ARJAS meeting will be held at Lyon College on April 21, 2012. Twenty high school

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student award winners from the regional ARJAS meetings have registered to attend and present their papers. The attendance is down sharply from recent years, due in part to the necessary separation in time and place of the ARJAS meeting from the state science fair, both of which had traditionally occurred on the same weekend in the same location (UCA). Additionally, the Arkansas School for Mathematics, Sciences and the Arts, which typically sent a large number of students to the annual meeting, is sending almost no one this year due to a time conflict with the school prom.

I am very grateful to the regional directors for their support in the last few months:

Central Region – Marian Douglas (UALR)

Northwest Region – Lynne Hehr (UA)

Northeast Region – Dr. Ron Johnson (ASU)

West Central Region – Dr. Brian Monson (ASMSA)

I would like to give a special thanks to Marian Douglas, who has gone above and beyond in helping me understand the workings of ARJAS.

If the AAS is going to be, as the organization's constitution call for, the parent organization of ARJAS, then something must change. While Nolan Carter certainly managed the funds of the ARJAS with the utmost integrity, it is nonetheless unacceptable to have that organization acting and collecting and spending money with absolutely no founding documents, no official status as a non-profit organization, no oversight, and no involvement of the AAS other than to appoint the director. I believe it is the responsibility of the AAS to manage the finances of the ARJAS, and I encourage the officers and membership of the AAS to either make a decision to do so, or make a decision to help the ARJAS become its own, functioning, legally-separate organization.

As soon as the 2012 ARJAS meeting is concluded and I have paid all costs and made all appropriate reimbursements for that meeting, I will be resigning as the director and sending a complete statement of the organization's finances and expenditures and a check for the remaining balance to the AAS Treasurer. I will also be closing the associated checking account and cancelling the tax ID number I acquired for the account in my own name. The AAS can decide how to proceed from there.

I encourage the AAS to consider the purpose of

the ARJAS, how it is related to other activities for high school students in the state, and how its annual meeting should be scheduled (e.g. should it be concurrent with the AAS meeting?).

Respectfully Submitted,

Anthony K. Grafton

8. AAAS Representative: Scott Kirkconnell

Report to the Arkansas Academy of Sciences regarding attendance at the annual AAAS meeting February 16-20, 2012. Dr. Scott Kirkconnell, Arkansas Tech University April, 2012.

These Vancouver, British Columbia meetings used "Flattening the World" as their inspirational theme. Pres. Nina Fyedoroffs keynote address was exceptionally engaging as she traced her personal story from age 17 (divorced and remarried by 19, with two children). She was a colleague and close personal friend of Nobel Laureate Barbara McClintock, and her perspectives on Dr. McClintock were priceless! Scientific sessions were broad-based but the degree of political contention at times surprised me. Genetic regulatory mechanisms, involving, the likes of siRNA and recent recognition that there are on the order of 10^{31} viruses in the world were memorable entries from molecular biology!

Sessions I attended included neuroscience, creative approaches to learning, strategies for preserving marine protected areas, global plant science perspectives, genetically modified crops, use of plants for improving human health, the Second Green Revolution, implementing research-based educational practices, new approaches to teaching evolution, Family Planning, novel efforts for keeping people and wildlife in balance, the role of science in responding to challenges of a global population that will rise to 9 or 10 billion, the Origins of Inequities in Complex societies, and various approaches to managing energy resources and its impact on human health, efforts to grow (and exercise) meat in petri dishes, and health costs of mountain top removal mining (which SHOULD be outlawed, as the researchers pointed out.)

Among the potentially most significant to AAS meetings involved the National Association of Academies of Science (NAAS), during which some participants described the approaches their academies have used to foster innovation, growth, and the general advancement of science in their various states. During the past year some NAAS-

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sponsored teleconferences addressed this same issue, in particular with Dr. Margaret Lewis last October describing the experiences of the Wisconsin Academy of Science. Dr. Lewis pointed out that they have a governing board, the members of which are required to contribute on an annual basis \$1500 cash or provide in kind service to the Academy. Leaders serve for about 3 years, and many of them greatly exceed the cash and in-kind contribution requirements. Perhaps the most impressive state academy represented at Vancouver was Ohio. The Ohio Academy of Science fielded no less than 13 young researchers manning very professional posters. In fact, there were other students from Pakistan, South Korea, and quite a number even from the United Kingdom, but there was not one single student presenter from Arkansas. To cite one of the more exciting posters, a young man from New Jersey described a brainwave- controlled system he designed and built enabling a quadriplegic to control his electric wheelchair "just by thinking". This 10th grader used his Apple laptop, \$50 worth of hardware and readily available software interfaced to a wheelchair. The Ohio Academy of Science is headed by a full-time CEO, Dr. Lynn Elfner, who referenced a seminal turning point in their Academy when they restructured their leadership in 1997 to include highly capable individuals from all walks of life; seeking to balance academe, industry, and government. I invite you to visit the Ohio Academy of Science website (www.ohiosci.org). I think you will agree that it portrays a first class operation! One of the clickable links in that web site lists the members of the Board of Trustees which includes 21 individuals, some of which come from universities, from the Food and Drug Administration, from various industries, etc. They don't require \$1500 annually, but, the ethos is, "give, get, or get off", as Dr. Elfner put it. He has promised to send me the strategic plan they used. Sitting next to me at the Vancouver NAAS meeting was Dr. Mary Burke of the St. Louis Academy of Science. (I did not know cities can host their own Academies of Science). This academy is credible, to put it mildly. The St. Louis Academy of Science employs five full-time and four part-time staff members. Their budget last year was \$500,000 and they anticipate a budget this coming year of \$700,000. Although we have made great strides in our Academy toward supporting young scientists and toward financial stability, I think we can do much, much better by learning from our sister academies.

With the approval of Dr. Kurt Grafton and Dr. Mark Seigar, I gave a 40 minute presentation last week to the larger of Russellville's 2 Rotary Clubs describing the Vancouver meetings, some educational initiatives directed at young Arkansas students, and asking for the possible engagement of these Rotarians with the Arkansas Academy of Science. I made a questionnaire requesting: Name, Vocation (title), Contact information, Special experience/ expertise that might be useful to AAS: Area in which you believe you could help AAS: and Suggestions for advancing science education through AAS 6 members responded, including a pastor, a lawyer, an engineering professor, an attorney, a stockbroker, a business dean, and an Army reservist/adult learning specialist. Kurt suggested that we have time to carefully consider restructuring our academy, and may, in fact, make such a process the focus for our centennial meeting.

9. Committee Reports:

a. Nominations Committee: Mostafa Hemmati

Nominees were accepted for AAS Vice-president. Abdel Bachri (SAU) was elected.

b. Publications Committee:

The publications committee developed an obituary publication policy incorporating the AAS website and the Journal. Obituaries of former members of the Academy can be placed on the AAS website upon approval from the Executive committee. A long-time officer or past-president of the Academy may be placed in the Journal.

10: AAS Undergraduate Research Award Committee

Committee constituency: Marc Seigar (Chair), Kurt Grafton, Scott Kirkconnell

The original deadline for submission of proposals to the AAS Undergraduate Research Program was March 1, 2012. However, with only 3 proposals submitted at that time, the deadline was extended to March 15, 2012. We received a total of 8 proposals by the extended deadline. We had funding for up to 5 proposals.

The three people on the committee reviewed each proposal independently, and gave the proposals a score for quality of the proposed research (1 to 5), a score for feasibility (1 to 5), and a score for understanding of the research area

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(1 to 5). A total score (out of 15) was then assigned. The individual scores from each committee member were then averaged. Based on this average, we recommend the following proposals be funded, each at \$500:

Student name: Adam Bigott
Field of study: Biology
Faculty Sponsor: Ann Willyard, Hendrix College.
Proposal Title: The Sky Islands Pine Project

Student name: Tayria Brownmiller
Field of study: Biology with Chemistry minor (it is a chemistry project)
Faculty Sponsor: Martin Campbell, Henderson State University.
Proposal Title: A study of new and nearly unexplored ionic liquids based on niacin

Student name: Emily Cariker
Field of study: Biochemistry/Molecular Biology
Faculty Sponsor: Andrew Schurko, Hendrix College.
Proposal Title: Gene Expression in Bdelloid Rotifers During DNA Damage Repair

Student name: Mariah Small
Field of study: Biomedical Biology
Faculty Sponsor: Ivan Still, Arkansas Tech University
Proposal Title: Role of Tacc2s in MyoD Regulation.

Student name: Hannah Blair
Field of study: Wildlife ecology and management
Faculty sponsor: Thomas Risch, Arkansas State University
Proposal Title: Comparative triacylglyceride profiles of *Geomyces destructans* and *G. pannorum* determined by Thin-Layer Chromatography and Mass Spectrometry

11. Business Old and New:

The 97th annual AAS meeting will be April 5-6, 2013 at the Hilton Hotel in Little Rock. The host for the meeting will be Arkansas Tech University. Hosts for future meetings are solicited.

12. Motions and Action Items:

- Abdel Bachri elected to Vice-president.
- Ron Tackett will chair a publicity committee and be in charge of the Newsletter.

- Steps have been taken with the IRS to re-establish the Academy's tax exempt status after changes in the law necessitated re-applying for such status.
- AAS constitution and by-laws need review at Executive Committee Meeting. Constitutional committee appointed to look into amendments of the Academy documents (Bill Doria, Abdel Bachri, Scott Kirkconnell)
- Non-JAAS budget approved:

\$2,500	Undergraduate Research Grants
\$ 500	Biota: to compile fauna & non-vascular plants to go on AAS website
\$ 900	AAAS representative travel (Scott Kirkconnell)
\$ 250	Affiliate student awards (Junior Academy)
\$ 400	Affiliate student awards (Arkansas Science Fair)
\$ 400	Affiliate student awards (AJSHS)
\$1,400	AAS Spring meeting student awards
\$ 200	AAS Secretary, journal mailings

\$6,550.	TOTAL (excludes costs associated with JAAS publication)

Meeting Adjourned

Jeff Robertson, AAS Secretary

Treasurer's Report
ARKANSAS ACADEMY OF SCIENCE
2012 FINANCIAL STATEMENT
December 20, 2012

Balance – December 14, 2012	\$86,268.77
Balance – December 21, 2011	\$79,787.95
Net Gain	\$6,480.82

DISTRIBUTION OF FUNDS

Checking Account Bank of the Ozarks, Russellville, AR, 12/14/2012	\$19,929.30
Certificate of Deposit	
Life Membership Endowment, Bank of the Ozarks, Russellville, AR, 12/14/2012 Maturity Date 06/11/13	\$18,455.94
Dwight Moore Endowment (Dwight Moore's final balance of \$6,002.73 + Short term CD's final balance of \$4,157.77 +\$9,839.50 from the Bank of the Ozarks checking account	\$20,761.39

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= \$20,000. 12/14/2012
Maturity Date 06/10/13

Phoebe and George Harp Endowment \$18,858.39

((\$7601 Harp+\$6515.15 CD+\$3383.85 Checking)
=\$17500 CD + Interest Paid 12/14/2012
Maturity Date 04/15/2013

Short Term CD \$8,263.75

Bank of the Ozarks, Russellville, AR, 12/14/2012
New Maturity Date 02/27/2013

Combined interest on all accounts as of December 14, 2012 was \$371.65

Total \$86,268.77

INCOME:

1. Transfer from CD to Checking **\$0**

2. GIFTS RECEIVED

a. Ouachita National Forest - Sponsorship \$0
b. Arkansas Heritage Central AD - Sponsorship \$0

\$0

3. INTEREST (Interest Earned Year to Date, ~ ~ December 14, 2012)

a. Checking Account, Bank of the Ozarks, ...448 \$15.70
b. CD1 (Bank of the Ozarks),929 \$87.45
c. CD2 (Bank of the Ozarks),594 \$39.11
d. CD3 (Bank of the Ozarks),583 \$126.82
e. CD4 (Bank of the Ozarks).....396 \$102.57

All interest was added to the CDs \$371.65

4. JOURNAL

a. Page Charges \$9,000
b. Copies of Vol. 64 and 65, one each \$100
c. Suscriptions, University of Arkansas \$1,300

\$10,400.00

5. JOURNAL CONTRIBUTION -0-

6. MEMBERSHIP

a. Individuals \$1,890
d. Institutional \$100
e. Life (Koope \$100, Still \$125, Jacobs \$125 and Rowley \$100) \$450

\$2,440

7. MISCELLANEOUS INCOME

a. Extra funds from 2011 UAM Meeting \$1,625
b. Kurt returned from Membership Drive \$2000
c. Check returned from Science Talent \$150;
I have mailed him a new check for that amount.
d. Check from Junior Academy \$5,181;
I have already given a check in that amount to
Dr. Mebi.

\$1,625

TOTAL INCOME \$14,465.00

EXPENSES:**1. STUDENT AWARDS**

1. Brady Spencer	\$100
2. Max Embury	\$50
3. Jessica Hartman	\$50
4. Nick Martinez	\$50
5. Anisha Rathi	\$100
6. Aaron McMoran	\$50
7. Muatez Mohammed	\$50
8. Kelsey Lancaster	\$100
9. Brady Spencer	\$50
10. Kristen Finch	\$50
11. Anisha Rathi	\$100
12. Andrew Gray	\$50
13. Ujvala Gaddle	\$50
14. Amanda Bates	\$50
15. Jessica Hartman	\$100
16. Kahli Remy	\$50
17. Paul Morgan	\$50
18. Kendall Fancher	\$50
19. Allan Thomas	\$100
20. Jay Guarneri	\$50
21. Magsood Ali Mughal	\$50

\$1,350

2. AWARDS (Organizations)

a. Junior Science and Humanities Sym.	\$400
b. Arkansas State Science Fair	\$400
c. Arkansas Junior Academy of Science	\$250
d. Arkansas Science Talent Search	\$150

\$1,200

3. UNDERGRADUATE RESEARCH AWARDS

a. Dr. Campbell/Brownmiller, HSU	\$500
b. Dr. Schurko/Cariker, Hendrix College	\$500
c. Dr. Ivan Still/Small, ATU	\$500
d. Dr. Risch/Blair, ASU	\$500
e. Dr. Willyard/Bigott, Hendrix	\$500

\$2,500

4. JOURNAL

a. Volume 65 Printing Cost	\$2,915.12
b. Journal Mailing Cost \$4.56+\$43.35	\$47.91
c. Journal Editorial Cost	-0-

\$2,963.03

5. MISCELLANEOUS EXPENSES

1. Partial Reimbursement, Dr. Kirkconnell's Trip	\$917.34
2. Reimbursed Marc for Kurt's Plaque	\$164.18
3. National Association Dues	\$71
4. Notary Public	\$50
5. Payment to Secretary of State's Office, Marc	\$50
6. Moore&Aikman, Tax Exemption Preparation	\$75
7. Dr. Doria, Public Portal	\$96
8. Payment to the Biota Committee	\$500

\$1,923.52

7. TRANSFER TO CD from Checking \$0

TOTAL EXPENSES \$9,936.55

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COST OF JOURNAL**

VOLUME	COPIES	PAGES	PRINTER CHARGE	TOT. VOL. COST	COST/ COPY	COST/ PAGE
35 (1981)	450	96	\$3,694.68	\$4,620.99	\$10.27	\$48.14
36 (1982)	450	110	\$5,233.28	\$5,291.69	\$11.76	\$48.11
37 (1983)	450	103	\$5,326.91	\$5,944.44	\$13.21	\$57.71
38 (1984)	450	97	\$5,562.97	\$6,167.72	\$13.71	\$63.58
39 (1985)	450	150	\$7,856.20	\$8,463.51	\$18.81	\$56.42
40 (1986)	450	98	\$6,175.20	\$6,675.20	\$14.23	\$68.11
41 (1987)	450	116	\$7,122.79	\$7,811.25	\$17.36	\$67.34
42 (1988)	450*	116	\$7,210.79	\$7,710.15	\$17.13	\$66.47
43 (1989)	450*	119	\$8,057.24	\$8,557.24	\$19.02	\$71.91
44 (1990)	450*	136	\$9,298.64	\$9,798.64	\$21.77	\$72.05
45 (1991)	450*	136	\$9,397.07	\$9,929.32	\$22.06	\$73.01
46 (1992)	450*	116	\$9,478.56	\$10,000.56	\$22.22	\$86.21
47 (1993)	400	160	\$12,161.26	\$12,861.26	\$32.15	\$80.38
48 (1994)	450	270	\$17,562.46	\$18,262.46	\$40.58	\$67.63
49 (1995)	390	199	\$14,725.40	\$15,425.40	\$39.55	\$77.51
50 (1996)	345	158	\$11,950.00	\$12,640.75	\$36.64	\$80.00
51 (1997)	350	214	\$14,308.01	\$15,008.01	\$42.88	\$70.13
52 (1998)	350	144	\$12,490.59	\$13,190.59	\$37.69	\$91.60
53 (1999)	350	160	\$13,686.39	\$14,386.39	\$41.10	\$89.91
54 (2000)	350	160	\$14,149.07	\$14,849.07	\$42.43	\$92.81
55 (2001)	360	195	\$16,677.22	\$17,498.22	\$48.61	\$89.73
56 (2002)	350	257	\$18,201.93	\$19,001.93	\$54.29	\$73.94
57 (2003)	230	229	\$14,415.12	\$15,715.12	\$68.33	\$68.62
58 (2004)	210	144	\$7,875.76	\$9,175.76	\$43.99	\$63.72
59 (2005)	215	226	\$16,239.04	\$17,835.84	\$82.96	\$78.92
60 (2006)	220	204	\$11,348.06	\$12,934.30	\$58.79	\$63.40
61 (2007)	195	150	\$8,196.84	\$9,914.69	\$50.84	\$66.10
62 (2008)	220	166	\$2,865.00	\$2,967.49	\$13.49	\$17.88
63 (2009)	213	206	\$3,144.08	\$3,144.08	\$14.76	\$15.26
64 (2010)	232	158	\$2,713.54	\$2,764.30	\$11.91	\$17.50
65 (2011)	200	194	\$2,915.12	\$2,963.03	\$14.82	\$15.27

The Total Volume Cost equals the printer's charge plus the other miscellaneous charges (Mailing Cost, etc...).

The Total Volume Cost equals the printer's charge plus the editor, editorial assistant, and other miscellaneous charges.

- On Volume 42 the Academy received 560 copies, but the printer did not charge us for the extra 110 copies. For comparison purposes the calculated cost/copy is based on 450 copies.
- On Volume 43 the Academy received 523 copies, but the printer did not charge us for the extra 73 copies. For comparison purposes the calculated cost/copy is based on 450 copies.
- On Volume 44 the Academy received 535 copies, but the printer did not charge us for the extra 85 copies. For comparison purposes the calculated cost/copy is based on 450 copies.
- On Volume 45 the Academy received 594 copies, but the printer did not charge us for the extra 144 copies. For comparison purposes the calculated cost/copy is based on 450 copies.
- On Volume 46 the cost was greater than usual due to the high cost of a second reprinting of 54 copies by a different printer.

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APPENDIX A

2012 AAS PRESENTATION AWARD WINNERS

GRADUATE STUDENT AWARDS

Posters Awards – (all disciplines)

- 1st Place:** “The Analysis of Cataract and/or Myopathy Causing Missense Mutation, R120G in human α B-crystallin” by Anisha Rathi, and Edathara Abraham of University of Arkansas for Medical Sciences.
- 2nd Place:** “Modeling Patient Flow in an Outpatient Clinic” by Aaron L McMoran, R B Lenin, and Hari Easwaran of University of Central Arkansas, and University of Arkansas for Medical Sciences.
- 3rd Place:** “Fabrication and Studies on CdS to be a N-P-N Solar Cell Junction” by Muatez Z. Mohammed, Samir AbdulMohsin, Alaa A. AL-Hilo, Tar-pin Chen, and Jingbiao Cui of University of Arkansas at Little Rock.

Oral Presentation Awards

Life Sciences

- 1st Place:** “The Analysis of Cataract and/or Myopathy Causing Missense Mutation, R120G in human α B-crystallin” by Anisha Rathi, and Edathara Abraham of University of Arkansas for Medical Sciences.
- 2nd Place (tie):** “Retrospective Epidemiologic Analysis of Influenza Pandemics in Arkansas” by Andrew J Gray, and Ben M Rowley University of Central Arkansas.
- 2nd Place (tie):** “Cytokine gene expression in the ceca of turkey poultts infected with *Eimeria adenoeides*, measured by quantitative PCR” by Ujvala Deepthi Gadde, Thilakar Rathinam, Gisela F Erf, and Hilary D Chapman of University of Arkansas.
- 3rd Place:** “Does the importance of crayfish as shredders differ with flow permanence?” by Amanda Bates, and Sally Entrekin of University of Central Arkansas.

Physical Sciences

- 1st Place:** “Structural and Optical Properties of Metal-Oxide Core-Shell Nanowire Arrays Fabricated by Atomic Layer Deposition” by Allan Thomas, and Jingbiao Cui of University of Arkansas at Little Rock.
- 2nd Place:** “Comparing Methods for Interpolation of Raster DEMs” by Jay C Guarneri, and Robert C Weih of University of Arkansas at Monticello.
- 3rd Place:** “Taguchi Analysis and Characterization of Electrodeposited Indium (III) Sulfide (In_2S_3) Films for use as Potential Buffer Layers in Solar Cells” by Maqsood Ali Mughal, Robert Engelken, M. Jason Newell, John Hall, Joshua Vangilder, Frederick Felizco, David McNew, Shyam Thapa, Elizabeth Hundley, Bruce Johnson, and Ross Carroll of Arkansas State University.

UNDERGRADUATE STUDENT AWARDS

Posters Awards – (all disciplines)

- 1st Place:** “Bacteriostatic Activity of a Novel Silver-Containing Hydrogel” by Brady Spencer, Daniel Atchley, and Kenneth Yates of Harding University.
- 2nd Place (tie):** “Tigers on a Phage Hunt” by Max Embury, Joseph Koon, Ruth Plymale, and Nathan Reyna of Ouachita Baptist University.
- 2nd Place (tie):** “Predicting Catalytic Parameters of Enantioselective Oxidations by CYP2C19 Using a Chirality Code and Artificial Neural Networks” by Jessica H Hartman, Steven D Cothren, Jerry A Darsey, and Grover P Miller of University of Arkansas for Medical Sciences, and University of Arkansas at Little Rock.
- 3rd Place:** “Electrical and Physical Properties of Micropipettes Pulled from Borosilicate Glass” by Nick S Martinez, and Azida Walker of University of Central Arkansas.

Oral Presentation Awards

Life Sciences

- 1st Place:** “The Testicular Histology and Germ Cell Cytology of Spermatogenesis of the Mississippi Map Turtle, *Graptemys pseudogeographica kohnii*, from Northeastern Arkansas” by Kelsey F. Lancaster and Stanley E. Trauth of Arkansas State University.
- 2nd Place:** “Bacteriostatic Activity of a Novel Silver-Containing Hydrogel” by Brady Spencer, Daniel Atchley, and Kenneth Yates of Harding University.
- 3rd Place:** “How distinct are the geographically isolated coastal populations of ponderosa pines in the Willamette Valley of Oregon and Fort Lewis, Washington?” by Kristen Finch, Ann Willyard, and Stephen Meyers of Hendrix College, and Oregon State University.

Physical Sciences

- 1st Place:** “Predicting Catalytic Parameters of Enantioselective Oxidations by CYP2C19 Using a Chirality Code and Artificial Neural Networks” by Jessica H Hartman, Steven D Cothren, Jerry A Darsey, and Grover P Miller of University of Arkansas for Medical Sciences, and University of Arkansas at Little Rock.
- 2nd Place:** “Energy Resolution Deterioration due to Recombination in High Pressure Xenon Detectors along Delta Electron Tracks” by Kahli Remy, Abdel Bachri, and Azriel Goldschmidt of Southern Arkansas University, and Lawrence Berkeley National Laboratory.
- 3rd Place (tie):** “DNA Aberrations Induced by Gamma Radiation on the *Drosophila melanogaster*” by Paul M Morgan, Salomon F Itza, and William J Doria of University of the Ozarks.

Business meeting report

3rd Place (tie): “State-Specific Reactions of Gas Phase Ni with CH₃X and CF₃X (X=Br,I): Evidence of Selective Halogen Abstraction” by Kendall G Fancher, Li C Chen, Ashley J Hicks, Casey A Cameron, and William S Taylor of University of Central Arkansas.

APPENDIX B RESOLUTIONS

Arkansas Academy of Science 96th Annual Meeting, 2012 Resolutions

Be it resolved that we, the membership of the Arkansas Academy of Science, offer our thanks and appreciation to Southern Arkansas University in Magnolia for hosting our 96th annual meeting. We especially thank the members of the Local Arrangements Committee for the time and effort they put into the excellent organization of the meeting in the spacious new Science Center: Abdel Bachri, Chairman, and Sam Heintz, both from the Physics department; Pierre Boumtje, Agriculture; Claude Baker, Shawn Krosnick, James Rasmussen, Mona Rasmussen, Viktoriya Street, Biology; Ganna Lyubartseva, Uma Mallik, Tim Schroeder, Angela Stone, and Scott White, Chemistry; and Leo Carson Davis, Geology.

We thank President David Rankin for financial support of AAS through the Amfuel Founders and the Southern Arkansas Foundation. Vice-President for Academic Affairs, Dr. David Crouse opened the meeting with a gracious welcome and a review of the ties between SAU and the Academy. Dr. Scott McKay, Dean of SAU’s College of Science and Technology facilitated the preparation of The Science Center. We especially thank our Keynote Speaker, Dr. David Gross, winner of the 2004 Nobel Prize in Physics. His audience was captivated by his description of the “super- small” world beyond atoms.

The Academy is indebted to those members who assumed the important role of session chairs: Andres Bacon, Anwar Bhuiyan, Leo Carson Davis, Rudy Eichenberger, Jun Gao, Anthony Grafton, Scott Kirkconnell, Jim Musser, James Petersen, Ben Rowley, and Brian Wagner.

We are also grateful to all of those who volunteered to serve as judges, without whom the awards and recognition of our student participants would not be possible. Sarajane Telford and Deena Hardin helped anywhere they were needed, and student workers kept projectors working for speakers. It was pleasure to be able to count on the campus food

service, Aramark, to serve an excellent banquet.

We congratulate all who presented papers and posters at this meeting, and we thank all the undergraduate students who applied to our second annual Undergraduate Research Funding program. We appreciate the involvement of so many students since their work and success directly contributes to the future success of the Academy and advancement of science in the state of Arkansas.

The membership of the Academy also recognizes that the work done by and through our organization takes place throughout the year, and we therefore thank the directors of the various science and youth organizations which are supported or supervised by the Academy: Mark Bland, Science Fair Association; Anthony K. Grafton, Junior Academy of Science; Bernard Chen, Arkansas Science Talent Search; Theresa Fuller, Arkansas Science Teachers Association; and Ron Tackett, Junior Science and Humanities Symposium.

We also want to thank all those who helped organize and direct Regional Science Fairs and Junior Academy meetings. We also offer our sincere thanks to those who served in leadership positions within the Academy: Dr. A. Kurt Grafton, President; Dr. Marc S. Seiger, President-Elect; Dr. Bill Doria, Vice-President & webmaster; Jeff Robertson (Secretary and Past President), Dr. Mostafa Hemmati, Treasurer and Journal Editor-in-Chief; Dr. Ivan Still, Journal Managing Editor; and Dr. Collis Geren, Historian.

Respectfully submitted on this 14th day of April, 2012. Resolutions Committee

Abdel Bachri, Chairman, SAU Local Arrangements
Committee
Leo Carson Davis, AAS Life Member

Business meeting report**2011-2012 MEMBERSHIP****LIFE MEMBERS****REGULAR MEMBERS**

FIRST MI.	LAST NAME	INSTITUTION	FIRST MI.	LAST NAME	INSTITUTION
Edmond J.	Bacon	University of Arkansas-Monticello	Abdel	Bachri	Southern Arkansas University
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Floyd	Beckford	Lyon College	Claude	Baker	Southern Arkansas University
Wilfred J.	Braithwaite	University of Arkansas-Little Rock	Linda	Bates	South Arkansas Community College
Calvin	Cotton	Geographics Silk Screening Co.	Anwar	Bhuiyan	Arkansas Tech University
Betty	Crump	Ouchita National Forest	Jennifer	Bouldin	Arkansas State University
James	Daly	UAMS	Morris	Bramlett	University of Arkansas-Monticello
Leo	Davis	Southern Arkansas University	Tom	Buchanan	University of Arkansas-Fort Smith
Mark	Draganjac	Arkansas State University	Stephen	Chordas III	Ohio State University
Jim	Edson	University of Arkansas-Monticello	Matthew	Connior	South Arkansas Community College
Kim	Fifer	UAMS	Mari	Davidson	UAMS
James H.	Fribourgh	University of Arkansas-Little Rock	William	Doria	University of the Ozarks
Collis	Geren	University of Arkansas	Eddie	Dry	ASU-Mountain Home
John	Giese	Ark. Dept. of Env. Qual. (ret)	Robert	Eoff	University of Arkansas-Monticello
Walter	Godwin	University of Arkansas-Monticello	Rudy	Eichenberger	Southern Arkansas University
Anthony	Grafton	Lyon College	Robert	Ficklin	University of Arkansas-Monticello
Joe M.	Guenter	University of Arkansas-Monticello	Carl	Frederickson	University of Central Arkansas
Joyce	Hardin	Hendrix College	Jun	Gao	UAMS
George	Harp	Arkansas State University	David	Gilmore	Arkansas State University
Phoebe	Harp	Arkansas State University	Frank	Hahn	Philander Smith College
Gary	Heidt	UALR	Franklin	Hardcastle	Arkansas Tech University
Mostafa	Hemmati	Arkansas Tech University	Lawrence	Hardy	Ouachita Mountain Biological Station
Philip	Hyatt	Retired	John	Harris	Arkansas Highway & Transportation
Cynthia	Jacobs	Arkansas Tech University	Kari	Harris	Arkansas State University
Douglas	James	University of Arkansas	Salomon	Itza	University of the Ozarks
Ronald	Javitch	Natural History Rare Book Found.	Wasmaa	Jabbar	UALR
Arthur	Johnson	Hendrix College	David	Jamieson	Crowder. College
Cindy	Kane	UAMS	Susan	Johnson	South Arkansas Community College
Scott	Kirkconnell	Arkansas Tech University	Tillman	Kennon	Arkansas State University
Roger	Koepp	University of Arkansas	Peter	Kovarik	Columbus State Community College
Roland	McDaniel	FTN Associates	Shawn	Krosnick	Southern Arkansas University
Grovel	Miller	UAMS	Ryan	Laddusaw	UAMS
Herbert	Monoson	ASTA	Janet	Lanza	UALR
Mansour	Mortazavi	University of Arkansas-Pine Bluff	Brenda	Lauffart	Arkansas Tech University
James	Peck	UALR	Ganna	Lyubartseva	Southern Arkansas University
Michael	Rapp	University of Central Arkansas	David	Martinez	U.S. Fish and Wildlife Service
Dennis	Richardson	Quinnipiac College	Chris	Marvin	Hendrix College
Jeff	Robertson	Arkansas Tech University	Mike	Matthews	Henderson State University
Henry	Robison	Southern Arkansas University	Chris	McAllister	Eastern Oklahoma State College-Idabel
Benjamin	Rowley	University of Central Arkansas	Charles	Mebi	Arkansas Tech University
David	Saugey	U.S. Forest Service	Rahul	Mehta	University Central Arkansas
Ivan	Still	Arkansas Tech University	Jim	Musser	Arkansas Tech University
Stanley	Trauth	Arkansas State University	Lawrence	Mwasis	University of Arkansas-Pine Bluff
Gary	Tucker	FTN Associates	Joseph	Onyilagha	University of Arkansas-Pine Bluff
Renn	Tumlison	Henderson State University	Ruth	Plymale	Ouachita Baptist University
Scott	White	Southern Arkansas University	Jacqueline	Potter	Wonder Junior High School
James	Wickliff	University of Arkansas	Kannan	Ragupathi	University of Arkansas- Fort Smith
Robert	Wiley	University of Arkansas-Monticello	Nathan	Reyna	Ouachita Baptist University
Steve	Zimmer	Arkansas Tech University	Thomas	Risch	Arkansas State University
			Blake	Sasse	Arkansas Game and Fish
			Andrew	Schurko	Hendrix College
			Marc	Seigar	UALR
			Hamed	Shojaei	Arkansas Tech University
			Thomas	Smith	Southern Arkansas University
			Kimberly	Smith	University of Arkansas
			Richard	Standage	USDA Forest Service-Ouachita NF
			Mary J.	Stewart	University of Arkansas-Monticello

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Bin	Zhang	Arkansas State University

STUDENT MEMBERS

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Andrew	Bedinghaus	UALR
Daniel	Brinker	University of Central Arkansas
William	Childs	Arkansas Tech University
Jesse	Christensen	Arkansas Tech University
Katherine	Docter	Southern Arkansas University
Charlette	Felton	Arkansas Tech University
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Hunter	Robinson	Arkansas Tech University
Robert	Rose	University of Arkansas-Monticello
Britney	Rosenthal	Arkansas Tech University
Allan	Thomas	UALR
Dacen	Waters	Arkansas Tech University
Caitlin	Wilhelm	Harding University
David	Zhong	