

2001

## 85th Annual Meeting, 2001. Program

Academy Editors

Follow this and additional works at: <https://scholarworks.uark.edu/jaas>

---

### Recommended Citation

Editors, Academy (2001) "85th Annual Meeting, 2001. Program," *Journal of the Arkansas Academy of Science*: Vol. 55, Article 3.

Available at: <https://scholarworks.uark.edu/jaas/vol55/iss1/3>

This article is available for use under the Creative Commons license: Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0). Users are able to read, download, copy, print, distribute, search, link to the full texts of these articles, or use them for any other lawful purpose, without asking prior permission from the publisher or the author.

This Arkansas Academy Annual Meeting report is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in Journal of the Arkansas Academy of Science by an authorized editor of ScholarWorks@UARK. For more information, please contact [scholar@uark.edu](mailto:scholar@uark.edu), [uarepos@uark.edu](mailto:uarepos@uark.edu).

# PROGRAM

## Arkansas Academy of Science 85th Annual Meeting April 13-14, 2001 Conway, Arkansas

### SCHEDULE OF EVENTS

Friday, April 13, 2001

9:00 a.m. - 4:00 p.m.	Registration	LSC 104
8:30 a.m. - 10:00 a.m.	Executive Committee Meeting	LSC 102
10:30 a.m. - 10:00 p.m.	First Business Meeting	LSC 102
	Oral Presentations	
1:15 p.m. - 2:30 p.m.	Invertebrate Zoology	LSC 126
1:15 p.m. - 2:45 p.m.	Microbiology, Parasitology, & Biomedical Sciences	LSC 132
1:15 p.m. - 2:45 p.m.	Geology & Hydrology	LSC 133
1:15 p.m. - 2:45 p.m.	Biological & Organic Chemistry	LSC 168
1:15 p.m. - 2:30 p.m.	Terrestrial Ecology	LSC 170
1:15 p.m. - 2:45 p.m.	Mathematics & Science Education	LSC 172
3:00 p.m. - 4:00 p.m.	Poster Presentations	LSC 113
4:00 p.m. - 5:00 p.m.	Keynote Address: Jere H. Lipps <i>Beyond Reality: Science and the Mass Media</i>	LSC 102

5:30 p.m. - 6:30 p.m.	Reception / Social Mixer	Buffalo Alumni Hall
7:00 p.m. - 9:00 p.m.	Banquet	Student Center 205

Saturday, April 14, 2001

8:00 a.m. - 1:00 p.m.	Registration	LSC 104
	Oral Presentations	
8:00 a.m. - 11:15 am.	Mathematics	LSC 126
8:00 a.m. - 11:45 am.	Vertebrate Zoology	LSC 132
8:00 a.m. - 11:30 am.	Botany & Plant Biology	LSC 133
8:00 a.m. - 10:45 am.	Aquatic Ecology & Ecotoxicology	LSC 168
8:00 a.m. - 11:45 am.	General & Inorganic Chemistry	LSC 170
8:00 a.m. - 11:00 am.	Physics & Astronomy	LSC 172
12:00 p.m. - 1:00 p.m.	Second Business Meeting Presentation of Student Awards	LSC 102

## SECTION PROGRAMS

\* Undergraduate    \*\*Graduate

### ORAL PRESENTATIONS

Friday, April 13, 2001  
**Invertebrate Zoology**  
 Location: Room 126, Lewis Science Center

Biology, Hendrix College, 1600 Washington Avenue,  
 Conway, AR 72032. **NEW RECORDS OF THE DIANA FRITILLARY (*SPEYERIA DIANA*) IN ARKANSAS WITH NOTES ON NECTAR PLANT PREFERENCE**

Friday, April 13, 2001  
**Microbiology, Parasitology, & Biomedical Sciences**  
 Location: Room 132, Lewis Science Center

Time	Topic
1:15	<u>C. H. Good</u> , R. L. Redondo, J. Alexander, and J. A. Murray, Department of Biology, University of Central Arkansas, Conway, AR 72035. <b>ROLE OF INDIVIDUAL NEURONS IN TURNING WHILE CRAWLING IN THE MARINE SLUG <i>TRITONIA DIOMEDEA</i></b>
1:30	<u>Becky Hicklin</u> and Janet Lanza, Biology Department, University of Arkansas at Little Rock, 2801 South University, Little Rock, AR 72204. <b>DO MONARCH BUTTERFLIES PREFER NECTARS WITH AMINO ACIDS?</b>
1:45	<u>George L. Harp</u> <sup>1</sup> , Linden Trial <sup>2</sup> and Phoebe A. Harp <sup>1</sup> , <sup>1</sup> Department of Biological Sciences, Arkansas State University, State University, AR 72467. <sup>2</sup> Fish and Wildlife Research Center, Missouri Department of Conservation, 1110 S. College Ave., Columbia, MO 65201. <b>DISTRIBUTION AND STATUS OF <i>OPHIOGOMPHUS WESTFALLI</i> (GOMPHIDAE: ODONATA) IN MISSOURI AND ARKANSAS</b>
2:00	<u>Matthew D. Moran</u> and Charles D. Baldrige, Department of

Time	Topic
1:15	<u>Julie Crawford</u> <sup>1</sup> , John Sorenson <sup>2</sup> , and James Daly <sup>3</sup> , <sup>1</sup> Department of Pharmacology, University of Arkansas for Medical Sciences, Little Rock AR 72205; <sup>2</sup> College of Pharmacy, University of Arkansas for Medical Sciences, Little Rock, AR 72205; <sup>3</sup> Southwest Arkansas College, Pine Bluff, AR 71603. <b>THE EFFECT OF COPPER ON THE <i>IN VITRO</i> SURVIVAL OF TREMATODE PARASITES OF BLACK BASS (<i>MICROPTEROUS</i> SPP.)</b>
1:30	<u>Lisa Mullis</u> <sup>1</sup> , Andrew Goodwin <sup>2</sup> , and Wayne Gray <sup>1</sup> , <sup>1</sup> Department of Microbiology and Immunology, University of Arkansas for Medical Sciences, Little Rock AR 72205; <sup>2</sup> Department of Aquaculture and Fisheries, University of Arkansas at Pine Bluff, Pine Bluff, AR 71611. <b>A NOVEL HERPESVIRUS AFFECTING KOI CARP</b>
1:45	<u>Robin L. Stingley</u> <sup>1</sup> , Billy R. Griffin <sup>2</sup> , and Wayne L. Gray <sup>3</sup> ,

- <sup>1</sup>Department of Microbiology and Immunology, University of Arkansas for Medical Sciences, Little Rock AR 72205; <sup>2</sup>National Aquaculture Research Center, ARS-USDA, Stuttgart, AR 72160. **EXPRESSION OF CHANNEL CATFISH HERPESVIRUS GENES *IN VIVO***
- 2:10 Chris T. McAllister<sup>1</sup>, Fredric L. Frye<sup>2</sup>, and Stephen R. Goldberg<sup>3</sup>, <sup>1</sup>Department of Biology, Texas A & M University-Texarkana, Texarkana, TX 75505; <sup>2</sup>Fredric L. Frye & Associates, Diagnostic Pathology, 875 South Orchard, Suite #4, Ukiah, CA 95482-7448; <sup>3</sup>Department of Biology, Whittier College, 13406 Philadelphia Street, P.O. Box 634, Whittier, CA 90608. **PHACOCLASTIC UVEITIS IN A WILD-CAUGHT COPE'S GRAY TREEFROG, *HYLA CHRYSOSCELIS* (AMPHIBIA: HYLIDAE)**
- 2:15 Chris T. McAllister<sup>1</sup>, Steve J. Upton<sup>2</sup>, Stanley E. Trauth<sup>3</sup>, and David W. Allard<sup>1</sup>, <sup>1</sup>Department of Biology, Texas A & M University-Texarkana, Texarkana, TX 75505; <sup>2</sup>Division of Biology, Kansas State University, Manhattan, KS 66506; <sup>3</sup>Department of Biological Sciences, Arkansas State University, State University, AR 72467. **A REDESCRIPTION OF *EIMERIA MACYI* (APICOMPLEXA; EIMERIIDAE) FROM THE EASTERN PIPISTRELLE, *PIPISTRELLUS SUBFLAVUS* (MAMMALIA: CHIROPTERA), FROM ARKANSAS**
- 2:30 Whitney Williams and Mohammad Jamali, Health Professions Department, Arkansas State University, Jonesboro, AR 72467. **HODGKIN'S DISEASE AND THE REED-STERNBERG CELL**
- Friday, April 13, 2001  
**Geology & Hydrology**  
Location: Room 133, Lewis Science Center
- Time**      **Topic**
- 1:15 Laura E. Ewing<sup>1</sup>, and Haydar J. Al-Shukri<sup>2</sup>, <sup>1</sup>Arkansas School for Mathematics and Sciences, 200 Whittington Ave., Hot Springs, AR; <sup>2</sup>University of Arkansas at Little Rock, 2801 South University Avenue, Little Rock, AR 72204. **RESEARCH OF THE EARTHQUAKES AT NEW MADRID, MISSOURI**
- 1:30 Marilyn Egan and Haydar J. Al-Shukri, Department of Applied Science, University of Arkansas at Little Rock, Little Rock, AR 72204. **ENHANCED EVALUATION OF EJECTED MATERIALS FROM EARTHQUAKE INDUCED PALEOLIQUEFACTINO FEATURES USING GROUND PENETRATING RADAR**
- 1:45 L. Jeffrey B. Connelly, Hanan H. Mahdi, Robert E. Lemmer, Marilyn Egan, and Haydar J. Al-Shukri, University of Arkansas at Little Rock, Little Rock, AR 72204. **PALEO-SEISMIC FEATURES IN THE SOUTHERN PART OF THE NEW MADRID SEISMIC ZONE**
- 2:00 Abbas S. Eyuboglu and Haydar J. Al-Shukri, University of Arkansas at Little Rock, 2801 South University Avenue, Little Rock, AR 72204. **GROUND PENETRATING RADAR: A GEOPHYSICAL TOOL TO SEARCH FOR WATER ON MARS**
- 2:15 W. Reed Green<sup>1</sup>, and Brian E. Haggard<sup>2</sup>, <sup>1</sup>Hydrologist, U.S. Geological Survey, 401 Hardin Road, Little Rock, AR 72211; <sup>2</sup>Hydrologist, U.S. Geological Survey, 10205-D East 61st Street, Tulsa, OK 74133. **USING REGRESSION MODELS AND HYDROGRAPH SEPARATION TECHNIQUES TO ESTIMATE AND ASSESS STREAMFLOW LOADING**
- 2:30 Cathy Baker, Physical Sciences Department, Arkansas Tech University, Russellville, AR 72801. **NUMERICAL DETERMINATION OF BEDROCK OUTCROP STABILITY OF SELECTED PENNSYLVANIAN AGE FORMATIONS IN WESTERN ARKANSAS**
- Friday, April 13, 2001  
**Biological & Organic Chemistry**  
Location: Room 168, Lewis Science Center
- Time**      **Topic**
- 1:15 S. Jernigan, W. B. Melchior, Jr., G. R. Jenkins, D. Roberts, P. Howard, and W. Tolleson, Division of Biochemical Toxicology, National Center for Toxicological Research, FDA, Jefferson, AR 72079. **CHARACTERIZATION OF FUMONISIN AFFINITY CHROMATOGRAPHY FOR THE ISOLATION OF CERAMIDE SYNTHASE**
- 1:30 Dallas Broadway and Michael J. Panigot, Department of Chemistry, Arkansas State University, State University, AR 72467. **PREPARATION OF BETA ALLYL-C-GLUCOSIDES AND THEIR ATTEMPTED FUNCTIONALIZATION TO PREPARE A C-GLYCOSIDE CORE MOLECULE**
- 1:45 Ranjini Murthy and Michael J. Panigot, Department of Chemistry, Arkansas State University, State University, AR 72467. **SYNTHESIS OF ALPHA ALLYL-C-GLUCOSIDES AND THEIR ATTEMPTED CONVERSION INTO A C-GLYCOSIDE CORE MOLECULE PRECURSOR**
- 2:00 Shonda M. Winn, Kim Tran, Melissa W. Arnold, and Michael J. Panigot, Department of Chemistry, Arkansas State University, State University, AR 72467. **SUCCESSSES AND DIFFICULTIES IN THE REGIOSELECTIVE PROTECTION AND FUNCTIONALIZATION OF THE 6-POSITION OF METHYL- $\alpha$ -D-GLUCOPYRANOSIDE AS A MODEL STUDY FOR THE SYNTHESIS OF C-GLYCOSIDE DENDRIMERS**
- 2:15 Shang-U Kim, and Michael J. Panigot, Department of Chemistry, Arkansas State University, State University, AR 72467. **EFFORTS TOWARD THE PREPARATION OF ETHYNYL-C-GLYCOSIDE CONTAINING DENDRIMERS**
- 2:30 Michael J. Panigot, Jason P. Boggs, and Jennifer L. Faulkner-Calvert, Department of Chemistry, Arkansas State University, State University, AR 72467. **INVESTIGATIONS INTO THE SYNTHESIS OF ISOTOPICALLY LABELED HISTIDINE AND TRYPTOPHAN - DIFFICULTIES AND RESULTS**
- Friday, April 13, 2001  
**Terrestrial Ecology**  
Location: Room 170, Lewis Science Center
- Time**      **Topic**
- 1:15 Sara K. Gremillion, Kelly A. Osborn, Chris T. Fortson, Alison R. Sheidler, and Matthew D. Moran, Department of Biology, Hendrix College, 1600 Washington Avenue, Conway, AR 72032. **TOP-DOWN AND BOTTOM-UP REGULATION IN A NATURAL AND HUMAN-MAINTAINED GRASSLAND**
- 1:30 Brenna C. Fitzgerald<sup>1</sup>, Laura Skelton<sup>2</sup>, Amy Polk<sup>1</sup>, and Matthew D. Moran<sup>1</sup>, <sup>1</sup>Department of Biology, Hendrix

College, 1600 Washington Avenue, Conway, AR 72032;  
 2Institute of Ecology, University of Georgia, Athens, GA  
 30602-2202. **TOP-DOWN AND BOTTOM-UP REGULATION  
 IN A NATURAL AND HUMAN-MAINTAINED  
 GRASSLAND**

- 1:45 **Tim Eubanks**, Arkansas STRIVE, Harrison High School, 925  
 Goblin Dr., Harrison, AR 72601. **EFFECTS OF BURNING  
 ON SOIL NITROGEN IN A TALL GRASS PRAIRIE**
- 2:00 **Michele L. Renschin**<sup>1</sup>, Hal O. Liechty<sup>1</sup> and Michael G.  
 Shelton<sup>2</sup>, <sup>1</sup>School of Forest Resources, P. O. Box 3468,  
 University of Arkansas at Monticello, Monticello, AR 71656;  
<sup>2</sup>USDA Forest Service, Southern Research Station, P. O. Box  
 3516, University of Arkansas at Monticello, Monticello, AR  
 71656. **DECOMPOSITION RATE COMPARISONS  
 BETWEEN FREQUENTLY BURNED AND  
 UNBURNED AREAS OF UNEVEN-AGED LOBLOLLY  
 PINE IN THE ARKANSAS COASTAL PLAIN**
- 2:15 **Robert S. Sikes**<sup>1</sup>, Kristin M. Kramer<sup>2</sup>, and David W. Clark<sup>1</sup>,  
<sup>1</sup>Department of Biology, University of Arkansas at Little  
 Rock, 2801 S. University Ave., Little Rock, AR 72204;  
<sup>2</sup>Department of Biology, University of Maryland, College  
 Park, MD 20742. **LACTATION INCREASES PREDATION  
 RISKS BY ALTERING ACTIVITY PATTERNS**
- 2:30 **M. Victoria McDonald** and Chuck R. Munson, Department of  
 Biology, University of Central Arkansas, Conway, AR 72035.  
**SEASONAL OCCUPATION OF MIGRATORY AND  
 NON-MIGRATORY BIRDS IN A TYPICAL  
 ARKANSAS BOTTOMLAND HARDWOOD FOREST**

Friday, April 13, 2001

**Mathematics & Science Education**

Location: Room 172, Lewis Science Center

- | <u>Time</u> | <u>Topic</u>  |
|-------------|---|
| 1:15        | <b>David W. Allard</b> , Biology Department, Texas A&M<br>University-Texarkana, 2600 North Robison Road, Texarkana,<br>TX 75501. <b>ONLINE EARTH SYSTEM SCIENCE<br/>             EDUCATION FOR K-12 TEACHERS</b>  |
| 1:30        | <b>Donna Foss</b> , Department of Mathematics, University of<br>Central Arkansas, Conway, AR 72035. <b>PARALLEL CON-<br/>             CEPTIONS OF MATHEMATICS TEACHING: MID-<br/>             DLE LEVEL AND SECONDARY PRESERVICE<br/>             TEACHERS</b>  |
| 1:45        | <b>Donna R. Shanklin</b> <sup>1</sup> , Kelly Loftin <sup>2</sup> , Tom Riley <sup>2</sup> , Brian<br>Richardson <sup>2</sup> , Bob Reynolds <sup>2</sup> , and Jason Shivers <sup>2</sup> ,<br><sup>1</sup> University of Arkansas Cooperative Extension Service, P. O.<br>Box 3468, Monticello, AR 71656; <sup>2</sup> University of Arkansas<br>Cooperative Extension Service, P. O. Box 391, Little Rock,<br>AR 72203. <b>THE ANTS UNDERGROUND: FIRE ANT<br/>             YOUTH EDUCATION</b> |
| 2:00        | <b>M. C. Hirrel</b> and J. S. Choinski, Jr., Department of Biology,<br>University of Central Arkansas, Conway, AR 72035-5003.<br><b>CREATING MORE ACTIVE LEARNING BY INTE-<br/>             GRATING TECHNOLOGY INTO UNDERGRADU-<br/>             ATE BIOLOGY LABORATORIES</b>   |
| 2:15        | <b>Jim Winter</b> and Janet Lanza, Arkansas STRIVE Program,<br>University of Arkansas at Little Rock, AR 72204. <b>HOW TO<br/>             IMPLEMENT INQUIRY-BASED TEACHING ACTIVI-<br/>             TIES</b>   |
| 2:30        | <b>D. W. Bullock</b> , C. Emery, Z. Ding, V. P. Labela, G. Stewart,<br>and P. M. Thibado, Physics Department, University of<br>Arkansas, Fayetteville. <b>HYPER-INTERACTIVE TEACH-</b>  |

**ING METHODS USING REMOTE CONTROL TECHNOLOGY**

**POSTER PRESENTATIONS**

Friday, April 13, 2001

Location: Room 113, Lewis Science Center

- | <u>Time</u> | <u>Topic</u>   |
|-------------|--|
|             | <b>Mark Denton</b> and Rahul Mehta, Department of Physics &<br>Astronomy, University of Central Arkansas, Conway, AR<br>72035. <b>MICROANALYSIS OF SELECTED SAMPLES<br/>             USING SCANNING ELECTRON MICROSCOPE AND<br/>             X-RAY FLUORESCENCE</b>  |
|             | <b>Elizabeth Geesaman</b> <sup>1</sup> , Dan Buzatu <sup>2</sup> , Jon Wilkes <sup>2</sup> , Jack<br>Lay <sup>1,2</sup> , and Jerry A. Darsey <sup>1,2</sup> , <sup>1</sup> Department of Chemistry,<br>University of Arkansas at Little Rock, Little Rock, AR 72204;<br><sup>2</sup> Division of Chemistry, National Center for Toxicological<br>Research, 3900 NCTR Road, Jefferson, AR 72079. <b>PREDICTION<br/>             OF TOXIC EQUIVALENCY FACTORS<br/>             USING ARTIFICIAL NEURAL NETWORKS</b>   |
|             | <b>Kenya Powell</b> , Susan Baker, Rose M. McConnell, and Walter<br>E. Godwin, School of Mathematical & Natural Sciences,<br>University of Arkansas at Monticello, Monticello, AR 71656.<br><b>CONDUCTIVE POLYMERS: SYNTHESIS OF<br/>             FURAN-PYRROLE CO-POLYMERS</b>  |
|             | <b>Susan Baker</b> , Kenya Powell, Rose M. McConnell, and Walter<br>E. Godwin, School of Mathematical & Natural Sciences,<br>University of Arkansas at Monticello, Monticello, AR 71656.<br><b>CONDUCTIVE POLYMERS: SYNTHESIS OF<br/>             FURAN-THIOPHENE CO-POLYMERS</b>  |
|             | <b>Emily Rickman</b> and Robyn Hannigan, Department of<br>Chemistry and Program for Environmental Science, P. O.<br>Box 419, Arkansas State University, State University, AR<br>72467. <b>PHOSPHATE CHEMISTRY OF THE TAUPO<br/>             VOLCANIC ZONE, NEW ZEALAND</b>   |
|             | <b>Marie E. King</b> , Jack T. King, and Stephen K. Boss,<br>Department of Geosciences, University of Arkansas, 113<br>Ozark Hall, Fayetteville, AR 727017. <b>BEDROCK GEOLOGY<br/>             OF FAYETTEVILLE QUADRANGLE, WASHINGTON<br/>             COUNTY, ARKANSAS</b>   |
|             | <b>Karen S. McDonald</b> , Biology Department, University of<br>Central Arkansas, Lewis Science Center, 201 Donaghey Ave.,<br>Conway, AR 72035. <b>A PALEOECOLOGICAL RECON-<br/>             STRUCTION OF THE IMO FORMATION FROM THE<br/>             MISSISSIPPIAN EAR AT THE PEYTON CREEK<br/>             ROAD CUT IN NORTH CENTRAL ARKANSAS</b>  |
|             | <b>Larry R. Hilburn</b> , Jesse W. Parrack, and Lynita M. Cooksey,<br>Department of Biological Sciences, Arkansas State University,<br>P. O. Box 599, State University, AR 72467. <b>THE MEM-<br/>             BERS OF THE ANOPHELES QUADRIMACULATUS<br/>             (DIPTERA: CULICIDAE) COMPLEX OF SIBLING<br/>             SPECIES PRESENT IN NORTHEAST ARKANSAS</b>   |
|             | Kelly Loftin <sup>1</sup> , <b>Donna Shanklin</b> <sup>2</sup> , Doug Petty <sup>3</sup> , John Turner <sup>3</sup> ,<br>and Bruce Steward <sup>4</sup> , <sup>1</sup> University of Arkansas Cooperative<br>Extension Service, Environmental and Natural Resources<br>Section, P. O. Box 391, Little Rock, AR 72204; <sup>2</sup> University of<br>Arkansas Cooperative Extension Services, Environmental<br>and Natural Resources Section, P. O. Box 3468, Monticello,<br>AR 71656; <sup>3</sup> Miller County, University of Arkansas<br>Cooperative Extension Service, 400 Laurel, Suite 319,<br>Texarkana, AR 72204; <sup>4</sup> Bayer Pursell LLC, 6700 Corporate |

Drive, Suite 200, Kansas City, MO 64120. **EVALUATION OF CYFLUTHRIN AND IMIDACLOPRID AS INDIVIDUAL MOUND TREATMENTS AGAINST IMPORTED FIRE ANTS**

Jamie L. Reck, Suzanne Coco, and Ann V. Paterson, Department of Natural Sciences, Williams Baptist College, P. O. Box 3565, Walnut Ridge, AR 72476. **FACTORS THAT AFFECT SHORT RANGE MOVEMENT IN THE ARKANSAS BROWN TARANTULA (*APHONOPELMA HENTZI*)**

Erin Sizemore and David Dussourd, Department of Biology, University of Central Arkansas, Conway, AR 72035. **TRENCH OR DIE: WHY DO MANY SOYBEAN LOOPERS FAIL TO TRENCH**

Michael D. Warriner and T. Evan Nebeker, Department of Entomology and Plant Pathology, Mississippi State University, Mississippi State, MS 39762. **INSECT DIVERSITY IN A HYBRID *POPULUS* PLANTATION AND ADJACENT BOTTOMLAND HARDWOOD FOREST**

Tammy V. Ash, David L. Feldman, Jerry L. Farris, Department of Biological Sciences, Arkansas State University, P. O. Box 599, State University, AR 72467. **AN ASSESSMENT OF THE 303D-LISTED STRAWBERRY RIVER, ARKANSAS, WITH RESULTING MANAGEMENT IMPLICATIONS**

Shannon L. Pinkston, Cynthia N. Mugi, and Ann V. Paterson, Department of Natural Sciences, Williams Baptist College, P.O. Box 3565, Walnut Ridge, AR 72476. **FACTORS AFFECTING GROWTH AND DEFORMITIES IN TADPOLES: COMPARING RIVER WATER TO DECHLORINATED TAP WATER**

Daryl E. Jones and Thomas E. Nupp, Fisheries & Wildlife Biology Program, Arkansas Tech University, Russellville, AR 72801. **ANALYSIS OF ARKANSAS DEER HARVEST**

John S. Choinski, Jr., Clay Hendrix and Julie Voegele, Department of Biology, University of Central Arkansas, Conway, AR 72035. **EFFECTS OF UV-B RADIATION ON LEAF PIGMENT SYNTHESIS IN BLACK JACK OAK**

R. Meeker and K. C. Larson, Department of Biology, University of Central Arkansas, Conway, AR 72035. **FRAGMENTATION IN A SOUTHERN OAK-HICKORY FOREST: IMPACTS ON SPECIES RICHNESS AND INVASIBILITY**

Jason Walker and K. C. Larson, Department of Biology, University of Central Arkansas, Conway, AR 72035. **MORPHOLOGICAL PLASTICITY IN TWO TYPES OF LONICERA IN RESPONSE TO LIGHT AVAILABILITY**

D. DeLynn Hearn Holleman, Josh King, and Steven W. Rune, Department of Biology, University of Central Arkansas, Conway, AR 72035-0001. **APOPTOTIC INDUCTION IN THE INTESTINAL EPITHELIUM OF THE MARINE SNAIL *APLYSIA CALIFORNICA* AND THE SPRAGUE-DAWLEY RAT**

D. R. Pierce<sup>1</sup> and K. E. Light<sup>2</sup>, <sup>1</sup>Department of Health Sciences, University of Central Arkansas, Conway, AR 72035; <sup>2</sup>College of Pharmacy, University of Arkansas for Medical Sciences, Little Rock, AR 72205. **A SINGLE**

**ETHANOL EXPOSURE KILLS DEVELOPING RAT CEREBELLAR PURKINJE CELLS IN A RELATIVELY RAPID MANNER**

## ORAL PRESENTATIONS

Saturday, April 14, 2001

**Mathematics**

Location: Room 126, Lewis Science Center

Time	Topic
8:00	<u>Mary Branton-Housley</u> , Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>APPROXIMATING SCHRÖDINGER POTENTIALS USING DARBOUX TRANSFORMATIONS</b>
8:15	<u>Chad Fendt</u> , Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>SCHRÖDINGERS EQUATION AND POTENTIALS USED TO MODEL <math>\alpha</math>-DECAY</b>
8:30	Danny Arrigo and <u>Fred Hickling</u> Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>DARBOUX TRANSFORMATIONS FOR A CLASS OF HEAT EQUATION WITH A SOURCE TERM</b>
8:45	<u>Bryan Gipson</u> and Garth Johnson, Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>ON THE VARIABLE WAVE SPEED EQUATION: PART I - THE DARBOUX TRANSFORMATION</b>
9:00	Bryan Gipson and <u>Garth Johnson</u> , Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>ON THE VARIABLE WAVE SPEED EQUATION: PART II - ADMISSIBLE WAVE SPEEDS</b>
9:15	BREAK
9:30	<u>Sarah Jacobs</u> , Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>DARBOUX TRANSFORMATION AND WAVE EQUATION SYSTEMS</b>
9:45	<u>Brandon S. Lindley</u> , Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>TIME INDEPENDENT SCHRÖDINGER POTENTIALS</b>
10:00	<u>J. Bruce Johnson</u> <sup>1</sup> and Seth Armstrong <sup>2</sup> , <sup>1</sup> Department of Chemistry and Physics, Arkansas State University, State University, AR 72467; <sup>2</sup> Department of Computer Science and Mathematics, Arkansas State University, State University, AR 72467. <b>A NEW METHOD FOR ANALYSIS OF ION CHANNEL DWELL TIMES</b>
10:15	<u>Danny Arrigo</u> and Fred Hickling, Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>SYMMETRY ANALYSIS OF A WAVE EQUATION AND A SYSTEM EQUIVALENT</b>
10:30	<u>David R. Peterson</u> , Department of Mathematics, University of Central Arkansas, Conway, AR 72035. <b>RESONANCE CURVES IN A MULTI-HOLED OCARINA</b>

**Vertebrate Zoology**

Location: Room 132, Lewis Science Center

Time	Topic
8:00	<u>David H. Jamieson</u> <sup>1</sup> , Pete Rust <sup>2</sup> , and Stan Trauth <sup>3</sup> , <sup>1</sup> Arkansas

- State University-Newport, Department of Biological Sciences, 7648 Victory Boulevard, Newport, AR 72112; <sup>2</sup>Minnesota DNR, Fisheries Division, 5351 North Shore Drive, Duluth, MN 55804; <sup>3</sup>Arkansas State University, Department of Biological Sciences, P. O. Box 599, State University, AR 72467. **FOOD HABITS OF THE OUACHITA DUSKY SALAMANDER, *DESMOGNATHUS BRIMLEYORUM* (CAUDATA: PLETHODONTIDAE), IN ARKANSAS**
- 8:15 Robyn R. Konvalinka<sup>1</sup>, Stanley E. Trauth<sup>1</sup>, Malcolm L. McCallum<sup>2</sup>, Ben A. Wheeler<sup>2</sup>, Hilary Worley<sup>1</sup>, and David Saughey<sup>3</sup>, <sup>1</sup>Department of Biological Sciences, 7648 Victory Boulevard, Arkansas State University, State University, AR 72467-0599; <sup>2</sup>Environmental Sciences Program, Arkansas State University, State University, AR 72467; <sup>3</sup>Jessieville-Winona Ranger District, Ouachita National Forest, P. O. Box 189, Jessieville, AR 71949. **MICROHABITAT UTILIZATION OF AN ABANDONED MINE SHAFT BY BROODING FEMALES OF THE WESTERN SLIMY SALAMANDER, *PLETHODON ALBAGULA* (CAUDATA: PLETHODONTIDAE)**
- 8:30 Malcolm McCallum<sup>1</sup> and Stanley E. Trauth<sup>2</sup>, <sup>1</sup>P. O. Box 847, Environmental Sciences Program, Arkansas State University, State University, AR 72467; <sup>2</sup>P. O. Box 599, Department of Biological Sciences, Arkansas State University, State University, AR 72467. **PERFORMANCE OF WOOD FROG (*RANA SYLVATICA*) TADPOLES ON THREE SOYBEAN MEAL B CORN MEAL RATIONS**
- 8:45 Malcolm McCallum<sup>1</sup> and Stanley E. Trauth<sup>2</sup>, <sup>1</sup>P. O. Box 847, Environmental Sciences Program, Arkansas State University, State University, AR 72467; <sup>2</sup>P. O. Box 599, Department of Biological Sciences, Arkansas State University, State University, AR 72467. ***PSEUDACRIS STRECKERI ILLINOENSIS* 2000-2001 BREEDING CHORUSES AND NOTES ON CONSERVATION NEEDS**
- 9:00 BREAK
- 9:15 David Saughey<sup>1</sup>, B. Sasse<sup>2</sup>, and J. D. Wilhide<sup>3</sup>, <sup>1</sup>United States Forest Service, P. O. Box 189, Jessieville, AR 71949-0189; <sup>2</sup>Arkansas Game and Fish Commission, 2 Natural Resources Drive, Little Rock, AR 72205; <sup>3</sup>Department of Biological Sciences, P. O. Box 599, Arkansas State University, State University, AR 72467-0599. **NOTES ON THE DISTRIBUTION AND ECOLOGY OF THE BRAZILIAN FREE-TAILED BAT (*TADARIDA BRASILIENSIS CYNOCEPHALA*) IN ARKANSAS**
- 9:30 Jeremy Lynn Jackson, J. D. Wilhide, and Roger Buchanan, Department of Biological Sciences, Arkansas State University, State University, AR 72467. **SWIMMING ABILITY OF ADULT BATS**
- 9:45 Lann M. Wilf, J. D. Wilhide, and Drew Reed, Department of Biological Sciences, Arkansas State University, State University, AR 72467. **ROOSTING ECOLOGY OF THE SOUTHEASTERN BAT (*MYOTIS AUSTRORIPARIUS*) AND SPECIES COMPOSITION OF BAT POPULATIONS IN DELTA NATIONAL FOREST, MISSISSIPPI**
- 10:00 Michelle L. Caviness and Douglas A. James, Department of Biological Sciences, University of Arkansas, Fayetteville, AR 72701. **BATS OF THE WESTERN OZARKS**
- 10:15 BREAK
- 10:30 David W. Clark, Leah D. Lucio, Steffany White, Annalea K. Bowers, and Gary A. Heidt, Department of Biology, University of Arkansas at Little Rock, Little Rock, AR 72204.
- A SURVEY OF RECENT ACCOUNTS OF THE MOUNTAIN LION IN ARKANSAS**
- 10:45 Annalea K. Bowers, Leah D. Lucio, David W. Clark, and Gary A. Heidt, Department of Biology, University of Arkansas at Little Rock, Little Rock, AR 72204. **EARLY HISTORY OF THE WOLF, BLACK BEAR, AND MOUNTAIN LION IN ARKANSAS**
- 11:00 D. Blake Sasse, Arkansas Game and Fish Commission, #2 Natural Resources Drive, Little Rock, AR 72205. **STATUS OF PET MOUNTAIN LIONS (*PUMA CONCOLOR*) IN ARKANSAS**
- 11:15 Jennifer H. Herner-Thogmartin<sup>1</sup>, Kimberly G. Smith<sup>2</sup>, and Michael E. Cartwright<sup>3</sup>, <sup>1</sup>Arkansas Cooperative Fish and Wildlife Research Unit, Department of Biological Sciences, University of Arkansas, Fayetteville, AR 72701; <sup>2</sup>Department of Biological Sciences, University of Arkansas, Fayetteville, AR 72701; <sup>3</sup>Arkansas Game and Fish Commission, P. O. Box 729, Calico Rock, AR 72519. **PERCEIVED DAMAGE BY ELK IN THE ARKANSAS OZARKS**
- 11:30 Renn Tumblison and Anna Smith, Department of Biology, Henderson State University, Arkadelphia, AR 71999. **NEW RECORDS OF THE WOODCHUCK (*MARMOTA MONAX*) IN SOUTHWESTERN ARKANSAS**

**Botany & Plant Biology**

Location: Room 133, Lewis Science Center

- | Time | Topic   |
|------|---|
| 8:00 | <u>Gary E. Tucker</u> , FTN Associates, Ltd., 3 Innwood Circle, Suite 220, Little Rock, AR 72211. <b>HISTORY OF ARKANSAS BOTANY TO 1950</b>   |
| 8:15 | <u>James H. Peck</u> <sup>1</sup> , C. Theo Witsell <sup>2</sup> , and Thomas L. Foti <sup>2</sup> , <sup>1</sup> Biology Department, University of Arkansas at Little Rock, 2801 South University Ave., Little Rock, AR 72204; <sup>2</sup> Arkansas Natural Heritage Commission, 1500 Tower Building, 323 Center St., Little Rock, AR 72201. <b>ARKANSAS FIELD BOTANY BIBLIOGRAPHY UPDATE (1988-2000)</b> |
| 8:30 | <u>Johnnie L. Gentry</u> , University of Arkansas Herbarium, University of Arkansas, Fayetteville, AR 72701. <b>THE ARKANSAS VASCULAR FLORA PROJECT</b>   |
| 8:45 | <u>George P. Johnson</u> , Biological Sciences, Arkansas Tech University, Russellville, AR 72801. <b>THE ORCHIDACEAE OF ARKANSAS</b>  |
| 9:00 | BREAK   |
| 9:15 | <u>Johnnie L. Gentry</u> , University of Arkansas Herbarium, University of Arkansas, Fayetteville, AR 72701. <b>SOLANACEAE OF MESOAMERICA</b>   |
| 9:30 | <u>James H. Peck</u> , Department of Biology, University of Arkansas at Little Rock, 2801 South University Ave., Little Rock, AR 72204. <b>SURVEY OF <i>SALVINIA</i> (SALVINIACEAE) IN EASTERN ARKANSAS</b>   |
| 9:45 | <u>David Williams</u> and Edith Hardcastle, University of Arkansas Herbarium, University of Arkansas, Fayetteville, AR 72701. <b>A STATUS REPORT ON HARPERELLA, <i>PTLIMNIUM NODOSUM</i> (APIACEAE) IN ARKANSAS</b>   |

## Secretary's Report

- 10:00 Terry K. McKay<sup>1</sup> and Daniel L. Marsh<sup>2</sup>, <sup>1</sup>Ouachita National Forest, 912 Smokey Bear Lane, Glenwood, AR 71943; <sup>2</sup>Henderson State University, Arkadelphia, AR 71999. **A SECOND ARKANSAS POPULATION OF SOUTHERN RUNNING-PINE, *DIPHASIASTRUM DIGITUM* (DILL. EX A. BRAUN) HOLUB REPORTED IN MONTGOMERY COUNTY ON THE OUACHITA NATIONAL FOREST**
- 10:15 BREAK
- 10:30 Jason A. Haley and Daniel L. Marsh, Henderson State University, Arkadelphia, AR 71999. **DIVERSITY OF *LAMIUM* (LAMIACEAE) IN ARKANSAS, INCLUDING OCCURRENCES OF *LAMIUM HYBRIDUM* AND FLOWER COLOR FORMS**
- 10:45 April Chamblee and Janet Lanza, Biology Department, University of Arkansas at Little Rock, 2801 South University, Little Rock, AR 72204. **PROPAGATION AND INTRODUCTION OF NATIVE WILDFLOWERS AT PINNACLE MOUNTAIN STATE PARK**
- 11:00 Hong Li Wang, Department of Biology, University of Arkansas at Little Rock, 2801 South University, Little Rock, AR 72204. **ASSIMILATE TRANSPORT IN WHEAT PLANTS: INSIGHTS FOR IMPROVEMENT OF CROP YIELD**
- 11:15 K. C. Larson, S. Fowler, and Jason Walker, Department of Biology, University of Central Arkansas, Conway, AR 72035. **LACK OF POLLINATORS LIMITS FRUIT SET IN THE EXOTIC *LONICERA JAPONICA***
- Aquatic Ecology & Ecotoxicology**  
Location: Room 168, Lewis Science Center
- 8:00 Thetsu Mon and Russell Nordeen, University of Arkansas at Monticello, School of Mathematical and Natural Sciences, P.O. Box 3480, Monticello, AR 71656. **PLASMID ANALYSIS OF BACTERIA THAT METABOLIZE THE DETERGENT IGEPON**
- 8:15 Gary L. Emmert, Department of Chemistry and the Program of Environmental Sciences, Arkansas State University, State University, AR 72467. **IMPROVING SENSITIVITY AND SELECTIVITY IN DRINKING WATER ANALYSIS**
- 8:30 Renn Tumilson, Department of Biology, Henderson State University, Arkadelphia, AR 71999. **DISCOVERY OF A POSSIBLE MUTUALISTIC RELATIONSHIP BETWEEN TADPOLES AND A GREEN ALGAE**
- 8:45 Laura Hudson and Thomas M. Buchahan, Department of Biology, Westark College, Fort Smith, AR 72913. **LIFE HISTORY OF THE RIVER SHINER, *NOTROPIS BLENNIUS* (CYPRINIDAE), IN THE ARKANSAS RIVER OF WESTERN ARKANSAS**
- 9:00 BREAK
- 9:15 Jennifer Davis and John Rickett, University of Arkansas at Little Rock, Little Rock, AR 72204. **A SUSPECTED MONOSPECIFIC FISH COMMUNITY IN A HYPER-ACIDIC LAKE**
- 9:30 Michael Berumen and Morgan Pratchett, Honors Department, Fulbright College of Arts and Sciences, University of Arkansas, Fayetteville, AR 72701. **DIET AND**
- 9:45 D. L. Feldman<sup>1</sup>, J. L. Farris<sup>1</sup>, C. D. Milam<sup>1</sup>, M. T. Moore<sup>2</sup>, S. J. Smith<sup>2</sup>, and C. M. Cooper<sup>2</sup>, <sup>1</sup>Ecotoxicology Research Facility, Arkansas State University, State University, AR 72467; <sup>2</sup>USDA-ARS National Sedimentation Laboratory, Oxford, MS 38655. **SEASONAL VARIATION OF BIOTIC AND ABIOTIC FACTORS THAT CHARACTERIZE AGRICULTURAL DRAINAGE DITCHES**
- 10:00 Randall Staley and Ronald L. Johnson, Arkansas State University, Department of Biology, State University, AR 72467. **IDENTIFICATION OF FLORIDA LARGE-MOUTH BASS ALLELES IN HATCHERIES AND RESERVOIRS IN ARKANSAS**
- 10:15 BREAK
- 10:30 Elizabeth Murray<sup>1</sup>, Tom Foti<sup>2</sup>, Henry Langston<sup>3</sup>, Jody Pagan<sup>4</sup>, Charles Klimas<sup>5</sup>, Arkansas Multi-Agency Wetland Planning Team, <sup>1</sup>2 Natural Resources Dr., Little Rock, AR 72205; <sup>2</sup>Arkansas Natural Heritage Commission; <sup>3</sup>Arkansas State Highway and Transportation Department; <sup>4</sup>USDA Natural Resource Conservation Service; <sup>5</sup>Klimas and Associates. **HYDROGEO MORPHIC CONTROLS ON WETLAND FUNCTIONAL DIVERSITY IN ARKANSAS**
- 10:45 Benjamin A. Wheeler<sup>1</sup> and Stan E. Trauth<sup>2</sup>, <sup>1</sup>Environmental Sciences, P.O. Box 847, Arkansas State University, State University, AR 72467; <sup>2</sup>Biological Sciences Department, P.O. Box 599, Arkansas State University, State University, AR 72467. **STATUS OF THE OZARK HELLBENDER: EVIDENCE FOR THE NEED OF MANAGEMENT STRATEGIES**
- 11:00 John D. Rickett<sup>1</sup> and E. P. (Perk) Floyd<sup>2</sup>, <sup>1</sup>University of Arkansas at Little Rock, Little Rock, AR 72002; <sup>2</sup>U.S. Public Health Service (ret.), 2423 E. Woodson Lateral, No. 35, Hensley, AR 72065. **THE MACROBENTHIC COMMUNITY OF FERGUSON LAKE, SALINE COUNTY, ARKANSAS**
- General & Inorganic Chemistry**  
Location: Room 170, Lewis Science Center
- 8:00 David M. Chittenden and Julie D. Chittenden, Department of Chemistry and Physics, Arkansas State University, State University, AR 72467. **AN EMPIRICAL MODEL OF THE VARIATION IN CONCENTRATION OF METAL IONS DURING A PRECIPITATION EVENT**
- 8:15 Wally Cordes, Department of Chemistry and Biochemistry, University of Arkansas, Fayetteville, AR 72701. **STRUCTURAL FEATURES OF NEUTRAL RADICAL MOLECULAR METALS**
- 8:30 Genevive Brown and John P. Graham, Department of Physical Science, Arkansas Tech University, Russellville, AR 72801. **THE ELECTRONIC STRUCTURE OF MANGANESE, IRON AND COBALT NITROSYL METALLOPORPHYRINS**
- 8:45 L. A. Thornton, Jr.<sup>1</sup>, M. Draganjac<sup>1</sup>, and A. W. Cordes<sup>2</sup>, <sup>1</sup>Department of Chemistry and Physics, Arkansas State University, State University, AR 72467; <sup>2</sup>Department of Chemistry and Biochemistry, University of Arkansas,

		<b>Physics &amp; Astronomy</b>	
		Location: Room 172, Lewis Science Center	
		<u>Time</u>	<u>Topic</u>
	Fayetteville, AR 72701. <b>SYNTHESIS OF A RUTHENIUM-TETRA(THT)DICHLORIDE COMPOUND: POTENTIAL PRECURSOR FOR MODELS OF THE ACTIVE SITE FOR HDS OVER LAURITE</b>		
9:00	<u>Amanda Wroble</u> , Scotty Sproles, M. Draganjac, and Paul M. Nave, Department of Chemistry and Physics, Arkansas State University, State University, AR 72467. <b>SYNTHESIS AND CHARACTERIZATION OF A RUTHENIUM-THIOXANE COMPLEX</b>	8:00	<u>Christine A. Byrd</u> <sup>1</sup> , Stephen A. Nicoletti <sup>1</sup> , W. J. Braithwaite <sup>1</sup> , and Edwin S. Braithwaite <sup>2</sup> , <sup>1</sup> Department of Physics & Astronomy, University of Arkansas at Little Rock, Little Rock, AR 72204; <sup>2</sup> Department of Science and Mathematics, Cedarville University, Cedarville, OH 45314. <b>USING INFLIGHT KAON AND PION DECAYS TO BOOST STRAP EFFICIENCY VS ENERGY FOR STAR'S MAIN TPC, USING THE RELATIVISTIC HEAVY ION COLLIDER AT BNL</b>
9:15	BREAK		
9:30	<u>Chad Chastain</u> , Robert Engelken, Justin Meyer, Richard Tanner, Barrett Brown, Anil Baral, and Gustavo Rehder, Optoelectronic Materials Research Laboratory, Arkansas State University, P.O. Box 1740, State University, AR 72467. <b>DEPOSITION OF MOLYBDENUM, TUNGSTEN, AND OTHER OXIDE FILMS BY SPRAY PYROLYSIS AND ELECTROCHEMICAL METHODS</b>	8:15	<u>Stephen A. Nicoletti</u> <sup>1</sup> , Christine A. Byrd <sup>1</sup> , W. J. Braithwaite <sup>1</sup> , and Edwin S. Braithwaite <sup>2</sup> , <sup>1</sup> Department of Physics & Astronomy, University of Arkansas at Little Rock, Little Rock, AR 72204; <sup>2</sup> Department of Science and Mathematics, Cedarville University, Cedarville, OH 45314. <b>SEPARATING KAONS AND PIONS BY INFLIGHT DECAY IN STAR'S MAIN TPC USING 130 GEV/NUCLEON DATA FROM THE RELATIVISTIC HEAVY ION COLLIDER AT BNL</b>
9:45	<u>Justin Meyer</u> , Robert Engelken, Chad Chastain, Richard Tanner, Barrett Brown, Anil Baral, and Gustavo Rehder, Optoelectronic Materials Research Laboratory, Arkansas State University, P.O. Box 1740, State University, AR 72467. <b>POWDER SPRAY DEPOSITION OF INDIUM SULFIDE MIXED FILMS</b>	8:30	<u>Kyland Holmes</u> and Pradip Bandyopadhyay, Department of Physics, Hendrix College, 1600 Washington Avenue, Conway, AR 72032. <b>LIF:MGO, CU,P RADIATION DOSIMETER: A STUDY OF LUMINESCENCE AND SENSITIVITY</b>
10:00	<u>Barrett Brown</u> , Robert Engelken, Richard Tanner, Chad Chastain, Justin Meyer, Anil Baral, and Gustavo Rehder, Optoelectronic Materials Research Laboratory, Arkansas State University, P.O. Box 1740, State University, AR 72467. <b>ELECTRODEPOSITION OF DIFFICULT-TO-PLATE METALS, SPECIFICALLY MOLYBDENUM AND NICKEL-MOLYBDENUM ALLOY FILMS</b>	8:45	<u>Cody Hopkins</u> and Pradip Bandyopadhyay, Department of Physics, Hendrix College, 1600 Washington Avenue, Conway, AR 72032. <b>THE ROLES OF COPPER IMPURITY IN THE PHOTO-STIMULATED LUMINESCENCE FROM KBR SINGLE CRYSTALS X-IRRADIATED AT 77 K</b>
10:15	<u>Richard Tanner</u> <sup>1</sup> , Robert Engelken <sup>1</sup> , Anil Baral <sup>1</sup> , Justin Meyer <sup>1</sup> , Chad Chastain <sup>1</sup> , Barrett Brown <sup>1</sup> , Gustavo Rehder <sup>1</sup> , and Clayton Workman <sup>2</sup> , <sup>1</sup> Optoelectronic Materials Research Laboratory, Arkansas State University, P.O. Box 1740, State University, AR 72467; <sup>2</sup> Microelectronics-Photonics Program, 222 Physics Building, University of Arkansas, Fayetteville, AR 72701. <b>CHROMIUM AND CHROMIUM OXIDE ELECTRODEPOSITION FROM ELECTROLYTES OF TRIVALENT CHROMIUM SALTS</b>	9:00	<u>C. Emery</u> <sup>1</sup> , D. W. Bullock <sup>1</sup> , Z. Ding <sup>1</sup> , M. Filipkowski <sup>1</sup> , V. P. LaBella, M. Mortazavi <sup>2</sup> , G. Salamo <sup>1</sup> , <sup>1</sup> Physics Department, University of Arkansas, Fayetteville, AR 72701; <sup>2</sup> Physics Department, University of Arkansas at Pine Bluff, Pine Bluff, AR. <b>ELECTRON SPIN SCATTERING ACROSS A P-TYPE GaAs(110) STEP USING A FERROMAGNETIC-METAL STM TIP</b>
10:30	BREAK	9:15	BREAK
10:45	<u>Reagan Baber</u> and Edmond W. Wilson, Jr., Department of Physical Science, Hardy University, Searcy, AR 72149-0001. <b>MOISTURE ANALYSIS USING THERMOMETRIC TITRATIONS</b>	9:30	<u>Wendy Kiehl</u> , Cynthia Sides, and Franklin D. Hardcastle, Department of Physical Sciences, Arkansas Tech University, Russell, AR 72801. <b>THERMAL LENS DETECTION OF CHROMOPHORES IN AQUEOUS SYSTEMS</b>
11:00	Melanie J. Beazley, Richard D. Rickman, and <u>Jon Russ</u> , Department of Chemistry, Arkansas State University, State University, AR 72467. <b>CARBON ISOTOPE COMPOSITION OF LIVING AND FOSSIL LICHEN</b>	9:45	<u>Jeff Robertson</u> , Tut Campbell, Benji Myers, and Bret Taylor, Department of Physical Science, Arkansas Tech University, 1701 N. Boulder, Russellville, AR 72801. <b>SUPEROUTBURST AND SUPERCYCLES IN SUPERHUMPING CATAclysmic VARIABLE STARS</b>
11:15	<u>Pam Ramage</u> <sup>1</sup> , <u>Scott Reeve</u> <sup>1</sup> , Michael Dvorak <sup>2</sup> , and Greg Gillispie <sup>2</sup> , <sup>1</sup> Department of Chemistry and Physics, Arkansas State University, 118 S. Caraway Road, State University, AR 72467; <sup>2</sup> DTI, 2201 A. 12th St. N, Fargo, ND. <b>A NOVEL HPLC DETECTOR: GENERATING ON-THE-FLY FLUORESCENCE LIFETIMES CONCURRENTLY AT MULTIPLE EMISSION WAVELENGTHS</b>	10:00	<u>Matthew A. Tilley</u> , Bao-An Li, Andrew T. Sustich and Bin Zhang, Department of Chemistry and Physics, P.O. Box 419, Arkansas State University, State University, AR 72467-0419. <b>THERMODYNAMIC PROPERTIES OF NEUTRON-RICH MATTER</b>
11:30	Alan Ford and <u>Scott Reeve</u> , Department of Chemistry and Physics, Arkansas State University, State University, AR 72467. <b>NON-COMMERCIAL SOFTWARE FOR ANALYZING AND INTERPRETING ROTATIONALLY RESOLVED MOLECULAR SPECTRA</b>	10:15	<u>Bao-An Li</u> and Matthew A. Tilley, Department of Chemistry and Physics, P.O. Box 419, Arkansas State University, State University, AR 72467-0419. <b>URANIUM-URANIUM COLLISIONS AT ULTRA-RELATIVISTIC ENERGIES</b>
		10:30	<u>Andrew T. Sustich</u> , Bao-An Li, Bin Zhang, Amanda Evans, and Matt Tilley, Arkansas State University, Department of



Chemistry and Physics, P.O. Box 419, Arkansas State University, State University, AR 72467-0419. **PROBING THE ISOPIN DEPENDENCE OF THE NUCLEAR EQUATION OF STATE**

45 Bin Zhang<sup>1</sup>, C. M. Ko<sup>2</sup>, Bao-An Li<sup>1</sup>, Siwei Lin<sup>2</sup>, Subrata Pal<sup>2</sup>, <sup>1</sup>Department of Chemistry and Physics, Arkansas State University, P.O. Box 419, State University, AR 72467-0419; <sup>2</sup>Cyclotron Institute and Physics Department, Texas A&M University, Mail Stop 3366, College Station, TX 77843-3366. **A MULTI-PHASE TRANSPORT STUDY OF RELATIVISTIC NUCLEAR COLLISIONS**