Keynote Address and Meeting Program

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KEYNOTE ADDRESS

Arkansas streams will play a pivotal role in our freshwater future.

By Dr. Sally Entrekin
Department of Biology, University of Central Arkansas

Dr. Entrekin is an environmental scientist; she earned her BS in Biology at Georgia Southwestern University, and MS in Entomology from the University of Georgia, and a PhD in Biology from the University of Notre Dame. Dr. Entrekin has been a faculty member at UCA since 2008. The basic question addressed by Dr. Entrekin’s lab is: “How do natural and human disturbances interact to influence aquatic community composition and function.” Dr. Entrekin is widely published and has made many presentations at national and regional meetings. Recent work has included stream ecology in the area of the Fayetteville Shale. This work includes examining how rapid land use changes, such as natural gas extraction and urbanization, alter associated freshwater ecosystems, and how interactions among common and emerging watershed activities change stream structure and functions.
SECTION PROGRAMS

ORAL PRESENTATIONS

(Only the presenter’s name was available at time of printing)

ORAL SESSIONS: FRIDAY 1:00-5:30

BIOLOGICAL SCIENCES - MEDICINE AND MICROBIOLOGY

ROOM CCCS 207

Chair: A. Mukherjee

1:00
COLLAGEN INCREASES TUMORIGENICITY OF PAPILLARY THYROID CANCER CELLS HARBORING BRAFV600E MUTATIONS
Anna Sharabura. Hendrix College

1:15
FOCAL ADHESION KINASE DISPLAYS ALTERED REGULATION IN PAPILLARY THYROID CANCER
Ben Zamzow. Hendrix College

1:30
THE USE OF LIGATION INDEPENDENT CLONING TO GENERATE ESCHERICHIA COLI CAPABLE OF PRODUCING CENTRUROIDES VITTATUS SCORPION ŔŽµ-TOXINS NA681 AND NA682 TO ALLOW FOR FURTHER ANALYSIS OF PHYSIOLOGICAL AND MEDICAL SIGNIFICANCE
David Williams. Arkansas Tech University

1:45
VALIDATION OF METHODS TO IMPROVE THE USE OF P19 CELLS AS A MODEL OF NEURONAL DIFFERENTIATION
Wallace Williamson. Arkansas Tech University

2:00
RELATIVE GENE EXPRESSION STUDY ON CENTRUROIDES VITTATUS INVESTIGATING SODIUM TOXIN GENE ACTIVITY
Aimee Bowman. Arkansas Tech University

2:15
USING ESCHERICHIA COLI TO GENERATE SCORPION Î2-TOXINS, AS SEEN IN CENTRUROIDES VITTATUS, TO ALLOW FOR FURTHER STRUCTURAL AND PHYSIOLOGICAL ANALYSIS
Jacob Pinkerton. Arkansas Tech University

2:30
MITOCHONDRIA MORPHOLOGY AND ROTENONE
Hunter Scharbor. University of Central Arkansas

2:45
OBSERVING FSZ-B’S FUNCTION IN DIC TYOSTELIUM DISCOIDEUM MITOCHONDRIAL DYNAMICS
Pristine Pittman. University of Central Arkansas

CHEMISTRY

ROOM CCCS 115

Chair: A. Harrington

1:00
FLUORESCENT INHIBITOR OF SYSTEM Xc- Alan Jackson. Arkansas Tech University

1:15
BOND LENGTH AND BOND VALENCE FOR TUNGSTEN - OXYGEN AND TUNGSTEN - SULFUR BONDS
Ruth Lykins. Arkansas Tech University

1:30
ATMOSPHERIC PHOTOCHEMISTRY STUDIES RELATED TO SATURN'S MOON TITAN
Connor Purvis. Harding University

1:45
ANALYSIS OF SURFACE WATERS IN SEARCY, ARKANSAS
Jade Toth. Harding University

2:00
BOND LENGTH AND BOND VALENCE RELATIONSHIP OF CHROMIUM OXIDES, CHROMIUM SULFIDES, MOLYBDENUM OXIDES, AND MOLYBDENUM SULFIDES
Jordan Labrecque. Arkansas Tech University

2:15
PHOTOCATALYTIC STERILIZATION OF AQUEOUS SOLUTIONS
David Williams. Arkansas Tech University

2:30
CARBON-CARBON, CARBON-OXYGEN, CARBON-NITROGEN, AND CARBON-HYDROGEN BOND VALENCE-LENGTH RELATIONSHIPS
Franklin Hardcastle. Arkansas Tech University

2:45
SEARCHING FOR PHARMACEUTICALS AND PERSONAL CARE PRODUCTS IN WASTEWATER IN SEARCY, ARKANSAS
Natalie Whitlock. Harding University

PHYSICS

ROOM CCCS 101

Chair: M. Hemmati

1:00
SUPPRESSION OF RADIATION-INDUCED CHROMOSOME DAMAGE BY GT3 AND THE ROLE OF MICROGRAVITY
Calla Bassett. Southern Arkansas University
A SIGN-CHANGING INTERACTION BETWEEN DARK ENERGY AND MATTER
Jazmin Urioste. Arkansas Tech University

IONIZATION RATE FOR BREAKDOWN WAVES WITH A SIGNIFICANT CURRENT BEHIND THE WAVE FRONT
Jesse Griffiths. Arkansas Tech University

OPTICAL AND DISPERSION PARAMETERS OF PMMA DOPED BY INDIUM SALT
Sami Salman Chiad. Al-Mustansaryah University

DESIGN OF CENTRAL RECEIVER SOLAR THERMAL CONCENTRATOR
Alaa H. Shmeishl. Al-Mustansaryah University

A NEW RELATION BETWEEN SPIRAL ARM PITCH ANGLES (P) AND THE BULGE LUMINOSITY
Ismaeel Al-Baidhany. Al-Mustansaryah University

BIOLOGICAL SCIENCES AQUATICS
ROOM CCCS 105
Chair: A. Odendaal

SPATIO-TEMPORAL DYNAMICS OF FISH ASSEMBLAGE STRUCTURE AFTER WATERSHED ALTERATION IN THE SALINE RIVER, ARKANSAS
Aaron Burgad. University of Central Arkansas

ENVIRONMENTAL DNA VS. TRADITIONAL SAMPLING: A CASE STUDY USING THE FEDERALLY THREATENED LEOPARD DARTER, PERCINA PANTHERINA
Taylor Lee. Arkansas State University

GENETIC STRUCTURE AND DIVERSITY OF DISJUNCT POPULATIONS OF RAINBOW DARTERS (ETHEOSTOMA CAERULEUM) AND SOUTHERN REDBELLY DACE (CHROSOMUS ERYTHROGASTER) THROUGHOUT THE MISSISSIPPI CORRIDOR.
Kyle Dineen. Arkansas State University

HISTORIC CHANGES IN FISH ASSEMBLAGE PATTERNS IN THE LITTLE MISSOURI RIVER, ARKANSAS
Michelle Furr. University of Central Arkansas

SPATIOTEMPORAL POPULATION DYNAMICS OF THE CADDIO MADTOM (NOTURUS TAYLORI)
Brittany McCall. Arkansas State University

FISH-HABITAT ASSOCIATIONS IN THE KINGS RIVER, ARKANSAS
Chelsey Sherwood. University of Central Arkansas

THE ANALYSIS OF COLIFORM BACTERIA IN LAKE COLUMBIA, AR.
Kara O’Neal. Southern Arkansas University

COMPONENTS OF URBANIZATION AND URBAN PROXIMITY IDENTIFY THREATS TO STREAM WATER QUALITY
Stephanie Stoughton. University of Central Arkansas

BIOLOGICAL SCIENCES – GENERAL
ROOM CCCS 207
Chair: J. Kelly

DISEASE INTRODUCTION BY ABORIGINAL HUMANS IN NORTH AMERICA AND THE PLEISTOCENE EXTINCTION
Zachary Nickell. Hendrix College

THE USE OF COLOR AS A STATUS SIGNAL IN THE PRAIRIE LIZARD, SCELOPORUS CONSORBINS
Christopher Robinson. University of Central Arkansas

WHO CITES WHOM? COMMUNICATION INSIGHTS FROM A BIBLIOMETRIC ANALYSIS OF INVASION AND BIOLOGICAL CONTROL LITERATURE
Ashley Schulz. Arkansas State University

ECOSYSTEM SERVICES OF THE BIG BEND REGION OF THE CHIHUAHUAN DESERT
Helena Abad. Hendrix College

BIODIVERSITY IN BIOCUBES
Amanda Brooks. Ouachita Baptist University

A FRACKING RACKET: DO BIRDS CHANGE THE WAY THEY SING WHEN EXPERIENCING CHRONIC NOISE FROM SHALE GAS EXTRACTION
Claire Turkal. Harding University

ENGINEERING & COMPUTER SCIENCE
ROOM CCCS 115
Chair: C. Frederickson

GENERATIVE ANATOMY MODELLING LANGUAGE (GAML)
Doga Demirel. University of Arkansas at Little Rock
3:45
COMPUTING WIND FIELD CLOSE TO THE GROUND USING CFD IN A TORNADO CHAMBER.
Damaso Dominguez. University of Arkansas

4:00
SIMULATING FOODBORNE PATHOGENS IN POULTRY PRODUCTION AND PROCESSING TO DEFEND AGAINST INTENTIONAL CONTAMINATION
Silas Lankford. University of Arkansas

4:15
CALCULATION OF THE WIDTH AND PERIOD OF TORNADOS FROM GOOGLE EARTH DATA AND THE RELATIONSHIP BETWEEN THE TORNADO’S PERIOD AND THE WIND SPEED
Mohammadhossein Kashefizadeh. University of Arkansas

4:30
NANOSTRUCTURES FOR INFRARED LINEAR POLARIZERS
Marzia Zaman. University of Arkansas

4:45
AN ACOUSTIC-BASED APPROACH FOR CONDITION MONITORING OF PIPES
Mitchell Collins. Arkansas Tech University

BIOLOGICAL SCIENCES- INVERTEBRATES
ROOM CCCS 105
Chair: D. Barron

3:30
A DESCRIPTION OF VARIATION IN FECUNDITY BETWEEN TWO POPULATIONS OF WOLF SPIDER RABIDOSA RABIDA IN SEARCY ARKANSAS USING BROOD SIZE MEASUREMENTS
Brandon Hogland. Harding University

3:45
SEASONAL CHANGES OF ARTHROPOD COMMUNITY STRUCTURE IN INACTIVE BISON WALLOWS
Sofia Varriano. Hendrix College

4:00
A FIRST LOOK INTO THE MICROBIOME OF RABIDOSA RABIDA, A WOLF SPIDER IN SEARCY, ARKANSAS
Patricia Rivera. Harding University

4:15
MIGRATION DYNAMICS OF OHIO SHRIMP, MACROBRACHIUM OHIONE, IN ARKANSAS
Geoffry Spooner. University of Central Arkansas

4:30
DISTRIBUTION, HABITAT, AND LIFE HISTORY ASPECTS OF THE SHRIMP CRAYFISH, FAXONIUS LANCIFER (HAGEN) (DECAPODA: CAMBARIDAE) IN ARKANSAS
Chris McAllister. Eastern Oklahoma State College-Idabel

4:45
CRAYFISH CHANGES TO THE ARKANSAS WILDLIFE ACTION PLAN
Brian Wagner. Arkansas Game and Fish Commission

BIOLOGICAL SCIENCES- BOTANY
ROOM CCCS 211
Chair: A. Willyard

3:30
TRANSCRIPTOME ANALYSIS FOR THREE ERIGERON (ASTERACEAE) GENOTYPES DIFFERING IN MODE OF REPRODUCTION
James Vire. University of Central Arkansas

3:45
MITOCHONDRIAL LINEAGES OF PINUS SUBSECTION PONDEROSAE TO RESOLVE THE RELATIONSHIP OF SPECIES NAMED IN THE UNITED STATES AND MEXICO
Mason Sifford. Hendrix College

4:00
DETERMINING THE VALIDITY OF THE SPECIES PINUS WASHOENIS IN THE WESTERN UNITED STATES
Samuel Lockhart. Hendrix College

4:15
DETERMINING RECENT HYBRIDIZATION OF PINYON PINES IN A ZONE OF SYMPATRY IN NORTHERN ARIZONA
Katie Dobbins. Hendrix College

4:30
SEED DISPERSAL OF DIOSPYROS VIRGINIANA IN THE PAST AND THE PRESENT: EVIDENCE FOR A GENERALIST EVOLUTIONARY STRATEGY
Taylor Stone. Hendrix College

4:45
SEED DISPERSAL IN OSAGE ORANGE (MACLURA POMIFERA) BY SQUIRRELS (SCIURUS SPP.)
Sophie Katz. Hendrix College

GEOSCIENCE
ROOM CCCS 101
Chair: J. Allender

3:30
LATE MISSISSIPPIAN (CHESTERIAN) SHALLOWING-UPWARD, EUSTATIC CYCLICITY REFLECTED BY TAPHONOMY OF PRESERVED AMMONOID CEPHALOPODS, NORTHERN ARKANSAS
Riley Dickson. University of Arkansas, Fayetteville

3:45
LITHOLOGIC CHARACTER, SEQUENCE AND DIAGENETIC HISTORY OF LOWER MISSISSIPPIAN TRIPOLITIC CHERT, NORTHERN ARKANSAS AND SOUTHERN MISSOURI
Sydney McKim. University of Arkansas, Fayetteville
ORAL SESSIONS: SATURDAY 8:00-10:15

BIOLOGICAL SCIENCES ROOM CCCS 105
Chair: D. James

8:00
COMPARISON OF BACTERIAL COMMUNITIES IN NATURAL AND DEVELOPED WATERSHEDS OF THE BUFFALO NATIONAL RIVER USING CULTIVATION AND 16S METAGENOMICS TECHNIQUES
Michael Ukpong. North Arkansas College

8:15
PERSISTENCE OF DOWNSTREAM NEGATIVE IMPACT OF POINT SOURCE AND NON-POINT SOURCE STREAM POLLUTANTS
Timothy Wakefield. John Brown University

8:30
HISTOLOGY OF RATHKE’S GLANDS IN THE RAZOR-BACKED MUSK TURTLE, STERNOTHERUS CARINATUS (CHELONIA: KINOSTERNIDAE), WITH COMMENTS ON LAMELLAR BODIES
Stan Trauth. Arkansas State University

8:45
COCCIDIAN PARASITES (APICOMPLEXA: EIMERIIDAE) OF ARKANSAS HERPETOFAUNA: A SUMMARY WITH TWO NEW STATE RECORDS
Chris McAllister. Eastern Oklahoma State College-Idabel

9:00
ECOLOGY OF BLANCHARD SPRINGS CAVERNS, OZARK NATIONAL FOREST, ARKANSAS, 42 YEARS LATER
Selena Sasser. Southern Illinois University

9:15
VERTEBRATE NATURAL HISTORY NOTES FROM ARKANSAS, 2017
Renn Tumlison. Henderson State University

9:30
BAT OCCUPANCY ESTIMATES AND SPECIES RICHNESS AT CACHE RIVER NATIONAL WILDLIFE REFUGE
Virginie Rolland. Arkansas State University

9:45
RESULTS OF TRAPPING SMALL MAMMAL POPULATIONS IN A GRASSLAND AND FOREST AREA AT THE LAKE FAYETTEVILLE ENVIRONMENTAL CENTER.
Douglas James. University of Arkansas

10:00
SULFUR OXIDATION GENOMICS IN THE AEROBIC PURPLE SULFUR BACTERIUM HALOTHIOBACILLUS NEAPOLITANUS
Newton Hillard. Arkansas Tech University

ENGINEERING/CHEMISTRY ROOM CCCS 115
Chair: M. Khan

8:00
DEVELOPING A LOW COST 3D PRINTING LAB AND THE USE OF 3D PRINTING IN A FRESHMAN ENGINEERING LAB COURSE
Mahbub Ahmed. Southern Arkansas University

8:15
RESTRAINED SHRINKAGE OF FLY ASH BASED GEOPOLYMER CONCRETE AND ANALYSIS OF LONG TERM SHRINKAGE PREDICTION MODELS
Md Rashedul Islam. Southern Arkansas University

8:30
OPTICAL PROPERTIES OF IRRADIATED SNO2 THIN FILMS PREPARED BY CHEMICAL SPRAY PYROLYSIS
Ali N. Mohammed. Al-Mustansaryah University

8:45
SWEETER SCORPIONATES INCORPORATE CARBOHYDRATES INTO FUNCTIONAL METAL CHELATES
Patrick Desrochers. University of Central Arkansas

9:00
DESIGN AND SYNTHESIS OF NIR DONOR-ACCEPTOR FLUOROPHORES
Rajib Choudhury. Arkansas Tech University

BIOLOGICAL SCIENCES ROOM CCCS 101
Chair: T. Yamashita

8:00
GEOGRAPHIC DISTRIBUTION OF YELLOW GRUB IN SMALLMOUTH BASS POPULATIONS OF CROOKED...
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CREEK AS DETERMINED BY METACERCARIAL CYST COUNTS IN THE GILL-MOUTH (OROBRANCHIAL) SITES
James Daly Sr. University of Arkansas for Medical Sciences (retired)

8:15
THE FISHES OF CHADRON CREEK, DAWES COUNTY, NEBRASKA
Chris McAllister. Eastern Oklahoma State College-Idabel

8:30
ANATOMICAL DISTRIBUTION OF CLINOSTOMUM METACERCARiae IN THE TISSUES OF POND-RAISED CHANNEL CATFISH
James Daly Sr. University of Arkansas for Medical Sciences (retired)

8:45
PHYLOGEOGRAPHY AND VICARIANT SEPARATION OF TWO RIVER DARTERS, PERCINA URANIDEA AND PERCINA VIGIL, FROM THE NORTH AMERICAN INTERIOR HIGHLANDS
Tsunemi Yamashita. Arkansas Tech University

9:00
LONG-TERM AQUATIC INVERTEBRATE MONITORING AT BUFFALO NATIONAL RIVER, ARKANSAS
David Bowles. US National Park Services

9:15
DEVELOPMENT OF THE ARKANSAS CENTER FOR BIODIVERSITY COLLECTIONS (ACBC) AT ARKANSAS STATE UNIVERSITY
Brook Fluker. Arkansas State University

9:30
LIRIOPE AND OPHIOPOGON: OVERVIEW OF TWO GENERA OF RUSCACEAE NATURALIZED IN THE ARKANSAS FLORA
Megan Stone. Henderson State University

9:45
NEW AND NOTEWORTHY VASCULAR PLANT RECORDS FROM ARKANSAS
Brook Olsen. Henderson State University

10:00
LEECH PARASITISM OF THE GULF COAST BOX TURTLE, TERRAPENE CAROLINA MAJOR (AGASSIZ, 1857) (TESTUDINES: EMYDIDAE)
Dennis Richardson. Quinnipiac University

POSTER PRESENTATIONS

BIOLOGICAL SCIENCES POSTER PRESENTATIONS

1. THE TOXICOLOGICAL EFFECTS OF DIETARY SUPPLEMENT ADDITIVES ON DAPHNIA MAGNA.
Antoinette Odendaal

2. SUNBATHING IN THE NORTHERN ROADRUNNER: AN UNEXPLORED TRAIT FOR THEIR RANGE EXTENSION.
Kimberly Smith

3. LITERATURE RECORD CHECKLIST OF TRUE BUGS (HEMIPTERA) FOR ARKANSAS WITH THE FIRST REPORT OF PSEUDOPACHYBRACHUS VINCTUS (RHYPAROCHROMIDAE) (ALSO OKLAHOMA) AND AN ANALYSIS OF MIRIDAE SEX RATIO FROM LIGHT TRAPS.
Stephen Chordas III

4. SURVEY OF RODENTS WITHIN ARKANSAS GAME AND FISH COMMISSION WILDLIFE MANAGEMENT AREAS.
Matthew Connior

5. NEW RECORDS OF PARASITES (APICOMPLEXA, ACARI ANOPLURA, NEMATODA) FROM RODENTS IN ARKANSAS.
Matthew Connior

6. DISTRIBUTION OF THE EASTERN SPOTTED SKUNK, SPILOGALE PUTORIUS, IN THE EARLY TWENTIETH CENTURY.
D. Blake Sasse

7. CENTRAL NESTS ARE MORE SUCCESSFUL AND PREFERRED FOR REUSE THAN PERIPHERAL NESTS IN CLIFF SWALLOW (PETROCHELIDON PYRROHONOTA) COLONIES.
Steward Huang

8. THE FLEAS (ARTHROPODA: INSECTA: SIPHONAPTERA) OF ARKANSAS.
Matthew Connior

9. AN ANNOTATED CHECKLIST OF THE CRAYFISHES (DECAPODA: CAMBARIDAE) OF ARKANSAS.
Chris McAllister

10. UNDERSTANDING CONFRONTATIONAL BEHAVIOR OF THE RAINBOW LORIKEET (TRICHOGLOSSUS HAEMATOMUS) AS A STRATEGY TO REDUCE ITS IMPACT AS AN INVASIVE SPECIES.
Victoria Veerhusen

11. PHYSIOLOGICAL EFFECTS OF LEAD NITRATE ON FOUR ARKANSAS NATIVE PLANT SPECIES AND THE ROLE OF ARBUSCULAR MYCORRHIZAL FUNGI ON PLANT STRESS MITIGATION.
Nicholas Dial

12. THE EFFECTS OF MICROGRAVITY ON VASCULAR TONE IN FEMALE MICE.
Sage Shaddox

13. ANALYSIS OF THE OXIDATIVE ENZYMATIC PROPERTIES OF THE BOTTLENOSE DOLPHIN DIAPHRAGM AND SCALENUS MUSCLE.
McKenzie Stribling
14. A QUALITATIVE ANALYSIS OF MACROINVERTEBRATES IN THE UCA VERNAL PONDS.
   DeShauna Tucker

15. SWIMMING PREFERENCES OF GUINEA PIGS.
   Olivia Sims

16. THE EFFECT OF HABITAT FRAGMENTATION ON SCELOPORUS CONSOBRINUS-PRAIRE LIZARDS LOCATED IN CENTRAL ARKANSAS.
   Mallory Heft

17. A HABITAT SUITABILITY ANALYSIS OF THE RED WOLF ACROSS ITS HISTORIC RANGE.
   Lauren Toivonen

18. EFFECT OF STYROFOAM DIET ON THE GUT PROTISTS OF MEALWORMS (TENEBRIOS MOLITOR).
   Brooke Skinner

19. LONGITUDINAL PATTERNS IN AN ARKANSAS RIVER VALLEY STREAM: TESTING THE RIVER CONTINUUM CONCEPT.
   Angela Lenard

20. UTILITY OF THE LOW COPY NUCLEAR GENE LEAFY FOR PHYLOGENETIC STUDIES IN THE SUNFLOWER FAMILY (ASTERACEAE), TRIBE ASTERAEAE.
   Miguel Mercado

21. RWANDAN SOCIETAL IMPROVEMENTS VIA THE USE OF ROCKET STOVES.
   Kyle Davis

22. ENZYME PRODUCTION AND HORMONE SIGNALING MEDIATE LONGEVITY RESPONSES TO DIETARY RESTRICTION IN C. ELEGANS.
   Ashley Henderson

23. ISOLATION OF ERYTHROCYTES FROM FRESHWATER TURTLES FOR USE IN TELOMERE LENGTH ANALYSIS.
   EliasSmith

24. INFLUENCE OF COMMON SALT CONCENTRATIONS ON DETRITIVORE RESPIRATION.
   Billy Huggins

25. BODY SHAPE VARIATION WITHIN AND AMONG LINEAGES OF THE RAINBOW DARTER, ETHEOSTOMA CAERULEUM.
   Kandria Driskill

26. EFFECTS OF BLACK-SPOT DISEASE ON THE BODY CONDITION OF BLEEDING SHINERS, LUXILUS ZONATUS.
   Lindsey Martin

27. BIOREMEDIATION OF PETROCHEMICALS FROM SOIL.
   Mitchell Rowland

28. WESTERN SPRUCE BUDWORM HERBIVORY INFLUENCES STREAM MACROINVERTEBRATE STRUCTURE AND BIOMASS.
   Deion Everhart

29. MACROINVERTEBRATE COMMUNITY RESPONSE TO A GRADIENT OF URBANIZATION IN THE WHITE OAK BAYOU WATERSHED.
   Joshua Nilz

30. PREY ITEMS IMPALED BY LOGGERHEAD SHRIKES IN NORTHWESTERN ARKANSAS.
   Ross Shieri

31. IMMUNOLOCALIZATION OF THE CADHERIN 18 PROTEIN IN FETAL KIDNEY CELLS.
   Scotty McKay

32. ANALYSIS OF BODY SHAPE VARIATION AMONG RESTRICTED AND WIDESPREAD POPULATIONS OF THE SOUTHERN REDBELLY DACE, CHROSOMUS ERYTHROGASTER.
   Dustin Thomas

33. RECRUITMENT AND SURVIVAL IN LIGUSTRUM SINENSE.
   Mason Rostollan

34. ANALYSIS OF A DROSOPHILA MELANOGASTER RIBOSOMAL PROTEIN GENE.
   John Mitchell

35. EVALUATING THE EFFECTS OF BIRD FEEDERS ON SONGBIRD PLUMAGE COLORATION.
   Stetson R. Collard

36. SOIL CRUST ALGAL COMMUNITIES OF WARREN PRAIRIE NATURAL AREA.
   Crystal Haynes

37. A COMPARISON OF THE IMPACTS OF WIND ENERGY AND UNCONVENTIONAL GAS DEVELOPMENT ON LAND-USE AND ECOSYSTEM SERVICES: AN EXAMPLE FROM THE ANADARKO BASIN OF OKLAHOMA, USA.
   Kendall Davis

38. LAND-USE AND ECOSYSTEM SERVICES COSTS OF UNCONVENTIONAL OIL AND GAS IN THE U.S.
   Nathan Taylor

39. IMPACT OF BAKKEN/THREE FORKS UNCONVENTIONAL OIL AND GAS DEVELOPMENT ON IMPORTANT WILDLIFE LANDSCAPES IN NORTH DAKOTA.
   Howden Carly

40. OPTIMUM LIGHTING FOR OXYGEN PRODUCTION OF ARTHROSPIRA PLATENSIS.
   Camryn Ruggeri

41. CHARACTERIZING A PUTATIVE MYCO-BACTERIOPHAGE TOXIN-ANTITOXIN SYSTEM.
   Alex Abbott
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42. EXPRESSION OF OCT4 AND NANOG IN HUMAN FIBROBLASTS WITH SHORT TELOMERES.
   Ethan Clement

43. CHARACTERIZING THE PERSISTING CORTICAL SUBPLATE IN RATS ACROSS DEVELOPMENT, MATURATION, AND AGING.
   Terri Teague

44. GLUCOSE-MEDIATED NEUROPROTECTION AGAINST PROTEOTOXICITY IS ENERGY-DEPENDENT IN CAENORHABDITIS ELEGANS.
   Landon Gatrell

45. THE EFFECTS OF TRPC3 CHANNEL ACTIVATION ON VASCULAR TONE IN HEALTHY ARTERIES VERSUS DISEASED ARTERIES.
   Alan Jackson.

46. COMPARATIVE GENOMICS OF THE PARABURKHOLDERIA BACTERIAL SYMBIONTS OF THE SOCIAL AMOEBA DICTYOSTELIUM DISCOIDEUM.
   Alexandria Melton

47. EPIDEMIOLOGY OF PANDEMIC INFLUENZA IN ARIZONA.
   Jenna Suen

48. EPIDEMIOLOGY OF PANDEMIC INFLUENZA IN MISSOURI.
   Harleigh Robbins

49. LIPID EXTRACTION OF C. ELEGANS.
   Lauren Westwood

50. CAENORHABDITIS ELEGANS HERMAPHRODITES HAVE REDUCED STRESS TOLERANCE WHEN GROWN IN THE PRESENCE OF RESIDUAL MALE PHEROMONES.
   Nathan Carmichael

51. GLUCOSE MEDIATES EARLY-LIFE STRESS RESISTANCE IN C. ELEGANS.
   Kaitlynn Butler

52. REGULATION OF SYMBIOTIC GENE EXPRESSION IN RICE.
   Ha Ram Kim

53. THE INFLUENCE OF EMBRYONIC STRESS HORMONES ON PHENOTYPIC VARIATION AND FITNESS IN SCELOROPUS CONSORBINS.
   Marcia Poletti

CHEMISTRY POSTER PRESENTATIONS

54. SYNTHESIS OF AMINO ACID RADICAL PRECURSORS.
   Candice Foscue

55. RETINOIC ACID RECEPTOR GAMMA RECIPROCALLY REGULATES CELLULAR ADHESION AND PROLIFERATION IN K562 CELLS.
   Victoria Niedzwiedz

56. IMPACT OF CHEMISTRY/MATHEMATICAL VIDEO-LECTURES ON STUDENT-BASED LEARNING IN A FRESHMAN LEVEL CHEMISTRY COURSE.
   Aaron Stebbins

57. ANALYZING THE PROPERTIES OF BIODIESEL.
   Dakotah Cooper

58. IDENTIFYING THE STRUCTURE OF FAT-MOBILIZING SUBSTANCE (FMS-1) ASSOCIATED WITH CONGENITAL LIPODYSTROPHY.
   Mallory Bryant

59. MEASUREMENT OF MULTICOMPONENT AEROSOL OPTICAL PROPERTIES USING PULSED LASER CAVITY RING-DOWN SPECTROSCOPY.
   Haley Kay

60. THEORETICAL SEMI-EMPIRICAL CALCULATIONS OF ETHYLENEDIAMINETETRAACETIC ACID (EDTA) BOUND METAL COMPLEXES MODELED FOR HEAVY METAL POISONING.
   John Bentley

61. THEORETICAL THERMOCHEMICAL BOND STABILITY OF EDTA CHELATION WITH METAL IONS FOR CHELATION THERAPY TO TREAT HEAVY METAL POISONING.
   Peter Joseph

62. DETERMINATION OF FATTY ACID CONCENTRATIONS IN ALGAE.
   Stacy Justice

63. ALTERING THE CONFORMATIONAL ENSEMBLE OF PEP-19 USING CALCIUM.
   Nicholas Rathke

64. IN SILICO PREDICTIONS OF CONFORMATIONS AND ORIENTATIONS OF SMALL MOLECULES WITHIN A MACROCYCLE.
   Kassandra Cendejas

65. THE EFFECT OF VIDEO-BASED INSTRUCTION ON STUDENT PERFORMANCE IN A COLLEGE CHEMISTRY LABORATORY.
   Kaitlyn Walden

   Danica Ordonez

67. EXPRESSION AND PURIFICATION OF CALMODULIN BINDING PARTNER PEP-19.
   Christian Mitchell

68. WATER ADSORPTION ON MONTMORILLONITE: COMPARISON OF WASHED AND UNWASHED CLAYS.
   Megan Cassingham
69. **THE EFFECT OF SIMULATED MICROGRAVITY ON THE BIOPHYSICAL PROPERTIES OF THE TibIA.**
Kristen Jones

70. **TOWARDS A CHLORINE-BASED FLUOROPHORE SYNTHESIS FOR PHARMACOKINETIC DIAGNOSIS IN NEGLECTED TROPICAL DISEASES.**
Shelby Bridges

71. **THE SYNTHESIS OF NATURAL PRODUCT-BASED DRUGS TO TREAT A NEGLECTED TROPICAL DISEASE: LEISHMANIASIS.**
Adam Hargis

**COMPUTER SCIENCE POSTER PRESENTATIONS**

72. **DESIGN OF VIRTUAL ENDOLUMINAL SURGERY SIMULATOR (VESS).**
Berk Cetinsaya

73. **VIRTUAL ARTHROSCOPIC TEAR DIAGNOSIS AND EVALUATION PLATFORM (VATDEP).**
Mustafa Tunc

74. **A GENTLENESS SIMULATOR FOR SURGICAL DEXTERITY EVALUATION OF SURGEONS WITH HAPTIC INTERFACES.**
Recep Erol

75. **ANALYSIS AND COMPARISON OF WINE EXPERTS WITH WINEINFORMATICS.**
Valentin Velchev

76. **DRONE DELIVERY WITH A PARROT BEBOP 2.**
James Palmer

77. **LOW-DELAY RATE CONTROL FOR H.265/HEVC VIDEO COMPRESSION.**
Reese Childers

78. **ORION ROVER MAZE SOLVER AND OBJECT DETECTION.**
Binqi Sun

79. **EDUCATIONAL DRONES: MINI-DRONE TRAVIS BY PARROT.**
Sravani Marreddy

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80. **ARTHROSCOPIC ROTATOR CUFF SURGERY PERFORMANCE COMPARISON STUDY OF NOVICES AND EXPERTS.**
Seth Cooper-Baer

81. **JD HUMANOID ROBOT.**
Min Kim

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82. **EVALUATION OF A 3D METAL-ORGANIC FRAMEWORK Cu(bpy)V2O10 AS A CATHODE MATERIAL FOR Li-ION BATTERIES.**
Andrew Zhou

83. **TERAHERTZ PULSED IMAGING OF FRESHLY EXCISED XENOGRaFT BREAST CANCER TUMORS IN MICE.**
Tyler Bowman

84. **RADIATION PRESSURE ON CORE-SHELL NANOPARTICLES.**
Mohammad Habibur Rahaman

85. **ANALYTICAL MODELING OF MICROSCOPIC AND MACROSCOPIC ANALYSIS OF DIELECTRIC MATERIAL.**
Misuk Saha

86. **IMAGE ANALYSIS TOOLBOXES FOR FINDING THE MEAN PORE SIZE OF SCAFFOLDS AND DIAMETER DISTRIBUTION OF FIBERS.**
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87. **TECTONO-STRATIGRAPHIC AND SEQUENCE AND STRATIGRAPHIC SUCCESSIONS, OZARK SHELF, TRI-STATE REGION, SOUTHERN MIDCONTINENT.**
Elvis Bello

88. **UTILIZING KARST FEATURES TO ACCOUNT FOR DIFFERENCES IN WATER QUALITY IN THE OZARK PLATEAUS IN NORTHERN ARKANSAS.**
Samantha Wacaster

89. **BRIDGING TECHNOLOGY AND COMMUNITY USING WEB-BASED GIS.**
Samuel Treece

90. **WATER ADSORPTION ON GOETHITE: CCN ACTIVATION FROM FRENKEL, HALSEY AND HILL ACTIVATION THEORY.**
Ryan Tumminello

91. **QUANTIFICATION OF LEVOGLUCOSAN IN PM2.5 ATMOSPHERIC AEROSOLS USING GC/MS: SEASONALITY OF A BIOMASS BURNING TRACER IN CENTRAL ARKANSAS.**
Abigail Gatmaitan

92. **GENERATION OF MIXED-PARITY INCE-GAUSS LASER BEAMS.**
Jessica Young

93. **THE IMPACT OF WEATHER ON MUSIC FESTIVALS IN OKLAHOMA**
Qinqing Yang

94. **OPTIMAL LOCATIONS FOR THE GENERATION OF RENEWABLE ENERGY.**
Justin Seymour
95. CREATION OF IMAGE MASKS FOR BARRED SPIRAL GALAXIES USING SOURCE EXTRACTOR.
Jess Ray

96. POTENTIAL DIFFERENCES IN PROBLEM SOLVING APPROACHES WHEN USING DIFFERENT TEXTBOOKS.
Charles Bertram

97. PROCESS ENGINEERING: 3 DIMENSIONAL COLORSSPACE CORRECTION.
Joseph Akers

98. DESIGN AND DEVELOPMENT OF AN ACOUSTIC FIELD SCANNER.
Nick Scoles

99. THE LAGRANGIAN AND HAMILTONIAN FORMULATION OF THE LINEAR OSCILLATOR CHAIN.
Garrott Granholm

100. MAXIMIZING WIND POWER.
Royer Ramirez Ruiz

101. THE EFFECTS OF WEATHER ON INSURANCE.
Zane Akers

102. DETERMINING BLACK HOLE MASS OF ACTIVE GALACTIC NUCLEI USING FWHM OF THE H-Î² EMISSION LINE AND LUMINOSITY RELATIONS.
Jacob Cameron

103. A GEOMETRIC APPROACH TO DETERMINING CONSERVATION LAWS FOR WAVES ON A STRING.
Brandon Miller

104. MAPPING THE INFLUENCE OF WEATHER ON CONCRETE.
Nick Scoles

105. THE EFFECTS OF WEATHER ON INSURANCE.
Joseph Akers

106. PRECIPITATION TOTALS AND THE EFFECT ON SOIL TEMPERATURE.
Timothy Brown

107. MECHANICAL AND CHEMICAL ALTERATIONS IN RAT LEG BONES UPON EXPOSURE TO SIMULATED MICROGRAVITY AND COSMIC RADIATION.
Hayley Heacox

108. RENEWABLE ENERGY IN RESEARCH AND EDUCATION.
Lauren Corby

109. TOMATO GROWTH IN OKLAHOMA.
Audrey Schucker

110. IMPACT OF MESONET ON OKLAHOMA AGRICULTURAL PROCESSES.
Isaac Raphael

111. AIR TEMPERATURE/DEW POINT VS. FREQUENCIES OF TORNADOES.
Garrott Granholm

112. CORRELATION OF AVERAGE TEMPERATURE VS. CONSECUTIVE TEMPERATURE TO DROUGHT CONDITIONS IN THE OKLAHOMA CITY AREA.
Blake Bryant

113. OPTIMAL CROP GROWING SEASONS DETERMINED USING MESONET.
Elias Smith

114. NEUTRON CAPTURE ELEMENTS IN LOW METALLICITY STARS WITHIN THE INNER-GALACTIC HALO.
Kenneth Jumper

115. THE EFFECT OF MODEL ATMOSPHERE PARAMETERS ON THE ELEMENTAL ABUNDANCES IN HALO STARS.
Justin C. Seymour

116. USING A PHOTON BEAM FOR THERMAL NOCICEPTIVE THRESHOLD EXPERIMENTS.
Spencer Sherwood