2017 Annual Meeting Program
November 3-4, 2017

Murray State University

Thank you to our Platinum Sponsor

Thank you to our Break Sponsors
Thank you to our Silver Sponsors
Online Program, October 30, 2017

Poster presentations are all on Friday

Oral Presentations are all on Saturday

Friday, November 3, 2017  1:00pm - 3:00pm

**KAS Governing Board meeting**

**Commonwealth Suite**

Open to all KAS members

Friday, November 3, 2017  3:00pm - 4:00pm

**Meeting for Section Leaders and Judges**

The Stables, Curris Center

1st floor

If you are serving as a Judge or Section leader, please attend this meeting for a brief orientation to the student competition process and to pick up materials.

Friday, November 3, 2017  3:00pm - 9:30pm

**Practice Room for Oral Presentations**

Tennessee Room, Curris Center

Friday, November 3, 2017  3:00pm - 9:30pm

**Practice Room for Oral Presentations**

Cumberland Room, Curris Center

Friday, November 3, 2017  3:00pm - 5:00pm

**Tour - Hancock Biological Station**

Meet in front of Curris Center for van pickup.

2 hour round trip

**Hancock Biological Station** - The Hancock Biological Station (HBS), located on Kentucky Lake less than 20 minutes from the campus, is a year-round teaching and research ecosystem facility where students have unique opportunities to interact with faculty and visiting scientists. A variety of field courses are taught each summer at the
Friday, November 3, 2017  4:00pm - 5:00pm

**KAS Business meeting**

Mississippi Room, Curris Center

President: Darrin Smith

Open to all KAS members. We will announce results of Board Elections, hear an update about the Raymond and Marcia Athey funds that endow our research grants, and provide other updates about KAS activities. Refreshments provided.

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Friday, November 3, 2017  4:00pm - 5:00pm

**Poster presenters Check-In**

3rd floor of Curris Center

Chair: Kevin Revell  
Co-chair: ANGELA GUYTON

Poster presenters, please check in to verify your poster placement. If you are participating in a student competition you will also receive further instructions here.

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Friday, November 3, 2017  4:00pm - 5:00pm

**Tour - Biology Building**

Meet in the lobby

The Biology Building was completed in 2008. It houses 7 teaching labs, several lecture spaces, 12 research labs, office space, the Herbarium, Animal Collection, Animal Care Facility and a Molecular Biology Facility. Additional Biology teaching and research spaces are located in Jones Hall (Chemistry) and the new Engineering Physics Buildings

[Campus map](#)

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Friday, November 3, 2017  4:00pm - 5:00pm

**Tour - Chemistry Building**

Meet in the lobby

In May 2009, the Department of Chemistry moved into the newly constructed Jesse D. Jones Hall. In our main entryway we feature a Living Periodic Table, built by Mr Jim Barnett, displaying many samples of actual elements. The Chemical Services Laboratory provides state of the art chemical analytical services and expertise in the areas of Environmental Analysis, Organic Synthesis, Inorganic Substance Analysis, Controlled Substance Analysis, Bioassay & Bio-analytical Techniques and much more! The Polymer and Materials Characterization Laboratory houses our Dynamic Mechanical Analyzer (DMA), which was purchased after the Chemistry Department was awarded a highly competitive Major Research Instrumentation grant from the National Science Foundation. In addition to our differential scanning calorimeter, a thermogravimetric analyzer, a gel permeation chromatography system, a density
meter, and two viscometers; the DMA makes Murray State the only university in the region to have such capabilities for polymer and materials characterization. The Chemistry Department provides access to the most advanced instrumentation including a JEOL 400-MHz Nuclear Magnetic Resonance Spectrometer, and major equipment in the areas of chromatography, thermal analysis, and inert atmosphere systems. Much of our instrumentation was purchased through a generous gift from Dr. Jesse D. Jones (Chemistry ‘64) and is housed in the Jones/Ross Research Center.

Friday, November 3, 2017  4:00pm - 5:00pm

Tour - Mapping Applications and Resource Center (MARC)
Meet outside of Blackburn 425

**MARC/Geosciences** - The tour will bring conference attendees to the Mapping Applications and Resource Center (MARC) on the 4th floor of the Blackburn Science Building. We will show our computer classrooms, large-format scanners and printers, and GPS equipment for geospatial technologies. The participants will visit our Terrain Modeling Lab that houses a stream table, an augmented reality sandbox, and a 3D printer. They will also visit our Environmental Monitoring and Modeling lab.

[Campus map](#)

Friday, November 3, 2017 4:00pm - 5:00pm

Tour - New Institute of Engineering facility
Meet in the lobby

The Engineering and Physics building was completed in 2017 and houses the Institute of Engineering – mainly programs in Engineering Physics (Mechanical Engineering, Electrical Engineering, Biomedical Instrumentation and Aerospace Engineering) and Physics. Student laboratory spaces associated with these programs include: Physics electricity and magnetism, Physics mechanics, circuits, fluid mechanics, standards/measurement, senior design, rapid prototype, optics, astronomy, and the high-bay research and development lab. In addition, there are lab and research spaces for Biology and Chemistry. Engineering and Physics faculty have dedicated research labs to include: solid state Physics, advanced Physics, astrophysics, swarm systems, automated manufacturing, non-destructive testing, thermos-fluid energy devices, power systems, and laser and photonics.

[Campus map](#)

Friday, November 3, 2017  5:00pm - 3:00pm

Judges conference room
Commonwealth Suite, Curris Center

This room is available if judges wish to use it for conference.

Friday, November 3, 2017  5:00pm - 8:00pm

Posters: Agricultural Sciences
Curris Center
effects of excess dietary branched chain amino acids (leucine and isoleucine) on growth and health of Nile tilapi

61.

First Author: Cora Teets  
Co-author: Waldemar Rossi  
Co-author: Vikas Kumar  
Kentucky State University  
University

A Comparison of the Characteristics of Kentucky and Illinois Soils Under Various Land Cover

62.

First Author: Bernedette Chadwick  
Co-author: Michael Mercer  
Co-author: Bailey Webster  
Co-author: Brandon Clark  
Co-author: Iin Handayani  
Murray State University  
University

Dehydration of autumn olive berries for human consumption

63.

First Author: Changzheng Wang  
Co-author: Lingyu Huang  
Co-author: Cecil Butler  
Kentucky State University  
University

Developing cold-hardy perennial ornamentals for Kentucky

64.

First Author: Hideka Kobayashi  
Kentucky State University  
University

Distinguishing Differences of Soil Physical Properties in Irrigated and Non-Irrigated Corn-soybean Rotation and Pastur

65.

First Author: Harry Franklin  
Co-author: Duncan Thomas  
Co-author: Connor Raymond  
Co-author: Jacob Flemming  
Co-author: Iin Handayani  
Murray State University  
University

Co-author: Brian Parr  
Murray State University  
University
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<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
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<tr>
<td>Effects of fertilization on growth performance of lotus plants in containers</td>
<td>Changzheng Wang</td>
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<td></td>
<td>Kentucky State University</td>
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<td>Impact of Soil-Set®, Grain-Set®, and Liqui-Plex® Formulations on Hot Pepper Yield</td>
<td>GEORGE ANTONIOUS KENTUCKY STATE UNIVERSITY</td>
<td>Kirk Pomper Kentucky State University</td>
<td>Eric Turley Kentucky State University</td>
<td>Quinn Heist Kentucky State University</td>
<td>Thomas Trivette Kentucky State University</td>
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<td></td>
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<td>Lusekelo Nkuwi Kentucky State University</td>
<td>Yogendra Upadhyaya Kentucky State University</td>
<td>Bjesh Mishra Kentucky State University</td>
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<td>Online Shoppers; Who Attends Farmers' Markets, Who Does Not, and Why?</td>
<td>Jean Dominique Gumirakiza Western Kentucky University</td>
<td>Thomas Kingery Western Kentucky University</td>
<td>Stephen King Western Kentucky University</td>
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<td>Soil Distinguishing Factors in Pasture and Irrigated Soils in Tennessee, Kentucky, and Illinois</td>
<td>Spencer Fulkerson Murray State University</td>
<td>joel reddick Murray State University</td>
<td>Landon Williams Murray State University</td>
<td>Blake Remmert Murray State University</td>
<td>iin Handayani Murray State University</td>
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<td>Brian Parr Murray State University</td>
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<td>Soil Properties in Varying Crop and Non-Crop Areas of Calloway County, Kentucky</td>
<td>Zack Eells Murray State University</td>
<td>Canaan Wring Murray State University</td>
<td>Clay Smotherman Murray State University</td>
<td>Connor Moore Murray State University</td>
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<tr>
<td>The Impact of Cropping Systems on Soil properties in Fredonia and Princeton Kentucky</td>
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</table>
Yield of Eggplant Grown in Horse Manure and Vermicompost Amended Soil

First Author
Yogendra Upadhyaya
Kentucky State University

Co-author
Thomas Trivette
Kentucky State University

Co-author
Lusekelo Nkuwi
Kentucky State University

Co-author
Bijesh Mishra
Kentucky State University

Co-author
George Antonious
Kentucky State University

Analyzing Quality and Quantity of Binary and Pure Stands of Low Lignin and Standard Alfalfa

First Author
Kelly Hagan
Asbury University

Co-author
Ray Smith
University of Kentucky

Posters: Botany

Is there an association between sex ratio and the level of sex expression among plant populations?

First Author
Juliana Silva e Costa
Federal University of Juiz de Fora

Co-author
Justin Cornett
University of Kentucky

Co-author
D. Nicholas McLetchie
University of Kentucky

Detection of Cryptic Interspecific Hybridization Between Morus rubra and M. alba Using Molecular Markers

First Author
Taylor Horton
Murray State University

Co-author
Dayle Saar
Murray State University

Is wintercreeper’s (Euonymus fortunei) success as an invader due to avoidance of herbivory?
Building an interactive tree map for the Bellarmine University campus.

77.

First Author
David Robinson
Bellarmine University

Co-author
Kaitlyn Yates
Bellarmine University

Assessing the role of the gene, pebbled, in D. melanogaster ASP Invasive Behavior

78.

First Author
Hasan Salim
WKU

Elucidating the Relationship Between sox4a and sox4b in the Zebrafish Eye

79.

First Author
Hadley Neal
KBRIN

Co-author
Rebecca Petersen
University of Kentucky

Co-author
Wen Wen
University of Kentucky

Co-author
Ann Morris
University of Kentucky

Characterizing the role of CP1 in Drosophila melanogaster and its effects on basement membrane degradation and signaling

80.

First Author
Dane Flinchum
Western Kentucky University

Co-author
Ajay Srivastava
Western Kentucky University

Examining Gene Expression during Xenopus Embryonic Development

81.

First Author
Maria Stewart
Northern Kentucky University

Co-author
Emily Shifley
Northern Kentucky University

Functional Analysis of Signaling Molecules Involved in Spermiogenesis of Drosophila melanogaster

82.
Identifying genetic modifiers in a Drosophila model of Inclusion Body Myopathy

83.

First Author
Lee Kendall
Centre College

Co-author
Samuel White
Murray State
University

Co-author
Douglas Harrison
University of Kentucky

FGF and RA signaling pathways interact during development of the Xenopus pharynx

84.

First Author
Amber Follin
Biology Department, Berea College

Co-author
Kyla Britson
Neuroscience and Neurology, Johns Hopkins Medicine

Co-author
Tom Lloyd
Neuroscience and Neurology, Johns Hopkins Medicine

The effect of benzo[a]pyrene on motor function in neonatal mice

85.

First Author
Sarah Kunkler
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Emily Shifley
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Tamika Chappell
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Lisa Massie
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Co-author
Nicholas Brinkman
Northern Kentucky University

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Rachel Dempsey
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Co-author
Christine Curran
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Co-author
Shelby Caudill
Northern Kentucky University

Co-author
Lisa Massie
Northern Kentucky University

Co-author
Pamela Dickson
Northern Kentucky University

Role of autophagy-related protein Vps34 in the function of adipose tissues and interactions with the immune system

86.

First Author
Henry Kwan
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Vanderbilt University Medical Center

Co-author
Luc Van Kaer
Vanderbilt University Medical Center

Co-author
Luke Postoak
Vanderbilt University Medical Center

Co-author
Margaret Sabourin
Vanderbilt University Medical Center

Using gene expression to better understand macrophages' role in tissue regeneration

87.

First Author
Kendall Collins
Visualizing Programmed Genome Arrangement in Live Sea Lamprey Embryos

First Author
Conner Hounshell
Kentucky Biomedical Research Infrastructure Network

Co-author
Courtney Waterbury
University of Kentucky

Co-author
Jeremiah Smith
University of Kentucky

Sex Specific Gene Control of Cardiac Fibrosis

First Author
Bruce Northington
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Co-author
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Co-author
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Annotation of Spock and Inky Mycobacteriophages

First Author
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Co-author
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Spalding University

Direct detection of double-stranded DNA of Staphylococcus aureus using engineered zinc finger proteins

First Author
Jiyoung Shim
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Western Kentucky University

Co-author
Moon-Soo Kim
Western Kentucky University

Functional and genetic studies of the tRNA modification protein Trm732 in yeast

First Author
Hannah Sizemore
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Co-author
Julia Ziebro
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Co-author
Michael Guy
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Exploring Small Molecule Drugs Binding To Ribosomal Protein L11

First Author
Swetaben Patel
University of Louisville

Co-author
Michal Hetman
University of Louisville

Co-author
Lukasz Slomnicki
University of Louisville

IDENTIFICATION OF SELECTIVE DDR1 KINASE INHIBITORS USING STRUCTURE ACTIVITY
RELATIONSHIP

94.

First Author
Issac Domenech
Vanderbilt University Medical Center

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Vanderbilt University Medical Center

Co-author
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Co-author
Craig Lindsley
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Co-author
Daniel Jeffries
Vanderbilt University Medical Center

NADPH oxidase-derived ROS regulate TLR2 responses in mouse dendritic cells

95.

First Author
Morgan Bahnsen
KBRIN

SOCS 1 Role In Manipulation of Neutrophil Signaling By Oral Pathogen, Filifactor alocis

96.

First Author
Thomas Case
KBRIN

Quantifying Tetracycline resistance genes in swine waste anaerobic digester over a period of 100 days

97.

First Author
Melanie Couch
Western Kentucky University

Co-author
Getahun Agga
ARS USDA

Co-author
John Loughrin
ARS USDA

Co-author
Rohan Parekh
ARS USDA

Co-author
Eric Conte
Western Kentucky University

Identification of the enzyme responsible for the acp3U modification in bacteria

98.

First Author
Maggie Thomas
Northern Kentucky University

Co-author
Jamison Burchett
Northern Kentucky University

Co-author
Justen Mamaril
Northern Kentucky University

Co-author
Michael Guy
Northern Kentucky University

Impact of Mutations in the EGO and GSE Complexes on Genomic Instability in Saccharomyces cerevisiae

99.

First Author
Friday, November 3, 2017  5:00pm - 8:00pm

### Posters: Chemistry: Analytical & Physical
Curris Center

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<th>Secretary: Bommanna Loganathan</th>
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#### Analysis of Protein Conformations Using Computer Simulations
1. 
*First Author*
Jonnah McManus
*Western Kentucky University Chemistry /
Gatton Academy*

#### GC-MS analysis of Volatile Organic Compounds in Metastatic and Non-Metastatic Breast Cancer Cells
2. 
*First Author*
Clara Reasoner
*Berea College*
*Co-author*
Amanda Siegel
*Indiana University*
*Co-author*
Hiroki Yokota
*Indiana University*
*Co-author*
Mangilal Agarwal
*Indiana University*

#### Anaerobic Degradation of Tetracyclines in Agricultural Manure
3. 
*First Author*
Brandon Couch
*Western Kentucky University*
*Co-author*
John Kasumba
*Western Kentucky University*
*Co-author*
John Loughrin
*usda*
*Co-author*
Eric Conte
*Western Kentucky University*

#### Community Usage of Select Illicit and Prescribed Drugs and their Occurrence in the Clarks River
4. 
*First Author*
Allie Skees
*Department of Chemistry, Murray State University*
*Co-author*
Katelyn Foppe
*Department of Chemistry, Murray State University*
*Co-author*
Bikram Subedi
*Department of Chemistry, Murray State University*

#### Towards the creation of turn-on fluorescent Schiff base probes for hydrogen sulfide detection
5. 
*First Author*
Maxwell Conte
## Polyunsaturated Fatty Acid Profile in Hemp-Fed Chicken Egg

### First Author
Cole Hulen  
**Murray State University**  
Co-author  
Cheyenne Hooks  
**Department of Agriculture Science, Hutson School of Agriculture**  
Co-author  
Nathan Denney  
**Department of Agriculture Science, Hutson School of Agriculture**  
Co-author  
Bomman Loganathan  
**Murray State University**  
Co-author  
Brian Parr  
**Department of Chemistry, Murray State University, Murray State University,**  
Co-author  
Bikram Subedi  
**Department of Chemistry, Murray State University,**

---

## From Halogenated Anthracenes to Bendable Displays: Decoding the Structure-Optical Gap Correlation

### First Author
Kevin Pierce  
**Murray State University**  
Co-author  
Alex Thome  
**Murray State University**  
Co-author  
Jill Cao  
**Murray State University**  
Co-author  
Sebastian Jezowski  
**Murray State University**

---

## The Analysis of Contact Lenses as Forensic Evidence Using FT-IR and Refractive Index

### First Author
Rachel Bracker  
**Eastern Kentucky University**  
Co-author  
Lori Wilson  
**Eastern Kentucky University**  

---

## Measurement of J-coupling in Mixed Lead and Sodium Pyrophosphate Glasses with PASS and TE-PIETA

### First Author
Tomas Flores  
**Berea College**  
Co-author  
Jay Baltisberger  
**Berea College**  
Co-author  
Sara Garner  
**Berea College**  
Co-author  
Shay Steele  
**College of Wooster**

---

## Sedimentation Fractionation

### First Author
Michael Greiving  
**KYSU**
Salt-Assisted Ultrasonicated De-aggregation and Advanced Electrochemistry of Detonation Nanodiamond.

11.

First Author
Brendan Evans

Co-author
Alex Henson

Western Kentucky University

Co-author
Sanju Gupta

Western Kentucky University

Comparison of Inorganic Elemental Concentrations in Water Samples and Occurrence of Zebra Mussels in Kentucky Lake, USA

12.

First Author
Nicole States

Co-author
Henry Pruett

Murray State University

Co-author
Bikram Subedi

Co-author
Susan Hendricks

Co-author
Bommanna Loganathan

Co-author
Hancock Biological Station

Co-author
Murray State University

Co-author
Hancock Biological Station

Co-author
Bikram Subedi

Co-author
Murray State University

Co-author
Hancock Biological Station

Co-author
Bommanna Loganathan

Co-author
Murray State University

Co-author
Hancock Biological Station

ZrO2-?-Cyclodextrin (CD) catalyzed synthesis of 2,4,5-trisubstituted imidazoles and 1,2-disubstituted benzimidazoles u

13.

First Author
K.N. Thimmaiah

Co-author
Mark Montgomery

Northwest MS Community College

Co-author
Padma Thimmaiah

Northwest MS Community College

Co-author
Ashish Pagare

Northwest MS Community College

Co-author
Larry Sylvester

Northwest MS Community College

Co-author
Ray Cox

Northwest MS Community College

Co-author
Paul Grisham

Northwest MS Community College

Co-author
Piya Adris

Northwest MS Community College

Co-author
Lindsay Massie

Northwest MS Community College

Water Purification using Magnetic Biochar

14.

First Author
Anne Carlisle

Western Kentucky University

A DRIFT Plus TG Device Revealing Unknown Chemicals Reaction Mechanisms

16.
Heavy Metal Accumulation in Aporrectodea complex and Risk Assessment of Bio Magnification

First Author
Demetrius? Davis
Kentucky State
University/University of Kentucky

Application of metal-organic framework materials in dye-sensitized solar cells

First Author
Ryan Boggess
Western Kentucky University
Co-author
Bangbo Yan
Western Kentucky University

Effect of Iron charge state on P450 BM3 stability

First Author
Catherine Denning
University of Kentucky
Co-author
David Heidary
University of Kentucky
Co-author
Edith Glazer
University of Kentucky

Fluorescence properties of metal-organic frameworks containing ruthenium and copper ions.

First Author
Bangbo Yan
Western Kentucky University
Department of Chemistry
Co-author
Robert Spears
Western Kentucky University
Department of Chemistry

Kinetic analysis of the mechanosyntheses of transition metal complexes and precursors

First Author
Erin O'Donnell
Murray State University
Co-author
Rachel Allenbaugh
Murray State University
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<th>Kinetic Studies of High-valent metal(IV)-oxo porphyrins generated by chemical and photochemical methods</th>
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<th>Light Activated Ruthenium Peptide Hybrids</th>
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<td><strong>First Author</strong>&lt;br&gt;Lydia Millard&lt;br&gt;<em>Kentucky State University</em></td>
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<th>N-Heterocyclic Carbene Complexes</th>
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| **First Author**<br>Mario Chavarria<br>*Berea College*
**Co-author**<br>Cheyenne Haynes<br>*Berea College* |

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<th>Optimization of lipid extraction from Scenedesmus acutus via in-situ transesterification</th>
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| **First Author**<br>Vincent Kelly<br>*Kentucky State University*
**Co-author**<br>Robert Pace<br>*University of Kentucky* |

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<th>Photocatalytic reduction of carbon dioxide by metal-organic framework materials.</th>
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</table>
| **First Author**<br>Hannah Brooks<br>*Western Kentucky University*
**Co-author**<br>Bangbo Yan<br>*Western Kentucky University* |

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<tr>
<th>Promotional Effect of Platinum on Nickel Catalysts in the Conversion of Lipids to Hydrocarbons in Diesel Range</th>
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</table>
| **First Author**<br>Kelsey Huff<br>*Kentucky State University*
**Co-author**<br>Ryan Loe<br>*University of Kentucky's Center for Applied Energy Research*
**Co-author**<br>Tonya Morgan<br>*University of Kentucky's Center for Applied Energy Research*
**Co-author**<br>Eduardo Santillan-Jimenez<br>*University of Kentucky's Center for Applied Energy Research*
**Co-author**<br>Mark Crocker
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<td>27. Reduction of Mannich Bases to Form 1,3-Amino Alcohols Using a Kn?lker-type Catalyst</td>
<td>Alexandra Redden, Rachel Whittaker, Kane Ferguson</td>
<td>Murray State University</td>
<td>University of Kentucky's Center for Applied Energy Research</td>
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<td>28. Selective C–O bond reductions in carbohydrate derivatives using boron based reagents</td>
<td>Luis Gonzalez Anguiar</td>
<td>Murray State University</td>
<td>Berea College</td>
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<td>29. Solid-Phase Synthesis of Heteroatom-Activated Antibiotics</td>
<td>Morgan Uebelacker, Jacob Nanney, Kyle Watson</td>
<td>Kentucky Wesleyan College</td>
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</tr>
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<td>30. Storage of Solar Energy in Strained Bis-Anthracene Cycloadducts and Release as Heat by Mechanical Grinding</td>
<td>Erin Calvert, Kasey Clear, Sebastian Jezowski</td>
<td>Murray State University</td>
<td>University of Kentucky's Center for Applied Energy Research</td>
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<td>31. Synthesis and catalytic studies of metalloporphyrin complexes as biomimetic models for cytochrome P450 enzymes</td>
<td>Benjamin Kash, Haiyan Liu, Rui Zhang</td>
<td>Gatton Academy, Western Kentucky University</td>
<td>Western Kentucky University</td>
</tr>
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<td>32. Synthesis and Properties of a Ruthenium Polypyridyl Complex</td>
<td>Hannah Cope, Bangbo Yan</td>
<td>Western Kentucky University</td>
<td>Western Kentucky University</td>
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33.
First Author
Luis Salazar Guzman
Berea College

Synthesis of Platinum-Malonate-Luteinizing Hormone Releasing Hormone (Pt-Mal-LHRH), an Anti-Cancer Agent
34.
First Author
Charles Greif
Eastern Kentucky University

Synthesis of Poly(4-hydroxystyrene) by Living Anionic Polymerization for Block Copolymer Lithography
35.
First Author
Beau Schweitzer
Berea College

Synthesizing Cleavable Acetal Antibody Drug Conjugates
36.
First Author
Michael James
Berea College
Co-author
Sarah Tabor
Berea College
Co-author
Elizabeth Thomas
Berea College

Friday, November 3, 2017 5:00pm - 8:00pm

Posters: Computer and Informational Sciences
Curris Center
Chair: Jerzy Jaromczyk
Secretary: Muzaffar Ali

Incorporating WeBWorK in a Mathematics Classroom
37.
First Author
Haley Replogle
Kentucky Wesleyan College
Co-author
Kyle Besing
Kentucky Wesleyan College

Open Science Grid (OSG) Tier2 Grid Site at Bellarmine University for the LSST (Large Synoptic Survey Telescope) Project.
38.
First Author
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<td>Chair: Maheteme Gebremedhin</td>
<td>Secretary: Roberta Challener</td>
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<tr>
<td>American Chestnut restoration in Daniel Boone National Forest: a GIS approach</td>
<td>Jacob Pease</td>
<td>Stephen Denny, Akhtar Mahmood, M. Saleem</td>
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<td>Ant communities of temperate tree canopies along an urban-rural gradient</td>
<td>Heather Short</td>
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<td>Is it enough? Passive Restoration in a Western Colorado Stream</td>
<td>Melody Feden</td>
<td>Howard Whitemand</td>
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The Mobility of Nickel in Soil and the Efficacy of Sphagnum Peat Moss to Immobilize Nickel with Contaminated Soils

First Author
Vanetta Graves
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Leaf Toughness in Tropical Rainforest Plants Depends on Leaf Age in Dicots but Not Monocots

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Examining the Relationship Between Temperature and Vegetation Phenology: Is Soil a Better Predictor than Air?

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Effect of Slope and Packing Ratio on the Behavior of Matchsticks Burnings

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Site selection by the Jefferson's and spotted salamanders based on substrate pH

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Assessing the effects of urban air pollution on lichens

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The Effects of Stream Degradation on Food Web Stability

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Water Levels and Temperatures Define Narrow Window of Larval Fish Phenology in Kentucky Lake.

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Murray State: University

Honey Bee Gene Expression Response to Pesticides Under Differential Nutritional Status

First Author: Alishea Brown
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Patterns of Herbivory Among Leaves of Tropical Forest Canopy Trees

First Author: Maria Shields
Co-author: Christopher Frost
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Driver bias in intentional wildlife-vehicle collisions

First Author: Mary Wilkinson
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Using Hardiness Zones to Determine Phenological Variation

First Author: Whitney Buechler
Co-author: Bassil El Masri
Murray State: University

Assessing Stormwater Impacts and Hydrogeological Influences on Water Quality in an Urban Karst Lake

First Author: Rachel Kaiser
Co-author: James Shelley
Western Kentucky: University

Is aboveground pathogen load influenced by belowground pathogen presence, plant community
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<td><strong>Exploring the impact of body size variation on trophic cascades using mole salamanders (Ambystoma talpoideum)</strong></td>
<td>Robin Baker</td>
<td>Cy Mott</td>
<td>Katelyn May</td>
<td>Howard Whiteman</td>
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<td><strong>Ability of Bald Cypress (Taxodium distichum) to enhance aquatic structure in backwater embayments of reservoirs</strong></td>
<td>Christy Soldo</td>
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</table>
Dose of a plant-derived volatile cue affects Arabidopsis thaliana defense phenotypes

First Author
Sarah Bissmeyer
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Grace Freundlich
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Season fluctuations in Ambystoma barbouri eDNA in central Kentucky streams.

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Caterpillar Predation Rates Across an Urban-Suburban Gradient

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Proliferation of Zebra Mussels (Dreissena polymorpha) in Kentucky Lake during 2017

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Co-author
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Co-author
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Co-author
Susan Hendricks

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<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author 1</th>
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<td>Detection of Percopsis omiscomaycus (trout-perch) using eDNA in eastern Kentucky streams.</td>
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<td>Harold Brabon</td>
<td>David Eisenhour</td>
<td>Brooke Washburn</td>
<td>Lynn Eisenhour</td>
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<td>Ben Brammell</td>
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<td>Ant tarsal adhesion on oak leaves differing in trichome density</td>
<td>Keegan Thompson</td>
<td>Alyssa Stark</td>
<td>Steve Yanoviak</td>
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<td>Villanova University</td>
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<td>Body Size of Leaf-Carrying and Hitchhiking Leafcutter Ants in a Tropical Forest</td>
<td>Virginia Nunamaker</td>
<td>Chris Nunamaker</td>
<td>Steve Yanoviak</td>
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<td>Assessing the diet of Perimyotis subflavus and Nycticeius humeralis bats before and after the occurrence of WNS</td>
<td>Summer Wheeler</td>
<td>Amie Towery</td>
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<td>Health of the Lee Branch on the Midway University Campus: Biological stream assessments and stream habitat assessments</td>
<td>John Delfino</td>
<td>Guipsy Lopez</td>
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<td>Midway University</td>
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<td>Relationship between fish biomass and eDNA in central Kentucky streams.</td>
<td>Ramon Guivas</td>
<td>Kyle Laufenburger</td>
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Effects of Roundup on Feeding Behavior of Larval Blue Dashers, Pachydiplax longipennis.

133.

First Author: Kayleen Parker
Murray State University

Co-author: Claire Fuller

Assessing Mussel Condition and Potential Dam Impact on the Green River, KY

134.

First Author: Lauren Mayton
Campbellsville University

Herbivory rates of Amazonian melastomes are unaffected by the presence of domatia-inhabiting ants

135.

First Author: Jeffrey Fox
University of Louisville

Co-author: Chris Frost
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Co-author: Steve Yanoviak
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Honeysuckle leaf blight causes a growth decline in Amur honeysuckle seedlings

136.

First Author: Onyinye Uwolloh
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Co-author: Sarah Farrar
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Co-author: Kimberly Wolfe
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Co-author: Steven Castellano
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Friday, November 3, 2017 5:00pm - 8:00pm

Posters: Engineering

Curris Center

Chair: Aaron Daley

Secretary: Shen Liu

Green Roofs: Synergistic Benefits to Energy and Environmental Building Design

39.

First Author: Emery Ginger
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Automated Control System For Photo-bioreactor

40.
Biomass Stove Design Project: Automated Fuel Feeder System

41.

First Author
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Constantine Botimer
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Integrated Computational Design of Tunable 3D CNT/Graphene Hybrid Nanomaterials

42.

First Author
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Quantification of Cast Aluminum Pores using MATLAB (by Rayens, N., Cai, P., and Zhai, T.)

43.

First Author
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Friday, November 3, 2017 5:00pm - 8:00pm

Posters: Geography

Curris Center

Chair: Buddhi Gyawali

Secretary: Christopher Day

Comparing Vegetation Index and Classification methods for detecting agriculture conservation practice using Landsat imag

44.

First Author
Kenneth Hancock
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Unmarked Burial Identification at the Frankfort, KY Cemetery using Ground Penetrating Radar and LIDAR data

45.

First Author
Land Cover Change Assessment in Five Major Watersheds of Central Kentucky

First Author
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Variability of Soil Organic Carbon Storage in Alluvial Landforms: A Case Study from Western Kentucky

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LATE HOLOCENE PALEOFLOOD DEPOSITIONAL SEQUENCES: MIDDLE TENNESSEE RIVER VALLEY, USA

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SITE FORMATION OF THE MIDDLE PLEISTOCENE FARRE ARCHAEOLOGICAL SITE, NORTHERN KENYA

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First Author
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An Automatic Segmentation Method for the Thigh Muscles and Adipose Tissue of Spinal Cord Injured Patients

137.
First Author
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Demographic/occupational/tumor characteristics & extent of metastasis melanoma patients diagnosed in Florida, 1996-2010

138.
First Author
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Co-author
Shasa Hu
University of Miami, Miller College of Medicine

Co-author
Tony Brown
USAT College of Medicine & graduate School

Effect of select phytochemicals on salivary and urinary pH

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<td>First Author: Ralphiel Payne</td>
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<td>Co-author: Sydney Leisure</td>
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<th>Examining the Expression and Function of Septin Proteins in Human Pancreatic Cancer Cells</th>
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<th>Health Impact of a Shared Use Path in Rural Appalachia: A Pilot Study</th>
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<th>Immunogenicity of Novel Vaccines for Hepatitis C Virus</th>
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<td>First Author: Donniesha Mason</td>
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<td>Northern Kentucky University</td>
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<td>Vanderbilt University</td>
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146.
First Author
Manoj Pathak
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Co-author
Cindy Austin
Trauma & Burn Research, Mercy Hospital
Co-author
Simon Thompson
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Urinary 8-OHdG as a Non-Invasive Biomarker of Oxidative Stress in Metabolic Syndrome (MetS)
147.
First Author
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Co-author
Rachel Tinius
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Using engineered zinc finger proteins to detect pathogen-specific DNA
148.
First Author
Bisola Asaolu
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Co-author
Avinash Tope
Kentucky State University

Zinc, Dietary Fat, and Sex have Interacting Influences on BTBR Mice in the Open Field Test
149.
First Author
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Co-author
Nicholas Mellen
University of Louisville

Friday, November 3, 2017 5:00pm - 8:00pm
Posters: Microbiology
Curris Center
Chair: Lingyu Huang
Secretary: Joseph Mester

Inactivation of Fungal Spores with Heat and UVC
150.
First Author
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Co-author
Sarah Goodrich
Northern Kentucky University
Co-author
Mitchel Lange
Northern Kentucky University
Co-author
Zadah Coy
Northern Kentucky University
Co-author
Joseph Mester
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<td>Brittany Farnsley</td>
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<td>Production of hydrogen peroxide as a virulence factor by Mycoplasma</td>
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<td>mycoides subspecies capri</td>
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<td>The Prevalence of Bacteria Resistant to Vancomycin and Colistin in</td>
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<td>Doug Krauth</td>
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<td>Deborah Yoder-Himes</td>
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<td>Paul Himes</td>
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<td>Extraction and Elucidation of Active Compounds in Antimicrobial</td>
<td>Zaria Elery</td>
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<td>Northern Kentucky University</td>
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<td>Producing Isolates</td>
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SURVEY OF VANCOMYCIN- AND COLISTIN-RESISTANT BACTERIA IN ENVIRONMENTAL WATER SAMPLES ACROSS LOUISVILLE
Non-pathogenic Neisseria sicca ATCC 29256 undergoes natural transformation

The Toxic Effects of Chemically Synthesized and Biologically Fabricated Gold Nanoparticles on Caenorhabditis elegans

Targeting Proteolytic Activity using protease inhibitors as natural therapeutics for human metapneumovirus (HMPV)

Comparison of Period Finding Techniques to Identify RR Lyrae Stars
Electromagnetic Wave Motion Around a Black Hole

First Author: Amanda Manning
Co-author: Sharmanthie Fernando
Northern Kentucky University

Analyzing Color Relations for RR Lyrae in KELT

First Author: Logan Hicks
Co-author: Connor Edwards, Tyler Labree, Matthew Buelsing, Nathan De Lee
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Gold and Silver Nanoparticles Decorated Graphene as ‘smart’ Surface Enhanced Raman Scattering (SERS) Platforms

First Author: Alexander Banaszak
Co-author: Tyler Smith, Sanju Gupta
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Large-Area Graphene Membranes and Mesoporous Deionization Electrodes for Water Desalination

First Author: Alex Henson
Co-author: Brendan Evans, Sanju Gupta
WKU Department of Physics and Astronomy

Nanoparticles-grafted functionalized graphene coated with nanostructured polyaniline layered nanocomposites as high-perf

First Author: Romney Meek
Co-author: Sanju Gupta
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Surface Functionality Of Graphene-family Nanomaterials On Electronic And Phononic Properties For Applied Electrochemistr
Systematic Study of the Effects of Incorporation of Carbon Nanotubes into the GexSe1-x Glass System

The Study of Light Paths Around Black Holes

An improved, 'green' tetramethylbenzidine-based assay for the quantification of hemoglobin

Developing TALE proteins as a sensor for detecting pathogens

Examining the role of muscarinic acetylcholine receptors in regulation of larval Drosophila melanogaster feeding and locomotion
Identification of a Drosophila melanogaster model to explore O-GlcNAc signaling

First Author: Emily Altman
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Co-author: JoBeth Bingham
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Co-author: Dr. Lewis Watson
University of Pikeville

Inhibition of PDE4 fails to reverse behavioural deficits induced by muscarinic receptor blockage

First Author: Samuel Case
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Co-author: Ilsun White
Morehead State University

Investigating Potential Mechanisms of Clove Oil (Eugenol) in Model Systems

First Author: Elizabeth Grau
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Co-author: Danielle Cantrell
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Co-author: Samantha Eversole
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Co-author: Robin Cooper
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Investigating the Synergistic Effects of Two Curcuminoids and Cisplatin on Cancer Cell Migration and ROS Release

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Co-author: Matthew Millay
Western Kentucky University

Co-author: Jerry Monroe
Western Kentucky University

Co-author: Michael Smith
Western Kentucky University

Co-author: Jerry Monroe
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Co-author: Michael Smith
Western Kentucky University

Pharmacological identification of cholinergic receptor subtypes in Drosophila

First Author: Eashwar Somasundaram
University of Kentucky

Co-author: Aya Omar
University of Kentucky

Co-author: Cole Malloy
NIH

Co-author: Robin Cooper
University of Kentucky

MK-801, a NMDA antagonist, reverses scopolamine-induced behavioral deficits.

First Author: Elizabeth Collins
Morehead State University

Co-author: Sami Case
Morehead State University

Co-author: Brianna Ward
Morehead State University

Co-author: Ilsun White
Morehead State University

Co-author: Sami Case
Morehead State University

Co-author: Brianna Ward
Morehead State University

Pharmacological identification of cholinergic receptor subtypes in Drosophila

First Author: Eashwar Somasundaram
University of Kentucky

Co-author: Aya Omar
University of Kentucky

Co-author: Cole Malloy
NIH

Co-author: Robin Cooper
University of Kentucky
The effects of a ketogenic diet on behavior and synaptic transmission in a Drosophila model.

First Author
Alex Stanback
University of Kentucky

Co-author
Hunter Maxwell
uky

First Author
Clare Cole
uky

Co-author
Katherine Johnson
uky

Co-author
Jenni Ho
uky

Co-author
La Shay Byrd
uky

Co-author
Samantha Danyi
uky

Co-author
Sushovan Dixit
uky

Co-author
Madan Subheeswar
uky

Co-author
Maddie Stanback
uky

Friday, November 3, 2017 5:00pm - 8:00pm

Posters: Psychology
Curris Center

Can nicotine improve scopolamine-induced behavioral deficit?

First Author
Brianna Ward
Morehead State
University

Co-author
Elizabeth Collins
Morehead State
University

Co-author
Ilsun White
Morehead State
University

Betta fish spontaneously use the combination of numerosity and surface area during discrimination learning

First Author
Alicia Bedolla
Berea College

Co-author
Evelyne Rivera Perez
Berea College

Co-author
Joseph Barger
Berea College

Co-author
Jasmine Roman
Berea College

Co-author
Sarah Jones
Berea College

What influences recognition of emotion among college students

First Author
Shannon Mapes
Morehead State
University

Co-author
Suzanne Savard
Morehead State
University

Co-author
Ilsun White
Morehead State
University

Co-author
Kinetta Crisp
Morehead State
University

Dual-task methodology: The use of video games as a surrogate for traditional laboratory tasks

180.
Implicit Gender Bias, Commercials, and Cooperation.

First Author
Rick Holland
Berea College

Let's Face It: The Effects of Disclosure Type and Modality on Student Comfort

First Author
Caitlin Taulbee
Berea College

Maternal reflective functioning and dyadic synchrony

First Author
Madison Raymer
Megan Conn
Morehead State University

Maternal trauma and parenting sensitivity: Implications for attachment-based interventions

First Author
Ashley Hamm
Madison Raymer
Dr. Shari Kidwell
Morehead State University Psychology Department
Morehead State
University Psychology Department

The Effect of Noise, Intention, and Time of Day on Memory

First Author
Alicia Bedolla
Berea College

Affect Perseverance or Affect Momentum?
### Posters: Science Education

<table>
<thead>
<tr>
<th>Title</th>
<th>First Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The POGIL Approach to Teaching</td>
<td>Lucas Collett</td>
</tr>
<tr>
<td>Using the POGIL Approach in Non-Stem Disciplines</td>
<td>Miguel Valdes, Megan Hoffman, Lucas Collet</td>
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<tr>
<td>Preparing K-8 teachers to utilize learning progressions to teach properties of materials</td>
<td>Martin Brock, Alexandra Stanback, Tristan Donovan, Priscilla Boachie, Brendon Stockwell, Carly Ballinger-Boone, Emma Higgins, Meaghan Labarre, Alexa Larson</td>
</tr>
</tbody>
</table>

### Posters: Zoology

<table>
<thead>
<tr>
<th>Title</th>
<th>First Author(s)</th>
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<tbody>
<tr>
<td>Dietary effects on behaviors for Drosophila: behaviors, survival and physiological responses.</td>
<td>Maddie Stanback, Alexandra Stanback, Tristan Donovan, Priscilla Boachie, Brendon Stockwell, Carly Ballinger-Boone, Emma Higgins, Meaghan Labarre, Alexa Larson</td>
</tr>
</tbody>
</table>
Characterization of mating behaviors and risk of cannibalism in Tigrosa georgicola wolf spiders

First Author
Talon Garman
Murray State University

Co-author
Laura Sullivan-Beckers
Murray State University

Bat Call Monitoring Study and Discrimination Between Species in Taylor County, Kentucky

First Author
Katherine Cappel
Campbellsville University

Comparing inner ear morphologies of globicephaline (Odontoceti: Delphinidae: Globicephalinae) dolphins

First Author
Abigail Glass
Murray State University

Co-author
Rachel Racicot
Vanderbilt University

Co-author
Michelle Casey
Murray State University

Co-author
Simon Darroch
Vanderbilt University

Heritable Behavioral Tendencies of the African Lion

First Author
Natalie Mercer
Kentucky Wesleyan College

Co-author
Shannon Finerty
Kentucky Wesleyan College

The Effect of Chemical Sympathectomy on Mouse Sleep Using Piezoelectric Technology

First Author
Benjamin Conkright
Western Kentucky University

Friday, November 3, 2017  8:30pm - 11:00pm

Biology Social

Corvette Lanes, 1415 Main St.

Biology Social: Let’s get to know each other a bit better.
Biologists of all disciplines (incl. students), join us for a round of bowling, arcade games, and/or drinks at Corvette Lanes (1415 Main St - in close walking distance). Half-price bowling specials for the first bowlers in line!

**Coffee & Tea**

Saturday, November 4, 2017 7:30am - 10:30am
Crows Nest, Curris Center

**Coffee & Tea**

Saturday, November 4, 2017 7:30am - 10:30am
Blackburn 2nd floor lobby

**Practice Room for Oral Presentations**

Saturday, November 4, 2017 7:30am - 12:00pm
Cumberland Room, Curris Center

**Practice Room for Oral Presentations**

Saturday, November 4, 2017 7:30am - 2:30pm
Tennessee Room, Curris Center

**Exhibitors tables**

Saturday, November 4, 2017 8:00am - 3:00pm
3rd floor of Curris Center

KBRIN (Kentucky Biomedical Research Infrastructure Network)

Kentucky Organization of Field Stations

University of Kentucky Chemistry Department
Characterization of Reagents Developed Against Two Basement Membrane Degraders in Drosophila melanogaster

8:00

First Author: Afolasayo Aromiwura  
Co-author: Ajay Srivastava  
Western Kentucky University  

Evaluation of endocrine pancreas development and maturation in glis3 mutant zebrafish (Danio rerio)

8:15

First Author: Dylan Hammrich  
Co-author: Gary ZeRuth  
Murray State University  

Using CRISPR/Cas9 to generate transgenic zebrafish to determine the expression pattern of glis3 during development

8:30

First Author: Tyler Hoard  
Co-author: Gary ZeRuth  
Murray State University  

Using RNA interference to identify the acp3U tRNA modification enzyme in higher eukaryotes

8:45
Pancreatic beta cell dysfunction mediated by down regulation of Glis3
9:00
First Author
Erin Clayton
Murray State University
Co-author
Gary ZeRuth
Murray State University

Hepatitis C virus entry inhibitor Aryloxazole modulates Autophagy
9:15
First Author
Jazmin Escamilla
Berea College
Co-author
Zongyi Hu
Liver Disease Branch, NIDDK-National Institute of Health
Co-author
Jake Liang
Liver Disease Branch, NIDDK-National Institute of Health

Exposure Effects of TiO2 Nanoparticles on the Growth and Physiology of Medicago truncatula
9:30
First Author
Ahmed Fadil
Western Kentucky University

PAM-1 aminopeptidase prevents neurodegeneration in Caenorhabditis elegans.
9:45
First Author
Brittani Hawkins
Murray State University
Co-author
Chris Trzepacz
Murray State University

Collagen IV homology in Nematostella vectensis and Homo sapiens and its implications of regeneration
10:15
First Author
Monica Moran
Vanderbilt University Division of Nephrology and Hypertension
Co-author
Billy Hudson
Vanderbilt University Division of Nephrology and Hypertension
Co-author
Vadim Pedchenko
Vanderbilt University Division of Nephrology and Hypertension

Effect of acute sleep fragmentation upon morphology and density of astrocytes in hippocampal and
An Examination of Epigenetic Factors and Methylation Patterns in Promoter Regions of AT1 and ACE
10:45
First Author
Dimond Shelton
Western Kentucky University
Co-author
Nancy Rice
Western Kentucky University
Co-author
Conner Hounshell
Western Kentucky University

Identifying Autophagy-induced phosphorylation sites on the Hsp70 molecular chaperone
11:00
First Author
Alexandria Szalanczy
Centre College
Co-author
Nitika Nitika
University of North Carolina at Charlotte
Co-author
Andrew Truman
University of North Carolina at Charlotte

Gene expression differences following early life exposure to polychlorinated biphenyls in three genotypes of mice
11:15
First Author
Yislain Villalona
Northern Kentucky University
Co-author
Kelsey Klinefelter
Northern Kentucky University
Co-author
Breann Colter
Northern Kentucky University
Co-author
Alexandra Dailey
Northern Kentucky University
Co-author
Christine Curran
Northern Kentucky University

Saturday, November 4, 2017  8:00am - 3:00pm

Oral Presentations: Ecology and Environmental Sciences
Curris Center Theatre

Chair: Maheteme Gebremedhin
Secretary: Roberta Challener
Section meeting to follow presentations at 2:30

Techniques in Carbon Footprinting: Achieving a Carbon Neutral Conference
8:00
First Author
Audrey Alexander
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
</table>
| 8:15   | Assessing the Carbon and Energy Balance of a Grazed Pasture in Central Kentucky Using the Eddy Covariance Method | First Author: Ian Ries  
Co-author: Leslie North  
Kentucky State University  
First Author: Elizabeth Malloy  
Co-author: David Brown  
Eastern Kentucky University  
First Author: Sait Sarr  
Co-author: Maheteme Gebremedhin  
Kentucky State University  
First Author: Meika Finger-Gray  
Co-author: Avinash Tope  
Kentucky State University  
First Author: Rose Marks |
| 8:30   | Comparison of the Kentucky Vegetation Index of Biotic Integrity (VIBI) to a rapid wetland condition assessment (KY-WRAM) | First Author: Elizabeth Malloy  
Co-author: David Brown  
Eastern Kentucky University  
First Author: Sait Sarr  
Co-author: Maheteme Gebremedhin  
Kentucky State University  
First Author: Meika Finger-Gray  
Co-author: Avinash Tope  
Kentucky State University  |
| 8:45   | Comparative Risk Evaluation of Commercially Available Organic and Conventional Fertilizers for Potential Bacterial Pathogens | First Author: Meika Finger-Gray  
Co-author: Avinash Tope  
Kentucky State University  
First Author: Sait Sarr  
Co-author: Maheteme Gebremedhin  
Kentucky State University  
First Author: Rose Marks |
| 9:00   | Interactive Effects of Animal Manure and Cover Crop Use in Improving Agricultural Soil Quality in Kentucky | First Author: Sait Sarr  
Co-author: Maheteme Gebremedhin  
Kentucky State University  
First Author: Meika Finger-Gray  
Co-author: Avinash Tope  
Kentucky State University  
First Author: Rose Marks |
| 9:15   | Genomics of dehydration tolerance in the liverwort, Marchantia inflexa | First Author: Rose Marks |
Policy communication and the Impact of Agricultural Communities on Karst Landscapes: An Example from Phong Nha-Kẻ Bàng

First Author
Elizabeth Willenbrink
Center for Human GeoEnvironmental Studies at WesternKentucky

Co-author
Leslie North
Center for Human GeoEnvironmental Studies at WesternKentucky

Co-author
Vu Thị Minh Nguyet
Institute of Geological Sciences, Vietnam

Co-author
Jason Polk
Center for Human GeoEnvironmental Studies at WesternKentucky

Development and Analysis of Avian Index of Biological Integrity for Kentucky Wetlands

First Author
Kaitlyn Kelly
Eastern Kentucky University

Co-author
David Brown
Eastern Kentucky University

Increased accuracy in population modeling using density-dependent Leslie matrices with steady-state distribution control

First Author
Bruce Kessler
Western Kentucky University

Co-author
Andrew Davis
Western Kentucky University

Prey Resource Partitioning Between Sympatric Bat Species

First Author
Macy Kailing
Murray State University

Co-author
Terry Derting
Murray State University

Co-author
Gary ZeRuth
Murray State University

Factors Affecting the Diversity of Stream Salamanders in Two Watershed Systems in Central Kentucky

First Author
Hannah Elliott
Berea College

Co-author
Munathar Alshimary
Berea College

Co-author
Rebecca Klem
Berea College

Co-author
Jeremy Wilde
Berea College

Co-author
Roy Scudder-Davis
Berea College

Plant-Derived Volatiles Alter Plant Fitness in a Species-Specific Manner

First Author

11:00
<table>
<thead>
<tr>
<th>Title</th>
<th>Time</th>
<th>First Author</th>
<th>Co-author</th>
<th>Institution</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory of seeds: Effect of plant volatile exposure to seeds on plant growth, development and defense across generations</td>
<td>11:15</td>
<td>Abhinav Maurya</td>
<td>Christopher Frost</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>Landscape Genetics of California Tiger Salamanders: Inferences from multiple methods</td>
<td>11:30</td>
<td>Samantha Thomas</td>
<td>Jarrett Johnson</td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>OCCUPANCY AND ALLOCHTHONY THRESHOLD RESPONSES OF PLETHODONTID STREAM SALAMANDERS TO STREAM CONDUCTIVITY</td>
<td>11:45</td>
<td>Jacob Hutton</td>
<td></td>
<td>University of Kentucky</td>
<td></td>
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<tr>
<td>A Study of Mercury in Bald Eagle Feathers and Quills</td>
<td>1:00</td>
<td>Wendy Cecil</td>
<td>Cate Webb</td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>Using Mobile Eye-Tracking to Inform the Development of nature tourism Destinations in Iceland</td>
<td>1:15</td>
<td>James Graham</td>
<td>Leslie North</td>
<td>Edward Hujbens</td>
<td>Elizabeth Willenbrink</td>
</tr>
<tr>
<td>Who’s the boss: Social dynamics associated with leadership in endangered Toque Macaques.</td>
<td>1:30</td>
<td></td>
<td></td>
<td>University of Akureyri</td>
<td>Western Kentucky</td>
</tr>
</tbody>
</table>
An examination of fish and macroinvertebrate succession patterns after restoration of a novel stream system
1:45
First Author
Patrick Vrablik
Murray State University
Co-author
Michael B. Flinn
Murray State University

Movement patterns of Silver Carp Hypophthalmichthys molitrix in Kentucky Lake
2:00
First Author
Timothy Spier
Murray State University
Co-author
Michael Flinn
Murray State University
Co-author
Jessica Morris
Kentucky Department of Fish and Wildlife Resources
Co-author
Neal Jackson
U. S. Fish and Wildlife Service
Co-author
Allison DeRose
Murray State University

Quantifying the Effects of Invasive Species on Fish Communities in Kentucky Lake: A Post-Invasion Approach
2:15
First Author
Bradley Hartman
Murray State University
Co-author
Timothy Spier
Murray State University

Saturday, November 4, 2017  8:00am - 11:30am
Oral Presentations: Physics and Astronomy
Blackburn 312

A Composite View of the Composite Supernova Remnant 3C 396 (G39.2-0.3)
8:00
First Author
Thomas Pannuti
Morehead State University

Chair: Troy Messina
Secretary: Marilyn Akins

Section meeting to follow presentations
<table>
<thead>
<tr>
<th>Title</th>
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<th>Co-author</th>
<th>Institution</th>
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</thead>
<tbody>
<tr>
<td>The CREAM instrument on the ISS</td>
<td>8:15</td>
<td>Scott Nutter</td>
<td></td>
<td>Northern Kentucky University</td>
<td></td>
</tr>
<tr>
<td>Matching Simulation Data to Calibration Data for the Silicon Charge Detector used in the ISS-CREAM Instrument</td>
<td>8:30</td>
<td>Carter Kring</td>
<td></td>
<td>Northern Kentucky University</td>
<td></td>
</tr>
<tr>
<td>Calibration of the CREAM Calorimeter with CERN Beam Tests</td>
<td>8:45</td>
<td>Tyler LaBree</td>
<td>Scott Nutter</td>
<td>Northern Kentucky University</td>
<td></td>
</tr>
<tr>
<td>Analysis of a Current-Mode Detector for the NOPTREX Experiment</td>
<td>9:00</td>
<td>Daniela Olivera</td>
<td>Danielle Schaper</td>
<td>University of Kentucky</td>
<td>Berea College</td>
</tr>
<tr>
<td>Josephson weak links with high characteristic voltage for THz radiation detection.</td>
<td>9:15</td>
<td>Luis Gomez</td>
<td></td>
<td>Northern Kentucky University</td>
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<tr>
<td>Investigation of the Kepler Eclipsing Binary Catalog: Analysis of Targets With UNC Flags</td>
<td>9:30</td>
<td>Garrison Turner</td>
<td></td>
<td>Big Sandy Community and Technical College</td>
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<tr>
<td>Streamlining Predictions of Temperature-Dependent Changes in Defect Properties of Intermetallic Compounds</td>
<td>9:45</td>
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</tr>
</tbody>
</table>
Swift Observations of the Narrow Line Seyfert 1 Galaxy RX J0134.2-4258
10:15
First Author
Sierra Hauck
Morehead State University
Co-author
Dirk Grupe
Morehead State University
Co-author
Anthony Dotson
Morehead State University

The “Hotter” Side of an X-Ray Tube
10:30
First Author
Ignacio Birriel
Morehead State University
Co-author
Joshua Allen
Morehead State University
Co-author
Anthony Dotson
Morehead State University

The Changing Look Active Galactic Nucleus IRAS 23226-3843
10:45
First Author
Dirk Grupe
Morehead State University

Understanding the Parameter Space of Keplerian Orbits in APOGEE
11:00
First Author
Nathan De Lee
Northern Kentucky University
Co-author
Kyle Houston
Northern Kentucky University
Co-author
Nicholas Troup
Salisbury University
Co-author
Joleen Carlberg
Space Telescope Science Institute

Redesign of Introductory Physics Labs Using Arduinos
11:15
First Author
Troy Messina
Berea College

Saturday, November 4, 2017  8:15am - 10:00am

Oral Presentations: Chemistry: Analytical & Physical
Blackburn 320

Chair: Harry Fannin
Secretary: Bommanna Loganathan

Section meeting to follow presentations

OIL DRIES A NEW ABSORBENT MATERIAL; FOR COLLECTING IGNITABLE LIQUIDS IN ARSON
Kinetic Modeling of Relevant Atmospheric Sulfur and Nitrogen Containing Compounds to Understand Particle Formation

First Author: Jesus Berlanga
Co-author: Matthew Nee
Co-author: Philip J. Silva
Institution: Western Kentucky University

Monitoring Photocatalytic Reactions Using Surface Enhanced Raman Spectroscopy

First Author: Ryan Lamb
Co-author: Matthew Nee
Institution: Western Kentucky University

The removal of organic pollutants through buoyant photocatalyst

First Author: Kayla Steward
Co-author: Matthew Nee
Institution: Western Kentucky University

Upconverting Luminescent Nanomaterials Produced Through Liquid-Phase Laser Ablation

First Author: Rosemary Calabro
Co-author: Dong-Sheng Yang
Co-author: Doo Young Kim
Institution: University of Kentucky

Oxidative stability of fish oil-in-water emulsions stabilized by protein-polysaccharide complexes: Effect of salt and pH

First Author: Mara Krempel
Co-author: Hayley Moss
Co-author: Khouryieh
Institution: Western Kentucky University

Temperature and electric field dependence of asymmetric stretching of nitrate ion
Oral Presentations: Agricultural Sciences
The Stables, Curris Center
1st floor

Chair: Jean Gumirakiza
Section meeting to follow presentations

Is Pawpaw Self-Compatible? Determining Compatibility and Its Impact on Fruit and Seed Set in North American Pawpaw
8:15

First Author
Srijana Thapa Magar
Co-author
Kirk Pomper
Co-author
Jeremiah Lowe
Co-author
Sheri Crabtree
Kentucky State
University
University
Kentucky State
University
Kentucky State
University

Enzymes as Indicators of Soil Microbial Activity at three Locations in Kentucky
8:30

First Author
GEORGE
ANTONIOUS
KENTUCKY STATE
UNIVERSITY

Assessing the nutritional value of novel soybean products in the diet of Atlantic salmon (Salmo salar L.)
8:45

First Author
James Schwartz
Co-author
Vikas Kumar
Co-author
Waldemar Rossi
Co-author
Katerina Kousoulaki
Kentucky State
University
Kentucky State
University
Kentucky State
University

Responses of juvenile largemouth bass (Micropterus salmoides) to dietary EPA and DHA rich oils
9:00

First Author
Amit Yadav
Co-author
Waldemar Rossi
Co-author
Hab Andemichael
Co-author
Vikas Kumar
Kentucky State
University
Kentucky state
University
Kentucky state
University
Kentucky State
university

Applicability of waste-reared Hermetia illucens as an ingredient in the diet of Nile Tilapia, Oreochromis niloticus
9:15
Comparing the Effects of Long-term No Till and Conventional Tillage on Soil Properties in Central Kentucky

9:30

<table>
<thead>
<tr>
<th>First Author</th>
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<tbody>
<tr>
<td>Emily Cook</td>
<td>Lin Handayani</td>
<td>Jessica Pafford</td>
<td>Steve Still</td>
<td>John Grove</td>
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<tr>
<td>Murray State</td>
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<td>Murray State</td>
<td>Murray State</td>
<td>University of Kentucky</td>
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<td></td>
<td>Mark Coyne</td>
<td>Ann Freytag</td>
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<td>University of Kentucky</td>
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Spotted wing Drosophila, Drosophila suzukii, larvae in blackberries bordered by native perennial plants or pasture

9:45

<table>
<thead>
<tr>
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<th>Co-author</th>
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<tbody>
<tr>
<td>Sathya Govindasamy</td>
<td>John Sedlacek</td>
<td>Karen Friley</td>
<td>E. Kyle Slusher</td>
<td>Mamata Bashyal</td>
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<td>Megan McCoun</td>
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<td>University of Kentucky</td>
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Comparing the abundance of beneficial insects in blackberry plots bordered by native perennial plants and pasture and sp

10:00

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<td>Mamata Bashyal</td>
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Optimizing Hemp Production through Cultivar Selection and Soil Management Practices

10:30

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<tbody>
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<td>Rose Johnson</td>
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</tbody>
</table>
An Assessment of Nutritive Value and Optimization of Soybean Meal-Based Diets for Largemouth Bass

10:45

First Author
Gagan Kolimadu
Kentucky State University

Co-author
Jarod Jones
Kentucky State University

Co-author
Kristy Allen
Kentucky State University

Co-author
Waldemar Rossi
Kentucky State University

Co-author
Michael Habte-Tision
Kentucky State University

Co-author
Vikas Kumar
Kentucky State University

ANTIBIOTIC SUSCEPTIBILITIES OF BACTERIA ISOLATED FROM THE SAME FISH IN CASES EXAMINED AT THE KENTUCKY STATE UNIVERSITY

11:00

First Author
Ashmita Poudel
Kentucky State University

Co-author
Kathryn Mitchell
Kentucky State University

Co-author
Robert Durborow
Kentucky State University

Investigating the Impact of Low-Cost Organic Fertilizers on Tomato Yield

11:15

First Author
Lusekelo Nkuwi
Kentucky State University

Co-author
George Antonious
Kentucky State University

Co-author
Eric Turley
Kentucky State University

Evaluation of Density in a Live Holding System for Food Size Channel Catfish, Ictalurus punctatus

11:30

First Author
Sujan Bhattarai
Kentucky State University

Co-author
Ken Semmens
Kentucky State University

Co-author
Vikas Kumar
Kentucky State University

Are Online Shoppers Aware and/or Interested In Learning About Direct-To-Consumer Market Outlets?

1:00

First Author
JEAN DOMINIQUE GUMIRAKIZA
Western Kentucky University

Co-author
Stephen King
Western Kentucky University

Co-author
Thomas Kingery
Western Kentucky University

As online shopping becomes popular, will consumers still be interested in direct-to-consumer offline market outlets?

1:15
Analyzing the Effects the use of Best Practices for Farm Management has on Farm Financial Position and Profitability

1:30

First Author
Audrey Barnett
Western Kentucky University

Co-author
Dominique Gumirakiza
Western Kentucky University

EVALUATION OF TWO SALT APPLICATIONS FOR HOLDING LARGEMOUTH BASS Micropterus salmoides FOR MARKETING AS A FOOD FISH

1:45

First Author
Thomas Mason
Kentucky State University

Co-author
Ken Semmens
Kentucky State University

Evaluation of Microbial Quality of Agricultural Water from Small Farms in Kentucky

2:00

First Author
Shreya Patel
Kentucky State University

Co-author
Avinash Tope
Kentucky State University

Oral Presentations: Geography

Mississippi Room, Curris Center

Chair: Buddhi Gyawali
Secretary: Christopher Day
Section meeting to follow presentations

Assessment of Vegetation Cover Change and Water Quality in Coal Mine Watersheds

8:30

First Author
Oguz Sariyildiz
Kentucky State University

Co-author
Buddhi Gyawali
Kentucky State University

Identification of Unmarked Burial Sites at Frankfort Cemetery using LiDAR and Ground Penetrating Radar
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
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<tbody>
<tr>
<td>8:45</td>
<td>The Urban Heat Island: Environmental Change and the Human Condition in Detroit Michigan</td>
<td>D’Andre Garrison</td>
<td>Jarod Jones</td>
<td>Jordan Wilson</td>
<td>Jeremy Sandifer</td>
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<td>Jeremy Sandifer</td>
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<td>Tori Farrow</td>
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<td>Networks of Sustainability within the Iceland Whale Watching Industry</td>
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<td>9:15</td>
<td>Jason Fox</td>
<td>Leslie North</td>
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<td>9:30</td>
<td>Predicting the Adoption of Sustainable Agricultural Practices among Kentucky Farmers and Its Barriers</td>
<td>First Author</td>
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<td>Bijesh Mishra</td>
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<td>10:15</td>
<td>Association of land cover change trend with land ownership size at parcel level data in Breckinridge County, KY</td>
<td>First Author</td>
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<td>Exploring Relationship between community Perception and landscape change in the Eastern Kentucky</td>
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<td>Land Cover Classification using LandSat, NAIP images, and Accuracy enhancements</td>
<td>First Author</td>
<td>Co-author</td>
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</tbody>
</table>
Modeling and Evaluating the Influences of Class V Injection Wells on Urban Karst Hydrology

10:45

First Author
James Shelley
Western Kentucky University

Co-author
Jason Polk
Western Kentucky University

Co-author
Leslie North
Western Kentucky University

Co-author
Nicholas Crawford
Western Kentucky University

Co-author
Matt Powell
City of Bowling Green Department of Public Works

Risk analysis of bedrock collapse sinkholes in Bowling Green, Kentucky

11:00

First Author
Patricia Kambesis
Western Kentucky University

Co-author
Brittany Moore-Kimmel
Texas State University

Estimating the Approximate Age of Unmarked Burial Sites in The Frankfort Cemetery using Spatial Interpolation

11:15

First Author
Jordan Wilson
Kentucky State University

Co-author
Jeremy Sandifer
Kentucky State University

Co-author
Kenneth Bates
Kentucky State University

Oral Presentations: Geology
Blackburn 228

Saturday, November 4, 2017 9:00am - 11:00am

Morphological Analysis of Astarte (Class: Bivalvia) using Geometric Morphometrics

9:00
Geochemical characteristics and storm dynamics of surface waters and groundwater at Eastern Kentucky University's Meadow

9:15
First Author
Randal Roberson
Murray State
University
Co-author
Michelle Casey
Murray State
University

Patterns of nutrient export for a typical non-point source, Meadowbrook Farm, Madison County, Kentucky.

9:30
First Author
Reid Buskirk
Eastern Kentucky
University
Co-author
Walter Borowski
Eastern Kentucky
University
Co-author
Jonathan Malzone
Eastern Kentucky
University

How Does Spatial Heterogeneity Influence Groundwater Flow on Ridgetops in Kentucky’s Daniel Boone National Forest?

10:00
First Author
Selsey Stribling
Eastern Kentucky
University
Co-author
Jonathan Malzone
Eastern Kentucky
University

Modeling the groundwater storage and the groundwater recharge rate of an ephemeral wetland with Hydrus-1D

10:15
First Author
Addison Bell
Eastern Kentucky
University
Co-author
Jonathan Malzone
Eastern Kentucky
University

Hydrograph Separation of Storm Flows in a Landscape with Thin Soil, Meadowbrook Farm, KY

10:30
First Author
Laura Kelley
Eastern Kentucky
University
Co-author
Sophia Chan
Eastern Kentucky
University
Co-author
Jonathan Malzone
Eastern Kentucky
University
Co-author
Walter Borowski
Eastern Kentucky
University

Runoff generation in an ephemeral agricultural watershed with thin soil

10:45
Saturday, November 4, 2017  9:00am - 11:15am

Oral Presentations: Psychology  
Blackburn 155

Section meeting to follow presentations

**Staying behind: The effect of stereotype threat on unhelpful perseverant behaviors.**  
9:00

**First Author**  
Aaron Clark  
*Berea College*

**Co-author**  
Dave Porter  
*Berea College*

**Breaking the Prejudice Habit: A Longitudinal Assessment of Reducing Implicit Racial Bias**  
9:15

**First Author**  
Laura Hopkins  
*Centre College*

**Co-author**  
Nicole Stumpp  
*Centre College*

**The Effects of Gender, Task Difficulty, and Emotional Arousal on Perceptual Sensitivity**  
9:30

**First Author**  
Enkhjin Enkhbold  
*Berea College*

**Children's emotion understanding and regulation: Links with psychological symptoms**  
9:45

**First Author**  
Karina Cole  
*Morehead State University*

**Co-author**  
Ashley Hamm  
*Morehead State University*

**Co-author**  
Shari Kidwell  
*Morehead State University*

**Initial Validation of the Hexaflex Process Assessment Instrument.**  
10:15

**First Author**  
Aaron Ellis  
*Morehead State University*

**Co-author**  
John Blackledge  
*Morehead State University*

**Co-author**  
Shelby Humphrey  
*Morehead State University*

**Co-author**  
Kellen Crager  
*Morehead State University*

**Co-author**  
Isabella Gearhart  
*Morehead State University*

**Co-author**  
Rebecca Ashley  
*Morehead State University*
### The Association of Parents' Emotion Philosophy with Adolescents' Mindful Approach to Affect.

**10:30**  
**First Author:** Joseph Reese  
**Co-author:** Mary Blanton  
**University:** Morehead State University  
**Co-author:** Ashley Ball  
**University:** Morehead State University  
**Co-author:** Kory Phelps  
**University:** Morehead State University  
**Co-author:** Shari Kidwell  
**University:** Morehead State University

### What does your Tinder profile say about you? Correlates of Tinder profile features and extroversion

**10:45**  
**First Author:** Hunter Gatewood  
**Co-author:** Lynn Haller  
**University:** Morehead State University

### Peer Mentoring Circles for Women STEM Faculty at Murray State University

**11:00**  
**First Author:** Maeve McCarthy  
**Co-author:** Paula Waddill  
**University:** Murray State University  
**Co-author:** Robin Zhang  
**University:** Murray State University  
**Co-author:** Echo Wu  
**University:** Murray State University  
**Co-author:** Steve Cobb  
**University:** Murray State University  
**Co-author:** Robin Zhang  
**University:** Murray State University  
**Co-author:** Echo Wu  
**University:** Murray State University  
**Co-author:** Steve Cobb  
**University:** Murray State University

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**Saturday, November 4, 2017  9:00am - 11:00am**  
**Oral Presentations: Science Education**  
**Blackburn 249**

**Chair:** Shira Rabin  
**Secretary:** Karen Hlinka  
Section meeting to follow presentations

**Data Mining in Astronomy Using Exoplanet Data from the Space and Ground-based Telescopes**  
**9:00**  
**First Author:** Joseph Erskine  
**Co-author:** Jordan Dowdy  
**University:** Bellarmine University  
**Co-author:** Stephen Denny  
**University:** Bellarmine University  
**Co-author:** M Saleem  
**University:** Bellarmine University  
**Co-author:** Akhtar Mahmood  
**University:** Bellarmine University
Characterizing Epistemic Beliefs Among Scientists: Applying the Q-Method to Science Epistemology
9:15
First Author
Katherine Ray King
University of Louisville
Co-author
Linda Fuselier
University of Louisville
Co-author
Justin McFadden
University of Louisville

Hearing eclipses: Making astronomy events accessible to visually-impaired students.
9:30
First Author
Wilson Gonzalez-Espada
Morehead State University
Co-author
Laura Parker
Kentucky School for the Blind
Co-author
Adam Stockhausen
Kentucky School for the Blind
Co-author
Wanda Diaz-Merced
Office of Astronomy for Development
Co-author
Allyson Bieryla
Dept. of Astronomy, Harvard University
Co-author
Robert Hart
Dept. of Physics, Harvard University
Co-author
Daniel Davis
Natural Sciences Lecture
Demonstrations, Harvard University

Should We Lie To Our Students?
10:00
First Author
Andy Martin
Kentucky state University

Adaptive Learning Courseware in Majors Biology Course
10:15
First Author
Shira Rabin
University of Louisville

Strengthening Student Foundations: Strategies for Active-Learning Classrooms
10:30
First Author
Kevin Revell
Murray State University

LOW-COST STUDENT RESEARCH IN A NON-MAJORS BIOLOGY LABORATORY CLASS
10:45
First Author
Norm Strobel
KCTCS/Blugrass Community and
**Technical College**

Saturday, November 4, 2017  9:30am - 10:30am

## Breaks

Staggered in sessions - check schedule

Saturday, November 4, 2017  10:00am - 11:15am

## Oral Presentations: Engineering

Ohio Room, Curris Center

Chair: Aaron Daley  
Secretary: Shen Liu

Section meeting to follow presentations

<table>
<thead>
<tr>
<th>Characterization of Mechanical Properties of 3D Printed Thermoplastic Parts</th>
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<td><strong>First Author</strong></td>
<td>Jordan Garcia</td>
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<td><strong>University of Kentucky</strong></td>
<td>Tyler Stoffel</td>
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<td>David Lu</td>
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<td>Charles Lu</td>
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<th>Imaging of the spinal cord in pediatric patients.</th>
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<td><strong>First Author</strong></td>
<td>Bhavesh Ramkorun</td>
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<td>Samantha By</td>
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<td>Aashim Bhatia</td>
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<td>Bryson Reynolds</td>
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<td>Patrick Couture</td>
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<td>Institute of Imaging Science</td>
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<td>Medical Center</td>
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<td><strong>Institute of Imaging Science</strong></td>
<td>Seth Smith</td>
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<th>Hands-on Robotics Lab at Bellarmine University</th>
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<td><strong>First Author</strong></td>
<td>Christopher Steitz</td>
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<td><strong>Bellarmine University</strong></td>
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| Flaw Characterization through Nonlinear Ultrasonics and Wavelet Cross-Correlation Algorithms | 10:45 |
Novel Approach of Wavelet Analysis for Nonlinear Ultrasonic Measurements and Fatigue Assessment of Jet Engine Components

Saturday, November 4, 2017 12:00pm - 1:00pm

Mentor-Matching

Mentor matching: Looking for a future graduate advisor?
If you are a biology undergraduate/graduate student and looking for a future biology advisor for your M.S. or Ph.D., please come to Winslow dining on Saturday at lunch time. Biology faculty who are interested in recruiting students will be present in the cafeteria (look for signs on the tables) and will be happy to talk to you about possibilities in their labs.

Saturday, November 4, 2017 1:00pm - 2:45pm

KAS-KCTCS Science Faculty meeting

An annual meeting of KCTCS Science faculty. A general meeting of all disciplines is followed by break-out meetings for faculty in Biology, Chemistry, and Physics. Breakouts will be in Blackburn 249 and 320.

Saturday, November 4, 2017 1:00pm - 1:15pm

Oral Presentations: Botany

Mississippi Room, Curris Center

Chair: Lawrence Alice  Secretary: Maggie Whitson

Botany and Zoology Section meetings to follow presentations, at 2:30
Far-Red light can induce sex structure development in the liverwort Marchantia inflexa Nees et Mont.

Saturday, November 4, 2017 1:00pm - 2:30pm

**Oral Presentations: Chemistry: Organic/Inorganic**

Chair: Kevin Revell  
Secretary: Kyle Watson

Section meeting to follow presentations

**A general fabrication approach on spinel MCo2O4 (M= Co, Mn, Fe, Mg and Zn) submicron prisms as advanced positive materia**

1:00

*First Author*  
Hongyan Gao  
CHEMISTRY DEPARTMENT, WESTERN KENTUCKY UNIVERSITY

*Co-author*  
Yan Cao  
CHEMISTRY DEPARTMENT, WESTERN KENTUCKY UNIVERSITY

**Chemical and photo generation of high-valent manganese-oxo porphyrins**

1:15

*First Author*  
Mike Winchester  
Western Kentucky University

**Multiple Oxidation Pathways for Photo-generated Manganese(V)-Oxo Corroles**

1:30

*First Author*  
Ngo Fung Lee  
Western Kentucky University

**Recent Progress in the Investigation of the Bonding and Electronic Structure in Metal Chalcogenide Complexes**

1:45

*First Author*  
Jessie Brown  
Transylvania University

*Co-author*  
Amelia Dickey  
Transylvania University

*Co-author*  
Elias Hanna  
Transylvania University

*Co-author*  
Christopher Samaan  
Transylvania University

*Co-author*  
Hannah Williams  
Transylvania University
The Synthesis of Heteroatom-activated Antibiotics: β-lactams

2:00

First Author
Jacob Nanney
Kentucky Wesleyan

Co-author
Kyle Watson
Kentucky Wesleyan

Visible Light Generation of High-Valent Iron-Oxo Intermediates

2:15

First Author
Malone Jonathan
WKU

Co-author
dharmesh Patel
WKU

Co-author
Tse-hong Chen
Purdue University

Co-author
Ka Wai Kwong
WKU

Oral Presentations: Health Sciences

Saturday, November 4, 2017 1:00pm - 1:30pm

Blackburn 155

Chair: Bruce Branan
Secretary: Avinash Tope

Section meeting to follow presentations

Determining a reference interactome for stable heart disease utilizing molecular structure for informed model selection

1:00

First Author
Patrick Trainor
University of Louisville

Co-author
Samantha Carlisle
University of Louisville

Co-author
Shesh Rai
University of Louisville

Co-author
Andrew DeFilippis
University of Louisville

Transcriptomics Evaluation of MDA-MB-231 Breast Cancer Cells Reveals NAT2 Transcript Production Following NAT1 Knockout

1:15

First Author
Samantha M. Carlisle
University of Louisville

Co-author
Patrick J. Trainor
University of Louisville

Co-author
Mark A. Doll
University of Louisville

Co-author
David W. Hein
University of Louisville

Oral Presentations: Mathematics

Saturday, November 4, 2017 1:00pm - 2:00pm

Blackburn 228

Chair: R. Douglas Chatham
Secretary: Andy Martin
Open Coverings of the Rationals Need Not Cover The Reals
1:00

First Author
Andy Martin
Kentucky State University

The Cubic Equation
1:15

First Author
Dwight Smith
Big Sandy CTC

A Perturbation Method for Determination of an Approximate Analytical Solution of a Nonlinear System of ODEs.
1:30

First Author
Austin Gabhart
Gatton Academy, Western Kentucky University

The n+k kings problem
1:45

First Author
R. Douglas Chatham
Morehead State University

Oral Presentations: Microbiology
Saturday, November 4, 2017 1:00pm - 1:45pm
Cumberland Room, Curris Center

Antimicrobial activity from bacteria found around downtown Cincinnati
1:00

First Author
Kory Stuessel
Northern Kentucky University
Co-author
John Carmen
Northern Kentucky University

Inhibition of Fungal Colony Growth by UVC
Emergence and divergence of influenza virus: A current perspective

First Author
Alexander Lai
Kentucky State University

Saturday, November 4, 2017 1:00pm - 2:00pm

Oral Presentations: Physiology and Biochemistry
Barkley Lecture Room, Curris Center

Chair: Michael Smith
Secretary: Julia Carter

Section meeting to follow presentations

Identification of tRNA modification enzymes in higher eukaryotes via primer extension

First Author
Justen Mamaril
Northern Kentucky University

Physiological Characteristics of Five Bladder Cancer Cell Lines

First Author
Kyle Damen
Wood Hudson Cancer Research Laboratory

Cell proliferation and Cathepsin L expression are inversely correlated during bladder cancer progression

1:30
The fluorescence quenching ability of graphene oxide as a platform for pathogenic double-stranded DNA sensing

Saturday, November 4, 2017  1:00pm - 2:00pm

Oral Presentations: Anthropology and Sociology
Ohio Room, Curris Center

Chair: Benjamin Freed
Secretary: Amanuel Beyin

Section meeting to follow presentations

LGBTQ+ Suicide: A review of the literature on social services for the queer community
1:00

First Author
Mason Gibson
Western Kentucky University

The Effects of Parental Guidance and Internet Use on Teenagers Experiencing Cyberbullying
1:15

First Author
Hannah Ridner
Western Kentucky University

Challenges and coping strategies of Chinese exchange students attending a university in Eastern Kentucky: A case study
1:30

First Author
Wilson Gonzalez-Espada
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<table>
<thead>
<tr>
<th>Title</th>
<th>Time</th>
<th>First Author</th>
<th>Co-author</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaria in the Prehistoric Caribbean: The Hunt for Hemozoin</td>
<td>1:45</td>
<td>Mallory Cox</td>
<td></td>
<td>University of Louisville</td>
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<td>Shifting Agriculture’s Effects on Lemurs in a Malagasy Gallery Forest</td>
<td>2:00</td>
<td>Benjamin Freed</td>
<td>Nathanael Bartosch</td>
<td>Eastern Kentucky University</td>
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<td>Cloud Computing for Hands-On Bioinformatics Education</td>
<td>1:15</td>
<td>Harrison Inocencio</td>
<td>Deavin Hester</td>
<td>University of Kentucky</td>
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<td>Adaptive Topic Mining from Social Media Streams</td>
<td>1:30</td>
<td>Gopi Chand Nutakki</td>
<td>Olfa Nasraoui</td>
<td>University of Louisville</td>
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<tr>
<td>BayesianGLasso: software for integrating a priori knowledge and empirical data utilizing a graphical model framework</td>
<td>1:45</td>
<td>Patrick Trainor</td>
<td>Andrew DeFilippis</td>
<td>University of Louisville</td>
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</table>
**Password cracking performance testing comparing GPU vs CPU performance using Hashcat**

First Author  
Deven Rataiczak  
*Bellarmine University*

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**Oral Presentations: Zoology**

**Mississippi Room, Curris Center**

**Chair:** Roy Scudder-Davis  
**Secretary:** Oliver Beckers

Botany and Zoology Section meetings to follow presentations

---

### Phenotypic plasticity of mating calls in the katydid Neconocephalus triops

**1:15**

First Author  
Oliver Beckers  
*Department of Biological Sciences, Murray State University*

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### Exploring selection on the complex mating displays of wolf spiders in the genus Tigrosa

**1:30**

First Author  
Samuel White  
*Murray State University*

Co-author  
Talon Garman  
*Murray State University*

Co-author  
Laura Sullivan-Beckers  
*Murray State University*

---

### Biology of the Cercaria of Leuceruthrus micropteri (Trematoda: Azygiidae) Recovered from the Snail, *Pleurocera semicarin*

**1:45**

First Author  
chi peng  
*Berea College*

Co-author  
Chi Peng  
*Berea College*

Co-author  
Hanna Abe  
*Yale University*

Co-author  
Ron Rosen  
*Berea College*

Co-author  
Brian Traw  
*Berea College*

Co-author  
Emma Reasoner  
*Berea College*

Co-author  
Marah Zeidan  
*Berea College*

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### Potential detection and utilization of substrate-borne vibrations by chameleons (*Chamaeleo calyptratus*).

**2:00**

First Author
Transcriptomic Response to Immune Challenge in Zebra Finch (Taeniopygia guttata) using RNA-seq.

First Author
Cassandra Scalf
Western Kentucky University

Co-author
Noah Ashley
Western Kentucky University

Saturday, November 4, 2017 2:30pm - 4:30pm
Coffee & Tea
Crow's Nest, Curris Center

Saturday, November 4, 2017 3:00pm - 4:00pm
Keynote Jeffrey Bennett: Communicating Science to the Public
Curris Center Ballroom

Jeffrey Bennett holds a B.A. in Biophysics from the University of California at San Diego and an M.S. and Ph.D. in Astrophysics from the University of Colorado at Boulder. He specializes in mathematics and science education, writing for and speaking to audiences ranging from elementary school children to college faculty. His extensive teaching experience, which spans all levels from preschool through graduate school, includes having founded and run a private science summer school for elementary and middle school children and teaching more than fifty college classes in astronomy, physics, mathematics, and education. He has received numerous awards for his teaching and writing, including the American Institute of Physics Science Communication Award.

Among his other major endeavors, Dr. Bennett served two years as a Visiting Senior Scientist at NASA Headquarters, where he was the first scientist hired within a science division specifically to leverage science missions for education. Working closely with NASA’s Education Division and teams working with the Hubble Space Telescope and other science missions, he was credited with helping bridge the cultural divide between education and science. In addition, he created the Initiative to Develop Education through Astronomy (originally IDEA, later called IDEAS), developed the Perspectives From Space concept (and creating its poster set) that was ultimately adopted as the global theme for International Space Year, and helped start the program known as Flight Opportunities for Science Teacher EnRichment (FOSTER), which flew teachers on the Kuiper Airborne Observatory and evolved to become the Airborne Astronomy Ambassadors program that now flies teachers on the SOFIA airborne observatory.

Perhaps his most visible achievements have been his work in developing educational scale models of the solar
system. He proposed the idea for and helped develop both the Colorado Scale Model Solar System (on the University of Colorado campus) and the Voyage Scale Model Solar System on the National Mall in Washington, DC. The Voyage model is now being replicated (through the Voyage National Program) in many other cities around the United States.

Saturday, November 4, 2017  4:00pm - 4:30pm
Reception and Presentation of 2017 Science Education & Outreach Award
Curris Center Ballroom

Saturday, November 4, 2017  4:15pm - 5:15pm
Symposium: Out in the Field: Experiences Communicating Science to the Public
Curris Center Ballroom

Moderator: Wilson Gonzalez-Espada

Featuring
• Dr. Jeffrey Bennett
• Kim Hunter, Chief Program Officer at the Kentucky Science Center
• Richard Gelderman, Professor of Physics at WKU, recipient of 2016 KAS Science Education & Outreach Award
• Robin Q. Zhang, Ph.D., Professor and Chair, Department of Geosciences, Murray State University
• David White, Commonwealth Endowed Chair, Professor, Biological Sciences & Director, Hancock Biological Station
• Gerry Harris, Hancock Biological Station, Murray State University
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2019