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
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.

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.

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

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
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  
Kentucky State University

Co-author  
waldemar Rossi  
Kentucky State University

Co-author  
Vikas Kumar  
Kentucky State University

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

62.

First Author  
Bernedette Chadwick  
Murray State University

Co-author  
Michael Mercer  
Murray State University

Co-author  
Bailey Webster  
Murray State University

Co-author  
Brandon Clark  
Murray State University

Co-author  
in Handayani  
Murray State University

Co-author  
Brian Parr  
Murray State University

Dehydration of autumn olive berries for human consumption

63.

First Author  
Changzheng Wang  
Kentucky State University

Co-author  
Lingyu Huang  
Kentucky State University

Co-author  
Cecil Butler  
Kentucky State University

Developing cold-hardy perennial ornamentals for Kentucky

64.

First Author  
Hideka Kobayashi  
Kentucky State University

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

65.

First Author  
Harry Franklin  
Murray State University

Co-author  
Duncan Thomas  
Murray State University

Co-author  
Connor Raymond  
Murray State University

Co-author  
Jacob Flemming  
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Co-author  
in Handayani  
Murray State University

Co-author  
Brian Parr  
Murray State University
Effects of fertilization on growth performance of lotus plants in containers
66.

First Author
Changzheng Wang
Kentucky State
University

Impact of Soil-Set®, Grain-Set®, and Liqui-Plex® Formulations on Hot Pepper Yield
67.

First Author
GEORGE ANTONIOUS
KENTUCKY STATE UNIVERSITY

Co-author
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Co-author
Eric Turley
Kentucky State University

Co-author
Quinn Heist
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Co-author
Thomas Trivette
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Lusekelo Nkuwi
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Co-author
Yogendra Upadhyaya
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Bjesh Mishra
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Yogendra Upadhyaya
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Kentucky State University

Online Shoppers; Who Attends Farmers' Markets, Who Does Not, and Why?
68.

First Author
Jean Dominique Gumirakiza
Western Kentucky University

Co-author
Thomas Kingery
Western Kentucky University

Co-author
Stephen King
Western Kentucky University

Soil Distinguishing Factors in Pasture and Irrigated Soils in Tennessee, Kentucky, and Illinois
69.

First Author
Spencer Fulkerson
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Co-author
joel reddick
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Blake Remmert
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Co-author
iin Handayani
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Brian Parr
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Soil Properties in Varying Crop and Non-Crop Areas of Calloway County, Kentucky
70.

First Author
Zack Eells
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Co-author
Canaan Wring
Murray State University

Co-author
Clay Smotherman
Murray State University

Co-author
Connor Moore
Murray State University

The Impact of Cropping Systems on Soil properties in Fredonia and Princeton Kentucky
71.
Yield of Eggplant Grown in Horse Manure and Vermicompost Amended Soil

First Author
Yogendra Upadhyaya
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Thomas Trivette
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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

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.
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<th>First Author</th>
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<td>Lee Kendall</td>
<td>Samuel White</td>
<td>Douglas Harrison</td>
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Identifying genetic modifiers in a Drosophila model of Inclusion Body Myopathy

83.

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<tr>
<td>Amber Follin</td>
<td>Kyla Britson</td>
<td>Tom Llyod</td>
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<tr>
<td>Biology Department, Berea College</td>
<td>Neuroscience and Neurology, Johns Hopkins Medicine</td>
<td>Neuroscience and Neurology, Johns Hopkins Medicine</td>
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FGF and RA signaling pathways interact during development of the Xenopus pharynx

84.

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<td>Sarah Kunkler</td>
<td>Emily Shifley</td>
<td>Kyla Britson</td>
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<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
<td>Neuroscience and Neurology, Johns Hopkins Medicine</td>
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The effect of benzo[a]pyrene on motor function in neonatal mice

85.

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<td>Katelyn Dunn</td>
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<td>Lisa Massie</td>
<td>Shelby Caudill</td>
<td>Pamela Dickson</td>
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<td></td>
<td>Nicholas Brinkman</td>
<td>Rachel Dempsey</td>
<td>Christine Curran</td>
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Role of autophagy-related protein Vps34 in the function of adipose tissues and interactions with the immune system

86.

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<td>Henry Kwan</td>
<td>Lan Wu</td>
<td>Luc Van Kaer</td>
<td>Luke Postoak</td>
<td>Margaret Sabourin</td>
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<td>Vanderbilt University Medical Center</td>
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Using gene expression to better understand macrophages' role in tissue regeneration

87.

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<td>Kendall Collins</td>
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KBRIN at University of Kentucky
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Co-author
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Visualizing Programmed Genome Arrangement in Live Sea Lamprey Embryos
88.
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Co-author
Jeremiah Smith
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Sex Specific Gene Control of Cardiac Fibrosis
89.
First Author
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Annotation of Spock and Inky Mycobacteriophages
90.
First Author
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Co-author
Jennifer Doyle
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Co-author
Moria Magre
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Direct detection of double-stranded DNA of Staphylococcus aureus using engineered zinc finger proteins
91.
First Author
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Barnabas Kim
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Co-author
Moon-Soo Kim
Western Kentucky University

Functional and genetic studies of the tRNA modification protein Trm732 in yeast
92.
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Daisy DiVita
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Co-author
Julia Ziebro
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Co-author
Michael Guy
Northern Kentucky University

Exploring Small Molecule Drugs Binding To Ribosomal Protein L11
93.
First Author
Swetaben Patel
University of Louisville
Co-author
Michal Hetman
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Co-author
Lukasz Slomnicki
University of Louisville

IDENTIFICATION OF SELECTIVE DDR1 KINASE INHIBITORS USING STRUCTURE ACTIVITY
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<td>Issac Domenech</td>
<td>Ambra Pozzi</td>
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<td>Vanderbilt University Medical Center</td>
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<td>Corina Borza</td>
<td>Craig Lindsley</td>
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<td>Daniel Jeffries</td>
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NADPH oxidase-derived ROS regulate TLR2 responses in mouse dendritic cells

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<th>First Author</th>
<th>Morgan Bahnsen</th>
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SOCS 1 Role In Manipulation of Neutrophil Signaling By Oral Pathogen, Filifactor alocis

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<th>Thomas Case</th>
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Quantifying Tetracycline resistance genes in swine waste anaerobic digester over a period of 100 days

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<th>First Author</th>
<th>Co-author</th>
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<td>Melanie Couch</td>
<td>Getahun Agga</td>
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<td>Western Kentucky University</td>
<td>ARS USDA</td>
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<tr>
<td><strong>Co-author</strong></td>
<td><strong>Co-author</strong></td>
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<td>John Loughrin</td>
<td>Rohan Parekh</td>
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<tr>
<td><strong>Co-author</strong></td>
<td><strong>Co-author</strong></td>
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<tr>
<td>Eric Conte</td>
<td>Eric Conte</td>
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<tr>
<td>Western Kentucky University</td>
<td>Western Kentucky University</td>
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Identification of the enzyme responsible for the acp3U modification in bacteria

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<td>Maggie Thomas</td>
<td>Jamison Burchett</td>
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<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
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<td><strong>Co-author</strong></td>
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<td>Justen Mamaril</td>
<td>Michael Guy</td>
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<td><strong>Co-author</strong></td>
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<td>Michael Guy</td>
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<td>Northern Kentucky University</td>
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Impact of Mutations in the EGO and GSE Complexes on Genomic Instability in Saccharomyces cerevisiae

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<td>Analysis of Protein Conformations Using Computer Simulations</td>
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<td>First Author: Jonnah McManus, Western Kentucky University Chemistry / Gatton Academy</td>
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<tr>
<th>GC-MS analysis of Volatile Organic Compounds in Metastatic and Non-Metastatic Breast Cancer Cells</th>
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<td>First Author: Clara Reasoner, Berea College</td>
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<td>First Author: Brandon Couch, Western Kentucky University</td>
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<th>Community Usage of Select Illicit and Prescribed Drugs and their Occurrence in the Clarks River</th>
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<td>First Author: Allie Skees, Department of Chemistry, Murray State University</td>
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<th>Towards the creation of turn-on fluorescent Schiff base probes for hydrogen sulfide detection</th>
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<td>First Author: Maxwell Conte</td>
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<tr>
<td>Polyunsaturated Fatty Acid Profile in Hemp-Fed Chicken Egg</td>
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<td>From Halogenated Anthracenes to Bendable Displays: Decoding the Structure-Optical Gap Correlation</td>
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<td>The Analysis of Contact Lenses as Forensic Evidence Using FT-IR and Refractive Index</td>
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<td>Measurement of J-coupling in Mixed Lead and Sodium Pyrophosphate Glasses with PASS and TE-PIETA</td>
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<td>Sedimentation Fractionation</td>
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Salt-Assisted Ultrasonicated De-aggregation and Advanced Electrochemistry of Detonation Nanodiamond.

11.

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<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>Brendan Evans</td>
<td>Alex Henson</td>
<td>Sanju Gupta</td>
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<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
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<td>University</td>
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Comparison of Inorganic Elemental Concentrations in Water Samples and Occurrence of Zebra Mussels in Kentucky Lake, USA

12.

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<tr>
<td>Nicole States</td>
<td>Henry Pruett</td>
<td>Bikram Subedi</td>
<td>Susan Hendricks</td>
<td>David White</td>
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<td>Hancock Biological Station</td>
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| ZrO2-?-Cyclodextrin (CD) catalyzed synthesis of 2,4,5-trisubstituted imidazoles and 1,2-disubstituted benzimidazoles u

13.

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<td>Padma Thimmaiah</td>
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<td>Co-author</td>
<td>Ray Cox</td>
<td>Paul Grisham</td>
<td>Piya Adris</td>
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Water Purification using Magnetic Biochar

14.

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<th>First Author</th>
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<tr>
<td>Anne Carlisle</td>
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A DRIFT Plus TG Device Reveling Unknown Chemicals Reaction Mechanisms

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

First Author
Junjie Xiang
Western Kentucky University

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

First Author
Ryan Boggess
Western Kentucky University

Effect of Iron charge state on P450 BM3 stability

First Author
Catherine Denning
University of Kentucky

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

First Author
Bangbo Yan
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
<table>
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<tr>
<th>Kinetic Studies of High-valent metal(IV)-oxo porphyrins generated by chemical and photochemical methods</th>
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<tr>
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<td>Haiyan Liu</td>
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<th>Light Activated Ruthenium Peptide Hybrids</th>
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<td>Lydia Millard</td>
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<th>N-Heterocyclic Carbene Complexes</th>
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<td>Mario Chavarria</td>
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<td>Cheyenne Haynes</td>
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<th>Optimization of lipid extraction from Scenedesmus acutus via in-situ transesterification</th>
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<td>Vincent Kelly</td>
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<td>Robert Pace</td>
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<th>Photocatalytic reduction of carbon dioxide by metal-organic framework materials.</th>
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<td>Hannah Brooks</td>
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<td>Bangbo Yan</td>
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<th>Promotional Effect of Platinum on Nickel Catalysts in the Conversion of Lipids to Hydrocarbons in Diesel Range</th>
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<td>Kelsey Huff</td>
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<tr>
<td>Co-author</td>
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<tr>
<td>Ryan Loe</td>
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<td>University of Kentucky's Center for Applied Energy Research</td>
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<tr>
<td>Co-author</td>
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<tr>
<td>Tonya Morgan</td>
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<tr>
<td>University of Kentucky's Center for Applied Energy Research</td>
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<tr>
<td>Co-author</td>
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<td>Eduardo Santillan-Jimenez</td>
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<tr>
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<tr>
<td>Co-author</td>
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<tr>
<td>Mark Crocker</td>
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<td>University of Kentucky's Center for Applied Energy Research</td>
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</table>
Reduction of Mannich Bases to Form 1,3-Amino Alcohols Using a Knöllker-type Catalyst

27.

First Author | Co-author | Co-author
Alexandra Redden | Rachel Whittaker | Kane Ferguson
Murray State University | Murray State University | Murray State University

Selective C–O bond reductions in carbohydrate derivatives using boron based reagents

28.

First Author
Luis Gonzalez Anguiar
Berea College

Solid-Phase Synthesis of Heteroatom-Activated Antibiotics

29.

First Author | Co-author | Co-author
Morgan Uebelacker | Jacob Nanney | Kyle Watson
Kentucky Wesleyan College | Kentucky Wesleyan College | Kentucky Wesleyan College

Storage of Solar Energy in Strained Bis-Anthracene Cycloadducts and Release as Heat by Mechanical Grinding

30.

First Author | Co-author | Co-author
Erin Calvert | Kasey Clear | Sebastian Jezowski
Murray State University | Murray State University | Murray State University

Synthesis and catalytic studies of metalloporphyrin complexes as biomimetic models for cytochrome P450 enzymes

31.

First Author | Co-author | Co-author
Benjamin Kash | Haiyan Liu | Rui Zhang
Gatton Academy, Western Kentucky University | Western Kentucky University | Western Kentucky University

Synthesis and Properties of a Ruthenium Polypyridyl Complex

32.

First Author | Co-author
Hannah Cope | Bangbo Yan
Western Kentucky University | Western Kentucky University

Synthesis of Cleavable Acetal Antibody Drug Conjugate

First Author
Luis Salazar Guzman
Berea College

Synthesis of Platinum-Malonate-Luteinizing Hormone Releasing Hormone (Pt-Mal-LHRH), an Anti-Cancer Agent

First Author
Charles Greif
Eastern Kentucky University

Synthesis of Poly(4-hydroxystyrene) by Living Anionic Polymerization for Block Copolymer Lithography

First Author
Beau Schweitzer
Berea College

Synthesizing Cleavable Acetal Antibody Drug Conjugates

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
Secretory: Muzaffar Ali

Incorporating WeBWorK in a Mathematics Classroom

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.

First Author
<table>
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<th>Poster Title</th>
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<tr>
<td>American Chestnut restoration in Daniel Boone National Forest: a GIS approach</td>
<td>Jacob Pease</td>
<td>Murray State</td>
<td>Bellarmine University</td>
<td>Bellarmine University</td>
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<tr>
<td>Comparative Analysis of Soil Elemental Composition Using Portable X-Ray Fluorescence In Multiple Land Use Practices</td>
<td>Ellyn Anthony</td>
<td>Oguz Sariyildiz</td>
<td>Mamata Bashyal</td>
<td>Tony Silvernail</td>
<td>John Sedlacek</td>
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<tr>
<td>Ant communities of temperate tree canopies along an urban-rural gradient</td>
<td>Heather Short</td>
<td>Daniella Prince</td>
<td>Benjamin Adams</td>
<td>Keegan Thompson</td>
<td>Chloe Lash</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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Friday, November 3, 2017 5:00pm - 8:00pm

Posters: Ecology and Environmental Sciences
Curris Center

Chair: Maheteme Gebremedhin
Secretary: Roberta Challener
<table>
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<th>Title</th>
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<tr>
<td>The Mobility of Nickel in Soil and the Efficacy of Sphagnum Peat Moss to Immobilize Nickel with Contaminated Soils</td>
<td>Vanetta Graves</td>
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<td>University</td>
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<td>Leaf Toughness in Tropical Rainforest Plants Depends on Leaf Age in Dicots but Not Monocots</td>
<td>Shelby Watkins</td>
<td>Stephen Yanoviak</td>
<td>Christopher Frost</td>
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<td>Exhanging the Relationship Between Temperature and Vegetation Phenology: Is Soil a Better Predictor than Air?</td>
<td>Kevin &quot;Austin&quot;</td>
<td>Monika Staszczak</td>
<td>Murray State</td>
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<td>Effect of Slope and Packing Ratio on the Behavior of Matchsticks Burnings</td>
<td>Roma Karna</td>
<td>Priya Karna</td>
<td>Sunil Karna</td>
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<td>Site selection by the Jefferson's and spotted salamanders based on substrate pH</td>
<td>Tosha Shokes</td>
<td>Jarrett Johnson</td>
<td>Western Kentucky University</td>
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<td>Assessing the effects of urban air pollution on lichens</td>
<td>Austin Adam</td>
<td>Roberta Challener</td>
<td>Bellarmine University</td>
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<tr>
<td>The Effects of Stream Degradation on Food Web Stability</td>
<td>Hannah Moore</td>
<td>Murray State</td>
<td>University</td>
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</table>
Water Levels and Temperatures Define Narrow Window of Larval Fish Phenology in Kentucky Lake.

First Author: Spencer Phillips
Co-author: Nathan Tillotson
Co-author: Ben Tumolo
Co-author: Michael Flinn
Murray State University

Honey Bee Gene Expression Response to Pesticides Under Differential Nutritional Status

First Author: Alishea Brown
Co-author: Farida Olden
Kentucky State University

Patterns of Herbivory Among Leaves of Tropical Forest Canopy Trees

First Author: Maria Shields
Co-author: Christopher Frost
Co-author: Stephen Yanoviak
University of Louisville

Driver bias in intentional wildlife-vehicle collisions

First Author: Mary Wilkinson
Co-author: Terry Derting
Murray State University

Using Hardiness Zones to Determine Phenological Variation

First Author: Whitney Buechler
Co-author: Bassil El Masri
Co-author: Paul Gagnon
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
<table>
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<td>Diversity, or precipitation</td>
<td>Aspen Workman</td>
<td>Claudia Stein</td>
<td>Scott Mangan</td>
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<td>Insect Pollinator Diversity in Gardens Across an Urban-to-Suburban Gradient</td>
<td>Jacob Lawson</td>
<td>Margaret Carreiro</td>
<td>Lindsay Nason</td>
<td>Perri Eason</td>
<td>Amy Cherry</td>
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<td>Sensing and educating the NEXUS to sustain ecosystems (SENSE): A Kentucky-West Virginia partnership.</td>
<td>David White</td>
<td>Susan Hendricks</td>
<td>Mindy Armstead</td>
<td>Bill Ford</td>
<td>Jimmy Fox</td>
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<td>Improving Detection and of a Threatened Anuran Species (Lithobates areolatus) in Western Kentucky</td>
<td>Michaela Lambert</td>
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<td>Exploring the impact of body size variation on trophic cascades using mole salamanders (Ambystoma talpoideum)</td>
<td>Robin Baker</td>
<td>Cy Mott</td>
<td>Katelyn May</td>
<td>Howard Whiteman</td>
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<td>Ability of Bald Cypress (Taxodium distichum) to enhance aquatic structure in backwater embayments of reservoirs</td>
<td>Christy Soldo</td>
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</table>
Dose of a plant-derived volatile cue affects Arabidopsis thaliana defense phenotypes

Sarah Bissmeyer
University of Louisville
Co-author Chris Frost
University of Louisville
Co-author Grace Freundlich
University of Louisville

Season fluctuations in Ambystoma barbouri eDNA in central Kentucky streams.

Andrew Nesselroade
Asbury University
Co-author Ronald Sams
Asbury University
Co-author Cierla McGuire
Asbury University
Co-author Sumathi Sankaran-Walters
William Jessup University
Co-author Mike McGrann
William Jessup University
Co-author Malinda Stull
Asbury University
Co-author Ben Brammell
Asbury University

Caterpillar Predation Rates Across an Urban-Suburban Gradient

Amy Cherry
University of Louisville
Co-author Jacob Lawson
University of Louisville
Co-author Lindsay Nason
University of Louisville
Co-author Margaret Carreiro
University of Louisville
Co-author Perri Eason
University of Louisville

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

Michael Flinn
Murray State University
Co-author Melody Feden
Murray State University
Co-author Ben Ferguson
Murray State University
Co-author Bradley Hartman
Murray State University
Co-author Kayleen Parker
Murray State University
Co-author Spencer Phillips
Murray State University
Co-author Ivan Roe
Murray State University
Co-author Christy Soldo
Murray State University
Co-author Susan Hendricks
Murray State University
**Detection of Percopsis omiscomaycus (trout-perch) using eDNA in eastern Kentucky streams.**

127.

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<td>Andrew Nesselroade</td>
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**Ant tarsal adhesion on oak leaves differing in trichome density**

128.

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<tr>
<td>Keegan Thompson</td>
<td>Alyssa Stark</td>
<td>Steve Yanoviak</td>
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<td>University of Louisville</td>
<td>Villanova University</td>
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**Body Size of Leaf-Carrying and Hitchhiking Leafcutter Ants in a Tropical Forest**

129.

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<td>Virginia Nunamaker</td>
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**Assessing the diet of Perimyotis subflavus and Nycticeius humeralis bats before and after the occurrence of WNS**

130.

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<tr>
<td>Summer Wheeler</td>
<td>Amie Towery</td>
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**Health of the Lee Branch on the Midway University Campus: Biological stream assessments and stream habitat assessments**

131.

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<td>John Delfino</td>
<td>Guipsy Lopez</td>
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<td>Midway University</td>
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**Relationship between fish biomass and eDNA in central Kentucky streams.**

132.

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<tr>
<td>Ramon Guivas</td>
<td>Kyle Laufenburger</td>
<td>Ben Brammell</td>
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<td>Asbury University</td>
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</table>
Effects of Roundup on Feeding Behavior of Larval Blue Dashers, Pachydiplax longipennis.

First Author: Kayleen Parker
Co-author: Claire Fuller
Murray State University

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

First Author: Lauren Mayton
Campbellsville University

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

First Author: Jeffrey Fox
Co-author: Chris Frost
University of Louisville
Co-author: Steve Yanoviak
University of Louisville

Honeysuckle leaf blight causes a growth decline in Amur honeysuckle seedlings

First Author: Onyinye Uwolloh
Northern Kentucky University
Co-author: Sarah Farrar
Northern Kentucky University
Co-author: Kimberly Wolfe
Northern Kentucky University
Co-author: Steven Castellano
Northern Kentucky University
Co-author: Richard Boyce
Northern Kentucky University

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

First Author: Emery Ginger
Murray State University

Automated Control System For Photo-bioreactor
### Biomass Stove Design Project: Automated Fuel Feeder System

41.

<table>
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<th>First Author</th>
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<tr>
<td>Chance Davice</td>
<td>Mark Mahoney</td>
<td>Constantine Botimer</td>
<td>Chris True</td>
<td>Jedidiah Radosevich</td>
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### Integrated Computational Design of Tunable 3D CNT/Graphene Hybrid Nanomaterials

42.

<table>
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<th>First Author</th>
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<tr>
<td>Tyler Stoffel</td>
<td>Jordan Garcia</td>
<td>Charles Lu</td>
<td>Johnson Joseph</td>
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<td>University of Kentucky</td>
<td>University of Kentucky</td>
<td>University of Kentucky</td>
<td>Fiat Chrysler Automobiles</td>
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</table>

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

43.

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<tr>
<th>First Author</th>
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<th>Co-author</th>
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<tr>
<td>Nathan Rayens</td>
<td>Tongguang Zhai</td>
<td>Pei Cai</td>
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<tr>
<td>University of Kentucky</td>
<td>University of Kentucky</td>
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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.

<table>
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<th>First Author</th>
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<tr>
<td>Kenneth Hancock</td>
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<td>Murray State</td>
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<tr>
<td>University</td>
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</tbody>
</table>

- **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

46.
First Author
Aman Bhatta
KYSU

Co-author
Saaruj Khadka
KYSU

Co-author
Bijesh Mishra
KYSU

Co-author
Buddhi Gyawali
KYSU

Co-author
Prabisha Shrestha
Kentucky State University

Co-author
Jeremy Sandifer
Kentucky State University

Co-author
Tilak Shrestha
Kentucky State University

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

Using Sequential LiDAR to Monitor & Catalog Landslides in Kenton and Campbell Counties in Northern Kentucky

47.
First Author
Roger Olson
Northern Kentucky University

Co-author
Benjamin Roenker
Northern Kentucky University

Co-author
Hawkins Warner
Northern Kentucky University

Co-author
Zachary Ivey
Northern Kentucky University

Co-author
Tim Faller
Northern Kentucky University

Co-author
Sarah Johnson
Northern Kentucky University

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

48.
First Author
Benedict Ferguson
Murray State University: Department of Geosciences

Co-author
Gary Stinchcomb
Murray State University: Department of Geosciences

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

49.
SITE FORMATION OF THE MIDDLE PLEISTOCENE FARRE ARCHAEOLOGICAL SITE, NORTHERN KENYA

50.

First Author
Mallory Gerzan
Murray State
University

Co-author
Gary Stinchcomb
Murray State
University

INVESTIGATION OF OMNIVORY IN THE DRILLING GASTROPOD, UROSALPINX CINEREA, USING STABLE ISOTOPE ANALYSIS

51.

First Author
Molly Karnes
Murray State
University

Posters: Health Sciences
Curris Center

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

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

137.

First Author
Carter Waugh
Kentucky Biomedical Research Infrastructure Network

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

138.

First Author
Frederick Bebe
Kentucky State University

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

139.
Effects of salt on the textural characteristics of fish meatballs prepared from deboned Asian carp meat

Examining the Expression and Function of Septin Proteins in Human Pancreatic Cancer Cells

Health Impact of a Shared Use Path in Rural Appalachia: A Pilot Study

Immunogenicity of Novel Vaccines for Hepatitis C Virus

Measurement of Influenza Severity in Tennessee Hospitalized Patients, 2016-2017

Secondary Traumatic Stress and Resilience in Emergency Medical Service Providers: A Look at the Adaptive and Maladaptiv
The Relationship Between Maternal Physical Activity and Infant Motor Development

First Author
Nikitha Rajendran
Gatton Academy, Western Kentucky University

Co-author
Rachel Tinius
Western Kentucky University

Urinary 8-OHdG as a Non-Invasive Biomarker of Oxidative Stress in Metabolic Syndrome (MetS)

First Author
Bisola Asaolu
Kentucky State University

Co-author
Avinash Tope
Kentucky State University

Using engineered zinc finger proteins to detect pathogen-specific DNA

First Author
Caleb Sedlak
Department of Chemistry WKU

Zinc, Dietary Fat, and Sex have Interacting Influences on BTBR Mice in the Open Field Test

First Author
Kandis Arlinghaus
Bellarmine University

Co-author
Nicholas Mellen
University of Louisville

Posters: Microbiology

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

Inactivation of Fungal Spores with Heat and UVC

First Author
Colin Hartman
Northern Kentucky University

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
Northern Kentucky University
# Mycobacteriophages: Inky and Spock

151.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moria Magre</td>
<td>Brittany Farnsley</td>
<td>Jennifer Doyle</td>
</tr>
<tr>
<td>Spalding University</td>
<td>Spalding University</td>
<td>Spalding University</td>
</tr>
</tbody>
</table>

# Antifungal Endophytes as a Source of Novel Bioactive Compounds

152.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katie Sawvell</td>
<td>John Carmen</td>
</tr>
<tr>
<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
</tr>
</tbody>
</table>

# Production of hydrogen peroxide as a virulence factor by Mycoplasma mycoides subspecies capri

153.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zackery Newton</td>
<td>Rachel Pritchard</td>
</tr>
<tr>
<td>Kentucky Wesleyan College</td>
<td>Kentucky Wesleyan College</td>
</tr>
</tbody>
</table>

# The Prevalence of Bacteria Resistant to Vancomycin and Colistin in Waters Around Louisville

154.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rachel Mahbubani</td>
<td>Amy Priest</td>
<td>Annie Koenig</td>
<td>Easton Ford</td>
<td>Doug Krauth</td>
</tr>
<tr>
<td>University of Louisville</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
<td></td>
</tr>
<tr>
<td>Co-author</td>
<td>Co-author</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deborah Yoder-Himes</td>
<td>Paul Himes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>University of Louisville</td>
<td>University of Louisville</td>
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</tr>
</tbody>
</table>

# Isolation and Characterization of the Mycobacteriophage Acquire49

155.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Mosley</td>
<td>Tyler Burton</td>
<td>John Starnes</td>
</tr>
<tr>
<td>Somerset Community College</td>
<td>Somerset Community College</td>
<td>Somerset Community College</td>
</tr>
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</table>

# Extraction and Elucidation of Active Compounds in Antimicrobial Producing Isolates

156.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>Zaria Elery</td>
<td>John Carmen</td>
</tr>
<tr>
<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
</tr>
</tbody>
</table>

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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 Fit

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  
Northern Kentucky University

Gold and Silver Nanoparticles Decorated Graphene as 'smart' Surface Enhanced Raman Scattering (SERS) Platforms

First Author: Alexander Banaszak  
Co-author: Tyler Smith, Sanju Gupta  
Western Kentucky University

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  
Western Kentucky University

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
<table>
<thead>
<tr>
<th>Title</th>
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<th>Co-author</th>
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<tbody>
<tr>
<td>Identification of a Drosophila melanogaster model to explore O-GlcNAc signaling</td>
<td>Emily Altman</td>
<td>JoBeth Bingham</td>
</tr>
<tr>
<td>Inhibition of PDE4 fails to reverse behavioural deficits induced by muscarinic receptor blockage</td>
<td>Samuel Case</td>
<td>Ilsun White</td>
</tr>
<tr>
<td>Investigating Potential Mechanisms of Clove Oil (Eugenol) in Model Systems</td>
<td>Elizabeth Grau</td>
<td>Alec Bradley</td>
</tr>
<tr>
<td>Investigating the Synergistic Effects of Two Curcuminoids and Cisplatin on Cancer Cell Migration and ROS Release</td>
<td>Blaine Patty</td>
<td>Matthew Millay</td>
</tr>
<tr>
<td>MK-801, a NMDA antagonist, reverses scopolamine-induced behavioral deficits.</td>
<td>Elizabeth Collins</td>
<td>Sami Case</td>
</tr>
<tr>
<td>Pharmacological identification of cholinergic receptor subtypes in Drosophilia</td>
<td>Eashwar Somasundaram</td>
<td>Aya Omar</td>
</tr>
</tbody>
</table>
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  

Co-author  
Clare Cole  

Co-author  
Katherine Johnson  

Co-author  
Jenni Ho  

Co-author  
La Shay Byrd  

Co-author  
Samantha Danyi  

Co-author  
Sushovan Dixit  

Co-author  
Madan Subheeswar  

Co-author  
Maddie Stanback  

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

Dual-task methodology: The use of video games as a surrogate for traditional laboratory tasks
Implicit Gender Bias, Commercials, and Cooperation.
181.

First Author
Rick Holland
Berea College

Let's Face It: The Effects of Disclosure Type and Modality on Student Comfort
182.

First Author
Caitlin Taulbee
Berea College

Maternal reflective functioning and dyadic synchrony
183.

First Author
Madison Raymer
Co-author
Megan Conn
Morehead State
University

Maternal trauma and parenting sensitivity: Implications for attachment-based interventions
184.

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

The Effect of Noise, Intention, and Time of Day on Memory
185.

First Author
Alicia Bedolla
Berea College

Affect Perseverance or Affect Momentum?
186.

First Author
**Posters: Science Education**

**Curris Center**

Chair: Shira Rabin  
Secretary: Karen Hlinka

---

**The POGIL Approach to Teaching**

187.

*First Author*
Lucas Collett  
*Berea College*

---

**Using the POGIL Approach in Non-Stem Disciplines**

188.

*First Author*
Miguel Valdes  
*Co-author*
Megan Hoffman  
*Co-author*
Lucas Collett  
*Berea College*

---

**Preparing K-8 teachers to utilize learning progressions to teach properties of materials**

189.

*First Author*
Martin Brock  
*Co-author*
Alexandra Stanback  
*Co-author*
Tristan Donovan  
*Co-author*
Priscilla Boachie  
*Co-author*
Brendon Stockwell  
*Co-author*
Carly Ballinger-Boone  
*Co-author*
Emma Higgins  
*Co-author*
Meaghan Labarre  
*Co-author*
Alexa Larson  
*University of Kentucky*

---

**Posters: Zoology**

**Curris Center**

Chair: Roy Scudder-Davis  
Secretary: Oliver Beckers

---

**Dietary effects on behaviors for Drosophila: behaviors, survival and physiological responses.**

171.

*First Author*
Maddie Stanback  
*Co-author*
Alexandra Stanback  
*Co-author*
Tristan Donovan  
*Co-author*
Priscilla Boachie  
*Co-author*
Brendon Stockwell  
*University of Kentucky*

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<thead>
<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>Characterization of mating behaviors and risk of cannibalism in Tigrosa georgicola wolf spiders</td>
<td>Talon Garman</td>
<td>Laura Sullivan-Beckers</td>
</tr>
<tr>
<td>Bat Call Monitoring Study and Discrimination Between Species in Taylor County, Kentucky</td>
<td>Katherine Cappel</td>
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</tr>
<tr>
<td>Comparing inner ear morphologies of globicephaline (Odontoceti: Delphinidae: Globicephalinae) dolphins</td>
<td>Abigail Glass</td>
<td>Rachel Racicot</td>
</tr>
<tr>
<td>Heritable Behavioral Tendencies of the African Lion</td>
<td>Natalie Mercer</td>
<td>Shannon Finerty</td>
</tr>
<tr>
<td>The Effect of Chemical Sympathectomy on Mouse Sleep Using Piezoelectric Technology</td>
<td>Benjamin Conkright</td>
<td></td>
</tr>
</tbody>
</table>

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**

- Crows Nest, Curris Center
- Blackburn 2nd floor lobby

**Practice Room for Oral Presentations**

- Cumberland Room, Curris Center
- Tennessee Room, Curris Center

**Exhibitors tables**

- 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 Co-author
Afolasayo Aromiwura Ajay Srivastava
Western Kentucky Western Kentucky
University University

Evaluation of endocrine pancreas development and maturation in glis3 mutant zebrafish (Danio rerio)
8:15
First Author Co-author
Dylan Hammrich Gary ZeRuth
Murray State Murray State
University University

Using CRISPR/Cas9 to generate transgenic zebrafish to determine the expression pattern of glis3 during development
8:30
First Author Co-author
Tyler Hoard Gary ZeRuth
Murray State Murray State
University 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

Effect of acute sleep fragmentation upon morphology and density of astrocytes in hippocampal and
hypothalamic tissue

10:30

First Author
Keelee Pullum
Gatton Academy, Western Kentucky University

Co-author
Noah Ashley

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
Breann Colter
Northern Kentucky University

Techniques in Carbon Footprinting: Achieving a Carbon Neutral Conference

8:00

First Author
Audrey Alexander
Assessing the Carbon and Energy Balance of a Grazed Pasture in Central Kentucky Using the Eddy Covariance Method

8:15

First Author
Ian Ries
Kentucky State University

Co-author
Maheteme Gebremedhin
Kentucky State University

Comparison of the Kentucky Vegetation Index of Biotic Integrity (VIBI) to a rapid wetland condition assessment (KY-WRAM)

8:30

First Author
Elizabeth Malloy
Eastern Kentucky University

Co-authors
David Brown
Eastern Kentucky University

Stephen Richter
Eastern Kentucky University

Barbara Scott
US Army Corps of Engineers

Michelle Cook
Kentucky Division of Water

Comparative Risk Evaluation of Commercially Available Organic and Conventional Fertilizers for Potential Bacterial Pat

8:45

First Author
Meika Finger-Gray
Kentucky State University

Co-author
Avinash Tope
Kentucky State University

shreya Patel
Kentucky State University

Interactive Effects of Animal Manure and Cover Crop Use in Improving Agricultural Soil Quality in Kentucky

9:00

First Author
Sait Sarr
Kentucky State University

Co-author
Maheteme Gebremedhin
Kentucky State University

Avinash Tope
Kentucky State University

Mark Coyne
University of Kentucky

Genomics of dehydration tolerance in the liverwort, Marchantia inflexa

9:15

First Author
Rose Marks
Policy communication and the Impact of Agricultural Communities on Karst Landscapes: An Example from Phong Nha-Kẻ Bàng

9:30

First Author
Elizabeth Willenbrink
Center for Human GeoEnvironmental Studies at Western Kentucky

Co-author
Leslie North
Center for Human GeoEnvironmental Studies at Western Kentucky

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

Co-author
Jason Polk
Center for Human GeoEnvironmental Studies at Western Kentucky

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

9:45

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

10:15

First Author
Bruce Kessler
Western Kentucky University

Co-author
Andrew Davis
Western Kentucky University

Prey Resource Partitioning Between Sympatric Bat Species

10:30

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

10:45

First Author
Hannah Elliott
Berea College

Co-author
Muntathar 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

11:00
<table>
<thead>
<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
<th>University</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>Grace Freundlich</td>
<td>Chris Frost</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>Landscape Genetics of California Tiger Salamanders: Inferences from multiple methods</td>
<td>Abhinav Maurya</td>
<td>Christopher Frost</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>A Study of Mercury in Bald Eagle Feathers and Quills</td>
<td>Samantha Thomas</td>
<td>Jarret Johnson</td>
<td>Western Kentucky University</td>
</tr>
<tr>
<td>OCCUPANCY AND ALLOCHTHONY THRESHOLD RESPONSES OF PLETHODONTID STREAM SALAMANDERS TO STREAM CONDUCTIVITY</td>
<td>Jacob Hutton</td>
<td></td>
<td>University of Kentucky</td>
</tr>
<tr>
<td>Using Mobile Eye-Tracking to Inform the Development of nature tourism Destinations in Iceland</td>
<td>James Graham</td>
<td>Leslie North</td>
<td>Edward Hujbens</td>
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<tr>
<td></td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
<td>University of Akureyri</td>
</tr>
<tr>
<td>Who’s the boss: Social dynamics associated with leadership in endangered Toque Macaques.</td>
<td>Abhinav Maurya</td>
<td></td>
<td>Jun Yan</td>
</tr>
<tr>
<td></td>
<td>Western Kentucky</td>
<td></td>
<td>Western Kentucky University</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

Co-author
Brad Hartman
Murray State University

Co-author
Dalton Lebeda
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

Chair: Troy Messina
Secretary: Marilyn Akins

Section meeting to follow presentations

A Composite View of the Composite Supernova Remnant 3C 396 (G39.2-0.3)
8:00

First Author
Thomas Pannuti
Morehead State University
<table>
<thead>
<tr>
<th>Title</th>
<th>Time</th>
<th>First Author</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The CREAM instrument on the ISS</td>
<td>8:15</td>
<td>Scott Nutter</td>
<td>Northern Kentucky</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>Northern Kentucky</td>
</tr>
<tr>
<td>Calibration of the CREAM Calorimeter with CERN Beam Tests</td>
<td>8:45</td>
<td>Tyler LaBree</td>
<td>Northern Kentucky</td>
</tr>
<tr>
<td>Analysis of a Current-Mode Detector for the NOPTREX Experiment</td>
<td>9:00</td>
<td>Daniela Olivera</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>Northern Kentucky</td>
</tr>
<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>Big Sandy Community</td>
</tr>
<tr>
<td>Streamlining Predictions of Temperature-Dependent Changes in Defect Properties of Intermetallic Compounds</td>
<td>9:45</td>
<td></td>
<td>and Technical College</td>
</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

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

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

8:30

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

Monitoring Photocatalytic Reactions Using Surface Enhanced Raman Spectroscopy

8:45

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

The removal of organic pollutants through buoyant photocatalyst

9:00

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

Upconverting Luminescent Nanomaterials Produced Through Liquid-Phase Laser Ablation

9:15

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

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

9:30

First Author: Mara Krempel
Co-author: Hayley Moss
Co-author: Hanna (John)
Western Kentucky University
University
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

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author 1</th>
<th>Co-author 2</th>
<th>Co-author 3</th>
<th>Co-author 4</th>
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<tbody>
<tr>
<td>8:15</td>
<td>Is Pawpaw Self-Compatible? Determining Compatibility and Its Impact on Fruit and Seed Set in North American Pawpaw</td>
<td>Srijana Thapa Magar</td>
<td>Kirk Pomper</td>
<td>Jeremiah Lowe</td>
<td>Sheri Crabtree</td>
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<tr>
<td>8:30</td>
<td>Enzymes as Indicators of Soil Microbial Activity at three Locations in Kentucky</td>
<td>GEORGE ANTONIOUS</td>
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<td>8:45</td>
<td>Assessing the nutritional value of novel soybean products in the diet of Atlantic salmon (Salmo salar L.)</td>
<td>James Schwartz</td>
<td>Vikas Kumar</td>
<td>Waldemar Rossi</td>
<td>Katerina Kousoulaki</td>
<td>Nofima</td>
</tr>
<tr>
<td>9:00</td>
<td>Responses of juvenile largemouth bass (Micropterus salmoides) to dietary EPA and DHA rich oils</td>
<td>Amit Yadav</td>
<td>Waldemar Rossi</td>
<td>Hab Andemichael</td>
<td>Vikas Kumar</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>9:15</td>
<td>Applicability of waste-reared Hermetia illucens as an ingredient in the diet of Nile Tilapia, Oreochromis niloticus</td>
<td>Amit Yadav</td>
<td></td>
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</table>
### Comparing the Effects of Long-term No Till and Conventional Tillage on Soil Properties in Central Kentucky

9:30

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<th>First Author</th>
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<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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<td>Murray State University</td>
<td>University of Kentucky</td>
</tr>
</tbody>
</table>

Co-author

Mark Coyne
Ann Freytag
University of Kentucky

### Spotted wing Drosophila, Drosophila suzukii, larvae in blackberries bordered by native perennial plants or pasture

9:45

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<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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Co-author

Megan McCoun
University of Kentucky

### 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>Sathya Govindasamy</td>
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</tbody>
</table>

Co-author

Megan McCoun
University of Kentucky

### Optimizing Hemp Production through Cultivar Selection and Soil Management Practices

10:30

<table>
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<tr>
<th>First Author</th>
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<tbody>
<tr>
<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 F

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

Saturday, November 4, 2017  8:30am - 11:15am

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>
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<tr>
<th>Title</th>
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<tbody>
<tr>
<td>The Urban Heat Island: Environmental Change and the Human Condition in Detroit Michigan</td>
<td>Tori Farrow</td>
<td>Jeremy Sandifer</td>
<td>Kentucky State</td>
<td>University</td>
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<tr>
<td>Networks of Sustainability within the Iceland Whale Watching Industry</td>
<td>Jason Fox</td>
<td>Leslie North</td>
<td>Western Kentucky</td>
<td>University</td>
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<tr>
<td>Predicting the Adoption of Sustainable Agricultural Practices among Kentucky Farmers and Its Barriers</td>
<td>Bijesh Mishra</td>
<td>Buddhi Gyawali</td>
<td>KYSU</td>
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<tr>
<td>Exploring Relationship between community Perception and landscape change in the Eastern Kentucky</td>
<td>Buddhi Gyawali</td>
<td>Prabisha Shrestha</td>
<td>Kentucky State</td>
<td>University</td>
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<tr>
<td>Association of land cover change trend with land ownership size at parcel level data in Breckinridge County, KY</td>
<td>Prabisha Shrestha</td>
<td>Buddhi Gyawali</td>
<td>Tilak Shrestha</td>
<td>Kentucky State</td>
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<tr>
<td>Land Cover Classification using LandSat, NAIP images, and Accuracy enhancements</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

Chair: Ann Harris
Secretary: David Dockstader

Section meeting to follow presentations

Morphological Analysis of Astarte (Class: Bivalvia) using Geometric Morphometrics
9:00

Saturday, November 4, 2017 9:00am - 11:00am
### Geochemical characteristics and storm dynamics of surface waters and groundwater at Eastern Kentucky University's Meadow

**9:15**

**First Author**
Randal Roberson

**Co-author**
Michelle Casey

**Murray State University**

---

**First Author**
Reid Buskirk

**Co-author**
Walter Borowski

**Eastern Kentucky University**

**Co-author**
Jonathan Malzone

---

**First Author**
James Winter

**Eastern Kentucky University**

---

**First Author**
Selsey Stribling

**Co-author**
Jonathan Malzone

**Eastern Kentucky University**

---

**First Author**
Addison Bell

**Co-author**
Jonathan Malzone

**Eastern Kentucky University**

---

**First Author**
Laura Kelley

**Co-author**
Sophia Chan

**Eastern Kentucky University**

**Co-author**
Jonathan Malzone

**Eastern Kentucky University**

**Co-author**
Walter Borowski

---

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

**9:30**

**First Author**
Reid Buskirk

**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

---

### 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

---

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

**10:30**

**First Author**
Laura Kelley

**Co-author**
Sophia Chan

**Eastern Kentucky University**

**Co-author**
Jonathan Malzone

**Eastern Kentucky University**

**Co-author**
Walter Borowski

---

### 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

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<th>First Author</th>
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<tbody>
<tr>
<td>Joseph Reese</td>
<td>Mary Blanton</td>
<td>Ashley Ball</td>
<td>Kory Phelps</td>
<td>Shari Kidwell</td>
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**What does your Tinder profile say about you? Correlates of Tinder profile features and extroversion**

10:45

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<th>First Author</th>
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<tr>
<td>Hunter Gatewood</td>
<td>Lynn Haller</td>
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<td>Morehead State University</td>
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**Peer Mentoring Circles for Women STEM Faculty at Murray State University**

11:00

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<tr>
<td>Maeve McCarthy</td>
<td>Paula Waddill</td>
<td>Robin Zhang</td>
<td>Echo Wu</td>
<td>Steve Cobb</td>
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**Oral Presentations: Science Education**

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

Blackburn 249

Chair: Shira Rabin

Secretary: Karen Hlinka

Section meeting to follow presentations

<table>
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<td>Joseph Erskine</td>
<td>Jordan Dowdy</td>
<td>Stephen Denny</td>
<td>M Saleem</td>
<td>Akhtar Mahmood</td>
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**Data Mining in Astronomy Using Exoplanet Data from the Space and Ground-based Telescopes**

9:00

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</table>
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
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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<tr>
<td><strong>10:00</strong></td>
</tr>
<tr>
<td>First Author</td>
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<tr>
<td>Jordan Garcia</td>
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<tr>
<td>University of Kentucky</td>
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<tr>
<td>Co-author</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>10:15</strong></td>
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<tr>
<td>First Author</td>
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<tr>
<td>Bhavesh Ramkorun</td>
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<tr>
<td>Berea College</td>
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<tr>
<td>Co-author</td>
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<tr>
<td>Seth Smith</td>
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<td>Vanderbilt University</td>
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<th>Hands-on Robotics Lab at Bellarmine University</th>
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<td><strong>10:30</strong></td>
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<tr>
<td>First Author</td>
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<tr>
<td>Christopher Steitz</td>
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<tr>
<td>Bellarmine University</td>
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<th>Flaw Characterization through Nonlinear Ultrasonics and Wavelet Cross-Correlation Algorithms</th>
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<td><strong>10:45</strong></td>
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</tbody>
</table>
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

Winslow Dining Hall

**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

Blackburn 249

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.

1:00

First Author  Co-author
Nicholas McLetchie  Maddison Hatton
University of Kentucky  University of Kentucky

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

Oral Presentations: Chemistry: Organic/Inorganic
Blackburn 135

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  Co-author
Hongyan Gao  Yan Cao
CHEMISTRY  CHEMISTRY
DEPARTMENT,  DEPARTMENT,
WESTERN  WESTERN
KENTUCKY  KENTUCKY
UNIVERSITY  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  Co-author  Co-author  Co-author  Co-author
Jessie Brown  Amelia Dickey  Elias Hanna  Christopher Samaan  Hannah Williams
Transylvania  Transylvania  Transylvania  Transylvania  Transylvania
University  University  University  University  University
The Synthesis of Heteroatom-activated Antibiotics: \( \beta\)-lactams

2:00

First Author
Jacob Nanney
Kentucky Wesleyan
College

Co-author
Kyle Watson
Kentucky Wesleyan

Co-author
College

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
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author(s)</th>
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<tbody>
<tr>
<td>1:00</td>
<td>Open Coverings of the Rationals Need Not Cover The Reals</td>
<td>Andy Martin&lt;br&gt;Kentucky State University</td>
</tr>
<tr>
<td>1:15</td>
<td>The Cubic Equation</td>
<td>Dwight Smith&lt;br&gt;Big Sandy CTC</td>
</tr>
<tr>
<td>1:30</td>
<td>A Perturbation Method for Determination of an Approximate Analytical Solution of a Nonlinear System of ODEs.</td>
<td>Austin Gabhart&lt;br&gt;Gatton Academy, Western Kentucky University</td>
</tr>
<tr>
<td>1:45</td>
<td>The n+k kings problem</td>
<td>R. Douglas Chatham&lt;br&gt;Morehead State University</td>
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Saturday, November 4, 2017  1:00pm - 1:45pm

### Oral Presentations: Microbiology

**Cumberland Room, Curris Center**

Chair: Lingyu Huang  Secretary: Joseph Mester

Section meeting to follow presentations

<table>
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<tr>
<td>1:00</td>
<td>Antimicrobial activity from bacteria found around downtown Cincinnati</td>
<td>Kory Stuessel&lt;br&gt;Northern Kentucky University  Co-author: John Carmen</td>
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<tr>
<td></td>
<td>Inhibition of Fungal Colony Growth by UVC</td>
<td>Northern Kentucky University  Inhibition:  UVC</td>
</tr>
</tbody>
</table>
### Emergence and divergence of influenza virus: A current perspective

1:30

**First Author**

Alexander Lai  
**Kentucky State University**

---

### Oral Presentations: Physiology and Biochemistry  
**Saturday, November 4, 2017  1:00pm - 2:00pm**

**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

1:00

**First Author**

Justen Mamaril  
**Northern Kentucky University**

**Co-authors**

Regan Bales  
Northern Kentucky University  
Michael Guy  
Northern Kentucky University

---

#### Physiological Characteristics of Five Bladder Cancer Cell Lines

1:15

**First Author**

Kyle Damen  
**Wood Hudson Cancer Research Laboratory**

**Co-authors**

Ryan Moore  
Wood Hudson Cancer Research Laboratory  
Alex White  
Wood Hudson Cancer Research Laboratory  
Julia Carter  
Wood Hudson Cancer Research Laboratory  
Bonnie Richmond  
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

1:45

First Author
Dat Thinh Ha
Western Kentucky University

Oral Presentations: Anthropology and Sociology
Ohio Room, Curris Center

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

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
Morehead State University

Co-author
Shanshan Li
Xingjian College of Science and Liberal Arts, Guangxi Univ.

Co-author
Jun Peng
Xingjian College of Science and Liberal Arts, Guangxi Univ.
<table>
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<tr>
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<th>First Author</th>
<th>Co-author 1</th>
<th>Co-author 2</th>
<th>Co-author 3</th>
<th>Co-author 4</th>
<th>Co-author 5</th>
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<tbody>
<tr>
<td>Malaria in the Prehistoric Caribbean: The Hunt for Hemozoin</td>
<td>1:45</td>
<td>Mallory Cox</td>
<td>University of Louisville</td>
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<tr>
<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</td>
<td>Eastern Kentucky</td>
<td>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>Laura Lodder</td>
<td>Justin Moore</td>
<td>Bailey Phan</td>
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<td>University of Kentucky</td>
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<td>Andrew Tapia</td>
<td>Neil Moore</td>
<td>Mark Farman</td>
<td>Jerzy Jaromczyk</td>
<td>University of Kentucky</td>
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<td></td>
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<td>Luke Decastro</td>
<td>University of Kentucky</td>
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<tr>
<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>Shesh Rai</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
</tr>
</tbody>
</table>
Password cracking performance testing comparing GPU vs CPU performance using Hashcat

First Author
Deven Rataiczak
Bellarmine University

Saturday, November 4, 2017  1:15pm - 2:30pm

Oral Presentations: Zoology

Phenotypic plasticity of mating calls in the katydid Neconocephalus triops

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

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

First Author
Samuel White
Murray State University
Co-author
Talon Garman
Murray State University
Co-author
Laura Sullivan-Beckers
Murray State University
Co-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

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

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

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

2:15

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

Introducing by President-Elect Jennifer Birriel

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
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
Quick links

Guidelines for the Research Paper
Preparing the Presentation
Kentucky Junior Academy of Science Plagiarism Policy
Rules and Policies for Kentucky Junior Academy
Junior Academy Scoring rubric
Video tips: Giving a good Scientific talk
KSU Campus Map
Kentucky State University
Chronicle of the New Researcher publishes research from young scientists