2017 Annual Meeting Program November 3-4, 2017

Murray State University

Thank you to our Platinum Sponsor

Thank you to our Break 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.

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

**KAS Business meeting**

Mississippi Room, Curris Center

President: Darrin Smith

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

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

**Poster presenters Check-In**

3rd floor of Curris Center

Chair: Kevin Revell  
Co-chair: ANGELA GUYTON

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

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

**Tour - Biology Building**

Meet in the lobby

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

[Campus map](#)

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

**Tour - Chemistry Building**

Meet in the lobby

In May 2009, the Department of Chemistry moved into the newly constructed Jesse D. Jones Hall. In our main entryway we feature a Living Periodic Table, built by Mr Jim Barnett, displaying many samples of actual elements. The Chemical Services Laboratory provides state of the art chemical analytical services and expertise in the areas of Environmental Analysis, Organic Synthesis, Inorganic Substance Analysis, Controlled Substance Analysis, Bioassay & Bio-analytical Techniques and much more! The Polymer and Materials Characterization Laboratory houses our Dynamic Mechanical Analyzer (DMA), which was purchased after the Chemistry Department was awarded a highly competitive Major Research Instrumentation grant from the National Science Foundation. In addition to our differential scanning calorimeter, a thermogravimetric analyzer, a gel permeation chromatography system, a density...
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

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<th>First Author</th>
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<td>Cora Teets</td>
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<td>Vikas Kumar</td>
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A Comparison of the Characteristics of Kentucky and Illinois Soils Under Various Land Cover

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<td>Bernedette Chadwick</td>
<td>Michael Mercer</td>
<td>Bailey Webster</td>
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Dehydration of autumn olive berries for human consumption

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<td>Cecil Butler</td>
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Developing cold-hardy perennial ornamentals for Kentucky

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<td>Duncan Thomas</td>
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Distinguishing Differences of Soil Physical Properties in Irrigated and Non- Irrigated Corn-soybean Rotation and Pastur

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### Effects of fertilization on growth performance of lotus plants in containers

**First Author**  
Changzheng Wang  
*Kentucky State University*

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

**First Author**  
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*KENTUCKY STATE UNIVERSITY*

**Co-author**  
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**Co-author**  
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**Co-author**  
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**Co-author**  
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*Kentucky State University*

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

**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

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**Co-author**  
Landon Williams  
*Murray State University*

**Co-author**  
Blake Remmert  
*Murray State University*

**Co-author**  
iin Handayani  
*Murray State University*

**Co-author**  
Brian Parr  
*Murray State University*

### Soil Properties in Varying Crop and Non-Crop Areas of Calloway County, Kentucky

**First Author**  
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*Murray State University*

**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

**First Author**  
Zack Eells  
*Murray State University*
Yield of Eggplant Grown in Horse Manure and Vermicompost Amended Soil

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

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

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

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

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

**Posters: Cellular and Molecular Biology**

Curris Center

Chair: Emily Shifley
Secretary: Gary ZeRuth

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

**First Author**
Hasan Salim
**Co-author**
WKU

Elucidating the Relationship Between sox4a and sox4b in the Zebrafish Eye

**First Author**
Hadley Neal
**Co-author**
University of Kentucky
**Co-author**
University of Kentucky

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

**First Author**
Dane Flinchum
**Co-author**
Western Kentucky University

Examining Gene Expression during Xenopus Embryonic Development

**First Author**
Maria Stewart
**Co-author**
Northern Kentucky University

Functional Analysis of Signaling Molecules Involved in Spermiogenesis of Drosophila melanogaster
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<td>Lee Kendall</td>
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Identifying genetic modifiers in a Drosophila model of Inclusion Body Myopathy

83.

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<td>Amber Follin</td>
<td>Kyla Britson</td>
<td>Tom Lyod</td>
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<td>Biology Department, Berea College</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>
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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>
<td>Tamika Chappell</td>
<td>Lisa Massie</td>
<td>Shelby Caudill</td>
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<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>
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<td>Luc Van Kaer</td>
<td>Luke Postoak</td>
<td>Margaret Sabourin</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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Visualizing Programmed Genome Arrangement in Live Sea Lamprey Embryos

88.
*First Author*  
Conner Hounshell  
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*Co-author*  
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*Co-author*  
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Sex Specific Gene Control of Cardiac Fibrosis

89.
*First Author*  
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Jennifer Doyle  
*Spalding University*

*Co-author*  
Moria Magre  
*Spalding University*

Annotation of Spock and Inky Mycobacteriophages

90.
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*Co-author*  
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*Co-author*  
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*Spalding University*

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

91.
*First Author*  
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Functional and genetic studies of the tRNA modification protein Trm732 in yeast

92.
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*Co-author*  
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Michael Guy  
*Northern Kentucky University*

Exploring Small Molecule Drugs Binding To Ribosomal Protein L11

93.
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Michal Hetman  
*University of Louisville*

*Co-author*  
Lukasz Slomnicki  
*University of Louisville*

IDENTIFICATION OF SELECTIVE DDR1 KINASE INHIBITORS USING STRUCTURE ACTIVITY
### NADPH oxidase-derived ROS regulate TLR2 responses in mouse dendritic cells

**First Author**
Morgan Bahnsen  
*KBRIN*

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

**First Author**
Thomas Case  
*KBRIN*

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

**First Author**
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Co-author  
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*ARS USDA*  
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Rohan Parekh  
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### Identification of the enzyme responsible for the acp3U modification in bacteria

**First Author**
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*Northern Kentucky University*  
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Justen Mamaril  
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Co-author  
Michael Guy  
*Northern Kentucky University*

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

**First Author**
### Analysis of Protein Conformations Using Computer Simulations

1. **First Author**
   Jonnah McManus
   **First Author**
   Western Kentucky University Chemistry / Gatton Academy

### GC-MS analysis of Volatile Organic Compounds in Metastatic and Non-Metastatic Breast Cancer Cells

2. **First Author**
   Clara Reasoner
   **Co-author**
   Berea College

### Anaerobic Degradation of Tetracyclines in Agricultural Manure

3. **First Author**
   Brandon Couch
   **First Author**
   Western Kentucky University

### Community Usage of Select Illicit and Prescribed Drugs and their Occurrence in the Clarks River

4. **First Author**
   Allie Skees
   **Department of Chemistry, Murray State University**

### Towards the creation of turn-on fluorescent Schiff base probes for hydrogen sulfide detection

5. **First Author**
   Maxwell Conte
Polyunsaturated Fatty Acid Profile in Hemp-Fed Chicken Egg

6.

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Co-author
Nathan Denney
Department of Agriculture Science, Hutson School of Agriculture

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Murray State University

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

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Bikram Subedi
Department of Chemistry, Murray State University,

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

8.

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Lori Wilson
Eastern Kentucky University

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

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Sara Garner
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College of Wooster

Sedimentation Fractionation

10.

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

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

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<td>Susan Hendricks</td>
<td>David White</td>
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## ZrO2-?-Cyclodextrin (CD) catalyzed synthesis of 2,4,5-trisubstituted imidazoles and 1,2-disubstituted benzimidazoles u

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<td>K.N. Thimmaiah</td>
<td>Mark Montgomery</td>
<td>Padma Thimmaiah</td>
<td>Ashish Pagare</td>
<td>Larry Sylvester</td>
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<td>Co-author Paul Grisham</td>
<td>Co-author Piya Adris</td>
<td>Co-author Lindsay Massie</td>
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## Water Purification using Magnetic Biochar

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<td>Anne Carlisle</td>
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## A DRIFT Plus TG Device Revealing Unknown Chemicals Reaction Mechanisms

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

First Author
Junjie Xiang
Western Kentucky University

Effect of Iron charge state on P450 BM3 stability

First Author
Catherine Denning
University of Kentucky

Co-author
David Heidary
University of Kentucky

Co-author
Edith Glazer
University of Kentucky

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

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Kinetic analysis of the mechanosyntheses of transition metal complexes and precursors

First Author
Erin O'Donnell
Murray State University

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

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<td>Alexandra Redden</td>
<td>Rachel Whittaker</td>
<td>Kane Ferguson</td>
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### Selective C–O bond reductions in carbohydrate derivatives using boron based reagents

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<td>Luis Gonzalez Anguiar</td>
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<td>Berea College</td>
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### Solid-Phase Synthesis of Heteroatom-Activated Antibiotics

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<td>Morgan Uebelacker</td>
<td>Jacob Nanney</td>
<td>Kyle Watson</td>
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### Storage of Solar Energy in Strained Bis-Anthracene Cycloadducts and Release as Heat by Mechanical Grinding

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<td>Erin Calvert</td>
<td>Kasey Clear</td>
<td>Sebastian Jezowski</td>
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### Synthesis and catalytic studies of metalloporphyrin complexes as biomimetic models for cytochrome P450 enzymes

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<td>Benjamin Kash</td>
<td>Haiyan Liu</td>
<td>Rui Zhang</td>
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<td>Gatton Academy,</td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
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### Synthesis and Properties of a Ruthenium Polypyridyl Complex

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<td>Hannah Cope</td>
<td>Bangbo Yan</td>
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<tr>
<td>Synthesis of Cleavable Acetal Antibody Drug Conjugate</td>
<td>Luis Salazar Guzman</td>
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<tr>
<td>Synthesis of Platinum-Malonate-Luteinizing Hormone Releasing Hormone (Pt-Mal-LHRH), an Anti-Cancer Agent</td>
<td>Charles Greif</td>
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<tr>
<td>Synthesis of Poly(4-hydroxystyrene) by Living Anionic Polymerization for Block Copolymer Lithography</td>
<td>Beau Schweitzer</td>
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<tr>
<td>Synthesizing Cleavable Acetal Antibody Drug Conjugates</td>
<td>Michael James</td>
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<td>Sarah Tabor</td>
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<td>Elizabeth Thomas</td>
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Friday, November 3, 2017  5:00pm - 8:00pm

**Posters: Computer and Informational Sciences**

**Curris Center**

Chair: Jerzy Jaromczyk  
Secretary: Muzaffar Ali

Incorporating WeBWorK in a Mathematics Classroom

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

**Posters: Ecology and Environmental Sciences**

**Curris Center**

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<th>Chair: Maheteme Gebremedhin</th>
<th>Secretary: Roberta Challener</th>
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</table>

**American Chestnut restoration in Daniel Boone National Forest: a GIS approach**

100.

*First Author*
Jacob Pease
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**Comparative Analysis of Soil Elemental Composition Using Portable X-Ray Fluorescence In Multiple Land Use Practices**

101.

*First Author*
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**Ant communities of temperate tree canopies along an urban-rural gradient**

102.

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**Is it enough? Passive Restoration in a Western Colorado Stream**

103.

*First Author*
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The Mobility of Nickel in Soil and the Efficacy of Sphagnum Peat Moss to Immobilize Nickel with Contaminated Soils

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Leaf Toughness in Tropical Rainforest Plants Depends on Leaf Age in Dicots but Not Monocots

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

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

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

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Assessing the effects of urban air pollution on lichens

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Roberta Challener
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The Effects of Stream Degradation on Food Web Stability

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

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University | University | University | University

Honey Bee Gene Expression Response to Pesticides Under Differential Nutritional Status

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University | University |

Patterns of Herbivory Among Leaves of Tropical Forest Canopy Trees

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Driver bias in intentional wildlife-vehicle collisions

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Using Hardiness Zones to Determine Phenological Variation

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University | University | University

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

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Western Kentucky | Western Kentucky
University | University

Is aboveground pathogen load influenced by belowground pathogen presence, plant community
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<td>117</td>
<td>Insect Pollinator Diversity in Gardens Across an Urban-to-Suburban Gradient</td>
<td>Aspen Workman</td>
<td>Claudia Stein</td>
<td>Scott Mangan</td>
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<td>118</td>
<td>Sensing and educating the NEXUS to sustain ecosystems (SENSE): A Kentucky-West Virginia partnership.</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>119</td>
<td>Improving Detection and of a Threatened Anuran Species (Lithobates areolatus) in Western Kentucky</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>Marshall University</td>
<td>University of Kentucky</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>121</td>
<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

**123.**

**First Author**
Sarah Bissmeyer  
**University of Louisville**

**Co-author**
Chris Frost  
**University of Louisville**

**Co-author**
Grace Freundlich  
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### Season fluctuations in Ambystoma barbouri eDNA in central Kentucky streams.

**124.**

**First Author**
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**William Jessup University**

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### Caterpillar Predation Rates Across an Urban-Suburban Gradient

**125.**

**First Author**
Amy Cherry  
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**Co-author**
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### Proliferation of Zebra Mussels (Dreissena polymorpha) in Kentucky Lake during 2017

**126.**

**First Author**
Michael Flinn  
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**Murray State University**
### Detection of Percopsis omiscomaycus (trout-perch) using eDNA in eastern Kentucky streams.

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<tr>
<td>Andrew Nesselroade</td>
<td>Harold Brabon</td>
<td>David Eisenhour</td>
<td>Brooke Washburn</td>
<td>Lynn Eisenhour</td>
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### Ant tarsal adhesion on oak leaves differing in trichome density

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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

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<td>Virginia Nunamaker</td>
<td>Chris Nunamaker</td>
<td>Steve Yanoviak</td>
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<td>University of Louisville</td>
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### Assessing the diet of Perimyotis subflavus and Nycticeius humeralis bats before and after the occurrence of WNS

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<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

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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.

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

First Author  Co-author
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University 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

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Honeysuckle leaf blight causes a growth decline in Amur honeysuckle seedlings

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

Posters: Engineering

Curris Center
Chair: Aaron Daley  Secretary: shen liu

Green Roofs: Synergistic Benefits to Energy and Environmental Building Design

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

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Integrated Computational Design of Tunable 3D CNT/Graphene Hybrid Nanomaterials

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

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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

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

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<td>Aman Bhatta</td>
<td>Saaruj Khadka</td>
<td>Bijesh Mishra</td>
<td>Buddhi Gyawali</td>
<td>Prabisha Shrestha</td>
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<td>KYSU</td>
<td>KYSU</td>
<td>Kentucky State University</td>
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**Using Sequential LiDAR to Monitor & Catalog Landslides in Kenton and Campbell Counties in Northern Kentucky**

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<td>Roger Olson</td>
<td>Benjamin Roenker</td>
<td>Hawkins Warner</td>
<td>Zachary Ivey</td>
<td>Tim Faller</td>
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<td>Sarah Johnson</td>
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**Variability of Soil Organic Carbon Storage in Alluvial Landforms: A Case Study from Western Kentucky**

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<td>Benedict Ferguson</td>
<td>Gary Stinchcomb</td>
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<td>Murray State University</td>
<td>Murray State University</td>
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<td>Department of Geosciences</td>
<td>Department of Geosciences</td>
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**LATE HOLOCENE PALEOFLOOD DEPOSITIONAL SEQUENCES: MIDDLE TENNESSEE RIVER VALLEY, USA**

46. Land Cover Change Assessment in Five Major Watersheds of Central Kentucky

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

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

49. LATE HOLOCENE PALEOFLOOD DEPOSITIONAL SEQUENCES: MIDDLE TENNESSEE RIVER VALLEY, USA
SITE FORMATION OF THE MIDDLE PLEISTOCENE FARRE ARCHAEOLOGICAL SITE, NORTHERN KENYA

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Lisa Davis
University of Alabama

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

51.
First Author
Molly Karnes
Murray State University

Friday, November 3, 2017 5:00pm - 8:00pm
Posters: Health Sciences
Curris Center
Chair: Bruce Branan
Secretary: Avinash Tope

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
Co-author
Orien Tulp
USAT College of Medicine & graduate School

Effect of select phytochemicals on salivary and urinary pH

139.
<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
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<tr>
<td>Ralphiel Payne</td>
<td>Sydney Leisure</td>
<td>Kentucky Wesleyan College</td>
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Effects of salt on the textural characteristics of fish meatballs prepared from deboned Asian carp meat

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<tr>
<th>First Author</th>
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<tr>
<td>Lingyu Huang</td>
<td>Cecil Butler</td>
<td>Changzheng Wang</td>
<td>Kentucky State</td>
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<td>University</td>
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Examining the Expression and Function of Septin Proteins in Human Pancreatic Cancer Cells

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<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>Danielle Upton</td>
<td>Maiyon Park</td>
<td>Valerie Dixon</td>
<td>Zachariah Slattery</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>UPIKE</td>
<td>KYCOM-UPIKE</td>
<td>KYCOM</td>
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Health Impact of a Shared Use Path in Rural Appalachia: A Pilot Study

<table>
<thead>
<tr>
<th>First Author</th>
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<tbody>
<tr>
<td>Louisa Summers</td>
<td>Scott Heggen</td>
<td>Christopher Harris</td>
<td>Daryl Sullivan</td>
<td>Peter Hackbert</td>
</tr>
<tr>
<td>Berea College</td>
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Immunogenicity of Novel Vaccines for Hepatitis C Virus

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<tr>
<td>Donniesha Mason</td>
<td>Ashley Wentworth</td>
<td>Reese Triana</td>
<td>Joseph Mester</td>
<td>Employer</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td>Northern Kentucky University</td>
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Measurement of Influenza Severity in Tennessee Hospitalized Patients, 2016-2017

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<th>First Author</th>
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<tr>
<td>Allison Harper</td>
<td>Tiffanie Markus</td>
<td>Gail Hughett</td>
<td>Danielle Ndi</td>
<td>Karen Leib</td>
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<tr>
<td>Berea College</td>
<td>Vanderbilt University</td>
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Secondary Traumatic Stress and Resilience in Emergency Medical Service Providers: A Look at the Adaptive and Maladaptiv

<table>
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<td>H. Keipp Talbot</td>
<td>Vanderbilt University</td>
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</table>

140.

141.

142.

143.

144.

145.
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

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

Posters: Microbiology

Curris Center

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

Chair: Lingyu Huang
Secretary: Joseph Mester
Mycobacteriophages: Inky and Spock

151.
First Author: Moria Magre
Co-author: Brittany Farnsley
Spalding University: Spalding University

Antifungal Endophytes as a Source of Novel Bioactive Compounds

152.
First Author: Katie Sawvell
Co-author: John Carmen
Northern Kentucky University: Northern Kentucky University

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

153.
First Author: Zackery Newton
Co-author: Rachel Pritchard
Kentucky Wesleyan College: Kentucky Wesleyan College

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

154.
First Author: Rachel Mahbubani
Co-author: Amy Priest
University of Louisville: University of Louisville

Isolation and Characterization of the Mycobacteriophage Acquire49

155.
First Author: Charles Mosley
Co-author: Tyler Burton
Somerset Community College: Somerset Community College

Extraction and Elucidation of Active Compounds in Antimicrobial Producing Isolates

156.
First Author: Zaria Elery
Co-author: John Carmen
Northern Kentucky University: Northern Kentucky University

SURVEY OF VANCOMYCIN- AND COLISTIN-RESISTANT BACTERIA IN ENVIRONMENTAL WATER SAMPLES ACROSS LOUISVILLE
Non-pathogenic Neisseria sicca ATCC 29256 undergoes natural transformation

First Author
Mark Sirianno
Transylvania University

Co-author
Paul Duffin
Transylvania University

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

First Author
Grayson Fuller
Western Kentucky University

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

First Author
Amber Earlywine
Berea College
Department of Chemistry

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

Posters: Physics and Astronomy
Curris Center

Comparison of Period Finding Techniques to Identify RR Lyrae Stars

First Author
Connor Edwards
Northern Kentucky University

Co-author
Logan Hicks
Northern Kentucky University

Co-author
Tyler Labree
Northern Kentucky University

Co-author
Matthew Buelsing
Northern Kentucky University

Co-author
Nathan De Lee
### Electromagnetic Wave Motion Around a Black Hole

**First Author**  
Amanda Manning  
**Northern Kentucky University**

**Co-author**  
Sharmanthie Fernando  
**Northern Kentucky University**

---

### Analyzing Color Relations for RR Lyrae in KELT

**First Author**  
Logan Hicks  
**Northern Kentucky University**

**Co-authors**  
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  
**Western Kentucky University**

**Co-authors**  
Connor Edwards  
Tyler Labree  
Matthew Buelsing  
Nathan De Lee  
**Western Kentucky University**

---

### Large-Area Graphene Membranes and Mesoporous Deionization Electrodes for Water Desalination

**First Author**  
Alex Henson  
**WKU Department of Physics and Astronomy**

**Co-authors**  
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  
**Western Kentucky University**

**Co-author**  
Sanju Gupta  
**Western Kentucky University**

---

### Surface Functionality Of Graphene-family Nanomaterials On Electronic And Phononic Properties For Applied Electrochemistry
Systematic Study of the Effects of Incorporation of Carbon Nanotubes into the GexSe1-x Glass System

The Study of Light Paths Around Black Holes

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

Developing TALE proteins as a sensor for detecting pathogens

Examining the role of muscarinic acetylcholine receptors in regulation of larval Drosophila melanogaster feeding and locomotion
Identification of a Drosophila melanogaster model to explore O-GlcNAc signaling
164.

First Author: Emily Altman
Georgetown College

Co-author: JoBeth Bingham
University of Pikeville

Co-author: Dr. Lewis Watson
University of Pikeville

Inhibition of PDE4 fails to reverse behavioural deficits induced by muscarinic receptor blockage
165.

First Author: Samuel Case
Morehead State

Co-author: Ilsun White
Morehead State

Investigating Potential Mechanisms of Clove Oil (Eugenol) in Model Systems
166.

First Author: Elizabeth Grau
University of Kentucky

Co-author: Alec Bradley
University of Kentucky

Co-author: Danielle Cantrell
University of Kentucky

Co-author: Samantha Eversole
University of Kentucky

Co-author: Carolyn Grachen
University of Kentucky

Co-author: Kaylee Hall
University of Kentucky

Co-author: Claire Kinmon
University of Kentucky

Co-author: Paula Ortiz Guerrero
University of Kentucky

Co-author: Bhavik Patel
University of Kentucky

Co-author: Robin Cooper
University of Kentucky

Investigating the Synergistic Effects of Two Curcuminoids and Cisplatin on Cancer Cell Migration and ROS Release
167.

First Author: Blaine Patty
Western Kentucky

Co-author: Matthew Millay
Western Kentucky

Co-author: Jerry Monroe
Western Kentucky

Co-author: Michael Smith
Western Kentucky

Co-author: Michael Smith
Western Kentucky

Co-author: Jerry Monroe
Western Kentucky

Co-author: Michael Smith
Western Kentucky

MK-801, a NMDA antagonist, reverses scopolamine-induced behavioral deficits.
168.

First Author: Elizabeth Collins
Morehead State

Co-author: Sami Case
Morehead State

Co-author: Brianna Ward
Morehead State

Co-author: Ilsun White
Morehead State

Co-author: Ilshun White
Morehead State

Pharmacological identification of cholinergic receptor subtypes in Drosophila
169.

First Author: Eashwar Somasundaram
University of Kentucky

Co-author: Aya Omar
University of Kentucky

Co-author: Cole Malloy
NIH

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

First Author
Alex Stanback
University of Kentucky

Co-author
Hunter Maxwell
uky

Co-author
Clare Cole
uky

Co-author
Katherine Johnson
uky

Co-author
Jenni Ho
uky

Co-author
La Shay Byrd
uky

Co-author
Samantha Danyi
uky

Co-author
Sushovan Dixit
uky

Co-author
Madan Subheeswar
uky

Co-author
Maddie Stanback
uky

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

Posters: Psychology
Curris Center

Can nicotine improve scopolamine-induced behavioral deficit?

First Author
Brianna Ward
Morehead State University

Co-author
Elizabeth Collins
Morehead State University

Co-author
Ilsun White
Morehead State University

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

First Author
Alicia Bedolla
Berea College

Co-author
Evelyne Rivera Perez
Berea College

Co-author
Joseph Barger
Berea College

Co-author
Jasmine Roman
Berea College

Co-author
Sarah Jones
Berea College

What influences recognition of emotion among college students

First Author
Shannon Mapes
Morehead State University

Co-author
Suzanne Savard
Morehead State University

Co-author
Ilsun White
Morehead State University

Co-author
Kinetta Crisp
Morehead State University

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

First Author
Rick Holland
Berea College

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

First Author
Caitlin Taulbee
Berea College

Maternal reflective functioning and dyadic synchrony

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

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

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

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

First Author
Alicia Bedolla
Berea College

Affect Perseverance or Affect Momentum?
The POGIL Approach to Teaching

First Author
Lucas Collett
Berea College

Using the POGIL Approach in Non-Stem Disciplines

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

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

First Author
Martin Brock
Eastern Kentucky University

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

First Author
Maddie Stanback
University of Kentucky
Co-author
Alexandra Stanback
uky
Co-author
Tristan Donovan
uky
Co-author
Priscilla Boachie
uky
Co-author
Brendon Stockwell
uky
Co-author
Carly Ballinger-Boone
uky
Co-author
Emma Higgins
uky
Co-author
Meaghan Labarre
uky
Co-author
Alexa Larson
Characterization of mating behaviors and risk of cannibalism in Tigrosa georgicola wolf spiders

First Author
Talon Garman
Murray State University

Co-author
Laura Sullivan-Beckers
Murray State University

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

First Author
Katherine Cappel
Campbellsville University

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

First Author
Abigail Glass
Murray State University

Co-author
Rachel Racicot
Vanderbilt University

Co-author
Michelle Casey
Murray State University

Co-author
Michelle Casey
Murray State University

Co-author
Simon Darroch
Vanderbilt University

Heritable Behavioral Tendencies of the African Lion

First Author
Natalie Mercer
Kentucky Wesleyan College

Co-author
Shannon Finerty
Kentucky Wesleyan College

The Effect of Chemical Sympathectomy on Mouse Sleep Using Piezoelectric Technology

First Author
Benjamin Conkright
Western Kentucky University

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

Biology Social

Corvette Lanes, 1415 Main St.

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

**Coffee & Tea**

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

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

**Practice Room for Oral Presentations**  
Saturday, November 4, 2017  7:30am - 12:00pm  
Cumberland Room, Curris Center

**Practice Room for Oral Presentations**  
Saturday, November 4, 2017  7:30am - 2:30pm  
Tennessee Room, Curris Center

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

**KBRIN** (Kentucky Biomedical Research Infrastructure Network)  
**Kentucky Organization of Field Stations**  
**University of Kentucky Chemistry Department**
Oral Presentations: Cellular and Molecular Biology

Barkley Lecture Room, Curris Center

Chair: Emily Shifley
Secretary: Gary ZeRuth

Section meeting to follow presentations

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

First Author
Erin Clayton
Murray State University

Co-author
Gary ZeRuth
Murray State University

Hepatitis C virus entry inhibitor Aryloxazole modulates Autophagy

First Author
Jazmin Escamilla
Berea College

Co-author
Zongyi Hu
Liver Disease Branch, NIDDK-National Institute of Health

Jake Liang
Liver Disease Branch, NIDDK-National Institute of Health

Exposure Effects of TiO2 Nanoparticles on the Growth and Physiology of Medicago truncatula

First Author
Ahmed Fadil
Western Kentucky University

PAM-1 aminopeptidase prevents neurodegeneration in Caenorhabditis elegans.

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

First Author
Monica Moran
Vanderbilt University Division of Nephrology and Hypertension

Co-author
Billy Hudson
Vanderbilt University Division of Nephrology and Hypertension

Vadim Pedchenko
Vanderbilt University Division of Nephrology and Hypertension

Effect of acute sleep fragmentation upon morphology and density of astrocytes in hippocampal and
hypothalamic tissue
10:30
First Author  Keelee Pullum  Co-author  Noah Ashley  Gatton Academy, Western Kentucky  University

An Examination of Epigenetic Factors and Methylation Patterns in Promoter Regions of AT1 and ACE
10:45
First Author  Dimond Shelton  Co-author  Nancy Rice  Co-author  Conner Hounshell  Western Kentucky University  Western Kentucky University

Identifying Autophagy-induced phosphorylation sites on the Hsp70 molecular chaperone
11:00
First Author  Alexandria Szalanczy  Co-author  Nitika Nitika  Co-author  Andrew Truman  Centre College  University of North Carolina at Charlotte  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  Co-author  Kelsey Klinefelter  Co-author  Breann Colter  Co-author  Alexandra Dailey  Co-author  Christine Curran  Northern Kentucky University  Northern Kentucky University  Northern Kentucky University

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

Oral Presentations: Ecology and Environmental Sciences
Curris Center Theatre

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

Techniques in Carbon Footprinting: Achieving a Carbon Neutral Conference
8:00
First Author  Audrey Alexander
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-author
David Brown
Eastern Kentucky University
Co-author
Stephen Richter
Eastern Kentucky University
Co-author
Barbara Scott
US Army Corps of Engineers
Co-author
Michelle Cook
Kentucky Division of Water

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

8:45

First Author
Meika Finger-Gray
Kentucky State University
Co-author
Avinash Tope
Kentucky State University
Co-author
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
Co-author
Avinash Tope
Kentucky State University
Co-author
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>
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<tbody>
<tr>
<td>Memory of seeds: Effect of plant volatile exposure to seeds on plant growth, development and defense across generations</td>
<td>Abhinav Maurya</td>
<td>Christopher Frost</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>Landscape Genetics of California Tiger Salamanders: Inferences from multiple methods</td>
<td>Samantha Thomas</td>
<td>Jarrett 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>A Study of Mercury in Bald Eagle Feathers and Quills</td>
<td>Wendy Cecil</td>
<td>Cate Webb</td>
<td>Western Kentucky University</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>
</tr>
<tr>
<td>Who’s the boss: Social dynamics associated with leadership in endangered Toque Macaques.</td>
<td>First Author</td>
<td></td>
<td>Elizabeth Willenbrink</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
University of Louisville

Movement patterns of Silver Carp Hypophthalmichthys molitrix in Kentucky Lake

2:00

First Author
Timothy Spier
Murray State University

Co-author
Michael Flinn
University of Louisville

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

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

Saturday, November 4, 2017  8:00am - 11:30am
The CREAM instrument on the ISS
8:15

First Author
Scott Nutter
Northern Kentucky University

Matching Simulation Data to Calibration Data for the Silicon Charge Detector used in the ISS-CREAM Instrument
8:30

First Author
Carter Kring
Northern Kentucky University

Calibration of the CREAM Calorimeter with CERN Beam Tests
8:45

First Author
Tyler LaBree
Northern Kentucky University
Co-author
Scott Nutter
Northern Kentucky University

Analysis of a Current-Mode Detector for the NOPTREX Experiment
9:00

First Author
Daniela Olivera Velarde
Berea College
Co-author
Danielle Schaper
University of Kentucky

Josephson weak links with high characteristic voltage for THz radiation detection.
9:15

First Author
Luis Gomez
Northern Kentucky University

Investigation of the Kepler Eclipsing Binary Catalog: Analysis of Targets With UNC Flags
9:30

First Author
Garrison Turner
Big Sandy Community and Technical College

Streamlining Predictions of Temperature-Dependent Changes in Defect Properties of Intermetallic Compounds
9:45

First Author
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

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

Oral Presentations: Chemistry: Analytical & Physical
Blackburn 320

Chair: Harry Fannin
Secretary: Bommanna Loganathan

Section meeting to follow presentations

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

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

Monitoring Photocatalytic Reactions Using Surface Enhanced Raman Spectroscopy

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

The removal of organic pollutants through buoyant photocatalyst

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

Upconverting Luminescent Nanomaterials Produced Through Liquid-Phase Laser Ablation

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

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

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

Temperature and electric field dependence of asymmetric stretching of nitrate ion
# Oral Presentations: Agricultural Sciences

The Stables, Curris Center  
1st floor

Chair: Jean Gumirakiza  
Section meeting to follow presentations

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

<table>
<thead>
<tr>
<th>First Author</th>
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<tr>
<td>Srijana Thapa Magar</td>
<td>Kirk Pomper</td>
<td>Jeremiah Lowe</td>
<td>Sheri Crabtree</td>
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## Enzymes as Indicators of Soil Microbial Activity at three Locations in Kentucky  
8:30

<table>
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<tr>
<th>First Author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>GEORGE ANTONIOUS</td>
<td>KENTUCKY STATE UNIVERSITY</td>
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</table>

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

<table>
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<th>First Author</th>
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<tr>
<td>James Schwartz</td>
<td>Vikas Kumar</td>
<td>Waldemar Rossi</td>
<td>Katerina Kousoulaki</td>
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## Responses of juvenile largemouth bass (Micropterus salmoides) to dietary EPA and DHA rich oils  
9:00

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<tr>
<td>Amit Yadav</td>
<td>Waldemar Rossi</td>
<td>Hab Andemichael</td>
<td>Vikas Kumar</td>
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## Applicability of waste-reared Hermetia illucens as an ingredient in the diet of Nile Tilapia, Oreochromis niloticus  
9:15
Comparing the Effects of Long-term No Till and Conventional Tillage on Soil Properties in Central Kentucky

9:30

First Author
Emily Cook
Murray State University

Co-author
Lin Handayani
Murray State University

Co-author
Jessica Pafford
Murray State University

Co-author
Steve Still
Murray State University

Co-author
John Grove
University of Kentucky

Co-author
Mark Coyne
University of Kentucky

Co-author
Ann Freytag
University of Kentucky

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

9:45

First Author
Sathya Govindasamy
Kentucky State University

Co-author
John Sedlacek
Kentucky State University

Co-author
Karen Friley
Kentucky State University

Co-author
E. Kyle Slusher
Kentucky State University

Co-author
Mamata Bashyal
Kentucky State University

Co-author
Megan McCoun
Kentucky State University

Comparing the abundance of beneficial insects in blackberry plots bordered by native perennial plants and pasture and sp

10:00

First Author
Mamata Bashyal
Kentucky State University

Co-author
John Sedlacek
Kentucky State University

Co-author
Karen Friley
Kentucky State University

Co-author
E. Kyle Slusher
Kentucky State University

Co-author
Sathya Govindasamy
Kentucky State University

Co-author
Megan McCoun
Kentucky State University

Optimizing Hemp Production through Cultivar Selection and Soil Management Practices

10:30

First Author
Rose Johnson
### An Assessment of Nutritive Value and Optimization of Soybean Meal-Based Diets for Largemouth Bass

<table>
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<tr>
<th>First Author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>Gagan Kolimadu</td>
<td>Jarod Jones</td>
<td>Kristy Allen</td>
<td>Waldemar Rossi</td>
<td>Michael Habte-Tision</td>
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<td>Co-author</td>
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<tr>
<td>Vikas Kumar</td>
<td>Kentucky State</td>
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### ANTIBIOTIC SUSCEPTIBILITIES OF BACTERIA ISOLATED FROM THE SAME FISH IN CASES EXAMINED AT THE KENTUCKY STATE UNIVERSITY

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>Ashmita Poudel</td>
<td>Kathryn Mitchell</td>
<td>Robert Durborow</td>
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<td>Kentucky State University</td>
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### Investigating the Impact of Low-Cost Organic Fertilizers on Tomato Yield

<table>
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<tr>
<th>First Author</th>
<th>Co-author</th>
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<tr>
<td>Lusekelo Nkuwi</td>
<td>George Antonious</td>
<td>Eric Turley</td>
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<td>Kentucky State University</td>
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### Evaluation of Density in a Live Holding System for Food Size Channel Catfish, Ictalurus punctatus

<table>
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<tr>
<th>First Author</th>
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<tbody>
<tr>
<td>Sujan Bhattarai</td>
<td>Ken Semmens</td>
<td>Vikas Kumar</td>
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<td>Kentucky State University</td>
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### Are Online Shoppers Aware and/or Interested In Learning About Direct-To-Consumer Market Outlets?

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
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<tbody>
<tr>
<td>JEAN DOMINIQUE GUMIRAKIZA</td>
<td>Stephen King</td>
<td>Thomas Kingery</td>
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<tr>
<td>Western Kentucky University</td>
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</table>

As online shopping becomes popular, will consumers still be interested in direct-to-consumer offline market outlets?
Analyzing the Effects the use of Best Practices for Farm Management has on Farm Financial Position and Profitability

First Author: Audrey Barnett
Co-author: Dominique Gumirakiza

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

First Author: Thomas Mason
Co-author: Ken Semmens

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

First Author: Shreya Patel
Co-author: Avinash Tope

Oral Presentations: Geography
Mississippi Room, Curris Center

Assessment of Vegetation Cover Change and Water Quality in Coal Mine Watersheds
8:30

First Author: Oguz Sariyildiz
Co-author: Buddhi Gyawali

Identification of Unmarked Burial Sites at Frankfort Cemetery using LiDAR and Ground Penetrating Radar
The Urban Heat Island: Environmental Change and the Human Condition in Detroit Michigan

9:00

First Author
Tori Farrow
Kentucky State University

Co-author
Jeremy Sandifer
Kentucky State University

Networks of Sustainability within the Iceland Whale Watching Industry

9:15

First Author
Jason Fox
Western Kentucky University

Co-author
Leslie North
Western Kentucky University

Predicting the Adoption of Sustainable Agricultural Practices among Kentucky Farmers and Its Barriers

9:30

First Author
Bijesh Mishra
Kentucky State University

Co-author
Buddhi Gyawali
KYSU

Exploring Relationship between community Perception and landscape change in the Eastern Kentucky

10:00

First Author
Buddhi Gyawali
Kentucky State University

Co-author
Prabisha Shrestha
Kentucky State University

Co-author
Tilak Shrestha
Kentucky State University

Co-author
Jeremy Sandifer
Kentucky State University

Association of land cover change trend with land ownership size at parcel level data in Breckinridge County, KY

10:15

First Author
Prabisha Shrestha
Kentucky State University

Co-author
Buddhi Gyawali
Kentucky State University

Co-author
Tilak Shrestha
Kentucky State University

Co-author
Jeremy Sandifer
Kentucky State University

Land Cover Classification using LandSat, NAIP images, and Accuracy enhancements
Modeling and Evaluating the Influences of Class V Injection Wells on Urban Karst Hydrology

10:45

First Author: James Shelley
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
Texas State University
Co-author: Brittiny 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

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

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
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
<th>Institutions</th>
</tr>
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<tbody>
<tr>
<td>9:15</td>
<td>Geochemical characteristics and storm dynamics of surface waters and</td>
<td>Randal Roberson, Michelle Casey</td>
<td>Murray State University</td>
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<td>groundwater at Eastern Kentucky University's Meadow</td>
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<td>9:30</td>
<td>Patterns of nutrient export for a typical non-point source, Meadowbrook</td>
<td>James Winter</td>
<td>Eastern Kentucky University</td>
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<td>Farm, Madison County, Kentucky.</td>
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<tr>
<td>10:00</td>
<td>How Does Spatial Heterogeneity Influence Groundwater Flow on Ridgetops</td>
<td>Selsey Stribling, Jonathan Malzone</td>
<td>Eastern Kentucky University</td>
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<tr>
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<td>in Kentucky's Daniel Boone National Forest?</td>
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<tr>
<td>10:15</td>
<td>Modeling the groundwater storage and the groundwater recharge rate of</td>
<td>Addison Bell, Jonathan Malzone</td>
<td>Eastern Kentucky University</td>
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<td>an ephemeral wetland with Hydrus-1D</td>
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<tr>
<td>10:30</td>
<td>Hydrograph Separation of Storm Flows in a Landscape with Thin Soil,</td>
<td>Laura Kelley, Sophia Chan,</td>
<td>Eastern Kentucky University</td>
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<td>Meadowbrook Farm, KY</td>
<td>Jonathan Malzone, Walter Borowski</td>
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<td>Runoff generation in an ephemeral agricultural watershed with thin</td>
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</tbody>
</table>
## Oral Presentations: Psychology

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

**First Author**
Aaron Clark  
**Co-author**
Dave Porter  
*Berea College*

*Section meeting to follow presentations*

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

**First Author**
Laura Hopkins  
**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  
**Co-author**
Ashley Hamm  
**Co-author**
Shari Kidwell  
*Morehead State University*

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

**First Author**
Aaron Ellis  
**Co-author**
John Blackledge  
**Co-author**
Shelby Humphrey  
**Co-author**
Kellen Crager  
**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.

First Author
Joseph Reese
Morehead State University

Co-author
Mary Blanton
Morehead State University

Co-author
Ashley Ball
Morehead State University

Co-author
Kory Phelps
Morehead State University

Co-author
Shari Kidwell
Morehead State University

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

First Author
Hunter Gatewood
Morehead State University

Co-author
Lynn Haller
Morehead State University

Peer Mentoring Circles for Women STEM Faculty at Murray State University

First Author
Maeve McCarthy
Murray State University

Co-author
Paula Waddill
Murray State University

Co-author
Robin Zhang
Murray State University

Co-author
Echo Wu
Murray State University

Co-author
Steve Cobb
Murray State University

Oral Presentations: Science Education
Blackburn 249

Chair: Shira Rabin
Secretary: Karen Hlinka

Section meeting to follow presentations

Data Mining in Astronomy Using Exoplanet Data from the Space and Ground-based Telescopes

First Author
Joseph Erskine
Bellarmine University

Co-author
Jordan Dowdy
Bellarmine University

Co-author
Stephen Denny
Bellarmine University

Co-author
M Saleem
Bellarmine University

Co-author
Akhtar Mahmood
Bellarmine University
Characterizing Epistemic Beliefs Among Scientists: Applying the Q-Method to Science Epistemology
9:15
First Author
Katherine Ray King
University of Louisville

Co-author
Linda Fuselier
University of Louisville

Co-author
Justin McFadden
University of Louisville

Hearing eclipses: Making astronomy events accessible to visually-impaired students.
9:30
First Author
Wilson Gonzalez-Espada
Morehead State University

Co-author
Laura Parker
Kentucky School for the Blind

Co-author
Adam Stockhausen
Kentucky School for the Blind

Co-author
Wanda Diaz-Merced
Office of Astronomy for Development

Co-author
Allyson Bieryla
Dept. of Astronomy, Harvard University

Co-author
Robert Hart
Dept. of Physics, Harvard University

Co-author
Daniel Davis
Natural Sciences Lecture Demonstrations, Harvard University

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

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

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

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

Characterization of Mechanical Properties of 3D Printed Thermoplastic Parts

10:00
First Author
Jordan Garcia
University of Kentucky

Co-author
Tyler Stoffel
University of Kentucky

Co-author
John Schmidt
University of Kentucky

Co-author
Alexander Bolin
University of Kentucky

Co-author
David Lu
University of Kentucky

Co-author
Charles Lu
University of Kentucky

Imaging of the spinal cord in pediatric patients.

10:15
First Author
Bhavesh Ramkorun
Berea College

Co-author
Samantha By
Vanderbilt University

Co-author
Aashim Bhatia
Vanderbilt University

Co-author
Bryson Reynolds
Vanderbilt University

Co-author
Patrick Couture
Vanderbilt University

Co-author
Seth Smith
Vanderbilt University

Institute of Imaging Science

Hands-on Robotics Lab at Bellarmine University

10:30
First Author
Christopher Steitz
Bellarmine University

Co-author
Stephen Brown
Bellarmine University

Co-author
Akhtar Mahmood
Bellarmine University

Flaw Characterization through Nonlinear Ultrasonics and Wavelet Cross-Correlation Algorithms

10:45
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.

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.

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: Nicholas McLetchie
Co-author: Maddison Hatton
University of Kentucky: University of Kentucky

Oral Presentations: Chemistry: Organic/Inorganic
Blackburn 135

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

A general fabrication approach on spinel MCo2O4 (M= Co, Mn, Fe, Mg and Zn) submicron prisms as advanced positive materia
1:00

First Author: Hongyan Gao
Co-author: Yan Cao
CHEMISTRY: CHEMISTRY
DEPARTMENT, WESTERN: DEPARTMENT, 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: Jessie Brown
Co-author: Amelia Dickey
Co-author: Elias Hanna
Co-author: Christopher Samaan
Transylvania University
University
Transylvania
University
Transylvania
University

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

2:00

First Author
Jacob Nanney
Kentucky Wesleyan
College

Co-author
Kyle Watson
Kentucky Wesleyan
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
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
Blackburn 228

Chair: R. Douglas Chatham
Secretary: Andy Martin
<table>
<thead>
<tr>
<th>Time</th>
<th>Presentation</th>
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<tbody>
<tr>
<td>1:00</td>
<td>Open Coverings of the Rationals Need Not Cover The Reals</td>
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<td></td>
<td><strong>First Author</strong> Andy Martin</td>
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<td></td>
<td>Kentucky state University</td>
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<tr>
<td>1:15</td>
<td>The Cubic Equation</td>
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<td></td>
<td><strong>First Author</strong> Dwight Smith</td>
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<td>Big Sandy CTC</td>
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<tr>
<td>1:30</td>
<td>A Perturbation Method for Determination of an Approximate Analytical Solution of a Nonlinear System of ODEs.</td>
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<td></td>
<td><strong>First Author</strong> Austin Gabhart</td>
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<td>Gatton Academy, Western Kentucky University</td>
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<td>1:45</td>
<td>The n+k kings problem</td>
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<td></td>
<td><strong>First Author</strong> R. Douglas Chatham</td>
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<td>Morehead State University</td>
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<td></td>
<td><strong>Co-author</strong> John Carmen</td>
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<td>Northern Kentucky University</td>
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**Oral Presentations: Microbiology**

Cumberland Room, Curris Center

Chair: Lingyu Huang  Secretary: Joseph Mester

Section meeting to follow presentations

<table>
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<th>Time</th>
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<tr>
<td>1:00</td>
<td>Antimicrobial activity from bacteria found around downtown Cincinnati</td>
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<td></td>
<td><strong>First Author</strong> Kory Stuessel</td>
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<td></td>
<td>Co-author John Carmen</td>
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<td>Northern Kentucky University</td>
<td>Northern Kentucky  University</td>
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Inhibition of Fungal Colony Growth by UVC
Emergence and divergence of influenza virus: A current perspective
1:30

First Author
Alexander Lai
Kentucky State University

Identification of tRNA modification enzymes in higher eukaryotes via primer extension
1:00

First Author
Justen Mamaril
Northern Kentucky University

Physiological Characteristics of Five Bladder Cancer Cell Lines
1:15

First Author
Kyle Damen
Wood Hudson Cancer Research Laboratory

Cell proliferation and Cathepsin L expression are inversely correlated during bladder cancer progression
1:30
The fluorescence quenching ability of graphene oxide as a platform for pathogenic double-stranded DNA sensing

1:45

First Author
Dat Thinh Ha
Western Kentucky University

Oral Presentations: Anthropology and Sociology
Ohio Room, Curris Center

Satuday, 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>
<td>Malaria in the Prehistoric Caribbean: The Hunt for Hemozoin</td>
<td>1:45</td>
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<tr>
<td>First Author</td>
<td>Mallory Cox</td>
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<td>Shifting Agriculture's Effects on Lemurs in a Malagasy Gallery Forest</td>
<td>2:00</td>
</tr>
<tr>
<td>First Author</td>
<td>Benjamin Freed</td>
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<tr>
<td>Co-author</td>
<td>Nathanael Bartosch</td>
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<td>Eastern Kentucky University</td>
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**Oral Presentations: Computer and Informational Sciences**

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

<table>
<thead>
<tr>
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<tr>
<td>Cloud Computing for Hands-On Bioinformatics Education</td>
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<tr>
<td>First Author</td>
<td>Harrison Inocencio</td>
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<tr>
<td>Co-author</td>
<td>Deavin Hester</td>
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<td>University of Kentucky</td>
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<td>Laura Lodder</td>
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<td>Justin Moore</td>
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<td>Bailey Phan</td>
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<td>Andrew Tapia</td>
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<td>Neil Moore</td>
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<td>Mark Farman</td>
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<td>Jerzy Jaromczyk</td>
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<td>Luke Decastro</td>
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<td>University of Kentucky</td>
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<td>Adaptive Topic Mining from Social Media Streams</td>
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<tr>
<td>First Author</td>
<td>Gopi Chand Nutakki</td>
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<tr>
<td>Co-author</td>
<td>Olfa Nasraoui</td>
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<tr>
<td>University of Louisville</td>
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<td>BayesianGLasso: software for integrating a priori knowledge and empirical data utilizing a graphical model framework</td>
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<tr>
<td>First Author</td>
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<td>Jerzy Jaromczyk</td>
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<td>University of Kentucky</td>
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</tbody>
</table>
Password cracking performance testing comparing GPU vs CPU performance using Hashcat

2:00

First Author
Deven Rataiczak
Bellarmine University

Oral Presentations: Zoology

Mississippi Room, Curris Center

Chair: Roy Scudder-Davis
Secretary: Oliver Beckers

Botany and Zoology Section meetings to follow presentations

Phenotypic plasticity of mating calls in the katydid Neconocephalus triops

1:15

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

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

1:30

First Author
Samuel White
Murray State
University

Co-author
Talon Garman
Murray State
University

Co-author
Laura Sullivan-Beckers
Murray State
University

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

1:45

First Author
chi peng
Berea College

Co-author
Chi Peng
Berea College

Co-author
Hanna Abe
Yale University

Co-author
Ron Rosen
Berea College

Co-author
Brian Traw
Berea College

Co-author
Emma Reasoner
Berea College

Co-author
Marah Zeidan
Berea College

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

2:00

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

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

Coffee & Tea
Crow's Nest, Curris Center

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

Keynote Jeffrey Bennett: Communicating Science to the Public
Curris Center Ballroom

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

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

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

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

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

Moderator: Wilson Gonzalez-Espada

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