2018 Annual Meeting Program
November 2-3, 2018

Western Kentucky University

Thank you to our Platinum Sponsor

ASRC
AMERICAN SYNTHETIC RUBBER COMPANY
Thank you to our Gold Sponsor

Thank you to our Morning Break Sponsor

Thank you to our Afternoon Break Sponsor
Thank you to our Bronze Sponsor

ECM Biosciences

Thank you to our In-Kind partners

Thank you our Local Arrangements Team at WKU: Ryanne Gregory, Leslie North, Cheryl Davis, Claire Rinehart, Kerrie McDaniel, Richard Gelderman and Rodney King.

WKU Office of Research and Creative Activity

Online Program, 2018

Poster presentations are Friday from 3-6 pm and Posters will all remain in place through Saturday.

Oral Presentations are Friday from 1:15-3 pm and Saturday 8am-4pm

Thursday, November 1, 2018  6:30pm - 9:00pm

KAS Science Film Festival
<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick off the KAS Meeting with a Science-themed mini-film festival, complete with popcorn!</td>
<td>Friday, November 2, 2018 9:00am - 11:00am</td>
</tr>
<tr>
<td>Kentucky Organization of Field Stations meeting</td>
<td>Friday, November 2, 2018 9:30am - 11:30am</td>
</tr>
<tr>
<td>Registration Open</td>
<td>Friday, November 2, 2018 11:30am - 5:00pm</td>
</tr>
<tr>
<td>Poster Presenters check-in</td>
<td>Friday, November 2, 2018 12:00pm - 2:30pm</td>
</tr>
<tr>
<td>Science Policy &amp; Advocacy workshop</td>
<td>Friday, November 2, 2018 12:00pm - 1:00pm</td>
</tr>
</tbody>
</table>

**KAS Governing Board Meeting**

Downing Student Union 3029

**Kentucky Organization of Field Stations meeting**

Downing Student Union 3004

**Registration Open**

Third Floor, Downing Student Union

Check-in will also be available at the National Corvette Museum after 6:30pm, during the Reception & Plenary.

**Poster Presenters check-in**

Third Floor, Downing Student Union

After checking in at Registration, we ask Poster presenters to check in at the Posters table for further instructions. All posters should be setup by 2:30pm.

**Science Policy & Advocacy workshop**

Cupola Room (inside Fresh Dining Hall)

What do scientists need to know about public policy? Do you want to advocate for science but aren't sure how to start? This workshop is for everyone – students and faculty - regardless of discipline, who are interested in learning more about the role of science in policy-making and in becoming empowered to be a voice for science. Our colleagues at the American Society for Biochemistry and Molecular Biology will provide practical guidance on how to engage in advocacy initiatives at local, state and national levels.

This event is FULL.

Featured Speakers:
Kentucky and Chair, Public Affairs Advisory Committee, American Society of Biochemistry and Molecular Biology

Dr. Matthew Gentry received his B.S. from the University of Evansville in 1996. He then studied yeast cell cycle regulation via protein phosphatase 2A at Syracuse University in Dr. Richard Hallberg’s lab, receiving his Ph.D. in 2003. He was a postdoctoral fellow at UC-San Diego with Dr. Jack Dixon where he discovered glycogen and starch phosphatases and how they are integral for both human and plant energy metabolism.

He began his independent career in 2008 and he is currently a Professor in the College of Medicine at the University of Kentucky where he oversees projects on both Lafora disease and biofuels research. The lab focuses on the regulation of specific phosphatases and E3 ubiquitin ligases in both human glycogen and plant starch metabolism utilizing in vitro biochemical and structural techniques; in situ cell culture models; and in vivo mouse, algal and plant models. Dr. Gentry has been continuously funded by NINDS since 2006, he is an NIH K99/R00 Pathway to Independence Award recipient, he received the NIH Young Investigator IDeA Maciag Award, the 2018 NINDS Landis Award, he is an NSF CAREER awardee, and PI of both a NINDS R01 and P01. He is a Journal of Biological Chemistry Editorial Board member, Director of the NIH-funded Lafora Epilepsy Cure Initiative, and Chair of the ASBMB Public Action Advisory Committee (PAAC).

Dr. Trent Garrison, Assistant Professor, Environmental Geoscience, Northern Kentucky University, and Co-Chair, Education and Advocacy Committee, Kentucky Academy of Science

Dr. Trent Garrison grew up in Hyden, Kentucky where he attended Leslie County High School. With an interest in science, he later went on to attend Eastern Kentucky University (BS and MS in hydrogeology), Kentucky State University (Public Administration), and then University of Kentucky (PhD – Environmental Geology). Dr. Garrison is now an Assistant Professor of Environmental Geoscience at Northern Kentucky University, where he studies a variety of environmental geology issues that affect Kentuckians, such as water issues and dye tracing techniques, as well as soil, air, and water quality in areas affected by coal fires in the state. In addition, Dr. Garrison has a strong passion for teaching, science advocacy, outreach, and interdisciplinary networking between students and professionals.

As Physical Science Representative and Education & Advocacy Co-Chair of KAS, Dr. Garrison was actively involved in research during the 2018 state legislative session, frequently reporting how HB 200 and other legislation would impact higher education. With input from others in KAS, he authored the letters to our state legislators opposing cuts to higher education, which, along with other groups’ advocacy efforts, led to education cuts not being as severe as originally proposed. He also assisted with KAS’s involvement in the March For Science and spoke about the importance of science outreach and involvement in policy.

Ms. Alexa Johnson, Ph.D. Candidate, Rehabilitation Sciences, University of Kentucky and past participant in the American Association for the Advancement of Science - Catalyzing Advocacy for Science and Engineering (CASE) workshop

Alexa is currently studying biomechanics of the lower extremity in military personnel with low back pain, as well as lower extremity loading mechanics in athletes with anterior cruciate ligament reconstruction. She previously completed her Master’s degree (MS in Kinesiology) at the University of Michigan and her Bachelor’s degree (BS in Kinesiology) at California State University Fullerton. Not only is she passionate about biomechanics and sports medicine but she is also passionate about how to translate our jargon science language to the public so everyone can understand it, aka science communication, as well as advocating for women in STEM. These passions have led to her interest in science policy, where she is now trying to figure out how she can pair a career in research and science policy simultaneously. Last March she was selected by UK to attend a workshop called Catalyzing Advocacy for Science and Engineering (CASE) put on by the American Association for the Advancement of Science (AAAS) where she learned not only about science communication and
science policy but also spent a day on the Hill meeting with Kentucky Congress members advocating for science funding.
2:15 * - Targeted integration of fluorescent reporters into iPSCs using CRISPR/Cas9

First Author
Chann Han
Berea College

Co-author
Dennis Roop
University of Colorado Denver - Anschutz Medical Campus

Co-author
Igor Kogut
University of Colorado Denver - Anschutz Medical Campus

Co-author
Ganna Biloussova
University of Colorado Denver - Anschutz Medical Campus

Co-author
Partick Sean McGrath
University of Colorado Denver - Anschutz Medical Campus

Co-author
Kiel Carson Butterfield
University of Colorado Denver - Anschutz Medical Campus

2:30 - The involvement of JAK/STAT signaling during air sac primordium development in Drosophila melanogaster

First Author
Nathan Powers
Western Kentucky University

Co-author
Ajay Srivastava
Western Kentucky University

2:45 * - Transcription factor Gli-similar 3 in pancreatic β cell development and insulin expression

First Author
Lesley Golden
Murray State University

Co-author
Gary ZeRuth
Murray State University

Friday, November 2, 2018 1:15pm - 3:00pm

Computer & Informational Sciences - Oral Presentations
DSU 2113
Section meeting follows talks at 3:00

1:15 - Application of Huffman Coding in Cryptographic hash function SHA-1

First Author
Mustafa Atici
Western Kentucky University

1:30 * - Optically-Linked Raspberry Pi Beowulf Cluster

First Author
Christopher Harton
Murray State University

1:45 * - Analyzing Telomere Sequences: Telomere sequence identification and analysis in fungal genomics

First Author
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00</td>
<td>Analysis of the vulnerabilities of Point of Sale (PoS) systems in the Internet of Things</td>
<td>Bryan Kirshe</td>
<td>Sherali Zeadally</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td>2:15</td>
<td>Utilizing Genome Assembly and Search Tools to Track Evolution of Magnaporthe Oryzae</td>
<td>Michael Murray</td>
<td>Kelsey Cole</td>
<td>University of Kentucky</td>
</tr>
<tr>
<td>2:30</td>
<td>Game Prediction in Professional League of Legends using Neural Networks</td>
<td>Stephen Goins</td>
<td></td>
<td>Bellarmine University</td>
</tr>
<tr>
<td>1:15</td>
<td>High-Throughput Microfluidics to Characterize Subtle Synaptic Phenotypes in C. elegans.</td>
<td>Jean-Pierre Amoakon</td>
<td>Farhan Kamili</td>
<td>Georgia Institute of Technology</td>
</tr>
<tr>
<td>1:30</td>
<td>Implementation of the SPICE Observation Geometry System for the Lunar IceCube Mission</td>
<td>Jacob Schabert</td>
<td></td>
<td>Morehead State University</td>
</tr>
<tr>
<td>1:45</td>
<td>Safety Engineering for a CubeSat: Hazards and Verifications</td>
<td>Katerina Winters</td>
<td></td>
<td>Morehead State University</td>
</tr>
<tr>
<td>2:00</td>
<td>Safety Engineering for a CubeSat: Materials and Usage Requirements</td>
<td></td>
<td></td>
<td>Morehead State University</td>
</tr>
</tbody>
</table>
WITHDRAWN - A synoptic focus on the January 2016 blizzard and tornado event using satellite and radar imagery

WITHDRAWN - American Chestnut Reintroduction in Kentucky: a GIS Approach

1:45 - An Index-Based Assessment of Tourism Development Impacts on Cold-Climate Hydrologically-Dominant Landscapes

First Author
Jason Fox
Western Kentucky University

Co-author
Leslie North
Western Kentucky University

Co-author
Jason Polk
Western Kentucky University

Co-author
Sydney Herndon
Western Kentucky University

2:00 * - Analysis of the Bioaccumulation of Methylmercury in the Organs and Tissues of Bald Eagles

First Author
Evan Hendrickson
Western Kentucky University

2:15 - Assessment of Emerald Ash Borer Related Canopy Gaps in Kentucky Using Drone-Based Remote Sensing and Plot-Level Data

First Author
Brandon Preece
Kentucky State University

Co-author
Richard Cristan
Kentucky State University
### 2:30 - Comparison of Benthic Macroinvertebrate Sampling Methods on Non-Wadeable Waters: A Study Proposal

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed Wilcox</td>
<td>Richard Cristan</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 2:45 - Ecosystem Exchange of Carbon Dioxide of a Grazed Pasture in Central Kentucky

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian Ries</td>
<td>Maheteme</td>
<td>Martin Matisoff</td>
<td>Ken Andries</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Gebremedhin</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td>Kentucky State</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 3:00 - Opportunities for collaborative research and education at a network of field stations in Kentucky

<table>
<thead>
<tr>
<th>First Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Richter</td>
</tr>
<tr>
<td>Eastern Kentucky</td>
</tr>
<tr>
<td>University</td>
</tr>
</tbody>
</table>

---

**Geology - Oral Presentations**

*DSU 3002 Section meeting follows talks at 3:15*

#### 1:15 - A Geochemical Comparison of two Telogenetic Karst Springs During Reverse Flow, Mammoth Cave, Kentucky

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chelsey Kipper</td>
<td>Patricia Kambesis</td>
<td>Jason Polk</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

#### 1:30 - Do Radioactive Black Shales Potentially Affect Human Health as well as Water Quality of Streams in Eastern Kentucky?

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitchell Grothaus</td>
<td>Elizabeth Hereford</td>
<td>Robert Grigsby</td>
<td>Geoffrey Gearner</td>
<td>Timothy Hare</td>
<td></td>
</tr>
<tr>
<td>Morehead State</td>
<td>Morehead State</td>
<td>Morehead State</td>
<td>Morehead State</td>
<td>Morehead State</td>
<td>Morehead State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td></td>
<td>Co-author</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Charles Mason</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Morehead State</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 1:45 - Fate of Indirect greenhouse gases in Karst Landscapes Associated with Land Use

<table>
<thead>
<tr>
<th>First Author</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
2:00 - Incision timing and its relationship to tectonic uplift and climate change: using thermochronology to unravel Ethiopia's

First Author
Shelby Bowden
Western Kentucky University

Co-author
Nahid Gani
Western Kentucky University

Co-author
Matthijs Van Soest
Arizona State University

Co-author
Royhan Gani
Western Kentucky University

Co-author
Paul O'Sullivan
GeoSeps Services LLC

2:15 - Mass-Transport Deposits in the Northern Gulf of Mexico and Their Implications to Hydrocarbon Exploration

First Author
Michael Arthur
Western Kentucky University

Co-author
M. Royhan Gani
Western Kentucky University

2:30 - Spectral Analysis of Analog Lunar and Martian Mineral Samples

First Author
Madison Howard
Morehead State University

Co-author
Marianne Peterson
St. Olaf

Co-author
Prabhakar Misra
Howard University

2:45 - Stratigraphic Controls on Cave Passage Development of Dogwood Cave, Hart, County, Kentucky

First Author
Patricia Kambesis
Western Kentucky University

3:00 - Tekeze River Incision Constrained from Apatite (U-Th)/He Dating

First Author
Jacob Grigsby
Western Kentucky University

Co-author
Nahid Gani
Institution

Co-author
Shelby Bowden
Institution

Friday, November 2, 2018  1:15pm - 3:00pm

Microbiology - Oral Presentations

DSU 3006  Section meeting follows talks
1:15 * - Effect of Growth Temperature on Mycoplasma iowae Pathogenicity

First Author
Brittany Boyken
Kentucky Wesleyan College

Co-author
Justin Fraizer
Kentucky Wesleyan College

Co-author
Rachel Pritchard
Kentucky Wesleyan College

1:30 - Host range shift of H3N8 canine influenza virus: A phylodynamics approach to delineate its origin and its adaptation

First Author
Alexander Lai
Kentucky State University

1:45 * - Novel Inactivation of the Causative Fungus of White Nose Syndrome with Methoxsalen and Ultraviolet A Light

First Author
Colin Hartman
Northern Kentucky University

Co-author
Riley James
Northern Kentucky University

Co-author
Joseph Mester Ph.D.
Northern Kentucky University

Co-author
Alan Cohen M.D.
Northern Kentucky University

2:00 * - Potential Use of Essential oils as Alternative Treatment for Bacterial Skin Infections

First Author
Clarissa Gearner
Western Kentucky University

Co-author
Simran Banga
Western Kentucky University

2:15 - UV Treatment of Environmental Fungi

First Author
Ashley Wentworth
Northern Kentucky University

Co-author
Joseph Mester
Northern Kentucky University

Co-author
Colin Hartman
Northern Kentucky University

Co-author
Alan Cohen
Northern Kentucky University

2:30 * - Metal and antibiotic cross-resistance among bacteria isolated from the Kentucky River

First Author
William Fenske
Eastern Kentucky University

Co-author
William Staddon
Eastern Kentucky University

Co-author
Valerie Peters
Eastern Kentucky University

3:00 - Practice Room

This space is available for speakers to practice their presentations.

Friday, November 2, 2018  1:15pm - 6:00pm
Practice Room

DSU 3004

This room is available for speakers to practice their presentations.

Poster Session and Social Hour

Asterisk* denotes student research competition

Downing Student Union,
Second & Third floors

Light refreshments will be served. Poster presenters will be at their posters during the session, and posters will remain up until the end of the day on Saturday.

Agricultural Science - Poster Presentations

1. - Accumulation of Heavy Metals in Fruits of Plants Grown in Recycled Sewage Sludge

First Author: Eric Turley
Kentucky State University
Co-author: George Antonious
Kentucky State University

WITHDRAWN - Applicability of waste-reared black soldier fly larvae as an ingredient in the diet of Nile tilapia


First Author: Nathan Folz
Murray State University
Co-author: Iin Handayani
Murray State University
Co-author: Brian Parr
Murray State University
Co-author: Brian Parr
Murray State University

4. * - Assessing Soil Quality Indicators in No-Till and Conventional Tillage Systems: Study Case: IL, IN, and KY

First Author: Riley Mabe
Murray State University
Co-author: Kaeden Mollett
Murray State University
Co-author: Riley Mabe
Murray State University
Co-author: I. P. Handayani
Murray State University
Co-author: Brian Parr
Murray State University

5. * - Assessing the Rising Plate Meter Method to Determine Forage Production on Organic Dairies

First Author:
<table>
<thead>
<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author 1</th>
<th>Co-author 2</th>
<th>University 1</th>
<th>University 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. * - Comparing Characteristics of Soil under Various Management Conditions in Western Kentucky</td>
<td>River Dowell</td>
<td>Iin Handayani</td>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>8. * - Economic Viability of Municipal Compost and Equine Stall Waste as Media Amendments in an In-Ground Pot-in-Pot Production</td>
<td>Ashley Robert</td>
<td>Alyx Shultz</td>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>9. * - Effects of live yeast supplementation on rumen bacterial diversity of beef cattle</td>
<td>Kyle Cannon</td>
<td>Megan Mccoun</td>
<td>Hank Schweickart</td>
<td>Kentucky State</td>
<td>University</td>
</tr>
<tr>
<td>10. * - Effects of live yeast supplementation on rumen fluid metabolome of beef cattle</td>
<td>Megan Mccoun</td>
<td>Kyle Cannon</td>
<td>Hank Schweickart</td>
<td>Kentucky State</td>
<td>University</td>
</tr>
<tr>
<td>11. - Effects of water soluble fertilizers on growth performance of lotus plants in containers</td>
<td>Changzheng Wang</td>
<td>Changzheng Wang</td>
<td>Lingyu Huang</td>
<td>Kentucky State</td>
<td>University</td>
</tr>
<tr>
<td>12. * - Evaluation of Soil Response to the Applications of Ammonium Nitrate and Horse Manures</td>
<td>Sarah Forden</td>
<td>Iin Handayani</td>
<td>Kyle Hanenberger</td>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>Number</td>
<td>Title</td>
<td>First Author</td>
<td>Co-author 1</td>
<td>Co-author 2</td>
<td>Co-author 3</td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>13.</td>
<td>Food Safety Perceptions and Behaviors of Kentucky Farmer Market Consumers</td>
<td>Hanna(John) Khouryieh</td>
<td>Western Kentucky</td>
<td>University</td>
<td>Steve Still</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky State</td>
<td>University</td>
<td>Kentucky State</td>
<td>University</td>
</tr>
<tr>
<td>15.</td>
<td>Growth of Pawpaw (Asimina triloba) Seedlings in Two Commercially Available Potting Mixes</td>
<td>Aidan Thompson</td>
<td>Western Kentucky</td>
<td>University</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>16.</td>
<td>Impact of aerobic compost tea on growth of Lactuca sativa</td>
<td>Ella Potts</td>
<td>Jessica Stoner</td>
<td>Lin Handayani</td>
<td>Alyx Shultz</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky State</td>
<td>University</td>
<td>Murray State</td>
<td>University</td>
</tr>
<tr>
<td>17.</td>
<td>Impact of integrated crop-livestock rotation including small ruminants on nitrate and phosphorus concentrations in water</td>
<td>Ellyn Anthony</td>
<td>Shawn Lucas</td>
<td>Derek Law</td>
<td>Tony Silvernail</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky State</td>
<td>University</td>
<td>Kentucky State</td>
<td>Beyond the Bridge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
<td>University</td>
<td>Organic Farm</td>
</tr>
<tr>
<td>18.</td>
<td>Investigating the Impact of Soil Amendments on Eggplant Production</td>
<td>Yogendra Upadhyaya</td>
<td>Western Kentucky</td>
<td>University</td>
<td>Western Kentucky</td>
</tr>
</tbody>
</table>
19. - Longitudinal Histological Study of Nosema ceranae in Honey Bees

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Katherine Kamminga</td>
<td>Thomas Webster</td>
<td>Martin Matisoff</td>
<td>Alix Shultz</td>
<td>Brian Parr</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samantha Peterson</td>
<td>Lin Handayani</td>
<td>Alix Shultz</td>
<td>Brian Parr</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

21. - The Effect of Sulfur and Copper Fungicides on June Drop of Pawpaw Fruit.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sijan Pandit</td>
<td>Jeremiah Lowe</td>
<td>Sheri B Crabtree</td>
<td>Kirk William Pomper</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

22. - Variation in annonaceous acetogenins activity in twig tissues of pawpaw varieties and new advanced selections using.....

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>HARRY MOMO</td>
<td>Jeremiah Lowe</td>
<td>Sheri Crabtree</td>
<td>Kirk Pomper</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

23. - Yield Performance of 'Prime-Ark® 45' and 'Black Magic' Grown Organically in Kentucky

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jeremiah Lowe</td>
<td>Kirk Pomper</td>
<td>Sheri Crabtree</td>
<td>Sheri Crabtree</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

Friday, November 2, 2018 3:00pm - 6:00pm

Anthropology and Sociology - Poster Presentations

24. - Ethnographic Study of Ohio River Barge Deckhands

<table>
<thead>
<tr>
<th>First Author</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
25. - Preliminary Results From 2017 NKU Excavations at the Glacken Site (15BE272), Big Bone Lick State Historic Site

First Author
Alessa Rulli
Northern Kentucky University

26. * - Multidisciplinary Approaches to Research and Abolitionism Through the Parker Academy

First Author
Andrea Shiverdecker
Northern Kentucky University
Co-author
Samantha Hamilton
Northern Kentucky University
Co-author
Cooper Pfalz
Northern Kentucky University

27. * - Uncovering the Women of Parker Academy

First Author
Delaney Gilliam
Northern Kentucky University
Co-author
Lyndsey Mcnabb
Northern Kentucky University

Friday, November 2, 2018 3:00pm - 6:00pm

Botany - Poster Presentations

28. * - Cultivation of Peanuts in Oak Tree Saw Dust to Increase Resveratrol

First Author
Wendy Cecil
Western Kentucky University

Cellular and Molecular Biology - Poster Presentations

29. - A Genetic Screen for Proteins Involved in ASP Invasion of the Wing Disc of Drosophila melanogaster

First Author
Anas Gondal
Western Kentucky University
Co-author
Hasan Salim
Western Kentucky University
Co-author
Ajay Srivastava
Western Kentucky University

30. * - Cerebellar gene expression of cabin1

First Author
31. * - Characterization of a Basement Membrane Associated Protein

First Author: Aref Ranjbar
Institution: Western Kentucky University
Co-author: Ajay Srivastava
Institution: Western Kentucky University

32. - Cloning Lectins for the Detection of Flavivirus Nonstructural Protein 1

First Author: Natalie Mercer
Institution: Kentucky Wesleyan College
Co-author: Krystal Hamorsky
Institution: Kentucky Wesleyan College

33. - Cysteine Thiol Directed Chemical Modification of a KCNE1 Protein N-Terminus

First Author: Sharman N Sugumaran
Institution: Berea College
Co-author: Keenan Taylor
Institution: Vanderbilt University

34. * - Damage to Danio Rerio’s Developing Neuromuscular Junction Could Lead to Expanded Synaptic Plasticity

First Author: Diana Schweitzer
Institution: Murray State University
Co-author: Dena Weinberger
Institution: Murray State University

35. * - De Novo Prediction of the Tail and Capsid Structure of Mycobacteriophage MooMoo

First Author: Alexander Stewart
Institution: Western Kentucky University
Co-author: Claire Rinehart
Institution: Western Kentucky University

36. - Detection of antibiotic resistance genes using engineered zinc finger proteins immobilized on the silane polymer-coated

First Author: Jiyoung Shim
Institution: Western Kentucky University
Co-author: Moon-Soo Kim
Institution: Western Kentucky University

37. * - Effect of HER2 expression on NUPL2 protein in cervical cancer cells

First Author: Tristan Haight
### 38. - Evaluation of Genes that May Mediate Individualization in Spermatogenesis

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olivia Honaker</td>
<td>Darren Paris</td>
<td>Douglas Harrison</td>
</tr>
<tr>
<td>Centre College</td>
<td>Murray State</td>
<td>University of Kentucky</td>
</tr>
</tbody>
</table>

### 39. - Examining how the FGF signaling pathway effects gene expression within the pharynx during embryonic development

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Wilke</td>
<td>Emily Shifley</td>
</tr>
<tr>
<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
</tr>
</tbody>
</table>

### 40. - Examining the Role that Iroquois Genes Play During Embryonic Development

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maria Stewart</td>
<td>Emily Shifley</td>
</tr>
<tr>
<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
</tr>
</tbody>
</table>

### 41. - Fishing for fertility: Creating a PAM-1 substrate trap to isolate novel fertility-governing proteins

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autumn Graves</td>
<td>Chris Trzepacz</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 42. - Generation of a transgenic beta cell line for study of Glis3 using CRISPR/Cas9 technology

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>NancyAnn Webster</td>
<td>Gary ZeRuth</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 43. - Generation of transgenic zebrafish line by CRISPR/Cas9 to evaluate pancreas development and function

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>LilyAnne Grieve</td>
<td>Gary ZeRuth</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>
44. * - Integrin β1 Promotes Kras-Mutated Lung Cancer Proliferation Via Mapk-Independent Mechanism

First Author
Kateryna Nabukhotna
Berea College

Co-author
Scott Haake
Vanderbilt University
Medical Center

45. * - Investigating a transient expression system in Nicotiana Benthamiana for the production of Novel TALE Proteins

First Author
Colleen Jackson
Western Kentucky University

Co-author
Wendy Cecil
Western Kentucky University

Co-author
Kibum Kim
Chung-Ang University

Co-author
Moon-Soo Kim
Western Kentucky University

Co-author
Kisung Ko
Chung-Ang University

46. * - Platinum Leaving Ligand Effects on Mammalian Cells

First Author
Emily Nole
Western Kentucky University

Co-author
Jessica Schlabach
Western Kentucky University

Co-author
Brooke Duke
Western Kentucky University

Co-author
B.Blairanne Williams
Western Kentucky University

47. * - Potential for the green alga Chlamydomonas reinhardtii to degrade lignin

First Author
Meg Dillingham
Western Kentucky University

Co-author
Cydne Kitchens
Western Kentucky University

48. * - Role of Shear Stress on Endothelial Insulin Sensitivity

First Author
Areli Medina Hernandez
Berea College

Co-author
Lauren Walsh
University of Missouri

Co-author
Thaysa Ghiafone
University of Missouri

Co-author
Luis Martinez-Lemus
University of Missouri

Co-author
Jaume Padilla
University of Missouri

49. - Spinal Cord Injury and its effect on Circadian Rhythm

First Author
Charles Thaler
KBRIN

50. * - The Bioinformatics of Mycobacteriophage Drake94

First Author
51. * - The effect of light pollution on immunoresponse and neurogenesis in zebra finches

First Author
Matthew Knerr
Western Kentucky University

52. * - The Effects of Acute Sleep Fragmentation on Microglial Cells

First Author
Anna Strunjas
Western Kentucky University
Co-author
Ila Mishra
Western Kentucky University
Co-author
Noah Ashley
Western Kentucky University
Co-author
Ila Mishra
Western Kentucky University
Co-author
Noah Ashley
Western Kentucky University
Co-author
Bradley Kraemer
Eastern Kentucky University

53. * - The effects of oxidative stress on p75NTR signaling in dopaminergic neurons.

First Author
Kendall Nelson
Eastern Kentucky University
Co-author
Montana Schemanski
Eastern Kentucky University
Co-author
Cassandra Escobedo
Eastern Kentucky University
Co-author
Carter Waugh
Eastern Kentucky University
Co-author
Alborz Kalantar
Eastern Kentucky University
Co-author
Bradley Kraemer
Eastern Kentucky University

54. - The FGF signaling pathway plays an important role regulating gene expression in developing Xenopus laevis embryos

First Author
Kelsey Donahue
Northern Kentucky University
Co-author
Emily Shifley
Northern Kentucky University

55. - The Role of Polarity Genes in Esophageal Adenocarcinoma Metaplasia

First Author
Young Koh
Asbury University
Co-author
Pei Guo Ding
University of Texas Southwestern
Co-author
David Wang
University of Texas Southwestern
Co-author
Malinda Stull
Asbury University

56. * - Therapeutic and toxicity profile of Pt-Mal-LHRH, a target direct chemotherapeutic for triple negative breast cancer.

First Author
Adam Gehlhausen
EKU
Co-author
Emily McCord
EKU
Co-author
Lindsay Calderon
EKU
Co-author
Margaret Ndinguri
EKU
**Chemistry: Analytical/Physical - Poster Presentations**

### 57. * - The Chemical Characterization of Kentucky Honeys

**First Author**
Rebecca Jenkins  
Morehead State University

**Co-author**
Chelsea Fitzpatrick  
Morehead State University

**Co-author**
Brandon Van Ness  
Morehead State University

### 58. * - Profiling whiskey fungus using the gas chromatography/mass spectrometry and laboratory serial dilutions methods

**First Author**
Amber Persons  
Kentucky State University

### 59. * - Solid Phase Extraction of Tylosin from Cattle Waste With Determination by Liquid Chromatography Mass Spectrometry

**First Author**
Anne Carlisle  
Western Kentucky University

**Co-author**
Keerthi Appala  
Western Kentucky University

**Co-author**
Eric Conte  
Western Kentucky University

**Co-author**
John Kasumba  
Western Kentucky University

**Co-author**
Getahun Agga  
USDA

**Co-author**
John Loughrin  
USDA

### 60. * - Temporal Trend of Illicit and Neuropsychiatric Drug Consumption

**First Author**
Brittney Nelson  
Murray State University

**Co-author**
Tara Croft  
Murray State University

**Co-author**
Bikram Subedi  
Murray State University

### 61. * - Using the Liquid Sampling-Atmospheric Pressure Glow Discharge with Capillary Channeled Polymer Fibers for Analysis of Pr

**First Author**
Daisy Sullivan  
Berea College

**Co-author**
Dr. R. Kenneth  
Clemson University

**Co-author**
Marcus  
Clemson University

### 62. * - Application of an Analytical Assay for Quantification of Polyphosphate Using Silicon Photonic Microring Resonators

**First Author**
Beau Schweitzer  
University of Michigan

### 63. * - Purification and Analysis of LHRH using HPLC
64. - Detection of Polyions with Pulsed Chronopotentiometry - Screening Antidotes for the Anticoagulants Low Molecular Heparin

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyle Rowe</td>
<td>Kebede Gemene</td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

65. * - Determination of Ochratoxin A in Kentucky Black Walnuts

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bryce Forry</td>
<td>Bruce Branan</td>
</tr>
<tr>
<td>Asbury University</td>
<td>Asbury University</td>
</tr>
</tbody>
</table>

66. * - Investigating the Diffusion Behavior of Analytes subjected Peak Parking Capillary Electrophoresis

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauren Rigg</td>
<td></td>
</tr>
<tr>
<td>Northern Kentucky</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

67. * - Predicted Protein Structure and Function of the Bacteriophage: Mithril

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moria Magre</td>
<td>John Burden</td>
</tr>
<tr>
<td>Spalding</td>
<td>University</td>
</tr>
<tr>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

68. * - Modeling Molecular Relaxation Dynamics for Diatom Clathrates

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levi Curtis</td>
<td>Jeremy Maddox</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

69. * - Protocols for UHF and UCCSD Potential Energy Curves

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Hedrick</td>
<td></td>
</tr>
<tr>
<td>Western Kentucky</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

69.5 * - Unraveling Subtle Intermolecular Interactions in Crystals of a Solar Thermal Fuel.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander Thome</td>
<td>Erin Calvert</td>
</tr>
<tr>
<td>Murray State</td>
<td>Kasey Clear</td>
</tr>
<tr>
<td>University</td>
<td>Murray State</td>
</tr>
<tr>
<td></td>
<td>University</td>
</tr>
</tbody>
</table>
70. - The Effectiveness of Thin Layer Spin Coating Sodium Acetate

First Author
Corey Mattic, Jr.
Kentucky State University

71. * - Avidin Functionalized Coverslips for Model Membrane Imaging

First Author
Sergio Perez Cruz
Berea College
Co-author
Tessa Calhoun
The University of Tennessee, Knoxville
Co-author
Lindsey Miller
The University of Tennessee, Knoxville

72. * - Effects of Various Buffers and Parameters on the Structure and Behavior of Stimuli-Responsive Polymers

First Author
Madisyn Hayes
Northern Kentucky University
Co-author
Eric Milner
Northern Kentucky University

Friday, November 2, 2018 3:00pm - 6:00pm

Chemistry: Organic/Inorganic - Poster Presentations

73. - A Dispersed REU Program on Theoretically Interesting Molecules (TIM)

First Author
KC Russell
Northern Kentucky University
Co-author
John Benber
Grand Valley State University
Co-author
Shannon Biros
Grand Valley State University
Co-author
Peter Iovine
University of San Diego
Co-author
Jeff Katz
Colby College

Co-author
Kristine Nolin
University of Richmond
Co-author
Ellen Ellen Yezirski
Miami University

74. - Synthesis of Oxacalixarenes from Silyl Protected Precursors

First Author
KC Russell
Northern Kentucky University
Co-author
Kimberly Richards
Northern Kentucky University
Co-author
Bailey Hardey
Northern Kentucky University
Co-author
Rachel Holland
Northern Kentucky University

75. - Catalytic Bis(imino)pyridine Iron Complexes for Carbene Reactions of Diazo Compounds

First Author
Ban Wang
Western Kentucky University
Co-author
Isaac Howard
Western Kentucky University

76. - Interaction of a platinum tri-amine complex having a seven-membered chelate ring with 5’-GMP and N-AcMet
77. * - Synthesis of metal-organic frameworks mimicking carbonic anhydrase enzyme.

First Author
Simrat Kaur
WESTERN KENTUCKY UNIVERSITY
Co-author
BANGBO YAN
WESTERN KENTUCKY UNIVERSITY

77.5. - An in vitro Study on Skin Protection Across the UV Spectra

First Author
Cheyenne Boone
Kentucky State University/University of Kentucky

78. * - Phosphonium-containing Poly(ionic liquid) Networks Prepared From Thiol-ene 'Click' Photopolymerization

First Author
Samantha Sims
Murray State University
Co-author
Rachel Whittaker
Murray State University
Kevin Miller
Murray State University

79. * - Highly efficient and selective oxidation of sulfides catalyzed by manganese corroles with iodobenzene diacetate

First Author
Ben Willis
Western Kentucky University
Co-author
Davis Ranburger
Western Kentucky University
Benjamin Kash
Western Kentucky University
Christian Alcantar
Western Kentucky University
Rui Zhang
Western Kentucky University

80. * - Enantioselective Cross Aldol Reactions of Aldehydes

First Author
Samantha Bradley
Morehead State University
Co-author
Chase Slone
Morehead State University
Brandon Vanness
Morehead State University

81. * - Investigating the Synthesis of LMA-P2

First Author
Sarah Little
<p>| Title                                                                 | First Author       | Co-author          | Institution                  |
|----------------------------------------------------------------------|--------------------|--------------------|
| 82. * - Palladium-Catalyzed Heteroarylation Under Microwave Irradiation | Adrianna Goodwin   | Claire Poling      | Morehead State University    |
| 83. * - Generation and kinetic studies of porphyrin-manganese(IV)-oxo intermediates | Seth Klaine        | Mike Winchester    | Western Kentucky University   |
| 84. * - Synthesis and photocatalytic properties of three metal-organic framework materials | Hannah Brooks      | Bangbo Yan         | Western Kentucky University   |
| 85. * - The Syntheses of Heteroatom-activated Antibiotics             | Kiah Gledhill      | Sydney Goff        | Kentucky Wesleyan College    |
| 86. * - Iron Catalyzed Oxidation of Amines to Imines                  | Rachel Chute       | Rachel Whittaker   | Murray State University      |
| 87. * - Solid Phase Organic Synthesis of an Antibody Drug Conjugate Linker | Levi Blevins       | Ominica Crockett   | Berea College                 |
| 88. * - Phenylethynyloxacalixarenes Synthesis                         | Jacolby Gardner    | KC Russell         | University of Kentucky       |
| 89. * - Synthesis and Mechanism study of Isocoumarin Analogues        |                    |                    |                            |</p>
<table>
<thead>
<tr>
<th></th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>90.</td>
<td>Annulene-Oxacalixarene Hybrids</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elizabeth Osifalujo</td>
<td>Andrew Quillen</td>
<td>Lili Ma</td>
</tr>
<tr>
<td></td>
<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
</tr>
<tr>
<td>91.</td>
<td>Synthesis and reactivity of platinum(II) anticancer drug analogs with unsymmetrical ligands</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emily Brown</td>
<td>Nicholas Spark</td>
<td>Eli Biedenbender</td>
</tr>
<tr>
<td></td>
<td>Berea College</td>
<td>colleague</td>
<td>colleague</td>
</tr>
<tr>
<td>92.</td>
<td>Solid Phase Organic Synthesis of an Antibody Conjugate Linker?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ominica Crockett</td>
<td>Levi Blevins</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Berea College</td>
<td>Berea College</td>
<td></td>
</tr>
</tbody>
</table>

Friday, November 2, 2018  3:00pm - 6:00pm

**Computer & Informational Sciences - Poster Presentations**


<table>
<thead>
<tr>
<th></th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amanda Hansford</td>
<td>Heba Elgazzar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Morehead State</td>
<td>Morehead State</td>
<td></td>
</tr>
<tr>
<td></td>
<td>University</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

94.  - Encoding and Decoding Messages in Android Applications

<table>
<thead>
<tr>
<th></th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Richard Pike</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Western Kentucky University</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

95.  * - Smart Routing Schemes for Dynamic Spectrum Access Network Architectures

<table>
<thead>
<tr>
<th></th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brian Luciano</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>University of Kentucky</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

96.  * - Neighborhood Graphs for Cities in Kentucky: comparison for two distance measures

<table>
<thead>
<tr>
<th></th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Ecology - Poster Presentations**

97. * - Nutrient Export of the Kentucky River to Detect Possible Eutrophication

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ieisha Hopwood</td>
<td>Kazi Javed</td>
<td>Tamara Sluss</td>
<td>Li Lu</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>University</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>University</td>
<td></td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

98. - Litter Breakdown and Invertebrate Detritivores from a Hydrologically Restored Stream

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jacob Becraft</td>
<td>Amy Braccia</td>
</tr>
<tr>
<td>Eastern Kentucky</td>
<td>Graduate Advisor</td>
</tr>
<tr>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

99. * - Influence of Salamanders on Leaf Litter Decomposition in Appalachian Headwater Streams

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Jones</td>
<td>Joseph Baecher</td>
<td>Amy Braccia</td>
<td>Stephen Richter</td>
</tr>
<tr>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
<td>University</td>
<td>Eastern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

100. - The Effects of Salinity on the Juvenile Freshwater Crayfish Procambarus clarkii

<table>
<thead>
<tr>
<th>First Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandra Ghinn</td>
</tr>
<tr>
<td>Bellarmine University</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ramon Guivas</td>
<td>Kyle Laufenburger</td>
<td>Ben Brammell</td>
</tr>
<tr>
<td>Asbury University</td>
<td>Asbury University</td>
<td>Asbury University</td>
</tr>
</tbody>
</table>

102. * - Use of eDNA in detection of multiple salamander species in eastern Kentucky streams

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angie Flores</td>
<td>Florene Bell</td>
<td>Kenton Sena</td>
<td>Thomas Maigret</td>
<td>Chi Jing Leow</td>
</tr>
<tr>
<td>Asbury University</td>
<td>Asbury University</td>
<td>University of Kentucky</td>
<td>University of Kentucky</td>
<td>Asbury University</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben Brammell</td>
</tr>
<tr>
<td>Asbury University</td>
</tr>
</tbody>
</table>

103. * - Detection of species using eDNA in high elevation habitats in the Sierra Nevada in Sequoia-
<table>
<thead>
<tr>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>104. - Effect of Plastic Microbeads in Two Face Washes on Zebrafish Reproductive Success</td>
<td>Autumn Holley</td>
<td>Indigo Thoman</td>
<td>Tracy Livingston</td>
<td>Geoffrey College</td>
<td>Georgetown College</td>
</tr>
<tr>
<td>105. - Accessing the Direct Toxicity of the Plant Volatile Indole on Herbivores</td>
<td>Rakhi Patel</td>
<td>Abhinav Maurya</td>
<td>Christopher Frost</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>106. * - Honeysuckle leaf blight increases leaf loss in Amur honeysuckle</td>
<td>Natalie Holsclaw</td>
<td>Allison Jones</td>
<td>Richard Boyce</td>
<td>Northern Kentucky University</td>
<td>Northern Kentucky University</td>
</tr>
<tr>
<td>107. - Ecosystem functional consequences of top predator amphibian mortality due to the invasive shrub, Lonicera maackii</td>
<td>Josey Berta</td>
<td>Cy Mott</td>
<td>Eastern Kentucky University</td>
<td>Eastern Kentucky University</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>109. - Differences in plant communities at natural and constructed upland-embedded wetlands in the Daniel Boone National Forest</td>
<td>Rachel Fedders</td>
<td>Stephen Richter</td>
<td>Eastern Kentucky University</td>
<td>University of Louisville</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>110. - Ecosystem functional consequences of body size variation in an apex predator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>Title</td>
<td>Authors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>Trophic effects of intraspecific body size variation among exploitative and interference competitors</td>
<td>David Smith, Eastern Kentucky University, Cy Mott, Eastern Kentucky University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>Determining the Cyanogenic Potential of Two Land Races of Lima Bean, Phaseolus lunatus</td>
<td>Renae Steinberger, Eastern Kentucky University, Maria Shields, University of Louisville, Grace Freundlich, University of Louisville, Christopher Frost, University of Louisville</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>Do Drip Tips Benefit Leaves in Both the Understory and Canopy of a Neotropical Rainforest?</td>
<td>Makenna Thibodeaux, University of Louisville, Chris Frost, University of Louisville</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>114</td>
<td>Do phenotypically plastic apex predators exhibit discrete patterns of local adaption to their invertebrate prey?</td>
<td>Austin Farson, Eastern Kentucky University, Cy Mott, Eastern Kentucky University, Howard Whiteman, Murray State University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>Does Life History Variation Mediate the Effects of Disease?</td>
<td>Alex Woolen, Murray State University, Howard Whiteman</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>A phylogenetic examination of the Pseudanophthalmus cave beetles (Carabidae) of western Kentucky.</td>
<td>Jedidiah Nixon, Western Kentucky University, Keith Philips, Western Kentucky University</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>The Effect of Malathion Toxicity on Zebrafish Caudal Fin Regeneration</td>
<td>Indigo Thoman</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Engineering - Poster Presentations

**118. - Comparison Study of Various CNN AI architectures for Prediction of Metal Sample Failure based on SEM images**

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawrence Madriaga</td>
<td>Ivan Novikov</td>
<td>Morteza Nurcheshmeh</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

**119. - Using NASA’s Land Information System (LIS) for hydrological and land-atmosphere coupling studies and as a lower boundary**

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles O’Connell</td>
<td>Eric Rappin</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### Environmental Science - Poster Presentations

**120. - A Karst Disturbance Index Map for Hidden River Cave**

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anna Harris</td>
<td>Patricia Kambesis</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

**121. * - A Synoptic Analysis of the 2012 Ohio Valley Heat Wave and an Investigation of the Effect on Public Health in Kentucky**

<table>
<thead>
<tr>
<th>First Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Padgett</td>
</tr>
<tr>
<td>Western Kentucky</td>
</tr>
<tr>
<td>University</td>
</tr>
</tbody>
</table>

**122. - Can remote sensing be used to accurately predict beaver activity?**

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melody Feden</td>
<td>Haluk Cetin</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

**123. * - Case Study of the Significant Cold Temperatures February 14th-20th, 2015**
| **124.** - Deriving Climate Statistics based on Kentucky Mesonet Observations |
|---|---|---|---|
| First Author | Co-author | Co-author | Co-author | Co-author |
| Eric Rappin | Stuart Foster | Megan Schargorodski | Andrew Quilligan | Patrick Collins |
| Western Kentucky University | WKU, Kentucky Climate Center, Kentucky Mesonet | WKU, Kentucky Climate Center, Kentucky Mesonet | WKU, Kentucky Climate Center, Kentucky Mesonet | WKU, Kentucky Climate Center, Kentucky Mesonet |
| Co-author | Charles O'Connell | | | |
| WKU, Kentucky Climate Center, Kentucky Mesonet | | | | |

<table>
<thead>
<tr>
<th><strong>125.</strong> - The Kentucky Forecasting System</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Author</td>
</tr>
<tr>
<td>Western Kentucky University</td>
</tr>
</tbody>
</table>

| **126.** - Evaluation of gluconic acid for the control of Nosema ceranae, a microsporidian infecting honey bees, Apis mellifera |
|---|---|---|---|
| First Author | Co-author | Co-author | Co-author |
| Jacob Vincent | Katherine Kamminga | Thomas Webster | |
| Kentucky State University | Kentucky State University | Kentucky State University | University |

<table>
<thead>
<tr>
<th><strong>127.</strong> * - Mercury Bioaccumulation in Bats from Mammoth Cave National Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Author</td>
</tr>
<tr>
<td>Western Kentucky University</td>
</tr>
</tbody>
</table>

| **128.** * - Testing Nutrient Levels of Water Kentucky River for Harmful Algae Bloom Forecasting |
|---|---|---|---|
| First Author | Co-author | Co-author | Co-author |
| Imani Harris | Li Lu | Javed Kazi | Tamara Sluss |
| Kentucky State University | Kentucky State University | Kentucky State University | Kentucky State University |

<table>
<thead>
<tr>
<th><strong>129.</strong> * - Use of a Reduced Sulfur Gas Chromatograph with Custom-made Permeation Tube for Analysis of Sulfur Compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Author</td>
</tr>
</tbody>
</table>
130. * - Using remote sensing and GIS to study the development of Harmful Algal Blooms in Lake Erie.

First Author
Steven Collett
Murray State
University


First Author
Josh Durkee
Western Kentucky
University
Co-author
Tori Murley
ECTC

132. * - The Impact of Urban Heat Island Magnitude on Organized Convective Systems

First Author
Logan Twohey
University of Louisville
Co-author
Jason Naylor
University of Louisville

133. * - Comparing water quality variables between first order streams located in agricultural and heavily forested communities

First Author
Caitlin Mullins
Kentucky State
University

134. - Trends in Total Suspended Solids(TSS) Discharge of Headwater Streams in Agricultural and Forested Watersheds

First Author
Jarod Jones
Kentucky State
University

135. * - Observing Trends in Foodborne Illnesses and Health and Food Codes in the United States

First Author
Megan Paule
Murray State
University

136. * - Comparing Accuracy of Supervised Image Classification of Wetlands in the Kentucky River Basin to the NLCD
137. * - The spatial distribution of local and organic food availability in Kentucky

First Author
Ariel Smith
Kentucky State University

Geology - Poster Presentations

Friday, November 2, 2018 3:00pm - 6:00pm

138. * - Anthropogenic Impacts on Encrusters in Association with Mercenaria mercenaria in Long Island Sound

First Author
Marie White
Murray State University

139. * - Dye Trace Study of Karst Groundwater Flow at Mystery Spring and Wildcat Culvert in Lexington, Fayette County, Kentucky

First Author
Constance Brown
Northern Kentucky University

140. * - Quantifying Hyporheic Flow in Beaver Ponds of Varying Size and Stream Morphology

First Author
Colton Sanders
Murray State University

141. - Seismic Interpretation of the North-Central Gulf of Mexico: Implications for Salt Tectonic Modeling

First Author
Adam Mattson
Western Kentucky
<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>142.</td>
<td>Altered Immune Cell Profile Contributes to Increase Risk of Heart Disease in Aging Mice</td>
<td>Aubrey Melton, Berea College</td>
<td>Renee Donahue, University of Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marlene Starr, University of Kentucky</td>
<td>Ahmed Abdel-Latif, University of Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Saha Cardiovascular Research Center</td>
<td>Saha Cardiovascular Research Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nutritional Sciences and Pharmacology</td>
<td>Nutritional Sciences and Pharmacology</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>143.</td>
<td>Glutamate-Induced Apoptosis on Olfactory Neuroepithelial Progenitors Derived from Bipolar and Non-Bipolar Subjects</td>
<td>Kristen Miller, Western Kentucky University</td>
<td>Yonglin Gao, University of Louisville</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rifaat El-Mallakh, University of Louisville</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>144.</td>
<td>Relationship between boneless meat yield and the size of Asian carp</td>
<td>Kaitlyn Sudd, Kentucky State University</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>145.</td>
<td>Parasite load as an indicator for zoonotic disease prevalence in feral cats versus shelter cats</td>
<td>Nicole Creeden, Murray State University</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146.</td>
<td>Physical Activity and Health Patterns of Berea Trail Town Users</td>
<td>Jaden Johnson, Berea College</td>
<td>Louisa Summers, Berea College</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Glendy Pineda, Berea College</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>147.</td>
<td>Effects of corn starch on the textural characteristics of fish meatballs prepared from deboned Asian carp meat.</td>
<td>Changzheng Wang, Kentucky State University</td>
<td>Lingyu Huang, Kentucky State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WITHDRAWN - Assessment of learning styles and learning retention among the elderly population in Frankfort, Kentucky

149. * - Sterilization of Staphylococcus aureus and Pseudomonas aeruginosa using Sanitrol

First Author
Riley James
Northern Kentucky University

Co-author
Joseph Mester
Northern Kentucky University

Co-author
Jonathan Schneider
Rem Brands

150. * - L-Serine Reduces Reactive Oxygen Species Yield in Cisplatin Treated Zebrafish Utricles

First Author
Elvin Irihamye
Western Kentucky University

Co-author
Satya Moolani
Western Kentucky University

151. * - Role of Gonadal Hormones in Cognitive Impairment Due to Hypovolemic Dehydration

First Author
Evy Perler-Tomboly
University of Kentucky

152. - Loss of plasmid in plasmid-carrying strains of Escherichia coli treated with phenoxazines

First Author
K.N. Thimmaiah
Northwest MS Community College

Co-author
Mark Montgomery
Northwest MS Community College

Co-author
Larry Sylvester
Northwest MS Community College

Co-author
Padma Thimmaiah
Northwest MS Community College

Co-author
Ashish Pagare
Northwest MS Community College

Co-author
Paul Grisham
Northwest MS Community College

Co-author
Lindsay Massie
Northwest MS Community College

Co-author
Piya Adris
Northwest MS Community College

Co-author
Sarah Holt
Northwest MS Community College

Co-author
Darrell Barnes
Northwest MS Community College

153. - Survival time distribution of advanced stage metastatic melanoma among Whites and Minority populations in Florida

First Author
Frederick Bebe
Kentucky State University

Co-author
Shasa Hu
University of Miami, Miller College of Medicine

Co-author
Tony Brown
NIH, National Cancer Institute

Co-author
Orien Tulp
University of Science, Arts and Technology

154. * - The Effect of Chronic Sleep Fragmentation and 6-OHDA on Microglia Activation

First Author
Kristen Eads
Western Kentucky University

Co-author
Ila Mishra
Western Kentucky University

Co-author
Noah Ashley
Western Kentucky University
155. * - The Health and Economic Impact of the Pinnacle Trails in a Kentucky Trail Town

First Author
Glendy Pineda
Berea College

Co-author
Louisa Summers
Berea College

Co-author
Jaden Johnson
Berea College

156. * - Vitreous Syneresis in the Human Eye

First Author
Meg Glenn
KBRIN (UofL)

Co-author
Douglas Borchman
University of Louisville

Friday, November 2, 2018 3:00pm - 6:00pm

Mathematics - Poster Presentations

157. - Investigating Tire Tracks to Determine a Vehicles Direction

First Author
Richard Cyrus
Morehead State University

158. - Predictive MLS Soccer Ratings

First Author
Taylor Ray
Morehead State

Friday, November 2, 2018 3:00pm - 6:00pm

Microbiology - Poster Presentations

159. - A Close Look at the K1 Bacteriophages Capricorn and Dalmuri, Including Similarities and Differences

First Author
Harrison Gover
Western Kentucky University

Co-author
Claire Rinehart
Western Kentucky University

Co-author
Anmol Sandhu
Western Kentucky University

Co-author
Sahil Chhabra
Western Kentucky University

Co-author
Samuel Chang
Western Kentucky University

160. * - An Introduction to the Forms and Functions of the A4 Mycobacteriophage Wizard007

First Author
Samuel Chang
Western Kentucky University
161. - Characterization of Mycobacteriophage MooMoo

First Author: Amanda Staples
Western Kentucky University
Co-author: Rodney A. King
Western Kentucky University

162. * - Clostridium isolate growth in a zinc-limited environment

First Author: Kamila Nurmakova
Berea College
Co-author: Christopher Lopez
Vanderbilt University
Medical Center
Co-author: Eric Skaar
Vanderbilt University
Medical Center

163. * - Effect of Growth Temperature on Mycoplasma iowae Pathogenicity

First Author: Christopher Frazier
Kentucky Wesleyan College
Co-author: Brittany Boyken
Kentucky Wesleyan College
Co-author: Rachel Pritchard
Kentucky Wesleyan College

164. * - Immunity Repressor Gene Regional Difference May Control Gene Expression of Lytic and Lysogenic Life Cycles

First Author: Sahil Chhabra
Western Kentucky University
Co-author: Harrison Gover
Western Kentucky University
Co-author: Samuel Chang
Western Kentucky University
Co-author: Anmol Sandhu
Western Kentucky University
Co-author: Claire Rinehart
Western Kentucky University

165. - Role of tRNA modifications in the regulation of pseudohyphal growth in yeast

First Author: Kaylee Fox
Northern Kentucky University
Co-author: John Carmen
Northern Kentucky University

166. * - Ruin Genome

First Author: Anmol Sandhu
WKU

167. - The House Sparrow as a Better Model for the Human Gut Microbiome

First Author: Joshua Nowacki
KBRIN
Co-author: Jordan Stacy
KBRIN
### 168. * - Contemporaneous Ground-Based Observations of Blazars Observed with NASA's K2 Mission

**First Author**
Zoe Ward  
**University**
Western Kentucky University Dept. of Physics and Astronomy

**Co-author**
Michael Carini  
**University**
Western Kentucky University Dept. of Physics and Astronomy

### 169. * - Development of a LabView Controlled Rotational Support System for the Dual Radiation Rotating Scattering Mask

**First Author**
Devon Loomis  
**University**
Western Kentucky University

**Co-authors**
Alexander Barzilov  (University of Nevada, Las Vegas)  
Lawrence Madriaga  (Western Kentucky University)  
Ivan Novikov  (Western Kentucky University)  
Seth Harper  (Western Kentucky University)

### 170. * - Electrochemical Desulfurization and Electroactivity of Molybdenum Disulfide (MoS2) Nanocatalysts on Reduced Graphene

**First Author**
Taylor Robinson  
**University**
Western Kentucky University

**Co-authors**
Jacob Dobler  (Western Kentucky University)  
Sanju Gupta  (Western Kentucky University)

### 171. * - Engineered Nanocomposite Materials Properties through Embedding of Smaller Nanoparticles in a Polymer Matrix

**First Author**
Alex Henson  
**University**
Western Kentucky University

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

### 172. * - Graphene-mediated Surface Enhanced Raman Spectroscopy for Detection of Biomolecules and Monitoring DNA Hybridization

**First Author**
Alexander Banaszak  
**University**
Western Kentucky University

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

### 173. * - Graphene-Polymer Thin Film Composite Membranes as Efficient and Anti-fouling Membranes for Water Purification

**First Author**
Brendan Evans
**174. * - Hydrothermally Synthesis and Properties of Mesoporous Molybdenum Disulfide (MoS2) Reduced Graphene Oxide Composites**

First Author: Jacob Dobler  
Co-author: Sanju Gupta  
Western Kentucky University

**175. * - Improving Accuracy of Parity Violation Measurements for NOPTREX Experiment at LANL**

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

**176. * - Investigating the Efficacy of Histotripsy on Drug Delivery**

First Author: Heather Thompson  
Berea College  
Co-author: Benjamin Wollant  
St. Olaf College  
Co-author: Kenneth Bader  
University of Chicago

**177. * - Microstructure and Properties of Layered Transition Metal Carbides (Ti3C2Tx) MXenes Phases**

First Author: Wyatt Ringo  
Western Kentucky University  
Co-author: Sanju Gupta  
Western Kentucky University  
University

**178. * - Phase transitions in charged black holes**

First Author: Emily Frame  
Northern Kentucky University  
Co-author: Sharmanthie Fernando  
Northern Kentucky University

**179. * - Photon Simulation Studies for the Dark Energy Science Collaboration (DESC) at LSST (Large Synoptic Survey Telescope)**

First Author: Sean Lawless  
Bellarmine University  
Co-author: Carlos Galiando  
Bellarmine University  
Co-author: Akhtar Mahmood  
Bellarmine University  
Co-author: Muhammad Saleem  
Bellarmine University

**180. * - Robotics with Humanoid Robot NAO and Hexapod (Robotic Spider)**

First Author: Carlos Galiando  
Bellarmine University  
Co-author: Muhammad Saleem  
Bellarmine University  
Co-author: Akhtar Mahmood  
Bellarmine University
181. * - Self-Assembly of Spheres on a Cone Surface
First Author
Talha Rehman
Berea College

182. * - Systematic Study of the Effect of Incorporation of Carbon Nanotubes into GexSe1-x Glass System
First Author
John Adamick
Northern Kentucky University
Co-author
John Rademacher
Northern Kentucky University
Co-author
Wayne Bresser
Northern Kentucky University
Co-author
Chari Ramkumar
Northern Kentucky University

183. * - XMM-Newton Observations of the Galactic Supernova Remnants G5.9+3.1 and G32.4+0.1
First Author
Lori Porter
Craft Academy
Co-author
Thomas Pannuti
Morehead State University

184. - Time series analysis of the rapid optical variability observed in Blazars with NASA’s K2 Mission.
First Author
Kennedy Pendleton
2001
Co-author
Michael Carini
Department of Physics
and Astronomy
Western Kentucky University

185. - Procedure improvement for FAPbI3 perovskite solar cells
First Author
Valeria Rosa Rocha
Berea College
Co-author
Somin Park
University of Kentucky

186. - Measurements of the entanglement of quantum of lights due to spontaneous parametric down conversion
First Author
Eli Prater
Berea College
Co-author
Martin Veillette
Berea College
Co-author
Brian Leist
Berea College
Co-author
Mothi Ghimire
Berea College

Friday, November 2, 2018 3:00pm - 6:00pm
Physiology and Biochemistry - Poster Presentations

187. * - A functional module for a response to low nutrients in Arabidopsis
First Author
Muntathar Alshimary
Berea College
Co-author
DeQuantarius Speed
University of Chicago
Co-author
Jean Greenberg
University of Chicago

188. * - Computational and experimental approaches to study the role of protein modifications by urea
189. * - Disruption of cell adhesion, loss of Arp2/3 complex function in macrophages are not sufficient to induce NF-kB activity

First Author  Co-author  Co-author
Imelda Saintilma  Jeremy Rotty  Uniformed Services
Berea College  University of the Health Sciences

190. * - Disruption of choline acetyltransferase (ChAT) by congenital mutations: Screening potential therapeutic leads

First Author  Co-author
Abigail Whitaker  David Rodgers
Berea College  University of Kentucky

191. * - Dose-dependent induction of circulating SAA, and pulmonary inflammation after ozone exposure: Alzheimer’ Disease Link

First Author  Co-author
Helina Asrat  Michelle Erickson
Berea College  US Department of Veterans Affairs

192. * - Effects of TEA and 4-AP on Firing Frequency of Proprioceptive Neurons in Crustaceans

First Author  Co-author  Co-author  Co-author  Co-author
Emma Higgins  Allison Lane  Alexandra Stanback  Maddie Stanback  Ross Basham
University of Kentucky  University of Kentucky  University of Kentucky  University of Kentucky  University of Kentucky

Co-author  Co-author  Co-author  Co-author
Bernardo Aguzzoli  Aaron Silverstein  Bennett Collis  Bharath Chithrala
Heberle  University of Kentucky  University of Kentucky  University of Kentucky

Robin Cooper
University of Kentucky

193. * - Mechanism of quinolone resistance in Escherichia coli type II topoisomerases

First Author  Co-author  Co-author
Nyasha Gombami  Alexandria Oviatt  Neil Osheroff
Berea College  Vanderbilt University  Vanderbilt University

Medical Center

194. - P. gingivalis infection debilitates anti-viral immune responses in gingival epithelial cells
195. * - Pharmacological identification of cholinergic receptor subtypes in modulation of neural circuits in D. melanogaster

First Author
Umair Bhutto
University of Kentucky

Co-author
Eashwar Somasundaram
University of Kentucky

196. * - Placental Transfer and Metabolism of FDA-approved Drugs Repurposed for Novel Tocolytic Use

First Author
Allison Harper
Berea College

Co-author
Shajila Siricilla
Vanderbilt University

Co-author
Raymond Johnson
Vanderbilt University

Co-author
Lauren Lambert
Vanderbilt University

Co-author
Jennifer Herington
Vanderbilt University

197. - Regulation of Programmed Genome Rearrangement in the Sea Lamprey

First Author
Taylor Stewart
Centre College

Co-author
Gena Wilson
Murray State University

Co-author
Cody Saraceno
University of Kentucky

Co-author
Jeramiah Smith
University of Kentucky

198. - TBF-B Pathway in relation to down regulation of PTTG gene expression

First Author
Alanis Morgan
Kentucky Biomedical Research Infrastructure Network

199. * - The Role of Reactive Oxygen Species in Regulating TRPV4 Responses to Stimuli

First Author
Zackery Hill
University of Pikeville

Co-author
Karthik Suresh
Johns Hopkins Div of Pulmonary and Critical Care Medicine

Co-author
Xin Yan
Johns Hopkins Div of Pulmonary and Critical Care Medicine

Co-author
Laura Servinsky
Johns Hopkins Div of Pulmonary and Critical Care Medicine

Co-author
Haiyang Jiang
Johns Hopkins Div of Pulmonary and Critical Care Medicine

Co-author
Larissa Shimoda
Johns Hopkins Div of Pulmonary and Critical Care Medicine
<table>
<thead>
<tr>
<th>Poster Number</th>
<th>Title</th>
<th>First Author(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>200.</td>
<td>Appraisal: The Effect of Electronic Media on Decision Making</td>
<td>Yabsira Ayele, Berea College</td>
</tr>
<tr>
<td>201.</td>
<td>Sustaining Attention: The Effects of Fidgeting and Break type</td>
<td>briana beckler, Berea College</td>
</tr>
<tr>
<td>202.</td>
<td>User Acceptance of Automated Vehicles</td>
<td>Vanessa Jones, Emily Lush, Jorden Crowe, Abigail Mohr, Sydney Young</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gregory Corso, Morehead State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>203.</td>
<td>The independence of implicit and explicit sequence learning</td>
<td>Allison Ludwig, Brandi Carey, Gilbert Remillard</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>204.</td>
<td>Amazon Mechanical Turk Responses vs. Student Responses</td>
<td>Emily Lush, Jorden Crowe, Vanessa Jones, Abigail Mohr, Sydney Young</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gregory Corso, Morehead State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>205.</td>
<td>Emphasis and &quot;only&quot; influence sentence interpretation</td>
<td>Victoria Nash, David Potter, Katy Carlson, Morehead State University</td>
</tr>
</tbody>
</table>
### Science Education - Poster Presentations

**206. - An Interactive Earth: Augmented Reality and Hands-On Earth Science Inquiry in Schools**

*First Author*
Olivia Santangelo  
*Western Kentucky University*

**207. * - Impact of Problem Based Team Learning on Underserved Students in Introductory Biology and Genetics Courses**

*First Author*
Shelby Diener  
*Northern Kentucky University*

### Zoology - Poster Presentations

**208 * - Effects of Foraging Enrichment Predictability on the Behavior and Space Use of Zoo-housed Elephants**

*First Author*
Cassondra Perkins  
*Kentucky Wesleyan College*

*Co-author*
Greg Vicino  
*San Diego Zoo Global*

*Co-author*
Angela Mackey  
*Kentucky Wesleyan College*

**209. - Zebrafish Spawning Conditions and Their Effects on Egg Success and Clutch Size**

*First Author*
Sydni Anderson  
*Murray State University*

*Co-author*
Dena Weinberger  
*Murray State University*

**210. * - The Influence of Endotoxic LPS on Primary Sensory Neurons in Crustaceans**

*First Author*
Maddie Stanback  
*University of Kentucky*

*Co-author*
Alexandra Stanback  
*University of Kentucky*

*Co-author*
Kelsi Vela  
*University of Kentucky*

*Co-author*
Ross Basham  
*University of Kentucky*

*Co-author*
Bernardo Aguzzoli  
*Heberle University of Kentucky*

*Co-author*
Heberle  
*University of Kentucky*

*Co-author*
Bharath Chithrala  
*University of Kentucky*

*Co-author*
Aaron Silverstein  
*University of Kentucky*

*Co-author*
Allison Lane  
*University of Kentucky*

*Co-author*
Bennett Collis  
*University of Kentucky*

*Co-author*
Ross Basham  
*University of Kentucky*

*Co-author*
Kelsi Vela  
*University of Kentucky*

*Co-author*
Bennett Collis  
*University of Kentucky*

*Co-author*
Robin Cooper  
*University of Kentucky*

**211. - Do Males Adjust Courtship Displays According to Female Feedback?**

First Author  
Jonathan Eisenhour  
Morehead State University

Co-author  
Matthew Fossett  
David Eisenhour  
Morehead State University

213. - Polyandry and polygyny in green salamanders, *Aneides aeneus*

First Author  
Paul Cupp Jr  
Eastern Kentucky University

214. * - Comparing the seasonal variation in distribution and abundance of anuran species in Daviess Co, KY.

First Author  
Jordan Danflous  
Kentucky Wesleyan College

Co-author  
Shannon Finerty  
Kentucky Wesleyan College

215. * - Overwintering implications for the cercaria of the diagenetic trematode, *Proterometra macrostoma*

First Author  
Sarah Tabor  
Berea College

Friday, November 2, 2018  7:00pm - 10:00pm

**Reception and Plenary at National Corvette Museum**

Facilitated by President-Elect  
Leslie North  
Free Shuttles to Corvette Museum begin at 6:30

"Behind the Scenes at the Corvette Cave-In"

Get the inside story from scientists on the now-famous sinkhole at the National Corvette Museum and find out how an interdisciplinary team of scientists and technicians came together to study and repair the sinkhole, as well as develop the Corvette Cave-In Sinkhole Exhibit at the museum.

The reception and plenary are included in your meeting registration, and entrance to the museum is included with this event. Tour the exhibit with your fellow scientists and learn about the cars and the karst!

The 2018 Science Education & Outreach Award will be presented at this program...
available between Downing Student Union, the National Corvette Museum and the Hyatt Place beginning at 6:30pm.

Bring a guest- [Guest tickets](#) for this Friday night event are available for $25

### Featured Speakers

**Jason S. Polk, Ph.D.**
Associate Professor of Geography and Geology
Western Kentucky University
He also is the Director of the Center for Human-GeoEnvironmental Studies (CHNGES) and HydroAnalytical Lab. Dr. Polk earned his doctorate degree from the University of South Florida in Geography and Environmental Science and Policy. His current research investigates climate change, karst landscapes and processes, water resources and sustainability, isotope hydrology and geochemistry, and global climate dynamics. Dr. Polk is a Fellow of the National Speleological Society, Chair of the Geological Society of America Karst Division, and conducts research in various places all over the world, including the Caribbean, Vietnam, Iceland, and elsewhere. Dr. Polk will be speaking about the science of sinkholes and how the team used a variety of geoscience methods to study the NCM sinkhole and plan its remediation.

**Katie Ellison**
Marketing & Communications Manager
National Corvette Museum & NCM Motorsports Park

Katie Ellison joined the National Corvette Museum team in 2009 after serving as Marketing Director of the Bowling Green Area Convention and Visitors Bureau. A graduate of Western Kentucky University and Leadership Bowling Green, Katie serves on the boards of the Professional Marketing Association, Bowling Green Area Lodging Association and The Center for Gifted Studies at WKU.

**Ric Federico, PG, CHMM, HEM**
EnSafe Business Lead and Branch Manager

Ricardo (Ric) Federico graduated from Western Kentucky University in Bowling Green,
Kentucky in 1994 with a B.S. in Geography and an emphasis in karst hydrogeology. Ric has 24 years of environmental consulting experience, the last 17 of them with EnSafe where he serves as the Branch Manager and Business Lead in their Bowling Green, Kentucky office. Ric’s practice specialties include soil and groundwater investigation & remediation; merger and acquisition support including environmental site assessment; vapor intrusion assessment; and brownfields redevelopment. Ric will talk about EnSafe’s primary contribution to the project, which was vetting assessment options and methods, then designing and conducting a karst geophysical survey of the SkyDome collapse area using microgravity. He will discuss challenges – perceptual, physical, and logistical – to project approval and implementation, discuss hurdles along the way, and summarize the results and excellent correlation with the WKU cave survey data.

S. Craig Smith, PE,
Senior Project Manager, Hayward Baker Inc.

Mr. Smith joined Hayward Baker in 2005 as an Area Manager overseeing the geotechnical construction markets in Tennessee and Kentucky. Currently, he is a Senior Project Manager based in the Knoxville, TN office where he manages Hayward Baker’s large and/or high-risk projects throughout the southeastern United States. Mr. Smith’s primary area of focus is in the drilling and grouting sector consisting of micropile installation, anchored retaining walls, landslide repair, structural underpinning, and grouting techniques for ground improvement including karst mitigation.

Prior to joining Hayward Baker, Mr. Smith worked for a large site development contractor overseeing large bulk earth moving projects, landfill construction projects, and landslide repair projects throughout the southeastern United States. Mr. Smith started his career working for a geotechnical design firm specializing in the design of coal tailing impoundments in the eastern coal fields, landslide mitigation design, and performing design work for various Hayward Baker offices.

Mr. Smith is a Geotechnical Engineer with more than 20 years of experience receiving both his B.S. and M.S. degrees from the University of Tennessee Knoxville in 1992 and 1994 respectively.
Registration Open
Third Floor, Downing Student Union
Saturday, November 3, 2018 7:00am - 4:00pm

Posters on Display
Downing Student Union, Second & Third floors
Saturday, November 3, 2018 7:58am - 4:00pm

Oral Presentations - Saturday morning
Asterisk * denotes student research competition
Saturday, November 3, 2018 7:59am - 12:00pm

Practice Room
DSU 2081
This room is available for speakers to practice their presentations.
Saturday, November 3, 2018 7:59am - 4:00pm

Practice Room
DSU 3004
This room is available for speakers to practice their presentations.
Saturday, November 3, 2018 7:59am - 4:00pm

Agricultural Science - Oral Presentations
DSU 3005
Section meeting follows talks at 11:45
Saturday, November 3, 2018 8:00am - 11:00am

08:00 - Monensin alters the functional and metabolomic profile of rumen microbiota in beef cattle

First Author Co-author Co-author
James Adeyemi Hank Schweickart Ibukun Ogunade
Kentucky State Kentucky State Kentucky State
University University University
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author 1</th>
<th>Co-author 2</th>
<th>Co-author 3</th>
<th>Co-author 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:15</td>
<td>A Cyanide Group Reduced Cypermethrin Half-Lives on Cucumber Grown Under Greenhouse Conditions</td>
<td>George Antonious</td>
<td>Kentucky State</td>
<td>University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:30</td>
<td>Quantification of tylosin antibiotics and antibiotic resistance genes in cattle waste.</td>
<td>Keerthi Appala</td>
<td>Eric Conte</td>
<td>John Kasumba</td>
<td>Getahun Agga</td>
<td>John H Loughrin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Kentucky University</td>
<td>Western Kentucky University</td>
<td>Western Kentucky University</td>
<td>USDA</td>
<td>USDA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Co-author</td>
<td>Anne Carlisle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Kentucky University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:45</td>
<td>Evaluation of Stocking Density in a Live Holding Recirculating System for Food-size Largemouth Bass, Micropterus salmoid</td>
<td>Sujan Bhattarai</td>
<td>Kenneth Semmens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky State University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>Rove beetles in blackberry plots bordered by native perennials or pasture and treated with biological insecticides.</td>
<td>Sathya Govindasamy</td>
<td>John Sedlacek</td>
<td>Karen Friley</td>
<td>Mamata Bashyal</td>
<td>Megan McCoun</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Co-author</td>
<td>Jill Fisk</td>
<td>Krystin Moody</td>
<td>Katherine Buckler</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Parental gender preference as a factor in population sustainability</td>
<td>Elmer Gray</td>
<td>Sai Pavan Adigarla</td>
<td>Sravya Patil Bagli</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Kentucky University</td>
<td>Western Kentucky University</td>
<td>Western Kentucky University</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Co-author</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:30</td>
<td>Yield of zucchini, Cucurbita pepo, grown in various soil amendments</td>
<td>Quinn Heist</td>
<td>George Antonious</td>
<td>Eric Turley</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td>Kentucky State University</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
09:45 * - Do Online Shoppers Have Knowledge on Community Supported Agriculture Programs?

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>University, Dept. of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wyatt Lucas</td>
<td>Dominique Gumirakiza</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>Western Kentucky</td>
<td>University, Dept. of Agriculture</td>
<td></td>
</tr>
</tbody>
</table>

10:15 * - Evaluation of drug-resistant Enterobacteriaceae on produce from small farms.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>University, Dept. of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tavin Marshall</td>
<td>Shreya Patel</td>
<td>Avinash Tope</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

10:30 - Optimizing Non-Phytate Phosphorus in Soybean Meal-Based Diets for Largemouth Bass Micropterus salmoides

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>University, Dept. of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kasondra Miller</td>
<td>Gagan Kolimadu</td>
<td>Habte-Michael Habte-Tsion</td>
<td>Waldemar Rossi</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>1994</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>University</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

10:45 - Assessing the Use of Biochar for Immobilization of Trace Elements in Sewage Sludge

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>University, Dept. of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lusekelo Nkuwi</td>
<td>George Antonious</td>
<td>Eric Turley</td>
<td>Quinn Quinn Heist</td>
<td>Yogendra Upadhyaya</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>University</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>Co-author</td>
<td>Thomas Trivette</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kentucky State</td>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11:00 - Efficacy of a fertilization solution created with testes extraction and maceration in largemouth bass

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>University, Dept. of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amit Sharma</td>
<td>Kenneth Semmens</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>University</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>University, Dept. of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thomas Trivette</td>
<td>George Antonious</td>
<td>Eric Turley</td>
<td>Quinn Heist</td>
<td>Lusekelo Nkuwi</td>
<td>University</td>
<td>Kentucky State</td>
</tr>
<tr>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>Kentucky State</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11:30 - Low-Tech hydroponics for beginning and limited resource farmers

First Author  
Nanaaishat umar  
Kentucky State University

Co-author  
Siddhartha Dasgupta  
Kentucky State University

Co-author  
Richard Bryant  
Kentucky State University

Saturday, November 3, 2018 8:00am - 12:00pm

Chemistry: Analytical/Physical - Oral Presentations  
DSU 3007  
Section meeting follows talks at 10:30

08:00 * - Consumption Profiles of Illicit and Neuropsychiatric Drugs in Urban and Rural Communities Using Sewage Epidemiology

First Author  
Tara Croft  
Murray State University

Co-author  
Bikram Subedi  
Murray State University

08:15 - Investigating caffeine levels in water sources in Morehead, Kentucky

First Author  
Brandon VanNess  
Morehead State University

Co-author  
Melanie West  
Morehead State University

Co-author  
Sarah Little  
Morehead State University

Co-author  
Sarah Little  
Morehead State University

08:30 * - Various Tools for Quantifying Diffusion of a Model Analyte Set via Capillary Electrophoresis

First Author  
Corbin Arrasmith  
Northern Kentucky University

08:45 * - Temporal Changes in Dissolved Calcium Levels in Stream and River Waters in Western Kentucky

First Author  
Adam Martin  
Student

Co-author  
Bommanna  
Professor

Co-author  
Loganathan  
Professor

Co-author  
Susan Hendricks  
Professor

09:00 * - Effect of kappa-carrageenan on the Stability of Oil-in-water Emulsions

First Author  
Andrew Ballard
09:30 * - Identifying Fecal Biomarkers of Obesity in Mouse Model Using Proton Nuclear Magnetic Resonance Metabolomics

First Author
Yacine Choutri
Berea College

Co-author
Paul Voziyan
Vanderbilt University
Medical Center

Co-author
Donald Stec
Vanderbilt University
Institute of Chemical Biology


First Author
Ryan Lamb
Western Kentucky University

Co-author
Matthew Nee
Western Kentucky University

10:00 - Incorporation of metal oxides into a polymer substrate for buoyant photocatalysts

First Author
Lovence Ainembabazi
Western Kentucky University

10:15 - Electrochemical Method for Fabrication of Metal Nanostructures Across Micron Gap Electrodes

First Author
Krista Riggins
Eastern Kentucky University

Co-author
Radhika Dasari
Eastern Kentucky University

Ecology - Oral Presentations

08:00 - Towards rapid assessment of wetland biological condition using indicator species

First Author
Suneeti Jog
Murray State University

Co-author
Jason Bried
Murray State University

Co-author
Tommi Fouts
Northeastern State University

08:15 - Experts and models can agree on species sensitivity values for wetland assessments

First Author
Jason Bried

### 08:30 - Verification of a Vegetation Index of Biotic Integrity (KY-VIBI) and a Rapid Wetland Assessment (KY-WRAM) in western KY

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Malloy</td>
<td>Stephen Richter</td>
<td>David Brown</td>
<td>Kelly Watson</td>
<td>Michelle Cook</td>
</tr>
<tr>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
<td>Kentucky Division of Water</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td></td>
</tr>
</tbody>
</table>

### 08:45 - Does increasing food-web stability mediate the effects of cattle grazing in aquatic ecosystems?

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hannah Moore</td>
<td>Howard Whiteman</td>
</tr>
<tr>
<td>Murray State</td>
<td>Murray State</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
</tr>
</tbody>
</table>

### 09:00 - Population Dynamics and Foraging Ecology of Copperheads in the Red River Gorge, KY.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Josh Hendricks</td>
<td>Jesse Sockman</td>
<td>Kyle Mueninch</td>
<td>Austin Owens</td>
<td>Stephen Richter</td>
</tr>
<tr>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
<td>Eastern Kentucky</td>
</tr>
<tr>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 09:15 - The Kentucky Arboreal Ant Survey: ant communities among forests and urban greenspaces

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daniella Prince</td>
<td>Benjamin Adams</td>
<td>Stephen Yanoviak</td>
</tr>
<tr>
<td>University of Louisville</td>
<td>Natural History</td>
<td>Department of</td>
</tr>
<tr>
<td></td>
<td>Museum of Los</td>
<td>Biology, University of</td>
</tr>
<tr>
<td></td>
<td>Angeles County</td>
<td>Louisville</td>
</tr>
</tbody>
</table>

### 09:30 * - Soil function assessment of urban prairie restoration.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarah Benton</td>
<td>Sarah Emery</td>
</tr>
<tr>
<td>University of Louisville</td>
<td>Univserity of Louisville</td>
</tr>
</tbody>
</table>

### 09:45 - Beaver-mediated restoration in a degraded desert ecosystem

<table>
<thead>
<tr>
<th>First Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melody Feden</td>
</tr>
<tr>
<td>Murray State</td>
</tr>
</tbody>
</table>
10:15 - Varying duration periods of the herbivore-associated cue differentially affect fitness in P. lunatus and C. annuum

First Author
Grace Freundlich
University of Louisville

Co-author
Liana Greenburg
Wageningen University

Co-author
Sarah Bissmeyer
University of Louisville

Co-author
Carly Nunamaker
University of Louisville

Co-author
Chris Frost
University of Louisville

10:30 - Assessment of Native Pollinator Habitat Planting Densities and Site Preparation Treatments on Abandoned Agriculture Land

First Author
Louis Ross
Kentucky State University

Co-author
Richard Cristan
Kentucky State University

10:45 - New methods utilized to deter elephant (Loxodonta Africa) from crop raiding in the Kasigau Wildlife Corridor, Kenya

First Author
R. Lynn Von Hagen
Western Kentucky University

Co-author
Bruce Schulte
Western Kentucky University

11:00 - 2018 State of the Resource: Mammoth Cave National Park

First Author
Autumn Turner
Western Kentucky University, Crawford Hydrology Laboratory

Co-author
Lee Anne Bledsoe
Western Kentucky University

Co-author
Chris Groves
Western Kentucky University, Crawford Hydrology Laboratory

Co-author
Cate Webb
Western Kentucky University

Co-author
Rickard Toomey III
National Park Service, Mammoth Cave National Park

Co-author
Bobby Carson
National Park Service, Mammoth Cave National Park

Co-author
Katie Algeo
Western Kentucky University

11:15 * - Impact of season, game fencing, moon phase, and vegetation on activity overlap of ungulate species in Namibia

First Author
Emma Reasoner
**Physics and Astronomy - Oral Presentations**

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Thermoelectric Properties of Graphene-Carbon Nanotube Aerogels as 'Organic' Energy Harvesters</td>
<td>Romney Meek</td>
<td>Sanju Gupta</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Kentucky</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>08:15</td>
<td>High Amplitude variable Active Galactic Nuclei</td>
<td>Dirk Grupe</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Morehead State</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>08:30</td>
<td>Citizen CATE: citizen scientist observations of 2017 total solar eclipse</td>
<td>Richard Gelderman</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Kentucky</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>08:45</td>
<td>Nanosecond pulsed laser deposition of Pb thin film on Si (111)</td>
<td>Devon Loomis</td>
<td>Bektur Abdisatarov</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Kentucky</td>
<td>Ilhom Saidjafarzoda</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td>Western Kentucky</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mikhail Khenner</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Western Kentucky</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>NGC 1566: A Temperamental Changing Look AGN</td>
<td>Rebecca Mikula</td>
<td>Dirk Grupe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Morehead State</td>
<td>Morehead State</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University</td>
<td>University</td>
</tr>
<tr>
<td>09:15</td>
<td>Fabrication of Aluminum Nanoparticles via Pulsed Laser Ablation for Bacterial Deactivation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
09:30 * - Computer Simulation of Atomic-Scale Defects in Intermetallic Compounds
First Author
Christopher Weaver
Northern Kentucky University
Co-author
Matthew Zacate
Northern Kentucky University

09:45 * - Effects of Plastic Deformation and Tensile Strain on Polycrystalline Solids
First Author
Jesse Tapp
Murray State University
Co-author
Dylan Weaver
Murray State University

10:15 * - Dependence of Helium Atmospheric Pressure Plasma Jet-Induced DNA Damage on Voltage Pulse Frequency and Irradiation Time.
First Author
Kemo Jammeh
Berea College
Co-author
Sylwia Ptasinska
University of Notre Dame

10:30 * - Blue Light and UV Blocking Lenses
First Author
Marissa Walls
Morehead State University
Co-author
Jennifer Birriel
Morehead State University

10:45 * - Investigating the Anode Heel Effect at 75kV and 140kV
First Author
Casey Christian
Morehead State University
Co-author
Ignacio Birriel
Morehead State University
Co-author
Michael Gossman
Tri-State Regional Cancer Center

11:00 - Modular Bootstrap Bounds at Finite Central Charge
First Author
Casey Christian
Morehead State University
Co-author
Joshua Qualls
Morehead State University

11:15 * - Energy Determination in the ISS-CREAM Instrument Using Simulations
First Author
Tyler LaBree
Northern Kentucky
11:30 * - Analyses of Jet measurements in Relativistic Heavy Ion Collisions

First Author
Ricardo Santos
Berea College

Co-author
Christine Nattrass
University of Tennessee

Co-author
Soren Sorensen
University of Tennessee

Co-author
Redmer Bertens
University of Tennessee

Co-author
James Neuhaus
University of Tennessee

Co-author
Austin Schmier
University of Tennessee

Co-author
Jerrica Wilson
University of Tennessee

Co-author
Mariah McCreary
University of Tennessee

11:45 * - Nylon or Steel?

First Author
Tanner Tackett
Morehead State University

Co-author
Ignacio Birriel
Morehead State University

13:15 * - X-ray Diffractometry and Compression of Materials

First Author
Hayden Johnson
Murray State University

Co-author
Jacob Hall
Murray State University

13:30 - TESS: Initial Results and Follow-Up Work at the University of Louisville

First Author
Garrison Turner
Big Sandy Community and Technical College

13:45 - A look at Swift observations of the highly variable Active Galactic Nucleus RX J0148-2758

First Author
Parker Poulos
Morehead State University

Co-author
Dirk Grupe
Morehead State University

14:00 - Long term X-Ray and UV monitoring of the Narrow Line Seyfert 1 Galaxy, RXJ2217.9-5941

First Author
Alanna Cavins
Morehead State University

14:15 - An XMM-Newton Observation of the Galactic Supernova Remnant CTB 1 (G116.9+0.2)

First Author
Thomas Pannuti
Morehead State University
14:30 - Night Sky Quality at Mammoth Cave National Park

First Author: Chris Groves
Co-author: Bobby Carson
Western Kentucky University
Mammoth Cave National Park

14:45 - System Parameters for the Eclipsing B-star Binary BD+11 3569

First Author: Wesley Ryle
Co-author: Stephen Williams
Co-author: Terri Perrino
Thomas More College
United States Naval Observatory
Thomas More College

15:00 - Design and Implementation of a Data Processing and Statistical Analysis Tool for the Unihedron Sky Quality Meter

First Author: Zachary Pater
Co-author: Jennifer Birriel
Morehead State University

Saturday, November 3, 2018 8:00am - 12:00pm

Physiology and Biochemistry - Oral Presentations

08:00 - Identification of conserved motifs important for Trm732 function in yeast

First Author: Daisy DiVita
Co-author: Michael Guy
Northern Kentucky University
Northern Kentucky University

08:15 - Characterization of the Molecular Diversity of Pulmonary Sensory Neurons

First Author: Issac Domenech
Co-author: Mark Krasnow
Co-author: Yin Liu
Berea College
Stanford University
Stanford University

08:30 - Graphene oxide-based sensing technology for screening antibiotic resistance genes utilizing zinc finger proteins

First Author: Dat Thinh Ha
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:45</td>
<td>Early Detection of Breast Cancer Through Changes in Amino Acid Metabolism</td>
<td>David Kelley</td>
<td>Kyle Damon</td>
<td>James Deddens</td>
<td>Larry Douglass</td>
<td>Leila Valanejad</td>
<td>Julia Carter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
</tr>
<tr>
<td>09:00</td>
<td>Expression of Cathepsin L, HSP-90, and MAP kinase pathway proteins in bladder cancer characterized by physiology</td>
<td>Ryan Moore</td>
<td>Kyle Damon</td>
<td>Zachary Taylor</td>
<td>Julia Carter</td>
<td>Zachary Taylor</td>
<td>Julia Carter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northern Kentucky University</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
</tr>
<tr>
<td>09:15</td>
<td>Mapping the Binding Sites of FATTY ACID SYNTHASE on Chikungunya Viral RNA</td>
<td>Clara Reasoner</td>
<td>Yuqi Bian</td>
<td>Jeffrey Jian</td>
<td>Katherine Rothamel</td>
<td>Byungil Kim</td>
<td>Manuel Ascano</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Berea College</td>
<td>Vanderbilt University</td>
<td>Vanderbilt University</td>
<td>Vanderbilt University</td>
<td>Vanderbilt University</td>
<td>Vanderbilt University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>University of Cincinnati</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
<td>Wood Hudson Cancer Research Laboratory</td>
</tr>
<tr>
<td>09:45</td>
<td>Developing engineered zinc finger proteins immobilized on acrylamide gel surface as diagnostic probes for detecting path</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Title</td>
<td>First Author</td>
<td>Co-author</td>
<td>Co-author</td>
<td>Co-author</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------</td>
<td>-------------------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:00</td>
<td>Seasonal variation in the communication system of the field cricket Gryllus rubens (Orthoptera: Gryllinae)</td>
<td>Caleb Sedlak, WKU</td>
<td>Oliver Beckers, Murray State University</td>
<td>Nicholas Norman, Murray State University</td>
<td>Jacob Pease, Murray State University</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Steve Huskey, WKU</td>
<td>Ruth Hughes, University of Notre Dame</td>
<td>Kristen Pedersen, University of Southern California</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:15</td>
<td>The kinematics of envenomation by the yellow stingray, Urobatis jamaicensis</td>
<td>Steve Huskey, WKU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:30</td>
<td>Effect of sleep loss on cognitive function and baseline plasma corticosterone levels in an arctic-breeding songbird</td>
<td>Brett Hodinka, Western Kentucky University</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08:45</td>
<td>New Discoveries of Relationships in Spider Beetles and Related Families Using Molecular Phylogenetics</td>
<td>Olivia Gearner, Western Kentucky University</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>Heritable Behavioral Tendencies of the African Lion</td>
<td>Natalie Mercer, Kentucky Wesleyan College</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Courtship behavior, communication, and copulation in Tigrosa annexa</td>
<td>Samuel White</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
WITHDRAWN - Genealogical history and admixture proportion of tiger salamanders in Black Lake, Mono County, California.

09:45 * - Bioenergetic measurements of macroinvertebrates in northern temperate streams using digital technologies.

First Author
Rachel Prokopius
Northern Kentucky University

Co-author
John Piccolo
Karlstad Universitet

Co-author
Eva Bergman
Karlstad Universitet

Co-author
Larry Greenberg
Karlstad Universitet

Co-author
Denis Lafage
Karlstad Universitet

Co-author
Richard Durstche
Northern Kentucky University

10:15 - Growth and Reproduction of the Bigeye Shiner, Notropis boops

First Author
Matthew Fossett
Morehead State University

Co-author
Jon Eisenhour
Morehead State University

Co-author
David Eisenhour
Morehead State University

10:30 - Canopy Conditions and Light Availability as Predictors of Running Buffalo Clover Population Trajectories

First Author
Jessica King
Eastern Kentucky University

Co-author
Jennifer Koslow
Eastern Kentucky University

10:45 * - Molecular analysis of glyceraldehyde 3-phosphate dehydrogenase genes in Ragweed (Asteraceae).

First Author
Kiana Mattingly
Bellarmine University

Co-author
Robert Day
Bellarmine University

Co-author
Joann Lau
Bellarmine University

Co-author
David Robinson
Bellarmine University

11:00 - A Statistical Approach to Defining the Typical Herbarium

First Author
Maggie Whitson
Northern Kentucky University

Saturday, November 3, 2018 9:00am - 3:00pm
Exhibitors Tables

Third Floor, Downing Student Union

Visit our Exhibitors to find out about career opportunities, graduate schools, and to connect to great services & resources!

Saturday, November 3, 2018  9:00am - 3:00pm

Statistics consultations

DSU 3018

Calling all researchers! Take advantage of the experts at UK's Applied Statistics Lab, courtesy of KBRIN! If you have data you're working with now, or if you're still designing a project, let the statistics experts help you sort out your data analysis. Find out more and make an appointment in advance: https://www.kyscience.org/statistics_consults_at_kas.php

Saturday, November 3, 2018  9:00am - 4:00pm

Student Competition Awards

Third Floor, Downing Student Union

All day Saturday we'll be announcing student competition winners. Come check the screen by the registration desk to see winners. Student winners, we'll be taking your photos to post on our website.

Saturday, November 3, 2018  12:00pm - 1:00pm

Past Presidents Lunch & Annual Business Meeting

Cupola Room (inside Fresh Dining Hall)

All KAS members are welcome to this meeting. At this time there are no more lunch tickets available but we are making arrangements for anyone to attend the meeting who wishes to join us.

Saturday, November 3, 2018  1:14pm - 4:00pm

Oral Presentations - Saturday Afternoon

Asterisk * denotes student research competition

Saturday, November 3, 2018  1:15pm - 4:00pm

Chemistry: Organic/Inorganic - Oral Presentations

DSU 3007  Section meeting follows talks at 3:00

*First Author*  
Junhao Huang  
*Western Kentucky University*

---

13:30 * - Heteroaryl Isocoumarins as Potential Aromatase Inhibitors: Substrate Scope Investigation

*First Author*  
Quynh Nguyen  
*Northern Kentucky University*  
*Co-author*  
William Renzenbrink  
*Northern Kentucky University*  
*Co-author*  
Stephen Ramirez  
*Northern Kentucky University*  
*Co-author*  
Lili Ma  
*Northern Kentucky University*

---

13:45 * - Discovery of New Heteroaryl Aromatase Inhibitors through Computer Modeling

*First Author*  
Ayanav Roy  
*Northern Kentucky University*  
*Co-author*  
Matthew Neiser  
*Northern Kentucky University*  
*Co-author*  
Stephen Ramirez  
*Northern Kentucky University*  
*Co-author*  
Andrew Quillen  
*Northern Kentucky University*  
*Co-author*  
Lili Ma  
*Northern Kentucky University*

---

WITHDRAWN - Pyridine N-Oxide Assisted Activation of Alkynes by Visible Light Photo-Redox Catalysis

14:15 * - Synthesis and structures of a 3D porous metal-organic framework [Fe(bpc)]

*First Author*  
Cristina Throckmorton  
*Western Kentucky University*

---

14:30 * - Synthesis and Biological Evaluation of Heteroaryl Ketones

*First Author*  
Stephen Ramirez  
*Northern Kentucky University*  
*Co-author*  
Quynh Nguyen  
*Northern Kentucky University*  
*Co-author*  
Alexander Rosen  
*Northern Kentucky University*  
*Co-author*  
Matthew Neiser  
*Northern Kentucky University*  
*Co-author*  
Ayanov Roy  
*Northern Kentucky University*  
*Co-author*  
Lili Ma  
*Northern Kentucky University*  
*Co-author*  
Ominica Crockett  
*Berea College*

---

14:45 * - Synthesizing Cleavable Antibody Drug Conjugates via Solid Phase Organic Synthesis

*First Author*  
Michael James  
*Berea College*  
*Co-author*  
Levi Blevins  
*Berea College*  
*Co-author*  
Ominica Crockett  
*Berea College*  
*Co-author*  
Elizabeth Thomas  
*University of Pikeville*
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-author</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:15</td>
<td>Inadvertent local climate modification at a regional university in Kentucky, USA</td>
<td>Donald Yow</td>
<td>Matthew Ruggless</td>
</tr>
<tr>
<td>13:30 *</td>
<td>URBAN HEAT AND DEMOGRAPHIC CHANGE: A COMPARATIVE ANALYSIS OF THE LARGEST 100 CITIES OF THE TEMPERATE-FORESTED ECOREGION</td>
<td>Tori Farrow</td>
<td>Jeremy Sandifer</td>
</tr>
<tr>
<td>13:45</td>
<td>Analyzing sanitary sewer overflow event response to storm frequency</td>
<td>Christopher Andrew Day</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>14:00</td>
<td>Comparing Sediment Yield of Selected Forest Ecosystems Using SWAT in Bell Watershed, Kentucky</td>
<td>Aman Bhatta</td>
<td>Buddhi Gyawali</td>
</tr>
<tr>
<td>14:15</td>
<td>Land cover classification and change detection using remote sensing imagery in Morgan County, Kentucky</td>
<td>Saaruj Khadka</td>
<td>Buddhi Gyawali</td>
</tr>
<tr>
<td>14:30</td>
<td>How economic geography might have saved the Mammoth Cave Mushroom Company</td>
<td>Katie Algeo</td>
<td>University of Louisville</td>
</tr>
<tr>
<td>14:45 *</td>
<td>Observing Boundary Layer Heights over Mountainous Terrain Using Aircraft Vertical Profiles</td>
<td><strong>First Author</strong></td>
<td></td>
</tr>
</tbody>
</table>
Dallas McKinney  
*Western Kentucky University*

**15:00 - Mapping Opioid Epidemic in Kentucky’s Counties**

*First Author*  
Charlie Zhang  
*University of Louisville*

---

**Saturday, November 3, 2018  1:15pm - 4:00pm**

### Health Science - Oral Presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Co-authors</th>
</tr>
</thead>
</table>
| 13:15 *       | Activation of Human Immune Responses by Novel Vaccines for Hepatitis C Virus | Samuel Adams  
*Northern Kentucky University* | Brett Messmer  
*Northern Kentucky University*  
Hunter Morgan  
*Northern Kentucky University*  
Ryan Fitzpatrick  
*Northern Kentucky University*  
Joseph Mester  
*Northern Kentucky University* |
| 13:30         | Prevalence of Dyslipidemia in Young African Americans                 | Bisola Asaolu  
*Kentucky State University* |                                                                             |
| 13:45 *       | Epidemiology of HPV-Associated Cancers: Changing Trends and Future Burden | Yeongha Oh  
*Berea College* |                                                                             |
| 14:00         | Bacterial deactivation by using Graphene quantum dot as an effective photodynamic therapy agent | Ermek Belekov  
*Western Kentucky University Physics and Astronomy Department* | Lauren Cooper  
*Western Kentucky University Physics and Astronomy Department*  
Khomidkhodzha  
*Kholikov*  
*Western Kentucky University Physics and Astronomy Department*  
Ilhom Saidjafarzoda  
*Western Kentucky University Physics and Astronomy Department*  
Michael Smith |
14:15 - Effects of alpha & beta-adrenergic receptor blockade upon inflammatory responses & microglia activation to sleep loss.

First Author
Nicholas Wheeler
Western Kentucky University
Co-author
Noah Ashley
Western Kentucky University

13:15 * - A Study of Non-Linearity in a Simple Pendulum

First Author
Ethan Caudill
Morehead State University
Co-author
Jennifer Birriel
Morehead State University

13:30 * - Using Topology to find Copyright Infringement

First Author
Jeremiah Halter

13:45 - From the Hardwood to the Spreadsheet

First Author
Christopher Napier
Morehead State University

14:00 - Dr. Strangelog or: How I Learned to Stop Worrying and Love the Slide Rule

First Author
Dwight Smith
Kentucky Community and Technical College System

14:15 - Additive 3-Choosability of Planar Graphs with Girth 20

First Author
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>First Author</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:30</td>
<td>Rational Points on Circles and the Birch and Swinnerton-Dyer Conjecture</td>
<td>Andy Martin</td>
<td>Kentucky State University</td>
</tr>
<tr>
<td>14:45</td>
<td>Applying the Hastings-Metropolis algorithm to chessboard placement problems</td>
<td>Doug Chatham</td>
<td>Morehead State University</td>
</tr>
<tr>
<td>15:00</td>
<td>An Examination of Discrete Least Squares Approximation Techniques</td>
<td>Mark Robinson</td>
<td>Western Kentucky University</td>
</tr>
<tr>
<td>15:15</td>
<td>Random Operators and Dynamical Localization</td>
<td>Kyle Besing</td>
<td>Kentucky Wesleyan College</td>
</tr>
<tr>
<td>15:30</td>
<td>PDE Model for Solid-State Dewetting of a Binary Alloy Thin Film</td>
<td>Mikhail Khenner</td>
<td>Western Kentucky University</td>
</tr>
<tr>
<td>15:45</td>
<td>A Deeper Look into Open Coverings of the Rationals that do not Cover the Reals</td>
<td>Justin Trulen</td>
<td>Kentucky Wesleyan College</td>
</tr>
</tbody>
</table>

**Science Education - Oral Presentations**

- **DSU 3006**
- Section meeting follows talks at 2:45

- **13:15 - Death Knell for le Grand K.**
13:30 - Why do students leave quantitative STEM majors?

First Author
Hannah Brewer
Morehead State University

Co-author
Wilson Gonzalez-Espada
Morehead State University

Co-author
Robert Boram
Morehead State University

13:45 - Evaluating the effectiveness of a concept-map oriented curriculum in a flipped chemistry classroom

First Author
Bharath Kumar
Midway University

14:00 - PowerPoint Reimagined: Enhancing Lessons to Guide Reasoning, Foster Collaboration, and Promote Active Learning

First Author
Kevin Revell
Murray State University

14:15 - Science Seminar Series of WKCTC: Going Strong for 33 Years

First Author
Karen Hlinka
Kentucky Community and Technical College System

14:30 - Middle School Investigation of Global Climate Change

First Author
Shira Rabin
University of Louisville

Co-author
Bennet Kolb
Jefferson County Public Schools

Co-author
Bronwyn Williams
University of Louisville

Co-author
Adam Stieglitz
University of Louisville

Co-author
Mary Brydon-Miller
University of Louisville

Saturday, November 3, 2018 1:15pm - 4:00pm

Social Sciences: Anthropology/Sociology/Psychology
DSU 2113
Section meetings to follow talks
**13:15 * - Haptic Distance Ratios: The Geometry of Space within the Hands**

*First Author*
Sydney Wheeler

*Co-author*
Farley Norman

*Co-author*
Lauren Pederson

*Co-author*
Catherine Dowell

*University*
Western Kentucky

**13:30 * - Water Deposits Connection to Decreased Evidence of Burial Practices in Iron Age Britain and Ireland.**

*First Author*
Amanda Lilly

*University*
Northern Kentucky

**1:45 - Five minute presentations**

*First Author*
Poster Presenters

---

**Saturday, November 3, 2018  2:00pm - 5:00pm**

**Physics Teaching Workshop - Ky Association of Physics Teachers**

Ogden College Hall Room
1007

This workshop is open to any registered KAS meeting participant.

Quick Links

- [Annual Meeting Overview](#)
- [Welcome to Berea College](#)
- [Registration & Abstract Submission](#)
- [Keynote Speaker](#)
- [Statistics Consults at KAS](#)
- [Local Accommodations](#)
- [Campus Map & Logistics](#)
- [Become a 2019 Sponsor](#)
- [Join us as an Exhibitor or Advertiser](#)
- [Teacher Workshops Nov 2](#)
Friday Film Screening

Forest Outings

Social Media Photo Contest

2019