

**54th Annual**



**SATURDAY, APRIL 6**

**DOWNING STUDENT UNION**

**Western Kentucky University - Bowling Green, Kentucky**

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# Conference Schedule

## **Student and Session Chairs Registration (8:30 AM – 3:30 PM)**

- First Floor Lobby
- *Ongoing throughout the day*
- *Register at least 30 minutes before start of session*

## **Morning Sessions (9:30 AM - 11:00 AM)**

- Oral Papers and Performances: Rooms 2123, 2124, 2081, 3003, 3004, & 3005
- Posters in First Floor and Second Floor Atrium
  - Presenters should remove their posters at the end of the session

## **Lunch Break (11:00 AM – 12:00 PM)**

- Presenters, co-presenters, and Session Chairs with name badges receive free lunch tickets. Please pick it up at the registration table.

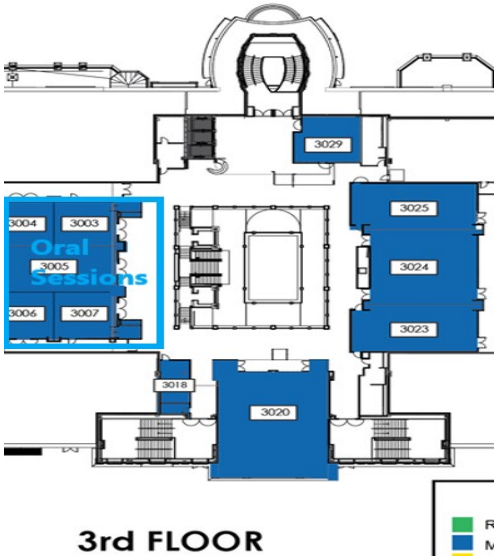
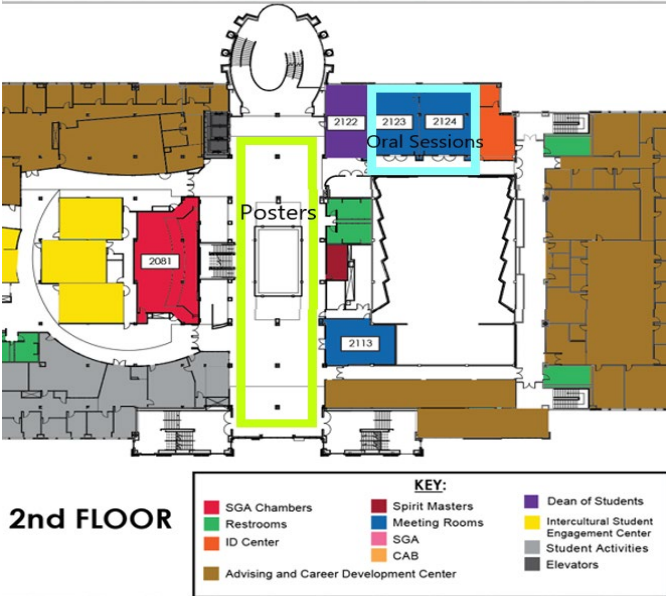
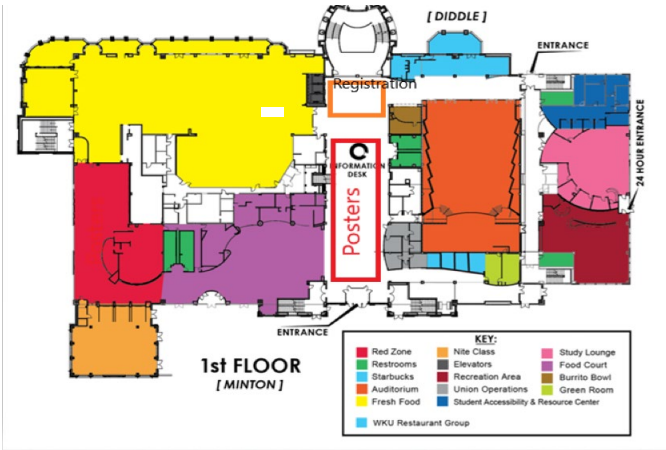
## **Midday Sessions (12:15 PM – 1:45 PM)**

- Oral Papers and Performances: Rooms 2123, 2124, 2081, 3003, 3004, 3005, 3006, & 3007
- Posters in First Floor and Second Floor Atrium
  - Presenters should remove their posters at the end of the session

## **Afternoon Sessions (2:00 PM – 3:30 PM)**

- Oral Papers and Performances: Rooms 2123, 2124, 2081, 3003, 3004, 3005, 3006, & 3007
- Posters in First Floor and Second Floor Atrium
  - Presenters should remove their posters at the end of the session

# DSU Floor Plans



# Conference History

The WKU Student Scholar Showcase (formerly the Student Research Conference) is an event highlighting the scholarly activities of graduate and undergraduate students of diverse disciplines from across the main and regional campuses. An annual tradition since 1970, the conference has provided opportunities for thousands of students to present papers, performances, posters, exhibits, and displays on their research and creative endeavors.

Scholarly activity is original and creative work that is shared with colleagues and the public. Research is a form of scholarly activity that involves the discovery of new knowledge. Other forms of scholarship include the development of new technologies, methods, materials or uses; the integration of knowledge that leads to new understanding; and artistry that creates new insights and interpretations. As demonstrated by the Student Scholar Showcase/Student Research Conference, students significantly enrich their academic experiences at WKU by engaging in scholarly activity.

WKU has a long history of promoting student research and creative activity. Between 1970 and 2002, the WKU Chapter of Sigma Xi organized and funded the WKU Student Research Conference. Sigma Xi is a national research honor society of scientists and engineers that recognizes scientific achievement. The society is a diverse organization of members and chapters dedicated to companionship in science and engineering and advancement of knowledge through research, teaching, and service. For the next three years, the conference was jointly sponsored and organized by Sigma Xi and the University Honors Program. In 2006, WKU hosted a weekend-long celebration of student scholarship that included the Potter College Undergraduate Conference on Friday and the annual WKU Student Research Conference on Saturday, the latter again sponsored by Sigma Xi and the University Honors Program. The following year, a special committee composed of representatives of each college, the University Honors Program, and Sigma Xi organized a single conference. In 2006-2007 Sigma Xi and the Office of the Provost provided financial support for the conference.

In 2008 Provost Barbara Burch created the Student Research Council, a university-wide committee charged with promoting student scholarly activity on campus and organizing the annual student conference. Since that year, the Student Research Council has organized the annual Student Research Conference, with financial support provided by the WKU Chapter of Sigma Xi, the Office of the Provost, the Office of Research and Creative Activity, and other university units. With support from the Office of the Provost and the Office of Research, in 2012 the Student Research Council developed a weeklong celebration of student scholarship called REACH (Research Experiences and Creative Heights) Week. The Annual Student Scholar Showcase is a major university-wide event of REACH.

In 2022, per the vision of Provost Robert (Bud) Fischer and the Associate Provost for Research and Graduate Education, the Student Research Council was renamed as the Student Scholar Showcase Council and the Student Research Conference was named to be Student Scholar Showcase.

# Conference Highlights

The 54th Annual WKU Student Scholar Showcase proudly showcases 287 research projects and creative works. There are 173 posters and exhibits, 109 oral papers and 6 performances.

The interdisciplinary nature of the conference is evident in the broad range of subject areas covered in the presentations. Student participants represent diverse disciplines from 30 schools, departments, programs, and institutes representing all colleges.

1. Agriculture
2. Biology
3. Chemistry
4. Counseling and Student Affairs
5. Earth, Environmental, and Atmospheric Sciences
6. School of Engineering and Applied Sciences
7. English
8. Folk Studies & Anthropology
9. History
10. Mathematics
11. Physics & Astronomy
12. Political Science
13. Psychological Sciences
14. Psychology
15. Public Health
16. Theatre & Dance
17. School of Journalism & Broadcasting
18. Art
19. Business Sciences
20. Center for Gifted Studies
21. Communication Sciences and Disorders
22. Computer Information Systems
23. Gatton Academy of Math & Science
24. Interdisciplinary Studies
25. School of Kinesiology, Recreation & Sport
26. Organizational Leadership
27. Physical Therapy
28. Social Work
29. Sociology
30. School of Teacher Education

# Conference Organization

The research and creative projects presented at the conference are organized into graduate sessions and undergraduate sessions with five to six presentations per session. Students are grouped into sessions based on the subject areas of their projects: natural sciences, social sciences and education, health and human services, arts and humanities, business, and interdisciplinary studies.

WKU faculty, professional staff, and retired faculty and staff serve as Session Chairs to moderate the student presentations at the conference.

## Acknowledgements

On behalf of the entire campus community, the WKU Student Scholar Showcase extends appreciation and congratulations to the hundreds of students participating in the conference. We applaud your talent, creativity, dedication, and commitment to making the most of your educational experience at WKU. Your passion for learning and academic excellence, as well as your motivation to overcome challenges, not only distinguishes you from your peers but also serves as an inspiration to others. We are proud of your accomplishments, and you should be too.

WKU faculty and staff who have supervised the students on their research and creative projects are referred to as "mentors" and are identified parenthetically in the detailed session listings. We commend the mentors for their support of scholarly activities and for their assistance in preparing students for the conference.

Funding for the 54<sup>th</sup> Annual WKU Student Scholar Showcase and other activities was provided by the Office of the Provost and Vice President for Academic Affairs and the Office of Research and Creative Activity.

The WKU Graduate School provides grants to graduate students to support scholarship that promotes inquiry and contributions to knowledge. A number of the graduate students presenting today were assisted by funding from the Graduate School.

A variety of funding opportunities are available to assist undergraduate students with their scholarship. In 2012 the Office of the Provost and Vice President for Academic Affairs and the Office of Research and Creative Activity initiated an internal funding program for undergraduate students called Faculty-Undergraduate Student Engagement (FUSE) grants. FUSE grants are designed to support students' intellectual development by fostering active engagement in the areas of research, creative and scholarly activities, and/or artistic performances.

We offer our thanks to Ms. Mary Bidwell, Ms. Alicia Carter, Ms. Carmen Herrera, Mr. Clinton Lewis, Mr. Tommy Newton, Ms. Aurelia Spaulding, Mr. Scott French, and other members of the WKU Office of Communications and Marketing staff provided vital assistance with conference artwork design, electronic advertising, photography, press and social media releases.

Ms. Diana Keeling provided expert database support to the Student Scholar Showcase Council.

WKU faculty members, Dr. Kandy Smith, Dr. Daniel Keller, Dr. John Erikson, and Ms. Ashley Orehek Rossi delivered informative professional development workshops for students in preparation of the conference.

The Downing Student Union staff at WKU provided logistical support for the conference. WKU Dining prepared lunch in the Fresh Food Company, and WKU Catering provided refreshment support.

The WKU Student Scholar Showcase organizes the annual conference. Council members represent the following campus units: Academic Colleges, Communications and Marketing, Downing Student Union, Honors College, Graduate School, University Libraries, University Senate, Gatton Academy, Student Government Association (SGA), and Office of Research and Creative Activity.

Members in 2023-2024 are Dr. Jeffrey Budziak, Ms. Alicia Carter, Dr. Sam Earls, Ms. Samantha Shemwell, Ms. Meygan Oliver, Dr. Jenni Redifer, Dr. Ritchie Taylor, Dr. Cathleen Webb, Dr. Lily Zhuhadar, and Ms. Ashley Orehek-Rossi

The Council sincerely appreciates the students, faculty, staff, and community members who contributed to the great success of this interdisciplinary conference, as well as the friends and family members who attended the event.



# Session Chairs

Listed below are the WKU faculty and staff, who served as session Chairs at this year's conference. We greatly appreciate the assistance of the judges and thank them for volunteering. Many have volunteered at the conference for years or decades.

Aaron Wichman  
Adam West  
Angela Nagel  
Anthony Paganelli  
Brooke Gross  
Christopher Biolsi  
Dan Forrest  
Darlene Applegate  
David Brown  
David Fulkerson  
Gordon Baylis  
Huanjing Wang  
Jae Kim  
Jenny Burton  
Joseph Marquardt  
Kevin Modlin  
Kirolos Haleem  
Laura Hudson  
Matt Woodward  
Mikhail Khenner  
Morteza Nurcheshmeh  
Nataliya Melnyk  
Nina Marijanovic  
Paige Hiltner  
Patricia Kambesis  
Sabita Shrestha  
Sandra Hughes  
Sara McCaslin  
Sarah Myers  
Sarah Scali  
Sheila Flener  
Stuart Burris  
Todd Seguin  
Tong Wu  
Whitley Stone  
Xiuhua Ding

# Oral Presentations and Performances

## Morning Sessions (9:30 am – 11:00 am)

### GRADUATE ORAL PRESENTATIONS: SESSION CHAIR: TODD SEGUIN

Room # 2081	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
9:30 AM	Athletes: While We Should Be Making Them Stronger, Society Is Encouraging Them To Be Smaller	Bruce	Kane	Andrea	Kirk- Jenkins
9:45 AM	Counseling Survivors with Military Sexual Trauma	Jordan	Daugherty	Rhemma	Payne
10:00 AM	Social Comparison In Academia Amid Covid-19: Exploring Gender And Rank Dynamics In Perception Of Pressure	Ashley	East	Katrina	Burch
10:15 AM	Veterans And Suicide 6,392 To Many!	Bruce	Kane	Andrea	Kirk- Jenkins

### UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: SARA MCCASLIN

ROOM # 2123	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
9:30 AM	How Do Queer Women Leave Behind a Legacy?	Ansley	Hoagland	Leigh	Johnson
9:45 AM	Finding Community Through Music - Summer Shade Pickers	Kristin	Dale	Kate	Hudepohl
10:00 AM	Documenting Gender In Gravestones: A Preliminary Analysis (Group)	Chloe Vivian Marley Noah	Todd Carlson Eppenheimer Risen	Kate	Hudepohl

**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: XIUHUA DING**

<b>ROOM # 2124</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>9:30 AM</b>	What Explains American Perceptions Of Russia And China?	Shane	Stryker	Scott	Lasley
<b>9:45 AM</b>	The Impact Of Unrelated Filler Task Type On Performance	Aimee	Scott	Jenni	Redifer
<b>10:00 AM</b>	Viva Wakanda: What Afrofuturism Gives To An Emancipated Diaspora	Tani	Washington	Andrew	Rosa
<b>10:15 AM</b>	A Government For The People: The American Administrative State, 1800-1850.	Edwin	Wilborn	Patricia	Minter

**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: NATALIYA MELYNK**

<b>ROOM # 3003</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTO R FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>9:30 AM</b>	Taiwanese Belief That The Us Will Aid In Defense Against A Chinese Invasion	Katrina	Fjeld	Timothy	Rich
<b>9:45 AM</b>	Public Support In Taiwan For Extending Conscription And The Extent Of That Support	Serena	White	Timothy	Rich
<b>10:00 AM</b>	The State Of The Union Address (SOTU) And Rhetoric Towards China: Does It Change With The Geopolitical Environment?	Reagan	Fournier	Timothy	Rich
<b>10:15 AM</b>	Impediments To Effective High School Teaching In Kentucky	Christopher	Wallace	Kevin	Modlin
<b>10:30 AM</b>	Are You Satisfied?: An Analysis of Democratic Satisfaction amongst Self Reported Identity Groups	Mallory	Hardesty	Scott	Lasley

**UNDERGRADUATE PERFORMANCES: SESSION CHAIR: ADAM WEST**

<b>ROOM # 3004</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>9:30 AM</b>	Lifeblood (Group)	Kendall Ella	McCormick David	Travis	Newton
<b>9:45 AM</b>	Longing For The Unfound	Chastity	Yocum	Sara	Thomason
<b>10:00 AM</b>	Yellow Moths	Bailey	Childress	Travis	Newton
<b>10:15 AM</b>	Grow Up, June!	Johnna	Kuegel	Alysia Fae	Klein
<b>10:30 AM</b>	Avulsion (Group)	David Thomas	Davies Wallace	Sara	Thomason
<b>10:45 AM</b>	Disciple - A WKU Short Horror Film (Group)	Boston K. Christian	Enderle McCormick	Sara	Thomason

UNDERGRADUATE ORAL PRESENTATION AND PERFORMANCES:  
SESSION CHAIR: SHEILA FLENER

ROOM # 3005	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
9:30 AM	Investigating the Manipulation of Movement and Shape in Ballet Choreography	Jenna	Lett	Amanda	Clark
9:45 AM	Teaching Dancers How to Tape and Recover from Common Dance Injuries	Grace	Carter	Meghen	McKinley
10:00 AM	How Mentorship Enhances The Technical And Artistic Development Of The Tap Dancer	Shannon	Maloney	Amanda	Clark

## Oral Presentations and Performances Midday Sessions (12:15 pm – 1:45 pm)

ORAL PRESENTATIONS: SESSION CHAIR: HUANJING WANG

ROOM # 2081	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
12:15 PM	Alien P.R.O.B.E. (Group)	Michael Nicholas Cy Alex	Lynch Johnson Dixon Godsey	Michael	Galloway
12:30 PM	Extension of 'Do Dogs Know Calculus'	EB	Barrett	Dominic	Lanphier
12:45 PM	Exploring Near-earth Objects With The Largest Telescope In Kentucky	Galilea	Ochoa	Ting-Hui	Lee
1:00 PM	Meaning In Life And Metacognition	Liam	Hill	Aaron	Wichman
1:15 PM	Investigating The Leaky Pipeline: Gendered Effects Of Caregiving Polices On Stem Faculty (Group)	Molly Makenzie	Simmons Barnes	Katrina	Burch

ORAL PRESENTATIONS & PERFORMANCES: SESSION CHAIR: TONG WU

ROOM # 2123	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
12:15 PM	Size Effects of SO <sub>2</sub> in Water Nanoparticles: a Molecular Dynamics Perspective	Nathaniel	Gillispie	Matthew	Nee
12:30 PM	Fabrication and analysis of zirconium thin films on silicon (Si) by pulsed laser deposition	Berdimyrat	Annamuradov	Ali Oguz	Er
12:45 PM	Surface Patterning On Zirconia Dental Implants By Laser Imprinting	Inomjon	Majidov	Ali Oguz	Er
1:00 PM	Bioactivity And Mechanical Properties Of Hydroxyapatite On Ti6Al4v And Si(100) Surfaces By Pulsed Laser Deposition	Zikrulloh	Khuzhakulov	Ali Oguz	Er

GRADUATE ORAL PRESENTATIONS: SESSION CHAIR: BROOKE GROSS

ROOM # 2124	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
12:15 PM	Development Of An Enhanced Sampling Workflow To Accelerate Molecular Docking With Sparse Biophysical Information	Zachary	Stichter	Matthew	Nee
12:30 PM	The Evolution of Arthropod Reaction to the Presence of Smoke	Adam	Miles	Albert	Meier
12:45 PM	Seasonal Variation Of Butterfly Community In A Fragmented Habitat: A Case Study From The Institute Of Forestry Complex, Hetauda, Nepal	Mahamad	Miya	Dr. Keith	Philips
1:00 PM	Effects Of Covid-19 Pandemic On Maternal Health And Cesarean Section Rates Amongst Women In Bowling Green, Kentucky	Manzar	Rzayeva	Susan	Eagle

**GRADUATE ORAL PRESENTATIONS: SESSION CHAIR: ANGELA NAGEL**

<b>ROOM # 3003</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>12:15 PM</b>	Developing Phenanthroimidazole-based Fluorescent Sensors For Efficient Analyte Detection	Brian	Kellogg	Lei	Li
<b>12:30 PM</b>	Ceg10 Legionella Pneumophila Effector Protein Modulate Host Lipid Metabolism	Emmanuella	Ofoka	Simran	Banga
<b>12:45 PM</b>	Application Of Remote Sensing And Artificial Intelligence For Critical Raw Material Exploration In The United States	Nima	Esmailzadeh	Nahid	Gani
<b>1:00 PM</b>	Remote Sensing For Geologic Mapping In Karst-rich Woodlands And Farmlands Of The Olmstead Quadrangle, Todd And Logan Counties, Kentucky	John	Lunday	Nahid	Gani
<b>1:15 PM</b>	Exploring Karst Hazards and Mass Wasting Potential in Pulaski County, Kentucky: Insights from the Appalachian Region	Barrett	Gibbs	Nahid	Gani

**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: SANDRA HUGHES**

<b>ROOM # 3004</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>12:15 PM</b>	Assessing Water Quality Trends in the Jennings Creek & Lost River Watershed to Develop a Watershed Based Plan in Bowling Green, Kentucky	Mara	Neace	Jason	Polk
<b>12:30 PM</b>	Impacts Of Land Use And Groundwater Inputs On Biological Stream Health And Habitat Of Jennings Creek, Bowling Creek, Kentucky.	Allison	Francis	Jason	Polk
<b>12:45 PM</b>	Modeling Urban Karst Flooding at Fairview Plaza in Bowling Green, Kentucky	Gregory	Sitz	Jason	Polk
<b>1:00 PM</b>	Jennings Creek Watershed Community Development Through Environmental Restoration And Recovery (Group)	Gracie Julianna	Hendrickson-Brown Brough	Jason	Polk
<b>1:15 PM</b>	Modeling Urban Karst Flooding At Fairview Plaza In Bowling Green, Kentucky	Gregory	Sitz	Jason	Polk

**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIRS: JOSEPH MARQUARDT**

<b>ROOM # 3005</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>12:15 PM</b>	Determining Tornadic Near-Misses via Oklahoma and Kentucky Mesonet Observations	Tyson	Stewart	Jerald	Brotzge
<b>12:30 PM</b>	An Analysis Of Microplastic Concentrations Effected By Rainfall In Jennings Creek, Bowling Green, Kentucky	Bryanna	Wylie	Patricia	Kambesis
<b>12:45 PM</b>	Developing A Comprehensive Water Resources Monitoring Dashboard Using Big Data Analytics And Modeling (Group)	Jack Gianna	Galloway Claros	Jason	Polk
<b>1:00 PM</b>	Test-Bed Development for Tactile Sensor Degradation Testing	Abram	Tingle	Farhad	Ashrafzadeh
<b>1:15 PM</b>	Development of Wireless Sensor Glove for Real-Time, Gesture-Based Robotic Arm Control (Group)	William Chad Matthew Adam	Seymour Garrett Whiticker Riley	Farhad	Ashrafzadeh

**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: DAVID FULKERSON**

<b>ROOM # 3006</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>12:15 PM</b>	Analysis Of Roundabout Safety Challenges In Kentucky: Findings From Survey Analysis (Group)	Justin Jermey	Szczepanski Jordan	Kirolos	Haleem
<b>12:30 PM</b>	Investigating Impact Of Retroreflective Backplates And Flashing Yellow Arrows On Distraction-related Crashes In Kentucky (Group)	Will Meaghan Evan	Pemberton Czarnecki Brittenham	Kirolos	Haleem
<b>12:45 PM</b>	Effect Of Covid-19 Pandemic On Distraction-related Motorcycle Crashes In Kentucky (Group)	Noelle Dylan	Buhay Justice	Kirolos	Haleem
<b>1:00 PM</b>	Nursing Documentation Management Application (Group)	Matthew Harsha Jeremiah	Polak Suresh Harris	Michael	Galloway
<b>1:15 PM</b>	Analyzing The Safety Of Roundabouts In The State Of Kentucky (Group)	Joshua Dylan Will	Oliver Justice Pemberton	Kirolos	Haleem

**GRADUATE ORAL PRESENTATIONS: SESSION CHAIR: STUART BURRIS**

<b>ROOM # 3007</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>12:15 PM</b>	Evaluation of Biochar as a Remediation Tool for Aminopyralid Contaminated Compost	Steven	Parris	William	Strunk
<b>12:30 PM</b>	Effect of Glucocorticoid Blockade on Inflammatory Responses to Acute Sleep Fragmentation in Mice	Zim Warda	Hasan	Noah	Ashley
<b>12:45 PM</b>	A Spatial And Temporal Analysis Of Stonefly (insecta, Plecoptera) Biodiversity Of Pennsylvania	Jack	Merola-Lapson	Scott	Grubbs
<b>1:00 PM</b>	The Role Of A Cathepsin L And Mmp During Drosophila Development	Oluwatobiloba	Oguntoyinbo	Ajay	Srivastava
<b>1:15 PM</b>	Diversity of spider beetles in Argentina: two new species and distributions	Marlena	Askren	Keith	Philips

## Oral Presentations and Performances Afternoon Sessions (2:00 pm – 3:30 pm)

**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: NINA MARIKANOVIC**

<b>ROOM # 2081</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>2:00 PM</b>	Sketching The Shape Of The Sun With Citizen Science (Group)	Lillian Travis Shikha Tameka	May Peden Sawant Ferguson	Michael	Galloway
<b>2:15 PM</b>	Course-aid (Group)	Tanner Ragan Jessica	Thurman Rone Mata	Michael	Galloway
<b>2:30 PM</b>	Mesonet: AI Assisted Quality Assurance/quality Control Analysis (Group)	Alyssa Cassandra Daria	Putman Priddy Casey	Michael	Galloway
<b>2:45 PM</b>	WKU Filmatrix (Group)	Matthew Zach Trevor	Irizarry Vance Kerney	Michael	Galloway
<b>3:00 PM</b>	Happy Feet Data Grab (Group)	Michael Conner	Wittkopf Hehn	Michael	Galloway



**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: KIROLOS HALEEM**

<b>ROOM # 2123</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>2:00 PM</b>	Herbaceous Plant Diversity (Group)	Jocelyn Anna Jacob	Seadler Hartman Dant	Martin	Stone
<b>2:15 PM</b>	Characterization Of A Bacteriophage Protein That Is Toxic To Mycobacterium Smegmatis	Sofia	Sileo	Rodney	King
<b>2:30 PM</b>	Cell Shape is Mediated by a Joint Effort Between a Septin-associated Kinase and Endocytic Protein	Presley	Neagle	Joseph	Marquardt
<b>2:45 PM</b>	Shedding Light On Cancer By Exploring The Influence Of Bem1, Boi1, And Boi2 Proteins On The Elm1 Protein Kinase & Mediated Cell Shape Control In Saccharomyces Cerevisiae	Nikhil	Kumar	Joseph	Marquardt
<b>3:00 PM</b>	Exploring The Contributions Of V-type Atpases To Drosophila Melanogaster Wing Development	Landon	Carlton	Ajay	Srivastava

**ORAL PRESENTATIONS: SESSION CHAIR: DAVID FULKERSON**

<b>ROOM # 2124</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>2:00 PM</b>	Improving The Photodeactivation Efficiency Of Pathogens Using Methylene Blue With Silver Nanoparticles And Efflux Pump Inhibitors	Yaran	Allamyradov	Ali Oguz	Er
<b>2:15 PM</b>	Quantitative Analysis Of An Analytical Hodgkin-huxley Model Solution	Ethan	Kelly	Tony	Simpao
<b>2:30 PM</b>	The Non-euclidean Nature Of Quantum Phase Space And Its Relation To Riemannian Manifolds	Gabriel	Nowaskie	Tony	Simpao
<b>2:45 PM</b>	Formation Of Picosecond Laser-induced Periodic Surface Structures On Steel For Knee Arthroplasty Prosthetics (Group)	Yaran Alper	Allamyradov Er	Ali Oguz	Er

GRADUATE ORAL PRESENTATIONS & PERFORMANCES: SESSION CHAIR: SARAH MYERS

ROOM # 3003	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
2:00 PM	A Review Of The Spatial And Temporal Trends In Precipitation And Temperature Across Kentucky.	Olufemi	Aina	Jerald	Brotzge
2:15 PM	Dynamics Of Large-scale Sediment Waves In The Northern Gulf Of Mexico Basin	Victor	Towoju	M. Royhan	Gani
2:30 PM	Renewable Energy Perception and Policy Implementation in Rural Communities: Case Studies in Southeastern and Midwestern America	Madeline	Petty	Leslie	North
2:45 PM	Perceptions And Visual Awareness Of Urban Karst Flooding To Inform Preparedness Planning And Management Actions	Hannah	Herrmann	Jason	Polk
3:00 PM	Investigating Groundwater Dynamics And Aquifer Recharge Patterns In Barbados Using Forensic Hydrology	Benjamin	Hauschild	Jason	Polk

GRADUATE ORAL PRESENTATIONS: SESSION CHAIR: DAN FORREST

ROOM # 3004	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
2:00 PM	Comparison of Microplastic Contamination between Urban and Protected Karst Groundwater Basins of South-Central Kentucky	Katie	Norman	Chris	Groves
2:15 PM	Climatology Of Rain-On-Snow Events Within The Connecticut River Watershed	Samuel	Davidson	Zachary	Suriano
2:30 PM	Property Renewal & History Through Adaptive Reuse at Western Kentucky University	Julianna	Brough	Margaret	Gripshover
2:45 PM	Exploring The Connection Between Weather And World-Record Times During Major Marathon Endurance Events Around The Globe	Michael	Quire	Joshua	Durkee
3:00 PM	Remote Sensing Analysis Of Virginia And West Virginia June 22nd-24th, 2016 Flooding Event	Robert	Ferguson	Joshua	Durkee

**GRADUATE ORAL PRESENTATIONS & PERFORMANCES:  
SESSION CHAIR: LAURA HUDSON**

<b>ROOM # 3005</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>2:00 PM</b>	Contaminant Transport Mechanisms And Source Tracking In Karst Groundwater Systems Under Agricultural Land Use	Shreya	Pandey	Jason	Polk
<b>2:15 PM</b>	Sinkhole Hazard Assessment Index And Risk Analysis To Inform Karst Policy And Mitigation Planning	Meghan	Puente	Jason	Polk
<b>2:30 PM</b>	Stormwater Management Advances Using Smart Sensor Network Precipitation Monitoring	Brittany	Pekara	Jason	Polk
<b>2:45 PM</b>	Climate Change Vulnerability Assessment Of A Regional Karst Landscape For Hazard Mitigation Planning	Kara	Brunot	Jason	Polk

**UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: DAVID BROWN**

<b>ROOM # 3006</b>	<b>ABSTRACT TITLE</b>	<b>FIRST NAME</b>	<b>LAST NAME</b>	<b>MENTOR FIRST NAME</b>	<b>MENTOR LAST NAME</b>
<b>2:00 PM</b>	Case study of the May 24, 2017, Southwest Ohio severe storm using satellite and radar	Joshua	Brown	Joshua	Durkee
<b>2:15 PM</b>	Determining Pre and In-flight Severe Weather Risks And Causes Of The September 27 2023 Ohio County N3097m Plane Crash Using Satellite And Radar Techniques	Kaylie	Bonifer	Josh	Durkee
<b>2:30 PM</b>	A Research-To-Operational Weather Monitoring and Measuring Method for Improving Health and Safety During Marathon Endurance Events	Thomas	Payette	Joshua	Durkee
<b>2:45 PM</b>	The Red River Of The North: Trends In Snowmelt Flooding Meteorological Data From 2000-2009	Alexis	Rodriguez	Zachary	Suriano
<b>3:00 PM</b>	Variability & Large-scale Weather Forcings Of Extreme Kentucky Precipitation Between 1949-2022	A	Tekoe	Zachary	Suriano

UNDERGRADUATE ORAL PRESENTATIONS: SESSION CHAIR: PATRICIA KAMBESIS

ROOM # 3007	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
2:00 PM	Analyzing Change Detection And Band Ratio Of The Olmstead Quadrangle In Kentucky: Insights For Environmental Monitoring	Sydney	Anderson	Nahid	Gani
2:15 PM	Study of Dolomite in South Central Kentucky	Carrie	Updegraff	Michael	May
2:30 PM	Tornado and Severe Weather Modeling	Jackson	Powers	Xingang	Fan
2:45 PM	A Radar Analysis Of The March 2-3, 2020 Severe Weather Outbreak	Samantha	Taylor	Joshua	Durkee
3:00 PM	Mapping Geochemistry of Capillary Water Within the Mammoth Cave Aquifer and Relationships With Overlying Geology, Great Onyx Cave, Mammoth Cave National Park	William	Strehl	Christopher	Groves

## Oral Posters Morning Session (9:30 am – 11:00 am)

SESSION CHAIRS: WHITLEY STONE, SABITA SHRESTHA, CHRISTOPHER BILOSI,  
MIKHAIL KHENNER, AARON WICHMAN, SARAH SCALI

### DSU 1<sup>ST</sup> FLOOR

BOARD #	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
1	The Myth of Swiss Style	Samuel	Engel	David	Marquez
2	Lumina: Illuminating the World of Holistic Beverage Branding with Switchel	Lily	Lang	Natalie	Tyree
3	Iequity: An Augmented Reality Theatre Production	Amy	Pan	Kristina	Arnold
4	The Shape Of Your Words: An Exploration Of Innovative Communication In Ted Talks On Creativity	Eliza	Marsh	Hasan	Akdeniz
5	Visualizing Communication Disorders Through Art	Adriana	Reyes	Leigh Anne	Roden
6	Fathers' Descriptions of Their Autistic Daughters Social Communication and Repetitive Behaviors and Interests: A Qualitative Investigation	Hannah	Wirth	Jenny	Burton

<b>7</b>	Middle Eastern And North African Students' Identification And Commitment To Predominantly U.s White Institutions1	Nesma	Soliman	Trini	Stickle
<b>8</b>	Online Real Analysis Course For In-service Teachers Using Project Ultra Recommendations; Meanings For Continuity And Differentiability	Sarah	Hartman	Zachary	Bettersworth
<b>9</b>	The Effect Of Mindfulness Training On Muscular Endurance Performance, Mindfulness, And Mental Toughness	Donte	McGee Jr.	Scott	Arnett
<b>10</b>	Cannabidiol (cbd) And Resistance Training: Does Cbd Attenuate Acute Pain?	Andres	Pacheco	Whitley	Stone
<b>11</b>	Refining The Goals Of Public Education In The United States: An Exploratory Single-case Embedded Study Of Student-centered Path-goals Setting	Tuan	Pham	Aaron	Hughey
<b>12</b>	Bringing Wellness Into The DPT Classroom (Group)	Beth Paige	Anthony Rager	Elizabeth	Norris
<b>13</b>	Intra-rater Reliability of Mobil-aider Device for Measuring Anterior Drawer Translation Of Talus During Anterior Drawer Test	Lauren Nadine Jaclynn	Batten Langsdorf Whiting	Penny	Head
<b>14</b>	Comparison Of Controlled Articular Rotations And Static Stretching For Hip Internal Rotation Range Of Motion (Group)	Robert Max Sarah	Brantley Modrall Pfeil	Penny	Head
<b>15</b>	3D Motion Analysis Of Single Leg Squat With Association To Hip Strength And Ankle Dorsiflexion (Group)	Makayla Sydney Cheyenne	Brindley Bruce Gore	Melissa	Tolbert
<b>16</b>	The Effects Of Virtual Reality Training And Body Weight Supported Treadmill Training Therapy On Children With Cerebral Palsy: A Single Subject Design Proposal (Group)	Cecil Jonathan Jason Skylar	Burke Loshinskie Head King	Sonia	Young
<b>17</b>	The Reliability Of iPhone 15 And Goniometer Rom Measurements Of The Hip (Group)	Jarred Brianna Noah	Crone Carrato Stafford	Kurt	Neelly
<b>18</b>	The Influence of A Fall Risk Screening Service-Learning Program On Student Confidence, Anxiety, And Perception In Assessing And Working With Older Adults (Group)	Janna Kayla Mallory Logan	Godby Krohman Williams Eastwood	Elizabeth	Norris

19	Burnout In Newly Licensed Physical Therapists With Less Than Five Years Of Experience: A Cross-sectional Survey (Group)	Hannah Madison Dalton	Gregory Simpson Festervan	Kurt	Neelly
20	The Effects Of Foam Rolling On Work Related Musculoskeletal Pain And Motivation To Participate In Healthy Activities (Group)	Nicholas Micheal Scott	Hauser-DeMeo Buchheit Terrell	David	Bell

## DSU 2<sup>ND</sup> FLOOR

BOARD #	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
21	The Effects Of Percussive Massage Therapy After Fatiguing Eccentric Exercise To The Hamstrings (Group)	Grant Kevin Andrew Lauren	Holland Rayno Buller Balance	Elizabeth	Norris
22	The Use of High Intensity Laser Therapy Paired with Active Forms of Treatment for the Management of Soft Tissue Injuries: A Systematic Review (Group)	Thomas Hettie Anthony	Martin Egan Mancini	Anthony	Mancini
23	The Collection Of Normative Data Using The Gaitbetter Device: A Descriptive Study (Group)	Kyle Hannah William Taylor	McClain Wilson Conley Raseta	Matthew	Condo
24	Integration Of Smartphone Apps In Physical Therapy Practice (Group)	Hannah Grant Anthony	Petitt Largen Cline	Elizabeth	Norris
25	Surf Or Turf? Observing Differences In Achieving A Target Heart Rate, Rate Of Perceived Exertion, And Pain Pressure Threshold In Water-based Vs. Land-based Walking (Group)	Harrison Avery Jessica Emily	Pfeifer Douglas Sandfoss Detre	David	Bell
26	Assessment of Smartphone Goniometer Application (Group)	Jacob Mina Ethan	Pooler Samer Warren	Beth	Norris
27	The Immediate Effects Of Virtual Training On Postural Stability Using The Sot Test On The Bertec Balance Advantage System (Group)	Rachel Meradeth Anna	Thweatt Carroll Orndorff	Sonia	Young
28	The Association of Cross-training and Dance Related Injuries (Group)	Kristen Sydney	Youngblood Burks	Melissa	Tolbert
29	Close reconstructions of proofs in the quantificational logic of Principia Mathematica	Ethan	Huffaker	Landon	Elkind
30	Dual Partisanship In America: Dead Or Alive?	Livi	Ray	Scott	Lasley

31	The Influence Of School Policies And Attitudes On Black Students' Mental Health	Ama	Boateng	Sarah	Bonis
32	The Impact of Goals on Attention, Anxiety, and Performance (Group)	Lauren Savannah	Heelan Savage	Steven	Winger
33	The Relationship Between Right Wing Authoritarianism and Perceived Feelings of Safety	Hannah	Hennessey	Christopher	Peters
34	The Effects Of Replication Crisis Instruction On The Development Of Skepticism	Ericka	hoppes	Amber	Giacona
35	Preliminary Evaluation of a Group Based Teacher Training of Trial-Based Functional Analysis	Evy	Lantz	Thomas	Gross
36	Art Therapy As A Discipline And Potential Profession.	Stephanie	Ramsey	Lisa	Duffin
37	Reliability Estimates Of The Social, Academic, And Emotional Behavior Risk Screener-student Rating Scale	Callie	Willis-Warthan	Thomas	Gross
38	Building Foundations: Introduction to Child Welfare	Jamison	Brown	Austin	Griffiths
39	Residential Segregation And Black Homicide Victimization Rates In 48 MSA's	Rene	East	James	Kanan
40	Pre-service Elementary Teachers Math Autobiographies: Past Experiences And Future Hopes.	Piper	Scannell	Janet	Tassell
41	Impact Of Community Engagement On Teacher Candidate Self Efficacy And Ability To Provide Book Access	Morgan	Stansell	Nancy	Hulan
42	Using A Critical View Of Dance History To Inform Jazz Dance Technique	Charlotte	Bariteau	Amanda	Clark
43	Beyond the Wardrobe: Exploring Contemporary Immersive Theatre Practices	Sebastian	Tingle	Shura	Pollatsek
44	A Process Model Of Workplace Cyber Incivility Spillover	Cora	Hurt	Katrina	Burch
45	Adverse Childhood Experiences (ACES) as a moderator in the prospective relationship between defeat, entrapment, and suicide ideation	Marlee	Gieselman	Amy	Brausch
46	Associations Between Parent Mental Health, Stress Responses, And Infant Affect Reactivity	Hailey	Borges	Diane	Lickenbrock
47	Associations Between Parental Involvement, Psychopathology, And Infant Negative Reactivity	Logan	Rios	Diane	Lickenbrock
48	Blind Loyalty: Group Loyalty And Conformity To The Sunk Cost Fallacy (Group)	Doug Journey	Brown Ford	Young-Jae	Yoon

49	Comparing Associations Between Child Sexual Assault, Adult Sexual Assault, And Negative Network Orientation.	Olivia	Dick	Matthew	Woodward
50	Comparison Of LDA And BERTopic On Commercial Airline Pilot Job Analysis (Group)	George Om	Nguyen Patel	Xiaowen	Chen
51	Computationally Investigating Eye-Blink Events in EEG Data	Addie	Patterson	Lance	Hahn
52	Development and Results of a Novel Digital Intervention for Heavy Drinkers with Interpersonal Trauma	Anne Hanna	Schueler Forrest	Matthew	Woodward
53	Differences In Mental Health For Adolescents In Gifted And Talented And Traditional High School Settings	Lauren	Morris	Amy	Brausch
54	Examination Of The Impact Of Gender On Chronic Pain, Binge Drinking, And Cannabis Use.	Emma	Briles	Jenni	Teeters
55	Examining Individual Differences In Infant Regulation With Mothers And Fathers	Alyssa	Swift	Diane	Lickenbrock
56	Examining The Impact Of Sexual Assault As A Moderator Between Cannabis Use And Suicidal Ideation	Sidney	Traxler	Jenni	Teeters
57	The Eating Disorder Inventory (EDI) Predicting Suicidal Ideation in an Adolescent Sample	Cheyla	Ferguson	Amy	Brausch

## Oral Posters Midday Session (12:15 pm – 1:45 pm)

SESSION CHAIRS: JAE KIM, MORTEZA NURCHESHMEH,  
JENNY BURTON, DARLENE APPLGATE

### DSU 1<sup>ST</sup> FLOOR

BOARD #	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
1	Burnham Park Symphony Hall: Where Animation, Music, And Architecture Blend	Grasen	Akridge	Shahnaz	Aly
2	Barren River Lake State Resort	Mason	Allison	Shahnaz	Aly
3	The Gatsby: Apartment In Asheville, Nc	Abby	Boike	Shahnaz	Aly
4	Virtual Simulation Escape Room (Group)	Clay Maddox Benjamin	Browning Saul Harris	Michael	Galloway
5	Mesonet Ai Quality Assurance/quality Control Analysis (Group)	Daria Cassandra Alyssa	Casey Priddy Putman	Michael	Galloway



6	WKU School Of Architecture And Design	Niang	Cing	Shahnaz	Aly
7	Sunsketcher	Andrea	Florence	Michael	Galloway
8	Does Sex Affect Neuromuscular And Motor Coordination Of Mice In Response To Sleep Fragmentation? (Group)	Tobi Van	Akangbe Nguyen	Noah	Ashley
9	Synthesis Offices: Amalgamation of Nature and Productivity	Rozany	Guzman-Rivera	Shahnaz	Aly
10	Adairville Baptist Church	Hunter	Hadden	Shahnaz	Aly
11	Cube Brewing Co.	Christian	Hines	Shahnaz	Aly
12	Supporting Community Growth In Russellville Kentucky	Nick	Hines	Shahnaz	Aly
13	Atlas	Andrew	Jewell	Shahnaz	Aly
14	William Natcher Public Library	Caleb	Jones	Shahnaz	Aly
15	Jim Robert's Park Community Center	Alexandria	Lahman	Shahnaz	Aly
16	Physicochemical and Sensory Characteristics of Low Fat Sausage Formulated with Xanthan - Locust Bean Gum Mixtures	Samantha	Massey	John	Khouryieh
17	Hidden Hills Country Club	Tres	Matthews	Shahnaz	Aly
18	Elevating Wellness: A Modern Fitness Center Concept For Bowling Green, Kentucky	Joel	Meier	Shahnaz	Aly
19	Bowling Green Recreational Center	Misael	Mejia Perez	Shahnaz	Aly
20	Injection Molded Strength Testing	Matt	Muse	Benjamin	Dinan

## DSU 2<sup>ND</sup> FLOOR

BOARD #	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
21	Creating Community Through Baseball	Dawson	Owens	Shahnaz	Aly
22	Development of Robot For 2024 IEEE SOUTHEASTCON Competition (Group)	David Gabe Michael Jacob	Perez Vazquez Lindsey Le Goldie	Mark	Cambron
23	St. Anselm Monastery	Tommy	Rhodes	Shahnaz	Aly
24	Galaxy Ultra	Jacob	Roberson	Shahnaz	Aly
25	Terra - Soar	Brooke	Robison	Shahnaz	Aly
26	Course-aid (Group)	Regan Tanner Jessica	Rone Thurman Mata	Michael	Galloway
27	Noise And Vibration Mitigation In Washing Machines (Group)	Brannon Mason Adam Tha	Spalding Coburn Filkins Thang	Morteza	Nurcheshmeh
28	The Nature of Succession	Jacob	Sunnygard	Shahnaz	Aly

29	Partial Displacement Of A Triamine Ligand From Platinum(ii) By Guanine Derivatives	Alexander	Bentley	Kevin	Williams
30	Agritecture	Harrison	Tucker	Shahnaz	Aly
31	Wku Filmatrix (Group)	Zachary Trevor Matthew	Vance Kerney Irizarry	Michael	Galloway
32	WKU Red Towel 3D Model Creation	Hayden	VanHook	Joel	Lenoir
33	Modifying Myocardial Mitochondrial Energetics Using Empagliflozin	Hunter	Smith	Ivan	Luptak
34	Understanding The Impact Of Environmental Pollution On Brain And Vascular Systems On The Zebrafish Model, Danio Rerio.	Vivianna	Weaver	Jessica	Plavicki
35	Barren River Outdoor Sports Recreational Center	Owen	Allison	Shahnaz	Aly
36	A Robust Finite Difference Model Reduction for a Fully-Clamped Three-Layer Laminate (Group)	Md Zulfiqur	Haider	Ahmet Ozkan	Ozer
37	Dynamic Grey Relational Analysis Of Air Pollution In Kentucky	Sarah	Hartman	Ngoc	Nguyen
38	Cleaning Of Surgical Tools With High-power Picosecond Laser Pulses	Mahmood	Ateyeh	Ali Oguz	Er
39	Uniformly Exponentially Stable Finite-Difference Model Reduction of a Heat and Piezoelectric Beam Interaction with Static or Hybrid Feedback Controllers	Sk Md Ibrahim	Khalilullah	Ahmet Ozkan	Ozer
40	Celestium: Optimized and Accurate Planetary and Interplanetary Satellite Modeling Via Utilization of Advanced Differential Equations	Nikhil	Kumar	Richard	Schugart
41	Uniform Exponential Stability in Finite-Difference Model Reduction for Magnetizable Piezoelectric Beams with Non-Collocated Observers	Uthman	Rasaq	Ozer	Ozkan
42	The Dirac Equation In Cantorian Hyperspace	Asa	Ashley	Tony	Simpao
43	The Role Of Efflux Pump Inhibitor In Enhancing Antimicrobial Efficiency Of Ag Nps And Mb As An Effective Photodynamic Therapy Agent	Yaran	Allamyradov	Ali Oguz	Er
44	Synthesis of Gold Nanoparticles via Laser Ablation in a Liquid Medium for use in the Photodynamic Therapy of Bacteria (Group)	Justice Yaran	ben Yosef Allamyradov	Ali Oguz	Er
45	Blazar Variability From The Ground And Space: S5 0716+714 Observed With	Daniel	Berry	Michael	Carini

	Wku's Robotically Controlled Telescope And Nasa's Transiting Exoplanet Survey Satellite (tess)				
46	A Compact VOC Monitor For NASA Space Missions	Bruno	Castaneda	Vladimir	Dobrokhotov
47	Modeling Neuron Energy Efficiency And Consumption Using Hodgkin-Huxley Equations	Zahra	Chasmawala	Valentino	Simpao
48	Ground-based Observations of 1ES 1959+650 Coincident With Observations From The Transiting Exoplanet Survey Satellite	Brycen	Daniels	Michael	Carini
49	Observations of 1ES 0647+250, an Active Galactic Nucleus classified as a blazar, with WKU's 1.3m Robotically Controlled Telescope (RCT) and NASA's Transiting Exoplanet Survey Satellite (TESS) observed 1ES 0647 + 250.	Molly	Elmore	Michael	Carini
50	Numerical Simulation Method for Analyzing Rolling Motion of a Cylinder Filled with Viscous Fluid	Alper	Er	Ivan	Novikov
51	Constraining Properties of Evolving Cold Interstellar Clouds	Kelly	Humphrey	Steven	Gibson
52	S4 0954+658 From The Ground And Space: Ground-based Observations Coincident With Observations From The Transiting Exoplanet Survey Satellite (tess)	Elizabeth	Parker	Michael	Carini
53	RGB 0521+211: A blazar observed from the ground with WKU's Robotically Controlled Telescope (RCT) and space with NASA's Transiting Exoplanet Survey Satellite (TESS)	Francis	Peak	Michael	Carini
54	Food Accessibility Struggles for College Students with Dietary Restrictions	Ella	Schleuning	Rick	Grieve
55	The Relationship Between Alcohol Use And Alcohol-related Problems Is Stronger For College Student Service Members/veterans (Group)	Kaitlyn Lily	Hoskins Milam	Matthew	Woodward
56	The Role Of Coping Motives In The Link Between Recent Cannabis Consumption And Suicidal Ideation	Lily	Milam	Matthew	Woodward
57	A Case of Dysphagia Following Carotid-Carotid Bypass	Logan	Elliot	Logan	Fluty

# Oral Posters Afternoon Session (2:00 pm – 3:30 pm)

SESSION CHAIRS: MATT WOODWARD, GORDON BAYLIS,  
PAIGE HILTNER, KEVIN MODLIN, ANTHONY PAGANELLI

## DSU 1<sup>ST</sup> FLOOR

BOARD #	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
1	Harmonizing Bounded Rationality And Ai: A New Paradigm For Organizational Decision-making In Uncertain Times	Jonathan	Roberts	Lily	Zhuhadar
2	Developing And Evaluating A Prediction Model For Diabetes Diagnosis: A Data Analytics Approach	Geoffrey	Ross	Lily	Zhuhadar
3	Analyzing Graduation Rates In American Universities	Lilly	Shipley	Lily	Zhuhadar
4	Blood & beta;-carotene And Vitamin A In Prewearing Bulls, Steers, And Heifers	Tesla	Trammell	Luiz	Silva
5	The Influence Of Gravity On Germination And Early Growth Of Beets And Radishes	Abigail	Krent	Martin	Stone
6	Digging Deep: The Role Of Depth Versus Nutrient Additives On Zai Pit Maize Productivity In Southern Kenya	Matthew	Bowers	Bruce	Schulte
7	Discovery And Analysis Of Mycobacteriophage Forman	Lola	Norman	Rodney	King
8	Alien P.r.o.b.e. (Group)	Alex Nicholas Cy Micheal	Godsey Johnson Dixon Lynch	Michael	Galloway
9	Discovery And Analysis Of Mycobacteriophage Hetestia	Ava	Blackledge	Rodney	King
10	Discovery And Analysis Of Mycobacteriophage Smar	Aanyaa	Arora	Rodney	King
11	Identification of Proteins that Prevent Bacterial Cell Growth: A Possible Alternative to Antibiotics. (Group)	Daniela Ashlynn	Lopez Llorens Linet	Rodney	King
12	Effect of Dietary Flavonoids on Growth in <i>Saccharomyces cerevisiae</i>	Vivian	Rivera	Joseph	Marquardt
13	Investigating Cell Shape Control By The Polarisome And Septin-associated Kinases In <i>Saccharomyces Cerevisiae</i>	Jenson	Harner	Joseph	Marquardt
14	Prevalence and Implications of Late Stage Colorectal Cancer Diagnosis in Rural Kentucky (Group)	Alexis Gabe	Smith Heckerman	Douglas	McElroy
15	Investigation Of The Function And Purpose Of The Surfeit 4 Gene In <i>Drosophila Melanogaster</i>	Jada	Scott	Ajay	Srivastava

16	Distribution Of An Invasive Zooplankton Species, Daphnia Lumholtzi, In South-central Kentucky	Henry Kelsie	Hurley McCorkle	Philip	Lienesch
17	The Discovery And Analysis Of The Novel Siphoviridae Mycobacteriophage Bigubba	Gabriel	Gooden	Rodney	King
18	Assessing Mammoth Cave National Park's Access For The Deaf And Hard Of Hearing	Katelyn	Lane	Chris	Groves
19	The Effects Of Tag Positions On The Morphogenesis Checkpoint Proteins	Julia	Allen	Joseph	Marquardt
20	Characterization of Microglia in a Novel APP-SAA KI Model using the Quiver Technique	Tyler	Clifton	Adam	Bachstetter

## DSU 2<sup>ND</sup> FLOOR

BOARD #	ABSTRACT TITLE	FIRST NAME	LAST NAME	MENTOR FIRST NAME	MENTOR LAST NAME
21	Investigating The Ability Of An Interspecies Gene To Rescue Shape Control Defects In Budding Yeast	Amelia	Baker	Joseph	Marquardt
22	c-JUN protein expression in the regenerating lamprey spinal cord	Albert-Presley	Mbanfu	Hilary	Katz
23	Novel Techniques For Imaging Septins In Yeast That Do Not Require Hydrofluoric Acid	Fletcher	Johnson	Joseph	Marquardt
24	Role Of Cst In Genome Stability (Group)	Colin Steven	Loveless Reed	Jason	Stewart
25	Investigating The Dna Damage Repair Pathway At Telomeres	Grayson	Duvall	Jason	Stewart
26	Effect of Photodynamic Therapy on Staphylococcus aureus Biofilm Formation	Briana	Harness	Simran	Banga
27	An Analysis Of The Nuclear Pore Complex In Drosophila Melanogaster	Emma	Hyman	Ajay	Srivastava
28	Effect Of Photodynamic Therapy On Legionella Pneumophila	Thomas	Gonzalez	Simran	Banga
29	Nursing Documentation Management Application (Group)	Harsha Matthew Jeremiah	Suresh Polak Harris	Michael	Galloway
30	Tri-amine Platinum Complex With A Seven-membered Chelate Ring Interactions With N-acetyl-l-methionine, 2-hydroxy-4-(methylthio)butyrate And Dgpg	Onu	Chukwu	Kevin	Williams
31	The Adherence Of Photocatalysts To Biodegradable Polymer Beads	Kal-El	Cline	Matthew	Nee
32	Application Of Gaussian Tools For The Study Of Molecular Symmetry	Katie	Isaacs	Jeremy	Maddox
33	Integration of zinc finger protein arrays into a microfluidic device for detecting specific pathogens	Juwon	Joung	Moon-Soo	Kim

34	Developing A Novel Fluorescent Sensor For Detecting Analytes In An Aqueous Medium	Varshith	Kotagiri	Lei	Li
35	A lab-built photometric titrator	Evelyn	Maddox	Eric	Conte
36	Novel Application Of Graphene Oxide In Conjunction With Dna-binding Dcas9 For Detecting Antibiotic Resistance Genes	Kareena	Pansuria	Moon-Soo	Kim
37	Polystyrene Beads With Incorporated Photocatalysts	Kellen	Patterson	Matthew	Nee
38	An Investigation of Cosmetic Threshold Fragrance Smell Detection	Angela	Rutherford	Eric	Conte
39	Photochemical water splitting on TiO <sub>2</sub> : heterogenous nickel and iron-oxide interfaced co-catalysts as platinum alternatives.	MD Towhidul Isam	Tareqe	Dr. Lawrence	Hill
40	Poly (methyl methacrylate) beads as photocatalytic substrates for water remediation	Evalynn	Veith	Matthew	Nee
41	Synthesis Of Photocatalytic Beads For Water Remediation	Julian	Williams	Matthew	Nee
42	The visual perception of long outdoor distances	Roseanna	Peterson	Farley	Norman
43	Geological And Hydrogeological “red Flags” That Influence Land-use Hazards In Karst: A Case Study In Warren County, Kentucky	Mykah	Carden	Patricia	Kambesis
44	Sinkhole Progression and Public Safety at Mammoth Cave and Surrounding Areas	Thomas	Clark	Nahid	Gani
45	A Detailed Forecast Analysis of Severe Weather Across Kentucky on March 2nd, 2012	Ryan	Marcum	Joshua	Durkee
46	Snowfall Processes In The Ohio River Basin	Harmony	Guercio	Zachary	Suriano
47	Land-atmosphere Interactions As Detected By A Statewide Observing Network (Group)	Evan Jalyn Alexis Susanne	Kidd Radford Fugatt Peake	Eric	Rappin
48	Examining the Relationship between Sexual Orientation, Substance Use, and Mental Health Outcomes in Women	Emma	Maddox	Jenni	Teeters
49	Exploring The Dynamics Of Infant Temperament And Maternal Engagement (Group)	Kate Lauren	Wilson Petrouske	Diane	Lickenbrock
50	Partisan Identity Matters Most When Politicians' Corruption Benefits Their Party	Trenton	Daugherty	Aaron	Wichman
51	Polysubstance Use, Depression, And Suicidal Ideation Among Young Adults	Hemali	Patel	Jenni	Teeters

<b>52</b>	Relations Between Daily Social Media Use, Binge Drinking, And Cannabis Use	Caleb	Peterson	Jenni	Teeters
<b>53</b>	Relationships Between Substance Use Motives, Ptsd, And Alcohol-related Problems Across Two Samples	Caitlin	McGettrick	Matthew	Woodward
<b>54</b>	Screen Use and Physical Activity as Predictors of Suicidal Ideation and Nonsuicidal Self-Injury in Adolescents	Cassandra	Lindsay	Amy	Brausch
<b>55</b>	Sleep Duration As A Risk Factor For Suicide Ideation And Attempts In Minoritized Youth	Danielle	Williams	Amy	Brausch
<b>56</b>	Soothing Zzz: Exploring Infant Sleep Habits And Soothability	Grace	Basquill	Diane	Lickenbrock
<b>57</b>	The Power Of Parenting: Associations Between Maternal Personality And Infant Temperament	Jessica	Davenport	Diane	Lickenbrock