

**16TH ANNUAL
STUDENT RESEARCH
& CREATIVE ACTIVITY
CONFERENCE**

**APRIL 19, 2024
BOOTH LIBRARY &
LUMPKIN HALL**



EASTERN ILLINOIS UNIVERSITY

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STUDENT RESEARCH & CREATIVE ACTIVITY CONFERENCE

EIU's campus-wide research conference was inaugurated as Showcase EIU in 2009. Since then, it has evolved and is now organized by the Honors College and the Undergraduate Research Task Force, a campus-wide faculty group. We celebrate the achievement of students who take their work beyond the regular classroom to excel and explore through research, practice, and creative work. Their learning creates knowledge and art and helps others.

THANKS TO

- The faculty who mentor students in research, scholarly, and creative work.
- President Jay Gatrell, Provost Ryan Hendrickson, and the Deans for their continuing support of student research.
- The Undergraduate Research Task Force members.
- To the many EIU staff who have helped with this event and, most of all, to YOU, the students. Keep up the excellent work!

PROGRAM AT A GLANCE

- 12:30-12:40** **WELCOME**
West Reading Room, Booth Library
- 12:40-1:30** **POSTER PRESENTATIONS, SESSION A**
West Reading Room, Booth Library
(Enjoy food and conversation as you learn from student presenters from all disciplines.)
- 1:30-2:20** **POSTER PRESENTATIONS, SESSION B**
West Reading Room, Booth Library
(Enjoy food and conversation as you learn from student presenters from all disciplines.)
- 2:30-3:20** **ORAL PRESENTATIONS, SESSION C**
Lumpkin Hall, Rooms 2011, 2020, 2121, 2041
- 3:30-4:20** **PANEL PRESENTATIONS, SESSION D**
Lumpkin Hall, Rooms 2011, 2020, 2121, 2041

DETAILED PROGRAM

12:30-12:40

WELCOME

West Reading Room, Booth Library

12:40-1:30

POSTER PRESENTATIONS, SESSION A

West Reading Room, Booth Library

(Light snacks will be served)

Posters are listed by topic, and the numbers in this program correspond to those on each poster. Furthermore, the posters are organized in the West Reading Room by number for easy navigation.

1. **"Identification of New Fluorogenic Chemical Tools for Studying Human Carboxylesterase 2 (CES-2)."**
Emmanuel Adusah
Fac. Mentor: Michael Beck, Chemistry & Biochemistry
2. **"Structure-Activity Relationship Studies of Human Carboxylesterases Using a Fluorogenic Ester Library."**
Morgan Drozs
Fac. Mentor: Michael Beck, Chemistry & Biochemistry
3. **"Optimization of Human Carboxylesterase Activity Assays to Enable Personalized Medicine."**
Shannon Legge
Fac. Mentor: Michael Beck, Chemistry & Biochemistry

4. **"Wintercreeper as an Invader in the Old-Growth Forest, Beall Woods."**
Brook Ozier
Fac. Mentor: Scott Meiners, Biological Sciences
5. **"Searching Human Chromosome 12 for a Master Regulator of Liver Function."**
Lyric Johnson
Fac. Mentor: Gary Bulla, Biological Sciences
6. **"Photocatalysis for C-N Coupling Reactions."**
Anthony Aya
Fac. Mentor: Hongshan He, Chemistry & Biochemistry
7. **"Effectiveness of International Teletherapy Targeting the Use of Compensatory Strategies for Stuttering for an Adolescent in Jamaica."**
Abigail Elston & Sarah Aukamp
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
8. **"Effectiveness of International Teletherapy Targeting Language Processing Deficits for a Child in Jamaica."**
Elizabeth Froemling & Bea VanKleek
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
9. **"Effectiveness of International Teletherapy Targeting Bilabial Speech Sounds and Letter Recognition for a Child in Jamaica."**
Jayci Stewart & Jillian Milton
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
10. **"Effectiveness of International Teletherapy Targeting R Clusters for a Child in Jamaica."**
Jenna Gordon & Lauren Kukman
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences

11. **"Effectiveness of International Teletherapy Targeting Servers Articulation Delay for a Child in Jamaica."**
Kiley Jacobs & Renae Russell
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
12. **"Effectiveness of International Teletherapy Targeting Speech Sounds Disorders for a Child in Jamaica."**
Liesl Melnick & Brenda Xu
Fac. Mentor: Ann Dralle, Communication Disorders & Sciences
13. **"Design and Building Process of an Autonomous Electric Go-Kart."**
Shiva Prasad Kotla & Ian J. Centers
Fac. Mentor: Wutthigrai Boonsuk, Technology
14. **"Usability of LiDAR Sensors on an Autonomous System."**
Shiva Prasad Kotla
Fac. Mentor: Wutthigrai Boonsuk, Technology
15. **"Foster Care System in Illinois."**
Alisa Gray
Fac. Mentor: Julie Harper & Christopher Maniotes, Human Services
16. **"Resiliency Resources for Firefighters."**
Haley Hoagland
Fac. Mentor: Emma Noble, Public Health & Nutrition
17. **"Professional Development for Employees."**
Haley Hoagland
Fac. Mentor: Amanda Harvey, Public Health & Nutrition
18. **"A Wholistic Gospel: Voice of Calvary and the Legacy of John Perkins."**
Nicholas Doty
Fac. Mentor: Edmund Wehrle, History

19. **"Introducing Pharmacology-Related Education to Reduce Medication Errors in Nursing."**
Mia Di Naso, Aaron Chao, & ShaNyah Bursey
Fac. Mentor: Holly Farley, Nursing
20. **"Effects of Evidence-Based Nursing Interventions on the Risk Reduction of Postpartum Depression."**
Allison Edwards, Karyn Billingsley-Reynolds, & Ashlee Shinebery
Fac. Mentor: Holly Farley, Nursing
21. **"Nursing Interventions to Increase Quality of Sleep."**
Sarah Lewins, Josie Peters, & Janelynn Wirth
Fac. Mentor: Holly Farley, Nursing
22. **"The Effects of Nursing Interventions on Maternal Sepsis."**
Taryn Wilson, Megan McMahan, & Bella P. Manrique
Fac. Mentor: Holly Farley, Nursing
23. **"Languages for Young Learners."**
Caleb Brasker, Ariel Zuercher, Makenna McBride, Lili Duran-Montero, & Jami Marriot
Fac. Mentor: Jessica Tindira, World Languages & Cultures
24. **"A Comparative Analysis of Circular Design Principles for the Sustainable End-of-Life Management of Renewable Energy Assets: A Case Study of Illinois and Germany's Renewable Energy Politics."**
Samuel Nimaful
Fac. Mentor: Nichole Hugo, Sustainability
25. **"The Effects of Hemp Fiber on the Mechanical Performance of Concrete."**
Hamida Baassou
Fac. Mentor: Isaac Slaven, Technology
26. **"Enhancing Corporate Sustainability with Artificial Intelligence: Challenges and Successes. A Case Study of Belvedere Trading in the United States of America (USA)."**
Isaiah Adegoke
Fac. Mentor: Mahmoud Al-Odeh, Technology

1:30-2:20

POSTER PRESENTATIONS, SESSION B

West Reading Room, Booth Library

(Light snacks will be served)

Posters are listed by topic, and the numbers in this program correspond to those on each poster. Furthermore, the posters are organized in the West Reading Room by number for easy navigation.

1. **“Design and Synthesis of Peroxisome-Targeted Fluorophores.”**

Luke Flaig

Fac. Mentor: Michael Beck, Chemistry & Biochemistry

2. **“Development of PROTCs to Study Peroxisomal Biochemistry.”**

Alana Vinson

Fac. Mentor: Michael Beck, Chemistry & Biochemistry

3. **“Using Community Science to Monitor Eastern Box Turtles and Engage Public in Conservation.”**

Sarah Zoppa

Fac. Mentor: Paul Switzer, Biological Sciences

4. **“Reprogramming Fibroblast Cells through Knockout of the Snai2 Gene Using CRISPR Technology.”**

Piper Rhoads

Fac. Mentor: Gary Bulla, Biological Sciences

5. **“Macroinvertebrate Community Dynamics Post Agricultural Stream Restoration.”**

Nyah Biegler

Fac. Mentor: Eden Effert-Fanta, Biological Sciences

6. **"The Effectiveness of International Teletherapy Targeting Phonol/Articulation for a Child in Jamaica."**
Mary Kate Drufke & Olivia Renken
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
7. **"Effectiveness of International Teletherapy Targeting a Phonological/Articulation Delay for a Child in Jamaica."**
Jessica Fiedler & Emily Gharst
Fac. Mentor: Ann Dralle, Communication Disorders & Sciences
8. **"The Effectiveness of International Teletherapy Targeting Speech Sound Disorders for a Child in Jamaica."**
Brenna Hamson & Emmy Flessas
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
9. **"The Effectiveness of International Teletherapy Targeting Articulation for a Child in Jamaica."**
Raven Stoneking & Brooke Mance
Fac. Mentor: Ann Dralle, Communication Disorders & Sciences
10. **"The Effectiveness of International Teletherapy Targeting Articulation for a Child in Jamaica."**
Teagan Guard & Brylee Rose
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
11. **"Effectiveness of International Teletherapy Targeting Speech and Language Goals for a Child in Jamaica."**
Kieran Manning, Ashley Garber, Maggie Bollinger, & Carmina Armstrong
Fac. Mentor: Rebecca Throneburg & Ann Dralle, Communication Disorders & Sciences
12. **"Effectiveness of International Teletherapy Targeting /th/, /l/, and Spatial Concepts for a Child in Jamaica."**
Erika Miller & Jacinda Floyd
Fac. Mentor: Rebecca Throneburg & Laurel Teller, Communication Disorders & Sciences

13. **"Impressions of Graduate Clinicians International Teletherapy Experience."**
Abbey McCord & Brooke Haller
Fac. Mentor: Rebecca Throneburg, Communication Disorders & Sciences
14. **"The Rock, A 19-Pound Sumo Robot."**
Mason Bonds, Ian J. Centers, Shiva Prasad Kotla, & Anthony B. Ollins
Fac. Mentor: Wutthigrai Boonsuk, Technology
15. **"CNC Industrial Robot Gripper."**
Luke Reeves
Fac. Mentor: Wutthigrai Boonsuk, Technology
16. **"The Relationship Between Perception of Fatigue and Front Squat Velocity Among Division I Collegiate Male Soccer Players."**
Jeremy Lay
Fac. Mentor: Maranda Schaljo, Kinesiology, Sport, & Recreation
17. **"An Examination of Difference Between Three Core Strength Interventions in Beginner Exercisers' Fitness Enhancements and Enjoyment."**
Ashlyn Hoover
Fac. Mentor: Carly Wahl, Kinesiology, Sport, & Recreation
18. **"Stalin Versus The Party: Stalinism and Women's Emancipation in 1920s Soviet Russia."**
Keegan Bottom
Fac. Mentor: Sace Elder, History
19. **"Cold War Fears and Algerian Independence: American Public Opinion on an Independent Algeria, 1954-1962."**
Shayla Taylor
Fac. Mentor: Sace Elder, History
20. **"Unit on Circle Reflections."**
Jackson Schumacher
Fac. Mentor: Grant Lakeland, Mathematics & Computer Science

21. **"Eating Disorder Awareness Sessions."**

Grace Campbell

Fac. Mentor: Melissa Maulding, Public Health & Nutrition

22. **"Expertise-Based Detection of AI-Generated Clinical Counseling Texts"**

Brandon Pater

Fac. Mentor: Jian Zhu, Psychology

23. **"An Application of Kaizen Tool in a Waste Management Company — A Case Study of a Company in Charleston."**

Gloria Darkoh, Nancy Ladeinde, Wale O. Ishola, Chimziebere Chuku, & Bhargav Buccapatnam

Fac. Mentor: Mahmoud Al-Odeh, Technology

24. **"Wastage in Construction."**

Sruthi Jnanesan

Fac. Mentor: Camden Burd, History

25. **"A Prairie Story: From Imperiled to Preserved."**

Lex Coniglio, Dayden Gardner, Anthony Talamonti, Payton Nichols, & Jacob Blanchette

Fac. Mentor: Camden Burd, History

Poster 25 of Session B will be held at 1:30 in front of the exhibit at the north entry foyer of Booth Library.

2:30-3:20

ORAL PRESENTATIONS, SESSION C

Main Floor of Lumpkin Hall

C1: BIOCHEMISTRY Lumpkin Hall 2011

1. **"Synthesis and Characterization of Chemical Tools to Study Human Carboxylesterase 2 (CES2)."**
Makenzie Walk
Fac. Mentor: Michael Beck, Chemistry & Biochemistry
2. **"Fluorescein-Based Fluorogenic Chemical Tools to Shed Light on Ester Drug Metabolism in Live Cells."**
Carolyn (CJ) Karns
Fac. Mentor: Michael Beck, Chemistry & Biochemistry
3. **"Design and Synthesis of Peroxisome Import Moieties."**
Chinenyenwa Okolie
Fac. Mentor: Michael Beck, Chemistry & Biochemistry

C2: COMMUNICATION DISORDERS & SCIENCES Lumpkin Hall 2020

1. **"Differential Diagnosis of Autism Spectrum Disorder and Social Anxiety Disorders Using a Comprehensive Assessment Paired with a Supplemental Interview."**
Emma Blaum
Fac. Mentor: Trina Becker, Communication Disorders & Sciences
2. **"Social Responsiveness Measures of School-Aged Children During Facilitated Conversation."**
Susie Pickett
Fac. Mentor: Nichole Mulvey, Communication Disorders & Sciences

3. **"A Retrospective Analysis of Auditory Processing Disorder and Comorbid Disorders."**

Amanda Rostron

Fac. Mentor: Angela Anthony, Communication Disorders & Sciences

C3: EXPERIENCE AND SUSTAINABILITY

Lumpkin Hall 2041

1. **"Exploring the Internship Experiences of International Grad Students at Eastern Illinois University (EIU)."**

Akinwale Ishola

Fac. Mentor: Chigozirim Sodeke, Communication & Journalism

2. **"Utilizing Hempseed Oil for Sustainable Flooring."**

Sruthi Jnanesan

Fac. Mentor: Isaac Slaven, Technology

C4: SOCIOLOGY AND PSYCHOLOGY

Lumpkin Hall 2121

1. **"Prestige and Faculty Unions: Social Structures of Accumulation Theory and Status Reproduction Among Higher Education Professors."**

Camden Webb

Fac. Mentor: Michael Gillespie, Sociology, Anthropology, & Criminology

2. **"The Effects of Procrastination on Stress in College Students: An Investigation of Self-Efficacy as a Moderator."**

Ambria Ford & Niara Fleming

Fac. Mentor: Jeffrey Stowell, Psychology

3:30-4:20

PANEL PRESENTATIONS, SESSION D

Main Floor of Lumpkin Hall

D1: MEDIA Lumpkin Hall 2011

“Does Media Matter: How News and Information Shape What We Know and How We Feel.”

Harrison Belsanti, Chandler Smith, Iyanna Stanton, & Maurice Phipps
Fac. Mentor: Ensung Kim, Communication & Journalism

D2: CULTURE JAMMING Lumpkin Hall 2020

“Culture Jamming Dominant Ideologies of Gender and Sexuality.”

Taylor Fuller, Carli Stone, M.E. Colby, Jessica Roell, Hailey Simmons,
& Chris Williams
Fac. Mentor: Nora Heist, Communication & Journalism

D3: KANO ANALYSIS Lumpkin Hall 2041

“Kano Analysis of Service Quality in Tata Group Companies.”

Olivier Nkombua, Mani Deepak Gadamsetty, Sunil Kumar Reddy Cheepati, Sujitha Yeddula, & Shiva Kumar Thuppala
Fac. Mentor: Mahmoud Al-Odeh, Technology

THANK YOU TO OUR COLLEAGUES ACROSS CAMPUS WHO HAVE CELEBRATED RESEARCH AND CREATIVE ACTIVITY THROUGHOUT SPRING 2024:

Tarble Arts Center Art Exhibition: April 6 – May 3, 2024
Graduate and undergraduate art is on display in the main gallery.

Public Health and Nutrition Navigating Health Symposium:
“Adulthood Unlocked”: Thursday, April 11, 2024

Graduate Student Exposition: Thursday, April 11, 2024
Additional information at
<https://www.eiu.edu/graduate/gradexpo.php>

Biological Sciences Showcase: Tuesday, April 16, 2024

English Studies Conference: Wednesday, April 17, 2024
Additional information at
<https://www.eiu.edu/english/conference.php>

Department of Music Recitals and Ensembles: Various Dates
Full calendar available at
https://www.eiu.edu/music/events_main_2023_2024.php

At EIU, research and creative activities are constantly taking place all around you. We hope to see you at these events supporting your peers in their pursuit of knowledge and creative expression!