

THE OHIO ACADEMY OF SCIENCE
& OHIO PROJECT KALEIDOSCOPE
JOINT MEETING

WORKFORCE DEVELOPMENT: CONNECTING COLLEGE TO CAREERS
THROUGH STEM EDUCATION

April 12, 2025

Hosted by Miami University




**PROJECT
KALEIDOSCOPE**
Lead. Differently.

Welcome

On behalf of the Ohio Academy of Science and the Ohio Chapter of Project Kaleidoscope (OH-PKAL) an affiliate of AACU-STEM, we are thrilled to welcome you to this inaugural joint conference, an exciting and unprecedented collaboration between our two organizations. This year's theme, "Workforce Development: Connecting College to Careers Through STEM Education" reflects our shared commitment to equipping students with the skills, experiences, and networks needed to thrive in a rapidly evolving STEM workforce. This conference represents a powerful opportunity for undergraduate and graduate students, educators, scientists, engineers, and employers from across Ohio to come together in a vibrant regional gathering centered on learning, collaboration, and innovation.

We extend our sincere thanks to the dedicated conference planning committees from both organizations, whose vision and hard work have made this event possible. We are especially grateful to Miami University for serving as our gracious host and providing such a welcoming space for meaningful conversations, presentations, and professional connections. Rooted in the missions and visions of our organizations, this conference seeks to advance curiosity, discovery, and learner-centered STEM education through evidence-based best practices, faculty development, and meaningful community engagement. Whether you're here to present your work, attend sessions, or make new professional connections, we hope you leave inspired and better equipped to shape the future of STEM education and careers in Ohio. Thank you for being part of this important effort to build bridges between college and career, education and industry, and between passionate individuals working toward a stronger, more scientifically literate, and STEM-ready Ohio.



Kathleen Koenig
OH-PKAL Chair 2024-2025
Professor of Physics, University of Cincinnati



Michael Woytek
Executive Director
The Ohio Academy of Science



The Ohio Academy of Science & Ohio Project Kaleidoscope
Joint Annual Meeting General Schedule
Saturday, April 12, 2025
Miami University
Pearson Hall, Psychology Building, & Laws Hall

7:30 to 10:00 am	Registration Pearson Hall (700 E. High Street, Oxford OH), Foyer
7:30 to 9:30 am	Breakfast Pearson Hall, Atrium
8:45-9:30 am	Poster Presentations Pearson Hall, Basement, 1st and 2nd Floor Hallways
9:40-10:30 am	Oral Presentations Pearson Hall (700 E. High Street, Oxford OH), & Psychology Building (90 N Patterson Ave., Oxford OH)
10:45-11:30 am	Keynote Laws Hall (551 E High St, Oxford OH), Room 100 Dr Ted Clark, The Ohio State University
11:30-12:15 pm	Panel discussion Laws Hall, Room 100
12:30-1:30 pm	Lunch Pearson Hall, 1st and 2nd floor
1:40-2:45 pm	Oral Presentations Pearson Hall & Psychology Building
2:45-3:30 pm	Poster Presentations Pearson Hall, Basement, 1st and 2nd Floor Hallways
3:30-4:30 pm	Reception Pearson Hall, Atrium

Pearson Hall - 700 E. High St. Oxford, OH 45056
Scan for interactive map



Parking: Please make sure to pre-register your vehicle to avoid having to pay parking fees.

Available parking garages are: **Old Manse Lot** (Corner of E. High St. and Talawanda Rd.), **Pearson Hall Lot** (650 E. Withrow St.), **Miami Inn Lot** (300 N. Patterson Ave.), and **Cook Field Lots** (West of Cole Service Building, South of Farmer School of Business, North of Route 73, and East of Patterson Ave.)

About Miami University

Miami University is a student-centered, public university, guided by the principles of Love and Honor. Leading with integrity, compassion, and respect, we pursue growth and excellence in a transformative learning environment. We embrace a holistic and personalized approach to education, infused with the humanities and liberal arts, to empower lifelong learners who use leadership, creativity, and innovation to shape the future. Our teacher-scholars and highly engaged staff inspire curiosity, intellectual depth, and career preparation across our communities through instruction, research, scholarship, experiential learning, co-curricular experiences, and civic engagement. We foster a diverse, inclusive, and welcoming community where each individual is valued, respected, and appreciated. Our students, faculty, staff, and alumni develop the skills and knowledge to lead with confidence and courage and to provide solutions for local and global challenges now and in the future.

About Miami ASPIRE

Miami University aspires to advance the reputation, revenue, and retention of talent in the communities where we live and educate. ASPIRE works with community, corporate, and government partners to advocate for and advance the Miami mission of love and honor.

About the Office of Research for Undergraduates (ORU)

Students are encouraged to explore and engage in research, creative works and scholarly activities. The ORU is proud to champion the vision, marketing, and coordination of these activities for undergraduates at Miami in partnership with faculty mentors and staff across the institution. Our programs and events aim to broaden the participation of students and mentors, recognize promising projects through awards, and to raise the visibility of the various forms of research, creative works and scholarly activities across campus and beyond.





Miami University support from the College of Arts and Science, the College of Engineering and Computing, the College of Education, Health & Society. In addition, Miami's Office of Research and Innovation and the Center for Career Exploration and Student Success

**THANK YOU TO THE 2025 OH-PKAL REGIONAL NETWORK EVENT COMMITTEE,
2025 OAS CONFERENCE COMMITTEE, AND SPEAKERS
FOR HELPING TO MAKE THIS A SUCCESSFUL MEETING:**

2025 OH-PKAL Regional Network Event Committee

- Joyce Fernandes (co-chair), Miami University
- James McCargar, Baldwin Wallace University
- Jennifer Quinn (co-chair), Miami University
- Carrie Davis Todd, Baldwin Wallace University
- Paul Wendel, Otterbein University

2025 OAS Conference Committee

- Fabienne Bohon, Miami University
- Sharon Custer, Miami University
- Joyce Fernandes, Miami University
- Alyson Gruber, The Ohio Academy of Science
- Dorie Gruber, The Ohio Academy of Science
- Halle Miller, Associate Director for Partners Environmental Consulting, Inc
- Jennifer Quinn, Miami University
- Michael Woytek, The Ohio Academy of Science
- John Means, The Ohio Academy of Science

Keynote

Artificial Intelligence (AI) and Generative Learning Practices

Dr Ted Clark, The Ohio State University

Ted Clark received his B.A. in Chemistry, History, and Religious Studies from the University of Detroit in 1991 and earned his Ph.D. in Chemistry from the University of Michigan in 1997. He joined The Ohio State University as a postdoctoral researcher with Dr. Philip Grandinetti and has since held various roles, including Instructional Laboratory Supervisor for analytical chemistry courses (2003–2007) and Associate Director of the Ohio Center for Undergraduate Research – Research Experiences to Enhance Learning (OCUR-REEL) program (2007–2011). Dr. Clark is now a Professor of Teaching and an active researcher in chemical education. His work focuses on metacognitive learning strategies, AI-supported personalized learning, active learning pedagogy, and technology-enhanced instruction, including the integration of PhET simulations in laboratory and large-enrollment courses. He has been deeply engaged in teacher professional development, particularly in Modeling Instruction, and played a key role in designing and leading the online certificate program “Advanced Chemistry Knowledge for Educators.” His contributions to STEM education have been recognized with multiple awards, including the Ohio PKAL STEM Educator of the Year Award, the OSU Provost Award for Distinguished Teaching by a Lecturer, and the Mid-Career Faculty Excellence Award. These honors highlight his dedication to excellence in teaching, research, and innovative pedagogical practices.



Workforce development in STEM

Panel Discussion—11:30am to 12:15pm—Laws 100

Dennis Cheatham, Associate Professor, Department of Art and Affiliate Faculty of Emerging Technology in Business & Design

John Dreyer, VP Manufacturing Engineering and Founder of Atricare

Sarah Freeman, Senior at Miami University, Mechanical & Manufacturing Engineering

Angie McMurry, Director, Industry Engagement and Workforce, Ohio Life Sciences

Moderators: Danielle Hart, Miami University, Center for Career Exploration and Success

Joyce Fernandes, Professor of Biology & Director of Undergraduate Research

Dennis Cheatham, Associate Professor, Department of Art and Affiliate Faculty of Emerging Technology in Business & Design

Dennis Cheatham is an Associate Professor of Communication Design at Miami University, serving as a Research Fellow at Scripps Gerontology Center and Affiliate Faculty in Emerging Technology in Business and Design. His research bridges social science, creativity, and technology to design meaningful experiences through products, services, and systems. Currently, Dennis focuses on advance care planning for aging populations and investigating AI's role in shaping future experiences. Before academia, he spent fifteen years as a creative director and designer in Dallas/Fort Worth, developing expertise in graphic, interaction, and experience design that informs his transdisciplinary approach to solving complex human challenges.

John Dreyer, VP Manufacturing Engineering and Founder of Atricare

John Dreyer is currently Vice President, Manufacturing Engineering at AtriCure, Inc., a leading provider of innovative technologies for the treatment of atrial fibrillation (Afib) and post-operative pain. John has a degree in Mechanical Engineering from the University of Cincinnati and started his career with AtriCure through the UC co-op program, then joined full-time after graduation. After several manufacturing engineering roles at AtriCure, he left to pursue opportunities in orthopedic and spine implant manufacturing, technical sales, and consulting, before returning to AtriCure 7 years ago. John is active with many local workforce and economic development organizations that promote manufacturing job growth and education including Ohio Life Sciences, REDI Cincinnati, and Advanced Manufacturing Industry Partnership (AMIP), as well as charitable organizations including the American Heart Association, American Stroke Association, and the March of Dimes. He lives in Springboro with his wife and four children.

Sarah Freeman, Senior at Miami University, Mechanical & Manufacturing Engineering

Sarah Freeman is a Senior double majoring in mechanical and manufacturing engineering at Miami University. On campus she is involved in the Lilly Leadership Institute, the American Society of Mechanical Engineers, Engineers Without Borders and the professional engineering fraternity, Theta Tau. Sarah has interned with Parker Hannifin Aerospace, the Air Force Research Lab, SpaceX, and NASA. After completing her undergraduate degree she will be attending Texas A&M University to pursue a PhD in aerospace engineering with a focus in satellite structures.

Angie McMurry, Director, Industry Engagement and Workforce, Ohio Life Sciences

Angie McMurry has dedicated over two decades to advancing STEM education in Ohio and beyond. With a strong background in science education and workforce development, she is passionate about fostering innovation and talent in the life sciences industry. Angie earned her degrees in Biology, Environmental Science, and Education from Ohio Northern University and holds a Master of Arts in Education from the University of Dayton. Her extensive career experience includes teaching numerous science and STEM-based subjects at nearly all levels of education, as well as serving as the Science Curriculum Coordinator for the Darke County Educational Service Center. Prior to joining Ohio Life Sciences, she was the Director of Programs for the Ohio Academy of Science. Beyond her professional contributions, Angie is dedicated to her local community and serves as an elected member of the Tipp City Schools' Board of Education. She resides in Tipp City with her husband, Glen, and their three children.

Oral Sessions

9:40 – 10:30 AM and 1:40 – 2:45 PM

9:40 AM – 10:30 AM - Pearson Hall, Room 032

Oral Session M2

Developing Skills

9:40am - USING IMPROVISATION TO STRENGTHEN COMMUNICATION & COLLABORATION SKILLS FOR STEM STUDENTS. Renee Seals, Sarah Ferguson, University of Cincinnati, 2600 Clifton Ave. Cincinnati OH 45221.

9:55am - USING A BRIEF SOCIO-BELONGING INTERVENTION TO IMPROVE STUDENT MOTIVATION AND LEARNING. Alexandru Maries, Kathy Koenig, Chandralekha Singh, University of Cincinnati, 2600 Clifton Ave. Cincinnati OH 45221.

10:10am - TRANSFORMING HOW WE SEE: EXPLORING EQUITY VIA INTERACTIONS IN THE CHEMISTRY INSTRUCTIONAL LABORATORY. Cassandra Miller, Meng-Yang Wu, Matthew, The Ohio State University, 281 W Lane Ave, Columbus OH 43210.

9:40 AM – 10:30 AM - Pearson Hall, Room 112

Oral Session M3

Research/Collaboration Skills

9:40am - TEACHING RESEARCH METHODS AND SKILLS TO NON-STEM MAJORS. Sherri Quinones, Capital University, 1 College and Main, Columbus OH 43209.

9:55am - USING A TEAM-BASED RESEARCH PROJECT FOR STUDENT DEVELOPMENT OF NACE COMPETENCIES IN AN UNDERGRADUATE PSYCHOLOGY COURSE. Jennifer Quinn, Leonard J. Smart, Yvette R. Harris, Miami University, 501 E High St, Oxford OH 45056.

10:10am - BUILDING THEN USING PEER COLLABORATION SKILLS AND FEEDBACK IN GENERAL CHEMISTRY COURSES. Rebecca Ricciardo, The Ohio State University, 281 W Lane Ave, Columbus OH 43210.

9:40 AM – 10:30 AM - Pearson Hall, Room 116

Oral Session M4

Education-Industry Partnerships

9:40am - TRANSFORMATIONAL OUTCOMES: LIFE SCIENCE INDUSTRY PARTNERSHIP WITH GLOBAL STEM PROGRAMS! Marla Phillips, Quality Champions for Life, 5451 Sentinel Oak Dr, Mason OH 45040.

9:55am - TRANSFORMING STEM EDUCATION: STRATEGIC PARTNERSHIPS FOR BIOTECHNOLOGY CAREER PATHWAYS. Sacha Tadros, Matthew Saelzler, Columbus State Community College, 550 E Spring St, Columbus OH 43215.

10:10am - PROJECT DRAGONFLY: AN INNOVATIVE PARTNERSHIP MODEL FOR GRADUATE EDUCATION. Katie Feilen, Michelle Szydlowski, Laura Abondano Franco, Amy Sullivan, Miami University, 501 E High St, Oxford OH 45056.

9:40 AM – 10:30 AM - Pearson Hall, Room 218

Oral Session M5

Developing Skills

9:40am - REDUCING DFW RATES IN GOB CHEMISTRY FOR NURSING STUDENTS. Sabrina Grove, Megan Bucks, Anne P. Vonderheide, University of Cincinnati, 2600 Clifton Ave. Cincinnati OH 45221.

9:55am - BACK TO BASICS: IMPROVING STEM EDUCATION BY ADDRESSING PROBLEMS AT THE SOURCE. Neelam Soundarajan, The Ohio State University, 281 W Lane Ave, Columbus OH 43210.

9:40 AM – 10:30 AM - Psychology Building Room 125

Oral Session M6

Biomedical and Health Sciences

9:40am - AUTISM-RELATED IMPACT OF TSC1 DELETION ON CEREBELLAR PURKINJE NEURONS. Joanna J. Osko, oskojj@miamioh.edu, (Joey Ransdell, ransdejl@miamioh.edu), Miami University, 501 E High St, Oxford, OH 45056.

9:55am - EXPLOITING MÜLLER GLIA PROGENITOR CELL SIGNALING PATHWAYS FOR RETINAL REGENERATION IN CHICK. Max Huddleston, huddleston.100@osu.edu, (Heithem El-Hodiri, heithem.el-hodiri@osumc.edu), Ohio State University, 281 W Lane Ave, Columbus OH 43210.

10:10am - MUTATIONS TO TLR4 GENES: CHANGES IN THE ULTRASTRUCTURE AND FUNCTIONS. Xavier McDougle, Xavier.McDougle@wilmington.edu, (Oladapo Fagbohun, oladapo.fagbohun@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

9:40 AM – 10:30 AM - Psychology Building Room 127

Oral Session M7

Biology

9:40am - DISCORDANT ANTI-SARS-COV-2 IGA RESPONSES IN BLOOD, SALIVA, AND TEARS OF SARS-COV-2 EXPOSED AND COVID-19 VACCINATED INDIVIDUALS. Mya Faulkner, Matthew Gambrel, (Kyle C. McKenna, kmckenna@franciscan.edu), Franciscan University of Steubenville, Dept. of Biology, Steubenville OH 43952.

9:55am - EVALUATING THE EFFECTS OF SINGLE NUCLEOTIDE VARIANTS OF PSEN-1 AND OTHER GAMMA-SECRETASE PROTEINS. Griffin Maxim, griffinmaxim@gmail.com, (Thomas Freeland, tfreeland@walsh.edu), Walsh University, Walsh University, 2020 E Maple St, North Canton OH 44720.

10:10am - HOW PEONIDIN-3-GLUCOSIDE (P3G) PROTECTS CELLULAR ULTRASTRUCTURE, REDUCES ROS FORMATION. Olive Iragena, olive.iragena@wilmington.edu, (Oladapo Fagbohun, oladapo.fagbohun@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

9:40 AM – 10:45 AM - Psychology Building Room 131

Oral Session M8

Biology

9:40am - MULTI-FACETED PROTECTIVE EFFECTS OF COMBINED EXERCISE AND BERRY EXTRACT IN STZ-INDUCED DIABETIC MICE SYNERGISTICALLY UPREGULATED THE LEVELS OF AMKP, CAMKII, AND INSULIN SIGNALING. Rachel S. Berry, rsberry39@gmail.com, (Amanda Rollins, amanda_rollins@wilmington.edu), Wilmington College, Dept. of Biology, Wilmington OH 45177.

9:55am - INACTIVATED NFKB SIGNALS CONTROLLED SEPSIS IN BERRY TREATED LPS-INDUCED RAW264.7 CELLS AND C3H/HEHSD MICE TLR4--/--. Jaylah C. Captain, Jaylah.c.captain@wilmington.edu, Amanda Rollins, amanda_rollins@wilmington.edu, (Oladapo Fagbohun, oladapo.fagbohun@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

10:10am - NORADRENALINE HAS DIRECT AND INDIRECT EFFECTS ON THE ACTIVITY OF KISSPEPTIN NEURONS IN THE FEMALE RP3V. Sophia G. Pinti, spinti@kent.edu, (Richard Piet, rpiet@kent.edu), Kent State University, Dept. of Biological Sciences, Kent OH 44240.

10:30am - EFFECT OF BUFFALO REEF STAMP SAND ON ZEBRAFISH (DANIO RERIO) EMBRYONIC DEVELOPMENT. Samantha J. Federici, federisj@miamioh.edu, Benjamin Akande, (Jennifer Schumacher, schumaj@miamioh.edu), Miami University, Dept. of Biology, Oxford OH 45056.

1:40 PM – 2:30 PM - Pearson Hall, Room 007

Oral Session A1

AI and Workplace/Cybersecurity

1:40pm - AI USE TRENDS IN EDUCATION AND HOW IT SHOULD IMPACT OUR TEACHING. Caleb Evans, Columbus State Community College, 550 E Spring St, Columbus OH 43215.

1:55pm - INTEGRATING ARTIFICIAL INTELLIGENCE INTO STEM EDUCATION: PERSPECTIVES AND POSSIBILITIES. Matthew Stoltzfus, The Ohio State University, 281 W Lane Ave, Columbus OH 43210.

2:15pm - TRENDS AND BEST PRACTICES FOR GENERATIVE AI USE IN INTRODUCTORY PHYSICS COURSES. Patrick Boyle, Kathy Koenig, University of Cincinnati, 2600 Clifton Ave. Cincinnati OH 45221.

1:40 PM – 2:30 PM - Pearson Hall, Room 032

Oral Session A2

AI and Liberal Arts

1:40pm - PROCESS OVER PRODUCT: DEVELOPING AI COMPETENCIES FOR PROFESSIONAL PRACTICE. Dennis Cheatham, Miami University, 501 E High St, Oxford OH 45056.

1:55pm - DIFFERENTIATE TEACHING STRATEGIES TO PREPARE COMPUTER SCIENCE STUDENTS FOR THEIR FUTURE WORKFORCE. Li Feng, Capital University, 1 College and Main, Columbus OH 43209.

2:15pm - THE ROLE OF LIBERAL ARTS AND RESIDENTIAL EDUCATION IN DEVELOPING AI SKILLS NEEDED FOR THE WORKFORCE. Kevin Hallinan, Li-Yin Liu, University of Dayton, 300 College Park, Dayton OH 45469.

1:40 PM – 2:30 PM - Pearson Hall, Room 112

Oral Session A3

Targeted Student Support

1:40pm - INSPIRING FUTURE ENGINEERS: SUCCESS STORIES FROM GE NEXT ENGINEERS. Kyle Turner, Whitney Gaskins, University of Cincinnati, 2600 Clifton Ave. Cincinnati OH 45221.

1:55pm - IMPLEMENTING CHOOSE OHIO FIRST AT MIAMI UNIVERSITY: SUPPORTING STUDENTS SO THEY SUCCEED. Jennifer Blue, Chun Liang, Miami University, 501 E High St, Oxford OH 45056.

1:40 PM – 2:30 PM - Pearson Hall, Room 116

Oral Session A4

Department/Program/Beyond

1:40pm - CURRICULA STRATEGIES THAT SUPPORT CAREER AND WORKFORCE READINESS IN STEM. Claire McLeod, Maija Sipola, Miami University, 501 E High St, Oxford OH 45056.

1:55pm - A LARGE-ENROLLMENT ACTIVE E-LEARNING WORKSHOP BROADENS ACCESS TO GEOSCIENCE COMPUTING SKILLS. Michael Brudzinski, Gillian Haberli, Wilnelly Ventura-Valentin, Miami University, 501 E High St, Oxford OH 45056.

2:15pm - PERSONALIZING INSTRUCTION VIA WEB-BASED INTERACTIVE VIDEO-ENHANCED TUTORIALS FOR LECTURE AND LAB. Kathy Koenig, Alexandru Maries, Sarah Baker, University of Cincinnati, 2600 Clifton Ave. Cincinnati OH 45221.

1:40 PM – 2:30 PM - Pearson Hall, Room 218

Oral Session A5

Enhancing Performance

1:40pm - ENGAGING FUTURE SCIENTISTS: A SUMMER BIOCHEMISTRY PROGRAM FOR HIGH SCHOOL STUDENTS. Nathan Howell, Ryan Arvidson, Vivien Yee, Case Western Reserve University, 10900 Euclid Ave, Cleveland OH 44106.

1:55pm - USING A COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCE TO INCREASE ACCESS AND ENGAGEMENT IN STEM. Amanda Reichert, Jennifer Quinn, Miami University, 501 E High St, Oxford OH 45056.

2:15pm - DESIGNING A MATHEMATICS COURSE FOR STUDENT SUCCESS IN STEM. Olga Brezhneva, Suzanne Harper, Miami University, 501 E High St, Oxford OH 45056.

1:40 PM – 2:45 PM - Psychology Building, Room 125

Oral Session A6

Earth and Environmental Sciences

1:40pm - NUTRIENT CONCENTRATION AND LOAD REDUCTIONS ASSOCIATED WITH BURNTWOOD-LANGENKAMP RESTORED WETLAND. Haley Hoehn, haley.hoehn@wright.edu, Morgan Grunden, morgan.grunden@wright.edu, Newell, senewell@umich.edu, Stephen J. Jacquemin, stephen.jacquemin@wright.edu, Wright State University - Lake Campus, 7600 Lake Campus Dr, Celina OH 45822.

1:55pm - TRACING ANTHROPOGENIC LEAD PRESENT IN SOIL AND ROAD SEDIMENT AT A VACANT PROPERTY. April D. Sanders, sander71@MiamiOH.edu, Morgan Gillis, gillism@MiamiOH.edu, Marion L. Lytle, lytleml@MiamiOH.edu, Landon Stitle, landon.stitle@jacobs.com, Juliana Curtis, juliana.curtis@colostate.edu, Kailey J. Gokey, gokeykj@MiamiOH.edu, (Mark Krekeler, krekelp@MiamiOH.edu), Miami University, Dept. of Geology and Environmental Earth Science, 250 S Patterson Ave, Oxford OH 45056.

2:15pm - MODELING THE COST AND FREQUENCY OF FLOODS AND SEVERE STORMS IN THE U.S. Simon Atoyire, atoyirs@miamioh.edu, Steve Kolk, (Tatjana Miljkovic, miljkot@miamioh.edu), Miami University, Dept. of Statistics, Oxford OH 45056.

2:30pm - NUTRIENT REDUCTIONS ASSOCIATED WITH FLOODPLAIN OFF-CHANNEL WETLANDS ON THE GREAT MIAMI RIVER. Morgan Grunden, morgan.grunden@wright.edu, Haley Hoehn, haley.hoehn@wright.edu, Silvia Newell, senewell@umich.edu, Stephen Jacquemin, stephen.jacquemin@wright.edu, Wright State University - Lake Campus, 7600 Lake Campus Dr, Celina OH 45822.

1:40 PM – 2:45 PM - Psychology Building, Room 127

Oral Session A7

Mathematics & Engineering

1:40pm - ADDITIVE MANUFACTURING OF HIGH-FREQUENCY MAGNETIC COMPONENTS IN POWER ELECTRONICS. Dhruv Birla, birlad@miamioh.edu, Thomas McKenzie, mckenztf@miamioh.edu, Mahmud Khan, khanm2@miamioh.edu, (Mark Scott, scottmj3@miamioh.edu), Miami University, Dept. of Electrical and Computer Engineering, Oxford OH 45056.

1:55pm - HAMMING CUBES IN LAMPLIGHTERS. Charlotte Melby, charlottemelby78@gmail.com, (Beata Randrianatoanina, randrib@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

2:15pm - SIMULATION AND CHARACTERIZATION OF ADVANCED STRUCTURES IN AEROSPACE APPLICATIONS. Cory C. Webber, webberc3@miamioh.edu, Jeong-Hoi Koo, koo@miamioh.edu, (Carter Hamilton, hamiltbc@miamioh.edu), Miami University, 3965 South Beechgrove Rd, Wilmington OH 45177.

2:30pm - CONGRESSIONAL REDISTRICTING ALGORITHM. Daniel R. Welch, welchd3@xavier.edu, (David Gerberry, david.gerberry@xavier.edu), Xavier University, 3800 Victory Pkwy, Cincinnati OH 45207.

1:40 PM – 2:45 PM - Psychology Building, Room 131

Oral Session A8

Plant Sciences, Earth and Environmental Sciences, & Systems Software & Robotics

1:40pm - GROWTH AND RESISTANCE OF ASCLEPIAS SYRIACA POPULATIONS. Allison N. Collins, collinsally156@gmail.com, Soren Brauner, sbrauner@ashland.edu, Emily K. Mohl, mohl@stolaf.edu, Jennifer N. Styrsky, styrsky.jennifer@lynchburg.edu, John D. Styrsky, styrsky.j@lynchburg.edu, (Andrew C. McCall, mccalla@denison.edu), Denison University, Dept. of Biological Sciences, Granville OH 43023.

1:55pm - VARIATION IN SEED TRAITS BETWEEN CORE & PERIPHERAL POPULATIONS OF EASTERN REDBUD (CERCIS CANADENSIS). Noel A. Mano, nmano@heidelberg.edu, Timothy Woody, twoody@heidelberg.edu, Heidelberg University, Dept. of Biological and Environmental Sciences, 310 E Market St, Tiffin OH 44883.

2:15pm - PEST MANAGEMENT PRACTICES IN MIDWESTERN SPECIALY CROP PRODUCTION: A SOCIAL NETWORK ANALYSIS. Carlo R. Moreno, cmoreno@wooster.edu, Elizabeth Y. Long, long132@purdue.edu, College of Wooster, Environmental Studies Program, Williams Hall, 930 College Mall, Wooster OH 44691.

2:30pm - CLOUD COMPUTING AND CONTAINERS. Ben Herdman, bherdman@capital.edu, (Li Feng, lfeng@capital.edu), Capital University, 1 College and Main, Columbus OH 43209.

Poster Sessions

8:45 – 9:30 AM and 2:45 – 3:30 PM

Loacted in Pearson Hall, Basement, 1st and 2nd Floor Hallways

Note: All posters will be displayed in both morning and afternoon sessions

Poster Number 01 - BEHAVIORAL DIFFERENCES AND ANALYSIS OF GRAY AND WHITE SQUIRRELS. Stevyn Butts, sbutts9@capital.edu, (Terry Lahm, tlahm@capital.edu), Capital University, Dept. of Biological and Environmental Sciences, Columbus OH 43209.

Poster Number 02 - CATCHING THE ELUSIVE: USING CAMERA TRAPS TO BUILD SPECIES INVENTORIES AT SOQTAPATA, PERU. Molly C. Hearsch, hearscmc@miamioh.edu, Nicholas Guetersloh, gueternm@miamioh.edu, (Kelsey Ellis, ellisk3@miamioh.edu), Miami University, 335 W Church St, Oxford OH, 45056.

Poster Number 03 – A ROLE FOR BNST CRH-CONTAINING NEURONS IN MALADAPTIVE FEAR LEARNING FOLLOWING EARLY LIFE STRESS. Harrison Jones, joneshm8@miamioh.edu, Harrison Smith, smithhd4@miamioh.edu, (Jennifer Quinn, quinnjj@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 04 – INVOLVEMENT OF MU-OPIOID RECEPTORS IN MEDIATING THE LONG-TERM IMPACTS OF EARLY LIFE STRESS. Thomas Williams, will1425@miamioh.edu, Harshini Ramesh, rameshh@miamioh.edu, Amanda Reichert, reichean@miamioh.edu, Anna Radke, aradke@miamioh.edu, (Jennifer Quinn, quinnjj@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 05 – MODULATORY EFFECTS OF BLUEBERRY AND BLACKBERRY EXTRACTS IN THE UPREGULATION OF INSULIN SIGNALING AND ENHANCED ADIPOGENESIS IN 3T3-L1 CELLS AND STZ-INDUCED BALB/C MICE. Anya Demshar, amdemshar@hotmail.com, Amanda Rollins, amanda_rollins@wilmington.edu, (Oladapo Fagbohun, oladapo.fagbohun@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

Poster Number 06 – SPOTTING SOLUTIONS: PUBLIC AWARENESS STRATEGIES FOR SPOTTED LANTERNFLY. Clare Mackin, cmackin25@wooster.edu, (Carlo Moreno, cmoreno@wooster.edu), College of Wooster, 5046 Jamestown Rd., Columbus OH 43220.

Poster Number 07 – PERSISTENT IMPACTS OF CHRONIC EARLY LIFE STRESS ON FEAR AND ANXIETY-RELATED BEHAVIORS IN ADULT RATS. Sophia W. H. Bick, bicks@miamioh.edu, Carson A. Powell*, powell71@miamioh.edu, Barrett W. Croskey, croskebw@miamioh.edu, Brianna L. Minshall, briannaminshall@gmail.com, Lauren A. Roos, roosla@miamioh.edu, Nazif B. Vardar, nazifbulutvardar@gmail.com, (Jennifer J. Quinn, quinnjj@miamioh.edu), Miami University, Dept. of Psychology, Oxford OH 45056.

Poster Number 08 – PRELIMINARY EVIDENCE PSILOCYBIN ALTERS MPFC CIRCUITRY TO RESTORE NEURAL BALANCE IN DEPRESSION. Emma M. King, kingem12@miamioh.edu, Sarah K. Crook, crooks@miamioh.edu, (Ryan J. Rakoczy, rakoczyryan@gmail.com), Miami University, Dept. of Psychology, 90 N Patterson Ave, Oxford, OH 45056.

Poster Number 09 – EXAMINING THE IMPACT OF CHEMOGENETIC INHIBITION OF THE PVT ON SAFETY EXPRESSION. Thomas G. Leslie, leslietg@miamioh.edu, Elayna B. Foor, fooreb@miamioh.edu, (Jennifer Quinn, quinnjj@miamioh.edu), Miami University, 90 N Patterson Ave, Oxford OH 45056.

Poster Number 10 – COMORBID ADHD AND INTERNALIZING SYMPTOMS IN ADOLESCENTS: EFFECTS ON PSYCHOLOGICAL CONTROL AND WARMTH. Abigail E. Linhardt, linharae@miamioh.edu, Rachel G. Li, lir66@miamioh.edu, (Aaron M. Luebbe, luebbea2@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 11 – ANALYZING AND QUANTIFYING SEX DIFFERENCES IN FOUR CORE GENOTYPES MICE. Lindsey G. O'Lalde, olaldeg@miamioh.edu, Roman A. Zegarelli, zegarera@miamioh.edu, Kiara D. Ream, reamkd@miamioh.edu, (Anna Radke, aradke@miamioh.edu), Miami University, Dept. of Psychology, 90 N Patterson Ave, Oxford OH 45056.

Poster Number 12 – DETERMINING THE ROLES OF THE BNST AND DRN IN THE ACQUISITION OF ELS-INDUCED SEFL IN ADULT RATS. Lauren Roos, roosla@miamioh.edu, Emily Ennis, enniseb@miamioh.edu, (Jennifer Quinn, quinnjj@miamioh.edu) Miami University, Dept. of Psychology, Oxford OH 45056.

Poster Number 13 – A BRIEF COMPARISON IN FINDINGS OF BEHAVIORAL AND COGNITIVE PRESENTATIONS OF SEXUAL SADISM DISORDER IN MALES AND FEMALES. Lauren M. Palivoda, palivoda.3@wright.edu, Robison K. Yost, yost.29@wright.edu, (Sara Bielek, sara.bielek@wright.edu), Wright State University, College of Health, Education, and Human Services, Dayton OH 45435.

Poster Number 14 – MOLECULAR IDENTIFICATION OF UNIDENTIFIED TADPOLES AND SALAMANDERS FROM SITES IN OHIO. Emili Pavlovska, epavlovska@capital.edu, (Christine S. Anderson, canders2@capital.edu), Capital University, Dept. of Biological and Environmental Sciences, Columbus OH 43209.

Poster Number 15 – COPPER CHALCOGENIDE-GRAPHENE COMPOSITE MATERIALS DISPLAY ANTIBACTERIAL ACTIVITY AGAINST GRAM-POSITIVE BACTERIA. Annie Witzky, awitzky2@capital.edu, Elizabeth M. Conway, 07lizcon@gmail.com, Daniel J. Little, littled2@ohiodominican.edu, Capital University, Dept. of Biological and Environmental Sciences, 1 College and Main, Columbus OH 43209.

Poster Number 16 – EBSTEIN'S ANOMALY: A COMPARATIVE ANALYSIS OF SURGICAL AND NON-SURGICAL INTERVENTIONS ACROSS THE LIFESPAN. Fatima Atta Muhammad, fattamuhammad@student.csc.edu, (Allison Foster, afoster54@csc.edu), Columbus State Community College, Dept. of Biological and Physical Sciences, 550 E. Spring St., Columbus OH 43215.

Poster Number 17 – THE EFFECTS OF LOW PUFA DIETS ON *DROSOPHILA MELANOGASTER* LARVAL BEHAVIORS. Emma Kim, kim_e1@denison.edu, Fletcher Williams, willia_fl@denison.edu, (Joy N. Dorsten, dorstenj@denison.edu), Denison University, Dept. of Biology, Granville OH 43023.

Poster Number 18 – LOW POLYUNSATURATED FATTY ACID (PUFA) DIETS AFFECT THE PRIMING IMMUNITY IN *DROSOPHILA MELANOGASTER*. Minh Tran Ha, tranha_m1@denison.edu, (Joy Dorsten, dorstenj@denison.edu), Denison University, 100 W College St, Granville OH 43023.

Poster Number 19 – PREFERENCE FOR CUES FROM DIFFERENT QUALITY DIETS IN THE LONGEAR SUNFISH (*LEPOMIS MEGALOTIS*). Spruhaa Vasistha, vasist_s1@denison.edu, (Geoffrey Smith, smithg@denison.edu), Denison University, 100 W College St, Granville OH 43023.

Poster Number 20 – OPTIMIZING RT-QPCR FROM WHOLE BODY LARVAL RNA EXTRACTIONS TO ASSESS EFFECT OF LOW PUFA DIET ON D2R. Isabel Woodard, woodar_i1@denison.edu, (Joy N. Dorsten, dorstenj@denison.edu), Denison University, 100 W College St, Granville OH 43023.

Poster Number 21 – MAPPING AUTOPHAGY REGULATION OF SLEEP IN FRUIT FLIES TO CANDIDATE NEURONAL SUBPOPULATIONS. Mikayla M. Cully, mcully1@kent.edu, Reece P. Turner, rturne33@kent.edu, Grace E. Davis, gdavis37@kent.edu, Brandi N. Besednjak, bbesednj@kent.edu, (Joseph L. Bedont, jbedont@kent.edu), Kent State University, Cunningham Hall, 1275 University Esplanade, Kent OH 44242.

Poster Number 22 – DOCUMENTING STUDENT LEARNING OF BASIC CONCEPTS IN GENE EXPRESSION. Sydney Carter, carte135@miamioh.edu, (Joyce Fernandes, joyce.fernandes@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 23 – IMPACT OF NEURAL LAMELLA BREAKDOWN ON GLIAL PROLIFERATION AND ECLOSION BEHAVIOR. Nelchi Prashali, prashan@miamioh.edu, Jackson Riffe, riffejt@miamioh.edu, (Joyce Fernandes, fernanj@miamioh.edu), Miami University, Dept. of Biology, Oxford OH 45056.

Poster Number 24 – INVESTIGATING THE IMPACT OF CLIMATE CHANGE ON GREEN ALGAE DISTRIBUTION IN LAKE BONNEY, ANTARCTICA. Gejla Toromani, toromag@miamioh.edu, (Rachael Morgan-Kiss, morganr2@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 25 – INVESTIGATING THE ROLE OF WRAPPING GLIA IN *DROSOPHILA MELANOGASTER* DURING METAMORPHOSIS. Yoshitha Bhargav, bhargay@miamioh.edu, Jonathan Hildebrand, hildebj3@miamioh.edu, (Joyce Fernandes, joyce.fernandes@miamioh.edu), Miami University, Dept. of Biology, Oxford OH 45056.

Poster Number 26 – EFFECTS OF ELEVATED PH AND HYPOXIA ON THE DIATOM *THALASSIOSIRA PSEUDONANA*. Jed Howrey, jhowrey25@wooster.edu, (Carlo Moreno, cmoreno@wooster.edu), The College of Wooster, Wooster OH 44691.

Poster Number 27 – ENCAPSULATED BERRY-DERIVED NANOPARTICLES FOR DUAL CANCER AND INFLAMMATION THERAPY. Randy Harris, randy.harris@wilmington.edu, Oladapo Fagbohun, oladapo.fagbohun@wilmington.edu, (Amanda Rollins, amanda_rollins@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

Poster Number 28 – CHANGES IN THE CELLULAR ULTRASTRUCTURE AND FUNCTIONS OF DIFFERENT ORGANS DURING DIABETES. Ava Hester, ava.hester@wilmington.edu, Amanda Rollins, amanda_rollins@wilmington.edu, (Oladapo Fagbohun, oladapo.fagbohun@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

Poster Number 29 – IN VITRO INHIBITION OF *STAPHYLOCOCCUS AUREUS* BY ESSENTIAL OILS FROM *ORIGANUM VULGARE*, *MELALEUCA ALTERNIFOLIA*, *EUCALYPTUS GLOBULUS*, *THYMUS VULGARIS*, AND *ALOE BARBADENSIS MILLER*. Jada E. Pohlen, jada.pohlen@wilmington.edu, (Kendra Cipollini, kendra_cipollini@wilmington.edu), Wilmington College, Dept. of Biology, Wilmington OH 45177.

Poster Number 30 – AN IN VITRO EVALUATION COMPARING THE EFFICIENCY OF NEOSPORIN AND ITS GENERIC COUNTERPARTS. Sarah Wolfer, sarah.wolfer@wilmington.edu, (Amanda Rollins, amanda_rollins@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

Poster Number 31 – DEVELOPING TARDIGRADE CHEMOTAXIS ASSAYS. Catherine Daugherty, daughterc5@xavier.edu, (Kathryn Morris, morrisk10@xavier.edu), Xavier University, Dept. of Biology, Cincinnati OH 45207.

Poster Number 32 – INTEGRATING *CAENORHABDITIS ELEGANS* ASSAYS INTO UNDERGRADUATE LABORATORIES TO ENHANCE GENETICS AND NEUROBIOLOGY EDUCATION. Matthew D. Liskai, liskaim@xavier.edu, Sofia Franco, francos@xavier.edu, (Kelly Crowe, crowek7@xavier.edu), Xavier University, 3800 Victory Pkwy, Cincinnati OH 45212.

Poster Number 33 – ASSESSMENT OF SIALYLATION IN SKELETAL MUSCLES OF A GROUND-BASED RAT MODEL OF MICROGRAVITY. Olivia L. Parker, parkero1@xavier.edu, Jordyn Woods, woodsj13@xavier.edu, Emily Greulach, greulache@xavier.edu, Cena Hornberger, hornbergerc1@xaver.edu, Nadia Leontescu, loentescun@xavier.edu, Joshua Mathis, mathisj2@xavier.edu, Emma Simone, simonee@xavier.edu, Reagan Vonderhaar, vonderhaarr@xavier.edu, Marie Mortreux, marie.mortreux@uri.edu, Kelly E. Crowe, crowek7@xavier.edu, (Hanna N. Wetzel, wetzelh@xavier.edu), Xavier University, Dept. of Biology, 3800 Victory Pkwy, Cincinnati OH 45207.

Poster Number 34 – INVESTIGATING A ROLE FOR ECDYSTEROID RECEPTION DURING NERVOUS SYSTEM REORGANIZATION IN THE FRUIT FLY, *DROSOPHILA MELANOGASTER*. Tyler Peace, peacetd@miamioh.edu, Donovan Lundy, lundydt@mimaioh.edu, Jackson Riffe, riffejt@miamioh.edu, (Joyce J Fernandes, joyce.fernandes@miamioh.edu), Miami University, Dept. of Biology, Oxford OH 45056.

Poster Number 35 – INTER- AND INTRA-POND MOVEMENT OF *CHRYSEMYS PICTA* AT THE GRANVILLE SCHOOLS AND LAND LAB. Valeria Benitez, benite_v1@denison.edu, (Geoffrey Smith, smithg@denison.edu), Denison University, 8821 Slayter Union, Granville OH 43023.

Poster Number 36 – 2D PEG-DMA HYDROGEL SYSTEMS DELIVER STEM CELLS AS EFFICIENTLY AS STANDARD 3D SYSTEMS. Rachel M. Young, ryoung002@student.franciscan.edu, Peter J. Patelli, ppatelli001@student.franciscan.edu, Rylie T. Severson, rseverson001@student.franciscan.edu, Cole A. Stull, cstull002@student.franciscan.edu, (Derek M. Doroski, ddoroski@franciscan.edu), Franciscan University of Steubenville, Steubenville OH 43952.

Poster Number 37 – EFFECTS OF INFORMATIONAL ABORTION VIDEO FOUND IN SURVEY PARTICIPANTS. Anna Cecilia R. Gessler, agessler002@student.franciscan.edu, Dominic M. Zak, dzak001@student.franciscan.edu, Isabella Dammeyer, idammey001@student.franciscan.edu, Peter J Patelli, ppatelli001@student.franciscan.edu, Rachel M. Young, ryoung002@student.franciscan.edu, Cole A. Stull, cstull001@student.franciscan.edu, Rylie T. Severson, rseverson001@student.franciscan.edu, (Derek M. Doroski, ddoroski@franciscan.edu), Franciscan University of Steubenville, Dept. of Biology, Steubenville OH 43952.

Poster Number 38 – TANYCYTE BMAL1 SEX-SPECIFICALLY REGULATES WEIGHT GAIN AND HYPOTHALAMIC NEUROGENESIS IN FEMALE MICE. Joseph L. Bedont, jbedont@kent.edu, Daniel M. Iascone, Daniel.Iascone@Pennmedicine.upenn.edu, Pavel Pivarshev, p.pivarshev@gmail.com, Mariela Lopez, Mariela.LopezValencia@pennmedicine.upenn.edu, Sara B. Noya, sarabnoya@gmail.com, Hongtong Lin, hongtonglin01@gmail.com, Amita Sehgal, amita@pennmedicine.upenn.edu, Kent State University, Dept. of Biological Sciences, Kent OH 44240.

Poster Number 39 – AUTOPHAGOSOME LEVEL MAY MEDIATE AMYLOID-INDUCED SLEEP LOSS IN A FRUIT FLY ALZHEIMER'S DISEASE MODEL. Grace E. Davis, gdavis37@kent.edu, Brandi N. Besednjak, bbesednj@kent.edu, (Joseph L. Bedont, jbedont@kent.edu), Kent State University, Cunningham Hall, 1275 University Esplanade, Kent OH 44242.

Poster Number 40 – GENETIC ADAPTATIONS TO HIGH-ALTITUDE HYPOXIA IN ETHIOPIANS AND THEIR IMPACT ON REPRODUCTIVE FITNESS. Grace Koo, koogc@miamioh.edu, Yue Shi, Daisy Lyu, Lerato Majara, Mary Yohannes, (Alicia R. Martin, armartin@broadinstitute.org), Miami University, Dept. of Statistics, Oxford OH 45056.

Poster Number 41 – RELATIONSHIPS BETWEEN POSTURAL CONFIGURATION AND USE OF SHOES AMONG YOUNG ADULTS WITH BALANCE DURING QUIET STANCE. Dean L. Smith, smithdl2@miamioh.edu, Brianne Kosier, kosierbm@miamioh.edu, Michael Hughes, hughesmr@miamioh.edu, Mark S. Walsh, walshms@miamioh.edu, Miami University, Dept. of Kinesiology, Nutrition and Health, Oxford OH 45056.

Poster Number 42 – NEUROTRANSMITTER EFFECTS ON SELECTIVE DEGRADATION OF INSULIN AND AMYLOID-BETA BY INSULIN PROTEASE. Grace Forrest, gforrest01@rio.edu, (John A. Means, jmeans@rio.edu), University of Rio Grande, School of Natural Sciences, Rio Grande OH 45674.

Poster Number 43 – ENZYME ACTIVITY OF CREATINE KINASE UNDER DIFFERENT CIRCUMSTANCES. Marina Garcia Perez, mgarciaperez01@rio.edu, (John A. Means, jmeans@rio.edu), University of Rio Grande, School of Natural Sciences, Rio Grande OH 45674.

Poster Number 44 – MAJOR TOOTHPASTE BRANDS VERSUS ORAL MICROBIOTA. Alyssa J. Petersen, apetersen01@rio.edu, (Sobha Gorugantula, sgorugantula@rio.edu), University of Rio Grande, School of Natural Sciences, Rio Grande OH 45674.

Poster Number 45 – BIOINFORMATICS ANALYSIS OF GENES CONNECTED TO AUTISM SPECTRUM; THE SGSH GENE AND ITS VARIANTS. Alexander Oswald, aoswald1@walsh.edu, (Thomas Freeland, tfreeland@walsh.edu), Walsh University, 2020 E Maple St, North Canton OH 44720.

Poster Number 46 – PROTECTIVE ROLES OF BLACKBERRY EXTRACTS IN DOWNREGULATING THE EXPRESSIONS OF INFLAMMATORY CYTOKINES. Kierstyn Schmidt, kierstyn.schmidt@wilmington.edu, Amanda Rollins, amanda_rollins@wilmington.edu, (Oladapo Fagbohun, oladapo.fagbohun@wilmington.edu), Wilmington College, 1870 Quaker Way, Wilmington OH 45177.

Poster Number 47 – PTSD SYMPTOMOLOGY IN VETERANS AND FIRST RESPONDERS: FINDINGS FROM AN ASL-MRI PILOT STUDY. Kelsie L. Pyle, kelsie.pyle@wright.edu, Megan B. Hildreth, hildreth.5@wright.edu, (Matt S. Sherwood, matt.sherwood@wright.edu), Wright State University, Dept. of Neuroscience, Cell Biology, and Physiology, Dayton OH 45435.

Poster Number 48 – CLOUD POINT EXTRACTION FOR THE DETERMINATION OF MANGANESE BY CATHODIC STRIPPING VOLTAMMETRY. Kendra J. Cassiday, cassidkj@miamioh.edu, Dustyn C. Weber, weberdc3@miamioh.edu, Brody Morris, morri394@miamioh.edu, (Cory A. Rusinek, rusineca@miamioh.edu), Miami University, 232 Gaslight Ave, Oxford OH 45056.

Poster Number 49 – EXPLORING MOLECULAR SELF-ASSEMBLY AND FOLDING IN SYNTHETIC SYSTEMS. Roshan Lama, lamar@miamioh.edu, (C. Scott Hartley, scott.hartley@miamioh.edu), Miami University, Dept. of Chemistry & Biochemistry, Oxford OH 45056.

Poster Number 50 – UNDERSTANDING THE PHYSICAL AND ELECTROCHEMICAL PROPERTIES OF BORON-AND NITROGEN-DOPED TA-C. Dustyn C. Weber, weberdc3@miamioh.edu, Elizabeth M. Garcia, Yehia Khalifa, Frank Kaulfuss, (Cory A. Rusinek, rusineca@miamioh.edu), Miami University, Dept. of Chemistry and Biochemistry, Oxford OH 45056.

Poster Number 51 – ADVANCING BIOSENSING TECHNOLOGY: EXPLORING TETRAHEDRAL AMORPHOUS CARBON (TA-C) ELECTRODES FOR ENHANCED BIOMOLECULAR DETECTION. Brody R. Morris, morri394@miamioh.edu, Lily Seaman, seamanle@miamioh.edu, Dustyn C. Weber, weberdc3@miamioh.edu, (Cory A. Rusinek, rusineca@miamioh.edu), Miami University, Dept. of Chemistry & Biochemistry, Oxford OH 45056.

Poster Number 52 – INTEGRATING ART INTO HIGH SCHOOL CHEMISTRY INSTRUCTION: LESSONS TAUGHT, LESSONS LEARNED. Eneko A. Dillenberger, dillenberger1@otterbein.edu, (Paul Wendel, pwendel@otterbein.edu), Otterbein University, Dept. of Chemistry, Westerville OH 43081.

Poster Number 53 – SYNTHESIS AND CHARACTERIZATION OF REDOX-SELECTIVE THIENYL PYRIDAZINE ELECTROPOLYMER MATERIALS. Daniel J. Little, littled2@ohiodominican.edu, Nathan C. Tice, tice@findlay.edu, Valeria Mattern-Mondragon, valesofi0201@gmail.com, Ohio Dominican University, Mathematics, Computer, and Natural Sciences Division, 1216 Sunbury Rd, Columbus OH 43219.

Poster Number 54 – BIOCHEMICAL ANALYSIS OF WATER CONTAMINATION IN RURAL APPALACHIA WELLS: IDENTIFYING PREVALENCE AND EVALUATING LOW-COST PURIFICATION METHODS. Taylor R. Sells, tsells01@rio.edu, (Sobha Gorugantula, sgorugantula@rio.edu), University of Rio Grande, School of Natural Sciences, Rio Grande OH 45674.

Poster Number 55 – ORGANICERS: AN ONLINE COMMUNITY OF PRACTICE. Justin B. Houseknecht, jhouseknecht@wittenberg.edu, Alexey Leontyev, alexey.leontyev@ndsu.edu, Jennifer L. Muzyka, jennifer.muzyka@centre.edu, Catherine O. Welder, Catherine.O.Welder@Dartmouth.edu, Wittenberg University, Dept. of Chemistry, PO Box 720, Springfield OH 45501.

Poster Number 56 – INTERCROPPING FOR PEST CONTROL: MARIGOLDS AND CILANTRO IMPACT ARTHROPODS AND CROP DAMAGE IN MUSTARD. Cady S. Eakins, ceakins25@wooster.edu, (Carlo Moreno, cmoreno@wooster.edu), College of Wooster, 1189 Beall Ave, Wooster OH 44691.

Poster Number 57 – THREE-YEAR BIOASSESSMENT OF UPPER MAUMEE WATERSHED TRIBUTARIES. Katelyn A. Smith, ksmith@defiance.edu, Sabrina Brown, srbrown@manchester.edu, Defiance College, 701 N Clinton St, Defiance Hall, Defiance OH 43512.

Poster Number 58 – UNDERSTANDING THE HYDROLOGICAL AND VEGETATIONAL RESPONSE OF THE MIDWESTERN UNITED STATES DURING THE CLIMATE CHANGE OF THE YOUNGER DRYAS. Nina Azadi, azadianl@miamioh.edu, (Jason Rech, rechja@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 59 – USING FRESHWATER MUSSEL ASSEMBLAGES TO INFORM MODERN CONSERVATION EFFORTS IN THE MIDWESTERN US. Lillian M. Champagne, champalm@miamioh.edu, (Jason Rech, rechja@miamioh.edu), Miami University, 706 S Campus Ave, Oxford OH 45056.

Poster Number 60 – PHOSPHORUS AVAILABILITY IN EXTRATERRESTRIAL OCEAN WORLDS. Emmanelle F. Cuasay, cuasayef@miamioh.edu, (James Leong, leongj@miamioh.edu), Miami University, 118 Shideler Hall, 250 S Patterson Ave, Oxford OH 45056.

Poster Number 61 – ACTIVITIES FOR SECONDARY EDUCATION STUDENTS ON RESERVOIRS, THEIR ASSOCIATED WATERSHEDS, AND IMPACTS. Sophia R. DeCandia, decandsr@miamioh.edu, Staff at USACE, (Tammie L. Gerke, gerketl@miamioh.edu), Miami University, Dept. of Geology and Environmental Earth Science, Oxford OH 45056.

Poster Number 62 – ASSESSING HEAVY METAL CONTAMINATION WITHIN LOW-HEAD DAM SEDIMENTS IN OXFORD, OHIO. Avery Littman, littmaav@miamioh.edu, Abigale O'Connor, oconno63@miamioh.edu, (Jason Rech, rechja@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 63 – RADIOCARBON RESERVOIR EFFECT (RRE) CORRECTION OF SCIOTO RIVER AQUATIC MOLLUSK SHELLS. Emily C. Ratvasky, ratvasec@miamioh.edu, (Jason A. Rech, rechja@miamioh.edu), Miami University, Dept. of Geology and Environmental Earth Science, Oxford OH 45056.

Poster Number 64 – INVESTIGATION OF GROUNDWATER-SURFACE WATER INTERACTION IN MUD RUN CATCHMENT, CLARK COUNTY, OH. Renie Thomas, thoma744@miamioh.edu, Ethan Zhou, zhouey@miamioh.edu, Samuel Panizo, panizose@miamioh.edu, Jonathan Levy, levyj@miamioh.edu, (Jason Rech, rechja@miamioh.edu), Miami University, Oxford OH 45056.

Poster Number 65 – EXAMINING WATER CHEMISTRY OF THE OHIO RIVER BASIN TO DETERMINE THE EXTENT OF FRESHWATER RESERVOIR EFFECTS. Sydney E. Kent, kentstse@miamioh.edu, (Jason Rech, rechja@miamioh.edu), Miami University, 250 S Patterson Ave, Oxford OH 45056.

Poster Number 66 – EXPANDING ENVIRONMENTAL EDUCATION THROUGH THE USE OF A BOARD GAME. Logan Murray, Murrayl7@miamioh.edu, Aaron Wanko, Wankoar@miamioh.edu, Hannah Hoblitzell, hoblithe@mail.UC.edu, (Laura Abondano Franco, abondala@miamioh.edu), Miami University, Dept. of Biology, Oxford OH 45056.

Poster Number 67 – STRUCTURAL AND FUNCTIONAL IMPACT OF THE A117V VARIANT IN THE COMT GENE AND A BASIS FOR ITS ASSOCIATION WITH OPIATE ADDICTION. Luis Hernandez-Ceballos, lhernand1@walsh.edu, (Thomas Freeland, tfreeland@walsh.edu), Walsh University, 2020 E Maple St, North Canton OH 44720.

Poster Number 68 – CHONDRICHTHYANS AND OSTEICHTHYANS OF THE INDIAN CAVE SANDSTONE (CARBONIFEROUS, GZHELIAN) OF NEBRASKA. Daniel A. Cline, cline.74@wright.edu, Lauren Fuelling, lauren.fuelling@wright.edu, Ryan Shell, ryanshell501@gmail.com, (Chuck N. Ciampaglio, chuck.ciampaglio@wright.edu), Wright State University – Lake Campus, 7600 Lake Campus Dr, Celina OH 45822.

Poster Number 69 – ANNUAL REVIEW OF GRAND LAKE ST MARYS RESTORED WETLANDS. Stephen J. Jacquemin, stephen.jacquemin@wright.edu, Morgan Grunden, morgan.grunden@wright.edu, Haley Hoehn, haley.hoehn@wright.edu, Madison Gels, gels.5@wright.edu, Kenneth Kline, kline.54@wright.edu, Aaron Selby, selby.24@wright.edu, Myles Wheeler, wheeler.164@wright.edu, Theresa Dirksen, theresa.dirksen@ag.mercercountyohio.gov, Wright State University – Lake Campus, 7600 Lake Campus Dr, Celina OH 45822.

Poster Number 70 – BUILDING A SUSTAINABLE FUTURE: ENERGY BENEFITS OF NATIVE GRASSES ON GREEN ROOFS. Andrew Fan, fana@xavier.edu, (Mark Mitchell, mitchellm36@xavier.edu), Xavier University, 3800 Victory Pkwy, Cincinnati OH 45207.

Poster Number 71 – PLANT DISEASE DETECTION USING DEEP LEARNING: A COMPARATIVE STUDY OF CUSTOM CNN AND EFFICIENTNETB0. Aniket G. Patel, apatel12@ashland.edu, (Selvanayaki Kolandapalayam Shanmugam, Ph.D., skolanda@ashland.edu), Ashland University, Dept. of Mathematics and Computer Science, Ashland OH 44805.

Poster Number 72 – DESIGN AND TESTING OF AN MR-BASED HAPTIC DEVICE FOR AUDIO-HAPTIC APPLICATIONS. Joshua C. Koo, koojc@miamioh.edu, (Eric Hodgson, eric.hodgson@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 73 – REASSESSING THE GOODNESS-OF-FIT TESTS IN ACTUARIAL SCIENCE DECISION-MAKING: CAN WE RELY ON P-VALUE R. Michael Okanta, okantam@miamioh.edu, (Tatjana Miljkovic, miljkot@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 74 – ASSESSMENT OF MRI MEASUREMENT STABILITY OF PHILIPS HEALTH DSTREAM ACHIEVA 3T SCANNER. Raneen Jaber, jaber.16@wright.edu, Kelsie Pyle, Kelsie.pyle@wright.edu, David Burch, David.burch.7@us.af.mil, (Matthew Sherwood, matt.sherwood@wright.edu), Wright State University, Dept. of Neuroscience Cell Biology and Physiology, Dayton OH 45435.

Poster Number 75 – ASCENT AND JUMP SEQUENCES. Elizabeth L. Mastilak, mastilake@xavier.edu, (Eric Bucher, buchere1@xavier.edu, Esmeralda Nastase, nastasee@xavier.edu), Xavier University, 3800 Victory Pkwy, Cincinnati OH 45207.

Poster Number 76 – DERIVATION OF THE MASTER EQUATION OF A SINGLE GIANT ATOM. Nishan Amgain, amgainn@miamioh.edu, (Imran Mirza, mirzaim@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

Poster Number 77 – HONG-OU-MANDEL EFFECT IN CAVITY QED WITH MORE THAN TWO PHOTONS. Alexia Dudones, dudonea@miamioh.edu, Caden McCollum, mccollcs@miamioh.edu, (Imran Mirza, mirzaim@MiamiOH.edu), 217 Kreger Hall, 500 E. Spring St., Oxford OH 45056.

Poster Number 78 – AN INVESTIGATION OF THE INTEGER QUANTUM HALL EFFECT. Glenn A. Ochsner, ochsnega@miamioh.edu, (Imran M. Mirza, mirzaim@miamioh.edu), Miami University, 500 E Spring St, Oxford OH 45056.

Poster Number 79 – MULTI-YEAR ASSESSMENT OF LOCAL ADAPTATION TO HERBIVORY IN COMMON MILKWEED GROWN IN OH, VA, AND MN. Anya Mitton-Fry, amittonfry@gmail.com, Soren Brauner, sbrauner@ashland.edu, Andrew McCall, mccalla@denison.edu, Emily Mohl, mohl@stolaf.edu, Jennifer Styrsky, jennifer.styrsky@gmail.com, John Styrsky, styrsky.j@lynchburg.edu, Denison University, Dept. of Biology, Granville OH 43023.

Poster Number 80 – EFFECT OF CANOPY COVER ON *AGERATINA ALTISSIMA*. Lindsey R. Urban, urban_l2@denison.edu, (Andrew C. McCall, mccalla@denison.edu), Denison University, 100 W College St, Granville OH 43023.

Poster Number 81 – EXPLORING THE IMPACT OF GENERATIVE AI ON LEARNING TO CODE IN A US COLLEGE. Liam McGuckin, mcgucklm@miamioh.edu, (Jay Shan, shanz3@miamioh.edu), Miami University, 501 E High St, Oxford OH 45056.

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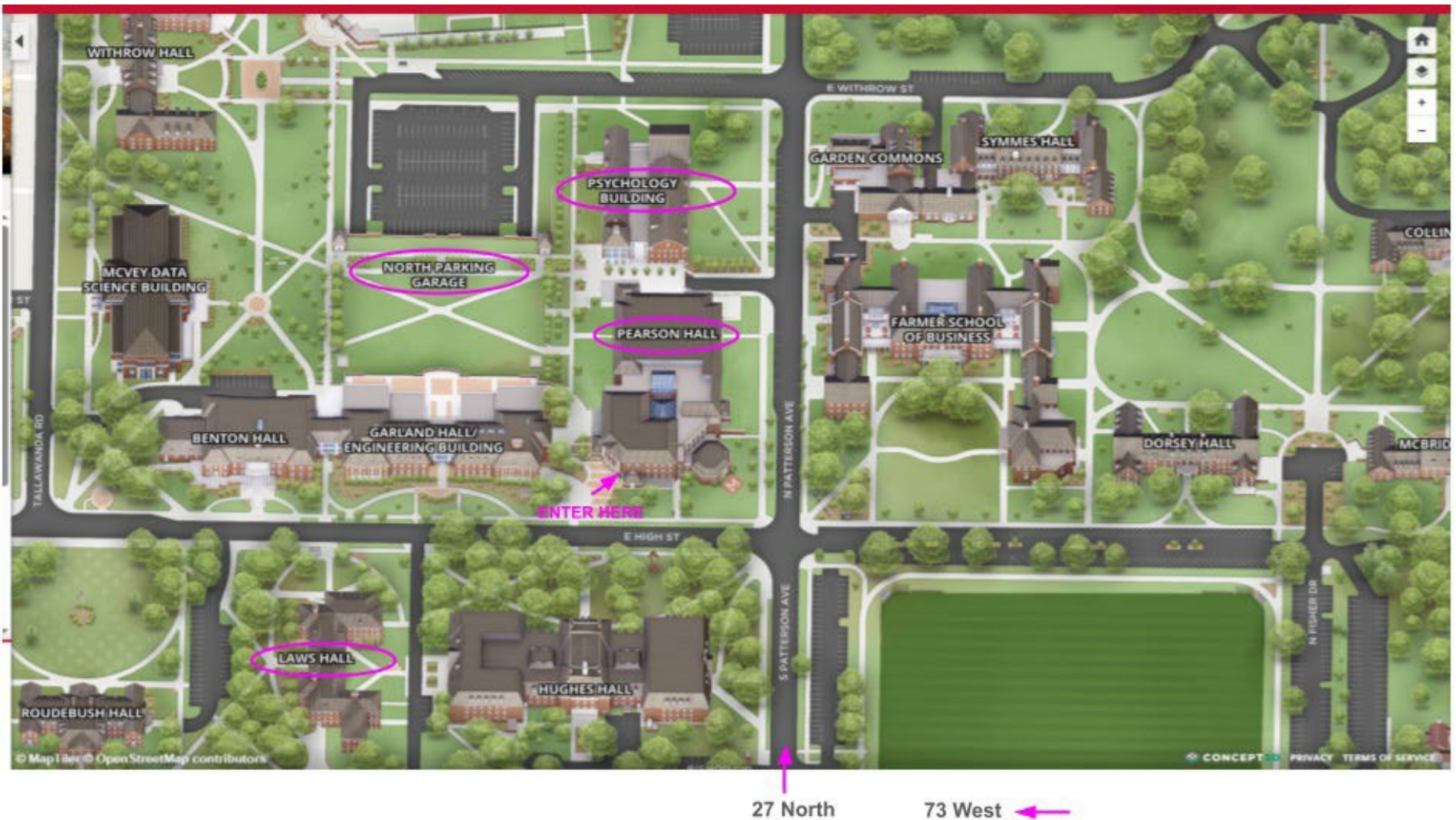
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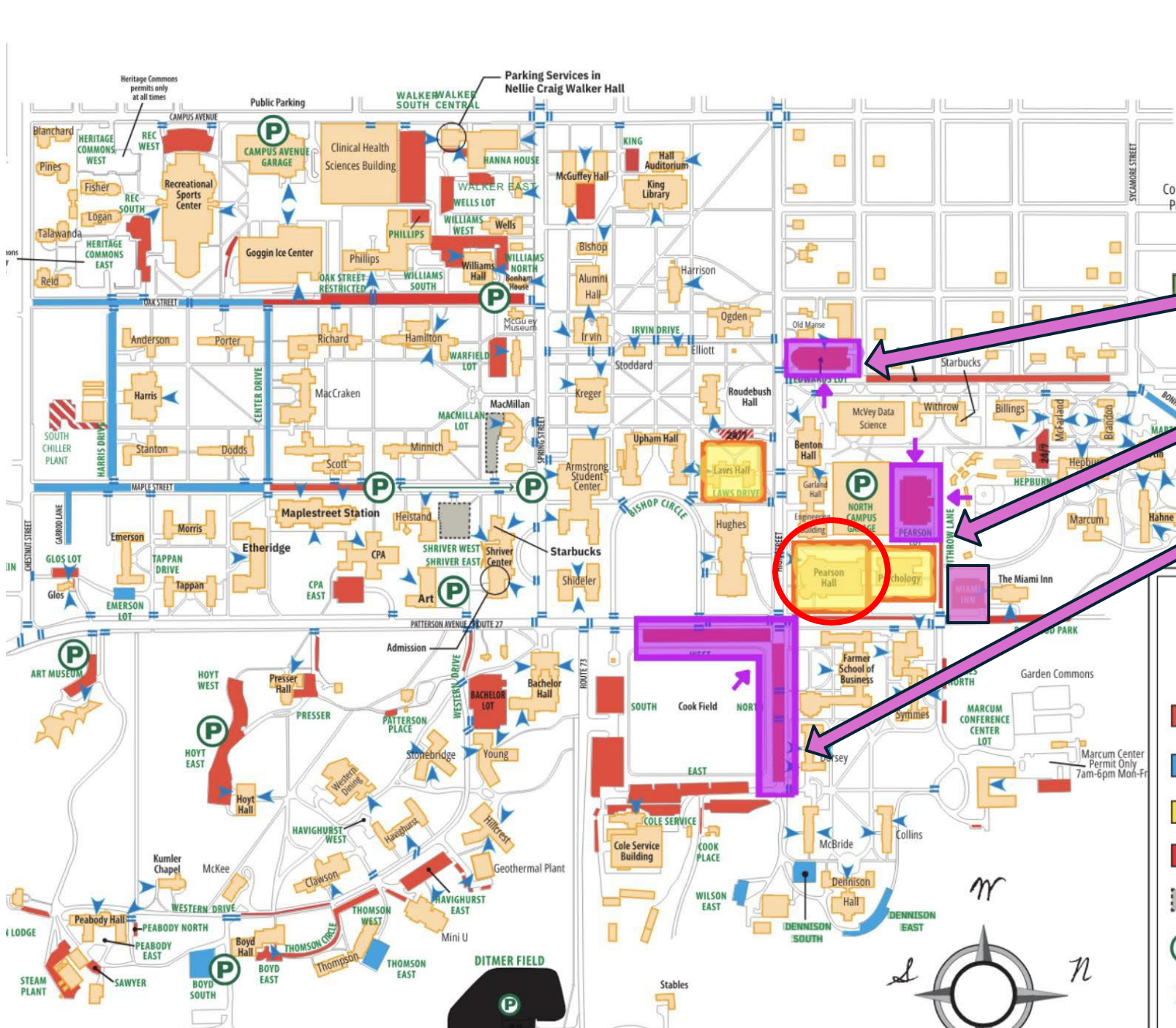
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