Edison State Community College has followed in the footsteps of its namesake, Thomas Alva Edison, by earning a reputation for being an innovator in providing accessible, quality education and training opportunities for students. The college has grown from modest beginnings in 1973, when it offered 30 courses in a rented facility, to serving more than 4,000 students enrolled today in over 100 degree, certificate, and short-term technical certificate programs.

In addition to the 131 acres of rolling green space the Piqua Campus sits on, Edison State has locations in Greenville, Eaton, and Troy. Each regional location focuses on specific programs, with Greenville and Eaton being home to the college’s agriculture programs and Troy positioned to be the center of healthcare education in the Upper Miami Valley.

Edison State continues to thrive, experiencing growth in enrollment while adding to an already robust catalog of academic offerings. Today, students can attend classes and receive support services at one of the college’s four convenient locations, as well as online. Learn more about Edison State by visiting www.edisonohio.edu.

Thank you to the Edison State Community College planning committee for helping to make this a successful meeting:

- Dr. Paul Heintz, Dean, Arts and Sciences
- Helen Willcox, Administrative Assistant for Finance & Institutional Effectiveness
- Don Walters, Edison State Chef and Julie Walters, AVI Food Systems, Inc.
- Tom Burelison, Maintenance Supervisor, and all of the Edison maintenance personnel
- Amy Crow, Chief Information Officer, and her IT team

The Ohio Academy of Science
5930 Wilcox Place Ste F
Dublin OH 43016
The Ohio Academy of Science
Annual Meeting General Schedule
Saturday, April 15, 2023

7:30 to 10:00am  Registration in the North Hall

7:30 to 9:00am  Breakfast in the Cafeteria

8:45am  Welcome in the Robinson Theatre

9:00 to 10:00am  Poster Presentations

10:00 to 11:00am  Panel Discussion in the Robinson Theatre
*Workforce Development in Ohio... Where do YOU fit in?*

11:00am to 12:00pm  Oral Presentations
-Auxiliary Gym and Room 020

12:00 to 1:30pm  Lunch in the Cafeteria and Keynote in the Robinson Theatre
*Dr. Rosalyn (Roz) Hobson Hargraves, Division Director for the Division of Undergraduate Education for the National Science Foundation (NSF)*

1:30 to 2:30pm  Oral Presentations
-Auxiliary Gym and Room 020

2:30 to 3:30pm  Poster Presentations
Workforce Development in Ohio...
Where do YOU fit in?
Panel Discussion—10:00 to 11:00 am—Robinson Theatre

The Workforce Development panel is composed of experts from the fields of energy, law, and manufacturing. Moderated by OAS staff, the panel aims to highlight the investment in Ohio's future labor and trends of growth across industries. Topics will aim to feature the promotion of entrepreneurial efforts, as well as educational and career tools. With their diverse work histories, the panelists will share their perspective on Ohio's most valuable resource: its people!

Panelists:

• Jane Harf, Green Energy Ohio
• Suzanne Sumner, Taft Law Firm
• Tony George, Techmetals Inc.
• Scott Koorndyk, Entrepreneurs’ Center

Thank you to the Academy’s Board of Trustees members Halle Miller, Martin English and Bill Beagle as well as OAS staff for organizing this panel.

Notes:

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11:00 AM – 12:00 PM - Room: Auxiliary Gym
Podium Session 1
Mathematics, System Software

11:00am  IMPLEMENTATION OF ALGEBRAIC STRUCTURES IN CRYPTOGRAPHY
First Author: Yalcin Karatas - University of Cincinnati Blue Ash College  karatazy@ucmail.uc.edu

11:15am  DETECTION OF ANOMALOUS AIRCRAFT STATE VIA LIVE+SIMULATED FLIGHT ACHINE LEARNING MODELS
First Author: Ahmad Waseem Ghauri - Ohio University  ag592521@ohio.edu
Advisor: Chad Mourning - mourning@ohio.edu

11:30am  CONVOLUTIONAL DEEP LEARNING FOR ATMOSPHERIC VISIBILITY ESTIMATION ON LOW COST DEVICES
First Author: Justin Murray - Ohio University  jm104018@ohio.edu
Advisor: Chad Mourning - mourning@ohio.edu

11:45am  NATURAL LANGUAGE APPROACH TO REGRESSION TEST GENERATION IN AVIATION VERIFICATION SOFTWARE: OUNPPM
First Author: Jacob Schaupp - Ohio University  js400421@ohio.edu
Advisor: Chad Mourning - mourning@ohio.edu

12:00pm  BEATMAP GENERATION
First Author: Braden Lounsbury - Ohio University  bl396918@ohio.edu
Advisor: Chad Mourning - mourning@ohio.edu

11:15 AM – 12:00 PM - Room: Robinson Theatre
Podium Session 2
Chemistry, Physics, Engineering Technology

11:15am  QUANTUM CHEMISTRY STUDY OF THE DECARBOXYLATION REACTION OF AMINOMALONIC ACID
First Author: Da Gao - Central State University  drgao8901@gmail.com

11:30am  (PHENYLIODOSYL)BENZENE TOSYLATE DIHYDRATE—A λ5-PERIODINANE SALT
First Author: TJ Smith - Walsh University  tsmith@walsh.edu

11:45am  CLASSICAL COSMOLOGY AND THE PROBLEM OF TIME IN QUANTUM GRAVITY
First Author: Mohannad Islaieh - Columbus State Community College  mislaieh1@student.cscc.edu

12:00pm  DETECTION OF DENIAL-OF-SERVICE ATTACKS USING MACHINE LEARNING MODELS
First Author: Alexander Nemecek - OHIO UNIVERSITY  nemoouacc21@gmail.com
Advisor: Chad Mourning - mourning@ohio.edu
11:00am  ASSESSMENT OF CORN ROOT LODGING USING RGB AND MULTISPECTRAL AERIAL IMAGERY  
First Author: Barry Allred - USDA - Agricultural Research Service (Retired) allred.13@osu.edu

11:15am  GROWING SEASON MAPPING OF SUBSURFACE DRAINAGE SYSTEMS WITH RGB AND 
MULTISPECTRAL AERIAL IMAGERY  
First Author: Barry Allred - USDA - Agricultural Research Service (Retired) allred.13@osu.edu

11:30am  COLDWATER CREEK CHLORIDE, HIGH CONCENTRATIONS IN A TRIBUTARY TO GRAND LAKE ST.  
MARYS  
First Author: Doug Kane - Heidelberg University dkane@heidelberg.edu

11:45am  CONCENTRATION AND DISTRIBUTION OF MICROPLASTICS IN WETLANDS OF WEST-CENTRAL OHIO  
First Author: Mitchell Link - Wright State University Link.73@wright.edu  
Advisor: Katie Hossler - katie.hossler@wright.edu

1:30pm  QUANTITATIVE ASSESSMENT OF WETLAND SOIL CONDITION: A COMPARISON OF ACCURACY AND 
EFFICIENCY  
First Author: James Retherford - Wright State University retherford.12@wright.edu  
Advisor: Katie Hossler - katie.hossler@wright.edu

2:00pm  CORRELATION BETWEEN WATER DEPTH AND DIVERSITY OF SHOREBIRDS AT STOPOVER HABITATS 
IN OHIO  
First Author: Taylor Shimek - Muskingum University tshimek@muskingum.edu  
Advisor: James Dooley - jdooley@muskingum.edu
1:30pm  THE NATURE OF SHRUB CHARACTERISTICS THAT INFLUENCE GRASSLAND BIRD RESPONSES ON A RECLAIMED MINE  
First Author: William Kline - Muskingum University wkline1@muskingum.edu  
Advisor: Danny Ingold - Ingold@muskingum.edu

1:45pm  THE DIVERSITY AND ABUNDANCE OF GRASSLAND AND FOREST-EDGE BIRDS ON A PARTIAL RECLAIMED SURFACE MINE  
First Author: Emma Jimison - Muskingum University ejimison1@muskingum.edu  
Advisor: Danny Ingold - ingold@muskingum.edu

2:00pm  OBLIGATE GRASSLAND BIRDS PRESENCE/ABSENCE TRENDS ON RECLAIMED SURFACE MINE LANDS  
First Author: Alexis Sharb - Muskingum University asharb1@muskingum.edu  
Advisor: Danny Ingold - ingold@muskingum.edu

2:15pm  MONARDA SUPPRESSES LPS-INDUCED INFLAMMATION IN MOUSE GRANULOSA CELLS  
First Author: Makkenzi Converse-Olson - Ohio Northern University m-converseolson@onu.edu  
Advisor: Jill Bennett-Toomey - j-bennett-toomey@onu.edu

Poster Sessions  
9:00 – 10:00 AM and 2:30 – 3:30 PM

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

Poster 01  ANALYSIS OF THE PORTRAYAL OF SCIENCE AT THE CREATION MUSEUM (PETERSBURG, KY)  
First Author: Lydia Adejumo - Capital University ladejumo@capital.edu  
Advisor: Dr. Kerry Cheesman - kcheesma@capital.edu

Poster 02  EXPLORING THE EFFECTS OF MIR-379-5P ON BREAST CANCER CELLS  
First Author: Fernanda Aiala - Denison University aiala_f1@denison.edu  
Advisor: Dr. Lina Yoo - yool@denison.edu

Poster 03  CANCER CELL COMPETITION PROJECT  
First Author: Mason Boatwright - University of Findlay boatwrightm@findlay.edu  
Advisor: Dr. Michael Edelbrock - edelbrock@findlay.edu

Poster 04  WHAT A WASTE: NITROGEN RUNOFF IN THE MAUMEE RIVER  
First Author: Ryanne Cimatu - Wright State University Cimatu.2@wright.edu  
Advisor: Silvia Newell - silvia.newell@wright.edu
Poster 05  MINERALOGICAL TRENDS IN THE UTICA SHALE AND POINT PLEASANT FORMATION, APPALACHIAN BASIN, OHIO  
First Author: Caleb Coppess - Miami University coppescn@miamioh.edu  
Advisor: Mark P. Krekeler - krekelmp@miamioh.edu, Brian S. Currie - curriebs@miamioh.edu

Poster 06  EFFECT OF LOW SALINITY ON SEA URMN DEVELOPMENT  
First Author: Serina Dweh - Denison University dweh_s1@denison.edu

Poster 07  DO ENVIRONMENTAL CUES AFFECT SOCIAL AND AGNOSTIC BEHAVIORS OF RED-BACKED SALAMANDERS?  
First Author: Courtney Fouke - Denison University fouke_c1@denison.edu  
Advisor: Geoff Smith - smithg@denison.edu

Poster 08  ANALYSIS OF RESULT CONSISTENCY OF DIRECT-TO-CONSUMER ANCESTRY REPORTS FOR IDENTICAL TWINS  
First Author: Katherine Freeland - Capital University kfreeland2@capital.edu  
Advisor: Kerry Cheesman - kcheesma@capital.edu

Poster 09  OPTIMIZING DASHBOARD DESIGN TO IMPROVE STUDENTS' MOTIVATION IN ONLINE LEARNING  
First Author: Fei Gao - Bowling Green State University gaof@bgsu.edu

Poster 10  EFFECTS OF HUMAN FOOT TRAFFIC ON ENVIRONMENTAL TETRACYCLINE RESISTANCE LEVELS  
First Author: Nathan Gibbs - Capital University ngibbs629@gmail.com  
Advisor: Kerry Cheesman - kcheesma@capital.edu

Poster 11  DETERMINATION OF ALTERED SOX7 VARIANT V379A C-TERMINAL PROTEIN-PROTEIN INTERACTIONS  
First Author: Elena Gioiello - Walsh University egioiell1@walsh.edu  
Advisor: Dr. Adam Underwood - aunderwood@walsh.edu

Poster 12  THE EFFECT OF WASTEWATER TREATMENT ON DISSEMINATION OF ANTIBIOTIC RESISTANT BACTERIA  
First Author: Hannah Houseknecht - Wilmington College hannah.j.houseknecht@wilmington.edu  
Advisor: Amanda Rollins - amanda_rollins@wilmington.edu

Poster 13  ASSESSING GENETIC VARIATION IN ASARUM ROSEI USING ISSR  
First Author: Jenna Howard - Otterbein University howard3@otterbein.edu  
Advisor: Brandon T. Sinn - sinn1@otterbein.edu

Poster 14  A SHORT-TERM WATER QUALITY ASSESSMENT OF THE UPPER MAUMEE RIVER WATERSHED UTILIZING DIATOM FRUSTULES  
First Author: Michaela Hunt - Defiance College mhunt002@defiance.edu  
Advisor: Sabrina Brown - sabrown@defiance.edu

Poster 15  NUTRIENT REDUCTIONS OF RESTORED GRAND LAKE ST MARYS WETLANDS  
First Author: Stephen Jacquemin - Wright State University - Lake Campus stephen.jacquemin@wright.edu
Poster 16  ALPHA-FOLD PROTEIN STRUCTURES COMPARED TO HUMAN-CURATED HOMOLOGY MODELS
First Author: Dustin Kreiner - Walsh University dkreiner1@walsh.edu
Advisor: Thomas M. Freeland - tfreeland@walsh.edu

Poster 17  CONSERVATION GENETIC ASSESSMENT OF DECLINING GRAY FOXES (UROCYON CINEREOARGENTEUS) IN OHIO
First Author: Megan Lenoy - Capital University mlenoy@capital.edu
Advisor: Christine Anderson - canders2@capital.edu

Poster 18  DIET COMPOSITION OF YELLOW PERCH AND WHITE PERCH IN THE CENTRAL BASIN OF LAKE ERIE
First Author: Sawyer Lorentz - Thomas More University sqlore32@thomasmore.edu
Advisor: Doug Kane - dkane@heidelberg.edu

Poster 19  THE EFFECTS OF AMPICILLIN ON THE GUT MICROBIOME OF LABORATORY MICE, MUS MUSCULUS
First Author: Destiny Martin - Wilmington College destiny.d.martin@wilmington.edu
Advisor: Amanda Rollins - amanda_rollins@wilmington.edu

Poster 20  WGA LECTIN STAINING IN SKELETAL MUSCLE AFTER SIMULATED PARTIAL GRAVITY
First Author: Nate Mazza - Xavier University mazzan1@xavier.edu
Advisor: Kelly Crowe - crowek7@xavier.edu

Poster 21  HOW QUICKLY DERMESTID BEETLES (DERMESTES FRISCHII) CONSUME DESICCATED CHICKEN UNDER DIFFERENT DAYLIGHT CYCLES
First Author: Kelsey Merriman - Wilmington College kelsey.l.merriman@wilmington.edu
Advisor: Amanda Rollins - amanda_rollins@wilmington.edu

Poster 22  A DATA MINING METHOD FOR FINDING HUMAN GENE VARIANTS CONTRIBUTING TO DISEASE CONDITIONS
First Author: Clare Mewhinney - Walsh University cmewhinn1@walsh.edu
Advisor: Thomas M. Freeland - tfreeland@walsh.edu

Poster 23  CHANGING CARDIOVASCULAR AND RESPIRATORY RESPONSES TO VARYING ALTITUDE CONDITIONS IN ECUADOR
First Author: Christina Mickelson - Capital University cmickelson2@capital.edu
Advisor: Dr. Kerry Cheesman - kcheesma@capital.edu

Poster 24  EXPRESSION OF NATIVE AND VARIANT SOX18 PROTEINS FROM PH6HCT-HALOTAG T7/SOX18 PROKARYOTIC CONSTRUCTS
First Author: Mike Mitchell - Walsh University mmitchel2@walsh.edu

Poster 25  ASSESSING NUTRIENT LOAD REDUCTION IN A CONSTRUCTED WETLAND: A CASE STUDY FROM BROOKS PARK
First Author: Justin Myers - Wright State University justin.myers@wright.edu

Poster 26  UNDERSTANDING THE STRUCTURE OF GATA-2 AND ITS L359V VARIANT WITH RESPECT TO CHRONIC MYELOID LEUKEMIA
First Author: Martin Nadwodney - Walsh University mnadwodn1@walsh.edu
Advisor: Thomas M. Freeland - tfreeland@walsh.edu
Poster 27  ALGAL ABUNDANCE AND TOXIN CONCENTRATIONS IN GRAND LAKE ST. MARYS
First Author: Silvia Newell - Wright State University silvia.newell@wright.edu

Poster 29  UTILIZING PARALLELISM AND MULTITHREADING FOR ITERATIVE REFINEMENT OF ANTENNA PATTERN VISUALIZATION
First Author: Brady Phelps - Ohio University bp309420@ohio.edu
Advisor: Dr. Chang Liu - liuc@ohio.edu

Poster 30  USING MACROINVERTEBRATES AS BIODINDICATORS OF WATER QUALITY IN CAESAR CREEK AND ITS SURROUNDING TRIBUTARIES TO ANALYZE THE EFFECTS OF ANTHROPOGENIC ACTIVITY ON STREAM HEALTH
First Author: Taylor Powell - Wilmington College taylor.r.powell-abbinate@wilmington.edu
Advisor: Amanda Rollins - amanda_rollins@wilmington.edu

Poster 31  EMERALD ASH BORER (AGRILUS PLANIPENNIS) LARVAE INFESTATION ASSESSMENT IN A NORTH CENTRAL OHIO WETLAND
First Author: Jessi Raubenolt - Ashland University jessiraubenolt@gmail.com
Advisor: Patricia Saunders - psaunder@ashland.edu

Poster 32  CAPTURE AND EVALUATION OF FREE-FLOATING MICROPLASTICS IN THE UPPER MAUMEE WATERSHED, OHIO
First Author: Autumn Saddler - Defiance College asaddler001@defiance.edu
Advisor: Sabrina Brown - sabrown@defiance.edu

Poster 33  MISSION REBUILD WORKFORCE IN OHIO THROUGH ADV. MANUFACTURING RESEARCH & TRAINING OF K14 TEACHERS
First Author: MD Sarder - Bowling Green State University msarder@bgsu.edu

Poster 34  CHARACTERIZATION OF THE FIRST COMPLETE ASARUM (ASARACEAE) PLASTOMES
First Author: Cassidy Shaver - Otterbein University shaver1@otterbein.edu
Advisor: Brandon Sinn - sinn1@otterbein.edu

Poster 35  ESTABLISHING A LONG-TERM ASSESSMENT STUDY ON WATER QUALITY OF THE RIVERS AROUND DEFIANE, OHIO USA
First Author: Mollie Sorrell - Defiance College msorrell@defiance.edu

Poster 36  LONICERA MAACKII INCREASES ABUNDANCE AND DIVERSITY OF SHRUB-DWELLING ARTHROPODS AND BIRDS
First Author: Linda Tucker Serniak - Defiance College ltuckerserniak@defiance.edu

Poster 37  EVALUATING SITES FOR THE PRESENCE OF SPOTTED LANTERNFLY INFESTATION IN THE NORTHERN OHIO VALLEY
First Author: Melody Vetrovec - Franciscan University of Steubenville mvetrovec001@student.franciscan.edu
Advisor: Dr. Chris Payne - cpayne@franciscan.edu

Poster 38  ANALYZING DIATOM COMMUNITIES ACROSS DIFFERENT COASTAL ENVIRONMENTS OF LAKE ERIE
First Author: Hallie Webb - Defiance College hwebb001@defiance.edu
Advisor: Sabrina Brown - sabrown@defiance.edu
Poster 39  COMPARISON OF INSECT AND SPIDER BIODIVERSITY BETWEEN TWO SOLAR ARRAYS  
First Author: Sophia Yager-Motl - Denison University yagerm_s1@denison.edu

Poster 40  A COMPARATIVE STUDY OF THE ACCURACY OF GLUTEN-FREE FOOD PRODUCT LABELING OF EUROPEAN AND MIDDLE EAST  
First Author: Daryna Zaitseva - Capital University dzaitseva@gmail.com  
Advisor: Kerry Cheesman - kcheesma@capital.edu

Poster 41  A LATE CARBONIFEROUS MARINE VERTEBRATE FAUNA OF THE PORTERSVILLE SHALE (CONEMAUGH GROUP) OF OHIO  
First Author: Daniel Cline - Wright State University cline.74@wright.edu  
Advisor: Charles Ciampaglio - chuck.ciampaglio@wright.edu
Save the Date

Mark your calendars to join us for the 131st
Ohio Academy of Science Annual Meeting
Kent State University
April 6, 2024

https://www.oaosci.org/annual-meeting/

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