THE OHIO STATE UNIVERSITY

EDWARD F. HAYES

GRADUATE RESEARCH FORUM

March 4, 2022
# TABLE OF CONTENTS

**WELCOME REMARKS** ........................................................................................................... 1

**REMEMBERING Edward F. Hayes** ......................................................................................... 4

**COUNCIL OF GRADUATE STUDENTS: Who We Are** .......................................................... 5

**ORAL PRESENTATIONS** ........................................................................................................ 7

- **THE ARTS** ........................................................................................................................ 7
- **BIOLOGICAL SCIENCES** .................................................................................................... 8
- **BUSINESS** .......................................................................................................................... 9
- **EDUCATION AND HUMAN ECOLOGY** ............................................................................. 10
- **MATERIAL SCIENCE AND ENGINEERING** ................................................................... 11
- **FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES** .................................. 12
- **HEALTH SCIENCES** ......................................................................................................... 13
- **HUMANITIES** .................................................................................................................... 14
- **MATHEMATICAL AND PHYSICAL SCIENCES** ............................................................... 15
- **SOCIAL AND BEHAVIORAL SCIENCES** ......................................................................... 16
- **STEAM 1** .......................................................................................................................... 17
- **STEAM 2** ........................................................................................................................... 18

**POSTER PRESENTATIONS** .................................................................................................... 20

- **BIOLOGICAL SCIENCES** .................................................................................................. 20
- **EDUCATION AND HUMAN ECOLOGY** .......................................................................... 22
- **ENGINEERING** ................................................................................................................ 24
- **FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES** .................................. 25
- **HEALTH SCIENCES** ......................................................................................................... 26
- **HUMANITIES** .................................................................................................................... 27
- **MATHEMATICAL AND PHYSICAL SCIENCES** ............................................................... 28
- **SOCIAL AND BEHAVIORAL SCIENCES** ......................................................................... 29

**JUDGES** ............................................................................................................................... 32

**2021 ORAL PRESENTATION WINNERS** ............................................................................... 34

**2021 POSTER PRESENTATION WINNERS** .......................................................................... 35
Welcome Remarks

Welcome to the 36th Annual Edward F. Hayes Graduate Research Forum at The Ohio State University. This unique collaboration between the Council of Graduate Students, the Graduate School, and the Enterprise for Research, Innovation and Knowledge, with organizational support from the Office of Student Life, enables Ohio State graduate students not only to present their cutting-edge research, but also to develop as scholars and professionals. We are pleased that you have joined us to celebrate the extraordinary graduate research that takes place at our great institution.

While it has continued to be a tough year that students at Ohio State have collectively experienced due to the ongoing novel coronavirus pandemic, we believe that this forum showcases the very best of graduate student perseverance in research. Today, we will be recognizing our top graduate students across multiple disciplines by awarding nearly $14,000 in cash prizes to support their research and long-term professional development.

The Hayes Forum Committee is extremely grateful to Mrs. Ann Hayes and her family for their continued support of Ohio State graduate student research endeavors. We also thank our faculty members who unsparingly gave their valuable time to support Ohio State graduate students by judging abstracts and the presentations and posters that will be presented today. The forum, organized for and by students, would not be possible without the generous support of Mrs. Hayes, our judges, and our volunteers.

Additionally, we would like to express our #BuckeyeLove and gratitude by thanking a few extraordinary Buckeyes in particular: Kerry Hodak from Academic Partnership and Career Success and Teresa Kempton-Dray, from Student Life Student Activities, for their knowledge, advice, and unwavering dedication to graduate students and the Forum; the Office of Student Life Marketing team; our speakers, for dedicating their time to make the forum a more enriching experience; and the wonderful Hayes Committee for their dedication in making this event a success. Finally, a special thank you to the Graduate School, Enterprise for Research, Innovation and Knowledge, and Office of Student Life for their continued support of graduate students.

The abstracts and presentations this year speak to a vibrant and diverse research community that seeks to address some of today’s most pressing issues. The caliber and range of scholarly work is truly inspiring and a privilege to learn from. Irrespective of your role today, we hope that what we have planned will provide you with a memorable experience. On behalf of the Council of Graduate Students, we thank you all for your unwavering and continued support of graduate students at The Ohio State University.

Abby Grieff
Vice President, Council of Graduate Students
College of Public Health and College of Social Work
Chair, Hayes Research Forum
Dear Hayes Forum Attendees,

Welcome to the 36th Annual Edward F. Hayes Graduate Research Forum at The Ohio State University. This unique collaboration between the Council of Graduate Students, the Graduate School, and the Enterprise for Research, Innovation and Knowledge Office of Research, with organizational support from the Office of Student Life, enables Ohio State graduate students not only to present their cutting-edge research, but also to develop as scholars and professionals.

We are pleased that you have joined us to celebrate the extraordinary graduate research that takes place at our great institution.

Sincerely,

Grace Jinliu Wang
Executive Vice President
Research, Innovation and Knowledge Enterprise
Dear Hayes Forum Attendees,

Welcome to the 36th annual Hayes Graduate Research Forum. This collaboration between The Ohio State University’s Council of Graduate Students, the Graduate School, and the Enterprise for Research, Innovation and Knowledge provides a forum to celebrate your research accomplishments, present the findings of that research to the broader research community, and facilitate research collaboration across campus.

As graduate students, you represent the next generation of researchers. Your creativity, ability to identify and solve problems, and drive to make and share new knowledge are crucial to the prosperity and well-being of this and future generations. Your work will help to ensure the vitality of the nation and world.

The Hayes Forum is also an occasion to forge connections and collaborations in meaningful new research endeavors. We encourage you to take advantage of this opportunity to meet and learn from your colleagues across Ohio State. We hope that you will be reinvigorated by your experience, and we wish you the very best in the presentation of your research.

Alicia L. Bertone, DVM, PhD
Vice Provost for Graduate Studies and Dean of the Graduate School
ENGIE-Axium Endowed Dean’s Chair
Professor, Veterinary Clinical Sciences
Dr. Hayes was born on September 8, 1941, in Baltimore, Maryland. After receiving a Baccalaureate degree from the University of Rochester and Master’s and Doctorate degrees from Johns Hopkins University, he joined the faculty at Rice University. Since July 1991 he served as Vice President for Research at The Ohio State University and Professor of Chemistry. He was an exemplar of the highest ideals for excellence in teaching, scholarship, and service who continued to teach chemistry and maintained an active, productive research program during his tenure as Vice President for Research.

Dr. Hayes was an internationally distinguished scientist whose particular research interest was in molecular electronic structure theory, molecular scattering theory, and parallel computing methods. Dr. Hayes created the Undergraduate Research Forum, strongly supported the Graduate Research Forum and spearheaded the launching of the Science and Technology Campus (formerly Research Park). He served in several prominent administrative roles for the National Science Foundation and the Office of Management and Budget. In addition, he served on several advisory committees and chaired the National Science Foundation Task Force on the Future of the Supercomputer Centers Program.

Vice President Hayes served in leadership roles in scientific societies, including extensive work for the American Chemical Society, the American Physical Society, and as a Fellow of the American Association for the Advancement of Science. Dr. Hayes also gave exemplary service to several local and statewide advisory boards, including the Ohio Science and Technology Council, The Edward Orton Jr. Ceramic Foundation, and the Ohio Aerospace Institute.

Dr. Hayes was highly respected for the principled, intelligent, thoughtful and positive manner in which he approached all matters before him; he was frequently sought out for his wise counsel; and he extended grace, kindness, and appreciation to all who interacted with him. Dr. Hayes set a high standard in both his professional and personal life that will continue to be a model for us all. He continues to be sadly missed by this university community and by those who were privileged to know him as a colleague and a friend.
The Council of Graduate Students (CGS) is the student government for graduate students at The Ohio State University. Since 1955, the Council has represented the views of graduate students to university, local, state, and federal officials. CGS also provides a forum for graduate students to discuss and act upon issues. CGS promotes and provides academic, administrative, and social programs for graduate students and the greater university community. The organization is comprised of an officer core, executive committee, 10 senators, and over 100 delegates who collectively represent in excess of 10,000 graduate students in the 200 programs across the University. The purpose of the Council of Graduate Students is to effectively advocate and program to ensure the OSU graduate experience is the best it can be.

External Advocacy

To ensure that the graduate views are reaching the appropriate audiences, CGS appoints graduate students to serve on over 100 university-wide and senate committees. CGS also elects 10 graduate students to the University Senate, the official representative body for faculty, administration, and students, chaired by the University President.
In addition to the Hayes Forum, CGS has a number of other programs that it oversees:

The Ray Travel Award
The Edward J. Ray Travel Award for Scholarship and Service (Ray Award) encourages and enables graduate students across the University to participate in professional conferences, both in their respective fields and in the broader academic community, by reimbursing or partially reimbursing the expenses incurred by graduate students during travel to conferences and meetings to present original research.

The Career Development Grant
The Career Development Grant program encourages graduate students to prepare for placement into their chosen field. Students will submit their Career Development Grant Application to the Council of Graduate Students (CGS) for an opportunity to receive an award to defray costs associated with the development of their careers.

The Global Gateway Research Abroad Grant
The Global Gateway Graduate Student Research Abroad Grant encourages and promotes the professional and academic development of graduate researchers at The Ohio State University by providing financial support that allows students to undertake research abroad. Student also assist the university to pursue its strategic international goals by creating and bolstering relations with universities and other institutions across the world.

The Engaged Scholar Grant
The Council of Graduate Students (CGS), in partnership with the Office of Outreach and Engagement, Office of Student Life, Office of Research, and Ohio State University Extension (OSUE) established Engaged Scholar Grant in autumn of 2020.

The Engaged Scholar Grant incentivizes graduate and professional students to undertake community-engaged research or community-engaged projects, in collaboration with a community partner, that address a specific need or problem within the community (in-state, out-of-state, and international). Graduate and professional students may apply for grants ranging from $500 to $1,500.
Adewale Adenle, Arts Administration, Education & Policy
Invoking authentic engagement with traditional and spiritual African objects in American art museums

Yujie Chen, Dance Studies
Choreographing
Queer Social Bodies: A Queer Reading of Chinese Choreographer Hu Shenyuan’s Cross-Stage Practices

Alesondra Christmas, Dance Studies
Dancing Abroad in 2020: OSU Dance Brazil

Simone Downie, Digital Animation and Interactive Media
Beyond the Text: Encouraging Learners to Explore Narrative in Multimodal Ways Through Gameplay to Improve Reading Comprehension and Motivation

Ishmael Laryea Konney, Dance Studies
By the Fireside: Making contemporary dance a communal experience through Storytelling

Nicole Lawson, Dance Studies
Uncivilized Nation

Kayla Lehman, Digital Animation and Interactive Media
Designing an animation about mental health inspired by the imagery of Surrealism

Bhumi Patel, Dance Studies
Horizons of Liberation: Unlearning, Hybridity, and Relationality as Decolonial Approaches to Movement-based Performance

Daniel Shellenbarger, Arts Administration, Education, & Policy
Thinking With Artists

Quianna Simpson, Dance Studies
Cultural keys to success: African Dance as neo traditional Rite of Passage programming
Becca Biltz, Neuroscience Graduate Program
Neuron selective tagging, tracing, and capture reveals unique pattern of activation within the prefrontal cortex and hippocampus following social stress

Thinh Dinh, Biomedical Science Graduate Program
Dissecting the role of Group 3 Innate Lymphoid Cells in Acute Myeloid Leukemia

Eric Hantz, Biophysics
Actives-Based Receptor Selection Strongly Increases Success Rate in Structure-Based Drug Design and Leads to Identification of Novel Cancer Inhibitors

Athena Howell, Neuroscience Graduate Program
Aberrant Brain Activation and Behavior During Self-Evaluation in Depression

Jonathan Packer, Neuroscience Graduate Program
Chronic Inflammation and Cognitive Deterioration after Diffuse Brain Injury are Dependent on Activation of the Stimulator of Interferon Genes (STING) and Increased Type I Interferon Signaling.

Oscar Rosas Mejia, Biomedical Science Graduate Program
Mice infected with Mycobacterium tuberculosis are resistant to secondary infection with SARS-CoV-2

Ashweta Sahni, Chemistry and Biochemistry
Cellular Entry Mechanisms of Peptides and Proteins

Morgan Schrock, Biomedical Science Graduate Program
MKLP2 function in early mitosis ensures proper chromosome alignment and establishes a novel antimitotic approach for glioblastoma

Nicole Walters, Chemical and Biomolecular Engineering
Inter-Leukocyte Communication and Migration During Inflammation

Lynde Wangler, Neuroscience Graduate Program
Amplified gliosis, cognitive deficits, and interferon-associated inflammation in aged mice following diffuse TBI
Nastaran Alimardaninaghani, Business Administration and Management
Signal Congruency in Initial Coin Offerings: A Text-Based Analysis of White Paper Language and Twitter Sentiment

Sang Hoon Han, Business Administration and Management
Does Persisted HR Investment Amid Financial Distress Pay Off? The Divergent Consequences of Interplay Between Financial Pressure and HR System's Strategic Fit

Jianna Jin, Marketing
Conversations with Machines: The Impact of Self-presentation Concerns on Consumer Engagement when Chatting with Chatbots vs. Human Service Providers

Aditya Ketkar, Management and Human Resources
How Innovative Strategies Help Small and Medium-sized Firms Overcome Institutional Voids

Hanho Lee, Management and Human Resources
Regulatory Focus and Employee Turnover Intention: A Network Perspective

Jason Sigler, Management and Human Resources
Better Judgment, Better Resources: The Effect of Cognitive Biases in Strategic Factor Markets

Andrew Zeiser, Logistics
The Fast and the (Not So?) Furious: Communication of Disruption Information to Supply Chain Partners
ORAL PRESENTATIONS: EDUCATION AND HUMAN ECOLOGY

Kimiko Ching, Educational Psychology
Making Mistakes: The Relationship Between Familial Ethnic Socialization and Students’ Achievement Goals in Predicting Students’ Beliefs About Errors

Colby Gregg, Agricultural Education
“I wanted to be the teacher I needed” Experiences of lesbian and gay school-based agriscience teachers

Jingwen He, Learning Technology
The Impact of Affection Supportive Feedback on Students’ Learning Performance with Different Motivation Levels

Nathan Helsabeck, Quantitative Research Evaluation and Measurement
A Comparison of Methods to Account for Annual Classroom Change in the Estimation Student Achievement

Grace Jue Yeon Kim, Multilingual Language Education
Language Socialization in a Two-Way Immersion Classroom During the COVID-19 Pandemic: Translanguaging of Spanish-English Bilingual Learners and their Teachers

Ho-Chieh Lin, STEM Education
Promoting Mathematical Justification through Child-created Videos: Elementary children learning fractions

Adriana Martinez, Educational Psychology
The Social Influences on Early Adolescents’ Attitudes Towards Healthy Sexual Behaviors

Eric Olsen, Consumer Sciences
Exploring Negative Home Equity in Military Households

Andrew Perry, Educational Psychology
Does cheating spread? The relation between observing academic dishonesty among peers and the self-reported cheating behaviors of undergraduate students

Wahyu Setioko, STEM Education
Parents’ View of Science and Indonesian Parent-Child Science Talk Variations at Home
Devleena Das, Biomedical Engineering
Injectable nanofiber powder mediates enhanced human adipose tissue engraftment and volume retention.

Faiz Nisar Khan, Chemical and Biomolecular Engineering
Rapid mixing in microreactor for controlled nanoparticle development

Sunny Kwok, Biomedical Engineering
3D Peripapillary Retina Thickness Mapping using High-Frequency Ultrasound

Luke Lemmerman, Biomedical Engineering
Pancreatic Islet-like Cells Derived from Fibroblasts using Non-Viral Direct Cell Reprogramming

Lilibeth Ortega-Pineda, Biomedical Engineering
Neurogenic designer extracellular vesicles modulate pro-neuronal cell responses and improve gene targeting to the brain

Ana Panic, Biomedical Engineering
In-Situ Deployment of Engineered Extracellular Vesicles into the Tumor Niche via Myeloid-Derived Suppressor Cells

Hyeonwoo Park, Food Science and Technology
Application of superheated steam to inactivate Geobacillus stearothermophilus spore in flour on different food processing surfaces: Role of the inversion temperature

Shraavya Rao, Chemical and Biomolecular Engineering
Selective H2S/CO2 Separation using Sterically Hindered Amine Membranes

Maria Angelica Rincon-Benavides, Biophysics Graduate Program
Designed extracellular vesicles loaded with pro-vascular transcriptions factors as a therapeutic strategy for skin wounds

Nina Tang, Biomedical Engineering
Non-Viral Reprogramming of Diseased Intervertebral Disc Cells via Engineered Extracellular Vesicles Reverts Pathogenesis of Low Back Pain: An In-Vivo Study
ORAL PRESENTATIONS: FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Ningzhu Bai, Environment and Natural Resources
Investigating the origin and host ecology of Borrelia burgdorferi in Ohio

Ariel Garsow, Food Science and Technology
Dietary and socioeconomic risk factors for fumonisin exposure among women of reproductive age in 18 municipalities in Guatemala from 2013 to 2014

Asmita Khanal, Food, Agricultural and Biological Engineering
Evaluating the techno-economics of whole-plant corn logistics for biobased industries

Hannah Maggard, Animal Sciences
Condition of surplus dairy calves at livestock dealers in Ohio: A cross-sectional study

Jack McCoy, Horticulture and Crop Science
Environment of Origin and Domestication Affect Seed Germination, Root Morphology, and Response to Water Deficit in Chile Pepper (Capsicum annuum L.)

Shreya Nuguri, Food Science and Technology
Portable Sensors for in-Field Assessment of flavor traits in Fresh Market Tomatoes

Sochina Ranjit, Veterinary Medicine
Identification of Novel Small Molecule Growth Inhibitors to Control Bacterial Spot Disease on Pepper Plants

Kelsey Ryan-Simkins, Environment and Natural Resources
Locating urban farms: A spatial analysis of urban agriculture in Ohio neighborhoods

Sarah Scott, Entomology
Chromium contamination threatens bumble bee foraging efficiency in cities

Yumin Xu, Food Science and Technology
Does shell egg pasteurization change the virulence of Salmonella Enteritidis?
ORAL PRESENTATIONS: HEALTH SCIENCES

David Danesh, Public Health
Pediatric Oral Health Equity

Daniel Gilmore, Health and Rehabilitation Sciences
“Giving the patients less work”: Recommendations to improve virtual visit telehealth processes at an autism-specific primary care clinic

Manuja Gunasena, Comparative Veterinary Medicine
Immune determinants of cardiometabolic risk in severe COVID-19 patients who had pre-existing type-2 diabetes mellites (T2DM)

Debasmita Mukherjee, Molecular, Cellular and Developmental Biology
Assessing the role of ATF4 dependent signaling in limiting pancreatic cancer by tomatidine

Kazune Pax, Oral Biology
Sources of the Placental Microbiome in Full-term, Pre-term, and Pre-eclampsia

Janell Pisegna, Health and Rehabilitation Sciences
Examination of Occupational Therapy Poststroke Depressive and Anxiety Symptom Management in Inpatient Rehabilitation

Lorien Salyer, Biomedical Sciences Graduate Program
Troponin I Ser-150 phosphorylation increases systolic heart function without detrimental effects

Kimberley Scott, Health and Rehabilitation Sciences
Parent engagement in home-based, parent-delivered pediatric rehabilitation for infants

Jessica Sherman, Nursing
CRP is Associated with Depression Symptom Severity and This Relationship is Partially Moderated by Sexual Identity Among Bisexual Individuals

Jing Zhang, Nursing
Increasing Patient Activation of Black American Men in a Lifestyle Cardiovascular Health Intervention
ORAL PRESENTATIONS: HUMANITIES

**Angela Acosta, Iberian Studies**  
Memorializing the Spanish Avant-Garde: The Gendered Dynamics of Inclusion in Homages to the Generation of 1927

**Andrew Bishop, English**  
Cather and Possession

**Karin Flora, History of Art**  
Valerio Belli’s Crystal Crucifix: Creating Generative Forms of Mysterious Knowledge

**Keira Hambrick, English Rhetoric, Composition, Literacy**  
Prior Knowledge and Transfer of Learning in First Year Composition

**Ives Hartman, History**  
Dairy and Human-Animal Relationships

**Sydney Heifler, History**  
Even Love Dies: Re-imagining the Post-War Infatuation with Romance Comics

**Maghan Jackson, Women’s, Gender & Sexuality Studies**  
Reading Too Much Into It: Queer Fanfiction, Utopian Futurity, and Representation that Matters

**Victoria Paige, History**  
The Rouged Army

**Henrique Yagui Takahashi, Latin American Cultural & Literary Studies**  
Racial Entanglements: Orientalism & Anti-Blackness in Brazil

**Yanzhuang (Gillian) Zhang, History of Art**  
Versatile Stones, Virtuous Emperor: Pictorial Stelae in the Qianlong Period (1736-1795)
ORAL PRESENTATIONS: MATHEMATICAL AND PHYSICAL SCIENCES

Allison Chartrand, School of Earth Sciences
Examining the relationships between basal channels and ice shelf structural evolution with repeat, high-resolution elevation models and altimetry

Emily Hruska, Chemistry and Biochemistry
Understanding the role of defects in photocatalysis: XUV spectroscopy on O vacancy-doped anatase TiO2

Dustin Nguyen, Physics
The Physics and Phenomenology of Galactic Starburst Winds

Radoslav Pavlovic, Chemistry and Biochemistry
Molecular Baskets to the Rescue: Towards Precise Drug Delivery and Selective Removal of Toxic Molecules

Anna Poptic, Chemistry and Biochemistry
Synthetic heterobimetallic iron(II)/manganese(II) complexes as models for the enzymes R2lox and R2c

Anna Seffernick, Biostatistics
A Bayesian Stereotype Model for Feature Selection in High-dimensional Genomic Data

Sean Steinke, Chemistry and Biochemistry
Prostate Cancer Treatment with Light-activated Ruthenium Drugs: Drug Cooperativity and Enzyme Inhibition

Danielle Voss, Food Science and Technology
Novel Naturally Derived Food Colorants: The Thermal Stability of Pyranoanthocyanins and Identification of their Degradation Compounds

Huma Yusuf, Physics
Exploring a quantum-information-relevant magnonic material: Ultralow damping at low temperature in the organic ferrimagnet V[TCNE]x

Quansong Zhu, Chemistry and Biochemistry
Resolving the Game Changer for Electrocatalytic CO2 Reduction: Solvation-Induced Electric Field
Yesenia Alvarez Padilla, Social Work
Which parents or caregivers of middle-school children are interested in educational modules on financial conversations?

Andrew Bahrou, Environmental Social Sciences
Assets or Eyesores? Community perceptions of Blueprint Columbus rain gardens

Jacob Coutts, Quantitative Psychology
Contrasting contrasts: Reasons why and ways to compare indirect effects in mediation models

Allison Glasser, Public Health
Cigarillo Characteristics and Co-Use of Cigarillos and Cannabis: A Structural Equation Modeling Approach

Ian Harwood, Sociology
Justifying Bad Jobs

Donggyu Lee, City and Regional Planning
The Demise of “Advocacy Planning” in Community Design?: A Content Analysis of the Mission Statements of Community Design Centers (CDCs) in the U.S.

Annelise Madison, Clinical Psychology
You Are What You Eat: Dietary Quality Predicts Inflammation, Gut Leakiness, and Depressive Symptoms

Samuel Murphy, Clinical Psychology
Who Benefits from Cognitive and Behavioral Depression Treatments

Morgan Ross, Communication
Solitude and Mobile Use

Shuyuan Yu, Psychology
Conceptual prerequisites for analogical reasoning: The case of proportions
Abdelhai Ben Ali
Monte Carlo simulation of MRI-guided proton therapy

Wendson Barbosa
Spatiotemporal Dynamics Prediction With Next-Generation Reservoir Computing

loic Deblais
In Vitro / In-Silico Modeling Facilitates the Discovery of Anti-Bacterial Compounds With Predictable Physico-Chemical Properties in Large Random Libraries

Kathryn Kroeper
Developing the Social Identity Threat Concerns (SITC) Scale: An Identity-Flexible, Contextually Sensitive Self-Report Measure of Threat

Sanghee Lee
An assessment of malalignement factors using artificial intelligence

Shaoying Ma
Expanding E-Liquid Flavor Wheel: Classification of Emerging E-Liquid Flavors in Online Vape Shops

Jin Hong Mok
Microfluidic studies of microcolonization of Escherichia coli O157:H7 on leafy green-mimicking features in dynamic environments

Meijian Wang
Bushy cell dendrites degenerate during age-related hearing loss

Amaris Williams
A Short Diet Screener Assesses Cardiovascular Disease Risk at Health Fairs
Ting-Heng Chou
Quantification of skeletal muscle perfusion using dynamic 18F-NaF PET/CT imaging: Experimental application in pigs with hindlimb ischemia and translation to patients with peripheral arterial disease

Federico Colombo
Extracellular Vesicles (EVs) are short-range shuttles for intercellular communication

Kirti Kaul
Early cessation of breastfeeding leads to potentially pathogenic metabolic signature in murine mammary glands

Mahsa Kheradmandi
Generation of Tumor-Reactive Peripheral Blood Lymphocytes by Immune-Enhanced Organoids

Fatma Mohamed
Prevention of Hypophosphatasia-Associated Dentoalveolar Defects Using AAV8 Mediated Gene Therapy

June Yoon, Moleculare
Characterizing the functional role of SLC35A2 in developing brain and Type 1 focal cortical dysplasia (FCD)

Caymen Novak
Lung Fibroblast Phenotypes are Regulated by Micro-Environmental Culture Conditions

Kate Ormiston
Impact of abrupt and gradual involution on systemic glucose metabolism and link to breast cancer risk

Pratik Shriwas
In vitro human CYP450 activation/inhibition by organophosphorus pesticides and nerve agent surrogates using fluorometric based assays
Julian Aldana, The Ohio State Biochemistry Program
Multi-omics networks shape epigenetic dysregulation effects in leukemia and lymphoma

Erin Boulanger, Biomedical Sciences Graduate Program
Sugars as Drugs: Exploiting Sugar Metabolism in Bacteria

Rachel Brown, Biomedical Sciences Graduate Program
Regulators of Type III Cytokines Identified by Genome-wide CRISPR Inhibition Screens

Shurui Cai, Biomedical Science Graduate Program
ERK Inhibition Expands Cancer Stem Cell Population in NSCLC by Promoting Slug-Mediated Epithelial-to-Mesenchymal Transition

Kayla Cross, Microbiology
Nutritionally unbalanced diets impact gut microbiome diversity and composition yet maintains a functionally redundant profile

Meretta Hanson, Neuroscience Graduate Program
The development of neural circuits in the hippocampus requires the transcription factor Satb2.

Hsiang-Yin Hsueh, Molecular Cellular and Developmental Biology
Dexamethasone-induced Ras-related Protein 1 Could Serve as a Novel Therapeutic Target for Pancreatic Ductal Adenocarcinoma

Daniela Jimenez-Harrison, Neuroscience Graduate Program
DJ-1 decreases tau aggregation propensity through interaction with monomer

Aaren Kettelhut, Biomedical Science Graduate Program
Estrogen Exposure May Enhance Toll-like Receptor 4 Activation in HIV Infection

Dominique Magistrado, Entomology
The effect of diet on immune defense in Aedes aegypti mosquitoes

Gargi Mishra, Molecular Cellular and Developmental Biology
Assessment of White Adipose Tissue Sensory Nerve Function.

Stephanie Muscat, Biomedical Sciences Graduate Program
Short-term consumption of a high-fat diet makes post-operative cognitive dysfunction persistent in aged male rats
POSTER PRESENTATIONS: BIOLOGICAL SCIENCES

Nicholas Nastasi, Environmental Science Graduate Program
Modeling Fungal Growth and Relative Humidity in Dust Collected from the International Space Station

Megan Pino, Neuroscience Graduate Program
Variants in the ALS-associated gene KIF5A affect RNA splicing and structure

Kelly Rich, Neuroscience Graduate Program
ALS-associated KIF5A mutation causes delayed and decreased recovery following sciatic nerve crush.

Shridhar Sanghvi, Molecular Cellular and Developmental Biology
Role of Chloride homeostasis in Cardiac Ischemic-Reperfusion injury

Ayesha Seth, Chemistry
Gold Nanoparticle (AuNP)-based Mass Spectrometry Signal Amplification for Asymptomatic Malaria Diagnosis achieved on Microfluidic Paper-Based Analytical devices

Zoe Tapp, Neuroscience Graduate Program
Altered Stress Responses to REM Sleep Disruption Promote Inflammation After Traumatic Brain Injury

Justin Thomas, Pharmaceutical Sciences
The neonatal Fc receptor is elevated in monocyte-derived immune cells in pancreatic cancer

Kevin Walsh, Biophysics
Magnetic Mapping of Iron using Magnetic Force Microscopy
POSTER PRESENTATIONS: EDUCATION AND HUMAN ECOLOGY AND HUMANITIES

Joseph Antonides, STEM Education
Toward Understanding and Supporting Undergraduate Students’ Conceptual Progress for Enumerating Permutations: Findings from a Computer-Mediated Design Experiment

Abena Anyidoho, Quantitative Research, Evaluation and Measurement
Investigating testing effects in high stakes technical educational testing

Cemile Bahar Balaban, Foreign Second and Multilingual Education
Socially-Situated Teaching Practices in the Acquisition and Promotion of Self-Regulation and Learner Autonomy: Observations from an Online English Language Teaching Classroom

Rachel Danahy, Consumer Sciences
Applying the Stress Process Model to College Students

Marvin Evans, Educational Studies
Designing Courses as Sustainable Learning Communities: A STEM pre-service course that Extends Beyond Higher Education and into K-12 Teaching

Yihui Gong, Human Development and Family Science
Family adjustment to COVID-19: Maternal psychological health and children’s emotional adjustment

Kristen Heitman, Health and Rehabilitation Sciences
Self-Efficacy Among Future Education Model Students with a Degree in Dietetics

Christian Hines, Literature for Children and Young Adults
I Was Never Meant to Fly’: Exploring the Visual Narratives of Black Girls in Marvel Comics

Barbara Hodgdon, Human Development and Family Science
Family Caregivers’ Psychological Well-being and the Impact of Family and Spousal Strain and Support

Phoebe Hughes, Musicology
Taylor Swift on Tour: Embracing Whiteness, Growing Up

Saetbyul Kim, Educational Psychology
When You Intend to Help Others, You Learn Better: Exploring the Beneficial Effects of Purpose on Learning Outcomes Among Early Adolescents.

Suzanne Lewis, Teaching & Learning
Transforming the academic-vocational divide in an ELA classroom
Xuezhao Li, East Asian Languages and Literatures
Translation in a Broader Sense: Multiple Forms of Translation Exemplified by Liang Qichao’s Biography of the Three Makers of Italy

Monica Lu, Educational Psychology
Development of 4th and 5th Grade Students’ Collective Efficacy during a Digital Civic Learning Curriculum

August Masonheimer, Educational Studies
Measuring Time Management Within Models of Self-Regulated Learning: Investigation into the Construct Validity of the Time Management Regulation Scale

Abigail Aba Mensah, Human Nutrition
Impact of sanitizers on Nutrient Film Technique (NFT) grown lettuce and basil

Huy Nguyen, Educational Studies
Self-Regulated Learning, Academic Engagement, and Achievement of Campus Change Students at the Ohio State University

Megan Wanttie, Arts Administration, Education, and Policy
Pandemic iteration
Srija Chakraborty, PhD  
Evaluating Extent of Natural Killer Cell Participation in Drug-treated Melanoma Organoids

Megan Co, Biomedical Engineering  
Manipulation of Nucleus Pulposus Tissue Hydration and its Effect on T1' and T2 Relaxation Times

Brendan Fuller, Biomedical Engineering  
Understanding cancer-endothelial cell crosstalk in response to anti-angiogenesis agents using micro-engineered models and cellular biosensors

Xiangming Gu, Chemical and Biomolecular Engineering  
Tangential Flow Filtration Facilitated Fractionation and PEGylation of Low and High Molecular Weight Polymerized Bovine Hemoglobins and Their Biophysical Properties

Zweli Hlatshwayo, Chemistry and Biochemistry  
A Benzothizole Linked Porous Organic Polymer for the Hydrosilylative Reduction of CO2 to Formate and Methanol

Anuj Joshi, Chemical Engineering  
Highly Efficient H2 Production from H2S Using a Bifunctional Catalytic Sulfur Carrier with Regeneration Using CO2 in a Cyclic Redox Scheme

Dongjoon Kim, Chemical Engineering  
Machine learning aided DFT studies: design of electrocatalysts for improved carbon products selectivity from CO2

Yoon Ji Kim, Statistics  
Model-based Sequential Alignment of Functions Observed with Phase Variation

Sonu Kumar, Chemical and Biomolecular Engineering  
Low Temperature CLNP

Ellia H. La, Food Science and Technology  
Making the Most of Natural Colorants: Modulating Photoisomerization of Anthocyanins by Acylation Patterns

Vageesha Liyana Gunawardana  
Chemistry and Biochemistry, Fuel-Driven Assembly of a Large Organic Cage for Tunable Delivery of Pharmaceuticals

Saikat Majumdar, Computer Science  
Using Undervolting as an On-Device Defense Against Adversarial Machine Learning Attacks
**POSTER PRESENTATIONS: ENGINEERING AND MATHEMATICAL AND PHYSICAL SCIENCES**

*Alexander Milder, Chemistry and Biochemistry*
A New Family of Hybrid Thiocyanate-Halide Perovskites

*Pinak Mohapatra, Chemical and Biomolecular Engineering*
High-Temperature Dry Methane Reforming Using Pseudo Catalytic Metal Oxide

*Joseph Race, Chemistry and Biochemistry*
The design and synthesis of lead-free layered hybrid perovskites as room-temperature ferroelectrics

*Daniel Seals, Mechanical Engineering*
Physics-Based Equivalent Circuit Model for Lithium-Ion Cells via Reduction and Approximation of Electrochemical Model

*Saba Zakeri Shahvari, Civil & Environmental Engineering*
Solar Air Conditioning with Metal Organic Frameworks (MOFs)

*Gabriel Zeballos Castellon, Geography*
Monthly and annual variability of the bofedales of the Bolivian Altiplano in the last 35 years

*Chi Zhang,*
Simulation of Transient Gas Flows in Pipelines with Physics-Informed Deep Neural Networks

*Songwei Zhang, Chemistry and Biochemistry*
2D Cobalt Benzoquinone Frameworks for Kitaev Quantum Spin Liquids


**POSTER PRESENTATIONS: FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES**

*Drew Barkley, Food Science and Technology*

Epidemiological Characteristics of Children Diagnosed with Salmonella spp., E. coli, Campylobacter spp., and Norovirus at Nationwide Children’s Hospital

*Abha Bhattarai, Environmental Science Graduate Program*

Modeling variation in agroecosystem services due to climate change and conservation practices at a landscape scale

*Zhaozhe Chen, Earth Sciences*

Growth of Two Aquatic Macrophyte Species in Artificial Floating Islands in an Ohio Wetland: Potential for Nutrient Sequestration

*Brianda Daniela Gonzalez Orozco, Food Science and Technology*

Screening of probiotic properties of kefir and kefir grain microbiota

*Erica Grush, Food Science and Technology*

Novel Beautyberry Characteristics

*Allison Howell, Food Science and Technology*

Using NHANES Dietary Data for Food Safety Risk Assessment: A Methodological Analysis

*Jerish Joyner Janahar Food Science and Technology*

Influence of ultra shear technology on plant-dairy protein colloidal dispersions of varying fat content

*Jennifer Janovick, Food Science and Technology*

Metabolomics of AHCC on L acid

*Mrunmayee Joshi, Food Science and Technology*

Effects of preheating treatments on fouling rates of oat-based beverages during UHT processes

*Kushal KC Agricultural Engineering*

Application of satellite and drone-based imagery for monitoring cover crop biomass and their nutrient uptake efficiency

*Jessica Cristina Lemos Motta, Animal Sciences*

Effect of pattern of p-FSH treatment prior to ovum pick-up on ovarian response and in vitro embryo production in pregnant Holstein heifers

*Nicole Lorig Animal Sciences*

Development of an Extension Equine Education Program for 4-H Youth

*Lu Xun Food Science and Technology*

Novel Food Colorants Derived from Natural Pigments: Pyranoanthocyanin Formation Efficiency and Color Expression from Anthocyanins and 3-Deoxyanthocyanins

*Siyu Yao, Food Science and Technology*

Real-time, in situ quantification of major cannabinoids in hemp by a handheld FT-NIR sensor
POSTER PRESENTATIONS: HEALTH SCIENCES

Natalie Andras, Oral Biology
Dentoalveolar Defects from Neural Crest Conditional Deletion of Bone Sialoprotein

Claire LeGendre, Doctorate in Occupational Therapy
Addressing Problem Behaviors and Sensory Needs within Daycare and Preschool Settings: A scoping review.

Matthew Lordo, Biomedical Sciences Graduate Program
miR-29b Regulates Group 1 Innate Lymphoid Cell Homeostasis

Jacqueline Penaloza, Biomedical Sciences Graduate Program
Functional Characterization of Copy Number Variants in Congenital Heart Disease using Network Analysis and Machine Learning

Aonjittra Phanrungsuwan, Oral Biology
Effect of Sclerostin Deletion on Dentoalveolar Development and Molar Super-Eruption

Avinash Pokala, Human Nutrition
Milk Fat Globule Membrane-Enriched Dairy Milk Does Not Adversely Affect Cardiometabolic Risk or Intestinal Inflammation In Adults with Metabolic Syndrome

Robert Schuetz, Biomedical Sciences Graduate Program
Development and optimization of a clinical support algorithm for rapid identification of diagnostic germline variants

Steven Sher, Biomedical Sciences Graduate Program
VIP152 A Treatment For Leukemia

Claire Spech, Doctorate of Physical Therapy
Obese Mechanics High Impact

Taylor Williams, Doctor of Veterinary Medicine
WBF for swine depopulation
Malorie Albee, Anthropology
Where the muscle meets the bone: Skeletal implications of sedentism in modern body donors

Julianna Calabrese, Clinical Psychology
A Pipeline for Automated Facial Expression Coding in Mother-Daughter Dyads

Rabail Chandio, Agricultural, Environmental, and Development Economics
Winners and Losers in the Green Revolution of India

Amy English, Law
Improving Ohio Police

Nina Freiberger, (Health) Communication
Processing Depression - Effects of Gender Stereotypical Information in DTC Ads

Madelyn Green, Anthropology
Reassessing Clustering Parameters of Biological Affinities: Utilization of k-means to Understand Eurasian Population Variation

Sophie Kjaervik, Communication
A Meta-Analytic Review of the Link between Narcissism and Aggression

Sydney Mack, Social Work
Preparation of Ohio Youth Sport Coaches to Address Youths’ Social-Emotional Needs

Basar Ozbilen, City and Regional Planning
Designing Pandemic Resilient Cities: Exploring the Impacts of the Built Environment on Infection Risk Perception and Subjective Well-Being

Rebecca Phillips, Social Work
Understanding and Supporting Healthy Health and Human Service Systems: Approaches and Implications of the Building a 21st Century Children Services Workforce Project

Justin Pulley, Agricultural Communication, Education, and Leadership
Tractor Safety in Virtual Reality: A Measure of Agricultural Education Students’ User Experience

Victoria Sevich, Speech and Hearing Science
Auditory deprivation affects vowel production in post-lingually deafened cochlear implant users
POSTER PRESENTATIONS: SOCIAL AND BEHAVIORAL SCIENCES

Jessica Stark, Clinical Psychology
Partial least squares regression analysis of Alzheimer’s disease biomarkers, modifiable health variables, and longitudinal cognition in older adults with Mild Cognitive Impairment

Jingyi Wang, Developmental Psychology
Are Fathers More Vulnerable? Coparenting Relationships and Parental Involvement in Low-Income Families

Uwe Wernekinck, Social Work
Childhood Sexual Abuse and Addiction Among Men: What Are The Pathways?
Ahmed Abdelhamid
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2nd Place: Marina Buyanova
3rd Place: Warren Campbell
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BUSINESS
1st Place: Zeynep Yavic

EDUCATION AND HUMAN ECOCOLOGY
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2nd Place: Arianna Black
3rd Place: Yvonne Allsop
Honorable Mention: Johana Chaparro-Moreno
Honorable Mention: Andrew Perry

ENGINEERING
1st Place: Spencer Stahl
2nd Place: Sunny Kwok
3rd Place: Zheng Hong Tan

FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
1st Place: Abigail Krentz
2nd Place: Sydney Grouge
3rd Place: Danielle Voss
Honorable Mention: Wanderson Novais Pereira
Honorable Mention: Aishwarya Badiger

HEALTH SCIENCES
1st Place: Helen Chen
2nd Place: Max Yano
3rd Place: Matt Lordo
Honorable Mention: Shane O’Neil
Honorable Mention: Nicolas Queen

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3rd Place: Joy Ellison

MATHEMATICAL AND PHYSICAL SCIENCES
1st Place: James Herbert
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3rd Place: Caprice Phillips
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2nd Place: Simon Kolbeck
3rd Place: Holly Lind-Combs
Honorable Mention: Ana Sucaldito
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2nd Place: Kelly Rich
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1st Place: Elizabeth Kraatz
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Honorable Mention: Manisha Naresh Nagpal
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ENGINEERING
1st Place: Faiz Nisar Khan
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2nd Place: Madeline Winans
3rd Place: Molly Mills
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