THE OHIO STATE UNIVERSITY

EDWARD F. HAYES

ADVANCED RESEARCH FORUM

March 6, 2026

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Welcome from the 2026 Hayes Leadership Team

Hello Hayes Forum presenters, judges, volunteers, friends, family, and guests -

We are honored and thrilled to welcome you all to the 40th Hayes Advanced Research Forum. 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. Today, we will be recognizing our top graduate students and postdoctoral scholars across multiple disciplines by awarding nearly $17,000 in cash prizes to support them, their research, and their long-term professional development. We are pleased that you have joined us to celebrate the extraordinary graduate and postdoctoral research that takes place at our great institution.

As always, 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, and to our namesake, Dr. Edward F. Hayes, for his initial enthusiastic support of graduate student research via the forum. We also thank our faculty, staff, postdocs, alumni, and community members who have unsparingly given their time to support Ohio State graduate students and postdoctoral scholars 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 all of you.

Additionally, we would like to express boundless gratitude by thanking a few extraordinary Hayes family and friends in particular for their support and contributions this year: Anna Sullivan Kvam, A.J. Diaz, Abby Frank, Candyce Williams, Stacy Smith, the entire OUAB Grad/Prof team, Dr. Matt Couch, Jeff Pelletier, and Maya Bygrave from Student Life and the Ohio Union teams. An extensive number of kind graduate students and judges who selflessly stepped up in the last week to make sure all sessions run as scheduled, and additional guidance and kind support from Kerry Hodak, Jaylen Lindsey, and more. We

have additional special thanks for our applicants and presenters this year for their incredible grace, kindness, and professionalism as we navigated some leadership transitions and organizational bumps along the way. Finally, as always, 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.

No matter whether you're joining us as a presenter, judge, volunteer, guest, or beyond today, we hope that the presentations and posters you engage with teach you something new, spark enlightening questions and queries, and inspire us all to continue our enthusiastic and committed support of graduate education and postdoctoral training across Ohio State.

The 2026 Hayes Forum Leadership Team

Sierra Johnson
2026 Hayes Advanced Research Forum Chair, PhD Student Anthropology

Katie Anne Conner, MA
Hayes Advanced Research Forum Chair 23, 24, 25, PhD Student in Linguistics

Sabrina Durso, MA
C.G.S. President, PhD Candidate in English

Lydia Gokey
C.G.S. Interim Vice President, MA Candidate in Arts Administration, Education, & Policy

Blue Lerner
Hayes Forum Vice Chair 25, C.G.S. Chief of Staff, PhD Candidate in Communication

Welcome from the Executive Vice President and Provost

Dear Hayes Forum Attendees,

I am thrilled to welcome you to the 40th Edward F. Hayes Advanced Research Forum! Today is an exciting opportunity for you to showcase your commitment to excellence in research, and to demonstrate to your peers and the Ohio State community your commitment to the highest-caliber scholarship.

As graduate students and postdocs, you play an important role in our university's research ecosystem. Through your studies, interactions with your professors and mentors, and your leadership of younger Buckeyes, you are advancing the ideals that make Ohio State a hub for innovation and an academic powerhouse. Your creativity, innovative spirit, and enthusiasm for your subject matter are contagious, and I am proud of you for competing in this wonderful Ohio State tradition.

On behalf of the Office of Academic Affairs, I wish you the very best of luck today and continued success in your scholarship!

Ravi V. Bellamkonda, PhD
Executive Vice President and Provost

Welcome from the Dean of the Graduate School

As we celebrate the 40th annual Edward F. Hayes Advanced Research Forum, it is a moment to reflect on the rich history and enduring tradition of this prestigious event. Since its inception, the Hayes Forum has been a cornerstone of academic excellence at The Ohio State University, showcasing the innovative and exemplary research conducted by our graduate students and postdoctoral scholars.

The Hayes Forum, named in honor of Edward F. Hayes, has evolved over the years to become a premier interdisciplinary event. It provides a unique platform for our scholars to present their research, engage in intellectual exchanges, and receive recognition for their outstanding contributions. This forum not only highlights the breadth and depth of research across various disciplines but also fosters a collaborative environment where ideas can flourish.

The importance of the Hayes Forum cannot be overstated. It serves as a testament to our commitment to advancing knowledge and fostering a culture of academic rigor and innovation. The forum facilitates fruitful exchanges between graduate students, postdoctoral scholars, faculty, and the broader community, promoting a vibrant academic ecosystem.

The forum is co-sponsored by the Council of Graduate Students, the Graduate School, the Office of Postdoctoral Affairs, and the Enterprise for Research, Innovation, and Knowledge (ERIK), with additional support from the Office of Student Life. These sponsors are proud to support the Hayes Forum and recognize top-judged presentations with cash prizes totaling more than $17,000.

As we engage with the plethora of research presented at this year's Hayes Forum, I encourage you all to explore as much of the remarkable research endeavors as possible from our graduate students and postdoctoral scholars. Together, we continue to uphold the legacy of excellence that defines the Edward F. Hayes Advanced Research Forum.
Congratulations, graduate students and post-doctorates, on your achievements!

Cheers,

Dean Mary Stromberger, PhD
Vice Provost for Graduate Education and Dean of the Graduate School
ENGIE-Axium Endowed Dean Chair

Welcome from the Vice Provost for Research, Enterprise for Research, Innovation, and Knowledge (E.R.I.K.)

Dear Hayes Forum Attendees,

On behalf of the entire team within the Enterprise for Research, Innovation and Knowledge (E.R.I.K.) at Ohio State, I'm pleased to welcome you to the 40th Annual Edward F. Hayes Advanced Research Forum.

From Poetry to Physics, and from Agriculture to Anesthesiology, research is the first link in the value-chain of prosperity for all of us, producing social, economic, educational, and quality-of-life outcomes that improve the human condition worldwide. The forum - co-sponsored by the Council of Graduate Students, the Graduate School, the Office of Postdoctoral Affairs, and ERIK – celebrates the creation and presentation of these 'first links,' developed through the innovation, brilliance, and collaboration among our graduate students, post-doctoral scholars, and their supporters.

We look forward to an amazing research forum, with special thanks to the judges, staff, and attendees who help make this event so successful. Thank you for being a part of this amazing Ohio State tradition!

Kind Regards,

John M. Horack, PhD
Vice Provost for Research, Enterprise for Research, Innovation and Knowledge
Professor and Neil Armstrong Chair in Aerospace Policy

Remembering *Dr. Edward F. Hayes*

This Annual Forum is in Honor of Dr. Edward F. Hayes (1941–1998)

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.

(Photo Courtesy of University Photo Archives)
(Biography Courtesy of OSU Board of Trustees Resolution No. 98–134)

Council of Graduate Students

Who We Are

Council of Graduate Students
at The Ohio State University

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 11,000 graduate students across over 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.

In addition to the Hayes Forum, CGS has a number of other events, programs, and advocacy that it oversees:

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

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.

Graduate Student Appreciation Week
Every year in recognition of National Graduate and Professional Student Appreciation Week (NGPSAW) CGS funds, plans, and hosts events for graduate students at Ohio State to come together, connect, and reflect on all the great work they do at Ohio State all year long. For CGS GSAW 2025 from April 7th – 11th there will be the return of Donuts with the Deans (), Graduate Game Night (), and an Instructional Kitchen () in addition to swag giveaways all throughout the week in the OSU Graduate School offices in University Hall.

Academic Regalia Lending Library
Graduation is a time of celebration and recognition of all the sacrifices students have made and the time they have dedicated to the advancement of their academic and professional careers. As a part of this celebratory ceremony, all students are required to wear the proper academic regalia to participate in commencement. However, CGS recognizes that lack of funds introduces barriers to participating in this experience and may induce feelings of anxiety rather than joy, particularly for graduate students who incur significant regalia costs. To that end, and in accordance with CGS Resolution 2223-SP-002: Affordability of Academic Regalia, the goal of this initiative is to clothe at least 10% of doctoral graduate students at OSU Commencement in Lending Library regalia. This initiative is expected to expand in the coming years.

Oral Presentations
Room Assignments

The Arts | US Bank Theatre | First Floor

Biological Sciences | Barbie Tootle | Third Floor

Business | Senate Chambers | Second Floor

Education & Human Ecology | Ohio Staters, Inc. Founders | Second Floor

Engineering | Tanya Rutner Hartman | Third Floor

Food, Agricultural, & Environmental Sciences | Student-Alumni Council | Second Floor

Health Sciences | Hays Cape | Third Floor

Humanities | Ohio Staters, Inc. Traditions | Second Floor

Mathematical & Physical Sciences | Rosa M. Ailabouni | Third Floor

Social & Behavioral Sciences | Great Hall Meeting Room 1 | First Floor

Postdoctoral: Arts, Humanities, & Social Sciences| Cartoon Room| Third Floor

Postdoctoral: Biological/Life Sciences, Health Sciences, and Biomedical Engineering | Cartoon Room| Third Floor

Postdoctoral: Mathematical & Physical Sciences and Engineering | Cartoon Room| Third Floor

Oral Presentations
Approximate Schedule & Timing

Presenter 1 | 9:00 – 9:20am

Presenter 2 | 9:20 – 9:40am

Presenter 3 | 9:40 – 10:00am

Presenter 4 | 10:00 – 10:20am

Presenter 5 | 10:20 – 10:40am

Session Break | 10:40 – 10:50am

Presenter 6 | 10:50 – 11:10am

Presenter 7 | 11:10 – 11:30am

Presenter 8 | 11:30 – 11:50am

Presenter 9 | 11:50am – 12:10pm

Presenter 10 | 12:10 – 12:30pm

ORAL PRESENTATIONS

The Arts

U.S. Bank Theatre | First Floor

Marissa Ajamian Grossman, *Dance Studies*
Shaking off the Soviet Union: Modernism and American Identity in *Silk Stockings*

Amarth Chen, *Digital Animation and Interactive Media*
A Framework for Imaging System Simulation

Andre Felipe, *Music Education*
The Impact of Community Music Making: The Parent's Perspective

Borami Kang, *Deisgn Research and Development*
Unmaking the Everyday AI: A Design Inquiry into Research Tools and AI Nudge

Evan McIntyre, *Music Education*
Music Teachers' Perceptions of Musical Literacy Development

Natalia Moreno-Buitrago, *Music Education*
Desde el principio: Engaging Parents in Their Children's Learning

Sophia Reeder, *Digital Animation and Interaction Media*
Design Your Anatomy: A User Interface for Real-Time Mocap Instruction and Performance

Oluwadamilola Salau, *Geography*
Leveraging Machine Learning for Urban Pluvial Flood Susceptibility Mapping in Cincinnati, Ohio

Mary Storm, *Dance*
Empowering Dancers through Intimacy Coordination and Narrative Choice-Making

Isabelle Thomas, *Music Theory*
"Same as it Ever Was": Gesture and Meaning in David Byrne's Physicality in "Once in a Lifetime" from *Stop Making Sense*

Zihao Yuan, Dance Studies
Recentering the Cultural & Gender Identities of Queer Chinese Diasporic Dancers through Hybridization in the U.S.

ORAL PRESENTATIONS

Biological Sciences

Barbie Tootle | Third Floor

Electra Coffman, *Molecular, Cellular, and Developmental Biology (MCDB)*
Revealing Target Adhesion Genes for Age-Dependent Cortical Cataract Prevention

Gayathri Dileepan, *Medical Scientist Training Program*
The Ikaros Zinc Finger Transcription Factor Aiolos Promotes the Formation of Lung-Resident Memory $CD8^+$ T Cells

Joseph Faleti, *Environmental Public Health*
Evaluation of Cross-Tissue Epigenetic Clocks across Respiratory and Circulatory Tissues

Caleb Gooden, *Molecular Genetics*
Genome-wide Resolution of LTR Retrotransposon Promoters and their Tissue-Specific Regulatory Programs

Roma Karna, *Biomedical Sciences Graduate Program (BSGP)*
TRAP1 Represents a Mitochondrial Target and a Promising Biomarker Candidate in Dedifferentiated Liposarcoma

Minseung Kim, *Environmental Sciences Graduate Program*
Impacts of Wildfires on Harmful Algal Blooms in West Coast Watersheds of the United States

Anna Lubertozzi, *Molecular Genetics*
Afadin Controls Tricellular Adherens Junction Maintenance and Lens Fiber Cell Organization

Zianne Olverson, *Molecular, Cellular, and Developmental Biology*
Electronic-Cigarette Use During Pregnancy Increases Offspring Asthma Susceptibility in a Sex-Dependent Manner

Sara Sequeira, *Comparative Biomedical Sciences*
Tracing *Salmonella* Dublin on the Move: A Network-Based Infection Model in US Cattle Systems

Lloyd Yang, *Anatomy*
A Forward Genetic Screen to Understand Congenital Anomalies of Kidney and Urinary Tract

ORAL PRESENTATIONS

Business

Senate Chambers | Second Floor

Rang Gong, *Logistics*
The Value of Cross-Product and Cross-Location Information in Demand Forecasting

Cheng-Yu Hung, *Marketing*
Re-Examining the No-Choice Option in Conjoint Analysis

Indeesh Mukhopadhyay, *Marketing and Logistics*
Boredom Begets Speed, Speed Begets Boredom: The Feedback Loop of Speed-Consumption

Jacob Rathjens, *Organizational Behavior and Human Resources*
The Effect of Virtuality on Negotiations Between Co-located Teams

Nancy Shen, *Marketing*
The Unwilling Ambassador Effect: Logo-Prominent Freebies Reduce Consumer Willingness to Spread Positive WOM

Anjali Tapadiya, *Business Administration*
Collateral Damage: How Imposter Scams Become Brand Transgressions

Vincent Tian, *Accounting and MIS*
Prospective Institutional Dual Holders and Voluntary Disclosure

Xinyi Wang, *International Business*
The Goldilocks Zone: Knowledge Proximity and Complexity in Subsidiary Mandate Acquisition

Yawen Zheng, *Logistics*
Delivered on Demand: Uncovering the Value of On-Demand Delivery for Retail Success

ORAL PRESENTATIONS

Education & Human Ecology

Ohio Staters, Inc. Founders | Second Floor

Abby Bush, *Human Development and Family Sciences*
Perceptions of Leadership in Early Childhood Education: Alignment and Discrepancies between Administrators and Teachers

Ashwini Chebbi, *Nutritional Sciences (OSUN)*
Feasibility and Efficacy of a Well-Formulated Ketogenic Diet in delaying progression of Polycystic Kidney Disease in patients at risk for Rapid Progression

Jimin Han, *Educational Studies*
Development and Validation of an Academic Adaptation Scale for Master's Students

Ruth Oliwe, *Educational Studies – STEM Education*
(Re)Storying Our Mathematics Identity through Comics: A Case Study of Nigerian Middle School Girls

Onur Özkaynak, *Multilingual Language Education*
When AI "Listens" to Accents: A Critical Analysis of Gemini's Teacher Evaluations in a Verbal-Guise Task

Gahyun Park, *Counselor Education*
Where Healing Begins: The role of Positive Childhood Experiences (PCEs) in Recovery from Anxiety and Depression among Adolescents

Alexia Ramos, *Educational Policy*
Absent for Democracy: How Political Violence and Student Protest Complicate the Civic Mission of School Attendance

LeeAnn Swager, *Human Development and Family Science*
Mental Healthcare Providers' Perspectives on Virtual vs. In Person Eating Disorder Treatment

Amy Watson-Grace, *Health and Rehabilitation Sciences*
Sensory Processing and Autism Eligibility: Are State Policies Compliant with IDEA?

ORAL PRESENTATIONS

Engineering

Tanya Rutner Hartman | Third Floor

Abdul Akbar, *Biomedical Engineering*
PathRosetta: Modeling the Cellular Language of Histopathology for Multi-Cancer Outcome and Mutation Prediction

Juan Pablo Arango Velasquez, *Biomedical Engineering*
Therapeutic Potential of Engineered IL-10 / IL-4 Myeloid Cells in Rhabdomyolysis-Induced Acute Kidney Injury

Fatemeh Azadi, *Chemical Engineering*
Fabrication and Characterization of Sustainable Composites Made with Carbon Nanotube Fibers and Epoxy Vitrimers

Jonathan Fritz, *Biophysics*
Computational Modeling Elucidates Mechanistic Targets for Treating Surfactant Dysfunction After Bacterial or Mechanical Lung Injury

Chetana Krishnan, *Biomedical Engineering*
Discovering Anatomical Structure from Unlabeled MRI for Reliable Cross-Domain Medical Segmentation

Yuzhang Liu, *Biomedical Engineering*
Transcriptional and Functional changes in Dorsal Root Ganglion neurons from Male and Female mice with injury induced Discogenic Back Pain

Mejalaa Mega Jayaseelan, *Biomedical Engineering*
Development of a 3D In Vitro Fibrotic Lung Platform for Modeling Early Idiopathic Pulmonary Fibrosis Pathogenesis

Kelly Johana Serna Vasco, *Biomedical Engineering*
Engineering of Ligand-Functionalized Extracellular Vesicles for Gene Replacement Therapy for a Rare Genetic Pulmonary Disease

Srinvasan Subramaniyan, *Electrical and Computer Engineering*
Feedback Control GPU Scheduling for Real-time Embedded Systems

Muhammed Ahmed Sultan, *Biomedical Engineering*
Motion-Robust Whole-Heart MRI-based Late Gadolinium Enhancement (LGE) Reconstruction Framework for Accurate Assessment of Heart Fibrosis

ORAL PRESENTATIONS

Food, Agricultural, & Environmental Sciences

Student-Alumni Council | Second Floor

Khadijat Adefaye, *Animal Sciences*
Assessing the Potential of Liquid-Liquid Phase Separation Body Formation Via Intrinsic Protein Disorder Within the Hepatitis E Virus ORF1 Polyprotein

Gabriella Gephart, *Food Science and Technology*
Bioprotective Capabilities of an Artisanal Strain of *Lactococcus lactis* and Consumer's Sensory Acceptability of the Resulting Cottage Cheese

Rinky Ghosh, *Food Science and Technology*
Development and Characterization of PHBV Blends with Coffee Waste-Derived Plasticizer and Eggshell Fillers for Food Packaging Applications

Md Zakir Hossain, *Food Science and Technology*
Effect of Rearing Conditions on Lipid Profile and Antioxidant Capacity of Atlantic Salmon (*Salmo salar*)

Amy Hurst, *Horticulture and Crop Science*
Sustaining Urban Farm Soil Productivity: Cover Crops and Compost in High and Low Tunnels

Megan Jamison Hart, *Environmental Science Graduate Program (ESGP)*
What's in Your Water? A Comparative Analysis of Micro- and Nanoplastics in Treated Tap Water and Bottled Water

Saroj Khatiwada, *Animal Sciences*
Probiotics Improved Gut Bacterial Diversity and Body Weight Against Reoviral Arthritis in Turkeys

Sochina Ranjit, *Food Science and Technology*
Paenibacillin as a Future Natural Food Preservative: Increasing the Productivity by Revealing Quorum Sensing Mediated Gene Regulation in the Producer, *Paenibacillus polymyxa*

Srijana Shrestha, *Geography*
Pre-Season Crop Label Prediction Using Historical CDL Rotation Patterns and Machine Learning

ORAL PRESENTATIONS

Health Sciences

Hays Cape | Third Floor

Madison Blake, *Health and Rehabilitation Services*
Comparing Novel Machine-Learning Derived Weights versus Standard Weights for the Charlson Comorbidity Index in Predicting Mortality for Autistic Older Adults

Sherif E Ammar, *Epidemiology*
Impact of Marijuana Legalization on Substance Use: Co-use Patterns and Alcohol, Tobacco, and Marijuana Consumption in U.S. Adults

Elizabeth Ghias, *Epidemiology*
Residential Mobility Patterns of New Jersey Colorectal Cancer Cases Diagnosed 2014-2019: Implications for Characterizing Environmental Exposures

Carolyn Lee, *Veterinary Preventative Medicine*
Dairy Cows Infected with Influenza A(H5N1) Reveals Low Infectious Dose and Transmission Barriers

Gabriel Lee, *Medicine*
No Symptoms, No Problem? Analyzing Symptomatic and Asymptomatic Sexually Transmitted Infection Testing Outcomes at a Student Run Free Clinic

Cara Noel, *Biomedical Sciences Program*
Assessment of EBV DNA Methylation to Guide Antiviral Use in EBV-Associated Lymphoma

Kayla Riel, *Epidemiology*
Do Emergency Medical Service Clinicians Attain Higher Degrees to Facilitate Leaving the Profession?

Anushka Ruwanpathirana, *Biomedical Sciences Graduate Program (BSGP)*
Interleukin-4 Promotes Actin Polymerization and Hypercontractility through PI3K/mTOR Pathway in Human Airway Smooth Muscle Cells

Jessica Wedig, *Mollecular, Cellular, and Developmental Biology*
CD200-CD200R Signaling Promotes Myeloid Cell Immunosuppressive Function and Reduces Efficacy of Immune Checkpoint Blockade in Pancreatic Cancer

ORAL PRESENTATIONS
Humanities

Ohio Staters, Inc. Traditions | Second Floor

Kestrel Anderson, *English*
Tracking Eyes, Tracing Narratives: Graduate Students' Practices for Finding and Assessing Sources in Their Disciplines

Katie Anne Conner, *Linguistics*
Creaky, She Spoke; Examining f0, Vocal Creak, and Perceptions of Young Women's Professionalism

Court(ney) Felle, *Writing, Rhetoric, and Literacy*
The 'Genre' of Chronic Illness: Chronic Pain Patient Narrative-Making

Matthew Gold, *Agricultural Communication, Education, and Leadership*
Will the Odds Ever be in Their Favor? A Social Semiotic Analysis of Food, Agriculture and Natural Resource Commodities, and Governmental Control in *The Hunger Games*

Yuyang Han, *East Asian Languages & Literatures*
Singing the Wrong Tongue: Dialectical Dissonance and the Performance of Authenticity in *Silent Honor*

Ka Fei Law, *Chinese Linguistics*
The Production of Cantonese Sentence-Final Particles: Immersed Speakers vs. Heritage Speakers

Sahil Patel, *Linguistics*
To Be Perfect and To Be Progressive: Aspectual Distinctions through the *Gujarati* Copula

Nina Wilson, *Anthropology*
If You Had a Dad, You Wouldn't Understand: How LGBTQ+ People Use Dark Humor for Survival, Community, and Negotiate Relationality

Savannah Wooten, *Musicology*
Culture, Race, and Shifting Perceptions of Jazz at OSU in the 1970s

ORAL PRESENTATIONS

Mathematical & Physical Sciences

Rosa M. Ailabouni | Third Floor

Arkajyoti Bhattacharjee, *Statistics*
Beyond Averages: Typical Outcomes and Natural Groupings Under Differential Privacy

Poulomi Chakraborty, *Physics*
High-throughput Computational Search for Topological Thermoelectrics

Purva Shripad Damale, *Chemistry and Biochemistry*
Dynamic Spray Mass Spectrometry for Rapid and Direct Analysis of Complex Mixtures

Bethany DeMuynck, *Chemistry and Biochemistry*
Development of Safer Strategies to Access Carbene Reactivity

Barbara Fornaciari, *Physical Chemistry*
Structure-Dependent Hydroxyl Radical Quantum Yields in Eumelanin Probed by Fluorescence Spectroscopy

Ali Pinarci, *Organic Chemistry*
Deoxygenative Reduction of Aliphatic Aldehydes via *Gem*-dichromium Catalysis

Shamma Jabeen Proma, *Chemistry and Biochemistry*
Understanding Disruption of Lung Surfactant at the Molecular Scale Due to Nanoplastic Exposure

Valmuri Srivardhan, *Organic Chemistry*
Electrocatalytic Upcycling of Polyvinyl Chloride (PVC) Plastics

Fangyi Wang, *Statistics*
Conformal Two-stage Classification and Shape Prediction for Fossil Bovid Teeth

Yiwei Zhou, *Chemistry*
Understanding ^{59}Co NMR Temperature Sensitivity by Spin-Crossover Co(III) Complexes

ORAL PRESENTATIONS

Social & Behavioral Sciences

Great Hall Meeting Room |First Floor

Sudarshan Adhikari, *Agricultural Communication, Education, and Leadership*
Clicking Upgrade: Behavioral Pathways Behind Students' Willingness to Pay for GenAI in Higher Education

Nicola Campoamor, *Pharmaceutical Sciences*
Task Format Choices can Affect the Quality of Best-Worst Scaling Studies

Minseong Kang, *Agricultural, Environmental, and Development Economics*
Economic Impact of Mississippi River Drought on U.S. Agriculture: Insights from the Gravity Model

Eunjee Ko, *Psychology*
Automatic Action Representation of Vaping in the Brain Predicts Future Intention to Vape Among Young Adults Who Use E-Cigarettes

Julia Nauman, *Intellectual and Developmental Disabilities (IDD)*
Maladaptive Daydreaming in Autism Spectrum Disorder and Attention-Deficit/Hyperactivity Disorder

Valeska Tan, *Design Research and Development*
Understanding Patient and Provider Perceptions of Social Isolation, Loneliness and Boredom in the Cancer Patient Experience

Manita Thapa, *Agricultural Communications*
Decentralized Agricultural Extension System and Job Satisfaction among Extension Agents of Nepal

Cyenna Ulrich-Cech, *Environmental Sciences Graduate Program (ESGP)*
Extreme Heat and Adverse Health Experiences of LGBTQIA+ Populations in Ohio

Yunzi Yu, *Social Work*
Family Resilience, Help-Seeking Behaviors, and School Readiness in Families of Preschool-Aged Children with Autism Spectrum Disorder: Analysis of the 2023 National Survey of Children's Health

ORAL PRESENTATIONS

Postdoctoral: Arts, Humanities, and Social Sciences

Cartoon Room | Third Floor

Lauren Doocy, *Public Affairs*
Exploring Excess Interaction of Drinking Drivers and Model-Based Estimates of Drinking and Driving Prevalence and Relative Risk

Stephanie Frost, *Chemistry Education*
The Power of Words: GTA Inquiry on Language Use in Chemistry Instruction

ORAL PRESENTATIONS

Postdoctoral: Biological/Life Sciences, Health Sciences, and Biomedical Engineering

Cartoon Room | Third Floor

Quetzalli Angeles, *Biomedical Engineering*
Alpha-Ketoglutarate as a Potential Regulator of Senescent Cells

Jana Cable, *Microbial Infection and Immunity*
Modeling Repeated Respiratory Virus Infections to Understand Long-Term Cardiac and Pulmonary Injury

Angela de Aguila, *Institute of Brain, Behavior, and Immunology*
Manipulation of the Gut Microbiome Alters the Intraperitoneal Immune System

Davinder Singh, *Molecular Genetics*
The Ync13-Rga7-Rng10 Complex Selectively Coordinates Secretory Vesicle Trafficking and Secondary Septum Formation During Cytokinesis

Nisitha Wijewantha, *Biomedical Engineering*
Real-Time, Label-Free Monitoring of Nanoparticle Drug Release via Nanopore Sensing under Physiological Conditions

ORAL PRESENTATIONS

Postdoctoral: Mathematical & Physical Sciences and Engineering

Cartoon Room | Third Floor

Srikanth Dasari, *Chemistry*
Clock-Like Zero-Field Spin Dynamics in Chemically Stable Ni(II) Complex Spin Qubit for Electron Paramagnetic Resonance Imaging

Ratnadip De, *Spectroscopy*
Ultrafast XUV Circular Dichroism Reveals Transient Spin Polarization in Chiral Copper Oxide: A Pathway to Understanding Chirality-Induced Spin Selectivity

Firoz Shah Tuglak Khan, *Inorganic Chemistry*
Understanding Spin Dynamics by Tuning Molecular Symmetry in Metal Complexes

Ökten Üngör, *Inorganic Chemistry*
Engineering Extreme-Sensitivity Molecular Thermometers for Advanced MRI Thermometry

Poster Presentations

Room Assignments

Session 1: Biological and Health Sciences | Archie M. Griffin Ballroom | Second Floor

Session 2: Education & Human Ecology and Social & Behavioral Sciences| Archie M. Griffin Ballroom | Second Floor

Session 3: Food, Agricultural, & Environmental Sciences | Archie M. Griffin Ballroom | Second Floor

Session 4: Engineering | Archie M. Griffin Ballroom | Second Floor

Session 5: Math & Physical Sciences | Archie M. Griffin Ballroom | Second Floor

POSTER PRESENTATIONS

Session 1: Biological and Health Sciences

1.1 ***Presenter Withdrew***

1.2 Elise Coneglio, ***Occupational Therapy***
Inter-rater Reliability of Coding Active Ingredients of Routine Occupational Therapy in Autism

1.3 Ayushi Das, ***Molecular, Cellular and Developmental Biology (MCDB)***
A Novel Mouse Model to Identify Antigen-Specific Immune Responses in Pancreatic Cancer Cachexia

1.4 Alison Deitsch, ***Health and Rehabilitation Sciences***
Long Stays and Revolving Doors: A Comparison of Psychiatric Hospitalizations Among Autistic and Non-Autistic Older Adults

1.5 Sharefa Duhaney, ***Health Behavior and Health Promotion***
Toward a Trauma-Informed, Brain-Injury-Aware System: Staff Exposure, Preparedness, and System-Level Implications

1.6 Lynzey Green, ***Epidemiology***
Sex Differences in the Association of Age with Life's Essential 8 scores Over the Life Course

1.7 Suci Nazier, ***Health and Rehabilitation Sciences***
Telerehabilitation for Children with Cerebral Palsy to Enhance Health Outcomes and Well-being: A Scoping Review

1.8 Tasnin Akter Nila, ***Chemistry and Biochemistry***
Probing the Secondary Structure of KIF5A pre-mRNA in Wild-Type and Disease-Associated Mutants

1.10 Omar Santiagonunez Ahumada, ***Immunology and Immunotherapeutics (I2GP)***
Glioblastoma Co-opts Dural Nociceptors to Drive Immune Evasion and Immunotherapy Resistance

1.11 Addie Schlussel, ***Evolution, Ecology, and Organismal Biology***
Improving Dryland Restoration: Connecting Seedling Function with Recruitment Success

1.12 Lily Schumacher, *Biophysics*
Specific Plant KASH Domains are Differentially Required for Individual LINC Complex Roles in *Arabidopsis thaliana*

1.13 Carmi Milagros Thompson, *Earth Sciences*
Changes in Trophic Structure of Fossil Gastropod Communities from the Western Caribbean

POSTER PRESENTATIONS

Session 2: Education and Human Ecology and Social and Behavioral Sciences

2.1 Precious Aforkeoghene, *Design Research & Development*
Understanding Graduate Student Physical Activity Needs: A Participatory Design Study Using Emerging Technologies and Gamification Strategies

2.2 Rashad Alirhayim, *City and Regional Planning*
How Refugees' Social Ties Shape Their Housing Opportunities

2.3 Abigail Altman, *Speech Language Pathology*
Caregiver Perspectives on Access to & Satisfaction with Services Following a Child's Traumatic Brain Injury

2.4 Grace Amadon, *Clinical Psychology*
Mobility Domains are Differentially Associated with Executive Function and Neural White Matter Integrity Across the Adult Lifespan

2.5 Suraksha Baral, *Agriculture, Environmental, and Development Economics*
Cross-Country Evidence on How Normative Framing Shapes Household Food Waste Behavior

2.6 Kara Fort, *Communication*
How Americans Defend Political Falsehoods: The Influence of Ideology, Information Environment, and Epistemic Beliefs

2.7 Xue Han, *Quantitative Research, Evaluation, and Measurement*
Correlation Reporting in Multilevel Analyses: A Practical Guide and Review of Practices

2.8 Olivia Horn, *Clinical Psychology*
Neighborhood Deprivation, But Not Physical Activity, is Associated with Episodic Memory and White Matter Integrity in Aging

2.9 Sori Hwang, *Educational Psychology*
The Brief Regulation of Motivation Scale: Testing Measurement Invariance and Latent Mean Difference across Subgroups and Time

2.10 Rika Mardiana, Educational Studies – *STEM Education*
Science Curriculum Standards and Teacher Development: A Comparative Study of Australia, Indonesia, and the United States

2.11 Sara Martin, *Educational Studies – Special Education*
Middle School FLIP Recess: Improving Social Outcomes for Students with Disabilities

2.12 Opal Moore, *Environmental Science Graduate Program – Environmental Health Sciences Specialization*
An Air Quality Dashboard for Addressing Resilient Communities (AQ-DARC)

POSTER PRESENTATIONS

Session 3: Food, Agricultural, & Environmental Sciences

3.1 Mostafa Aliabdelbary, *Food Science*
Advanced Oxidation Processes for Alfalfa sprouts Decontamination

3.2 Santosh Raman Acharya, *Analytical Chemistry*
Resolving Isomeric Disaccharides via Porous Graphitic Carbon Chromatography Coupled to Contained Electrospray Ionization Mass Spectrometry

3.3 Taylor Beck, *Food Science and Technology*
Designing Functional Foods to Support Neurological Health: Stability, Sensory, and Clinical Perspectives

3.4 Adam Chismar, *Food Science and Technology*
Correspondence Between Stated and Operational Preferences – An Examination of Overall Liking, Preference Rankings, and Three Methods of Takeaway Choice

3.5 Sandeep Dhakal, *Food, Agricultural, and Biological Engineering*
Remote Sensing Based Phenotyping of Rubber Dandelion: Linking Canopy Traits to Root Biomass and Natural Rubber Yield

3.6 Mabel Dwomoh, *Horticulture and Crop Science*
From Tropics to Frost: Evaluating Soybean Varieties for Freeze Tolerance

3.7 Matias Frias Harriague, *Animal Science*
The Association of Rotavirus Species with Gastrointestinal and Respiratory Illness in Suckling and Weaned Pigs under Field Conditions

3.8 Mujahidul Islam, *Agricultural, Environmental, and Developmental Economics*
Solar vs. Easements: Causal Evidence of a Land-Use Trade-Off in U.S. Farmland

3.9 Brynn Johnson, *Horticulture and Crop Science*
Defining Nitrogen Rates and Mowing Heights on Community Level Sports Fields

3.10 Sushma Katari, *Agricultural Engineering*
A Multi-Sensor Imaging Strategy to Enhance Soybean Growth Monitoring

3.11 Manpreet Kaur, *Food Science and Technology*
Controlling Off Odors in Rainbow Trout (*Oncorhynchus mykiss*) and Yellow Perch (*Perca flavescens*) Fillets via Antioxidant Rich Diet

3.12 Md Nayem Hasan Munna, *Soil Science*
Building Resilient Soils: Legacy Effects of Organic Inputs on Carbon-Nitrogen Stabilization

3.13 Sumita Sen, *Horticulture and Crop Science*
Effect of Multi-factor Crop Management Practices on Corn and Soybean Productivity

3.14 Hrithik Shetty, *Food Science and Technology*
Mathematical Modeling of High Moisture Extrusion Cooling Die Using Non-Linear Viscoelastic Rheological Models to Optimize the Texture of Plant-Based Meat Analogs

Session 4: Engineering

4.1 Behzad Amirzade, *Integrated Systems Engineering*
Finite Element-driven Machine Learning Approach for Evaluation of Prophylactic Stabilization in Cancerous Canine Bones

4.2 Arshad Ansari, *Food, Agricultural, and Biological Engineering*
Watershed-Scale Assessment of Hydrochar as an Alternative to Raw Manure for Nutrient Management in the Maumee River Watershed

4.3 Syed Murtaza Arshad, *Electrical and Computer Engineering*
Read4DFlow: Real-time Whole-Heart 4D Flow Imaging from a 5-Minute Scan Using Multi-Dynamic Deep Image Prior

4.4 Jacob Barnes, *Biomedical Engineering*
Lower Limb Joint Degeneration Following Intervertebral Disc Injury and Force-Based Manipulation in a Mouse Model

4.5 Victoria Blanc, *Biomedical Engineering*
Synthesis and Characterization of Metal-Organic Framework Nanoparticles for the Treatment of Glioblastoma

4.6 Mimi Cai, *Integrated Systems Engineering*
You've Been Framed! Reducing Algorithm Influence in Healthcare Decision-Making

4.7 Akhil Canumalla, *Electrical and Computer Engineering*
Flexible Opto-electronic Thin Film Devices for Neurological and Cardiac Stimulation

4.8 Kaitlyn Cimney, *Biomedical Engineering*
Cerclage Wire for Affordable Plate Fixation in Murine Critical Sized Defect Models

4.9 Khady Diop, *Biomedical Engineering*
Proteomics Analysis of FOXF1 and Brachyury Loaded Engineered Extracellular Vesicles Derived from Human Nucleus Pulposus Cells

4.10 Mattie Grooms Phillips, *City and Regional Planning*
Unheard Voices: Participatory Action Research on the Perception of Residents of Subsidized Multifamily Rental Housing

4.11 Yizhen Jia, *Material Science and Engineering*
Flexible Light-Addressable Potentiometric Sensors for Cellular Imaging of Electrophysiological Signals

4.12 XingZhi Li, *Integrated Systems Engineering*
Numerical Simulation of Microdamage in Equine Superficial Digital Flexor Tendon

4.13 Chidimma Maryjane Nwankwor, *Chemical Engineering*
Selective Hydrodeoxygenation of Acetophenone to Ethylbenzene Using Palladium Supported on Aryl-Bridged Polysilsesquioxane

4.14 Krutarth Pandit, *Chemical Engineering*
Advanced Chemical Looping Gasification of Biomass for High-Purity Syngas Production with Inherent CO_2 Capture: A Pathway to Sustainable Liquid Fuels

POSTER PRESENTATIONS

Session 5: Math & Physical Sciences

5.1 Jae Chang, *Statistics*
Knowledge Transfer When Features Misalign

5.2 Subhajit Das, *Chemistry*
Surface Defects and Their Influence on Charge Dynamics: A Case Study of Iron Oxides

5.3 Anand Ekbote, *Philosophy*
Diagnosing Underdetermination in Quantum Mechanics, and Proposing a New Way Forward

5.4 Andrew Gothard, *Biostatistics*
Continuous Logic Forest: An Ensemble Machine Learning Technique for Discovering Logical Combinations of Binary Markers

5.5 Allison Jessup, *Chemistry and Biochemistry*
Synthetically Engineering Vanadium (IV) Complexes for Quantum Noise Control

5.6 Chenze Li, *Statistics*
Transfer Learning with Distance Covariance for Random Forest: Error Bounds and an EHR Application

5.7 Andrew Lorig, *Chemistry*
C-H Deuteration Enabled by Stepwise Electrochemical Transformations in Solid State

5.8 Rohan Maji, *Chemistry*
Remote Tuning of a Zr/Co Heterobimetallic Catalyst for Olefin Isomerization

5.9 Christopher Mortensen, *Chemistry*
Amino Acid Functionalized Molecular Baskets for Fentanyl Encapsulation

5.10 H Rainak Khan Real, *Grography*
From Microns to Meters: Using Remote Sensing to Understand the Spatial Ecology of Iron-Oxidizing Bacteria on the Arctic Tundra

5.11 Anshuman Samanta, *Chemistry*
Anion-Controlled Showdown: Time-Resolved SFG Reveals CO-Hydroxide Interplay.

5.12 Piyush Anil Kumar Sharma, *Physical Chemistry*
Carbonate-Enhanced Photocorrosion Limits the CO2 Reduction Reactivity on $CuFeO_2$ Delafossite Photocathodes

5.13 Jude Stapf, *Chemistry*
Enhancing ^{59}Co NMR Sensitivity and Accuracy for Next-Generation MRI Probe Design

5.14 Chloe Zheng, *Physics*
Cosmological Zoom-In Simulations of Self-Interacting Dark Matter Halos

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