



THE OHIO STATE UNIVERSITY

EDWARD F. HAYES

GRADUATE RESEARCH FORUM

Friday, February 28, 2020

Ohio Union

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WELCOME REMARKS

Dear Guests,

Welcome to the 34th 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 Office of Research enables Ohio State graduate students not only to present their cutting-edge research, but also to develop as professionals. I am pleased that you have joined us to celebrate the graduate research that takes place at this great university. 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. On behalf of the Council of Graduate Students, I thank you for your unwavering and continued support.

I would like to thank a few people in particular: the primary advisor, Kerry Hodak, for her knowledge and advice; Teresa Kempton-Dray and Rachel Conners for their administrative assistance; the graphics team, Johna Walls, Rose Buoni, and Abby Shaffer; 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 for their 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 important issues. The caliber and range of scholarly work is truly inspiring and a privilege to learn from. Irrespective of your role today, I hope that what we have planned will provide you with a memorable experience. On behalf of the Council of Graduate Students, thank you to everyone who gave their time to support the Hayes this year.

Sincerely,

Libby Bauman

Vice President, Council of Graduate Students
Chair, Hayes Graduate Research Forum Committee

Dear Hayes Forum Attendees,

Welcome to the 34th annual Edward F. Hayes Graduate Research Forum. This collaboration between The Ohio State University's Council of Graduate Students, the Graduate School, and the Office of Research provides a forum to celebrate your research accomplishments, present the findings of that research to the broader Ohio State community, and facilitate 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 our state, nation and world.

In addition to sharing your valuable research, the Hayes Forum is an occasion to forge connections and collaborations in meaningful new research endeavors. We encourage you to take advantage of this unique opportunity to 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.

Sincerely,



Alicia Bertone, DVM, PhD
Vice Provost for Graduate Studies and
Dean of the Graduate School

A handwritten signature in black ink that reads "Alicia Bertone".



Morley Stone, PhD
Senior Vice President for Research

A handwritten signature in black ink that reads "Morley O. Stone".

ACADEMIC AREA ROOM ASSIGNMENTS

Oral Presentations

The Arts

Senate Chamber | *2nd Floor*

Biological Sciences

Rosa M. Ailabouni Room | *3rd Floor*

Business Session

Founders Room | *2nd Floor*

Education & Human Ecology

Barbie Tootle Room | *3rd Floor*

Engineering

Hays Cape Room | *3rd Floor*

Food, Agricultural & Environmental Sciences

Maudine Cow Room | *Lower Level*

Humanities

Ohio Staters, Inc. Traditions Room | *2nd Floor*

Mathematical & Physical Sciences

Suzanne M. Scharer Room | *3rd Floor*

Health Sciences

Milestones Room | *Lower Level*

Social & Behavioral Sciences

Student-Alumni Council Room | *2nd Floor*

Poster Presentations

Biological Sciences – Archie M. Griffin West Ballroom | *2nd Floor*

Education and Human Ecology – Great Hall Meeting Room | *1st Floor*

Food, Agricultural & Environmental Sciences – Archie M. Griffin West Ballroom | *2nd Floor*

Health Sciences – Great Hall Meeting Room | *1st Floor*

Math, Physical Sciences, & Engineering – Archie M. Griffin West Ballroom | *2nd Floor*

Social & Behavioral Sciences – Great Hall Meeting Room | *1st Floor*

Ohio Union Description by Floor

Lower Level

Maudine Cow Room
Creative Arts Room

1st Floor

Great Hall Meeting Room
US Bank Conference Theater

2nd Floor

Ohio Staters, Inc. Founders Room
Ohio Staters, Inc. Traditions Room
Student-Alumni Council Room
Senate Chamber
Cartoon Room

3rd Floor

Rosa M. Ailabouni Room
Suzanne M. Scharer Room
Interfaith Prayer and Reflection Room

HAYES GRADUATE RESEARCH FORUM: *Schedule*

7:30 – 7:50 a.m. | Registration

Great Hall Lobby | 1st Floor – Breakfast and networking session

7:50 – 8:20 a.m. | Welcome Addresses and Opening Session

U.S. Bank Conference Theater | 1st Floor

Host – Libby Bauman

Chair, Hayes Research Forum
Vice President, Council of Graduate Students
Master's Student, Education and Human Ecology

Speaker – Melissa Shivers, PhD

Vice President for Student Life

Speaker – Noah Weisleder, PhD

Director, Office of Postdoctoral Affairs
President of Ohio State Sigma Xi Chapter

8:30 a.m. – 12 p.m. | Oral Presentations – Guests Welcome

8:40 a.m. – 12 p.m. | Poster Session – Guests Welcome

12 – 12:45 p.m. | Judges' Deliberations

Deliberations are closed to the public

12:15 – 12:55 p.m. | Hayes Forum Professional Development Session:

Communicating Across Disciplines – US Bank Conference Theater | 1st Floor

Ana Berríos Allison, LPC, PhD

Assessment Specialist & Career Counselor,
Counseling & Consultation Services
Adjunct Professor, Counselor Education

Karin Jordan, PhD

Assistant Dean of Graduate Development
and Engagement

Annika Peter, PhD

Associate Professor, Physics and Astronomy

1 – 2:45 p.m. | Awards Luncheon

Performance Hall | 1st Floor

Host – Libby Bauman

Chair, Hayes Research Forum
Vice President, Council of Graduate Students
Master's Student, Education and Human Ecology

Speakers –

President Michael V. Drake, MD

Stephen Post

President, Council of Graduate Students
Master's Student, John Glenn College
of Public Affairs and College of Pharmacy
and Administration

Morley Stone, PhD

Vice President for Research

Alicia Bertone, DVM, PhD

Vice Provost for Graduate Studies
and Dean of the Graduate School
ENGIE - Axiom Endowed Dean's Chair
Professor, Veterinary Clinical Sciences

Award Presenters –

Alicia Bertone, DVM, PhD

Vice Provost for Graduate Studies
and Dean of the Graduate School
ENGIE - Axiom Endowed Dean's Chair
Professor, Veterinary Clinical Sciences

DaVonti' Haynes, MSW

Treasurer, Council of Graduate Students
Doctoral Candidate, Agricultural
Communication, Education, & Leadership

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*

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.

ORAL PRESENTATIONS: *The Arts*

Senate Chamber, *2nd Floor*

Visualizing Ancient Culture Through the Design of Intermodal
Mixed Reality Experiences

Presented by: Joseph Chambers, Design

Can Biophilic Design Components Impact the Mood and
Behavior of Dementia Patients?

Presented by: Susan Booher, Design

Swing Heil: Embodied Resistance to the Third Reich

Presented by: Emily Kaniuka, Music Theory

Fractal Patterns and Wellbeing: An Application of Biophilia in the Interior Space

Presented by: Noor Danielle Murteza, Design Research & Development

Glorifying Whiteness: How Chorus Lines in the Early Twentieth Century
Contributed to the Hegemony of the White Racial Body

Presented by: Adrienne Oehlers, Theatre

Embodied by Design: The Presence of Creativity, Art-Making and
Self in Virtual Reality

Presented by: Jessica Pissini, Arts Administration, Education, & Policy

Beyond Accessibility

Presented by: Shannon Thacker, Art Education

Artful Cultural Diplomacy Design: Culture, Power, and History

Presented by: Biyun Zhu, Arts Administration, Education, & Policy

Making Resilient International Arts Festivals: A Preliminary Investigation of
China Shanghai International Arts Festival

Presented by: Yifan Xu, Arts Administration, Education, & Policy

ORAL PRESENTATIONS: *Biological Sciences*

Rosa M. Ailabouni Room, *3rd Floor*

Fatty Acid Binding Proteins Facilitate Reprogramming of Müller Glia into Progenitor Cells by Modulating Cannabinoid Signaling in the Retina.

Presented by: Warren Campbell, Neuroscience Graduate Program

Individual Effects of Bone Marrow Derived Cells in the Attenuation of Tissue Engineered Vascular Graft Occlusion

Presented by: Yu-Chun Chang, Biomedical Sciences

Bone Sialoprotein is Critical for Bone Healing

Presented by: Michael Chavez, Biosciences

Persistent ESBL E. Coli Strain

Presented by: Siying Fu, Food Science and Technology

Transforming Industrial Waste to a Source of Natural Antimicrobials Followed by Semi-Preparative Purification to Facilitate Industrial Applications

Presented by: Walaa Hussein, Food Science and Technology

Metabolic Flux Through the Lipogenic Host Enzyme Fatty Acid Synthase (Fasn) Generates DE Novo Fatty Acids for Myristoylation of HIV-1 Gag

Presented by: Krithika Karthigeyan, Microbiology

Identifying and Characterizing Inhibitors of the FraB Deglycase, a Promising Drug Target to Treat Salmonellosis

Presented by: Jamison Law, Biochemistry Program

Chronic Demyelination and Remyelination of Spared Axons After Spinal Cord Injury

Presented by: Nicki Pukos, Neuroscience Graduate Program

Network Analysis Provides New Insights Into Hormone Signal Integration During the Plant Immune Response

Presented by: Alexander Turo, Translational Plant Sciences

Circadian Regulation of the Mapk-Erk Signaling Pathway

Presented by: Hyojung Yoon, Molecular, Cellular and Developmental Biology

ORAL PRESENTATIONS: *Business*

Founders Room, *2nd Floor*

Internalized Abuse: Examining Followers' Subjective Judgment of Leaders' Abusive Supervision Behaviors

Presented by: Woohee Choi, Business Administration

The Good-Cop and Bad-Cop Negotiation Approach: A Role Differentiation Strategy on Integrative Consequences in Intergroup Negotiation Setting

Presented by: Seunghoo Chung, Business Administration

Risk and Rivalry Promotions

Presented by: John Costello, Marketing

Can the Government Help Firms Develop Innovation Capabilities?

Presented by: Joon Woo Hong, Business Administration

Do Horizontal Mergers Affect Rivals' Cash Holdings?

Presented by: Dongxu Li, Finance

When Collecting Personal Data from Consumers Backfires

Presented by: Jianna Jin, Marketing

ORAL PRESENTATIONS: *Education & Human Ecology*

Barbie Tootle Room, *3rd Floor*

Recruiting and Hiring Black Graduate Women as Faculty

Presented by: e alexander, Higher Education and Student Affairs

"So, You Want to Be a Teacher?" How Hopeful Teachers Navigate Challenges

Presented by: Meghan Breedlove, Counselor Education & Supervision

Pathways Through Early Care Predict Differences in Child Outcomes
in the First Two Years of Schooling

***Presented by: Nathan Helsabeck, Quantitative Research, Evaluation, and
Measurement***

Children's Classroom Social Experiences During Preschool and First-Grade
Transition: The Role of Teacher Awareness of Classroom Social Dynamics

Presented by: Saesbyul Kim, Educational Psychology

Social Scaffolding and Social-Moral Reasoning: A Comparative Case Study

Presented by: Elizabeth Kraatz, Educational Psychology

Black Girls and School Discipline in Ohio: Using Their Voices to Imagine Solutions

Presented by: Alexis Little, Educational Policy

Bridging the Gap between Social Reasoning and Action:

Impacts of Collaborative Small-Group Discussion

Presented by: Manisha Naresh Nagpal, Educational Psychology

Emergent Bilingual Children Letter Name Knowledge

***Presented by: Somin Park, Reading and Literacy in Early and
Middle Childhood***

Community Partner-Led Service-Learning: Potential for Equity through
Critical Service-Learning

Presented by: Nathaniel Stewart, Educational Policy

Positive Social Dynamic Predictors of Student Learning

***Presented by: Susan Talley, Quantitative Research, Evaluation, and
Measurement***

The ACA Medicaid Expansion and Low-income Homeownership

Presented by: Guangyi Wang, Consumer Science

ORAL PRESENTATIONS: *Engineering*

Hays Cape Room, 3rd Floor

A New Design of Microbolometer for Millimeter Wave Imaging System
Based on Phase-change Material

Presented by: Shangyi Chen, Mechanical Engineering

An in Vitro Screening Platform to Identify Novel Effectors of Extracellular
Matrix Alignment

Presented by: Caitlin Jones, Biomedical Engineering

Brain Tissue and Functional Recovery in Ischemic Stroke Model via
Nanotechnology Based Cell Reprogramming

Presented by: Luke Lemmerman, Biomedical Engineering

A Plug-and-Play Method with Learned Denoiser for Accelerated Cardiac MRI

Presented by: Sizhuo Liu, Biomedical Engineering

Retrieval and Analysis of Mobility-Related Information from Free Text
Clinical Reports

***Presented by: Denis Newman-Griffis, Computer Science and
Engineering***

Engineering Extreme Electric Fields for Ultra-Wide Bandgap
Semiconductor Electronics

Presented by: Towhidur Razzak, Electrical and Computer Engineering

Surface-Modified Ultra-Pure Earthworm Mega-Hemoglobin as a
Transfusion Product

Presented by: Chintan Savla, Chemical and Biomolecular Engineering

Non-Viral Reprogramming of Degenerate Intervertebral Disc Cells Induces
Trans-Differentiation to a Healthy Phenotype

Presented by: Nina Shirley Tang, Biomedical Engineering

Efficiently Integrating Solar Photovoltaic gNeration in Utility
Distribution Networks

***Presented by: Sree Subiksha Madhavan Reshikeshan, Electrical
and Computer Engineering***

Understanding the Biological Basis of Alternating Electric Field Therapy
on Breast Cancer Metastasis

Presented by: Meihui Zhang, Biomedical Engineering

ORAL PRESENTATIONS: *Food, Agriculture & Environmental Sciences* | *Maudine Cow Room, Lower Level*

Assessing the Impact of Negative Versus Positive Textural Drivers on Eating Choices

Presented by: Amy Andes, Food Science and Technology

Recombinant Attenuated Salmonella Vaccines to Control Campylobacter in Poultry

Presented by: Gary Closs Jr., Food Science and Technology

Timing of Luteolysis and Conceptus Expulsion After Induced Embryonic Demise During the Second Month of Gestation in Beef Cows

Presented by: Benjamin Duran, Animal Science

Building a Grain Bin Dust Simulator: A Model to Measure Workers' Exposure of Organic Dust

Presented by: Yang Geng, Food, Agriculture, and Biological Engineering

Metabolic Responses of Austrian Pine to an Opportunistic Pathogen Under Drought Stress

Presented by: Soumya K Ghosh, Plant Pathology

Elucidating a Potential Detection Mechanism for High-Viscosity Solutions in the Oral Cavity Using Tissue Isolation and Anatomical Characterization

Presented by: Brittany Miles, Food Science and Technology

Huge Impacts from Tiny Organisms: Harnessing Novel Strains of Beneficial Bacteria to Improve Drought Stress Tolerance of Greenhouse Plants

Presented by: Nathan Nordstedt, Horticulture and Crop Science

Agroecological Change and Participatory Cover Crop Research in Maya Milpas of Southern Belize

Presented by: Henry Peller, Environment and Natural Resources

Improvement of Natural Food Colorant Performance with Efficient Pyranoanthocyanin Formation from Sambucus Nigra Anthocyanins Using Caffeic Acid and Heat

Presented by: Nicole Straathof, Food Science and Technology

Safety of shell Eggs as Affected by Different Heating Rates and Survival of Salmonella Enteritidis During Mild Egg Pasteurization

Presented by: Yumin Xu, Food Science and Technology

ORAL PRESENTATIONS: *Humanities*

Ohio Staters, Inc. Traditions Room, *2nd Floor*

The Construction of Common Narrative and Identity in the "National Epic"

Presented by: Dennin Ellis, English

In the Search of Piety: Why Muslim Iranian Angelinos Convert to Christianity?

Presented by: Eshan Estiri, Near Eastern Languages and Cultures

"These Unfortunate People": The International Response to Jewish Refugees in Shanghai, 1945-1949

Presented by: Sara Halpern, History

Building Empathy in Video Games through Digital Mestizaje in Hellblade: Senua's Sacrifice

Presented by: Carlos Kelly, English

The Problem of Venue: The Controversy on Liu Haisu's Exhibition at the Daxin Gallery

Presented by: Yiwen Liu, History of Art

A Reduction in Suffering: Applying the Principles of Medical Humanities to Address the Needs of ELL Students in Freshman Composition

Presented by: Rolando Rubalcava, English

Conservatives and Progressists Rappers: Brazilian Rap in the Context of Jair Bolsonaro's Presidential Election in 2018.

Presented by: Henrique Yagui Takahashi, Latin American Cultural and Literary Studies

Look into the Two "Eyes" in Chinese

Presented by: Jinwei Ye, East Asian Languages and Literatures

Visualizing the Temporal Space of Narratives

Presented by: Sean A. Yeager, English

Reduplication in Sajian: To Be Twice as Cute in the Chinese Culture of Cuteness

Presented by: Wei Zhou, Chinese Linguistics

Efficient Theoretical Quantum Chemistry Method For Insight Into The Excited States Of Molecules And Materials

Presented by: Samraghi Banerjee, Chemistry

Watching Electrons Move: Understanding Solar Energy Conversion Using X-Ray Spectroscopy

Presented by: Somnath Biswas, Chemistry

Basal Channel Evolution in West Antarctic Ice Shelves

Presented by: Allison Chartrand, Earth Sciences

Inferring the Order in which Mutations Arise during Cancer Progression

Presented by: Yuan Gao, Biostatistics

Amplitude-Phase Separation of Trace-Variogram for Spatial Functional Data Analysis

Presented by: Xiaohan Guo, Biostatistics

CHPNCL for Linker Histone

Presented by: Ziyong Hong, Chemistry

Bayesian Model for Estimation and Registration of Noisy, Sparse and Fragmented Functional Data

Presented by: James Matuk, Statistics

Polarization Dependent Relativistic Transparency: Particle-In-Cell Simulations and Experiment

Presented by: Preston Pozderac, Physics

C-H Functionalization: A Holy Grail Transformation Enabled by Radical Relays

Presented by: Allen Prusinowski, Chemistry

Expediting Drug Discovery via Late Stage C-H Functionalization

Presented by: Leah Stateman, Chemistry

ORAL PRESENTATIONS: *Health Sciences*

Milestones Room, *Lower Level*

Characterization of clonal evolution in microsatellite unstable metastatic cancers through multi-regional tumor sequencing

Presented by: Russell Bonneville, Biomedical Sciences Graduate Program

Prenatal Stress Leads to Intrauterine Inflammation, Serotonergic Dysfunction, and Long-Term Behavioral Deficits Through Microbe- and CCL2-Dependent Mechanisms

Presented by: Helen Chen, Neuroscience Graduate Program

Targeted Ultrasound

Presented by: Meghan Flannery, Anatomy

Development of Next-Generation Live Attenuated Influenza Vaccines with Elite Immunostimulatory Capabilities

Presented by: Amir Ghorbani, Comparative and Veterinary Medicine

Notch Signaling Regulates Human Innate Lymphoid Cell Plasticity and Differentiation

Presented by: Ansel Nalin, Biomedical Sciences Graduate Program

Impaired Glial IL-10 / TGF β Signaling Underlies the Exaggerated Sickness Response in Aged Mice

Presented by: Shane O'Neil, Neuroscience Graduate Program

Adipose PTEN Regulates Adult

Presented by: Nicholas Queen, Biomedical Sciences Graduate Program

Pre-Operative Activity Level and Outcomes after Ventral Hernia Repair: Making the Case for Prehabilitation in Ventral Hernia Patients

Presented by: Savannah Renshaw, Public Health

Mammary Tumors and Chemotherapy Independently Disrupt Circadian Rhythms in Mice

Presented by: Kyle Sullivan, Neuroscience Graduate Program

Tonsil Scrapings for Porcine Reproductive and Respiratory Syndrome Virus Detection

Presented by: Heather Walker, Public Health

ORAL PRESENTATIONS: *Social & Behavioral Sciences*

Student-Alumni Council Room, *2nd Floor*

Persistence in STEM: An Analysis of Achievement Goals and the Effects of Gender on Class Belonging

Presented by: Elise Allen, Educational Studies

nLL1R1 Necessary for Stress

Presented by: Damon DiSabato, Neuroscience Graduate Program

Climate Change Litig. Networks

Presented by: Federico Holm, Environment and Natural Resources

The Politics of Protection and Care: A Gendered Analysis of Everyday Violence in Fragile Societies

Presented by: Kara Hooser, Political Science

Adolescents' Relational Closeness to Maternal Figure, Religious Beliefs, and Depressive Symptoms: Examinations Across Race and Ethnicity

Presented by: Karis Inboden, Human Development and Family Science

Twitter Watch: Leveraging Social Media to Monitor and Predict Collective-Efficacy of Neighborhoods

Presented by: Moniba Keymanesh, Computer Science and Engineering

"Stop Playing the 'What-If' Game": Gender in Satisfaction with Sterilization

Presented by: Alexandra Kissling, Sociology

Implementation Science in Cancer Control: Replicating the Effects of Dissemination and Examining Its Effects on Providers' Usage of an Empirically Supported Treatment

Presented by: Stephen Lo, Psychology

The Role of Tree and Building Shades in Neighborhood Thermal Control: A Three-Dimensional Digital City Approach

Presented by: Yujin Park, City and Regional Planning

Self-Regulation in Young Deaf Children

Presented by: Natalie Safdar, Audiology

POSTER PRESENTATIONS: *Biological Sciences*

Archie M. Griffin West Ballroom, *2nd Floor*

- 1 Do Plants Control Their Development by Integrating Signals Through Key Transcription Factors?
Presented by: Quratulayn Ashraf, Molecular, Cellular and Developmental Biology
- 2 Gender-Specific Effects of Tamoxifen on Neotissue Development in Murine Tissue Engineered Vascular Grafts
Presented by: Kevin Blum, Biomedical Engineering
- 3 Regulation of Oscillatory Genes During Vertebrate Segmentation
Presented by: Kara Braunreiter, Molecular Genetics
- 4 Corridors of Dispersal: Population Genetics of a Panamanian Fungus-Growing Ant
Presented by: Cody Cardenas, Evolution Ecology & Organic Biology
- 5 Chloroplast Cytochrome C Assembly Requires the Provision of Reducing Power Through Two Different Pathways
Presented by: Ankita Das, Molecular Genetics
- 6 KMT2D Impact on Metastasis Phenotypes in Squamous Cell Carcinoma
Presented by: Cara Dauch, Applied Clinical and Preclinical Research
- 7 BAT SVF for metabolism
Presented by: Revati Dewal, Molecular, Cellular and Developmental Biology
- 8 From Bitter to Better: Exploring Variation in Tomato Glycoalkaloids
Presented by: Michael Dzakovich, Horticulture and Crop Science
- 9 Oxygen Affinity and Size of HBOCs Can Be Engineered: Glutaraldehyde Polymerized Bovine Hemoglobin Red as a Blood Cell Substitute
Presented by: Xiangming Gu, Chemical Engineering
- 10 Hemoglobin Nanoparticles can be Synthesized by Ethanol Desolvation for use as a Red Blood Cell Substitute
Presented by: Richard Hickey, Chemical Engineering

POSTER PRESENTATIONS: *Biological Sciences*

Archie M. Griffin West Ballroom, *2nd Floor*

- 11 A Survey Study of Prophylactic Rabies Vaccination Regulations for Companion Animals in Ohio
Presented by: Abigail Jokerst, Public Health
- 12 Paneth Cells Regulate Diet-Induced Obesity and Trafficking of Inflammatory Immune Cells Into Adipose Tissues
Presented by: Marisa Joldrichsen, Comparative and Veterinary Medicine
- 13 Developmental Roles of Pcdh1a in Neural Circuit Assembly
Presented by: Sarah Light, Neuroscience Graduate Program
- 14 Computational Analysis of MS- and NMR-determined Hydrogen-Deuterium Exchange Rates via de novo Structure Prediction
Presented by: Daniel Marzolf, Biophysics
- 15 Pumilio In Dicer1 Syndrome
Presented by: Swetha Rajasekaran, Molecular Genetics
- 16 Translating Data from Surface-Induced Dissociation Mass Spectrometry and Cryo-Electron Microscopy into Accurate Structures of Protein Complexes
Presented by: Justin Seffernick, Chemistry
- 17 In-Silico Electrophysiology of TMC1--An Inner-Ear Mechanotransduction Protein
Presented by: Sanket Walujkar, Chemical Physics
- 18 Ribotag
Presented by: Wenyan Yin, Neuroscience Graduate Program
- 19 KIF11 at PC in Neurodevelopment
Presented by: Abigail Zalenski, Neuroscience Graduate Program

POSTER PRESENTATIONS: *Education & Human Ecology* | Great Hall Meeting Room, 1st Floor

- 1 Teachers are Key: Using the MSC Model to Implement Interventions
Presented by: Caitlyn Chambers, School Psychology
- 2 Stories of Mudanca (Change): Black Brazilian Women Activists and Preservice Teachers on Natural Afro Hair and (Re)Imagining Education on (Anti)Blackness"
Presented by: Marla Goins, Multicultural and Equity Studies in Education
- 3 Investigating Teachers' Implementation of New Social and Emotional Learning Standards Through a Community of Practice
Presented by: Kelsey Higginson, Kinesiology
- 4 A Longitudinal Study on How Motivation Affects Students' Cognitive Engagement in Vocabulary Learning Online
Presented by: Zilu Jiang, Learning Technologies
- 5 The Impact of SNAP Benefit Changes on Consumption
Presented by: Yiting Lan, Consumer Sciences
- 6 Repositioning the Birthplace of Instructional Design: Ralph W. Tyler's Systematic Method
Presented by: Catherine O'Keefe, Educational Studies
- 7 ICC Bias and Level 1 Sample Size
Presented by: Joshua Peri, Quantitative Research Evaluation Measurement
- 8 Self-Efficacy in Pediatric Physical Therapy Education: Considering Domain-Specific Experiential Learning
Presented by: Kimberley Scott, Health and Rehabilitation Sciences
- 9 Making Sense of Worldview Diversity at Public Universities: An Exploration of Student Encounters using Critical Sensemaking
Presented by: Beth Ashley Staples, Educational Studies
- 10 Nearpod VR Influence on Science Engagement and Content Retention among Elementary and Middle School Students
Presented by: Joanne Vakil, STEM Education
- 11 Grandmothers' Endorsement of Coparenting and Maternal Gatekeeping Behaviors: The Moderating Role of Fathers' Parenting Competence
Presented by: Jingyi Wang, Developmental Psychology
- 12 Bystander Intervention Disposition with Racial Slurs for College Students Living in Residential Halls: Considering Discussing Sociocultural Issues with Peers
Presented by: Wu Xie, Higher Education and Student Affairs

POSTER PRESENTATIONS: FAES

Archie M. Griffin West Ballroom, *2nd Floor*

- 1 I Do Not Think It Means What You Think It Means: Explorations of Soil Health Conceptualization
Presented by: Margaret Beetstra, Environment and Natural Resources
- 2 Differentiation of Perceptual Responses And Characterization Of Desensitization To Capsaicin Across Various Oral Cavity Areas
Presented by: Danica Berry, Food Science and Technology
- 3 Linking Genomics And Metabolomics For Nutrition-Driven Germplasm Improvement Of Apples
Presented by: Emma Bilbrey, Horticulture and Crop Science
- 4 Influence Of Chlorine Concentration To The Effectiveness Of In-Place Cleaning Agents
Presented by: Ryan Hardika, Food Science and Technology
- 5 Biobased Novolac Resin
Presented by: Asmita Khanal, Food, Agricultural and Biological Engineering
- 6 Techno-Economic, Energy And Environmental Life Cycle Analyses Of Renewable Jet Fuel Production From Pennycress
Presented by: Seyed Hashem Mousavi Avval, Food, Agricultural and Biological Engineering
- 7 U.S. Military Land and Endangered Species
Presented by: Emily Rabung, Environment and Natural Resources
- 8 Soy soft Pretzels for Recovery
Presented by: Abigail Sommer, Food Science and Technology

POSTER PRESENTATIONS: *Health Sciences*

Great Hall Meeting Room, *1st Floor*

- 1 Using Progressive Muscle Relaxation to Improve Early Symptoms of Advanced Lung Cancer: A Static Group Comparison Design
Presented by: Nicola Arrato, Psychology
- 2 Current Practices in Acute Musculoskeletal Injury Care: A National Survey of Athletic Trainers
Presented by: Tyler Beauregard, Health and Rehabilitation Sciences
- 3 Characterizing Long-term Health Outcomes and Health Related Quality of Life among Families affected by Hemolytic Uremic Syndrome
Presented by: Aaron Beczkiewicz, Food Science and Technology
- 4 New Muscle
Presented by: Dathe Benissan-Messan, Biomedical Sciences Graduate Program
- 5 Rehabilitation Dose for Children with Cerebral Palsy
Presented by: Rachel Bican, Health and Rehabilitation Sciences
- 6 FLI1-Domain Contributions Go Beyond DNA-Binding to Drive Ewing Sarcoma Biology
Presented by: Megann Boone, Biomedical Sciences Graduate Program
- 7 Contribution of Snacks to Dietary Intake Stratified by Race/Ethnicity in the United States
Presented by: Kristen Heitman, Health and Rehabilitation Sciences
- 8 Tau Lesion Formation in Alzheimer's Disease is Antagonized by DJ-1
Presented by: Daniela Jimenez-Harrison, Neuroscience Graduate Program
- 9 Does Neurocognitive Functioning Impact Degraded Sentence Recognition?
Presented by: Jessica Lewis, Speech and Hearing Science
- 10 Group 1 Innate Lymphoid Cell Dysregulation in Acute Myeloid Leukemia
Presented by: Matthew Lordo, Biomedical Sciences Graduate Program

POSTER PRESENTATIONS: *Health Sciences*

Great Hall Meeting Room, *1st Floor*

- 11 Constraint Changes Movement Frequency Not Kinematics in Infants With and Without CP: Early Results
Presented by: Julia Mazzarella, Health and Rehabilitation Sciences
- 12 Effects of Omega-3 Fatty Acids on Insulin Resistance in an Ovariectomized Mouse Model of Diet-Induced Obesity Treated with Chemotherapy
Presented by: Kate Ormiston, Nutrition
- 13 A Mother's Touch: Impact of Maternal Habits on the Infant Oral Microbiome
Presented by: Kazune Pax, Oral Biology
- 14 Diet Quality and Mental Health-Related Quality of Life Among Female Breast Cancer Survivors
Presented by: Janell Pisegna, Health and Rehabilitation Sciences
- 15 Nicotine-Free and Nicotine-Containing E-cigarettes Differentially Alter Microbial Colonization Dynamics
Presented by: Michelle Scott, Biosciences
- 16 Assessing Pharmacist Workload in a Critical Care Satellite Pharmacy After a Bed Expansion
Presented by: Olga Vlashyn, Pharmaceutical Sciences

POSTER PRESENTATIONS: *Math, Physical Sciences, and Engineering* – Archie M. Griffin West Ballroom, *2nd Floor*

- 1 Marine Polysaccharides Influence Water Organization at Sea Spray Aerosol Proxy Films: Implications for Atmospheric Ice Nucleation
Presented by: Kimberly Carter-Fenk, Chemistry
- 2 Validation of Sequence for MRE
Presented by: Megan Co, Biomedical Engineering
- 3 Light-Fueled Dynamic Self-Assembly with Reversibly Isomerizing Tetrapeptide Nanofibers
Presented by: Cassidy Creemer, Organic Chemistry
- 4 Quantum Symmetries for Quantum Topological Spaces
Presented by: Roberto Hernandez Palomares, Mathematics
- 5 Harnessing Electricity to Enable Transformations of Carboxylic Acids
Presented by: Heather Hintz, Chemistry
- 6 Minimal High Pressure Based Continuous Method for Milk Pasteurization
Presented by: Jerish Joyner Janahar, Food Science and Technology
- 7 DNA-caged Polymer Nanocomposites for Erasable Fluorescence Imaging
Presented by: Elizabeth Jergens, Chemical Engineering
- 8 Ferumoxytol-Enhanced Accelerated 4D Flow MRI: Preliminary Analysis in a Pediatric Patient
Presented by: Aaron Pruitt, Biomedical Engineering
- 9 Competitive Binding Interactions for Phosphoric and Phosphonic Acids in Proxy Aged Aerosols
Presented by: Michaela Rogers, Chemistry and Biochemistry
- 10 Water Quality Impacts of Green Infrastructure on Nutrients, Sediment, and Metals: An Analysis of Watersheds in Clintonville, Ohio
Presented by: Joseph Smith, Food, Agricultural & Biological Engineering

POSTER PRESENTATIONS: *Math, Physical Sciences, and Engineering* – Archie M. Griffin West Ballroom, *2nd Floor*

- 11** Biomechanical Differences between Normal Walking and Tactical Walking: Guiding Exoskeleton Development to Enhance Physical Capabilities of Tactical Athletes
Presented by: Maria Talarico, Biomedical Engineering
- 12** Searching for the most energetic neutrinos with the Askaryan Radio Array (ARA) experiment
Presented by: Jorge Torres, Physics
- 13** A Scalable, Electrically Driven, Carbon-Carbon Bond Forming Reaction
Presented by: Blaise Truesdell, Chemistry
- 14** Indirect Magnetic Force Microscopy of Superparamagnetic Nanoparticles
Presented by: Kevin Walsh, Biophysics

POSTER PRESENTATIONS: *Social & Behavioral Sciences* – Great Hall Meeting Room, 1st Floor

- 1 Skeletal Morphological Adaptation of the Modern Human Ankle and Forefoot: A Study of Plasticity in Response to Cultural Pressures
Presented by: Malorie Albee, Anthropology
- 2 UNLABEL ME: Effects of Breed Labeling on Perception and Adoptability of Shelter Dogs
Presented by: Yolanda Bradshaw, Animal Sciences
- 3 When Too Much is Still Not Enough: The Role of Resting HRV & Problem-Focused Coping on Depression Among Black Americans
Presented by: Briana Brownlow, Psychology
- 4 The Impact of Controlled Context on Taint Detection of Chocolate Milk Measured With Implicit and Explicit Methods
Presented by: Maria Cotter, Food Science and Technology
- 5 Predictors of Parenting Self-Efficacy in New Fathers
Presented by: Reed Donithen, Psychology
- 6 Presidential Grandiose Narcissism and International Conflict Appetite
Presented by: John Harden, Political Science
- 7 Framing Realities
Presented by: Brianna Johnson, Dance
- 8 Cheering for Your Team Is Not Booing the Other Side: In-party Love and Out-party Hate
Presented by: Jon Kingzette, Political Science
- 9 Service Attentiveness and Customer Enjoyment in Fashion Retailing
Presented by: Keyin Li, Consumer Sciences
- 10 The Psychology of Psychological Waste: The Dynamic Effects of Sunk Costs on Consumption
Presented by: Tyler MacDonald, Psychology
- 11 Living in Dust and Smog: Identity, Inequality, and Pollutant Exposure during England's Industrial Revolution
Presented by: Sara McGuire, Anthropology

POSTER PRESENTATIONS: *Social & Behavioral Sciences* – Great Hall Meeting Room, 1st Floor

- 12 Can we Overcome a Poor Early Response to Treatment? An Analysis of the Role of Early Improvements in Cognitive Behavioral Skills.
Presented by: Samuel Murphy, Clinical Psychology
- 13 Shifting Philanthropies? Tracing Grantmaking for Community and Economic Development in American Cities
Presented by: Jeeson Oh, City and Regional Planning
- 14 The Salpingopharyngeus, Revisited
Presented by: Karen Perta, Speech and Hearing Science
- 15 Locked Out and Locked Up? Investigating the Relationship Between Eviction and Incarceration
Presented by: Stephanie Pierce, Public Policy and Management
- 16 Anxiety Among Marginalized
Presented by: Andrew Podob, Political Science
- 17 What's Mine Is Yours: The Role of Psychological Ownership on Attitudes Toward Collecting Family Health History
Presented by: Judy Watts, Communication
- 18 Decision-Making Power in the Relationship Between Loneliness and Social Isolation and Health Outcomes Among Aging People in China
Presented by: Xi Yu, Consumer Science
- 19 Is It Better to Know or Not to Know? Getting Notified by A Mishandled Airline Baggage Timely
Presented by: Zenan Zhou, Business Administration

HAYES FORUM 2019 AWARD WINNERS

2019 ORAL PRESENTATION WINNERS

THE ARTS

1st Place: Lindsey Reymore; Music Theory

2nd Place: Nicholas Shea; Music Theory

3rd Place: Hilary Katz; Art Education

BIOLOGICAL SCIENCES

1st Place: Greta Volpedo; Microbiology

2nd Place: Michael Chavez; Oral Biology

3rd Place: Justin Middleton, Molecular, Cellular, and Developmental Biology

Honorable Mention: Michael Ryan-Simkins, Biochemistry

Honorable Mention: Swetha Rajasekaran, Molecular Genetics

BUSINESS

1st Place: Aviva Philipp-Muller;

Social Psychology

EDUCATION & HUMAN ECOLOGY

1st Place: Elizabeth Kraatz; Educational Psychology

2nd Place: Julia Yan; Human Development and Family Science

3rd Place: Guangyi Wang; Consumer Science

ENGINEERING

1st Place: Huiming Dong;

Biomedical Engineering

2nd Place: Keyton Clayson; Biophysics

3rd Place: Nina Shirley Tang; Biomedical Engineering

FOOD, AGRICULTURE & ENVIRONMENTAL SCIENCES

1st Place: Daniel Gillespie; Horticulture and Crop Science

2nd Place: Preston Manwill; Medicinal Chemistry and Pharmacognosy

3rd Place: Ceclia Chagas de Freitas; Plant Pathology

Honorable Mention: Mackenzie Hannum; Food Science and Technology

HEALTH SCIENCES

1st Place: Adam Kenney; Biomedical Sciences

2nd Place: Ansel Nalin; Biomedical Sciences

3rd Place: Christina Knippler; Biomedical Sciences

Honorable Mention: Julie Young; Health and Rehabilitation Sciences

HUMANITIES

1st Place: Zeyuan Wu; Chinese Literature

2nd Place: Hector Iglesias Pascual; Spanish

3rd Place: Ehsan Estiri; Near Eastern Languages and Cultures

MATH & PHYSICAL SCIENCES

1st Place: Madison Tuttle; Chemistry

2nd Place: Curt Wong; Chemistry

3rd Place: Andrew Franjesevic; Math & Physical Sciences

SOCIAL AND BEHAVIORAL SCIENCES

1st Place: Joseph Siev; Social Psychology

2nd Place: Annelise Madison; Clinical Psychology

3rd Place: Austin Hubner; Communication

2019 POSTER PRESENTATION WINNERS

ARTS & HUMANITIES

1st Place: Youngaah Koh; Arts Administration, Education, and Policy

Honorable Mention: Laura Neese; Dance

BIOLOGICAL SCIENCES

1st Place: Nicki Pukos; Neuroscience

2nd Place: Benjamin Noble; Neuroscience

3rd Place: Gary Closs Jr.; Food Science & Technology

ENGINEERING

1st Place: Deven Baser; Chemical Engineering

2nd Place: Deeksha Jain; Chemical Engineering

3rd Place: Noah Einstein; Mechanical Engineering

Honorable Mention: James Kim; Chemical and Biomolecular Engineering

Honorable Mention: Kayane Dingilian; Chemical Engineering

HEALTH SCIENCES

1st Place: Walaa Hussein; Food Science and Technology

2nd Place: Kimberly Scott; Health and Rehabilitation Sciences

3rd Place: Rachel Bican; Health and Rehabilitation Sciences

Honorable Mention: Brittney Keller-Hamilton; Epidemiology

MATH AND PHYSICAL SCIENCES

1st Place: Michael Scudder; Chemistry and Biochemistry

2nd Place: Andrew Chen; Chemistry and Biochemistry

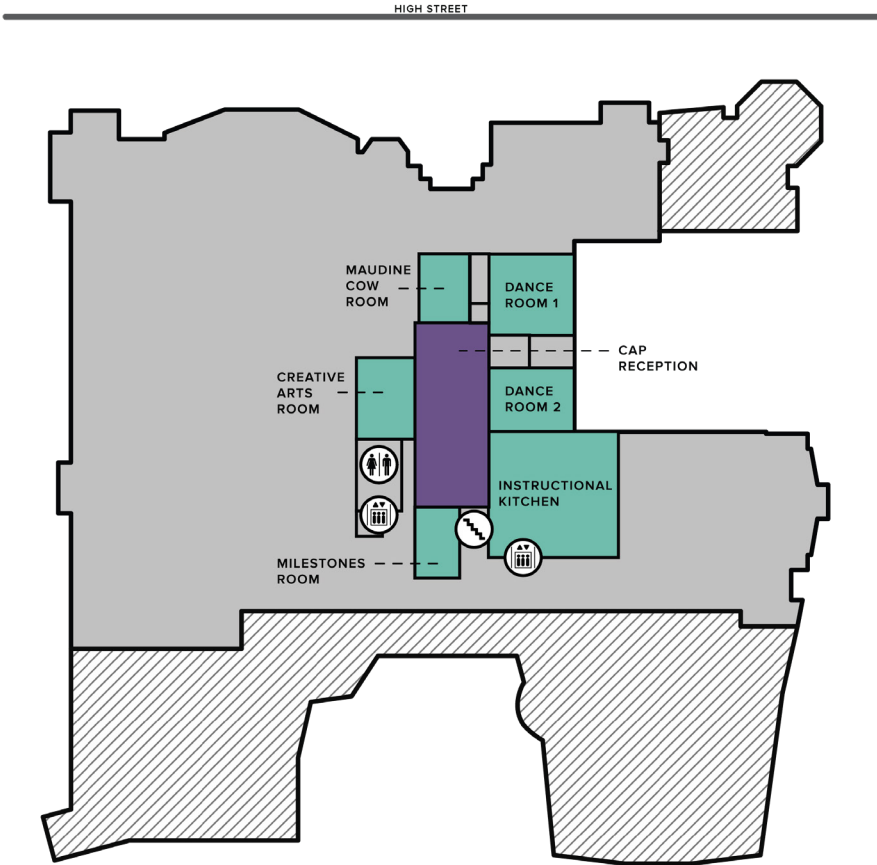
SOCIAL SCIENCES

1st Place: Manisha Nagpal; Educational Psychology

2nd Place: Rebecca Frazer; Communication

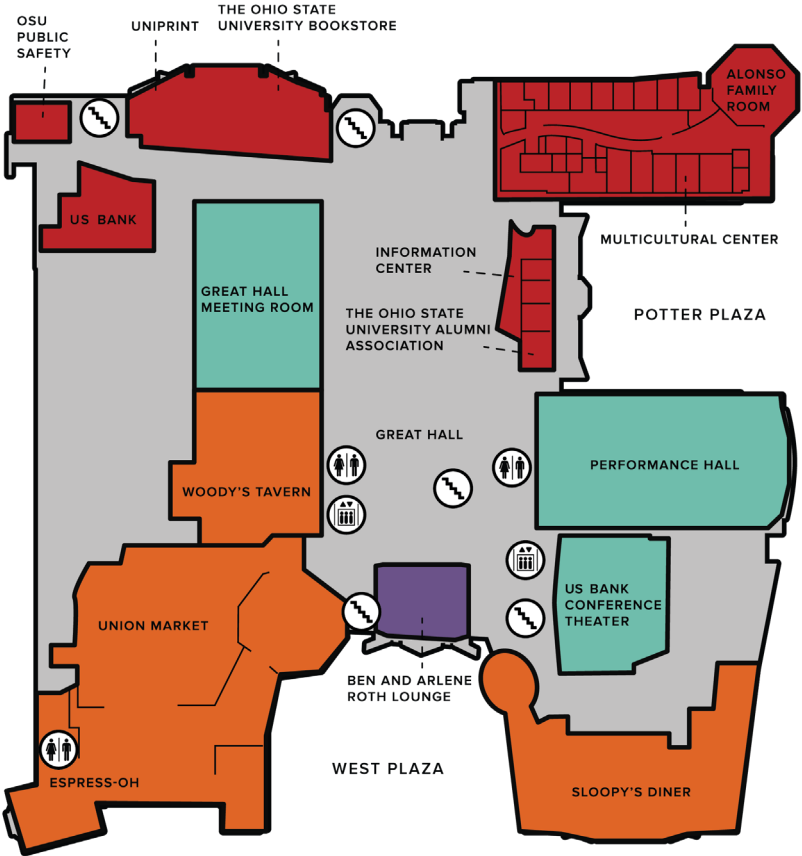
3rd Place: Andrew Perry; Educational Psychology

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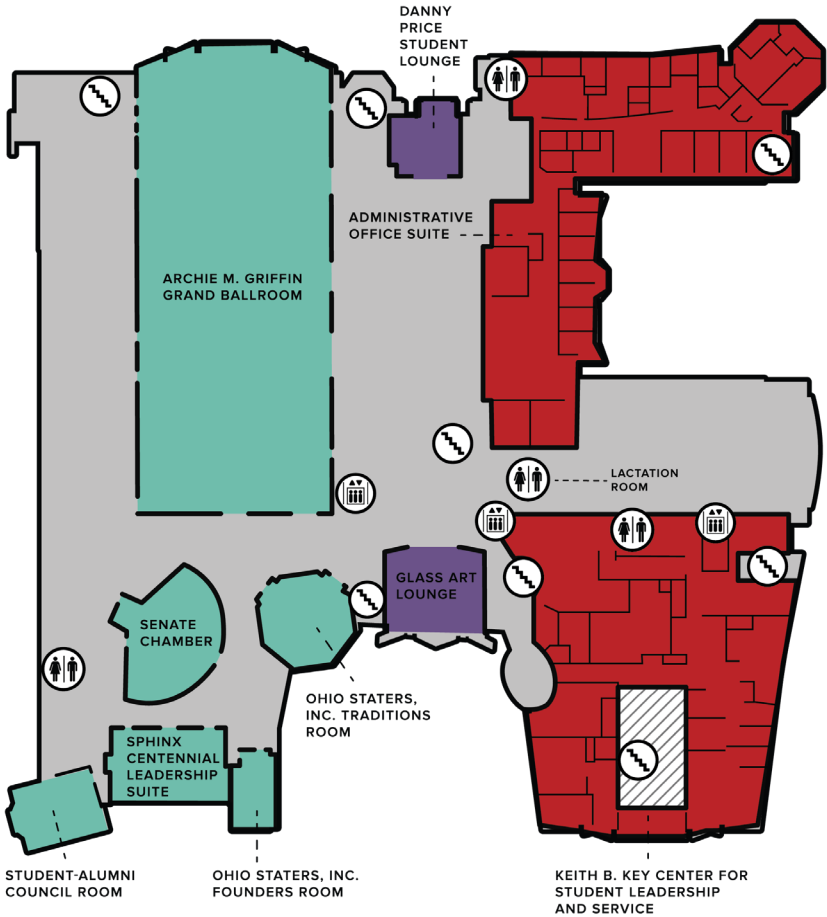
FIRST FLOOR

HIGH STREET

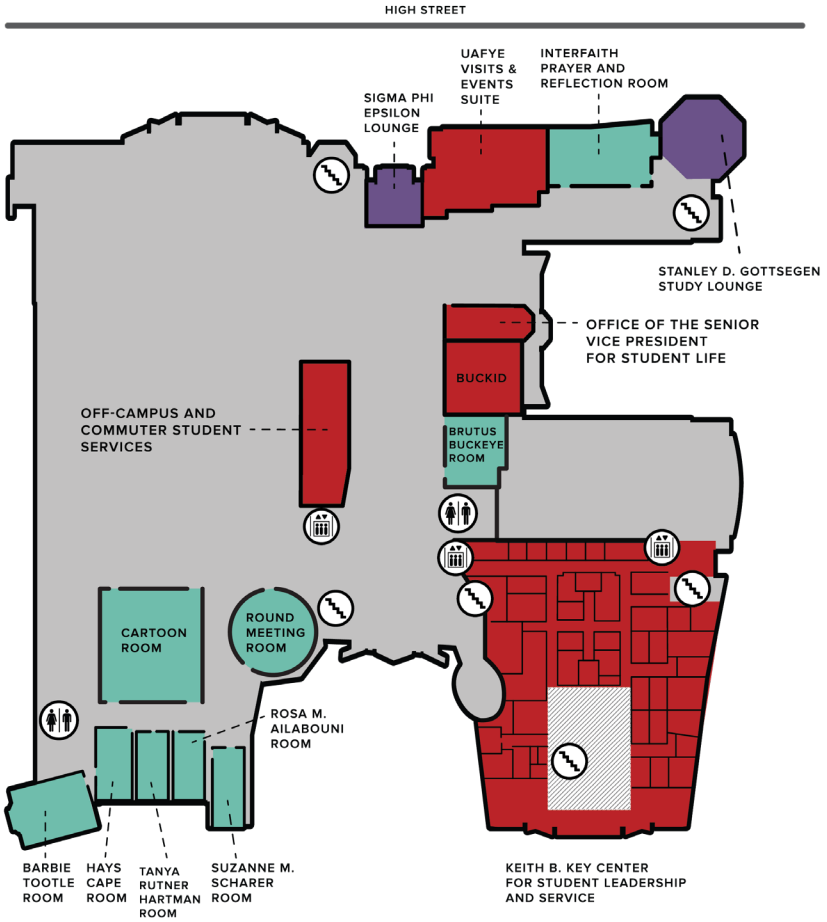


SECOND FLOOR

HIGH STREET



THIRD FLOOR





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