



THE OHIO STATE UNIVERSITY

EDWARD F. HAYES

GRADUATE RESEARCH FORUM

Friday, March 1, 2019 | Ohio Union



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WELCOME REMARKS

Dear Guests,

Welcome to the 33rd 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. This year we have taken feedback from faculty judges and increased number of Hayes participants from about 100 to over 200 Ohio State graduate students. Additionally, we have increased the number of volunteers to increase the efficiency of the day. 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, Hali Buck, Rachel Conners and Teresa Kempton-Dray for their administrative assistance and the graphics team, Jen Cottrell and Elliott Schoolcraft, and the wonderful Hayes Committee. Finally, a special thank you to the Graduate School for their support of graduate students and Senior Vice President Javaune Adams-Gaston from the Office of Student Life for her support of the Council 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,

Tracey Walterbusch, MEd

Vice President, Council of Graduate Students

Chair, Hayes Graduate Research Forum Committee

Dear Hayes Forum Attendees,

Welcome to the 33rd annual 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 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.

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

US Bank Conference Theater | *1st Floor*

Biological Sciences

Rosa M. Ailabouni Room | *3rd Floor*

Business Session

Suzanne M. Scharer Room | *3rd Floor*

Education & Human Ecology

Creative Arts Room | *Lower Level*

Engineering

Senate Chamber | *2nd Floor*

Food, Agricultural & Environmental Sciences

Maudine Cow Room | *Lower Level*

Humanities

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

Mathematical & Physical Sciences

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

Health Sciences

Interfaith Prayer and Reflection Room | *3rd Floor*

Social & Behavioral Sciences

Student-Alumni Council Room | *2nd Floor*

Poster Presentations

Arts & Humanities – Great Hall Meeting Room | *1st Floor*

Biological Sciences – Cartoon Room | *2nd Floor*

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

Engineering – Cartoon Room | *2nd Floor*

Math and Physical Sciences – Cartoon Room | *2nd Floor*

Health 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 – 8:30 a.m. | Welcome Addresses and Opening Session

U.S. Bank Conference Theater | 1st Floor

Host – Tracey Walterbusch, MEd

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

Speaker – 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

8:40 a.m – 12:10 p.m. | Oral Presentations – Guests Welcome

The Arts | US Bank Conference Theater | 1st Floor

Biological Sciences | Rosa M. Ailabouni Room | 3rd Floor

Business | Suzanne M. Scharer Room | 3rd Floor

Education & Human Ecology | Creative Arts Room | Lower Level

Engineering | Senate Chamber | 2nd Floor

Food, Agricultural & Environmental Sciences | Maudine Cow Room | Lower Level

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

Mathematical & Physical Sciences | Ohio Staters, Inc. Founders Room | 2nd Floor

Health Sciences | Interfaith Prayer and Reflection Room | 3rd Floor

Social & Behavioral Sciences | Student-Alumni Council Room | 2nd Floor

9 a.m. – 12 p.m. | Poster Session – Guests Welcome

Great Hall Meeting Room | 1st Floor

Arts & Humanities
Social Sciences
Health Sciences

Cartoon Room | 2nd Floor

Biological Sciences
Engineering
Math and Physical Sciences

12:10 – 12:45 p.m. | Judges' Deliberations

Deliberations are closed to the public

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

Negotiating a Job Across the Spectrum of Higher Education Prospects

US Bank Conference Theater | 1st Floor

1 – 2:45 p.m. | Awards Luncheon

Performance Hall | 1st Floor

Host – Tracey Walterbusch, MEd

Chair, Hayes Research Forum
Vice President, Council of Graduate Students
PhD Candidate, College of Education and
Human Ecology

Award Presenters –

Kristyn Gumpfer
Treasurer for the Council of Graduate Students
Doctoral Candidate, Biomedical Sciences

Alicia Bertone, DVM, PhD

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

Speakers –

Alex Wesaw

President, Council of Graduate Students
PhD Candidate, City & Regional Planning

President Michael V. Drake, MD

Morley Stone, PhD

Vice President for Research

Noah Weisleder, PhD

President of Ohio State Sigma Xi
Chapter

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)

ORAL PRESENTATIONS: *The Arts*

US Bank Conference Theater, *1st Floor*

The Music Environments of Young Children in Tanzania

Presented by: Lucia Benetti, Music Education

Breath Engine

Presented by: Jacklyn Brickman, Art

Color and Tone Color: Connecting Sight and Sound in Music

Presented by: Lindsey Reymore, Music Theory

Subtle Semblances of Sorrow: How Emotional Granularity Influences
Music and Sadness

Presented by: Lindsay Warrenburg, Music Theory

Childhood Sexual Trauma and its Correlation with Borderline
Personality Disorder

Presented by: Jessica Boushie, Printmaking

Playing Psychopathy: Acting the Space Through Bioenergetics

Presented by: Matt Greenberg, Theatre (Acting)

Inclusive Museum Interpretation

Presented by: Hilary Katz, Art Education

Addressing Issues of Representation in Popular Music Research

Presented by: Nicholas Shea, Music Theory

Facilitate a Growth Mindset of Creativity for College Students Using a
Game Design Approach

Presented by: Shasha Yu, Design Research and Development

Investigating the Policy Network of Arts-led Urban Revitalization Network
Catalyzed by Creative Placemaking

Presented by: Wen Guo, Cultural Policy and Arts Administration

ORAL PRESENTATIONS: *Biological Sciences*

Rosa M. Ailabouni Room, *3rd Floor*

Functional Analysis of BARD1 Missense Variants in Homology-Directed Repair and Damage Sensitivity

Presented by: Aleksandra Adamovich, Biomedical Sciences Graduate Program

Zoledronic Acid Affects Development of Tissue Engineered Vascular Grafts

Presented by: Yu-Chun Chang, Biomedical Sciences Graduate Program

Ossabaw Pigs as a Natural Preclinical Model of Metabolic Syndrome and Impaired Wound Healing

Presented by: Nandini Ghosh, Education & Human Ecology

The Stress-inducible Gene, Atf3, in Immune Cells Regulates Chemotherapy-exacerbated Breast Cancer Colonization

Presented by: Justin Middleton, Molecular, Cellular and Developmental Biology

Translational Accuracy Protects Salmonella from Oxidative Stress

Presented by: Rebecca Steiner, Biochemistry

Role of Hofbauer Cells in Vertical Transmission of *Listeria Monocytogenes*

Presented by: Siavash Azari, Microbiology

Lack of Collagen Receptor DDR1 Promotes Periodontal Disease in Mice

Presented by: Michael Chavez, Oral Biology, Biosciences, College of Dentistry

The Small Molecule OSU-2S Mediates Cell Death, Differentiation and Cell Cycle Arrest in Acute Myeloid Leukemia

Presented by: Swagata Goswami, Molecular, Cellular and Developmental Biology

Role of Pumilio (PUM) Mediated Post-transcriptional Regulation in Human Cells

Presented by: Swetha Rajasekaran, Molecular Genetics

Live Attenuated Prophylactic Vaccine for Leishmaniasis

Presented by: Greta Volpedo, Microbiology

ORAL PRESENTATIONS: *Business*

Suzanne M. Scharer Room, *3rd Floor*

Effect of Customer Portfolio and Technological Capability on Quality
Performance of Pharmaceutical Contract Manufacturers

Presented by: In Joon Noh, Business

How to Radicalize the Moderate Consumer

Presented by: Aviva Philipp-Muller, Social Psychology

Evolution of Inequality in the US: Entrepreneurial Activity and Financial
Intermediation

Presented by: Mohsen Mohaghegh, Economics

Order Quantity and Diversification Decisions Under Demand and
Supply Uncertainty

Presented by: Somak Paul, Operations and Statistics

ORAL PRESENTATIONS: *Education & Human Ecology*

Creative Arts Room, *Lower Level*

Students' Goal Setting as Predictors of Growth in Social Reasoning
in Collaborative Small-Group Discussions

Presented by: Elizabeth Kraatz, Educational Psychology

Financial Insecurity and Mortality Risk in American Households

Presented by: Youngwon Nam, Consumer Sciences

Teacher Self-efficacy Beliefs, Collaboration, and Quality Professional
Development: Antecedents of Effective Instructional Practices

Presented by: Salim Ucan, Educational Administration

An Analysis of Charter State Laws: Exploring Policy Environments
and Legal Factors Impacting Charter School Performance

Presented by: Christopher Yaluma, Educational Policy

College Attendance, Appreciative Attitudes, and their Relationship
to Geographical Locale

***Presented by: Graham Knight, Higher Education and
Student Affairs***

Academic Discourse Socialization for Multilingual Learners from
Pre-Kindergarten to Higher Education

***Presented by: Afida Safriani, Foreign, Second, and Multilingual
Language Education***

ACA's Premium Subsidies and Housing Consumption Among Renters

Presented by: Guangyi Wang, Consumer Sciences

Associations Between Couple Relationship Quality and Parental
Depressive Symptoms

Presented by: Julia Yan, Human Development and Family Science

ORAL PRESENTATIONS: *Engineering*

Senate Chamber, *2nd Floor*

Immunoengineering Lung Mechanotransduction to Mitigate Ventilator-Induced Lung Injury

Presented by: Christopher Bobba, Biomedical Engineering

Characterizing Corneal Mechanical Response Using Ocular Pulse Elastography (OPE)

Presented by: Keyton Clayson, Biophysics

In Vivo Quantification of Aortic Stiffness in Abdominal Aortic Aneurysm Patients using Non-Invasive MR Elastography

Presented by: Huiming Dong, Biomedical Engineering

Towards Clinically Feasible Whole-heart Magnetic Resonance Velocity Imaging of the Heart and Great Vessels with Intrinsic Cardiac and Respiratory Motion Compensation

Presented by: Aaron Pruitt, Biomedical Engineering

Terahertz Polarimetric Imaging

Presented by: Nandhini Srinivasan, Electrical and Computer Engineering

Modulation of CXCL12-induced Tumor Angiogenesis by Hyaluronic Acid using Microvessel Analogue

Presented by: Chia-Wen Chang, Chemical and Biomolecular Engineering

Production of Syngas with Controllable H₂/CO Ratio by High Temperature Co-electrolysis of CO₂ and H₂O: A Promising Route to Convert CO₂ into Fuel

Presented by: Dhruba Jyoti Deka, Chemical and Biomolecular Engineering

A Machine-Learning Approach to Creating 3D City Models: LiDAR Point Cloud Classification and Building Height Estimation Validation

Presented by: Yujin Park, City and Regional Planning

Engineering DNA Origami Structures on Cell Surface for Detection of Cancer Biomarkers in Cellular Microenvironment

Presented by: Melika Shahhosseini, Mechanical Engineering

Non-Viral Reprogramming of Degenerate Intervertebral Disc Cells Induces Trans-differentiation to a Healthy Phenotype with Enhanced Extracellular Matrix Accumulation

Presented by: Nina Shirley Tang, Biomedical Engineering

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

Plant Diversity Predicts Pest Management Interventions in Urban Residential Landscapes

Presented by: Christopher Riley, Entomology

Biological Control of *Agrobacterium Rhizogenes* in Hydroponic Grown Tomatoes

Presented by: Cecilia Chagas de Freitas, Plant Pathology

Wine-ing About Context? Does Environment Matter? Wine Perception and Liking in Traditional Booths Compared to a Virtual and Actual Wine Bar

Presented by: Mackenzie Hannum, Food Science and Technology

A Novel Method for Non-thermal Fruit and Vegetable Juice Pasteurization Using Combinations of Mechanical Treatment, Moderate Electric Field and Nisin

Presented by: Jin Hong Mok, Food, Agriculture, and Environmental Science

Water Quality Impacts from Stacked Agricultural Conservation Practices

Presented by: Elizabeth Callow, Food, Agriculture, and Environmental Science

Root Zone Optimization of Hydroponic Leafy Greens

Presented by: Daniel Gillespie, Horticulture and Crop Science

Comparison of Milk and Soy Phospholipid Composition by Normal Phase HPLC-CAD and their Respective Effects on Cell Membrane Functionality.

Presented by: Erica Kosmerl, Food Science

Cinnamodial Analogues with Insecticidal and Antifeedant Activity to Control the *Aedes aegypti* Mosquito

Presented by: Preston Manwill, Medicinal Chemistry and Pharmacognosy

Outgraded produce variably retains surface inoculated *Escherichia coli* through washing

Presented by: Shiyu Cai, Food Science and Technology

Expanding Diversity in Ohio 4-H Membership is Difficult Given Current Funding Structure

Presented by: Mark Light, Agriculture and Extension Education

ORAL PRESENTATIONS: *Humanities*

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

Iran, LA Style: Iranian-immigrants' Public Events in Los Angeles

Presented by: Ehsan Estiri, Near Eastern Languages and Cultures

Fire on the Drive

Presented by: Tessa Jacobs, English-Folklore

The Cultural Markings of American Modernity: Paul Taylor's, Martha Graham's, and Alwin Nikolais's Tours in Taiwan

Presented by: Tsung-Hsin Lee, Dance Studies

Contemporary Brazilian Comedy Films: Cause and Effect of Cultural, Political and Socioeconomic Transformations in Brazil and in Brazilian Cinema

Presented by: Raphael Palermo dos Santos, Portuguese

A Colonial Mission: Deviant Sex, Regulating Families, and Controlling Women's Bodies

Presented by: Malia Womack, Women's, Gender, and Sexuality Studies; Latin American Studies

Chile Coliza: Identities, Discursive Sites, and Social Media in Gay Themed Contemporary Chilean Literature

Presented by: Héctor Iglesias Pascual, Spanish

Activist Joy, Residues of Protest, and Decolonial Transformative Potential in Urban Guatemala

Presented by: Kristen Kolenz, Women's, Gender, and Sexuality Studies

The Emotional Labor of Breaking Barriers: Black Women in the Commercial Airline Industry

Presented by: Shannon Morrison, Women's, Gender, and Sexuality Studies

Aage Juul and the World's War: Resistance, Race, and Internationalism in the Allied Fight through Italy, 1943-1945

Presented by: Carson Teuscher, Military History

Words, Music, and Meaning: The Debate on Qin Song in Late Imperial China

Presented by: Zeyuan Wu, Chinese Literature

ORAL PRESENTATIONS: *Mathematical & Physical Sciences* | *Ohio Staters, Inc. Founders Room, 2nd Floor*

The Introductory Steps in Solar Energy Conversion Technologies: Watching Charge Separation in Real-Time Across an Interface

Presented by: Somnath Biswas, Chemistry

Aggregated Pairwise Classification of Statistical Shapes

Presented by: Min Ho Cho, Statistics

Insulator-to-Superconductor Transitions: Topological Superconductivity from Simple Models

Presented by: Tamaghna Hazra, Physics

Photo-Initiated Ketyl Radical Reactivity via Atom Transfer Catalysis

Presented by: Sean Rafferty, Chemistry

A Non-Aqueous Redox Relay Flow Battery for Grid-Scale Energy Storage

Presented by: Curt Wong, Chemistry

A Four-coordinate $\{\text{CuNO}\}_4$ by Nitrite Reduction: Implications for Oxidative Stress in Alzheimer's Disease

Presented by: Jamey Bower, Chemistry

Design, Synthesis, and Evaluation of Small Molecule Therapeutics for the Treatment of Organophosphorus Chemical Nerve Agent and Pesticide Exposure

Presented by: Andrew Franjesevic, Mathematical and Physical Sciences

Information Transduction between Spintronic and Photonic States in Two-Dimensional Hybrid Systems

Presented by: Yunqiu (Kelly) Luo, Physics

Stable Thiazyl Radicals as Organic Cathode Materials in Li-ion Batteries

Presented by: Madison Tuttle, Chemistry

Clustering Bayesian Posterior Sample Functions Using Fisher-Rao Metric

Presented by: Xiao Zang, Biostatistics

ORAL PRESENTATIONS: *Health Sciences*

Interfaith Prayer and Reflection room, 3rd Floor

Training and Stigma in Treating OUD

Presented by: Bridget Bailey, Social Work

IFITM3 is Cardioprotective

Presented by: Adam Kenney, Biomedical Sciences Graduate Program

Predictors of New Onset Physical Restraint Use in Adult Intensive Care Unit (ICU) Patients

Presented by: Thomas Lawson, Nursing

Forced Turnover of Aged Microglia Induces an Intermediate Phenotype but does not Rebalance CNS Environmental Cues Driving Priming to Immune Challenge

Presented by: Shane O'Neil, Neuroscience Graduate Program

Traumatic Brain Injury-induced Neuronal Damage Induces Cortical Rod Microglia that Promote Persistent Neuroinflammation

Presented by: Kristina Witcher, Neuroscience Graduate Program

Raking Electronic Health Records to Adjust for Selection Bias in Preterm Birth Ascertainment

Presented by: Sara Conroy, Public Health

PAK is a Thyroid Cancer Target

Presented by: Christina Knippler, Biomedical Sciences Graduate Program

The Role of Notch Signaling in Human NK Cell Development

Presented by: Ansel Nalin, Biomedical Sciences Graduate Program

A Novel Strategy to Inhibit Small Cell Lung Cancer Progression and Metastasis by S100A9 Inhibitor of Tumor-Associated Macrophages and Myeloid Derived Suppressor Cells

Presented by: Salha Sassi, Veterinary Medicine – Pathology

Self-reported Exercise Volumes in Pediatric Patients with Overuse Knee Injuries

Presented by: Julie Young, Health and Rehabilitation Sciences

ORAL PRESENTATIONS: *Social & Behavioral Sciences*

Student-Alumni Council Room, 2nd Floor

Cigarette Smoking Trajectories Among Sexual Minority Women: Results from a National Longitudinal Cohort Study of U.S. Adults (2013-2016)

Presented by: Allison Glasser, Health Behavior and Health Promotion

Promotion, College of Public Health

Can Expertise Survive? Examining the Effects of Social Transmission on the Integrity of Scientific Messages

Presented by: Austin Hubner, Communication

Local Partners for Local Problems: Building Civilian Support for Foreign Intervention

Presented by: Austin Knuppe, Political Science

Styles of Emotion Regulation

Presented by: Samuel Murphy, Clinical Psychology

Affirmative Action or Civil Rights: A Textual Analysis of Ballot Measures and Related Discourse

Presented by: Tyler Hallmark, Higher Education and Student Affairs

How Relationships Foster Thriving: Associations among Compassionate Goals in Relationships, Growth Seeking Orientation, and Academic Self-Regulation

Presented by: Tao Jiang, Social Psychology

Gut Leakiness Predicts Women's Depressive Symptoms One and Two Years Later

Presented by: Annelise Madison, Clinical Psychology

Threatened Partisans are Motivated by Support, Threatened Independents by Opposition

Presented by: Joseph Siev, Social Psychology

Class Habitus, Gender, and First-generation College Students' Trajectories

Presented by: Ashley Wright, Sociology

Are You an Expert or Do You Just Enjoy It? The Impact of Enjoyment on Self-Perceptions of Expertise

Presented by: Jacob Teeny, Social Psychology

POSTER PRESENTATIONS: *Arts & Humanities*

Great Hall Meeting Room, *1st Floor*

- 1 Sentence-final Expressions in Popular Media: The Interaction of Character Role and Audience Design in Japanese Manga
Presented by: Hannah Dahlberg-Dodd, East Asian Languages & Literatures
- 2 Culturally Relevant, Informal Art Education for Korean-American Elementary Students: Impact and Policy Implications
Presented by: Youngaah Koh, Arts Administration, Education, and Policy
- 3 Music, Ethnic Politics, and Conflict in Gambella, Ethiopia
Presented by: Sarah Bishop, Musicology
- 4 Revising Narratives of Nation: Contemporary Dance in Ireland
Presented by: Laura Neese, Dance

POSTER PRESENTATIONS: *Biological Sciences*

Cartoon Room, *2nd Floor*

- 1 Molecular basis of Multiple Mitochondrial Dysfunctions Syndrome 2 (MMDS2):
Impact of a disease causing Ile67Asn mutation on BOLA3
Presented by: Sambuddha Sen, Chemistry
- 2 Exploring Composition of Peptide Loops of Antibody Fragments to Enhance
Biophysical Characteristics as Cancer Therapeutics
Presented by: Jeong Min Han, Chemistry and Biochemistry
- 3 Regulation of Oscillatory Genes During Vertebrate Segmentation
Presented by: Kara Braunreiter, Molecular Genetics
- 4 Rational Exploration of the Linker Composition in Relation to the Biophysical
Properties of scFV Antibody Fragments
Presented by: Michael Ryan-Simkins, Biochemistry Program
- 5 Manipulating Spinal Autonomic Circuitry to Improve Cardiovascular and
Immune Function
Presented by: Benjamin Noble, Neuroscience Graduate Program
- 6 Modulation of Matrix Mineralization by Discoidin Domain Receptor 2
Presented by: Arghavan Farzadi, Biomedical Engineering
- 7 Abnormal Collagen Fibril Ultrastructure in Abdominal Aortic Aneurysms
Presented by: Blain Jones, Biomedical Engineering
- 8 bPNA Probes of RNA Tertiary Interactions
Presented by: Shiqin Miao, Chemistry and Biochemistry
- 9 Vacant Lot Habitat Design and the Surrounding Landscape Shape Spider
Community Assembly Across Urban Green Spaces in Cleveland, Ohio
Presented by: Yvan Delgado de la flor, Entomology
- 10 Efficacy and Antimicrobial Characterization of Different Probiotic Bacteria Against
Salmonella Infections in-vitro
Presented by: Gary Closs Jr., Food Science and Technology

POSTER PRESENTATIONS: *Biological Sciences*

Cartoon Room, *2nd Floor*

- 11 The Application of Supercritical CO₂ Technology on Modifying
Beta-lactoglobulin to Reduce Milk Allergenicity
Presented by: Po-Wei Yeh, Food Science and Technology
- 12 The Neuronal IL-1b Receptor is Necessary and Sufficient for Paired
Fighting-induced Social Withdrawal and Cognitive Impairment
Presented by: Damon DiSabato, Neuroscience Graduate Program
- 13 Exploring Brain Secretory Dynamics Using a Spatially and Temporally Defined
Protein Tagging Technique
Presented by: Josh Rieskamp, Neuroscience Graduate Program
- 14 Non-peptidic Cell-penetrating Motifs for Mitochondrion-specific Cargo Delivery
Presented by: George Appiah Kubi, Organic Chemistry
- 15 Discovery of Novel Genes Controlling Mitochondrial CI Biogenesis via a
Forward Genetic Screen in Chlamydomonas Reinhardtii
Presented by: Andrew Castonguay, Molecular Genetics
- 16 Dietary Gamma-Tocopherol Supplementation Reduces Stroke Severity
in Lean Mice
Presented by: Katie Stock, Human Nutrition
- 17 Transplantation of pre-adipocytes and stem progenitors from BAT SVF
improves glucose metabolism of the recipients
Presented by: Revati Dewal, Molecular, Cellular, Developmental Biology
- 18 Environmental Experience of Infants with Congenital Heart Disease in
Cardiac Intensive Care
Presented by: Laura Beth Kalvas, Nursing
- 19 Effects of Smoking and Obesity on the Subgingival Microbiome
Presented by: Najla Kasabreh, Periodontology

POSTER PRESENTATIONS: *Engineering*

Cartoon Room, *2nd Floor*

- 1 Application of DNA Cages in Biological Imaging
Presented by: Elizabeth Jergens, Chemical Engineering
- 2 Dynamics of Techno-Ecological Synergy: A Sustainable Design Paradigm
Presented by: Utkarsh Shah, Chemical Engineering
- 3 Spot Impact Welding of an Age-Hardening Aluminum Alloy: Process, Structure and Properties
Presented by: Angshuman Kapil, Materials Science and Engineering
- 4 Modeling Microbial Growth in Carpet Dust at Varying Relative Humidity Levels using the Time-of-Wetness Model
Presented by: Sarah Haines, Environmental Science
- 5 Sand Bioreactors- The Membrane Fouling Solution Right Beneath Your Feet
Presented by: Kelsey Henderson, Food, Agricultural, and Biological Engineering
- 6 Imperfections by Design: Tunable Interactive Buckling and Postbuckling in Architected Actuating Units
Presented by: Amal Jerald Joseph Maria Joseph, Mechanical Engineering
- 7 Separation of Intrinsically Magnetic Red Blood Cells Using Combination of Numerical Modelling and Microfluidic Magnetic Deposition System
Presented by: James Kim, Chemical and Biomolecular Engineering
- 8 Surface Area Determination of Metal-Organic Frameworks
Presented by: Archit Datar, Chemical Engineering
- 9 Using small angle X-ray scattering (SAXS) to characterize the homogeneous nucleation of carbon dioxide (CO₂) in a supersonic nozzle
Presented by: Kayane Dingilian, Chemical Engineering
- 10 Exploring Strategies to Improve Yields of Oxidative Coupling of Methane in a Chemical Looping System
Presented by: Deven Baser, Chemical Engineering
- 11 Rapid Access to Oxazoles from Feedstock Chemicals Via Tandem Oxidation
Presented by: Andrew Chen, Chemistry and Biochemistry
- 12 Denoising Speech Using Realistic Feedback
Presented by: Peter Plantinga, Computer Science and Engineering
- 13 Comparative Two-dimensional Relative Enamel Thickness (RET) of South African Hominin Premolars
Presented by: Mackie O'Hara, Anthropology

POSTER PRESENTATIONS: *Engineering*

Cartoon Room, *2nd Floor*

- 14** Springback Calibration of High Strength Metals using Vaporizing Foil Actuator Method
Presented by: Bhuvi Nirudhoddi, Engineering
- 15** Spatial Evaluation of a Water Quality Model: A Case Study in the Maumee River Watershed
Presented by: Haley Kujawa, Environmental Science
- 16** Influence of Varying Solar Zenith Angles on Phenology Extracted from Vegetation Indices
Presented by: Yang Li, Environmental Science Graduate Program
- 17** Effectiveness of Cleaning-In-Place (CIP) using Ozonated Water for Inactivation of Biofilms
Presented by: Ariel Garsow, Food Science and Technology
- 18** Manual Wheelchair Data Extraction and Processing Device
Presented by: Noah Einstein, Mechanical Engineering
- 19** Improved Image Classification by augmentation of Neural Network and Topological Data Analysis
Presented by: Sayan Mandal, Computer Science and Engineering
- 20** Analysis of Bridge Performance Measures for Allocating Funds in Transportation Systems
Presented by: Chi Zhang, Civil Engineering
- 21** Microsphere Immunoassay and Cell Tracking Velocimetry to Diagnose Iron-Related Disorders in Point-of-Care Applications
Presented by: Mitchell Weigand, Chemical and Biomolecular Engineering
- 22** Heteroatom-doped Carbon Nanostructures as Catalysts for Electrochemical Halogen Production Technologies
Presented by: Deeksha Jain, Chemical Engineering
- 23** Chance-Constrained Optimal Path Planning in Uncertain Environments
Presented by: Rachit Aggarwal, Mechanical Engineering
- 24** Catalytic Enantioselective Synthesis of Highly Functionalized Cyclobutenes
Presented by: Mahesh Parsutkar, Organic Chemistry
- 25** Glutamatergic Regulation of Remyelination After Spinal Cord Injury
Presented by: Nicki Pukos, Neuroscience

POSTER PRESENTATIONS: *Health Sciences*

Great Hall Meeting Room, 1st Floor

- 1** The Relationship Between Movement Kinematics of the Upper Extremity and Motor Development: An Exploratory Study
Presented by: Rachel Bican, Health and Rehabilitation Sciences

- 2** Parent-Reported PEDI-CAT, GMFM, and GMFCS for Very Young Children with Cerebral Palsy
Presented by: Kimberley Scott, Health and Rehabilitation Sciences

- 3** Physical Therapists Demonstrate Good Inter-rater Reliability across Dynamic Postures and Movements - a Critical First Step to Treatment Consistency
Presented by: Shelby York, Physical Therapy

- 4** Targeting of HDAC1/2 and CDK4 is cooperative in Dedifferentiated Liposarcomas (DDLPS)
Presented by: Richard Maradiaga, Medicine

- 5** Spatial and Temporal Characteristics of Spontaneous Upper Extremity Movements in Infants with and without Neonatal Stroke
Presented by: Julia Mazzarella, Health and Rehabilitation Science

- 6** Writing in the Margins: Women Composers in the Orchestral World
Presented by: Trevor Marcho, Music Education

- 7** Purification and Structural Elucidation of Plantaricin TC318, A Novel Antimicrobial Peptide Produced by *Lactobacillus Plantarum*
Presented by: Walaa Hussein, Food Science and Technology

- 8** Motivational Interviewing in Overweight and Obese Cancer Survivors: A Time Series Analysis
Presented by: Ashlea Braun, Health and Rehabilitation Sciences

- 9** Illness Perceptions Predict Depressive and Anxiety Symptoms, Mood, and Absolute Lymphocyte Counts in Chronic Lymphocytic Leukemia
Presented by: Nicole Arrato, Clinical Psychology

- 10** Adolescent Recall of Cigarette Advertisements Making Natural Claims
Presented by: Brittney Keller-Hamilton, Epidemiology

POSTER PRESENTATIONS: *Math & Physical Sciences*

Cartoon Room, *2nd Floor*

- 1 Visible Transient Absorption Spectroscopy Toward Understanding the Influence of Copper Vacancies on photoelectrochemical processes
Presented by: Elizabeth Fugate, Chemistry
- 2 A Hypothesis Test for Network Comparison
Presented by: Ha Khanh Nguyen, Applied Statistics
- 3 Geometric Sensitivity Measures for Density Estimation Models
Presented by: Abhijoy Saha, Statistics
- 4 Circumgalactic Medium: The Key to Lost Baryons in the Universe
Presented by: Sanskriti Das, Astronomy
- 5 Axis-Dependent Conduction Polarity in Re₄Si₇ Single Crystals
Presented by: Michael Scudder, Chemistry and Biochemistry

POSTER PRESENTATIONS: *Social Sciences*

Great Hall Meeting Room, 1st Floor

- 1 Agent-based Models to Explore Social Norms and Ecological Outcomes of Swidden Agriculture
Presented by: Fabio Correa Duran, Anthropology
- 2 Engaging the Dark Side: Exploring Identification with Morally Deviant Antagonists
Presented by: Rebecca Frazer, Communication
- 3 Cultural Heritage within the Landscapes of Fiji
Presented by: Kyle Riordan, Anthropology
- 4 Reverse Engineering the LGBTQ Voice: Utilizing Prototype Theory to Construct Linguistic Prototypes of Sexual Identity
Presented by: Katherine Conner, Linguistics
- 5 Levels of Work-Related Stress of Special Education Teachers with and without Children with Autism Spectrum Disorder in their Classrooms
Presented by: Bethany Frick, Speech and Hearing
- 6 The Interactive Impact of Generational Status and Achievement Goal Adoption on Academic Achievement
Presented by: Andrew Perry, Educational Psychology
- 7 Debt Burden in Older Age and Loneliness
Presented by: Madeleine Drost, Human Development and Family Science
- 8 A Naturalistic Observational Study of Maternal Emotion Socialization and Emotion Expression: Prospective Associations with Preschooler's Regulation of Anxiety
Presented by: Karis Inboden, Human Development and Family Science
- 9 Investigating the Impact of Early Childhood Education through Third Grade
Presented by: Nathan Helsabeck, Quantitative Research Evaluation and Measurement
- 10 Depressive Symptoms Among Ethnic Minority Adolescent: The Role of Parental Closeness and Social Cohesion
Presented by: Guijin Lee, Social Work
- 11 Effects of Self-Directed Static Picture Prompts on the Vocational Skills of Individuals with Severe Disabilities
Presented by: Mary Barczak, Special Education
- 12 Social Influence of Collaborative Small-group Discussions
Presented by: Saesbyul Kim, Educational Psychology

POSTER PRESENTATIONS: Social Sciences

Great Hall Meeting Room, 1st Floor

- 13

The Role of Implicit Writing Beliefs in High School Students' Literature-related Argumentative Writing

Presented by: Manisha Nagpal, Educational Psychology
- 14

Translanguaging Pedagogies: Affordances, Constraints, and Next Steps

Presented by: Nicole King, Foreign, Second, & Multilingual Language Education
- 15

The Affectionate Gesture Planner (AGP) iOS App for Couples: A Pilot Study

Presented by: Patrick Bortz, Human Development and Family Science
- 16

Attentional Capture Alters Feature Perception

Presented by: Jiageng Chen, Psychology
- 17

Experience of Space in Music-making

Presented by: Yong Jeon Cheong, Musicology

HAYES FORUM 2018 AWARD WINNERS

2018 ORAL PRESENTATION WINNERS

THE ARTS

1st Place: Josh Truett ; Performance, History, and Theory

2nd Place: Caitlyn Trevor; Music Theory

3rd Place: Lindsey Reymore; Music Theory

BIOLOGICAL SCIENCES

1st Place: Debadritha Modak; Chemistry

2nd Place: Kelly Crowe; Cellular, and Developmental Biology

3rd Place: Christopher Schwebach; Molecular, Cellular, and Developmental Biology Business

BUSINESS

1st Place: Shan Ge; Finance

2nd Place: John Costello; Marketing

3rd Place: Daniel Zane; Marketing (Consumer Behavior)

EDUCATION & HUMAN ECOLOGY

1st Place: Nivedita Bhaktha; Quantitative Research, Evaluation and Measurement

2nd Place: Kirsten Smith; Education - Policy and Leadership

3rd Place: Leah Groom; Reading and Literacy in Early and Middle Childhood

ENGINEERING

1st Place: Yixiao Cui; Biomedical Engineering

2nd Place: B. Audrey Nguyen; Biomedical Engineering

3rd Place: Juliana Laszakovits; Civil, Environmental, and Geodetic Engineering

FOOD, AGRICULTURE &

ENVIRONMENTAL SCIENCES

1st Place: Katie Robertson; Environment and Natural Resources - Fisheries and Wildlife Specialization

2nd Place: Seungjun Lee; Environmental Sciences Graduate Program

3rd Place: Geoffrey Dubrow; Food Science and Technology

HUMANITIES

1st Place: Kathryn Lang; Environmental History

2nd Place: Nathan Young; Near Eastern Languages and Cultures

3rd Place: Stacey Alex; Spanish and Portuguese

MATHEMATICAL & PHYSICAL SCIENCES

1st Place: Grace Eder; Chemistry

2nd Place: Gabriel Khan; Mathematics

3rd Place: Michalea King; Earth Sciences

HEALTH SCIENCES

1st Place: Khaled Altabtbaei; Biology

2nd Place: Russell Bonneville; Biomedical Sciences

3rd Place: Christin Zwolski; School of Health and Rehabilitation Sciences

SOCIAL & BEHAVIORAL SCIENCES

1st Place: Hannah Shatzer; Psychology

2nd Place: Mary Cole; Anthropology

3rd Place: Andre Plate; Clinical Psychology

2018 POSTER PRESENTATION WINNERS

ARTS, HUMANITIES & SOCIAL SCIENCES

1st Place: Mackenzie Hannum; Food Science and Technology

2nd Place: Brittney Keller-Hamilton; Epidemiology

3rd Place: Heather McDonough-Caplan; Clinical Psychology Biological Sciences

BIOLOGICAL SCIENCES

1st Place: Rim Yoseph; Neuroscience

2nd Place: Lindsey Webb; Biomedical Sciences

3rd Place: Igor Mrdjen; CPH: Environmental Health Science Engineering, Math and Physical Sciences

ENGINEERING, MATHEMATICAL & PHYSICAL SCIENCES

1st Place: Kayla Presley; Materials Science and Engineering

2nd Place: Vance Gustin; Engineering, Math and Physical Sciences

3rd Place: Krishnaja Duvvuri; Chemistry

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

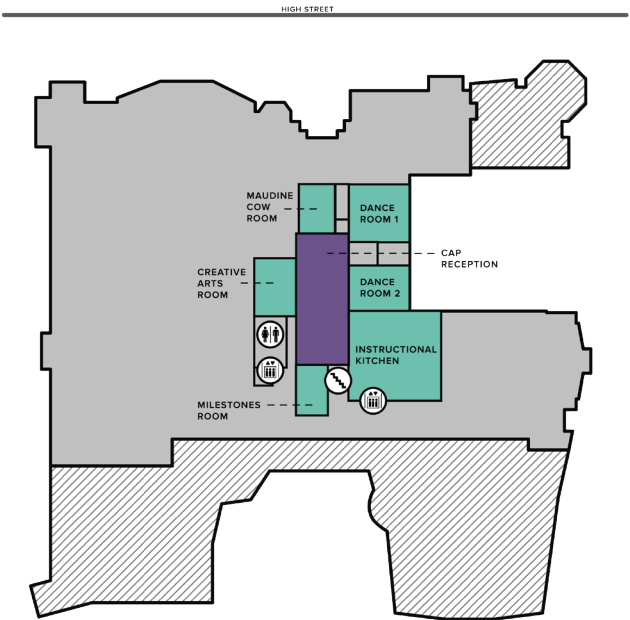
The Career Development Grant program encourages graduate students to prepare for placement into their chosen field. Students will submit their Career Development Grant Application to the Council of Graduate Students (CGS) for an opportunity to receive an award to defray costs associated with the development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

The Global Gateway Research Abroad Grant

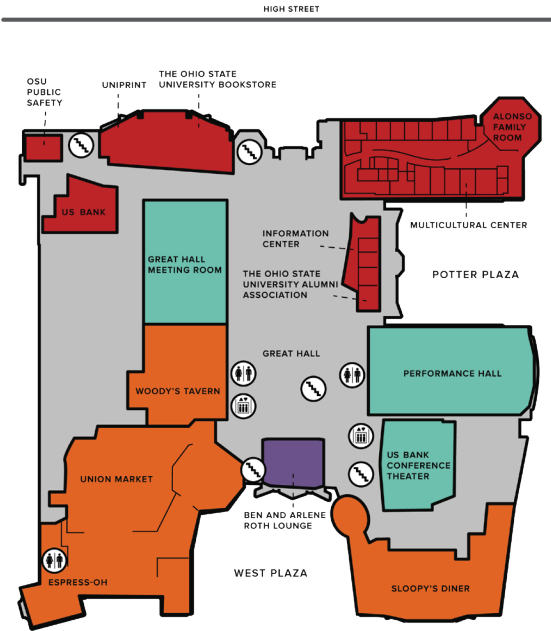
The Global Gateway Graduate Student Research Abroad Grant encourages and promotes the professional and academic development of graduate researchers at The Ohio State University by providing financial support that allows students to undertake research abroad. Student also assist the university to pursue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

OHIO UNION MAPS

LOWER LEVEL

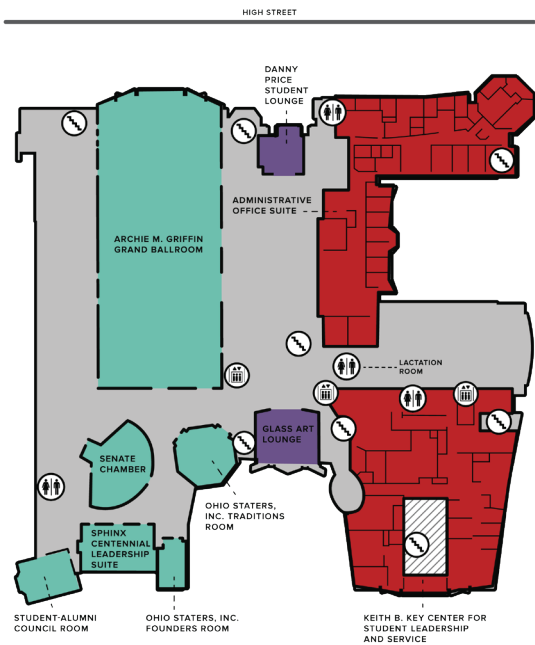


FIRST FLOOR

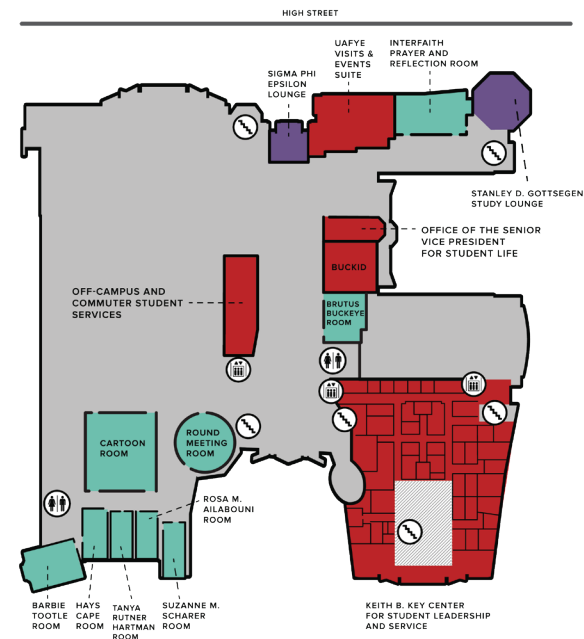


OHIO UNION MAPS

SECOND FLOOR



THIRD FLOOR





THE OHIO STATE UNIVERSITY

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OFFICE OF RESEARCH
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COUNCIL OF GRADUATE STUDENTS**



Council of Graduate Students
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