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WELCOMING REMARKS

Dear Guests,

Welcome to the 28th 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. Hayes fosters academic and professional development for our attendees while showcasing the work of nearly 150 Ohio State graduate students. 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 OSU graduate students by judging over 360 abstracts and the nearly 150 presentations that will be presented today. Three years ago, the Hayes Forum celebrated its 25th anniversary. It was a marked milestone in not only the event but in the continued excellence of our graduate students, faculty, and staff. Now in its 28th year, this is the premier event for graduate student research at Ohio State, organized by students for students that 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: Last year’s Hayes Forum Chair, Allison Sturm for her experience and insights, the Hayes Forum Vice Chair, Alfred Yates for his technological and logistical expertise, Kerry Hodak for her knowledge and advice, and Katie Krajny, Rachel Conners, and Megan Znidarsic for their administrative assistance. I would also like to thank our panelists for sharing the benefits of their experiences with graduate students. Finally, a special thank you to Dean Patrick Osmer and Assistant Dean Kathleen Wallace from the Graduate School for their support of graduate students, Vice President Caroline Whitacre from the Office of Research for supporting graduate student research, and 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.

Sincerely,

Jamie Crowsley
Vice President, Council of Graduate Students
Chair, Hayes Graduate Research Forum
WELCOMING REMARKS

Dear Colleagues,

On behalf of the Graduate School, I would like to welcome you to the 28th annual Edward F. Hayes Graduate Research Forum.

I am often asked what distinguishes graduate education. The three hallmarks that I always mention are creativity, solving problems, and making new knowledge. These qualities are in evidence throughout today’s Hayes Forum, which is one of the highlights of the year for graduate students, for Ohio State, and for me as dean of the Graduate School.

The Hayes Forum showcases graduate student research from the full span of graduate programs at Ohio State. One of the unique aspects about this research meeting is the way it compels researchers to present their findings in ways that are meaningful to an interested but non-specialist audience. This is an extremely useful skill for any graduate student to practice. It applies to any career path and is critical for engaging the public and other stakeholders in the work we do.

Take advantage of this opportunity to talk with your colleagues from across the University. You may be surprised by the unexpected and fruitful connections and collaborations that may result.

Sincerely,

Patrick S. Osmer
Vice Provost for Graduate Studies and Dean of the Graduate School
Dear Guests,

Welcome to the Hayes Graduate Research Forum. This event represents the 28th year for a very successful collaboration between the Council of Graduate Students, the Graduate School and the Office of Research. We come together to celebrate your research accomplishments, provide a forum in which to present the findings of your research to the broader research community, and facilitate research collaboration between areas across campus.

It is always inspiring for me to attend the Hayes Graduate Research Forum and to hear the excellent oral presentations and to see the outstanding posters. The presentations just get better and better each year! I know how hard it is for the judges to pick winners from such a talented group of individuals. Congratulations to all of the presenters as you have worked exceptionally hard to make your research presentations well organized and understandable by a broad audience.

It is a very exciting time to be engaged in research on the Ohio State campus. The University is embarking on a bold faculty hiring initiative which you will begin to see in your time at OSU. This initiative, termed the Discovery Themes, is about solving big global problems in the areas of Energy and the Environment, Health and Wellness, and Food Production and Security. More than $400 million will be invested in bringing new faculty and their programs to Ohio State over the next 10 years. Each year, a theme will be announced which will serve as the focus for proposals for faculty hires. You hopefully are aware that Data Analytics is the theme for this first year’s focus in the Discovery Theme hiring program. So what does this mean for graduate students? As these new faculty come to campus over the next and subsequent years, there will be new opportunities for graduate student training. There will not only be new mentors and new collaborative opportunities for those graduate students directly working with the new faculty, but also more opportunities for all graduate students to learn about the field of data analytics, which touches nearly all areas of graduate study. The key feature of the Discovery Themes is its interdisciplinary and multidisciplinary focus, which means that graduate students in all disciplines will be positively impacted by this broad University initiative.

I wish you the very best in the presentation of your research as part of the Hayes Graduate Research Forum.

Sincerely,

Caroline C. Whitacre
Vice President, Office of 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.

Dr. 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.
HA YES GRADUATE RESEARCH FORUM COMMITTEE

The entire Edward F. Hayes Graduate Research Forum Committee is organized by the Council of Graduate Students. This Forum is organized by students, for students. Financial support comes from the Graduate School, the Office of Research, the Hayes Endowment, and the Council of Graduate Students.

Jamie Crowsley, Chair
Alfred Yates, Vice Chair
Sayoni Bose
Jing Chen
Shuai Dong
Kristin Garvin
Kristyn Gumpper
Christian Harding
Kathryn Halleck
Lauren Himmel
Carla Jagger
Pooja Joshi
Candace Joswick
Molly Krygowski
Kristy McCray
Megan Muccigrosso
Diana Norden
Hussam Salhi
Estevan Santana
Janet Schroeder
Kaitlin Snider
Allison Sturm
Anupama Sukhu
Ashley Weber
Tingting Zhang
On behalf of the CGS, thank you to the tremendously busy Ohio State faculty who gave their time to judge abstracts and presentations for Hayes this year:

Joni Acuff
Yazan Alsmadi
Anika Anthony
Kimberly Arcoleo
Richard Arnold
Gergana Atanassova
David Barker
Sujit Basu
Vincent Billock
Joshua Blakeslee
Dennis Bong
Alexandra Borstad
Elisebeth Boyer
William Brantley
John Brion
Sergey Brodsky
Kristine Browning
Craig Burd
Marcello Canova
Lisa Christian
Graham Cochran
Bill Coombs
Briggs Cormier
Gregory Davis
Johanna Devaney
Jo Dowell
Jennifer Eisenhauer
Kelly Farquhason
Xin Feng
Danielle Fosler-Lussier
Michael Freitas
Andrew Gaudet
Jonathan Godbout
John Gray
Howard Gu
Christopher Hadad
Patrice Hamel
Tae-Im Han
John Harper
Curt Hartsfield
Andrew Hartwick
Curtis Haugtvedt
Kristina Haworth
James Hopper
Lawrence Inks
Ludmila Isurin
Brian Janssen
Joel Johnson
Reed Johnson
Lisa Jordan
Roy Joshua
Eloise Kaizar
Claire Kamp Dush
Savita Khanna
Kyoung Tae Kim
Hzewon Kim
Seung Hyun Kim
Samantha King
Marianna Klochko
Sebastian Kurtek
Jessie Labov
Tzu-Jung Lin
En-Ju Lin
Jialin Lin
Jessica Logan
Robert Lount
Stuart Ludsin
Sandra Macpherson
Thomas Magliery
Helen Malone
Paul Martini
Brooke Mcmichael
Brian Mcspadden Gardener
David Neal Miller
Carla Miller
Scott Mullins
Sunny Munn
Manoj Nair
Alex Oliszewski
Susan Oliver-Marston
Michael Parke
Linda Parsons
Shayne Piasta
Keeley Pratt
Jessica Prinz
Raghunath Raja Chandrasekar
James Rathman
Ranajoy Ray-Chaudhuri
Amy Rettig
Laurie Rinehart-Thompson
Brian Roe
Mark Rudoff
Mark Ruegsegger
George Rush
Scott Scheer
Sarah Shoppe-Sullivan
Matt Sheridan
Soheil Sohrati
Latonia Stiner-Jones
Shilarna Stokes
Jenna Tague
Sherine Tambryraja
Margaret Teaford
Donald Terndrup
David Tovey
Asuman Turkmen
Rao Unnava
Tatiana Vashchilko
Murugesan Velayutham
Giuseppe Vercellotti
Yael Vodovotz
Jeffrey Walline
Elizabeth Weiser
Noah Weisleder
Jay Wellman
Dale White
Juliet White-Smith
Bryan Whitson
Traci Wilgus
Jen Wong
David Wood
Jack Yalowich
Donald Yau
Ryan Yoder
Ulises Zevallos-Aguilar
Ouliana Ziouzenkova
Li Zuo
HAYES FORUM SCHEDULE

7:15 – 7:50 a.m.  Registration
Great Hall Lobby, Ground Floor
Breakfast and informal conversations

7:50 – 8:20 a.m.  Welcome Addresses and Opening Session
U.S. Bank Conference Theater, Ground Floor
Jamie Crowsley, Vice President of the Council of Graduate Students
Caroline Whitacre, Vice President of the Office of Research
Patrick S. Osmer, Dean of the Graduate School

8:30 – 10:30 a.m.  First Round of Oral Presentations  – Guests are welcome
Arts – Ohio Staters, Inc. Founders Room
Biological Sciences – Lower Level Meeting Room
Business – Multicultural Center Meeting Room
Education & Human Ecology – Rosa M. Ailabouni Room
Engineering – Barbie Tootle Room
Food, Agricultural & Environmental Sciences – Maudine Cow Room
Humanities – Ohio Staters, Inc. Traditions Room
Mathematics & Physical Sciences – Tanya R. Rutner Room
Professional Biological Sciences – Suzanne M. Scharer Room
Social & Behavioral Sciences – Student Alumni Council Room

9:00 a.m. – Noon  Poster Session Opens  – Poster Judging
Great Hall Meeting Room, Ground Floor
Arts, Humanities & Social Sciences
Biological Sciences,
Engineering, Mathematics & Physical Sciences

10:30 – 10:40 a.m.  Break

10:40 a.m. – Noon  Second Round of Oral Presentations  – Guests are welcome
Same locations as First Round

Noon – 12:10 p.m.  Break
Please Make your way to the U.S. Bank Conference Theater on the ground floor for the Career Panel Discussion

Noon – 12:30 p.m.  Judges’ Deliberations  – Deliberations are closed to the public

12:10 – 12:50 p.m.  Career Panel Discussion
US Bank Conference Theater, Ground Floor

1:00 – 2:45 p.m.  Awards Luncheon
Performance Hall, Ground Floor
## PRESENTATION LOCATIONS BY SUBJECT AREA

### ORAL PRESENTATIONS

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td><strong>The Arts</strong></td>
<td>Ohio Staters, Inc. Founders Room, 2nd Floor</td>
</tr>
<tr>
<td><strong>Biological Sciences</strong></td>
<td>Lower Level Meeting Room, Lower Level</td>
</tr>
<tr>
<td><strong>Business</strong></td>
<td>Multicultural Center Meeting Room, Ground Floor</td>
</tr>
<tr>
<td><strong>Education and Human Ecology</strong></td>
<td>Rosa M. Ailabouni Room, 3rd Floor</td>
</tr>
<tr>
<td><strong>Engineering</strong></td>
<td>Barbie Tootle Room, 3rd Floor</td>
</tr>
<tr>
<td><strong>Food, Agricultural, and Environmental Sciences</strong></td>
<td>Maudine Cow Room, Lower Level</td>
</tr>
<tr>
<td><strong>Humanities</strong></td>
<td>Ohio Staters, Inc. Traditions Room, 2nd Floor</td>
</tr>
<tr>
<td><strong>Mathematics and Physical Sciences</strong></td>
<td>Tanya R. Rutner Room, 3rd Floor</td>
</tr>
<tr>
<td><strong>Professional Biological Sciences</strong></td>
<td>Suzanne M. Scharer Room, 3rd Floor</td>
</tr>
<tr>
<td><strong>Social and Behavioral Sciences</strong></td>
<td>Student-Alumni Council Room, 2nd Floor</td>
</tr>
</tbody>
</table>

### POSTER PRESENTATIONS

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arts, Humanities, Social Sciences</strong></td>
<td>Great Hall Meeting Room, Ground Floor</td>
</tr>
<tr>
<td><strong>Biological Sciences</strong></td>
<td>Great Hall Meeting Room, Ground Floor</td>
</tr>
<tr>
<td><strong>Engineering, Mathematics, Physical Sciences</strong></td>
<td>Great Hall Meeting Room, Ground Floor</td>
</tr>
</tbody>
</table>
THE ARTS
Ohio Staters, Inc. Founders Room, 2nd Floor

8:30 a.m.  Orlay Alonso - Music
The Illuminated Scores Abstract: The Architectural Design of Musical Form

8:50 a.m.  Elizabeth Beggrow - Teaching & Learning
Context In Learning and Assessment: Do Biological Anthropology Students Have An Edge Over Biology Students in Reasoning About Human Evolution?

9:10 a.m.  Hui-Chun Hsiao - Food Science and Technology
Improving Anthocyanin Color and Stability During Storage by using Catechins as Copigment

9:30 a.m.  Mao Huang - Horticulture and Crop Science
Correlations of seed traits with tofu texture in 48 soybean cultivars and breeding lines

9:50 a.m.  Anna Newman - Molecular, Cellular, and Developmental Biology
Investigating the role of RanGAP in Arabidopsis development: should we solely be minding the GAP, or is the story more complex?

10:10 a.m.  Sujata Ponappa - Human Development and Family Science
Differentiation in the Family System, Sibling warmth and Depressive symptoms among Young Adults

10:30 a.m.  Break

10:40 a.m.  Geoffrey Wilson - Theatre History, Literature, and Criticism
War Bugs: Street Art as Performed Discourse in Bogotá

11:00 a.m.  Yanfei Yin - History of Art
Survival and Revival of China’s Traditionalist Painting

11:20 a.m.  Tingting Zhang - Hospitality Management
Health Promotion by Hospitality Firms and its Influence on Employees Attitudes and Behaviors: An Exploratory Study

11:40 a.m.  End of Presentations: Judging Deliberations Commence
8:30 a.m. Zachary VanGundy - Comparative and Veterinary Medicine
   The Generation of mature tolerogenic myeloid cells with retinoic acid

8:50 a.m. SungWon Song - Molecular Cellular Developmental Biology
   ALS astrocytes adopt natural killer properties to induce motor neuron death

9:10 a.m. Scott Prajzner - Entomology
   Impacts of an adjuvant and an herbicide on the colony success and foraging behaviors of the native bumble bee Bombus impatiens.

9:30 a.m. Christie McCracken - Biomedical Sciences
   Minimal In Vitro Toxicity of Food-Relevant Nanoparticles in an Intestinal Epithelial Model

9:50 a.m. Cindy Lee - Molecular, Cellular, & Developmental Biology
   MYCBP: a novel genetic explanation for the loss of DNA repair in breast cancer

10:10 a.m. Apama Lakshmanan - Molecular Cellular and Developmental Biology
   Radioiodine accumulation is significantly enhanced in thyroid cells by the plant-derived flavonoid, Apigenin in combination with functional inhibition of the Protein Kinase Akt

10:30 a.m. Break

10:40 a.m. Zoe Hesp - Neuroscience Graduate Studies Program
   Oligodendrogenesis and remyelination occur chronically after spinal cord injury in mice and rats

11:00 a.m. Julia Harris - Biomedical Sciences
   Interactions of the BLM helicase with topoisomerase IIa are regulated by BLM phosphorylation

11:20 a.m. Timothy Frey - Plant Pathology
   Changes in amino acid homoeostasis negatively affect development of a plant parasitic nematode.

11:40 a.m. Reshma Davidson - Molecular, Cellular and Developmental Biology
   Art1: Arrestin in cytokinesis

12:00 p.m. End of Presentations: Judging Deliberations Commence
BUSINESS
Multicultural Center Meeting Room, Ground Floor

8:30 a.m.  Anastasia Bailey - Management & Human Resources
The Impact of Prior Expatriate Experience on Cross-Border Knowledge Sharing and Performance

8:50 a.m.  Jonathan Jensen - Sport Management
Second Screen, Second Place? Investigating the Implications of Second Screen Use on Brand Awareness

9:10 a.m.  Hyojin Lee - Fisher Collage of Business
Monotonous Forest and Colorful Trees: The Effects of Color vs. Black-and-White on Information Processing

9:30 a.m.  Jamie Levine Daniel - Public Policy and Management
Mission-Based Objectives, Market-Based Funding: The Effects of Nonprofit Enterprise on Service Delivery

9:50 a.m.  Chris Summers - Business Administration
Persuasion Mindset: The Effect of Persuasion on the Persuader

10:10 a.m.  End of Presentations: Judging Deliberations Commence
8:30 a.m.  **Ruiulan Zhao** - Foreign, Second and Multilingual Language Education
**Exploring Reading and Writing Connections in Synthesis Writing of Second Language Learners**

8:50 a.m.  **Qiong Wu** - Human Development and Family Science
**A Naturalistic Observation of Parental Socialization of Child Negative Emotions in Relation to Maternal Depression**

9:10 a.m.  **Megan Sanders** - Educational Psychology and Philosophy
**A Comparison of Four Factor Analytical Methods Used with Ordinal Data**

9:30 a.m.  **Narmada Paul** - Educational Psychology
**Reactive generative self-efficacy in learners: A concern for educators in the Internet age?**

9:50 a.m.  **Travis Mountain** - Family Resource Management
**How Impactful are Financial Disclosure Forms?**

10:10 a.m.  **Leah Morgan** - Educational Studies
**The Effects of a Student Success Course on College Students’ Academic Outcomes**

10:30 a.m.  **Break**

10:40 a.m.  **Carolyn Kaplan** - Foreign and Second Language Education
**Foreign Language Teachers’ Cognitions and Practices Related to Student Assessment**

11:00 a.m.  **Emma Hooper** - Human Development and Family Science
**Maternal Emotion and Depressive Symptoms in Relation to Child Outcomes: A Person-Centered Approach**

11:20 a.m.  **Melinda Hill** - Kinesiology
**Activity Trait to Predict Strenuous Resistance Exercise**

11:40 a.m.  **Jessica Bennett** - Special Education
**Effects of Computer-Assisted, Culturally Relevant, Repeated Reading Intervention on Oral Reading Fluency of Students At-Risk for Reading Failure**

12:00 p.m.  **End of Presentations:** Judging Deliberations Commence
 ENGINEERING
Barbie Tootle Room, 3rd Floor

8:30 a.m.  Mark Calhoun - Biomedical Engineering
Development of a 3D in vitro Model of the Glioblastoma Microenvironment

8:50 a.m.  Elena Caruthers - Mechanical Engineering
Individual Muscle Forces during a Sit to Stand Transfer

9:10 a.m.  Benjamin Goldberg - Mechanical and Aerospace Engineering
Measurement of Rapid Electric Field Development with Sub-Nanosecond Precision

9:30 a.m.  Peng He - Industrial and Systems Engineering
Precision Glass Molding of Freeform Lens Using Machined Silicon Mold

9:50 a.m.  Likai Li - Industrial and Systems Engineering
Investigation of Manufacturing of Affordable Freeform Polymer Lenses for Vision Applications

10:10 a.m.  Ria Mazumder - Electrical and Computer Engineering
Waveguide Magnetic Resonance Elastography of the Heart

10:30 a.m.  Break

10:40 a.m.  Tyler Nelson - Biomedical Engineering
Development of Chemotactic and High-Throughput Drug Screening Assays for Personalized Treatments of Metastatic Cancers

11:00 a.m.  Mark Scott - Electrical and Computer Engineering
Efficient, Economical Solar Power Conversion via Wide Bandgap based Power Electronics

11:20 a.m.  Xu Zhang - Biomedical Engineering
A Microdevice for Studying Intercellular Electromechanical Transduction in Adult Cardiac Myocytes

12:00 p.m.  End of Presentations: Judging Deliberations Commence
FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
Maudine Cow Room, Lower Level

8:30 a.m.  Feng Zhang - Environmental Science
The effects of zebra mussels on cyanobacterial communities and microcystin level in United States lakes

8:50 a.m.  Zongsu Wei - Food Science and Nutrition
Evaluating Acoustic Technology for In-Situ Remediation of Contaminated Sediment: A Laboratory and Computational Study

9:10 a.m.  Matthew Teegarden - Educational Psychology and Philosophy
Determination of Biologically Relevant Vitamin D Metabolites in a Mouse Model of Non Melanoma Skin Cancer

9:30 a.m.  Pranay Ranjan - PhD Environment & Natural Resources
Assessment of Sustainability literacy and engagement in pro-environmental behaviors among domestic and international students at The Ohio State University

9:50 a.m.  Dominic Petrella - Turfgrass Science
Variation in Anthocyanin Production among Accessions and Cultivars of Poa trivialis L.

10:10 a.m.  Jessica Pempek - Animal Sciences
Housing System May Affect Performance and Behavior of Jersey Heifer Calves

10:30 a.m.  Break

10:40 a.m.  Fabiola Gutierrez Orozco - Interdisciplinary Nutrition
Dietary a-Mangostin, an Abundant Xanthone Compound in Mangosteen Fruit, Exacerbates Colitis and Adversely Alters the Gut Microbiota

11:00 a.m.  John Grayson - Environment and Natural Resources
Saving the Friday fish fry: Improving yellow perch culture through live food enrichment

11:20 a.m.  Jessica Cooperstone - Food Science and Technology
Increased lycopene bioavailability from a unique, cis-lycopene containing tangerine-type tomato

11:40 a.m.  Morgan Cichon - Food Science and Technology
Isomerization and Oxidative Metabolism of Tomato Lycopene in a 13C Human Tracer Study

12:00 p.m.  End of Presentations: Judging Deliberations Commence
8:30 a.m. Jennifer Barajas - Hispanic Linguistics
   A Sociophonetic Approach to Vowel Raising: Social Networks in Rural Michoacán, Mexico

8:50 a.m. David Bond - Near Eastern Languages and Cultures
   Mission impossible? “Seeing sympathetically” in colonial Tunisia 1937-1950

9:10 a.m. Matthew Gillespie - Psychology
   Joyce’s Hippocampus: Association, Neuroplasticity, and the Biological Memory of Ulysses

9:30 a.m. Delano Lopez - History
   What Price Postmodernism? A Case Study in the Funding of Intellectual Movements

9:50 a.m. Andrew Skabelund - History
   The Grain of Sand that Moved the Sea: Africans, EurAfricans, France, and the Formation of Franco-Habitant Identity in the Senegambia (1700-1865)

10:10 a.m. Yu-Chen Tai - Women’s, Gender and Sexuality Studies
   The Porous and Permeable Body as a (W)holistic Feminist Ontology: Theorizing the Body in Gloria Anzaldúa’s Work

10:30 a.m. Break

10:40 a.m. Blake Wilder - English
   Segregated Worlds: Race, Reading, and the Shaping of Reality

11:00 a.m. Adrienne Winans - History
   The Invisibility of Race Mixed-race Chinese Americans during the Exclusion Era

11:20 a.m. Marion Wolfe - English: Rhetoric, Composition, and Literacy
   A Woman’s Place in the World: Literacy and Gender Education in Women’s Foreign Missionary Societies

11:40 a.m. Qiong Yang - Chinese literature
   Old Rivals in a New Age: Science in Chinese Fiction and Films, 1960s–1990s

12:00 p.m. End of Presentations: Judging Deliberations Commence
8:30 a.m.  Meng Zhang - Biophysics
Dynamic determination of the functional state in photolyase

8:50 a.m.  Melissa Wrzesien - Earth Sciences
Validation of Snow Cover Fraction for Regional Climate Simulations in the Sierra Nevada

9:10 a.m.  Alycia Palmer - Inorganic Chemistry
Dirhodium Complexes as Potential Photo-chemotherapy Drugs

9:30 a.m.  Rachel Mauk - Atmospheric Sciences
Prediction of Intensity Changes Subsequent to Concentric Eyewall Events

9:50 a.m.  Jeremy Lucy - Condensed Matter Physics
Strain-dependent, Extraordinary Magnetocrystalline Anisotropy in Sr2CrReO6 Epitaxial Films

10:10 a.m.  Biao Huang - Physics
Large Spin Magnetic Condensate

10:30 a.m.  Break

10:40 a.m.  Samantha Brown-Xu - Chemistry
Investigating Mo2 Paddlewheel Complexes as Photosensitizers

11:00 a.m.  Archana Anandakrishnan - Physics
Physics at the High Energy Colliders

11:20 a.m.  Bryan Albani - Chemistry
Photoinduced ligand exchange in ruthenium(II) complexes as potential photochemotherapeutic agents

11:40 a.m.  End of Presentations: Judging Deliberations Commence
PROFESSIONAL BIOLOGICAL SCIENCES
Suzanne M. Scharer Room, 3rd Floor

8:30 a.m. Elizabeth Barrie - Biomedical Sciences
Genetic Variants in Dopamine Beta Hydroxylase Decrease Gene Expression and Serve as Biomarkers for Protection from Cardiovascular Disease

8:50 a.m. Heather Carey - Biomedical Sciences
PU.1, MITF and EOMES Control the Transcription Factor Regulatory Network Governing Osteoclast Differentiation

9:10 a.m. Ashley Fenn - Neuroscience
Methylene Blue Infusion for Treatment of Traumatic Brain Injury-associated Neuroinflammation and Functional Deficits

9:30 a.m. Ashley Frakes - Biomedical Sciences
Microglia induce motor neuron death via the classical NF-?B pathway in amyotrophic lateral sclerosis

9:50 a.m. Madelyn Gerber - Biomedical Sciences
Uncovering Colorectal Cancer Susceptibility Genes Using Mouse and Human Models

10:10 a.m. Shibi Likhite - Molecular, Cellular & Developmental Biology
Therapeutic AAV9-mediated SOD1 downregulation extends survival in mouse models of Amyotrophic Lateral Sclerosis

10:30 a.m. Break

10:40 a.m. Rajeswaran Mani - Comparative and Veterinary Medicine
Tumor Antigen ROR1 Targeted Delivery of FTY720 Derivative OSU-2S Prolongs Survival In ROR1 Engineered Mouse Model of Chronic Lymphocytic Leukemia

11:00 a.m. Nima Milani-Nejad - Biomedical Sciences
Regulation of cross-bridge cycling rate in health and heart failure: studies from animal models and humans using a novel approach

11:20 a.m. Mary Severin - Biomedical Sciences
The Effect of microRNAs on Regulatory T Cells in Multiple Sclerosis

11:40 a.m. Mia Tazi - Biomedical Sciences
Effect of the MiR-17–92a Cluster On The Autophagy Response To Burkholderia cenocepacia In Cystic Fibrosis

12:00 p.m. End of Presentations: Judging Deliberations Commence
SOCIAL & BEHAVIORAL SCIENCES
Student Alumni Council Room, 2nd Floor

8:30 a.m. Jill Yavorsky - Social and Behavioral Sciences
“Doing Fear”: The Influence of Hetero-Femininity on (Trans) Women’s Fears of Victimization

8:50 a.m. Dimitry Mezhvinsky - Economics
Boycotting and Buycotting: Third Party Punishment and Reward in Groups

9:10 a.m. Adam Kolatorowicz - Anthropology
Basicranial Angle as an Indicator of Ancestry in Modern Humans: A Novel Method for Identifying Unknown Skeletal Remains in Death Investigations

9:30 a.m. Dixie Hu - Psychology
A Meta-analysis of Sex Differences in Heart Rate Variability

9:50 a.m. James Goodenberger - Agricultural, Environmental, and Development Economics
Evading Invasives: How Water-Milfoil Impacts New Lakefront Development

10:10 a.m. Morgan Ellithorpe - Communication
Die, foul creature! How the supernatural genre affects attitudes toward outgroups

10:30 a.m. Break

10:40 a.m. Geoffrey Durso - Psychology
Over-the-Counter Relief from Pains and Pleasures Alike: Acetaminophen Attenuates Evaluation Extremity toward Both Negative and Positive Stimuli

11:00 a.m. Kelly Dillon - Communication
Distraction of cyber-bystanders in cyber-bullying contexts

11:20 a.m. Phokeng Dailey - Communication
Communication, Somali culture and decision-making about the human papillomavirus (HPV) Vaccine

11:40 a.m. Jennifer Belding - Social Psychology
Using high-level construal and perceptions of changeability to promote self-change over self-protection motives in response to negative feedback

12:00 p.m. End of Presentations: Judging Deliberations Commence
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Using Values for College to Predict Student Achievement and Expectancies for Success |
| 2      | Jennifer Bauman - Nursing  
Analysis of Psychosocial Influences on Glycemic Control Among Adults with T2DM and Depression |
| 3      | Laura Berger - Human Nutrition  
Validation of a 10-Item Fruit and Vegetable Behavior Questionnaire in Low-Income 9-11 year-old Children, a Pilot Study |
| 4      | Jing Chen - Educational Psychology  
Observing Children's Engagement in Small-group Discussions as a Function of Individual- and Group-level Centrality Status |
| 5      | Maria DiFranco - Art  
The Female Experience of Cancer Seen Through Art, Deconstructing the “Fight Against Cancer” Metaphor |
| 6      | Kimberly Frier - Nursing  
Association of Qualitative Content Codes for Decision-making and Psychosocial Distress in Predicting Diabetes Related Distress among Adults with T2DM and Depressive Symptoms |
| 7      | Brandon Gillie - Psychology  
Individual Differences in Resting Heart Rate Variability Moderate Thought Suppression Success |
| 8      | Devin Grammon - Hispanic Linguistics  
When grammar meets politics: Uses of stigmatized language on a political talk show |
| 9      | Jennifer Harmon - Human Sciences  
Obesity Bias in Undergraduate Personal Service Majors |
| 10     | Seulki Ku - Human Development & Family Science  
Preschool Children’s Lying: Effects of Gender, Temperament, and Parenting |
| 11     | Leroy Long III - Education  
How Feelings of Connectedness Affect Student Involvement in Courses that Use Technology |
| 12     | Amy Pratt - Speech and Hearing Science  
Parent-Implemented Intervention for Spanish-speaking Preschoolers with Language Impairment |
| 13     | Victoria Schenker - Developmental Psychology  
Household Chaos and Reading and Mathematics Skills: A Longitudinal Study |
| 14     | Tricia Shalka - Higher Education & Student Affairs  
Examining Leadership Development Among International Undergraduate Students in the United States |
| 15     | Xuan Zhang - Electrical Engineering  
A Gallium Nitride Device based 90 W AC/DC Power Adapter for Portable Electronics |
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<td>Hussam Salhi - Biomedical Sciences Phosphorylation of cardiac Troponin I at Tyrosine 26 decreases thin filament calcium sensitivity</td>
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<td>Sara Sabihi - Psychology-Behavioral Neuroscience Oxytocin in the medial prefrontal cortex of postpartum females modulates anxiety, maternal care, and maternal aggression</td>
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<td>Jamie Richmond - Neuroscience Graduate Studies Program Deficient TLR4 signaling differentially influences intraspinal and peripheral mRNA expression of iron regulatory proteins after spinal cord injury</td>
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<td>Michelle Pershing - Psychology Prenatal Kynurenic Acid Elevation Alters Cortical Development And Prefrontal Glutamate Release, Corresponding To Cognitive Inflexibility In Adults</td>
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<td>Daniel Morgan - Biomedical Informatics Genomic Algorithm Identifies Chinese Herbals as Potential treatment in Bladder Cancer</td>
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<td>Daniel McKim - Neuroscience Inflammatory Cytokine Signaling Promotes Impaired Hippocampal Neurogenesis Following Prolonged Psychological Stress</td>
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<td>Emily Durham - Food, Agricultural, and Biological Engineering Moderate Electric Field (MEF) Treatment Increases Enzymatic Hydrolysis of Cellulose Filter Paper</td>
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| 2      | Luke DeBruin - Mechanical and Aerospace Engineering  
Modeling & Optimal Control Design for Advanced Automotive Thermal Management Systems |
| 3      | Qirui Fan - Chemical and Biomolecular Engineering  
Photo-switchable quantum dots based on reversible FRET |
| 4      | Matthew Gerber - Mechanical Engineering  
Biomimetic Anode Designs to Improve Power Output in Continuous Flow Microbial Fuel Cells |
| 5      | Arijit Ghosh - Chemistry and Biochemistry  
Probing pH-triggered self-assembling peptide based tumor imaging agents in blood serum |
| 6      | Sara Grieshop - Materials Science and Engineering  
Comparison of the Corrosion Behavior of AA7075 and AA2099 Aluminum Alloys after Exposure to B117 Environment |
| 7      | Bohyun Hwang - Geodetic Science  
Water-Rock Interaction in the Coso Geothermal System |
| 8      | Jibin Liu - Environmental Engineering  
Heteroaggregation of Silver Nanoparticles with Clay Minerals in Aqueous System |
| 9      | Birce Onal - Biomedical Engineering  
BetaIV-spectrin controls sinoatrial node cell membrane excitability and cardiac pacemaking. |
| 10     | Joshua Pritchard - Mechanical Engineering  
Fabrication and Analysis of Thermally Invariant Smart Composites via Ultrasonic Additive Manufacturing |
| 11     | Aruna Ravi - Electrical & Computer Engineering  
Electromagnetic wave interaction with individual wavelength-scale particles in the IR range: Spectral challenges and novel techniques |
| 12     | James Reinhardt - Biomedical Engineering  
ECM Remodeling and Cell Migration are Emergent Behaviors in Agent-Based Models |
| 13     | Aaron Short - Biomedical Engineering  
Accessing Hyaluronic Acid Receptor Expression on Electrospun Fibers |
| 14     | Ying-Chin Wang - Agricultural Engineering  
Effect of various catholytes on performance of blood-based microbial fuel cells |
| 15     | Kang Wei - Biomedical Engineering  
An In-line Fluidic Pump Driven by Magnetic Stir Bars |
Lauren Kleinman, MA, MENR is an Outreach Specialist for the Healthier Hospitals Initiative (HHI), a free, three year initiative designed to accelerate the widespread use of proven sustainability practices throughout the health care sector for improved health of patients, staff, and the community. Prior to joining HHI, Lauren worked for The Ohio State University Wexner Medical Center as an Administrative Manager, incorporating her passion for health, wellness, and sustainability at every opportunity. While she worked at OSUWMC, she completed her dual Masters degrees in Environment and Natural Resources and Public Policy. Her Masters project compared energy model predictions with actual energy performance of three LEED buildings on campus, resulting in LEED building follow-up audits one year post-occupancy. In addition to the opportunities she sought at work and through school, she was a student leader in groups such as Net Impact and the Sustainability and Environmental Responsibility Committee (SERC) for the Council of Graduate Students. SERC joined student sustainability initiatives together to leverage their numbers for a larger impact, and published a student sustainability resolution that successfully encouraged OSU administration to define a sustainability plan for the university.

By combining her graduate degrees, work experience, and student leadership opportunities, Lauren was able to land her version of a “dream job.” She also writes grants for a local watershed advocacy nonprofit and is a board member at Green Columbus, a nonprofit that organizes local Earth Day activities and focuses on sustainability within the community.
Dr. DeJong is an entrepreneur, arts administrator, community educator, international Fair Trade retailer and researcher, and a non profit management specialist.

Her career spans numerous social justice and arts and culture projects, including reviving Columbus’ Global Gallery from near failure in the early 2000s to now a premier Fair Trade retail location with extensive educational and outreach programming. As Executive Director of Global Gallery, Dr. DeJong not only financially stabilized the organization, but broadened its scope and influence through an increased focus on education, programmatic special events planning, expansion to multiple locations, strong community collaboration, and investment in new international partnerships.

A longterm key project for Global Gallery that Dr. DeJong developed was the Bolivian Orphanage project, a fundraising and collaborative endeavor with Foundation Anyi that has worked to build a sustainable, multi-phase orphanage for children in need in Cochabamba, Bolivia. As Executive Director, Dr. DeJong has secured numerous grants for Global Gallery over the years, including funding from the National Endowment for the Arts, the Ohio Arts Council, and the Greater Columbus Arts Council, to name a few. She also worked as the Program Director for OSU Arts Scholars during this time, and led multiple study abroad trips throughout South America.

Locally, Dr. DeJong’s many outreach efforts have resulted in vital community partnerships across the area, including acting as Retail Operations Manager for Celebrate Local at Easton Towne Centre, dedicated to growing and promoting Ohio based businesses, or as a founding member of Women Crafting Change, a collaborative effort to engage low income women with professional development via hand crafted trades. Numerous other collaborations have also been cultivated by Dr. DeJong, among them work with the Short North Alliance, many of the local arts and cultural festivals city and statewide, farmers markets, musicians, artists, and as a mentor for many future arts administrators, artists, students, and likeminded social entrepreneurs.

Dr. DeJong’s expertise in nonprofit management and Fair Trade issues led her to start her own social enterprise with World Peaces, a Fair trade importing business that sends her across the globe throughout the year, with specialization in the key areas of Africa, Asia, and South America. Increasing the amount of Fair Trade merchandise imported into the U.S. creates a dramatic change in the lives of those artisans who craft the goods, and she has significantly increased the knowledge locally of the power of this change via her many entrepreneurial and educational efforts. Along this line, she also has cofounded The Ethical Arts Collective in Franklinton, a place for socially minded artists, entrepreneurs and visionaries to come together to share ideas and resources—and ultimately, to join forces to make the world a better place.
CAREER PANEL

Jonathan Toot, MS, PhD, DABT is a Senior Toxicologist (Study Director) and head of Drug Abuse Liability Testing at WIL Research Laboratories located in Ashland, Ohio. WIL Research is contract research lab that conducts scientific studies for various US and international government agencies, including the EPA and FDA. WIL Research is a scientific research company with facilities located in Europe, Japan, and throughout the US.

Jonathan received his MS from Akron University in Physiology, and his PhD from Kent State University in Biomedical Physiology. For the past 6+ years, Jonathan has been conducting research studies for WIL Research in the departments of Developmental and Reproductive Toxicology, Juvenile Toxicology, and Neuroscience. In addition to mentoring graduate students, collaborating with scientists, and volunteering, Jonathan is also adjunct faculty at Ashland University and has taught courses in Applied Toxicology and Human Biology. While at WIL Research Jonathan has published original research, coauthored a book chapter, and presented research findings at scientific meetings (across the US and abroad) in topics ranging from drug abuse liability to neurodegenerative diseases to pregnancy induced models of pathology. Although working at WIL Research as a Study Director is focused on scientific research, his job also requires experience in marketing, business development, legal contracts, general drug development consulting, analytical/bioanalytical chemistry, accounting, equipment/software validation, and research oriented scientific method development.
Jill Smith, Ph.D., is the English-Language Arts Curriculum Coordinator for Westerville City Schools and an adjunct lecturer at The Ohio State University in the School of Teaching and Learning. Before that she worked as the Program Manager for Middle Childhood M.Ed. program at OSU and was a full-time English teacher at Westerville Central High School. She completed her M.Ed. and doctorate at O.S.U. In her 16 years of as a high school English-Language Arts teacher she developed curriculum for Cultural Studies and American Literature classes and was actively involved on many committees such as Curriculum Council and Site Council in the Westerville School district. She also acted as advisor to her school’s Gay-Straight Alliance and initiated anti-bullying policies in her school. She is a co-author and editor of Acting Out!: Combating Homophobia and Heterosexism in Schools, recognized in 2010 as an “Outstanding Academic Title” by the American Library Association and winner of the National Association of Multicultural Education Philip C. Chinn book award. Jill was awarded “Teacher of the Year” by Westerville City Schools in May of 2011 and was awarded the Holloways Human and Civil Rights Award by the Ohio Department of Education, also in spring of 2011. She currently resides in Columbus, Ohio with her partner, Kyle, and their two sons.

Jill’s activism in her work and school communities and her academic publications led her to seeking out a position where she could have a strong voice in shaping equitable, more inclusive school spaces and can develop and support authentic professional development for teachers. She is currently working on a follow-up book to Acting Out! that will explore ways teachers can better support LGBTQ students and families. She also continues to present her work at local and national educational conferences such as OCTELA, NCTE, and AERA and will be teaching at Ataturk University in Turkey this May.
AWARDS LUNCHEON
Performance Hall, Ground Floor

WELCOME ADDRESS
Jamie Crowsley: Vice President, Council of Graduate Students

LUNCH MENU

Appetizer
Traditional Blend Salad - Mixed greens with Roma Tomatoes, cucumbers, carrots, and croutons with Ranch and Italian Dressings

Entrees
Lemon Garlic Chicken - Roasted chicken leg and thigh quarter with lemon, garlic, and herbs served with roasted Roma tomatoes and mashed potatoes
Vegetarian Lasagna - Layers of fresh garden vegetables, pasta, and cheese in a white cream sauce

Dessert
New York Style Cheesecake with Macerated Fresh Strawberries

REFLECTIONS
Patrick S. Osmer, Dean of the Graduate School
Javaune Adams-Gaston, Vice President for Student Life

AWARD PRESENTATIONS
Awards will be announced by Jamie Crowsley
Certificates will be presented by Dean Osmer, assisted by Alfred Yates
2013 HAYES GRADUATE FORUM RECIPIENTS

CONGRATULATIONS TO THE WINNERS FROM THE 2013 HAYES FORUM!

2013 ORAL PRESENTATION WINNERS

THE ARTS
1st Place: Kellen Maicher
2nd Place: Andrew Barry
3rd Place: Joyelle Fobbs

BIOLOGICAL SCIENCES
1st Place: Jeffrey Wojton
2nd Place: Rosanna Wotowicz

BUSINESS
1st Place: Karthikeya Easwar
2nd Place: Matthew Wynter
3rd Place: Beth Polin

EDUCATION AND HUMAN ECeLOGY
1st Place: Christin Carotta
2nd Place: Elizabeth Beggrow
3rd Place: Chad Campbell

ENGINEERING
1st Place: Mikael Hudoba
2nd Place: Santino Carnevale
3rd Place: Julie Thompson

FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES
1st Place: Erin DiCaprio
2nd Place: Wenfei Wang
3rd Place: En Huang

HUMANITIES
1st Place: Austin Dean
2nd Place: Chelsea Phillips
3rd Place: Meagan Horn

MATHEMATICS AND PHYSICAL SCIENCES
1st Place: Lindsay Morrison
2nd Place: Michael Severance
3rd Place: Andrew Krygier

PROFESSIONAL BIOLOGICAL SCIENCES
1st Place: Ashley Frakes
2nd Place: Erin Burns
3rd Place: Matthew Mason

SOCIAL AND BEHAVIORAL SCIENCES
1st Place: Laren Conklin
2nd Place: Eric Wohleb
3rd Place: Jayeon Lee
2013 HAYES GRADUATE FORUM RECIPIENTS (CONTINUED)

2013 POSTER PRESENTATION WINNERS

**POSTER: ARTS, HUMANITIES & SOCIAL SCIENCES**
1st Place: Ben Kerrick
2nd Place: Ciara Stigen
3rd Place: Zachariah Hubbell

**POSTER: BIOLOGICAL SCIENCES**
1st Place: Priscilla Lee
2nd Place: Nirav Shah
3rd Place: Christopher Hansen

**POSTER: ENGINEERING, MATHEMATICS, AND PHYSICAL SCIENCES**
1st Place: Eric Coleman
2nd Place: Steven Hansen
3rd Place: Aaron Short
THE COUNCIL OF GRADUATE STUDENTS

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, federal, state, and local officials. CGS also provides a forum for graduate students to discuss and act upon issues. The CGS promotes and provides academic, administrative, and social programs for graduate students and the greater university community. Up to 135 graduate students serve as delegates from the 133 graduate programs at Ohio State. These delegates are charged with representing over 10,000 graduate students.

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 over 125 graduate students to serve on the university-wide and senate committees. CGS also appoints 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, the 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. Also, students will be able to assist the University pursue its strategic international goals by creating and bolstering relations with universities and other institutions across the world.
Special Thanks to our Sponsors

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Council of Graduate Students