



# UNDERGRADUATE RESEARCH SYMPOSIUM



PART OF UNDERGRADUATE RESEARCH WEEK

APRIL 13-18, 2014



elcome to Undergraduate Research Week, a celebration of student excellence in research across campus. The signature event is the seventh annual campus-wide Undergraduate Research Symposium (URS), held on Thursday, April 17th. The breadth and scope of the oral and poster presentations as well as the performances featured not only reflect the wide range of academic disciplines at the University of Illinois, but also speak to the caliber of our undergraduate students. Our students are enterprising and thoughtful, eager to learn from their advisors and mentors. Their projects also demonstrate the ongoing commitment of our faculty to supporting and expanding undergraduate research opportunities on campus and beyond.

The presentations, posters, and performances that follow address some of society’s most pressing issues, including education, health care, violent conflict, and natural disasters. As is true of the mentors who support them, these students and their projects hold the potential to change the world for the better. The featured lunchtime session demonstrates the range of research that occurs at the University of Illinois, from advanced scientific analysis to creative arts.

This year’s symposium includes a record number of participants from an expansive range of departments, colleges, and other units on campus. In addition, awards in various categories will be presented to the best posters and presentations. Judges include university administrators, distinguished faculty members, and corporate sponsor representatives.

Special thanks to Office of Undergraduate Research (OUR) Associate Director Karen Rodriguez’G, OUR intern Mackenzie Kurth, Matthew Price, and the OUR Advisory Board.

**Paul F. Diehl**

*Director, Office of Undergraduate Research*  
Henning Larsen Professor of Political Science

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## Researchers Initiative Poster Symposium, Urbana South Living–Learning Communities

**Sunday, April 13, 4:00-6:00 p.m.**

Florida Avenue Residence Halls, Oglesby Pagoda

*The Effects of Cognitive Behavioral Therapy (CBT) on Depression and Parental Self-Efficacy in Latino Immigrant Mothers*

**Hannah Adekale**, Sophomore, Nursing, CON  
**Anna Fischer**, Freshman, Undeclared, DGS  
**Keanya Jackson**, Sophomore, Finance in Agribusiness, ACES  
**Sandy Perez**, Freshman, Undeclared, DGS

*Social Capital and Community Gardening:  
A Study of Inner-City Residents, Project*

**Ricardo Amaya**, Sophomore, Molecular and Cellular Biology, LAS  
**Allison Hollatz**, Freshman, Molecular and Cellular Biology, LAS  
**Marina Shah**, Sophomore, Mathematics, LAS

*School Readiness in Inner-City Children*

**Ricardo Amaya**, Sophomore, Molecular and Cellular Biology, LAS  
**Allison Hollatz**, Freshman, Molecular and Cellular Biology, LAS  
**Marina Shah**, Sophomore, Mathematics, LAS

*Developing Novel Biocatalysts for Alternative Energies*

**Chidinma Anigbogu**, Sophomore, Chemical Engineering, LAS

*The Effects of Vocal Use and Disuse  
on Neuromuscular Junctions in the Aging Voice*

**Jacob Bowers**, Freshman, Molecular and Cellular Biology, LAS

*Effects of Human Activities and Management  
on Forest Ecosystems*

**Taylor Cascia**, Freshman, Undeclared, DGS  
**Tingxiao Chen**, Freshman, Actuarial Science, LAS  
**Magdalena Gusztyń**, Freshman, Animal Sciences, ACES  
**Roshan Kumar**, Sophomore, Biochemistry, LAS

*Insect-Infested Hemlock's Effects  
on Soil in Southern Appalachian Forests*

**Taylor Cascia**, Freshman, Undeclared, DGS  
**Tingxiao Chen**, Freshman, Actuarial Science, LAS

*Neural Markers of Strategic Attention and Learning*

**Sopirinye Diri**, Sophomore, Molecular and Cellular Biology/Psychology, LAS

*Political and Media Action on Childhood Lead Poisoning  
and Gardening Activity in the Urban Environment*

**Vinisha Doshi**, Freshman, Undeclared, DGS

*Nutrient Biomarker Patterns, Cognitive Function,  
and MRI Measures of Brain Aging*

**Jason Ginzkey**, Freshman, Molecular and Cellular Biology, LAS  
**Ana Tinoco Martinez**, Sophomore, Molecular and Cellular Biology, LAS

*Evaluating the Effectiveness of Diversity Training  
on Police Recruits' Racial Beliefs*

**Zheng Yun Ji**, Sophomore, Economics, LAS

*Race and Digital Media*

**Christine La**, Sophomore, Broadcast Journalism, COM  
**Brea Thompson**, Sophomore, Communication, COM

*Design Research: Exploring Tools That Elicit Emotional Needs*

**Liam McHugh**, Freshman, Aerospace Engineering, ENG

*Meta-Analysis of the Perceived Satisfaction of Interracial Couples*

**Shree Modi**, Freshman, Business, BUS

*Social "Epidemics" on Networks:  
Mathematical Modeling of the Growth of Twitter Posts*

**Chiho Moon**, Sophomore, Actuarial Science, LAS  
**Sneha Shrivastav**, Sophomore, Mathematics, LAS

*Genetic Regulation in Bacteria*

**Monal Patel**, Sophomore, Molecular and Cellular Biology, LAS

*Chinese and South Korean Students  
in Changing University of Illinois Demographics*

**Cassandra Phelps**, Sophomore, Linguistics, LAS  
**Yiyang Wang**, Freshman, Economics, LAS  
**Wenting Zhu**, Freshman, Economics/Industrial Engineering, LAS/ENG

*Racial and Ethnic Representations of Latinas in the Media*

**Yeah In Po**, Exchange Student

## College of Media Symposium, Media and Cinema Studies

**Monday, April 14, 12:00-1:00 p.m.**

Gregory Hall, Room 231

*SoundCloud, NoiseTrade, and the Platforming  
of Collaboration in Music Remix Cultures*

**Ian Reeves**, Sophomore, Political Science, LAS

*Trapped Online!: Innovations in Electronic  
Music Through Digital Collaboration*

**Marty Arneberg**, Senior, Media and Cinema Studies, COM

*Television Broadcast History and Disruptive Innovations*

**Veronica Mullen**, Sophomore, Media and Cinema Studies, COM  
**Erin Ray**, Sophomore, Undeclared, DGS

*Technologies of Accounting  
and a History of Disruptive Innovations*

**Tom Feigel**, Senior, Accountancy, BUS  
**Daniel Keller**, Senior, Accountancy, BUS  
**Kevin Mulligan**, Senior, Accountancy, BUS

*Teen Suicide Prevention Through Youth New Media Interventions*

**Elizabeth Weiler**, Junior, Political Science/English, LAS

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*LGBT Youth and Anti-Bullying Activism Online*

**Michael Montalban**, Senior, Accountancy, BUS

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*Effects of Pizza Advertising*

**Troy Farsakian**, Sophomore, Undeclared, DGS

**Ansley Heppner**, Sophomore, Undeclared, DGS

**Airius Reeves**, Sophomore, Psychology, LAS

**Krishna Somayajula**, Senior, Agricultural and Consumer Economics, ACES

**Zhizhe Zhang**, Freshman, Sociology, LAS

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*UIUC's Reaction to Violent Content*

**Sukeerthi Khadri**, Sophomore, Computer Science, ENG

**Feifei Cai**, Junior, Communication, LAS

**Sean Forsythe**, Junior, Accounting, BUS

**Li Qian**, Senior, Finance, BUS

**Qi Ling**, Sophomore, Media and Cinema Studies, COM

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*Effects of the Media*

**Katerina Pappas**, Sophomore, Advertising, COM

**Christopher Smreczak**, Junior, Molecular and Cellular Biology, LAS

**Samantha Terstriep**, Sophomore, Atmospheric Sciences, LAS

**Thomas Chapman**, Sophomore, Undeclared, DGS

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*Encoding and Decoding*

**Katherine Holmes**, Sophomore, Supply Chain Management/Marketing, BUS

**Jennifer Heck**, Sophomore, BUS

**William Smolen**, Sophomore, Finance/Information Systems and Information Technology, BUS

**Tahar Bowen-Pinto**, Sophomore, Accounting, BUS

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*Effects of Violent Video Games*

**Timothy Campbell**, Freshman, Undeclared, DGS

**Paulina Burgoa**, Freshman, Media and Cinema Studies, COM

**Alexia Roc**, Sophomore, Psychology, LAS

**Disha Ankola**, Senior, Molecular and Cellular Biology, LAS

**Joseph Procopio**, Sophomore, Psychology, LAS

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*Gendered Media Effects on Body Image*

**Jaclyn Shaps**, Sophomore, Special Education, EDU

**Lauren Pliskin**, Freshman, Political Science, LAS

**Nicole Brettman**, Sophomore, Undeclared, DGS

**Angela Hong**, Sophomore, Molecular and Cellular Biology, LAS

**Mary Kate Simon**, Sophomore, Undeclared, DGS

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## College of Fine and Applied Arts Symposium

**Monday, April 14, 2:00-4:00 p.m.**

Krannert Center for the Performing Arts, Krannert Room, Level 5

*The Theatre and Art: The Audience's Role*

**Julianne Heuel**, Senior, Art Education, FAA

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*Give Sorrow Words: Hamlet's Death and Its Impact on William Shakespeare's Work*

**Stephanie Svarz**, Junior, Theatre/English, FAA/LAS

*Early American Ibsenism*

**Jacob Davis**, Senior, Theatre, FAA

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*Plays at Work: The In-Depth Exploration of New Play Development From Broadway to Illinois Theatre*

**Mateo Hurtado**, Sophomore, Theatre, FAA

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**4:00-5:00 p.m.**

Krannert Center for the Performing Arts,  
Choral Rehearsal Room, Level 2

*Transcribing J.S. Bach's Keyboard Music to Harp (performance)*

**Erin Brooker**, Senior, Harp Performance, FAA

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*Composing a Woodwind Quintet (performance)*

**Joseph Meland**, Junior, Composition/Theory, FAA

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## Ethnography of the University Initiative Biannual Student Conference

**Tuesday, April 15, 3:00-8:00 p.m.**

Library and Information Science Building, Room 126

Since 2003, Ethnography of the University Initiative (EUI) has provided an innovative approach to teaching and learning focused on promoting student research at universities and colleges. In EUI-affiliated courses, students use a variety of ethnographic, archival, and related methods to examine the university in its broader social, political, and historical contexts. During this academic year, there were 13 courses affiliated with EUI serving approximately 250 students. At the end of each semester, students have the opportunity to present their research at this conference as well as contribute their work to the EUI collection in the university's digital repository, Illinois Digital Environment for Access to Learning and Scholarship (IDEALS).

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## Department of English Symposium

**Wednesday, April 16, 4:00-5:00 p.m.**

English Building, Atrium, Lower Level

### Gendered Spaces in British Literature

*Popular and Critical Perceptions of Female Actors in Traditionally Male Roles in Contemporary Shakespearean Productions*

**Nicole Moore**, Senior, English, LAS

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*The Social Worker, the Consumer, and the Prostitute: Escape From Domestic Ideology in the Victorian and Neo-Victorian Novel*

**Leatrice Potter**, Senior, English, LAS

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*Between Misselthwaite Manor and the "Wild, Dreary" Moor: Children and Enclosures in The Secret Garden*

**Katy DiGiulio**, Senior, English, LAS

**5:00-5:30 p.m.**

English Building, Atrium, Lower Level

Refreshments hosted by the English Student Council

Welcome

**Professor Michael Rothberg**, Head of the Department of English

**5:30-7:00 p.m.**

English Building, Room 107A

Research in the Writers Workshop

*Research in the Writers Workshop: A Roundtable*

**Leatrice Potter**, Senior, English, LAS

**Debbie Newcomb**, Senior, English, LAS

**Gwen Quigley**, Junior, English, LAS

**Susana Luna**, Junior, Creative Writing, LAS

**Hillary Waldstein**, Senior, Creative Writing/English, LAS

**Karthik Brahmamdam**, Senior, Geography and Geographic Information Science, LAS

**6:00-7:00 p.m.**

English Building, Atrium, Lower Level

Intersectional Identities in American Women Writers

*Female Community in The Women of Brewster Place and The Mixquiahuala Letters*

**Margaret O'Connor**, Senior, English, LAS

*Depictions of Race in Works by Nineteenth-Century Women Writers*

**Caitlin MacDonald**, Senior, English/Spanish, LAS

*Fragmented Identities in Modern Women's Writing: Race, Gender, and Space in American Modernist Literature*

**Michael Chan**, Senior, English/Architecture, LAS/FAA

## Department of Anthropology Symposium

**Wednesday, April 16, 6:00-9:00 p.m.**

Noyes Lab, Room 161

Annual Anthropology Senior Capstone Conference

Untitled

**Mechell Frazier**, Senior, Archaeology, LAS

*Open Source, Piracy, and Hackers: Competing Conceptions of Freedom on the Internet*

**Andrew La Pointe**, Senior, Sociocultural/Linguistic Anthropology, LAS

*Are You What You Eat?: An Examination of Food and Culture in University Dining*

**Ashley Loreal Jackson-Lee**, Senior, Sociocultural/Linguistic Anthropology, LAS

*Evidence for the Co-Evolution of Genes With the Subsistence Patterns of First Nation Communities in British Columbia*

**Rachel Loth**, Senior, Biological Anthropology, LAS

*Inferring a Population History of the Seri Indians of Northwest Mexico Using Microsatellite Markers*

**Stephanie Mundis**, Senior, Biological Anthropology, LAS

*The Lord of Your Chariot: Yoga, A Dynamic Metaphor Through Time, Space, and Bodies*

**Anna Prior**, Senior, Sociocultural/Linguistic Anthropology, LAS

*More Than Mound Building: A Zoo-Archaeological Study of the Mound House Site in the Illinois River Floodplain*

**Taylor H. Thornton**, Senior, Archaeology, LAS

*Seasonal Variation in Tooth Enamel Isotopes of Wild and Domestic Mammals From Chepnyalil Cave, Mt. Elgon, Kenya*

**Madelaine Walker**, Senior, Archaeology, LAS



ORAL PRESENTATIONS

**10:00-11:00 a.m., Room 209**

The Global Economy

*The Behavioral Components of the European Debt Crisis*

**Megan Lindgren**, Junior, Economics/Statistics, LAS

*The Effect of Political and Economic Change on Mexico's Drug Cartels and the Rise of Narcoterrorism*

**ManoLasya Perepa**, Senior, Global Studies, LAS

*Patent Pending: When Do National Intellectual Property Policies Lead to International Trade Disputes?*

**Valerie Brankovic**, Senior, Political Science, LAS

10:00-10:30 a.m., Room 217

Fragile X

*VEGF Expression and the Fragile X Syndrome*

**Nabiya Arshad**, Senior, Psychology, LAS

*Developmental Neocortical Vasculature Abnormalities in a Mouse Model of Fragile X Syndrome*

**Stephen Fleming**, Senior, Psychology, LAS

11:00 a.m.-12:00 p.m., Room 209

Chinese and American Educational Experiences

*Comparing Education Opportunities for Students With Disabilities Between China and the United States*

**Benjamin Appleby**, Freshman, Special Education, EDU

*How Chinese vs. American Elementary School Day Differs in Structure, Routines, and Teaching Styles*

**Julia Malinowski**, Sophomore, Special Education, EDU

**Leslie Martin**, Sophomore, Elementary Education, EDU

*English in the Chinese Educational System*

**Sarah Kitz**, Sophomore, Elementary Education, EDU

**Kelly Burger**, Junior, English, LAS

**Dana Roesslein**, Junior, Mathematics, LAS

*Chinese Family vs. American Family*

**Meng Chi Ao**, Junior, Computer Science, ENG

**Connie Tan**, Sophomore, Undeclared, DGS

**Mingya Huang**, Junior, Education, EDU

11:00 a.m.-12:00 p.m., Room 217

Challenges in Education

*School Readiness: Insights From Low-Income African American Mothers*

**Lilli Melero**, Junior, Psychology, LAS

*Humanities Education Across Prison Boundaries*

**Michael Brawn**, Non-Degree

**Jose Carbrales**, Education Justice Project, EDU

**Gregory Donatelli**, Education Justice Project, EDU

*Education Barriers for the Children of Migrant Farm Workers in Illinois*

**Heather Sears**, Senior, Social Work, SSW

*The Role of Mentorship on the College Enrollment Rate of Mexican American Males*

**Jasmine Patron Vargas**, Junior, Gender and Women's Studies / Latina/o Studies, LAS

*Promoting Education in an Urban Setting: How Well Does the University of Illinois School of Education Address and Work With It?*

**Dave Rodgers**, Junior, Teaching of English, EDU

1:00-2:00 p.m., Room 209

Issues in Engineering

*Field-Dependent Simulations of Phase-Change Memory and Silicon Microelectronics for SJEM Measurements*

**Juan Llinas**, Senior, Electrical Engineering, ENG

*Thin-Layer Chromatography Using a Smartphone Biosensor*

**Venkata Pillarisetti**, Senior, Electrical Engineering, ENG

*Structurally Engineered Gas-Diffusion Electrodes for Electrochemical CO<sub>2</sub> Reduction: Optimizing Mass Transport, Catalyst Utilization, and Reactor Performance*

**Saman Moniri**, Senior, Chemical Engineering, LAS

*Quantification of Gene Expression in Angiogenic Receptors and Ligands Using qPCR*

**Dipen Kumar**, Freshman, Bioengineering, ENG

1:00-1:30 p.m., Room 217

Identity Issues

*Shelley Jackson's Patchwork Girl and Hypermediated Print*

**Bradley Williams**, Senior, English, LAS

*The Politics of Self-Progression*

**Jarvis Young**, Senior, English, LAS

2:00-3:00 p.m., Room 209

Cross-Cultural Interactions

*Cultural Differences in Teenagers' Lifestyles*

**Si Un Leong**, Junior, Civil Engineering, ENG

**Weng Si Kuan**, Junior, Linguistics, LAS

**Michael Allenworth**, Senior, Political Science, LAS

*Exploring Intercultural Friendship*

**Elizabeth Ortiz**, Freshman, Media and Cinema Studies, COM

**Cheang Hio Hei**, Junior, English Education, EDU

**Liu Tianbo**, Junior, Mathematics, LAS

*Islam and Women: Surveying the Academic Debate*

**David Rahimi**, Senior, History/Political Science, LAS

## *Interacting Within Different Cultures*

**Fai Thompson**, Junior, Psychology, LAS

**Keith Leong**, Exchange Student

**Dominique Parker**, Senior, Media and Cinema Studies, COM

## 2:00-2:30 p.m., Room 217

### Food Security

#### *The Impact of Household Food Security on Parental Quality of Life*

**Amanda Jacobs**, Junior, Earth, Society, and Environmental Sustainability, LAS

#### *Food Security and Subsidies: The Common Agricultural Policy's Unintended Effect on the Productivity of African, Caribbean, and Pacific Group of States*

**Paul Dolmon**, Senior, Political Science, LAS

## 3:00-4:00 p.m., Room 209

### Literary Criticism

#### *A Roundtable on the Founding of Re:Search: The Undergraduate Journal for Literary Criticism*

**Michael Chan**, Senior, English/Architecture, LAS/FAA

**Jonathan Cheng**, Senior, English, LAS

**Nick Millman**, Junior, English/Global Studies, LAS

**Clara Mount**, Senior, English, LAS

**Lindsey Rolf**, Senior, English, LAS

**Stephanie Svarz**, Senior, English/Theatre Studies, LAS/FAA

**Mary Baker**, Senior, English, LAS

**Dave Rodgers**, Junior, Teaching of English, EDU

**Genevieve Scheele**, Senior, Comparative Literature/East Asian Languages, LAS

## POSTER PRESENTATIONS

## 9:00-10:15 a.m., Illini Room A

### PA Session—Plants and Animals

#### *Identification of the Mutation Causing Platinum Coat Color in Foxes*

**Alexandra Kozysa**, Junior, Animals Sciences, ACES

#### *Markers on Fox Chromosomes 3 and 14 Show Allele Frequency Differences Between the Tame and Aggressive Silver Fox Strains*

**Flora Fong**, Senior, Animal Sciences, ACES

#### *How Does the Chronic Disturbance of Developing Honey Bees Affect Their Adult Aggression Levels?*

**Chelsey Coombs**, Senior, Molecular and Cellular Biology, LAS

#### *The Effects of Repeated Electroejaculation on Bull Behavior and Serum Cortisol Concentrations*

**Erica Navis**, Junior, Animal Sciences, ACES

#### *Effects of Grazing Endophyte-Infected Fescue Followed by Grazing Novel Endophyte-Infected Fescue on Heifer Calf Performance*

**Mary West**, Senior, Animal Sciences, ACES

#### *Reducing Chlorophyll Content in Soybeans Alters the Surface Energy Balance*

**Kaitlin Togliatti**, Senior, Atmospheric Sciences, LAS

#### *Methane Production From Anaerobic Digestion of Miscanthus X Giganteus "Illinois" Fermentation Residue*

**Hoi Chun Ho**, Senior, Agricultural and Biological Engineering, ACES

#### *The Effects of High-Yield Management on Soft Red Winter Wheat Flour*

**Rachel Cote**, Senior, Food Science, ACES

#### *Disease Resistance of Impatiens Walleriana Cultivars to Rhizoctonia Solani*

**Jeff Hansen**, Senior, Horticulture, ACES

#### *Study on the Synergistic Effect of Pectin and Added Hydrocolloids in Raspberry Jam*

**Karen Chen**, Junior, Food Science, ACES

#### *Role of Lactadherin in the Binding of Sperm to Porcine Oviduct Cells*

**Rebecca Winters**, Senior, Animal Sciences, ACES

#### *Visual Acuity of Bass*

**Sally Feng**, Senior, Integrative Biology, LAS

**Numan Karim**, Sophomore, Statistics/Molecular and Cellular Biology, LAS

#### *Diet and Colony Investment Into Worker Body Size in Two Ant Species*

**Newton Hood**, Senior, Anthropology, LAS

#### *Determination of Forage Quality of Miscanthus at Different Cutting Times*

**Nicholas Reitz**, Senior, Food Science, ACES

#### *Culinary Herbs in the Fight Against Type 2 Diabetes*

**Luis Hernandez**, Sophomore, Chemistry, LAS

#### *Effects of Pyrethroid and Pyrethrin Insecticides on Beef Bull Reproductive Parameters*

**Sandra Poveda Jimenez**, Junior, Animal Sciences, ACES

#### *Self-Organization in Eusocial Insects: Can You Predict Nest Architecture From Individual Behavior?*

**Michael Pirovano**, Sophomore, Integrative Biology, LAS

**Zack Cohen**, Freshman, Integrative Biology, LAS

**D'mario Turner**, Sophomore, Mathematics, LAS



*Environmental Stressors and Physiological Changes in Plants*

**Kyra Michon**, Senior, Molecular and Cellular Biology, LAS

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*Temporal Variations in NH<sub>3</sub> Emissions From Agricultural Fertilization*

**Meng Wang**, Senior, Civil Engineering, ENG

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*Fishing for Flightin: Crayfish as a Model Organism to Study the Evolution of Specialization in Paralogous Genes Involved in Muscle Contractions*

**Sylvia Nunez**, Junior, Integrative Biology, LAS

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*Host Specificity in the Common Yellow Morel, Morchella Esculenta*

**Jason Newton**, Junior, Integrative Biology, LAS

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*Modeling Honey Bee Colony Population Dynamics and Interaction Networks*

**Ting Liao**, Senior, Mechanical Engineering, ENG

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*Insect Species Diversity and Abundance Trends in a Woody Perennial Polyculture vs. Conventional Agriculture*

**Chloe Mattia**, Senior, Natural Resources and Environmental Sciences, ACES  
**Kevin Wolz**, Graduate Student, Integrative Biology, LAS

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9:00-10:15 a.m., Illini Room C

PB Session—Science and Mathematics

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*Longitudinal Bayesian Diffusion Model for Two Choice Reaction-Time Studies*

**Kyle Payne**, Senior, Statistics, LAS

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*The Effects of Macrophages and Angiogenic Factors on Endothelial Cell Sprouting in 3D Microfluidic Device*

**Daniel Pak**, Junior, Bioengineering, ACES

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*Long-Term Imaging Cellular Processes*

**Elliot Tague**, Junior, Bioengineering, ACES

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*Design of Actively Controlled Reconfigurable Mechatronic System*

**Danny Lohan**, Senior, General Engineering, ENG

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*Gene Expression in the Uterus of Monodelphis Domestica*

**Kathryn Dorhout**, Senior, Integrative Biology, LAS

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*Regulation of hile, Encoding a Negative Regulator of Type III Secretion in Salmonella*

**Michaela Eickhoff**, Junior, Molecular and Cellular Biology, LAS

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*Automated Search for Gravitational Lenses*

**Sean McLaughlin**, Junior, Engineering Physics, ENG

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*Functional Role of a Non-Conserved Isoleucine Residue in the I-Helix of Thromboxane Synthase*

**Susan Zelasko**, Junior, Molecular and Cellular Biology, LAS

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*Monolithic III-V Active-Passive Integration Platform Incorporating Slot Waveguides*

**Manan Raval**, Senior, Electrical Engineering, ENG

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*Searching for Wolf-Rayet Stars Formed in Isolation in the Large Magellanic Cloud*

**Rebecca Tippens**, Senior, Physics, LAS

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*Intermediate-Scale Astronomical Image Composition*

**Britton Jeter**, Senior, Physics, LAS

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*Competitive Advantage of Tissue-Specific Streptococcus Pneumoniae in Human Samples*

**Elizabeth Southworth**, Senior, Molecular and Cellular Biology, LAS

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*Automatic Thickness Measurement of Tympanic Membrane for Improved Diagnosis of Otitis Media*

**Zita Hubler**, Senior, Bioengineering, ACES

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*RNAi Knockdown of NPR-6 in Caenorhabditis Elegans*

**Sally Ladsaria**, Sophomore, Integrative Biology, LAS

**Katie Lincoln**, Sophomore, Integrative Biology, LAS

**Becky Michna**, Sophomore, Integrative Biology, LAS

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*Age- and Sex-Dependent Differences in Addiction-Like Methamphetamine and Saccharin Self-Administration Behavior in Rats*

**Rachel Haake**, Senior, Psychology, LAS

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*Stationary Domain Wall Contributions to Dielectric Response in Ferroelectric Thin Films*

**Jason Fleischman**, Sophomore, Materials Science and Engineering, ENG

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*Selective Amplification and a Highly Efficient Nanoparticle-Mediated Delivery of DNA-Cleaving Agents*

**Joseph Kus**, Junior, Bioengineering, ENG

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9:00-10:15 a.m., South Lounge

PC Session—Education

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*Determining Children's Developmental Outcomes: A Review of Standardized Testing*

**Flor Reza**, Senior, Human Development and Family Studies, ACES

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*Why Do Children Learn Language Better Than Adults?*

**Julia Cronin**, Senior, Linguistics, LAS

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*Illinois Farm-to-School Program: Determining the Educational Needs of Teachers for the Incorporation of School Gardens*

**Jasmine Washington**, Sophomore, Human Development and Family Studies, ACES

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*The Effects of Parental Involvement in the Transitional Period of Special Education Students*

**Jennifer MocarSKI**, Freshman, Education, EDU  
**Anna L. Bolton**, Freshman, Pre-Education, EDU

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*It's the Subtle Things That Shape Our Education: Racial Microaggressions in the Classrooms of a Predominantly White University*

**Ashley Ojiemwen**, Senior, Speech and Hearing Science, AHS

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*The Diagnostic Accuracy of Parent Report in Assessing Grammatical Development*

**Sarah Van Der Bosch**, Senior, Speech and Hearing Science, AHS

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*Relationship Between Personality Traits, Goal Difficulty, and Task Performance*

**Han Zhu**, Senior, Psychology/Mathematics, LAS

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*Disciplinary Approach Utilized by University Primary School*

**Staci Fay**, Sophomore, Elementary Education, EDU

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*Using Eye Tracking to Analyze Effects of Word Expectancy and Sentential Constraint on Natural Reading*

**Agnes Strojewska**, Senior, Psychology, LAS

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*Children With Autism Spectrum Disorders: Impact of Related Sleep Issues Affect Ability to Perform Academically and Socially in the Classroom Setting*

**Jennifer Weber**, Senior, Nursing, CON

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*Drawing as Assessment in Human Anatomy and Physiology Courses*

**Megan McKeon**, Sophomore, Integrative Biology, LAS

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*Social Interactions in the Fifth- and Sixth-Grade Art Classroom*

**Emily Fiedler**, Junior, Art Education, FAA

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*Visual Arts Assessment in First and Second Grade*

**Adam Smith**, Junior, Art Education, FAA

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*(Re)Presentation With Third and Fourth Graders*

**Megan Swiertz**, Junior, Art Education/Photography, FAA

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*Outdoor Interaction in the First Grade*

**Kelly Kerulis**, Senior, Art Education, FAA  
**Naomi Morimoto**, Junior, Art Education/Sculpture, FAA

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*Transitioning With Third and Fourth Graders*

**Erin Gleason**, Junior, Art Education, FAA

*Comparing the Chinese Education System to the American Education System*

**Ali Marten**, Junior, Elementary Education, EDU  
**Lydia Vetrone**, Junior, Elementary Education, EDU  
**Elizabeth Hancock**, Junior, Elementary Education, EDU

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*Integrating Computational Skills Into Curriculum to Aid Students With Disabilities*

**Christina Japuntich**, Freshman, Special Education, EDU

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*Are We Making the Grade on Disability Awareness for Our Students?*

**Dustin Krause**, Junior, Kinesiology, AHS  
**Joel Firkins**, Junior, Finance in Agribusiness, ACES  
**Jay Seigrist**, Sophomore, Agricultural and Consumer Economics, ACES  
**Nickolas Clarke**, Senior, Community Health/Health Planning and Administration, AHS  
**Mark Girone**, Sophomore, Crop Sciences, ACES  
**Wil Cagley**, Sophomore, Technical Systems Management, ACES

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*Educate to Embrace Disabilities*

**Kelly Baker**, Junior, Community Health, AHS  
**Uzma Ahmad**, Senior, Community Health/Health Education, AHS  
**Gabriella Dehesse**, Senior, Community Health/Health Education, AHS  
**Houston Bates**, Senior, Community Health/Health Planning and Administration, AHS

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10:45 a.m.-12:00 p.m., Illini Room A

PD Session—Health and Well-Being

*Do Kids Who Watch More Snack More?: The Relationship Between Television Viewing and Salty Snack Consumption*

**Catherine Maloney**, Junior, I-Health, AHS  
**Diana Marczuk**, Junior, Community Health, AHS  
**Samantha Zelm**, Senior, Food Science and Human Nutrition, ACES

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*Feasibility and Cultural Acceptability of a Health Curriculum for At-Risk Girls in an Alternative School Setting*

**Elizabeth Badskey**, Junior, Social Work, SSW

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*Medicare Prescription Drug Plans After Affordable Care Act: A Policy Analysis*

**Ga-Young Jin**, Senior, Social Work, SSW

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*Evaluation of Nutrient Intakes of Pregnant and Non-Pregnant Women*

**Leila Shinn**, Junior, Food Science and Human Nutrition, ACES

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*Non-Communicable Diseases in Sub-Saharan Africa*

**Cristina Gratton**, Junior, Molecular and Cellular Biology, LAS

---

*Characterizing Change in Parent Input to Toddlers*

**Kelsey Haywood**, Senior, Speech and Hearing Science, AHS  
**Victoria Ting**, Senior, Speech and Hearing Science, AHS

*Effects of Perioperative Beta Blockade on Patient Morbidity*

**Laura Sokolowski**, Senior, Nursing, CON

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*Social Determinants of Health:*

*Analysis of Patients Utilizing a Free Clinic*

**Olatoyosi Akinrotimi**, Senior, Community Health, AHS

**Uzma Ahmad**, Senior, Community Health, AHS

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*High Consumption of Saturated Fatty Acids Is Associated With Hypertriglyceridemia in Mexican College Students*

**Jiewen Li**, Senior, Food Science and Human Nutrition, ACES

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*Frequency of Family Mealtimes in Families With Preschool-Aged Children*

**Melissa Raney**, Junior, Food Science and Human Nutrition, ACES

**Kelsey Galicia**, Sophomore, Human Development and Family Studies, ACES

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*What's the Big Deal About Allergies?:*

*A Correlation Analysis of How Specific Allergies and Number of Allergies Affect Weight Status in Children*

**Tanis Klingler**, Senior, Molecular and Cellular Biology, ACES

**Eva Doyle**, Senior, Food Science and Human Nutrition, ACES

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*The Search for the Missing Heritability of Obesity: Using Ancestry-Informative Markers to Account for Ethnic Differences in the STRONG Kids Cohort*

**Konstantin Tchalukov**, Junior, Biochemistry, LAS

**Vrajika Thakker**, Sophomore, Molecular and Cellular Biology/Spanish, LAS

**Anthony Wang**, Medical Scholar, ACES

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*Impact of Nutritional Factors on Virulence in Staphylococcus Aureus*

**Gianna Vella**, Junior, Animal Sciences, ACES

---

*Depression, Adiposity, and Adiponectin in Young Mexican Adults*

**Jasmine Washington**, Sophomore, Human Development and Family Studies, ACES

---

*Engineering Brain Cancer in Vitro Models for Clinical Studies*

**Jacob Hanselman**, Sophomore, Bioengineering, ENG

**Sarah Laken**, Junior, Bioengineering, ENG

---

*Parent-Child Relationship Quality Moderates the Contribution of Peer Victimization to Depressive Symptoms*

**Samantha Welter**, Senior, Psychology, LAS

---

*Characterization of the Material Properties of Pig Right Femur Mid-Diaphysis From Ages 0 to 24 Months to Further Understanding of Human Child Bone Development*

**Kevin Chrzanowski**, Junior, Molecular and Cellular Biology/Economics, LAS

**So Hyun Ahn**, Junior, Bioengineering, ENG

**Carl Bohm**, Senior, Mechanical Engineering, ENG

---

*Youth Interventions: Teen Suicide*

**Elizabeth Weiler**, Junior, Political Science/English, LAS

---

*Analyzing HDL and LDL Levels in the Older Ecuadorian Adult Population During the Nutrition Transition*

**Joanne Jose**, Senior, Food Science and Human Nutrition, ACES

---

*Relationships Between Fasting Blood Glucose, Saturated Fat Intake, and Cognition Among Prepubertal Children*

**Brooke Pfest**, Senior, Food Science and Human Nutrition, ACES

**Alexis Tiller**, Senior, Food Science and Human Nutrition, ACES

---

*Postpartum Depressive Symptoms in Women Participating in a WIC Program*

**Noelle Bruce**, Junior, Social Work, SSW

**Heather Sears**, Senior, Social Work, SSW

---

*An Investigative Look Into the Current State of Illinois Child Care Providers' Nutritional Knowledge Broken Down by Race*

**Erin Tompkins**, Junior, Community Health, AHS

**Rachel McCool**, Senior, Human Development and Family Studies, ACES

---

*High Maternal Prepregnancy BMI Negatively Affects Visual Recognition Memory in Infants*

**Khristian Bersamin**, Senior, Psychology, LAS

---

*Associations Between Interdialytic Weight Gain and Dietary Intake of Sodium and Fluid in Hemodialysis Patients*

**Alyssa Giovannoni**, Junior, Food Science and Human Nutrition, ACES

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10:45 a.m.-12:00 p.m., Illini Room C

PE Session—Science and Mathematics

*Adiponectin Polymorphisms as an Early Marker for Metabolic Disorders*

**Abby Esker**, Junior, Molecular and Cellular Biology, LAS

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*Simulations of Black-Hole Emission and Comparisons to Observation*

**Scott Luedtke**, Senior, Physics, LAS

---

*The Search for Surviving Companions of Type Ia Supernova Progenitors in the Large Magellanic Cloud: SNR 0509-67.5*

**Abigail Holmes**, Senior, Astronomy, LAS

---

*Machine Learning for Star-Galaxy Classification*

**Ching Chang**, Junior, Physics, LAS

---

*Predictive Skill of Temperature and Precipitation Forecast Deviations From Climatology in the Boulder, Colorado, Flood and the August 2013 Central U.S. Drought*

**Vincent Carretti**, Senior, Atmospheric Sciences, LAS

---

*Airmass Sources of the Comma Head Region of a Continental Winter Cyclone Using HYSPLIT*

**Matthew Macomber**, Senior, Atmospheric Sciences, LAS

---

*Use of Generative Algorithms in Heat Transfer Applications*

**Danny Lohan**, Senior, General Engineering, ENG

---

*Fractals, Primes, and Digital Dice:  
Patterns and Randomness in Number Theory*

**Yiwang Chen**, Junior, Mathematics, LAS

**Tong Zhang**, Senior, Mathematics, LAS

---

*The Strange Case of the Moebius Power Series:  
Reconciling Theory and Numerical Evidence*

**Tong Zhang**, Senior, Mathematics, LAS

**Yiwang Chen**, Junior, Mathematics, LAS

---

*Characterization of Histone H1.4 Variants  
Using Amphibian Lampbrush Chromosomes*

**Cara Schornak**, Junior, Molecular and Cellular Biology, LAS

---

*Evolution of Baby HII Regions in the LMC*

**Ju Zhu**, Junior, Astronomy, LAS

**LiZhong Zhang**, Junior, Astronomy, LAS

---

*Droplet-Based Microfluidic Device  
for Epigenetic Analysis of Small Cell Samples*

**Amy Oreskovic**, Junior, Bioengineering, ENG

**Mallika Modak**, Junior, Bioengineering, ENG

---

*Methods of Investigating the Subcellular Localization  
of VEGFR-3 in HUVECs*

**Audra Storm**, Sophomore, Bioengineering, ENG

---

*Computational Modeling and Prediction  
of G-Quadruplex Formation*

**Jacob Calvert**, Junior, Bioengineering, ENG

---

*Quantitative Flow Cytometry of Angiogenic Growth  
Factor Receptors in the EA.hy926 Cell Line*

**Brenda Mathias**, Sophomore, Bioengineering, ENG

**Xinyi Guo**, Junior, Molecular and Cellular Biology, LAS

**Osazomon Imarenezor**, Sophomore, Undeclared, DGS

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*Symmetries in Nature*

**Michelle Zosky**, Senior, Mathematics, LAS

**Christopher Formosa**, Sophomore, Mathematics, LAS

**Chaofan Da**, Junior, Mathematics, LAS

**Junxian Li**, Graduate Student, Mathematics, LAS

---

*DNA-Guided Growth of Palladium Nanocubes*

**Arzeena Ali**, Sophomore, Chemistry, LAS

---

*Stimulated Brillouin Scattering Gain  
in Whispering Gallery Resonators*

**Nathan Dostart**, Senior, Mechanical Engineering, ENG

---

*Tracking EGF Activation With Quantum Dots on Hydrogel Platform*

**Ashley Peterson**, Junior, Bioengineering, ENG

*Yield-Stress Fluid Droplet Impact on Coated Surfaces*

**Marc Deetjen**, Senior, Mechanical Engineering, ENG

**Brendan C. Blackwell**, Graduate Student, Mechanical Engineering, ENG

---

*Carbon Accounting Methodology*

**Ilana Braverman**, Sophomore, Natural Resources  
and Environmental Sciences, ACES

---

*Creative Blocking*

**Daniel Hirsbrunner**, Senior, Mathematics, LAS

**Jeremy Dejournett**, Junior, Electrical Engineering, ENG

**Moon Hwan Lee**, Junior, Political Science/Mathematics, LAS

---

*Vacuole Recruitment and Recycling of the GEF Mon1  
Are Regulated by Phosphatidylinositol 3-Phosphate  
and the Casein Kinase Yck3*

**Blake Flood**, Senior, Biochemistry, LAS

---

*Characterization of CREB-Binding Proteins: Chromatin-Modifying  
Enzymes Functioning in Planarian Regeneration*

**Rivka Stelman**, Senior, Molecular and Cellular Biology, LAS

---

*Detection of Glioblastoma Multiforme Microvesicles  
Using Microring Resonator Arrays*

**Nicholas Vertin**, Sophomore, Integrative Biology, LAS

---

*Intraspecific Variation Significantly Alters Outcomes  
Among Competing Cladocerans*

**Sarah Duple**, Senior, Integrative Biology, LAS

---

*Quantitative Analysis and Computational Modeling  
of PDGFR-VEGFR Crosstalk*

**Manu Kumar**, Senior, Bioengineering, ENG

**Tyler Cowman**, Senior, Bioengineering, ENG

---

*Modeling and Design Analysis of a Permanent Magnet  
Linear Synchronous Generator*

**Xin Niu**, Junior, Industrial Engineering, ENG

---

*Quantitative Flow Cytometry Analysis  
of Angiogenic Growth Factor Receptors*

**Grace Conard**, Senior, Bioengineering, ENG

**Pavan Gupta**, Senior, Bioengineering, ENG

**James M. Parkin**, Senior, Bioengineering, ENG

---

*Survey of Bubbles Around Wolf-Rayet Stars  
in the Magellanic Clouds*

**Mohd Irteza**, Sophomore, Astronomy, LAS

**Yu Jin Yeo**, Junior, Astronomy, LAS

---

*Individual Differences in Binocular Rivalry*

**Lu Ye**, Senior, Psychology, LAS

*Analyzing Spatial Variations in Sea-Level Rise Due to Ocean Warming*

**Abigail Peterson**, Junior, Atmospheric Sciences, LAS

---

*Mitigation of Cognitive Decline Through Calcium Hydroxy-Beta-Methylbutyrate (CaHMB) Supplementation in Aged Rats*

**Lauren Ruvola**, Senior, Psychology, LAS

---

*Bootstrap Percolation and the Target Set Selection Problem*

**Kaiyue Hou**, Senior, Mathematics/Economics, LAS

**Yuxi He**, Junior, Mathematics, LAS

**Yibo Guo**, Sophomore, Computer Science, ENG

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*G-Quadruplex Structure Variations and Gene Regulation*

**Molly Imgruet**, Junior, Bioengineering, ENG

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10:45 a.m.-12:00 p.m., South Lounge

PF Session—Social Science and Human Behavior

*Not Your Parents' Stereotypes: A Study of Student Perceptions of Foreign-Accented Speech*

**Katharine Tyndall**, Junior, Linguistics, LAS

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*It's Not You, It's U.S.: The Influence of Domestic Forces on U.S. Foreign Conflict Engagement*

**Ewa Kaszuba**, Senior, Political Science/Economics, LAS

---

*The 10%: Explaining Bill Passage in the U.S. House of Representatives*

**Stephanie Westfall**, Senior, Political Science/Sociology, LAS

---

*Maximizing the Profits of Organizations by Retaining Employees: Using the Model of Social Exchange Theory to Examine Turnover Intentions in Higher Education*

**Gloria Kim**, Sophomore, Psychology, LAS

---

*Throw the Bums Out? The Impact of Term Limits on State Governance*

**Derek Miller**, Senior, Political Science/History, LAS

---

*Building a Leadership Lab at the University of Illinois*

**Melissa Brotzman**, Senior, Speech and Hearing Science, AHS

**Patrick Proctor**, Senior, Communication, LAS

---

*Defining Shifting and Dividing Attention in Older Adults*

**Rachel Hopman**, Senior, Psychology, LAS

---

*The Timing of United State Intervention Militarily in International Intrastate Wars*

**Erin Dine**, Senior, Political Science/Communication, LAS

---

*An Examination of Middle Woodland Spatiotemporal Settlement Trends in the Lower Illinois River Valley*

**Taylor Thornton**, Senior, Anthropology/Geography and Geographic Information Science, LAS

---

*The Hashemite Kingdom of Jordan as a Country of Transition: An Examination of Iraqi and Syrian Refugees*

**Lauren Fritzsche**, Senior, Global Studies, LAS

---

*Auditory Gating in Response to Speech Stimuli*

**Jordan Barr**, Senior, Speech and Hearing Science, AHS

---

*American and Chinese Mothers' Motivation Strategies: Predictions and Consequences*

**Chun Hei Yip**, Senior, Psychology, LAS

---

*Brightening the Future of the Financial Planning Industry*

**Colleen Dumke**, Senior, Agricultural and Consumer Economics, ACES

---

*Parental Monitoring of Youth's Internet Activity*

**Jillian Mershon**, Senior, Human Development and Family Studies, ACES

---

*Senior Housing: North First Feasibility Study*

**Xiaodong Chen**, Sophomore, Architectural Studies, FAA

**Kayla Peck**, Sophomore, Architectural Studies, FAA

---

*The Potentials of Rezoning in the Fifth and Hill Neighborhood*

**Peiyong Yu**, Senior, Urban and Regional Planning, FAA

**William Goff**, Junior, Political Science, LAS

---

*Fifth and Hill Site Planning Project*

**Kayla Peck**, Junior, Architectural Studies, FAA

**Puchun Zhang**, Sophomore, Architectural Studies, FAA

---

*Connectivity and Accessibility of UIUC Campus Bike Paths*

**Russell Pildes**, Senior, Geography and Geographic Information Science, LAS

---

*Cross-Cultural Differences in Response Styles*

**Tianjun Sun**, Junior, Psychology/Statistics, LAS

---

*Employer and Employee Perceptions of Valuable Workplace Traits in Leisure Service Workplace Settings*

**Brian Sanderson**, Junior, Psychology/Sociology, LAS

---

*Emotion and Superstition*

**Yanqing Li**, Senior, Psychology/Molecular and Cell Biology, LAS

---

*Effects of Ideology on Mental Purity and Disgust*

**Daniel Relihan**, Senior, Psychology/Communication, LAS

---

*Use of Social Networking Applications and Sexual Interactions Among Latino MSM*

**Xavier Ramirez**, Senior, Social Work/Latina/o Studies, SSW/LAS

---

*Emblemas Morales*

**Melina Nunez**, Sophomore, Psychology, LAS

---

*Product Design*

**Yashvi Vira**, Sophomore, Industrial Design, FAA

---

*The Impact of Heifer International on Food Security in Zambia*

**Marin Thompson**, Senior, Economics/Statistics, LAS

---

*Consonant Harmony and Memory*

**Zach Greenlee**, Senior, Psychology, LAS

---

*A Cross-National Analysis of Protest Behavior and Governmental Response*

**Christopher Boidy**, Senior, Political Science, LAS

---

*Spotlight on Foreign Corrupt Practices Act*

**Chong Gu**, Senior, Agricultural Accounting, ACES

---

*Digital Trap!: Innovations in Electronic Music Through Networked Collaboration*

**Ian Reeves**, Sophomore, Spanish/Political Science, LAS

---

*Heritage and Dwelling: Opportunities for Reanimation of the Small Industrial City*

**Elisa Laurini**, Senior, Architecture, FAA

---

12:00-1:15 p.m., Illini Room B

Lunchtime Featured Sessions

*Outer Space to the Operating Room: Microorganisms Showing the Past and Shaping the Future*

**William Bruce**, Senior, Molecular and Cellular Biology, LAS

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*Brown Before 42: The Story of Three Latinos Playing Baseball for Chicago Before World War II*

**Mariano Nava**, Junior, History, LAS

---

*"Psyché" (by Emile Paladilhe), "Almen se non poss'io" (by Vincenzo Bellini), "Till There Was You" (by Rodgers and Hammerstein)*

**Madeline Whitesell**, Sophomore, Music Voice Performance, FAA  
Accompanied by **Casey Baker**, Graduate Student, Piano, FAA

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1:30-2:45 p.m., Illini Room A

PG Session—Education

*Impact of Outreach on the LunchStop Summer Feeding Program*

**Natasha Wilkins**, Senior, Agricultural and Consumer Economics, ACES

---

*What Does the Chinese-English Interlanguage Look Like?: Using Test Design to Understand Difficulties in Language Learning*

**Lauren Colby**, Senior, Global Studies, LAS

---

*Do Mothers' Expectations Influence Adolescents' Perceptions of Their Achievements Across Cultures?*

**Erjing Cui**, Senior, Psychology/Political Science, LAS

---

*The Reading Study*

**Samantha Labus**, Junior, Speech and Hearing Science, AHS

**Ariana Grieco**, Senior, Speech and Hearing Science, AHS

**Margaret Briggs**, Senior, Speech and Hearing Science, AHS

**Kylie Ritter**, Junior, Speech and Hearing Science, AHS

---

*Science in Art*

**Ben Barber**, Senior, Art Education, FAA

---

*Journal Review of Causal Influences on Child Language Development*

**Clare Rogers**, Junior, Speech and Hearing Science, AHS

**Karissa Nulty**, Senior, Molecular and Cellular Biology, LAS

---

*The Importance of Mixed Pedagogy in K-12 Art Classrooms*

**Kelsey Mangler**, Senior, Art Education, FAA

---

*The Accessibility of Technology in Special Education Classrooms*

**Gregory Knapp**, Freshman, Special Education, EDU

---

*Students' Attitude Toward Education in Macau and the United States*

**Melissa Boyce**, Sophomore, Elementary Education, EDU

**Angel Chan**, Exchange Student

**Queenie Lee**, Exchange Student

---

*Teachers Trained at the University of Illinois Working in High-Poverty Schools*

**Colleen Ross**, Freshman, Elementary Education, EDU

---

*Self-Attributes in South African University Students Differ Across Race and Gender*

**Taylor Lindbom**, Senior, Psychology, LAS

---

*Education Behind Bars: Beneficial for Prisoners?*

**Samantha Cherry**, Freshman, Elementary Education, EDU

**Mia Cudecki**, Freshman, Elementary Education, EDU



*Students and Art Media Exploration*

**Travis Smith**, Senior, Art Education, FAA

---

*Teacher Quality: Pre-Induction*

**Samantha Cherry**, Freshman, Elementary Education, EDU

---

*Gender and Technology in the Classroom*

**Katherine Farley**, Sophomore, Elementary Education, EDU

---

*Cost of Attendance: The Effect of Debt on Student Values and Political Participation*

**Casey Thiel**, Senior, Political Science/Economics, LAS

---

*CCTV High: An Agent-Based Computer Model of Student Surveillance in High Schools*

**Jeff Sheets**, Senior, Sociology/Linguistics, LAS

---

*Methods for Automatic Lecture Monitoring*

**Adam Miller**, Senior, Computer Science/Electrical Engineering, ENG

---

*Chinese Education System vs. American Education System*

**Melissa Feiger**, Junior, Elementary Education, EDU

**Jennifer Ummel**, Senior, Elementary Education, EDU

---

*Exploring the Frontiers of Fluency: Adaptation Under Delayed Auditory Feedback*

**Alyssa Hunter**, Senior, Speech and Hearing Science, AHS

**Carolyn Jeon**, Sophomore, Speech and Hearing Science, AHS

**Kyung Lee**, Senior, Physics/Chemistry/Molecular and Cellular Biology, LAS

**Elizabeth Jenkins**, Junior, Speech and Hearing Science, AHS

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*Tracing Dialogic Patterns as Evidence of Learning in Severe Aphasia: A Treatment Case Study*

**Alex Karigan**, Senior, Speech and Hearing Science, AHS

**Amanda Rohde**, Junior, Speech and Hearing Science, AHS

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1:30-2:45 p.m., South Lounge

PH Session—Science and Mathematics

*Distant Neighbors in the Night Sky*

**Kian Moslehi**, Senior, Astronomy, LAS

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*Meteorological Interpretation of S- and X-Band Warm-Season Echoes Using the CSU-CHILL Dual-Frequency Radar*

**Jacqueline Costello**, Senior, Atmospheric Sciences/Geography, LAS

---

*NAM Model Forecast Verification System*

**Jacob Byrd**, Senior, Atmospheric Sciences, LAS

---

*Impacts of ENSO on the Formation of Cape Verde Storms*

**Robert Nystrom**, Junior, Atmospheric Sciences, LAS

---

*Severe Weather Risk Perception Among College Students*

**Jessica Shryock**, Junior, Atmospheric Sciences, LAS

---

*Search for Surviving Companions of Type Ia Supernova Progenitors in the Large Magellanic Cloud: DEM L316*

**Katrina Litke**, Junior, Astronomy, LAS

---

*Characterization of Systematic Effects in Sky Surveys*

**Michael Schubert**, Senior, Physics/Astronomy, LAS

---

*Comparative Dynamic and Thermodynamic Characteristics of Nontornadic New England Thunderstorm Environments*

**Manda Chasteen**, Senior, Atmospheric Sciences, LAS

---

*A Geochemical Analysis of Igneous Features in the Alta Stock Exposed at the Albion Basin, Utah*

**Allison Greaney**, Senior, Geology, LAS

---

*A Geochemical Study of Igneous Rocks: Petrogenesis of Intermediate Stocks and Dikes on Bonanza Ridge, Summit, and Wasatch Counties, Utah*

**Andrew Reinhard**, Senior, Geology, LAS

---

*Examining the Effects of Invasive Japanese Stiltgrass (*Microstegium vimineum*) on Forest Carbon and Nitrogen Cycles*

**Scott Cinel**, Senior, Natural Resources and Environmental Sciences, ACES

---

*Invasive Species in Fragmented Natural Areas*

**Lainey Pasternak**, Senior, Natural Resources and Environmental Sciences, ACES

---

*Computer-Based Modeling of Groundwater Impacts Due to "Live Fence" Catchment Protection in Northwestern Cameroon*

**Reshmina William**, Senior, Civil Engineering, ENG

---

*The Effect of Barge Traffic on Sediment Movement and Water Quality Monitoring in Illinois River*

**Ferisca Putri**, Senior, Agricultural and Biological Engineering, ACES

---

*Adhesion of Pathogenic Legionella on Copper Surfaces*

**Lance Langer**, Senior, Environmental Engineering/Hydraulic Engineering, ENG

---

*CocoaNuts iOS Development Group*

**Briana Chapman**, Sophomore, Computer Science, ENG

**Marrissa Hellesen**, Junior, Computer Science, ENG

**Shivam Gupta**, Junior, Computer Science, ENG

**Matt Rajca**, Sophomore, Computer Science, ENG

---

*Broker Model for Congestion Control*

**Akash Kapoor**, Junior, Computer Science, ENG

---

*Random Triangles*

**Gilad Margalit**, Freshman, Mathematics/Physics, LAS



*Can One Fake Randomness?*

**Rishabh Marya**, Sophomore, Computer Science, ENG  
**Robert Weber**, Junior, Mathematics/Computer Science, LAS/ENG  
**Chad Franzen**, Freshman, Computer Science, ENG

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*Kinship Accuracy: Comparing Algorithms for Big Pedigrees*

**Shuxin Yu**, Senior, Computer Science, ENG  
**Danni Sun**, Senior, Mathematics, LAS  
**Zhencheng Wang**, Senior, Computer Science, ENG

---

*Correlation Function for LCDM Stripe Data*

**Fanshi Liu**, Senior, Physics, LAS

---

*A Generalizable Heuristic for Classification of Packed Malware*

**Yi Zhou**, Junior, Computer Science, LAS  
**Matthew Tomei**, Junior, Computer Engineering, ENG

---

*A Probabilistic Two-Point Angular Correlation Function*

**Harshil Kamdar**, Sophomore, Physics, ENG

---

*Stability of Quasicrystalline Frameworks in 2D and 3D*

**Daniel Pugliese**, Sophomore, Computer Science, ENG  
**Joseph Zeller**, Junior, Mathematics, LAS  
**Zachary Miksis**, Senior, Mathematics, LAS

---

*Development and Application of a Bayesian Classification Method*

**Shangjie Gou**, Sophomore, Physics, LAS

---

*Search for Surviving Companion of Type Ia Supernova Progenitor in the Large Magellanic Cloud: SNR 0548-70.4*

**Rebecca Tippens**, Senior, Physics, LAS

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1:30-2:45 p.m., Illini Room C

PI Session—Health and Well-Being

*The Potential Role of HMB in Ameliorating Age-Related Loss in Dendritic Spines of Layer V Neurons of the Rat Prefrontal Cortex*

**Suzanne Nolan**, Senior, Psychology, LAS

---

*Bile Acids Contribute to Gender-Biased Hepatocellular Carcinoma Incidence*

**Megan Patton**, Sophomore, Molecular and Cellular Biology, LAS  
**Sherwin Kelekar**, Sophomore, Molecular and Cellular Biology, LAS

---

*Dietary Cholesterol and Fat-Type Effect on Mexican Young Adults' Prevalence for Metabolic Syndrome*

**Maria Pauls**, Senior, Food Science and Human Nutrition/Human Nutrition, ACES

---

*Modified Integrative Literature Review: Barriers to Surgical Antibiotic Prophylaxis Administration*

**Amy Slana**, Senior, Nursing, CON

---

*The Effects of Vitamin E and Selenium on Mouse Sperm Production and Fertility*

**Amanda Lehner**, Senior, Animal Sciences, ACES

---

*A Single PD7 Alcohol Binge May Be Sufficient to Cause Reductions in the Survival of Newly Generated Hippocampal Neurons*

**Paula Bucko**, Senior, Individual Plan of Study, LAS

---

*Using Percent Body Fat in Estimating Differences in Lipid Profiles of Males and Females with Metabolic Syndrome Risk Factors*

**Maggie Chung**, Senior, Food Science and Human Nutrition, ACES

---

*Comparison of Cardiovascular Disease Risk Assessment Using Two Different Waist-Circumference Cutoff Points in Young Mexican Adults*

**Ingrid Zago**, Senior, Food Science and Human Nutrition, ACES  
**Courtney Marques**, Graduate Student, Division of Nutritional Sciences, ACES

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*Plantazolicin: A Promising Agent in the Fight Against Antibiotic Resistance*

**Jeanna Wong**, Senior, Molecular and Cellular Biology/Psychology, LAS  
**Agnieszka Maniak**, Senior, Molecular and Cellular Biology/Chemistry, LAS

---

*Comparative Study of the Chemical Characterization of Blueberry Extracts*

**Valerie Munoz**, Junior, Food Science and Human Nutrition, ACES

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*Cardiobiotics: A Genetically Engineered Approach to Cardiovascular Health*

**Xinyi Guo**, Junior, Molecular and Cellular Biology/Psychology, LAS  
**Ashley S. Moy**, Sophomore, Bioengineering, ENG  
**Margaret S. Barbero**, Sophomore, Bioengineering, ENG  
**Rachel Walker**, Sophomore, Bioengineering, ENG  
**Blake Wilhelmsen**, Sophomore, Bioengineering, ENG  
**Will Dolatowski**, Senior, Agricultural and Biological Engineering, ENG  
**Arnav Rana**, Sophomore, Molecular and Cellular Biology/Psychology, LAS

---

*Aging Using Bone Ossification Centers in the Limbs of Illinois River Otters*

**Lucas Budden**, Senior, Animal Sciences, ACES

---

*Exercise and the Microbiome*

**Keith Whitlock**, Senior, Molecular and Cellular Biology, LAS  
**Bredesen Hartmann**, Sophomore, Molecular and Cellular Biology, LAS

---

*Effects of CIMT and Plaque Presence on Cardiovascular Health in Hemodialysis Patients*

**Isaac Philip**, Sophomore, Molecular and Cellular Biology, LAS

---

*Dietary and Non-Dietary Factors Associated With Protein Status in Hemodialysis Patients*

**Tyler Brown**, Senior, Food Science and Human Nutrition, ACES

---

*The Climb*

**Julianna Ge**, Sophomore, Agricultural and Biological Engineering, ACES  
**William Bruce**, Senior, Molecular and Cellular Biology, LAS  
**Veronica Drozdowski**, Senior, Chemistry, LAS

---

*Long-Term Fructose Consumption Increases Body Fat and Decreases Physical Activity But Does Not Impair Learning, Memory, or Adult Hippocampal Neurogenesis Relative to an Isocaloric Diet Containing Glucose*

**Ashley Masnik**, Senior, Molecular and Cellular Biology/Psychology, LAS

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*Genetic Ablation of Fxr and Shp Protects Mice Against Obesity*

**Phil VanDuyn**e, Sophomore, Molecular and Cellular Biology, LAS  
**Karthik Seetharaman**, Sophomore, Molecular and Cellular Biology, LAS

---

*Abolishment of Conditioned Place Preference for Cocaine as a Result of Voluntary Exercise Is Independent of New Neurons*

**Ashley Holloway**, Senior, Independent Plan of Study, LAS

---

*Nutrition and Healthy Brain Aging*

**Rachel Gonzales**, Senior, Molecular and Cellular Biology/Psychology, LAS

---

3:15-4:30 p.m., Illini Room A

PJ Session—Social Science and Human Behavior

*The Marriage Dilemma: Shaping Attitudes Toward the Queer Community*

**Justin Ostrowski**, Senior, Political Science, LAS

---

*Disparities in Expectations in Newlyweds and How Relationship Education Can Help*

**Jeremy Kanter**, Senior, Human Development and Family Studies, ACES

---

*The History of Footwear and Cultural Influences*

**Kevin Hauger**, Sophomore, Industrial Design, FAA

---

*Implicit Racial Attitudes and Policy Choice: Does Our Subconscious Inform Our Policy Preferences?*

**Grant Snyder**, Senior, Political Science/History, LAS

---

*Privatization and Growth: A Cross-Country Comparative Analysis on Privatization's Effects on Economic Output*

**James Reed**, Senior, Political Science, LAS

---

*The Advocacy of International Human Rights Organizations (IHROs) and U.S. Foreign Policy in Latin America and the Caribbean*

**Magdala Boyer**, Senior, Political Science, LAS

---

*Rebel Violence Against Civilians in Civil War*

**Nicholas Dietrich**, Senior, Political Science, LAS

---

*Civic Engagement and Age Disparities*

**David Adeleye**, Senior, Political Science, LAS

---

*Playing it Safe: The Influence of Neighborhood Social Cohesion on Child Play*

**Allison Byrne**, Junior, Community Health, AHS  
**Haley Highfill**, Junior, I-Health, AHS

---

*Predator–Prey Dynamics and Business Competition*

**Yimin Ge**, Junior, Actuarial Science/Statistics, LAS  
**Zhiyi Guo**, Junior, Actuarial Science/Statistics, LAS

---

*System Justification*

**Carol Villanueva-Perez**, Senior, Psychology, LAS

---

*Word Frequency and Pronunciation Complexity in New Word Learning by a Child With a Severe Speech Sound Disorder: A Descriptive Treatment Case Study*

**Meghan Schassler**, Senior, Speech and Hearing Science, AHS  
**Sarah Richards**, Senior, Speech and Hearing Science, AHS  
**Hannah Radnitzer**, Senior, Speech and Hearing Science, AHS  
**Connelly Thompson**, Senior, Speech and Hearing Science, AHS

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*Dialect or Disorder: Use of the DELV in Three Kindergarten Children With Distinct Language Profiles*

**Alison Dey**, Junior, Speech and Hearing Science, AHS  
**Megan-Brette Hamilton**, Graduate Student, Speech and Hearing Science, AHS  
**Bridget Dumoulin**, Senior, Speech and Hearing Science, AHS

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*The Effect of Country-Specific Technical-Assistance Aid Projects*

**Michael Bertucci**, Senior, Political Science, LAS

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*Not I: Why International Organizations Participate in Peacekeeping in Some Conflicts and Not Others*

**Naomi Hill**, Senior, Political Science/Sociology, LAS

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*The Influence of Lobbies on Policy Formation: A Comparative Study of the Dairy Lobby in the U.S. and EU*

**Elisha Gutmann**, Senior, Political Science, LAS

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*Cash Transfers and Poverty in Ecuador*

**Colin Burnett**, Senior, Global Studies, LAS

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*Does Violence Only Cause More Violence?: Internal Ethnic Conflict and Its Effects on External Interstate Conflict*

**Katherine Nugent**, Junior, Political Science, LAS

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*An Examination of Middle Woodland Spatiotemporal Settlement Trends in the Lower Illinois River Valley*

**Taylor Thornton**, Senior, Anthropology/Geography and Geographic Information Science, LAS

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*Listeners ... Um ... Pay More Attention to Disfluent Speech: Evidence From Event-Related Potentials*

**Michael Hudgins**, Senior, Psychology, LAS

*Risk Factors for Peer Victimization*

**Bo Dong**, Senior, Psychology, LAS

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*Differences in Parent-Adolescent Autonomous Decision-Making Across Gender, Age, and Ethnicity*

**Lorraine Munoz**, Senior, Human Development and Family Studies, ACES

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*The Influence of a Field's Ability Beliefs and Gender Composition on Women's Representation*

**Heeyoung Kim**, Senior, Psychology, LAS

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*Analysis of Publicly Traded Fertilizer Companies' Performance Since 2000*

**Mengzhu Wang**, Senior, Agricultural and Consumer Economics, ACES

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*How Advertising Is Fueling Social Change*

**Jonathan Schultz**, Senior, Advertising, COM

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*Baseball as Revolutionary: Purifying the Cuban Game*

**Mariano Nava**, Junior, History, LAS

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*Implementing Enterprise Risk Management (ERM) Strategies in Public Universities*

**Tingting Gao**, Junior, Actuarial Science/Statistics, LAS

**Shaoyang Luo**, Junior, Actuarial Science/Mathematics, LAS

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*Does Parents' Child-Based Worth Disrupt the Quality of Their Relationships With Their Children?: The Case of the United States and China*

**Chengyi Xu**, Senior, Psychology, LAS

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*How Do Nonmetropolitan LGBT Youth Get Support?: Triangulating Findings From a Mixed-Method Study*

**Amanda Hwu**, Junior, Social Work, SSW

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*Does Working Memory Capacity Affect Mind Wandering During Meditation?*

**Matthew Voss**, Senior, Psychology/Philosophy, LAS

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*Modern Slavery and the Global Economy*

**Brett Tucker**, Senior, Sociology, LAS

**David Huettner**, Senior, New Media, FAA

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*Media, Democracy, and Social Movements: A Comparative Study of the Print Media's Role on the U.S. Civil Rights Movement and the South African Anti-Apartheid Movement*

**Eden Gebregior**, Senior, Global Studies, LAS

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*Globalization, Gender Equality, and Environmental Integrity in Rural Kenya*

**Courtney Kramer**, Senior, Global Studies, LAS

*Impulsivity in Rats Predicts Willingness to Consume Alcohol*

**Olubanko Aladesuyi Arogundade**, Senior, Psychology, LAS

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*Southern Cone Pipeline Development: Risk Analysis and Policy Recommendation*

**Logan Nagel**, Senior, Individual Plan of Study, LAS

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*The Sacrificial Love of a Military Mother*

**Beatrice Chen**, Senior, Social Work, SSW

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*Through Wedding to Understanding*

**Estifanos Ijigu**, Sophomore, Crop Sciences, ACES

**Ho Cheong Seng**, Junior, Civil and Environmental Engineering, ENG

**Zhou Wanying**, Junior, English Education, EDU

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*Women of Minority Groups in Israel: The Context in Which They Live and the Attitudes Toward Them*

**Britta Johnson**, Junior, Global Studies, LAS

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*Women in Japanese Modernism*

**Genevieve Scheele**, Senior, East Asian Languages and Cultures, LAS

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*Embodied Perception and Driving*

**Meer Zukosky**, Senior, Psychology, LAS

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*The World Reflected in Martin Luther's Ten Commandments Commentary*

**Robert Weber**, Junior, Mathematics/Computer Science, LAS/ENG

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3:15-4:30 p.m., Illini Room C

PK Session—Science and Mathematics

*Discovery of Novel Peptide Natural Products*

**Bryan Schaeffer**, Sophomore, Molecular and Cellular Biology, LAS

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*Duplication of ZNF286 and Its Effect on Neurogenesis in the Brain*

**Jacqueline Brinkman**, Junior, Molecular and Cellular Biology, LAS

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*Uncovering Germ-Cell-Specific G-Protein-Coupled Receptors in a Schmidtea Mediterranea Model*

**Ayana Jamal**, Sophomore, Molecular and Cellular Biology, LAS

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*Female Mating Preferences in Sympatric vs. Allopatric Populations*

**Clare Rankhorn**, Senior, Integrative Biology, LAS

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*Estradiol Down Regulates the Expression of Growth Factors in the Suprachiasmatic Nucleus of Mice*

**Athanasios Kondilis**, Senior, Molecular and Cellular Biology/Psychology, LAS

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*The Urinary Microbiome and Renal Biomineralization*

**William Bruce**, Senior, Molecular and Cellular Biology, LAS

**Annette Merkel**, Junior, Molecular and Cellular Biology, LAS

*The Role of Matrix Metalloproteinases in Planarian Regeneration*

**Caitlin Dingwall**, Sophomore, Molecular and Cellular Biology, LAS

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*Synthesis of Branched Single-Stranded DNA Molecules*

**Lily Chen**, Junior, Chemical Engineering, LAS

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*Adiponectin Polymorphisms  
as an Early Marker for Metabolic Disorders*

**Abby Esker**, Junior, Molecular and Cellular Biology, LAS

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*Production and Characterization of New Lanthipeptide Substrates*

**Candace Wong**, Senior, Molecular and Cellular Biology, LAS

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*Effect of Resmethrin (+PBO) Insecticide on Predatory Activity  
of Juvenile Blue Crabs (*Callinectes Sapidus*)*

**Paige Oboikovita**, Junior, Integrative Biology, LAS

---

*Semantic and Syntactic Processing in Russian:  
ERP Investigation of N400 and P600 Components*

**Anastasiya Bagrova**, Senior, Chemistry, LAS

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*Self-Healing Capability of Ionic Molecular Glass*

**Andrew Chancellor**, Senior, Chemistry, LAS

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*Ligand Binding and Membrane Association Studies  
of Cytochrome p450 2J2*

**Amogh Kambalyal**, Junior, Molecular and Cellular Biology, LAS

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*Optimized Magnetic Field Configuration  
for High-Power Impulse Magnetron Sputtering*

**Jake McLain**, Junior, Nuclear, Plasma, and Radiological Engineering, ENG

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*Self-Healing of a Carbon-Fiber/Epoxy Interface*

**Alicia Cintora**, Senior, Materials Science and Engineering, ENG

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*Liquid Lithium Flow in Vertical Narrow Trenches*

**Ian Haehnlein**, Junior, Nuclear, Plasma, and Radiological Engineering, ENG

**Aveek Kapat**, Junior, Nuclear, Plasma, and Radiological Engineering, ENG

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*Alternative mRNA Splicing Has a Functional Role  
in Mammalian Liver Development*

**Darren Parker**, Senior, Biochemistry, LAS

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*Comparison of miRNA Expression Profiles Obtained  
by qRT-PCR and Silicon Photonic Microring Resonators  
to Subclassify Glioblastoma Multiforme*

**Christopher Para**, Sophomore, Chemistry/Communication, LAS

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*Oviposition and Development  
With Varying Leaf Detritus of *Culex Pipiens**

**Lauren Frisbie**, Senior, Integrative Biology, LAS

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*Electrophysiological Responses to Differences in Speaking Rate*

**Alexander Senetar**, Senior, Neuroscience, LAS

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*Long-Term Control of Contact Angle on a Silicon Surface  
Using Nanowires and a Nanometer-Thin PDMS Coating*

**Christopher Marry**, Sophomore, Mechanical Engineering, ENG

---

*Advanced Microfabrication Techniques  
for Electronically Instrumented Interventional Surgical Tool*

**Jonas Kurniawan**, Junior, Materials Science and Engineering, ENG

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*Environmentally Sustainable and Non-Precious  
Metal-Catalyzed C-N Bond Coupling*

**Dongyoung Kim**, Senior, Chemistry, LAS

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*Numerical Investigation of Slag Entrainment  
in Continuous Casting Molds*

**Kenneth Swartz**, Senior, Mechanical Engineering, ENG

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*Thermoelectric Module Temperature Distribution*

**Bruno Abedelnour**, Senior, Mechanical Engineering, ENG

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*Geometric Model of the Visual Cortex*

**Mohammad Saad**, Freshman, Electrical Engineering, ENG

**Nishad Phadke**, Freshman, Computer Science, ENG

**Jon Graven**, Senior, Mathematics, LAS

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*Determining the Intrinsic Shapes of Galaxies  
in the RESOLVE and ECO Surveys*

**Katrina Litke**, Junior, Astronomy, LAS

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3:15-4:30 p.m., South Lounge

PL Session—Health and Well-Being

*The Effects of Mobile Phone and Internet Use  
on Psychological Health*

**Tayana Panova**, Senior, Psychology/Communication, LAS

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*Is Electronic Media Diminishing Your Child's Sleep?*

**Timothy Colombo**, Senior, Kinesiology, AHS

**Taylor Karhliker**, Senior, Human Development and Family Studies, ACES

**Hannah Gutzwiller**, Sophomore, Molecular and Cellular Biology, LAS

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*Survey of College-Aged Mexican Americans' Health Habits  
and Perceptibility to Health Intervention by Text Messaging*

**Ramona Montez**, Junior, Food Science and Human Nutrition, ACES

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*Sociodemographic Determinants of Exercise Compliance  
in Hemodialysis Patients*

**Cory Buenting**, Senior, Kinesiology, AHS

*Can a Lifestyle Intervention Help Reduce Depressive Symptoms Among Latinas?*

**Laura Carlos**, Senior, Psychology, LAS  
**Dalmina Lisette Arias**, Senior, Community Health, AHS  
**Adriana Rodriguez**, Senior, Community Health, AHS

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*The Relationship Between Race, Religion, and Suicide*

**Brandon Mitchell**, Senior, Psychology, LAS

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*Hospital Pricing*

**Tapish Desai**, Junior, Community Health, AHS

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*Importance of Sponsors in the Child and Adult Care Food Program*

**Stephanie Christin**, Senior, Speech and Hearing Science, AHS  
**Noel Konken**, Junior, Food Science and Human Nutrition, ACES  
**Veronica Burns**, Junior, Human Development and Family Studies, ACES

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*Frequency of Family Mealtimes in Families With Preschool-Aged Children*

**Melissa Raney**, Junior, Food Science and Human Nutrition, ACES  
**Kelsey Galicia**, Sophomore, Human Development and Family Studies, ACES

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*Breastfeeding, Babies, and BMI: The Correlation Between Breastfeeding and Infant Physical Development*

**Kelly Uchima**, Junior, Agricultural and Consumer Economics, ACES  
**Maria Pia Gomez Postigo**, Junior, Animal Sciences, ACES

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*Differences in Mealtime Strategies Between Home-Based Day Care Providers, Center-Based Day Care Providers, and Parents Based on the Perception That Their Child/Student is a Picky Eater*

**Anisha Kothari**, Senior, Food Science and Human Nutrition, ACES

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*Differences in Mealtime Duration Between Perceived Picky and Non-Picky Eaters Across Three Different Settings: Center-Based Day Care, Home-Based Day Care, and the Family Home*

**Alison Ganko**, Junior, Human Development and Family Studies, ACES  
**Rachel Romer**, Senior, Psychology, LAS

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*Aerobic Exercise is the Critical Variable in a Complex Environment That Accelerates Extinction for Cocaine-Conditioned Place Preference*

**Aya Kobeissi**, Senior, Individual Plan of Study, LAS

---

*The Analysis of Chronic Conditions of the Uninsured Utilizing Free Clinics*

**Anuoluwapo Osideko**, Junior, Community Health, AHS

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*Brazilian Ideologies: Perceptions and Decisions in Regards to the Body*

**Natali Gracia**, Senior, Human Development and Family Studies, ACES

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*Effects of Fatigue and Load Carriage on Firefighter Gait*

**Faith Bradley**, Junior, Bioengineering, ENG

*Impact of Different Kinds of Music on Exercise Intensity of Square Dancing Among Older Chinese*

**Shengzhang Su**, Junior, Kinesiology, AHS

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## College of Engineering Illinois Scholars Undergraduate Research Symposium

**Thursday, April 17, 4:30-6:30 p.m.**

**Illi Union, Room 210**

The Illinois Scholar Undergraduate Research (ISUR) program is a year-long experience for Engineering students. It is generously funded by the Semiconductor Research Corporation, Rockwell Collins, and Shell. Through this program, undergraduate scholars are offered a unique opportunity to expand their academic experience beyond the walls of the traditional classroom. Students are introduced to research by working closely with graduate student mentors and faculty sponsors on projects. The ISUR Symposium is open to the public.

*Developing a Toolbox to Analyze the Motion of Zebrafish*

**Chamila H. Amithirigala**, Sophomore, Computer Science, ENG

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*Spatio-Temporal Learning Using Neural Networks*

**Sameer Kumar Bojja Venkatarama**, Junior, Computer Engineering, ENG

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*Electro-Tactile Sensation Control*

**Brandon Boyce**, Senior, Aerospace Engineering, ENG

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*Methods for Analyzing Speech Data*

**Jonathan Buie**, Senior, Electrical Engineering, ENG

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*The Effect of Mechanical Microenvironment on Stem Cell Growth*

**David Chiao**, Junior, Mechanical Engineering, ENG

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*Flexible, Stretchable Sensor Arrays for Instrumented Surgical Guide Wires and Catheters*

**Timothy Chiu**, Junior, Materials Science and Engineering, ENG

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*Reflective Fiber Ring Mirrors*

**Marjorie Dallmann**, Sophomore, Computer Engineering, ENG

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*Effects of Fatigue and Self-Contained Breathing Apparatus on Firefighter Functional Balance*

**Grace Deetjen**, Sophomore, Bioengineering, ENG

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*Biologically Modeled Self-Organizing Maps on FPGA Platform*

**Junia Findlay**, Senior, Electrical Engineering, ENG

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*Analysis of Co-Crystal Formation Based on Supersaturation Levels*

**Lucas Gonzalez**, Sophomore, Chemical Engineering, ENG



*Deformation of Graphene Through Polymer Substrate*

**Ryan Han**, Junior, Mechanical Engineering, ENG

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*Characterizing the Contact Effects of Metal/Graphene Interfaces*

**Jayan Hewaparakrama**, Junior, Electrical Engineering, ENG

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*G-Quadruplex Effect on Expression in E. Coli*

**Molly Imgruet**, Junior, Bioengineering, ENG

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*Developing Alternative Capabilities for Imaging Silicon Wafers*

**Alexander Kaczowski**, Junior, Mechanical Engineering, ENG

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*Understanding Student Strategies  
in Solving Adaptive Homework Assignments*

**Alhaji Mansaray**, Junior, Computer Science, ENG

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*Kinematic Analysis of Compensation Strategies  
During Recovery From Injury*

**Emily Matijevich**, Sophomore, Bioengineering, ENG

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*Mechanical Stimuli for Tissue Regeneration  
at the Tendon–Bone Interface in Collagen Scaffolds*

**Ashley S. Moy**, Sophomore, Bioengineering, ENG

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*Wearable Ankle Angle Sensor*

**Katie Neville**, Senior, Mechanical Engineering, ENG

*Optimization of Horizontal Heat Exchanger  
for Residential Water Heat Recovery System*

**Mahir Sharif**, Sophomore, Mechanical Engineering, ENG

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*Low-Cost OCT System*

**Anthony Shvets**, Junior, Electrical Engineering, ENG

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*Multi-Degree of Freedom Robot Arm*

**Patrick Slade**, Freshman, Mechanical Engineering, ENG

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*Mechanochemically Active Surfaces*

**Zoey Sowinski**, Junior, Materials Science and Engineering, ENG

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*Differential Scanning Calorimetry  
of Copper Tin Zinc Sulfur Selenium System*

**Hannah Taylor**, Sophomore, Materials Science and Engineering, ENG

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*Development of a Passive Proprioceptive Feedback System  
for Upper-Limb Amputees*

**Logan Wan**, Senior, Mechanical Engineering, ENG

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*Plasma Interaction With Microscale Cavity Device  
for Sensor Applications*

**Yuou Zhang**, Senior, Electrical Engineering, ENG

