



# Illinois Undergraduate Research Week

2017 Events

April 23-29

University of Illinois at Urbana-Champaign

150  
ILLINOIS  
150  
1867-2017



**W**elcome to Undergraduate Research Week (URW), a celebration of student innovation and excellence in research across campus. The signature event is the tenth annual campus-wide Undergraduate Research Symposium (URS), held on Thursday, April 27. The breadth and scope of the oral and poster presentations, as well the performances, reflect not only 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 listed below address some of society's most pressing issues. 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 lunch time session demonstrates the range of research that occurs at the University of Illinois, from the scarcity of African-Americans in STEM fields to the future of renewable energy.

Every year, we see the numbers of students participating in the URS grow, and URS 2017 is no exception. Once more, this year's URS (and URW more largely) includes a record number of participants from an expansive range of departments, colleges, and other units on campus. In addition, there will be awards in various categories for the best posters and presentations. Judges include university administrators, distinguished faculty members, and representatives from our corporate sponsors.

Special thanks go to: Christopher Holmes and Shelby Gordon, the Office of Undergraduate Research (OUR) graduate research assistant and undergraduate intern, respectively; David Aristizábal, graduate research assistant for the Ethnography of the University Initiative program; and OUR's Advisory Board Members.

We invite you to come be inspired!

Dr. Karen Rodriguez'G  
Interim Director, Office of Undergraduate Research

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# Illinois Undergraduate Research Week

## Sponsors

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## UNDERGRADUATE RESEARCH WEEK EVENTS

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### Department of English Symposium

Thursday, April 20, 4:30 PM – 6:30 PM

English Building, Mary Kay Peer Lounge

*Re:Search: The Undergraduate Literary Criticism Journal at the University of Illinois*

**Ana Fleming**, Senior, English, LAS

**Marilyn MacNamara**, Senior, English, LAS

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*A Paradise Not So Lost: Cassandra Clare's Modern Interpretation of John Milton's Paradise Lost and a Feminist Eve*

**Samantha Awad**, Senior, English, LAS

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*The Reflection in the Daguerreotype: Hawthorne's Investment in Antebellum Science*

**Ana Fleming**, Senior, English, LAS

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*Performance-as-Research: Staging John Webster's The White Devil*

**Emaline Johnson**, Senior, Molecular & Cellular Biology, LAS

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### The Value of Undergraduate Research Workshop

Friday, April 21, 2:00 PM – 3:30 PM

Lincoln Hall, Room 1065

In this workshop, The Career Center will discuss the importance of conducting research as an undergraduate student at the University of Illinois. This will include a discussion of how engaging in research can impact your career development, and how to communicate this value effectively. We encourage students to take this workshop before attending the "Getting Started in Research Workshop, provided by the Office of Undergraduate Research on April 26 (see below).

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### Political Science Student Research Symposium & Awards Ceremony

Saturday, April 22, 11:45 AM – 1:30 PM

ACES Library, Heritage Room

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## Living-Learning Communities Researchers Initiative Poster Symposium

Sunday, April 23, 4:00 PM — 6:00 PM

Florida Avenue Residence Halls, Oglesby Pagoda

*The Slavery Trade: A Comparative Study of Slavery in the United States and Jamaica*

**Ashli Drummond**, Freshman, Undeclared, DGS

*Integrating versus Discriminating in Relational Memory: the Role of Exploratory Behavior*

**Vaughn Hage**, Sophomore, Integrative Biology and Psychology, LAS

*Eye-tracking in Reading and Scene Perception*

**Xinyue Wang**, Freshman, Undeclared, DGS

**Jacob Nguyen**, Freshman, Interdisciplinary Health Sciences, AHS

**Sylvia Peng**, Freshman, Graphic Design, FAA

*How Cortisol Concentrations Vary with Mood*

**Velimira Asenova**, Freshman, Biology, LAS

*Changes in Age at Menarche of Rural Polish Women over Time*

**Hayley Ban**, Freshman, Biology, LAS

*Effects of Community Support on Ethnic Identity in Adolescents*

**Fatima Godfrey**, Freshman, Sociology, LAS

*Inflammation and Bone Modeling in Healthy Adults*

**Ohm Shukla**, Freshman, Biology, LAS

*Examining the Effects of Developmental Methamphetamine Exposure on Attention and Impulsive Behavior in Long-Evans Rats*

**Fiona Kuo**, Sophomore, Animal Sciences, ACES

*Effects of Tree Mortality on Non-target Tree Species Growth and Aboveground Carbon Storage*

**Melissa Swire**, Freshman, Animal Sciences and Natural Resources & Environmental Sciences, ACES

*The Role of Ubiquitin Specific Protease 18 (USP18) in Defining Interferon Signaling Magnitude and Duration*

**Malikah Black**, Freshman, Undeclared, DGS

*Defining the Role of GOS2 in Lactation*

**Alexandra Nebelle**, Freshman, Animal Sciences, ACES

*Away from Home: The Hopi Experience at Off-Reservation Indian Boarding Schools*

**Deonte Harris**, Sophomore, Media & Cinema Studies, COM

**Logan Mullins**, Freshman, History, LAS

*Writing the Destiny for All Those Kids: How Low-Income African American and Latino Mothers Promote Their Children's School Readiness*

**Christopher Ackerman Avila**, Freshman, Urban Planning, FAA

**Kaitlyn Pugh**, Freshman, Mathematics, LAS

*How Might Contact with Nature Affect Learning? Proposed Mechanisms*

**RuthAnn Haefli**, Freshman, Industrial Engineering, ENG

*Empathic Understanding*

**Kathleen Ferreira**, Freshman, Mechanical Engineering, ENG

**Matthew Young**, Freshman, Engineering Physics, ENG

*Conservation in Human-dominated Grasslands of the Midwest: Ponds, Cattle Pastures, and Shrub Encroachment*

**Jena Johnson**, Sophomore, Natural Resources & Environmental Sciences, ACES

*Impact of Age-related Hearing Loss on Brain and Cognition*

**Julia Rajan**, Freshman, Psychology, LAS

*The Effects of Body Size on Horse Locomotion*

**Galila Dandridge**, Freshman, Undeclared, DGS

**Kevin Zhagui**, Freshman, Undeclared, DGS

*Using Subchondral and Trabecular Bone Properties to Infer Postural Differences among Humans, Chimpanzees, and Gorillas*

**Emma Herzog**, Freshman, Biology and Mathematics, LAS

**Agha Shuja Hussain**, Freshman, Chemical Engineering, LAS

**Min Kyoung Kim**, Freshman, Molecular & Cellular Biology, LAS

*Does Variation in EphA4 Explain the Evolution of Hopping in Mammals?*

**Shaochong (Max) Wei**, Freshman, Molecular & Cellular Biology, LAS

*Modeling the Behavioral Interactions of Fish in an Educational and Informative Game*

**Megan Coleman**, Sophomore, Computer Engineering, ENG

*Modeling Crystal Growth Using Cellular Automata*

**Dana Drinkall**, Sophomore, Geology, LAS

*Analysis of Fall-related Injuries among Power Wheelchair Users*

**Kevin Qin**, Freshman, Interdisciplinary Health Sciences, AHS

*Racial Discrimination, Social Support, and Psychological Distress among African American Parent-Adolescent Dyads*

**Nathalia Davila**, Freshman, Human Development & Family Studies, ACES

**Gabrielle Maloney**, Freshman, Human Development & Family Studies, ACES

*Social Equity of Urban Water Rates in the Midwest*

**Allisa Hastie**, Freshman, Civil Engineering, ENG

*The Effect of Water Stress on Electricity Pricing in Illinois***Grace Wackerman**, Freshman, Electrical Engineering, ENG*Chemical Imaging of Brain Tissues and Single Cells using MALDI MS with Subsequent Immunocytochemistry***Tiffany Chu**, Freshman, Biochemistry, LAS**Laura Tanase**, Freshman, Biology and English, LAS**Amelia Triplett**, Freshman, Computer Science, ENG*Analytical Methods for Studying Sensory Systems: From Eye Tissues to Dorsal Root Ganglia (DRG) Neurons***Yujin Lee**, Sophomore, Bioengineering, ENG**Kenya Tyiska**, Freshman, Molecular & Cellular Biology, LAS*Using Computer Technology to Compose Music as an Evolving Entity***Eric Auster**, Sophomore, Music and Statistics & Computer Science, FAA/LAS**Zehao Chen**, Freshman, Computer Science and Astronomy, ENG/LAS**Devarsh Ruparelia**, Freshman, Computer Engineering, ENG

## College of Fine and Applied Arts (FAA) Symposium

**On Display, April 23-29****Art + Design Building, A+D Block Gallery (Room 114 A+DB)**

The School of Art + Design's Undergraduate Research Week Exhibition will feature outstanding creative research by eleven students, who were selected to represent each of our degree granting programs. (Art Education, Art History, Crafts-Metals, Graphic Design, Industrial Design, New Media, Painting, Photography and Sculpture).

**On Display, April 24-29****Temple Buell Hall, Upper West Entry Plaza**

Work from undergraduates in the School of Architecture, Department of Landscape Architecture and Department of Urban and Regional Planning will be displayed. Award-winning work from architecture undergraduate majors who have participated in design competitions sponsored within and beyond the School of Architecture will be featured. In addition, outstanding work from undergraduate majors in architecture, landscape architecture, and urban and regional planning will be displayed. This work highlights community-based projects completed by undergraduate students as part of both research and coursework.

## Economics Spring Research Symposium

**Monday, April 24, 5:30 PM****David Kinley Hall, Room 317**

## Ethnography of the University Initiative (EUI) Biannual Student Conference And The Odyssey Project Poster Symposium

**Monday, April 24, 3:30 PM – 8:00 PM****School of Information Sciences, Room 126**

Since 2003, EUI has provided an innovative approach to teaching and learning focused on promoting student research on 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. At the end of each semester, students have the opportunity to present their research at our biannual conference as well as contribute their work to the EUI collection in the University of Illinois' digital repository, Illinois Digital Environment for Access to Learning and Scholarship (IDEALS). The EUI program is supported through a partnership between the Office of Undergraduate Research and the Department of Anthropology.

Since 2006, the Odyssey Project has been a linking point between the University of Illinois and the broader Champaign-Urbana community. Eligible community members take four free Humanities courses taught by faculty from the campus. Odyssey Project students will host poster sessions highlighting findings from their explorations of both Art History and Philosophy.

## Anthropology Senior Capstone Conference

**Tuesday, April 25, 5:00 PM – 8:00 PM****Davenport Hall, Room 230**

Anthropology majors present their independent research projects to faculty, fellow students, and guests. Join us to celebrate their hard work and learn more about the kinds of undergraduate research going on in contemporary anthropology. Enjoy good food and conversation!

## School of Literatures, Cultures, and Linguistics Symposium

**Thursday, April 27, 9:30 AM – 10:45 AM****Foreign Language Building, Atrium**

*Programming a Multi-lingual Interactive Interface for the School of Literatures, Cultures & Linguistics*

**Nathan Bartlett**, Freshman, Physics, LAS**Eric Bulak**, Senior, Human Nutrition, ACES**Mengyu Chen**, Junior, Accountancy, BUS**Xiaoyang Chen**, Freshman, General Studies, DGS**David Friedman**, Junior, Engineering and Physics, ENG/LAS**Kyle Gwon**, Sophomore, Agricultural & Consumer Economics, ACES**Khai Hoon**, Junior, Accountancy, BUS**Helena Igbo**, Senior, Molecular & Cellular Biology, LAS**Yash Jhavar**, Senior, Civil Engineering, ENG**Tian Jin**, Junior, Accountancy, BUS**Kevin Lee**, Junior, Computer Engineering, ENG**Ryan Lenhart**, Senior, Financial Planning, ACES**Longhang Li**, Junior, Accountancy, BUS**Sarah Lord**, Senior, Computer Science and Linguistics, ENG/LAS**Mona Meng**, Junior, Accountancy/Finance, BUS**Adrianna Pilch**, Freshman, Food Science, ACES**Fran Sagerian**, Freshman, Global Studies, LAS**Garren Schneider**, Sophomore, Animal Sciences, ACES**Quentin Shaw**, Freshman, Aerospace Engineering, ENG**Andrew Smith**, Junior, Linguistics, LAS

**Thursday, April 27, 11:00 AM – 1:00 PM**

Foreign Language Building, Atrium

*Second Language Acquisition of Nominal Expressions*

**Jessie Golden**, Senior, Linguistics, LAS

*Interpretation and Processing of English Pronouns*

**Emily Heerde**, Sophomore, Developmental Psychology and Spanish, LAS

**Anqi Hu**, Junior, Linguistics, LAS

*Indian Cultural Outreach at UIUC*

**Kamakshi Katwala**, Sophomore, Chemical & Biomolecular Engineering, ENG

*Students' Use of the South Asian Film Collection of the International and Area Studies Library at UIUC*

**Yash Miriyala**, Freshman, Computer Science, ENG

*Indian Students' Influence on Non-Indian Students' Interest in Indian Cinema at UIUC*

**Junning Liang**, Psychology, LAS

*Perception Challenged by Cinema: Cultural Diversity in UIUC*

**Kripa-Mariam Poozhikunnel**, Freshman, Biochemistry, LAS

**Hammad Ahmed**, Freshman, Undeclared, DGS

*Possible Links between Cultural Immersion through Cinema and Desire to Travel*

**Vanessa Aceves**, Sophomore, Political Science, LAS

*Creativity in Context: Indian Cinema + STEM?*

**Girija Vaidya**, Freshman, Molecular & Cellular Biology, LAS

**Center for Translation Studies - Undergraduate Certificate Capstone Projects**

**Friday, May 5, 10:00 AM – 3:00 PM**

Foreign Language Building, Lucy Ellis Lounge (Room 1080)

*Marketing Estratégico y Operativo de Mercadona*

**Bridget Chaput**, Senior, Spanish, LAS

*Paris Conference on the Climate*

**Ann Pond**, Senior, French and Global Studies, LAS

*Stepfather Step*

**Elizabeth Nowicki**, Senior, Linguistics and East Asian Languages & Cultures, LAS

*Socio-territorial Effects of Mega-Mining and Social Response: The Case of Minera Alumbrera in the Catamarca Province, Argentina*

**Candice Steidinger**, Senior, Spanish, LAS

## Getting Started in Research Workshop

**Wednesday, April 26, 3:00 PM – 4:30 PM**

Gregory Hall, Room 319

With this Workshop, the Office of Undergraduate Research will provide an overview of the various forms of undergraduate research taking place on our campus, provide guidance in developing a plan of action, and discuss ways to contact faculty research mentors. Students will leave the workshop with (1) a better understanding of undergraduate research and how it takes place on our campus, (2) increased confidence to contact faculty research mentors, and (3) a list of faculty mentors to contact.

## IPRH-Mellon Bio-Humanities Undergraduate Research Collaborative Symposium

**Friday, April 28, 12:00 PM – 4:00 PM**

Levis Faculty Center, 4th floor, IPRH Lecture Hall

The IPRH-Mellon Bio-Humanities Undergraduate Research Collaborative Symposium integrates the work of multiple undergraduate researchers at the intersection of biology and the humanities. The goal of the symposium is to think about what it means to be human across different disciplinary contexts. The symposium will begin with a presentation of the research collaborative's project and will be followed by a round-table discussion consisting of conversations with undergraduate researchers from various fields in the life sciences and humanities who will discuss how their work can help us understand the idea of what it means to be human. Join us for good food and conversation!

*Principles for Considering the Social Environment in Biomedical Research*

**Sneha Adusumilli**, Junior, Molecular & Cellular Biology and Classics, LAS

**Miranda Dawson**, Junior, Bioengineering, ENG

**Sana Khadri**, Senior, English and Integrative Biology, LAS

**Jake Stone**, Junior, Global Studies, LAS

*This event is hosted by the Illinois Program for Research in the Humanities and supported by the Andrew W. Mellon Foundation.*

# Illinois Undergraduate Research Week Symposium

27 April  
Illini Union

## IMAGE OF RESEARCH COMPETITION

On Display 9:00 AM—4:30 PM  
Illini Room B

The Image of Research is a multidisciplinary competition celebrating the diversity and breadth of undergraduate student research at the University of Illinois at Urbana-Champaign. All undergraduate students were invited to submit entries consisting of an image and brief text that articulates how the image relates to the research.

### Awards

First prize: \$300

Second prize: \$200

Two honorable mentions

### The judges for 2017:

Terri Weissman, Associate Professor, Art + Design

Rebekah Hounsell, Visiting Scholar, Astronomy

Karen Rodriguez-G, PhD, Interim Director &

Associate Director, Office of Undergraduate Research

Ayla Stein, Assistant Professor, University Library

To view past entries, please visit:  
<http://imageofresearch.omeka.net/>

The Image of Research is organized by the Scholarly Commons of the University Library and the Office of Undergraduate Research and is supported by a generous gift to the Scholarly Commons from the Division of Intercollegiate Athletics.

## ORAL PRESENTATIONS AND PERFORMANCES

### Access to Healthcare

9:15 AM – 10:15 AM, Room 209

*Prognosis Communication: The Role of Meaning Changes in Discrepancies in Understanding Between Patients and Physicians*

**Kelsey Choi**, Senior, Health Planning & Administration, AHS

*The Financial Health of Critical Access Hospitals*

**Justice Hammers**, Senior, Community Health, AHS

**Jacob Bowers**, Senior, Health Planning & Administration, AHS

**Julia Ghering**, Junior, Interdisciplinary Health Sciences, AHS

**Samia Qureshi**, Senior, Community Health, AHS

*Free Clinic Disparities*

**Geovanna Estrada**, Senior, Health Planning & Administration, AHS

**Lauren Bline**, Junior, Health Planning & Administration, AHS

**Yara Alagha**, Sophomore, Health Planning & Administration, AHS

**Claudia Morawa**, Sophomore, Health Planning & Administration, AHS

### Violence, Fear, and the 'State'

9:15 AM – 10:15 AM, Room 210

Title IX

**Malissa Jarosz**, Senior, Social Work, SSW

*Predicting Conflict Through Illicit Arms Transfers*

**Sharadyn Ciota**, Senior, East European & Eurasian Studies, LAS

*Fear and Control in Society Case Studies of the Developing and Developed World: Sierra Leone and the United States*

**Elena Wilson**, Freshman, Molecular & Cellular Biology, LAS

### Energy Questions

9:15 AM – 10:15 AM, Room 404

*Deposition and Characterization of Mixed-halide Perovskites for Photovoltaic Applications*

**Yanting Teng**, Sophomore, Engineering Physics, ENG

*Renewable Transportation Fuel Production from Algal Biocrude Oil Converted via Hydrothermal Liquefaction*

**Zhenwei Wu**, Sophomore, Agricultural & Biological Engineering, ENG

*Gold Nanoparticles Supported on Polybenzimidazole-wrapped Carbon Nanotubes as a Catalyst for the Electrochemical Reduction of CO<sub>2</sub> to CO*

**Xun Lu**, Junior, Chemical & Biomolecular Engineering, LAS

## Human Diet

9:15 AM – 10:15 AM, Room 405

"Food is Loving": Family Influences on Eating Habits of Underserved Chilean Women

**Michelle Fairbairn**, Senior, Interdisciplinary Health Sciences, AHS  
**Nataly Quito**, Sophomore, Actuarial Science, LAS

Dietary Fat Intake: A Key Component of Obesity Explored in Puerto Rican and Mexican American Diet

**Rebecca Jung**, Junior, Human Nutrition, ACES

Latina Mothers' Contributions to their Children's Educational Success

**Alexandra Vazquez**, Freshman, Elementary Education (Grades 1-6), EDU

## Modes of Performance and Expression

9:15 AM – 10:15 AM, Room 406

The Search for Feminism while Living within the Patriarchy: An Analysis of Emilia Pardo Bazán's Poetry

**Brittany Barajas**, Sophomore, Spanish, LAS

A Comparative Analysis of Character Representations in Webster's The White Devil

**Emaline Johnson**, Senior, English and Molecular & Cellular Biology, LAS

Active Breathing & Optimal Performance

**Mary Vo**, Senior, Dance, FAA

## Conservation and Sustainability

10:45 AM – 11:45 AM, Room 209

The Political Economy of Sustainable Living: Notions and Practices of the Housing Market in Champaign-Urbana Illinois

**Elizabeth Wright**, Senior, Anthropology, LAS

How Much does the Public Care about Conservation Policy in China? Empirical Evidence from Weibo (Chinese Twitter) Microblogs

**Shiyuan Dong**, Senior, Natural Resources & Environmental Sciences, ACES

Optimizing Future Town: Pixelate Responsive Environment and Concave&Convex: Redefine the Future Public Open Space

**Xiaoxin Ma**, Junior, Landscape Architecture, FAA  
**Yingzhe Du**, Junior, Landscape Architecture, FAA

## Bodies in Movement

10:45 AM – 11:45 AM, Room 314A

Dance is Business II

**Alex Hutton**, Senior, Dance, FAA

Transcontinental Bodies

**Diana Shepherd**, Senior, Dance, FAA

Variations on a Joke: The Embodiment of Humor in Dance

**Phoebe Ballard**, Junior, Dance, FAA  
**Oksana Kuzma**, Junior, Dance, FAA

## Biological Processes and Communities

10:45 AM – 11:45 AM, Room 210

The Genome and Evolution of *Candidatus Carsonella ruddii* BC

**Alex Riley**, Junior, Integrative Biology, LAS

An Investigation of Mosquito Larval Habitat and the Influence of Proximal Plant Species

**Madison Moore**, Senior, Integrative Biology, LAS

Quantifying Microbial Interactions from Time Series Data

**Zachary Cohen**, Senior, Integrative Biology, LAS

## Food and Health

10:45 AM – 11:45 AM, Room 404

Outcomes of the Illinois Junior Chefs Culinary Education Program

**Ruyu Liu**, Senior, Food Science & Human Nutrition, ACES  
**Emilie Emberton**, Junior, Human Development & Family Studies, ACES

Gender Differences in Dietary Attitudes and Behaviors of Participants in the Illinois Junior Chefs Program

**Emilie Emberton**, Junior, Human Development & Family Studies, ACES  
**Ruyu Liu**, Senior, Food Science & Human Nutrition, ACES

After More Than 30 Years: What People Do and Do Not Find Acceptable About GMOs

**Kelsey Litchfield**, Senior, Agricultural Communication, COM

## Mapping Identity

10:45 AM – 11:45 AM, Room 405

The Patriots Far Away: A Concise History of Overseas Chinese Students in the United States During the Early Twentieth Century

**Mindi Zhang**, Senior, History, LAS

Learning to be Black

**Erin Threlkeld**, Junior, Creative Writing, LAS

An Exploration of the History of the University's First Building

**Stephanie Perna**, Freshman, Architectural Studies, FAA  
**Laura McHugh**, Freshman, Architectural Studies, FAA

## Contemporary Education

1:45 PM – 2:45 PM, Room 209

*Teaching Intersectionality in Social Work Education*

**Kahlia Halpern**, Senior, Social Work, SSW

*Meanings of Abroad Volunteer Tourism: From the Perspective of College Students*

**Kalina Gajda**, Senior, Global Studies, LAS

*Rethinking Retention: Inclusive Efforts and Black Students at Predominantly White Institutions*

**Aaminah Long**, Senior, Psychology, LAS

## Modern Approaches to Medicine

1:45 PM – 2:45 PM, Room 210

*A Contemporary Approach to Alternative Remedies for Treatment of Infantile Hemangioma*

**Nathan Cornwell**, Sophomore, Bioengineering, ENG

*Exploring Image Segmentation Methods to Segment Tumors by Training Over a Dataset Marked by Skilled Professionals*

**Varun Somani**, Senior, Computer Engineering, ENG

*Injectable LEDs for Optogenetics Application*

**Do Hoon Kim**, Junior, Chemical & Biomolecular Engineering, LAS

## Breaking Boundaries

1:45 PM – 2:45 PM, Room 314A

*Making Music with Arduino Connected Flex Sensor Gloves*

**Casey Skorski**, Senior, Music, FAA

*Retaining Native Identity at Off Reservation Indian Boarding Schools: Theatrical and Paratheatrical Events*

**Michael Byrd**, Senior, Theatre Studies, FAA

*St. Lucy's Home for Girls Raised by Wolves*

**Ryan Luzzo**, Junior, Acting, FAA

**Alexandra Smith**, Junior, Acting, FAA

**Danyelle Monson**, Junior, Acting, FAA

**Lauren Farbota**, Junior, Acting, FAA

## Environment and Natural Resources

1:45 PM – 2:45 PM, Room 405

*Filling a Gap in Knowledge about What Recreationally Important Steelhead Trout Eat in Lake Michigan*

**Ruth Londono**, Senior, Integrative Biology, LAS

*Accessing Patterns of Arthropod Abundance in Illinois Grasslands*

**Luxia Yao**, Junior, Integrative Biology, LAS

**Catherine Jimenez**, Senior, Integrative Biology, LAS

**Jacqueline Orozco**, Senior, Integrative Biology, LAS

*Illinois' Public Water Supply Network: How Accessible Data Provokes Sustainable Reform*

**Joanna Krueger**, Senior, Earth, Society & Environmental Sustainability, LAS

## Computation Models and Patterns

3:15 PM – 4:15 PM, Room 209

*Implementation of Regular Path Query in SQLite*

**Qiwen Wang**, Junior, Mathematics and Computer Science, LAS

*Traffic Patterns in Manhattan*

**Yicheng Pu**, Senior, Mathematics, LAS

**Gabriel Shindnes**, Junior, Mathematics and Computer Science, LAS

**Yu Wu**, Senior, Physics and Mathematics, LAS

**Ziying Wang**, Junior, Mathematics, LAS

## Deep Readings: Questions of Identity

3:15 PM – 4:15 PM, Room 210

*Into the Deep: A Story of Exploration, Investigation and Inspiration*

**Sarah Foster**, Senior, Journalism, COM

*Becoming Aztec in Aztlan: Critical Analysis of Chicanismo through a Native American Studies Perspective*

**Gabriela Garay**, Senior, Latina/Latino Studies, LAS

*Mapping Places, Telling Stories: Hidden Histories of Campus and Community*

**Maria Valenzuela**, Junior, Latina/Latino Studies, LAS

**Hannah Gutierrez**, Junior, History, LAS

**Arianna Adkins**, Senior, Latina/Latino Studies, LAS

**Gabriel Perez**, Junior, History, LAS

## Human Disease and Treatment

3:15 PM – 4:15 PM, Room 404

*Paving Vascular Highways: An In Vivo Image-based Analysis of Stem Cell Angiogenic Potential to Reverse Vascular Complications*

**Than Huynh**, Sophomore, Bioengineering, ENG

*TDP-43 Knockout Mice and Male Infertility*

**Abby Ralph**, Senior, Animal Sciences, ACES

*Analyzing the Genomes of HFMD (hand, foot and mouth disease) Viruses using Machine Learning Algorithms*

**Chaeyun Jung**, Freshman, Statistics and Computer Science, LAS

## Literary Canons

3:15 PM – 4:15 PM, Room 405

*Bond Girls*

**Erin Blaber**, Senior, Media & Cinema Studies, COM

*Shakespeare and Femininity*

**Margaret Wolfe**, Senior, Advertising, COM

*Re:Search: The Undergraduate Literary Criticism Journal at the University of Illinois*

**Ana Fleming**, Senior, English, LAS

**Marilyn MacNamara**, Senior, English, LAS

## Youth Education and Health

3:15 PM – 4:15 PM, Room 406

*Child Abuse Prevention & Treatment Act Policy Analysis*

**Daisha Hill**, Senior, Psychology, LAS

*Acculturation and its Influence on Hispanic Children's Diet*

**Ryan Walton**, Junior, Human Development & Family Studies, ACES

## POSTER SESSIONS

### PA SESSION – SCIENCE AND MATHEMATICS

9:00 AM – 10:15 AM, Illini Room A

*Geomorphology and Sedimentology of Amazon Channel Bars*

**Vanessa Gabel**, Senior, Geology, LAS

*Deep Learning Applications on Stock Market Data*

**Sushma Adari**, Junior, Computer Science and Astronomy, LAS

*Intrinsic Mirror Birefringence Measurements for the Any Light Particle Search (ALPS)*

**Claire Baum**, Senior, Engineering Physics, ENG

*Traffic Waves, Autonomous Dampening and Fuel Consumption*

**Miles Churchill**, Senior, Civil Engineering, ENG

*Dance-Movement Communication Therapy*

**Stephanie Smolen**, Junior, Speech & Hearing Science, AHS

*Processing Functional MRI Scans Utilizing Infant Brain Extraction and Analysis Toolbox (iBEAT) Technology*

**Monica Muthaiya**, Sophomore, Bioengineering, ENG

*Discovery and Characterization of a Lanthipeptide from Moorea producens*

**Sarah Ackenhuse**n, Junior, Chemistry, LAS

*The Variability of Center of Pressure Measures from an Instrumented Treadmill*

**Abby Pakeltis**, Sophomore, Mechanical Engineering, ENG

*Real-Time Detection of Neurotransmitter Release from Aplysia Neuronal Somata with Nanopipet-Supported ITIES Electrode*

**Theresa Welle**, Senior, Molecular & Cellular Biology, LAS

*The Petrogenesis of Intermediate Stocks and Dikes of the Wasatch Igneous Belt, Central Wasatch Range of Utah*

**Isaac Foli**, Senior, Geology, LAS

*Tagging Endogenous Genes Using a Universal Nuclease Assisted Vector Integration System*

**Nikhil Shiva**, Junior, Bioengineering, ENG

*Childhood Health and Relational Memory*

**Matt Simanonis**, Senior, Molecular & Cellular Biology, LAS

*Barkhausen Noise Probe of the Ferroelectric Transition in the Relaxor PMN-12%PT*

**Xinyang Zhang**, Senior, Physics, LAS

*Using Biosynthesized <sup>13</sup>C-Cholesterol and SSNMR to Investigate Lipid Dynamics*

**Zoe Petros**, Senior, Biochemistry, LAS

*High Molecular Weight Poly- $\alpha$ -Glutamic Acid Brush Polymer Conjugates as Cancer Therapeutics*

**Diane Kuai**, Senior, Materials Science & Engineering, ENG

*Surface-Enhanced Infrared Absorption (SEIRA) to Monitor Surface Reactions*

**Mary Haugen**, Senior, Chemistry, LAS

*Toxin-Based Delivery Vehicles for Targeting DNA Vectors to Motor Neurons*

**Ross Skelly**, Senior, Molecular & Cellular Biology, LAS

*Order and Chaos in Arithmetic Sequences: Quantifying the Degree of Randomness in Mathematical Sequences*

**Yuchen Li**, Sophomore, Computer Engineering, ENG

**Yunyi Zhang**, Sophomore, Engineering Physics, ENG

**Xinwei He**, Sophomore, Mathematics and Computer Science, LAS

*The Regulation of Ion Transport across the Vacuolar Membrane in Saccharomyces Cerevisiae*

**Brandon Jones**, Senior, Molecular & Cellular Biology, LAS

*In Vitro* Characterization of Substrate Specificity for Secologanin Synthases Supported by Cytochrome P450 Reductases From *Camptotheca acuminata* and *Catharanthus roseus*

**Allison Hollatz**, Senior, Molecular & Cellular Biology, LAS

Dopaminergic Drugs Influence Impulsivity and Attention on the 5-Choice Serial Reaction Time Task (5-CSRTT) in a Rodent Model

**Laura Olander**, Sophomore, Animal Sciences, ACES

The Role of tRNA in Translational Regulation of Gene Expression in *Mycobacterium*

**John Oh**, Junior, Biochemistry, LAS

Inducing Gene Overexpression in *Streptococcus mutans* to Identify Essential Genes

**Caroline Blassick**, Junior, Bioengineering, ENG

The Fake Randomness Project: How to Differentiate Made-up Data Points from Random Data

**Victor Sui**, Sophomore, Computer Science, ENG

Second Phase Development of a Comprehensive Curricular Module That Integrates Hands-on Physical Tests with Model-Based Design: Gear Design and Test Activity for GE 410

**Junwu Zhang**, Senior, Mechanical Engineering, ENG

Inside Out: Importance of Lysosomal Exocytosis for the Release of intracellular *Bacillus anthracis* from Infected Macrophages

**Alondra Diaz**, Junior, Molecular & Cellular Biology, LAS

Isomorphism in Enumeration with Structured Components

**Shangting Li**, Junior, Industrial Engineering, ENG

Understanding Kappa Opioid Receptor Dependent Learning Modulation in Behavioral Tasks

**Ali Aijaz**, Senior, Molecular & Cellular Biology, LAS

Long Lake Axis Parallel (LLAP) Snow Bands Impacting the West Coast of Lake Michigan

**Jason Maska**, Senior, Atmospheric Sciences, LAS

Correlation Between Body Composition in Preadolescents and Peak Aerobic Performance Levels

**Daniel Cavato**, Sophomore, Kinesiology, AHS

**David Kellner**, Sophomore, Kinesiology, AHS

A Study on Graphically Enhanced Representations of Medical Test Results and Their Influence on Accurate Risk Perception

**Tanya Malik**, Junior, Psychology, LAS

Using Biochar to Mitigate Soil Greenhouse Gas Emissions: Seasonal Dynamics and Possible Mechanisms

**Joseph Edwards**, Senior, Integrative Biology, LAS

Uncertainty Quantification for the Integrated Probabilistic Risk Assessment Framework

**Grant Schumock**, Junior, Nuclear Plasma & Radiological Engineering, ENG

Transit Time Measurements for Probing Mechanical Properties and Surface Expression of Proteins of a Cell

**Mariam Saadah**, Junior, Bioengineering, ENG

Near Infrared Metal Ion Sensing Using DNAzymes

**Kang Yong Loh**, Senior, Chemistry, LAS

Multiplexed and Tunable Genome-Scale Transcriptional Activation by Promoter Insertion Using Nuclease-Assisted Vector Integration

**Nathan Tague**, Senior, Bioengineering, ENG

Activity-dependent Changes in Proteins at the Neuronal Axonal Initial Segments During Homeostatic Plasticity of Intrinsic Excitability

**Zhuoli Huang**, Senior, Biochemistry, LAS

Modeling Glioblastoma using Microfluidics

**Elijah Karvelis**, Junior, Chemical & Biomolecular Engineering, LAS

Cloning and Expression of Insecticide-metabolizing *Anopheles gambiae* CYP6P3 and CYP6Z3 in *Escherichia coli*

**Nicole Blum**, Senior, Molecular & Cellular Biology, LAS

## PB SESSION – EDUCATION, SOCIAL SCIENCES, AND HUMAN BEHAVIOR

9:00 AM – 10:15 AM, Illini Room C

Maternal Parenting Stress and Cardiac Autonomic Regulation in Infants with Down Syndrome

**Caylie Kurtenbach**, Junior, Speech & Hearing Science, AHS

The Indian Child Welfare Act: A Policy Analysis

**Anne Coulomb**, Senior, Social Work, SSW

The Impacts of Privacy Hypocrisy, Victim Characterization, Gender, and Context on Bystanders' Guilt Attribution in a Cyberbullying Suicide

**Yixin Zou**, Senior, Advertising, COM

I Want to Take my Leadership Skills to the Next Level: Youths' Goals for Participation in After-School Programs

**Katherine Erwin**, Junior, Human Development & Family Studies, ACES

**Anna Reynish**, Junior, Human Development & Family Studies, ACES

*Pediatric Oral and Mental Health Comorbidity: Introducing a Biopsychosocial Explanation***Felix So**, Senior, Psychology, LAS*Mood Effects on Responses to Advertising***Emma Campanella**, Freshman, Advertising, COM*Title IX and Higher Education: A Policy Analysis***Emily Bauman**, Junior, Social Work, SSW*Identifying Successful Strategies for Mealtimes on the Autism Spectrum***Caroline Stevens**, Senior, Human Development & Family Studies, ACES*Understanding Willingness to Intervene in Sexual Violence***Daniel Szoke**, Senior, Psychology, LAS*Potential Drivers of Intention-Driven Illusory Behavior: Rumination and Mood in a Goal-Driven Task Setting***Colin Harmony**, Senior, Psychology, LAS*Right-Wing Populism in Austria and Germany***Sonam Kotadia**, Senior, Global Studies, LAS*Intra-Party Factions and Inter-Party Polarization***Collin Schumock**, Senior, Political Science, LAS*Laptop Stickers May Act as a Proxy for Personality Traits***Armando Sanchez-Monsivais**, Sophomore, Advertising, COM*Personality Correlates of Sexual Experiences Among an Undergraduate Sample***Mecca Maynard**, Senior, Psychology, LAS*Understanding the Importance of the Relationship Between Bilingual Families and Schools***Natalie Hernandez**, Freshman, Elementary Education (Grades 1-6), EDU**Payton White**, Freshman, Elementary Education (Grades 1-6), EDU*Active Contributions to Spatial Learning in a Virtual Dunhuang Cave***Jefferson Fu**, Senior, Psychology, LAS*Asymmetrical Information and College Realty Markets***Rachel Richardson**, Senior, Consumer Economics & Finance, ACES**Adam Kurczewski**, Senior, Agri-Accounting, ACES*The Correlation Between a Student's Favorite School Subject and Ideal Career***Rachel Hernandez**, Freshman, Elementary Education (Grades 1-6), EDU**Silvia Sukenic**, Freshman, Elementary Education (Grades 1-6), EDU**Shemia Barnes**, Freshman, Elementary Education (Grades 1-6), EDU*Creating and Testing Virtual Reality (VR) for UIUC: Immersive Media & The Consumer***Aparna Sivasankaran**, Junior, Advertising, COM**Yixin Zou**, Senior, Advertising, COM*Gender and Education***Sammie Streeter**, Freshman, Elementary Education (Grades 1-6), EDU**Jamie Rush**, Freshman, Elementary Education (Grades 1-6), EDU**Susanna Ogorkowska**, Freshman, Elementary Education (Grades 1-6), EDU*University Primary School Students' Perceptions of Spanish Class***Tiffany Nieves**, Freshman, Elementary Education (Grades 1-6), EDU*Mechanisms by Which "Brilliance-required" Messages Hinder Female Performance***Madeline Reinecke**, Senior, Psychology, LAS*An Investigation of Third Party Voting in US Presidential Elections***Aaron Reinsbach**, Senior, Political Science, LAS*UP 478: Reclaiming the City***Hanna Udischas**, Senior, Urban Planning, FAA*Analyzing Everyday-talk and Conversational Flow between Clients with Aphasia and Clinicians***Carissa Ernat**, Senior, Speech & Hearing Science, AHS**Nicole DelGiudice**, Senior, Speech & Hearing Science, AHS**Caroline Dreifuss**, Senior, Speech & Hearing Science, AHS**Margaret Boland**, Senior, Speech & Hearing Science, AHS*Engineering Students' Perceptions of the Social Responsibilities of Engineers***Athena Lin**, Senior, Materials Science & Engineering, ENG*"She Continues to Grow with the Program": Parents' Goals for Their Youth Partaking in After-School Programs***Anna Reynish**, Junior, Human Development & Family Studies, ACES**Katherine Erwin**, Junior, Human Development & Family Studies, ACES*Is the On-Campus Improv Community Inclusive in Terms of Race and Gender? What Attitudes and Behaviors Perpetuate the Same Demographic of People to Participate?***Bobbi McSwine**, Sophomore, Journalism, COM**PC SESSION – FOOD, PLANTS, AND ANIMALS****9:00 AM – 10:15 AM, South Lounge***Food Deserts, Socioeconomic Disparities, and Engineering Approaches to Development of Modern Communities***Nathan Cornwell**, Sophomore, Bioengineering, ENG*Hitting Snooze: The Relationship between Diet and Sleep Quality***Jessica Park**, Senior, Dietetics, ACES

*Jump Mechanics in the Ant *Gigantiops destructor* (Hymenoptera: Formicidae)*

**Dajia Ye**, Senior, Integrative Biology, LAS

*Influences of Transportation Cost on Market Price of Maize in Zambia*

**L. Ashley Yu**, Senior, Agricultural & Consumer Economics, ACES

*Relationship between Whole Grain Consumption and Selective Attention*

**Jackson Evensen**, Senior, Kinesiology, AHS

*Evaluation of EDNRB as a Candidate Gene for the Star Phenotype in Silver Foxes (*Vulpes vulpes*)*

**Omar Shennib**, Senior, Molecular & Cellular Biology, LAS

*Pictures Worth a Thousand Words: Utilizing Photographs to Examine the Food Worlds of Low Socioeconomic Women*

**Jaclyn Trauscht**, Sophomore, Molecular & Cellular Biology, LAS

**Jennifer Vargas**, Junior, Community Health, AHS

*After Arcadia - The Future of Small Farming*

**Emily Greibe**, Junior, Landscape Architecture, FAA

*Effects of Anthocyanin Rich Colored Corn Extracts on Janus Kinase Inhibition*

**Sharon Li**, Junior, Food Science, ACES

**Kathryn Johnson**, Senior, Food Science, ACES

*Why Have Primates Evolved a Long Juvenile Period, and How Does This Relate to Social Spacing of *Cebus capucinus*?*

**Alia Kirsch**, Senior, Anthropology, LAS

*The Effect of Climate Variables on Vegetation Productivity on Different Temporal Scales*

**Anish Bhattacharya**, Junior, Electrical Engineering, ENG

*Investigating the Function of Pro-phenoloxidase in *Daphnia* Defense Against *Metschnikowia* Parasite*

**Gargi Sundaram**, Junior, Integrative Biology, LAS

*An Analysis of Splice Variants of the WRKY1 Gene in *Arabidopsis thaliana**

**Laura Janousek**, Sophomore, Integrative Biology, LAS

*The Total Phenolic, Antioxidant, and Vitamin C Content in Fruit and Vegetable Peels and Flesh*

**Timothy Jang**, Senior, Horticulture, ACES

*Human-Elephant Conflict in Chobe, Botswana: Assessing Elephant Pathway Usage in Relation to Human Settlement*

**Trent Mizulski**, Junior, Natural Resources & Environmental Sciences, ACES

**Taylor Damery**, Senior, Animal Sciences, ACES

*Interferon-lambda Induction During Influenza Infection in the Canine Epithelial Cell*

**Zachary Dean**, Senior, Molecular & Cellular Biology, LAS

*Central DMNT inhibition Improves Sickness Behavior*

**Jalisa Zimmerman**, Senior, Animal Sciences, ACES

*Chemical Properties of Proanthocyanidins from Color Corn after Different Processing Methods*

**Juliet Lucente**, Junior, Food Science, ACES

*Mitochondrial and Y-Chromosome Haplotypes Reveal Population History of North American Foxes*

**Jeremy Stutchman**, Junior, Animal Sciences, ACES

*Larval Dietary Preference of *Amyelois transitella* for Media Producing Fungal Volatiles of *Aspergillus flavus**

**Abraham Matlak**, Senior, Integrative Biology, LAS

*Increasing CRISPR/Cas9 Efficiency by Silencing XRCC4 in *N. Benthamiana* using Virus-Induced Gene Silencing*

**Helen Liu**, Junior, Plant Biotechnology & Molecular Biology, ACES

*Conservation in Tanzania to Mammal Line Transects in the Serengeti Ecosystem*

**Kat Perkins**, Junior, Animal Sciences, ACES

*Comparison of the Apoptosis-inducing Potential of Anthocyanin-rich Plant Extracts on Colon Cancer Cells in Vitro*

**Katie Liang**, Senior, Molecular & Cellular Biology, LAS

*Repellent-taxis in *Bacillus subtilis**

**Zachary L. Foust**, Senior, Molecular & Cellular Biology, LAS

## PD SESSION – SCIENCE AND MATHEMATICS

10:45 AM – 12:00 PM, Illini Room A

*Elucidating the Mechanism by Which Ball Plasmoids are Stabilized Using Emission Spectroscopy*

**Amber Rose**, Junior, Chemistry, LAS

*Neuroplasticity-related Protein Expression in the Piglet Brain*

**Rebecca Moll**, Senior, Animal Sciences, ACES

*Exemplar and Prototype Category Learning in Younger and Older Adults*

**Xiao (Nicole) Han**, Senior, Psychology, LAS

*An Investigation into the Role of PTB in Preventing Colorectal Cancer***Wesley Tung**, Sophomore, Molecular & Cellular Biology, LAS*The Effect of Zinc on the Differentiation of Adipose-derived Stem Cells (ASC) into Osteoblasts***Joshua Bertels**, Junior, Molecular & Cellular Biology, LAS*Statistical Analysis of Weather Forecasts: Accuracy of Internet Weather Forecasts vs. Statistical Models***Sijia Huo**, Junior, Mathematics and Computer Science, LAS**Yunxin Zhang**, Sophomore, Mathematics and Computer Science, LAS**Yantong Zheng**, Senior, Statistics, LAS**Yajie Chu**, Sophomore, Computer Science, ENG*Quantum Mechanics on Graphs***Boyan Xu**, Junior, Mathematics, LAS*The Role of PTB in Mouse Spermatogenesis***Kinan Sawar**, Sophomore, Molecular & Cellular Biology, LAS*Dietary Plant miRNA Found in Human Term Placenta Tissue***Benjamin Lamar**, Senior, Molecular & Cellular Biology, LAS*Biochemical and Structural Analysis of the Interaction Between PCNA and Mac PolB 2PIPBox***Fatima Eldes**, Junior, Molecular & Cellular Biology, LAS*Fabrication of Anti-Reflection Coatings and Alumina Lenslet Arrays for SPT-3G Camera***Anna Kofman**, Senior, Physics, LAS*A Novel Combinatorial Therapy for Triple Negative Breast Cancer***Taylor Kampert**, Senior, Bioengineering, ENG*MAT-MIP: A GUI Development for Medical Image Processing***Pete Conway**, Senior, Nuclear Plasma & Radiological Engineering, ENG*Design and Validation a Custom Electromyography (EMG) System for a Portable Position, Velocity, EMG and Resistance Meter (PVREM)***Rohita Mocharla**, Senior, Mechanical Engineering, ENG*The Effect of FOXA2 Inactivation on Mucus Overproduction in Canine Respiratory Infections***Madeline Steiner**, Senior, Molecular & Cellular Biology, LAS*Biomolecular Networks and Persistence Strategies***Aishwarya Raj**, Sophomore, Biochemistry, LAS**Noah Flynn**, Senior, Bioengineering, ENG*Does Scene Structure Affect Change Detection?***Yi Zhao**, Senior, Psychology, LAS*10 Million Poker Hands: Data Mining and Predictive Modeling***Ruoyu Zhu**, Junior, Mathematics, LAS**Simiao Ye**, Junior, Computer Engineering, ENG**Nicholas Brown**, Senior, Economics, LAS**Zihan Wang**, Freshman, Mathematics and Computer Science, LAS*Characterization of Three Proteins Belonging to the Uracil-DNA Glycosylase (UDG) Family in Methanosarcina acetivorans***Matthew Heffernan**, Senior, Molecular & Cellular Biology, LAS*Determining the API Gravity of Cypress using Fluorescence***Pingfan Hu**, Senior, Chemical & Biomolecular Engineering, LAS*Low-Cost Radio Telescope for Observations of the Galactic Plane at 21 cm***James Cheshire IV**, Senior, Physics, LAS*Detection of D-Amino Acid Containing Neuropeptides through Carboxypeptidase Y Digestion***Sankara Mandalika**, Junior, Molecular & Cellular Biology, LAS*Relationship among Impulsivity, Alcohol Use, and Dopamine Receptor Expression in Prefrontal Cortex***Qingrou Gu**, Senior, Psychology, LAS*Effect of Caloric Restriction on Adipose Tissue Lipid Droplet Biogenesis***Zachary Goldberg**, Sophomore, Molecular & Cellular Biology, LAS*Role of ytfL in the Defense Against Oxidative Stress in Salmonella Typhimurium***Andy Wu**, Senior, Molecular & Cellular Biology, LAS*Coarse-grained Atomistic Simulation of Isolated Beta-amyloids Plaque Found in Alzheimer and to Study the Effect of Varying Environment in its Structure and Stability***Alana Alfeche**, Senior, Materials Science & Engineering, ENG**Paige Elias**, Sophomore, Kinesiology, AHS**Soham Ali**, Senior, Material Science and Engineering, ENG*From Harm to Unfairness: What Inferences Do Toddlers Draw about Wrongdoers' Moral Characters?***Chitra Iyer**, Senior, Molecular & Cellular Biology, LAS*The Wall: Determining Viability of Low OD Ratios for PCR Amplification Using Genomic DNA***Jessica Brooks**, Sophomore, Animal Sciences, ACES*Understand the Mechanism by which POMC is Down Regulated by E2 in the Pituitary Gland***Annesha Banerjee**, Senior, Chemistry, LAS*Investigating the Function of Catalytic Null Splice Variants of Human Leucyl-tRNA Synthetase***Connor Forsyth**, Junior, Molecular & Cellular Biology, LAS

*Analysis of Crack Strain Energies of Rheological Materials Through Cavitation-pressure Experiments*

**Davin Bahk**, Junior, Mechanical Engineering, ENG  
**Steven Yang**, Senior, Agricultural & Biological Engineering, ACES

*Contributions to ATLAS Experiment from the Fast TracKer*

**Daniel Salazar**, Junior, Physics, LAS

*The Green Housing Market of Champaign-Urbana, Illinois: Determining the Added-Value of Solar Panels on Residential Homes*

**Elizabeth Wright**, Senior, Agricultural & Consumer Economics, ACES

*Mechanisms of Drug-drug Interactions in Cytochrome P450*

**Robert Knier**, Junior, Molecular & Cellular Biology, LAS

*Low-force Mechanical Impacts Modulate Calcium Dynamics in Neurons*

**Kimberly Sam**, Senior, Molecular & Cellular Biology, LAS

*A Truth-Functional Model for the Computation of Monotone Boolean Functions*

**Aubrey Laskowski**, Sophomore, Mathematics and Computer Science, LAS  
**Alice Chudnovsky**, Sophomore, Mathematics, LAS

*The Mathematics of Poker: From John von Neumann to the World Series of Poker*

**Nicholas Brown**, Senior, Economics, LAS  
**Junghyun Hwang**, Freshman, Mathematics and Computer Science, LAS  
**Ruoyu Zhu**, Junior, Mathematics, LAS  
**Simiao Ye**, Junior, Computer Engineering, ENG

*Monogamy and Limited Female Choice Promote the Evolution of Parthenogenesis*

**Paul Bogdan**, Senior, Molecular & Cellular Biology and Economics, LAS

*A New Two-Phase Nozzle Flow Control Mechanism*

**Kate Malmsbury**, Sophomore, Mechanical Engineering, ENG

*Exploring Expressive Dimensions In Unscripted Male Voices*

**Sophie Jin**, Sophomore, Electrical Engineering, ENG

*Identifying Influential Users Discussing Controversial Topics*

**Priyanka Balakumar**, Freshman, Computer Science and Statistics, LAS

*The Analysis of Soil Organic Matters in Intensively Managed Landscapes'*

**Emilio Cabrera**, Junior, Statistics, LAS

**PE SESSION – HEALTH AND WELLNESS**

**10:45 AM – 12:00 PM, Illini Room C**

*Longitudinal Study of the Human Gastrointestinal Microbiota*

*Following Fecal Microbiota Transplant (FMT) for Clostridium Difficile Infections*

**Oluyemisi Joseph**, Senior, Molecular & Cellular Biology, LAS

*Another Approach Towards Retirement*

**Tina Park**, Senior, Recreation, Sport & Tourism, AHS  
**Pamela Hernandez**, Sophomore, Community Health, AHS  
**Alondra Rios**, Junior, Recreation, Sport & Tourism, AHS  
**Mitchell Fransen**, Junior, Recreation, Sport & Tourism, AHS  
**Daniel Andress**, Sophomore, Molecular & Cellular Biology, LAS

*Effects of Dietary Fats on the Gastrointestinal Microbiota and Cardiovascular Disease Risk Factors in Healthy Weight, Overweight, and Obese Adults*

**Kennedy Davis**, Sophomore, Human Nutrition, ACES

*Inhibition of Soluble VEGFR1 (sFlt1) to Treat Preeclampsia*

**Jeffrey Varghese**, Sophomore, Bioengineering, ENG  
**Adam Dama**, Sophomore, Bioengineering, ENG  
**Sung Min Shin**, Junior, Bioengineering, ENG  
**Deepthi Suresh**, Sophomore, Bioengineering, ENG

*A Meta-analysis of Attachment Security and Substance Use*

**Dani Kang**, Senior, Psychology, LAS

*The Design and Fabrication of a Non-Invasive Thermometry Platform for Accurate Dehydration Detection*

**Eddie Sun**, Junior, Mechanical Engineering, ENG

*Examining Repeated Engagement During Collaborative Referencing: An Aphasia Treatment Study*

**Claire Smego**, Senior, Speech & Hearing Science, AHS  
**Regan Kelley**, Junior, Speech & Hearing Science, AHS  
**Andrea Jachino**, Junior, Speech & Hearing Science, AHS

*A Synthetic Biology Approach to the Study of Gut Microbial Bile Acid 12 $\alpha$ -hydroxy Epimerizing Enzymes*

**Greta Doden**, Senior, Animal Sciences, ACES

*The Application of Stem Cells in Skin Repair and Regeneration*

**Abdul-Rahman Abdel-Reheem**, Senior, Molecular & Cellular Biology, LAS  
**Ahmed Radwan**, Junior, Actuarial Science, LAS  
**Pedro Escobedo**, Junior, Actuarial Science, LAS  
**Jeffrey Varghese**, Sophomore, Bioengineering, ENG

*Assessing Differences in Grey Matter Anatomy After Mindfulness-based Practice in Tinnitus Patients*

**Emily Kay**, Junior, Speech & Hearing Science, AHS

*Greater Perseverance and Determination is Associated with Lower Odds of Food Insecurity Among U.S. Parents*

**Megan Schierer**, Senior, Integrative Biology, LAS

*Portable Listening Devices: Listening Habits, Hearing Health, and Cognition*

**Andrew Perpignani**, Senior, Speech & Hearing Science, AHS

*Rate Your Plate: Dietary Habits of Hispanic Mothers in an Obesity Prevention Program*

**Alejandro Torres**, Junior, Psychology, LAS

*Do You See What I See? Weight Perceptions of Parents and the Snacking Practices that Contribute to Rising Overweight and Obesity*

**Brenda Munguia**, Sophomore, Community Health, AHS

*Sleep Right, Eat Right?: Examining the Relationship between Adequate Sleep and Fruit and Vegetable Consumption in Twelve-Month-Old Children*

**Brandon Chou**, Sophomore, Health Planning & Administration, AHS

**Brianna Velazquez**, Senior, Psychology, LAS

**John Belz**, Senior, Biology, LAS

*Physical Activity and Bone Mineral Density in Healthy and Overweight Adults*

**Alaina Balbinot**, Junior, Food Science & Human Nutrition, ACES

*Electrophysiological Markers of Cognitive Control in Picture Word Interference Task*

**Meghan Diamond**, Senior, Speech & Hearing Science, AHS

**Stephany Burz**, Junior, Psychology, LAS

*Effects of Circadian Disruption on Female Reproduction*

**Angel Chu**, Senior, Molecular & Cellular Biology, LAS

*Prevalence and Correlates of Antenatal Suicidal Ideation among Racially and Ethnically Diverse Women Receiving Care in a Midwestern Public Health Clinic*

**Nancy Perez**, Junior, Social Work, SSW

*Creating Culturally Competent Healthcare Professionals for LGBTQ Patients Using Educational Interventions: A Modified Integrative Literature Review*

**David S. Cho**, Senior, Nursing, NUR

*Has the Presence of Food Advertising Increased Childhood Obesity?*

**Anastasia Mourikes**, Junior, Advertising, COM

*Is Obesity the New Norm? Understanding Weight Perceptions and Nurturing Health Intentions*

**Guadalupe Herrera**, Sophomore, Undeclared, DGS

*Connected Language in Alzheimer's Disease*

**Fanting Kung**, Junior, Speech & Hearing Science, AHS

*Ni de Aqui Ni de Alla: Preliminary Program Adaptations for Health Interventions Addressing Guatemalan Immigrants' Diet and Lifestyle Patterns*

**Evelyn Zepeda**, Junior, Community Health, AHS

*The Potential of Music Therapy for Positive Effects of Schizophrenia*

**Mayna Tyrrell**, Senior, Musicology, FAA

*The Timing of Recess and the Effects in Nutrition and Physical Activity in Elementary-Aged Students*

**Kathryn Liston**, Junior, Kinesiology, AHS

**Camryn Schmidt**, Junior, Kinesiology, AHS

**Bridget Tesher**, Senior, Molecular & Cellular Biology, LAS

*How the Perceptions of Neighborhood Conditions Impact Physical Activity Behavior in Adults with Multiple Sclerosis: A Qualitative Approach*

**Nikta Athari**, Junior, Interdisciplinary Health Sciences, AHS

**Ilham Hussaini**, Senior, Molecular & Cellular Biology, LAS

**Brittany Albrecht**, Junior, Interdisciplinary Health Sciences, AHS

*Falls in Older Individuals with and without Multiple Sclerosis*

**Jamie Rymut**, Senior, Kinesiology, AHS

*Cure My Life with Black Seed Oil*

**DaShon Rivers**, Junior, Kinesiology, AHS

*Hydrogels: The Future of Drug Delivery*

**Shrey Maheshwari**, Sophomore, Bioengineering, ENG

## PF SESSION – EDUCATION, SOCIAL SCIENCES, AND HUMAN BEHAVIOR

10:45 AM – 12:00 PM, South Lounge

*Examination of Polygenic Risk for Schizophrenia, Schizotypy Traits, and Traumatic Brain Injury*

**Justin Lien**, Senior, Psychology, LAS

*The Effect of Cognitive Load on Visual Sensitivity*

**Sophie Leib**, Senior, Psychology, LAS

*The Role of the Hippocampus in Conceptual Combination*

**Mahima Goel**, Senior, Molecular & Cellular Biology and Psychology, LAS

*I Think He Wants You to Play the Guitar: Use of Interpretation as a Strategy for Facilitating Interaction across Autistic and Non-Autistic Peers*

**Carissa Ernat**, Senior, Speech & Hearing Science, AHS

*Understanding the Brexit Referendum: Direct Democracy and International Regimes*

**Amy Radlinski**, Senior, Political Science, LAS

*Do Children Blame Victims?*

**Jacqueline Beck**, Senior, Psychology, LAS

*Patterns of Mean-Level Change in Personality Traits Across the Life Course in College vs. Non-College Samples*

**Robert Clark**, Senior, Psychology, LAS

*Influence of Trust in New Relationships*

**Marty Schatz**, Senior, Psychology, LAS

*Barriers among Low-income Latino Families with Young Children Transitioning to Kindergarten*

**Xochitl Esparza**, Sophomore, Social Work, SSW

**Susana Sosa**, Junior, Human Development & Family Studies, ACES

*Using the ABC-X Model to Understand Mealtimes for a Family with a Child with Autism: A Case Study*

**Rachel Wurtzel**, Senior, Human Development & Family Studies, ACES

*Can Gentrification Occur in Shrinking Cities?*

**Minyue Ge**, Junior, Architectural Studies, FAA

*Cultural Influence on the Relation Between Agreeableness and Job Satisfaction*

**Yueyang Chen**, Senior, Psychology, LAS

*Authoritarian to Democratic Transitions: The Impact of Legacies*

**Mandie Heitz**, Senior, Political Science, LAS

*The Effect of Ideology on Protest Behavior of Citizens in Latin American Countries*

**James Holevas**, Senior, Political Science, LAS

*Approaches to Education Policy and Refugee Outcomes in European Union Member States*

**Derek Hoot**, Senior, Political Science, LAS

*Health Outcomes among Garment Workers in Low-Middle Income Countries: A Scoping Review*

**Shelby Gordon**, Senior, Interdisciplinary Health Sciences, AHS

*Processing of English Articles by Second Language Learners*

**Jessie Golden**, Senior, Linguistics, LAS

*Storytelling and Architecture in South Pacific Cultures*

**Anthony LoCasio**, Freshman, Architectural Studies, FAA

*World Wars: Investigating the Nature of World Wars, Why They Occur, and Why They Do Not*

**Moksha Muthukrishnan**, Senior, Political Science, LAS

*Reconstructing the Lost Architecture of the University of Illinois*

**Emma Dannhausen-Brun**, Freshman, Architectural Studies, FAA

**Dylan Young**, Freshman, Architectural Studies, FAA

*Effects of Parental Attachment Style and Emotional Responsiveness on Children's Media Use*

**Marisa Cullnan**, Junior, Psychology, LAS

*Linking Intuition to Embodied Experience: The Case for Regaining Balance*

**Patrick Kwon**, Sophomore, Physics, LAS

**Ryan Lin**, Sophomore, Engineering Mechanics, ENG

*Social Work Education*

**Megan Kats**, Freshman, Earth, Society & Environmental Sustainability, LAS

*The "Indian Problem" in the Early Twentieth Century*

**Cindy Martinez**, Freshman, Psychology, LAS

*Studying Anglo-Soviet Cultural Exchanges - a Zero-Sum Game between Human Analysis and Simple Code*

**Nalin Gadihoke**, Sophomore, Nuclear Plasma & Radiological Engineering, ENG

*Bridging the Gap: Millennials and Financial Advice*

**Christopher J. Valvassori**, Senior, Agricultural & Consumer Economics, ACES

## Featured Presentations

**Lunch: 12:00 PM – 1:15 PM, Illini Room B**

*Synthesizing Chemical Libraries for Drug Discovery*

**Amanda Cowfer**, Junior, Chemistry and Molecular & Cellular Biology, LAS

*The Future of Renewable Energy: Tandem Silicon-Perovskite Solar Cells*

**John Simonaitis**, Junior, Electrical Engineering and Engineering Physics, ENG

*An Investigation into the Role of hnRNPI in Preventing Colorectal Cancer*

**Wesley Tung**, Sophomore, Molecular & Cellular Biology, LAS

*Black Science Matters*

**Zila Renfro**, Senior, Journalism, COM

**PG SESSION – SCIENCE AND MATHEMATICS****1:30 PM – 2:45 PM, Illini Room A**

*An Investigation into the Role of the TBX18 Transcription Factor in Mesenchymal to Epithelial Transition in Mammalian Urogenital Sinus Development*

**Kurt Reynolds**, Senior, Molecular & Cellular Biology, LAS

*Functional Characterization of S-layer Deficient Mutants in *Sulfolobus islandicus**

**Rebecca Wipfler**, Sophomore, Molecular & Cellular Biology, LAS

*Atomistic Modeling of the Ion-Induced Depth-Dependent Compositional Profile in Driving Surface Morphology in III-V Semiconductors*

**Michael Toriyama**, Sophomore, Materials Science & Engineering, ENG

*Paleoecology of "Butter" Shale Communities from the Waynesville Formation (Upper Ordovician) in the Cincinnati Arch*

**John Luchok**, Junior, Geology, LAS

*Alpha2A Adrenoreceptor Influence on Proliferation of Intestinal Epithelial Stem Cells*

**Mary Kate Feldner**, Senior, Molecular & Cellular Biology, LAS

*The Possible Changes on Atmospheric Rivers along the Pacific Coast of the Western U.S. under Climate Change Condition*

**Shao Wen (Amy) Chen**, Senior, Atmospheric Sciences, LAS

*Convergence of the DNA Damage Response Impairs Core Homeostatic Autophagic Machinery of Human Cells in vitro*

**Paul Kaminski**, Junior, Biochemistry, LAS

*Determining Variability in Peptides within Mice with OIH and Migraine*

**Jimmy Wang**, Junior, Chemical & Biomolecular Engineering, LAS

*A Unified Approach for Surface-Initiated Atom-Transfer Radical Polymerization (SI-ATRP)*

**Nathan Reed**, Senior, Chemistry, LAS

*Interpolating Surface Pressure Data from Wings with Artificial Ice*

**William Yoshida**, Junior, Aerospace Engineering, ENG

*Morphological Awareness Intervention Activities Used With Children*

**Sarah Vogt**, Senior, Speech & Hearing Science, AHS

**Gregory Knapp**, Senior, Speech & Hearing Science, AHS

**Rachel Thain**, Junior, Speech & Hearing Science, AHS

*Building a Chemical Library of Complex Small Molecules from Natural Products*

**Amanda Cowfer**, Junior, Chemistry and Molecular & Cellular Biology, LAS

*A Simple Protocol to Extract DNA from A Small Number of Cells*

**Nicole Lopez**, Senior, Animal Sciences, ACES

*Behavior of Porcine Mesenchymal Stem Cells on a Collagen-Glycosaminoglycan Hydrogel Scaffold for Bone and Cartilage Tissue Engineering*

**Sarah Womack**, Junior, Molecular & Cellular Biology, LAS

*A County-Wide Information Base for Decision-Support During Weather Emergencies*

**Rachel Gutierrez**, Senior, Atmospheric Sciences, LAS

*Benchmarking and Optimization of Long-distance Big Data Transfers, in Application to Large Genomics Projects*

**Ellen Nie**, Junior, Computer Science, ENG

*Automatic Classification of Ice Crystals using Techniques in Machine Learning*

**Javier Villegas**, Sophomore, Atmospheric Sciences, LAS

*The Happy Number Project: Experimental and Theoretical Investigations on a Classical Problem*

**Zihe Wang**, Sophomore, Mathematics, LAS

**Thien Le**, Freshman, Mathematics and Computer Science, LAS

**Yunxin Zhang**, Sophomore, Mathematics, LAS

*Utilizing the Gut Microbiota to Predict Weight Loss from a Volumetric Diet and Exercise Program in Obese Adults*

**Haily Stillabower**, Sophomore, Undeclared, DGS

*Deconstructing Vadose Zone Oxidation-Reduction Cycles in the Eel River Critical Zone Observatory, Northern California*

**Jia Wang**, Senior, Earth, Society & Environmental Sustainability and Geology, LAS

*Specification of T1 Neuron Fate in *Drosophila**

**Vamsikrishna Naidu**, Senior, Molecular & Cellular Biology, LAS

*ALMA Observations of a Quiescent Molecular Cloud in the Large Magellanic Cloud*

**Evan Wojciechowski**, Junior, Physics, LAS

*Btk29a Influences Imaginal Disc Regeneration in *Drosophila melanogaster**

**Benjamin Wang**, Senior, Molecular & Cellular Biology, LAS

*Benchmarking Parfu to Determine Best User Parameters for Genomic Analyses*

**Tiffany Li**, Junior, Integrative Biology, LAS

*Analysis of Photoinduced Processes in Quantum Dot Heterostructures with Nanosecond Transient Absorption Spectroscopy*

**Alexandra Lamtyugina**, Junior, Chemistry, LAS

*Leading Digit Distribution, Continued Fractions, and Probabilistic Diophantine Approximation*

**Yuan Zhang**, Junior, Mathematics, LAS

**Matthew Faust**, Junior, Computer Engineering, ENG

*Small Molecule Restores Iron Transport and Promotes Gut Iron Absorption and Hemoglobinization*

**Christopher Nardone**, Senior, Molecular & Cellular Biology, LAS

**James Fan**, Junior, Chemical & Biomolecular Engineering, LAS

*Stochastic Collocation for Uncertainty Propagation in High-Speed Link Simulation using Wavelet Bases*

**Alan Yang**, Sophomore, Electrical Engineering, ENG

*Understanding Heme-Copper Oxidases Through Site-Directed and Metal Mutagenesis of Myoglobin-Based Enzyme Models*

**Madeline Sponholtz**, Junior, Biochemistry, LAS

*Targeted Carbon Nanoparticles for Fluorescent Bone Imaging*

**Lily Benig**, Sophomore, Bioengineering, ENG

*Hips Don't Lie: Inferring Locomotion Patterns of Chimpanzees, Gorillas, and Humans Based on Subchondral and Trabecular Bone Properties of the Femoral Head*

**America Guerra**, Senior, Anthropology, LAS

*Cocoa Flavanols and the Aging Brain*

**Amanda Snyder**, Junior, Molecular & Cellular Biology, LAS

*The Role of SHP in Cholesterol Regulation in the Intestine*

**Lydia Lee**, Junior, Molecular & Cellular Biology, LAS

*Petrogenetic Relationship between Mafic Enclaves, the Alta Stock and Dikes in Albion Basin, Utah*

**Yunhe Cui**, Senior, Geology, LAS

*Evaluating AMD HIP Toolset for Migrating CUDA Applications to AMD GPUs*

**Yan Zhan**, Junior, Computer Engineering, ENG

*Using Spatial Light Interference Microscopy (SLIM), an Unbiased Imaging Technique, to Quantify Temperature Effects on Primary Neurons*

**David Kline**, Junior, Bioengineering, ENG

*Combustion Syntheses of Advanced Structural Ceramics*

**Caelin Muir**, Sophomore, Materials Science & Engineering, ENG

*Investigating the Chemical Response of Pseudomonas aeruginosa Microbial Communities to Antibiotic Treatment*

**Stephanie Lozano**, Junior, Molecular & Cellular Biology, LAS

*Dielectric Relaxation Study of Barium Titanate in the Rhombohedral Phase*

**Shubhang Goswami**, Senior, Physics, LAS

*Establishment of ex vivo Organs Slice Culture of Mouse Stomach*

**Jeongmin Lee**, Senior, Biochemistry, LAS

*Design of a Planar Focusing Collector for Concentrated Solar Power*

**Aakash Choubal**, Junior, Mechanical Engineering, ENG

*Impulsive Behavior is Influenced by Interactions Between Cholinergic and Dopaminergic Neurotransmitter Systems*

**Chi Tran**, Junior, Psychology, LAS

## PH SESSION – FOOD, PLANTS, AND ANIMALS

1:30 PM – 2:45 PM, Illini Room C

*Dining Dickcissels: A Study of a Grassland Bird's Provisioning Behaviors*

**Iris Daiber**, Junior, Fish & Wildlife Conservation, ACES

*LEED: Where is it Leading Us and Should We Follow?*

**Harjot Sidhu**, Freshman, Architectural Studies, FAA

*Effects of Including DBY70 in Diets Fed to Weanling Pigs*

**Molly McGhee**, Senior, Animal Sciences, ACES

*Analysis of Dietary Intervention Compliancy within the Persea Americana for Total Health (PATH) Study*

**Jessica Dietrich**, Senior, Human Nutrition, ACES

*Microbial Production of Human Milk Oligosaccharides*

**Sunyoung Choi**, Junior, Molecular & Cellular Biology, LAS

*The Relationship between Dietary Carbohydrates and Cognition*

**Ruyu Liu**, Senior, Food Science & Human Nutrition, ACES

**Jackson Evensen**, Senior, Kinesiology, AHS

**Shaun Majeed**, Junior, Economics, LAS

**Jimmy Park**, Junior, Kinesiology, AHS

*Herbivore Population Dynamics in the Chobe Enclave*

**Kaitlyn Campbell**, Junior, Animal Sciences, ACES

**Benjamin Daniels**, Senior, Natural Resources & Environmental Sciences, ACES

*Measuring the Deliquescence Point of Isomaltulose*

**Cara Feng**, Junior, Food Science, ACES

*Wildlife Conservation in the Enashiva Nature Reserve*

**Jennifer Naglw**, Junior, Global Change & Landscape Dynamics, ACES

*Does Daycare put Children at Risk for Obesity?*

**Rachel Full**, Senior, Molecular & Cellular Biology, LAS

**Jacqueline Bellefontaine**, Senior, Psychology, LAS

*The Effects of Non-Digestible Fiber on Exploratory and Stress Behaviors in Piglets*

**Alexander Patsavas**, Senior, Animal Sciences, ACES

*Developing a Web-tool to Assist Making a Healthy Choice in Chain Restaurants*

**Diamond Brown**, Senior, Biology, LAS

**Mengli Wang**, Senior, Food Science & Human Nutrition, ACES

**Shengwen You**, Senior, Agricultural & Biological Engineering, ENG

*Sex Differences in Cytoarchitecture of the Preoptic Area in Amphiprion Ocellaris*

**Logan Dodd**, Senior, Psychology, LAS

*Characterization of Typical Potent Odorants in Dried Crataegus pinnatifida (Chinese Hawthorn) Fruit Tea*

**Yaozheng Liu**, Senior, Food Science, ACES

*Centriole Presence in Sperm as it Progresses Through the Epididymis of Monodelphis domestica*

**Jacqueline Piekos**, Senior, Integrative Biology, LAS

*A Meta-analysis of Fire-induced Filtering of Plant Traits and its Implications for Forest Drought Vulnerability*

**Nadia Ennab**, Sophomore, Integrative Biology, LAS

*An Investigation of the Direct and Indirect Effects of Vegetation on Mosquitoes*

**Sana Khadri**, Senior, Integrative Biology, LAS

*Correlation of Feed Intake and Efficiency between Beef Heifers and Cows*

**Caitlin Sanders**, Senior, Animal Sciences, ACES

*Cultivating Healthier Lifestyles: Gardening Among Latinos*

**Sonia Cabrera**, Sophomore, Community Health, AHS

*The Effect of Fire Disturbances on Adult Quercus spp. Growth in Drought Years*

**Taskeen Khan**, Freshman, Integrative Biology, LAS

*Ant Nest Architecture Compared to Geographical Position*

**Andrew Gonsalves**, Sophomore, Bioengineering, ENG

*Mandible Strike Kinematics of the African Snapping Ant Plectroctena mandibularis (Hymenoptera: Formicidae)*

**John Eastwood**, Sophomore, Nuclear Plasma & Radiological Engineering, ENG

## PI SESSION – EDUCATION, SOCIAL SCIENCES, AND HUMAN BEHAVIOR

1:30 PM – 2:45 PM, South Lounge

*Metacognitive Monitoring During a Biology Intervention: Relation to Motivation*

**Chelsea Oleson**, Junior, Elementary Education (Grades 1-6), EDU

*Nationwide Examination of Agricultural Education Student Teaching Placement Processes and Influential Factors*

**Jordan Johns**, Sophomore, Agricultural Sciences Education, ACES

*Online Adolescent Support for Parental Divorce*

**Madison Arbuthnot**, Junior, Human Development & Family Studies, ACES

*Youth-Adult Partnerships in Foster Youth-Led Advisory Boards in the United States*

**Fabiola Villalpando**, Senior, Social Work, SSW

*'The Appleknocker's Lament' (1927): A SourceLab Edition*

**Mallory Untch**, Senior, History, LAS

*Examining Correlation between Attitudes of Race and Gender using the Implicit Association Test*

**Onik Paul**, Junior, Psychology, LAS

*A First Look at How Teachers Communicate During Parent-Teacher Conferences*

**Kelsey Howard**, Senior, Psychology, LAS

*Campaign Messaging Strategies on Twitter*

**Amelia Berger**, Senior, Political Science, LAS

*Does the Way We Explain the World Change Based on Messages from Authority Figures?*

**Sarah Carlisle**, Senior, Psychology, LAS

*Representation of Racial and Ethnic Minorities in State Judiciaries*

**Nadia Gonzalez**, Senior, Political Science, LAS

*Transformative Militant Networks: A Case Study of North Caucasian and Central Asian Jihadist Networks*

**Caleb Weiss**, Senior, Political Science, LAS

*Predicting Social Anxiety from a Subjective Well-Being Polygenic Score*

**Yuri Kim**, Senior, Psychology, LAS

*Evaluating Changes in Non-Land Costs for Corn and Soybeans on Illinois Grain Farms*

**Sarah Sellars**, Senior, Agricultural & Consumer Economics, ACES

*Evaluation of Certificate of Need Licensure*

**Nicholas Brown**, Senior, Economics, LAS

**Calvin Kessler**, Senior, Economics, LAS

*Differentiated Instructed at the University Primary School*

**Antonia Schmidt**, Freshman, Special Education, EDU

**Danielle Golob**, Freshman, Early Childhood Education (Birth through Grade 3), EDU

*Group Identification and Voter Turnout*

**Julie Stankiewicz**, Senior, Political Science, LAS

*The Impact of Federal Judicial Vacancies on Decision Quality*

**Peter Miles**, Senior, Political Science, LAS

*The Relationship Between Behavioral Looking and EEG Studies in Infant Facial Recognition*

**Katherine Nameth**, Senior, Psychology, LAS

*Meteotsunamis*

**Gerardo Diaz**, Senior, Atmospheric Sciences, LAS

*A 3D, Interactive and Virtual Dose Minimization Game for Education and Training*

**Zahra Hanifah**, Sophomore, Chemical & Biomolecular Engineering, LAS

**Arnav Das**, Sophomore, Electrical Engineering, ENG

*The Machine Learning Application on UIUC Course Advising & Prediction*

**Jiacheng Zhu**, Junior, Computer Engineering, ENG

**Guanhao Yan**, Junior, Computer Engineering, ENG

*The New Frontier: Foodie Narratives about Contemporary Cuban Cuisine*

**Michelle Patiño-Flores**, Senior, Linguistics, LAS

*The Relationship between Diversity of Student Grouping and Leadership in the University of Illinois at Urbana-Champaign*

**Un Si Ieong**, Junior, Government and Public Administration, University of Macau

**Kwok Wai Leung**, Junior, Learning and Education Studies, University of Macau

*Parental Impact on Children's Salience of Racial and Sexual Identity*

**Ariel Watts**, Senior, Human Development & Family Studies, ACES

**Daniel Salazar**, Junior, Physics, LAS

*Rural to Rural Migration: Puerto Rican Presence in Rantoul, Illinois*

**Brenda Gutierrez**, Sophomore, Global Studies, LAS

*Designing Social Experiences: How Organizations Enhance Belonging*

**Lauren Castaneda**, Freshman, Psychology, LAS

*Analysis of Longitudinal Data with Latent Variable Models*

**Shannon Sledz**, Senior, Statistics, LAS

**Benjamin Olson**, Senior (Graduated Fall 2016), Statistics, LAS

**Rahul Kalluri**, Senior, Statistics, LAS

**Anuj Dahiya**, Senior, Statistics, LAS

## PJ SESSION – SCIENCE AND MATHEMATICS

**3:15 PM – 4:30 PM, Illini Room A**

*Charactering D-amino Acid-containing Neuropeptides in Planarians*

**Yuquan Tong**, Sophomore, Chemical & Biomolecular Engineering, LAS

*The Density of Dusty Galaxies at High Redshift*

**Sidney Lower**, Junior, Engineering Physics, ENG

*Hydrogeomorphological Characterization of Alluvial River Valleys in Glaciated Landscapes: Floodplain Versus Terrace*

**Angela Magnuson**, Junior, Civil Engineering, ENG

*Does Soil Drainage History Affect Soil Greenhouse Gas Emissions?*

**Natcha Suriyavirun**, Senior, Integrative Biology, LAS

*The Influence of Comprehensive Versus Abstinence Only Sexual Education on Sexually Transmitted Infections in Adolescents*

**Carolyn Wainer**, Senior, Nursing, NUR

*Detection of Ionic Species at Nanopipet Electrode via Assisted Ion Transfer by a Novel Ionophore with Multiple Crown Ether Moieties*

**Philip Oweimrin**, Senior, Chemistry, LAS

*Sun Buckets: Solar Thermal Heating*

**Rachel Tham**, Freshman, Agriculture & Biological Engineering, ENG

**Perry Lim**, Freshman, Chemistry, LAS

*Interface Tracking Technique in Both 2D and 3D Geometry*

**Xiaodan Du**, Junior, Civil Engineering, ENG

*An Anthocyanin-Rich Extract from Purple Corn and Pure Anthocyanins Reduced 3T3-L1 Adipocytes Differentiation and Ameliorated Inflammatory Status*

**Matthew Weiss**, Junior, Molecular & Cellular Biology, LAS

*Upgrading Biocrude Oil Converted from Animal Waste via Hydrothermal Liquefaction*

**Patrick Dziura**, Sophomore, Agriculture & Biological Engineering, ENG

*Characterizing Neuropeptides Released from the Rodent Dorsal Root Ganglion*

**Ashley Lenhart**, Junior, Chemistry, LAS

*Fluorometric Evaluation of Interaction between Anthocyanins Present in Purple Corn Pericarp with Metal Ions and Polysaccharides to Improve their Chemical Stability in a Beverage Model*

**Paulina Ongkowitzo**, Senior, Chemistry, LAS

*Further Analysis and Verification of Storm Prediction Center 1300-UTC Tornado Outlooks*

**Alexander Erwin**, Junior, Atmospheric Sciences, LAS

*Web Data Analysis: University Career Guidebook*

**Nuochen Lyu**, Junior, Electrical Engineering, ENG

**Minkang Yang**, Junior, Computer Engineering, ENG

**Zhao Chen**, Junior, Computer Engineering, ENG

*Development of a Method for Determining Stable Chlorine Isotope Compositions in Low-Cl-abundance Samples*

**Cristopher Alvarez**, Junior, Geology, LAS

**Stirling Lemme**, Senior, Geology, LAS

*Genotoxin Mediated Suppression of Autophagy*

**Eunji Jeong**, Junior, Molecular & Cellular Biology, LAS

*Glioblastoma Tumor Model to Analyze the Mechanisms of Resistance to Chemotherapy*

**Gabrielle Wolter**, Junior, Bioengineering, ENG

*What Protein Transports Manganese into E. coli Aside from MntH?*

**Ogeneitsega Joseph**, Senior, Molecular & Cellular Biology, LAS

*Antibacterial and Imaging Properties of Hafnium Nanoparticles*

**Valeriya Kravchuk**, Junior, Bioengineering, ENG

*Residual Topography Signals to Continental Buoyancy and Mantle Dynamics*

**Stirling Lemme**, Senior, Geology, LAS

*Bacterial Genotoxin Induced DNA Damage Response Impairs Host-Cell Stress Responses*

**Jordan Kryza**, Senior, Molecular & Cellular Biology, LAS

*Understanding How Antibiotics Resistance Genes are Transferred Among E.coli Strains*

**Alaa Mansour**, Senior, Molecular & Cellular Biology, LAS

*Synchronization for Wireless Medical Sensor*

**Mengting Yan**, Junior, Mathematics and Computer Science, LAS

*Porous Silicon Microlenses: An Examination of Porous Silicon and Its Applications in Gradient Index Optics*

**Matthew Clawson**, Sophomore, Materials Science & Engineering, ENG

*A Preliminary Analysis of Fossil Orthoptera (Arthropoda: Insecta) from the Oligocene Renova Formation of Southwest Montana*

**Steven Zhang**, Senior, Geology, LAS

*Exceptionally Preserved Orthoptera (Arthropoda: Insecta) from the Late Pennsylvanian Kinney Brick Quarry Lagerstätte of New Mexico*

**Caroline Mierzejewski**, Senior, Geology, LAS

*Controlled Growth and Characterization of CVD Graphene*

**Shunya Namiki**, Sophomore, Materials Science & Engineering, ENG

**Tejas Idate**, Freshman, Materials Science & Engineering, ENG

*Elastic Moduli of Apophyllite*

**Zhirong Cai**, Senior, Geology, LAS

*Games for Mathematical Experimentation*

**Manting Huang**, Sophomore, Statistics, LAS

**Sung jib Kim**, Junior, Mathematics, LAS

**Pranav Bhardwaj**, Sophomore, Mathematics, LAS

**Tejo Nutalapati**, Sophomore, Mathematics, LAS

*Stability of Quasicrystal Frameworks*

**Yijing Chen**, Junior, Actuarial Science, LAS

**Alexandra Lamtyugina**, Junior, Chemistry, LAS

**Arturo Guerrero**, Junior, Math, LAS

**Zac Berrabah**, Junior, Math, LAS

*Zipf's Law: A Universal Law for Empirical Data from Word Frequencies to Olympic Records*

**Khoa Tran**, Junior, Mathematics, LAS

*Stress is Associated with Altered DNA Methylation in Select HPA Axis Genes in the Rodent Adrenal Gland*

**Myrna Sobhy**, Senior, Psychology, LAS

*Exploring Possible Novel Functions for a Duplicated Leucyl-tRNA Synthetase within Sulfolobus islandicus*

**Alexander Gatten**, Junior, Molecular & Cellular Biology, LAS

*Molecular Perspectives on Agrochemical Control of Drought Resistance*

**Moeen Meigooni**, Senior, Chemical & Biomolecular Engineering, LAS

*The Effect of KCNQ2 Encephalopathy Mutation on KCNQ2/Q3 Channel & the Effect of Seizure-like Activity on GIRK*

**Weilun Pang**, Senior, Molecular & Cellular Biology, LAS

*Combinatorics Interpretation of Graph Theory*

**Chengzheng Yu**, Senior, Mathematics, LAS

*Raman Imaging of Bone During the Remodeling Process due to an Endosseous Implant***Soorya Todatry**, Senior, Mechanical Engineering, ENG*Fabrication of Perovskite Solar Cells by Flow-Limited Field Injection Electrostatic Spraying***John Simonaitis**, Junior, Engineering Physics, ENG**John Graft**, Junior, Electrical Engineering, ENG*Clustering for Semantic***Mazin Bokhari**, Senior, Computer Engineering, ENG*Measuring the Impedance Spectrum of Biomass During Compression***Allison Nowak**, Senior, Agricultural & Biological Engineering, ENG**Kyle Buchanan**, Senior, Agricultural & Biological Engineering, ENG*Curvature in Three-Dimensional Manifolds***Julia Spina**, Senior, Engineering Physics, ENG*Innovating Bioactive Interfaces with Atomic-scale Additive Plasma Nano-manufacturing***Tanmay Shah**, Sophomore, Computer Science, ENG**Jesse Perez**, Junior, Advertising, COM**Ruchika Roy**, Senior, Engineering Physics, ENG*Sensitivity of Model Verification Results to Object Identification Parameters Using Method for Object-based Diagnostic Evaluation – Time Domain***Shao Wen (Amy) Chen**, Senior, Atmospheric Sciences, LAS**PK SESSION – HEALTH AND WELLNESS****3:15 PM – 4:30 PM, Illini Room C***Use of Geographic Information in Physical Activity Interventions: A Systematic Review***Reynaldo De Leon**, Senior, Community Health, AHS*Effects of Sleep on Obesity and Physical Activity***Gabrielle Schweitzer**, Sophomore, Kinesiology, AHS**Mia Corazzi**, Sophomore, Kinesiology, AHS*The Influence of Biomaterial Environment on the Activation and Behavior of Glioblastoma Stem Cells***Allison LaHood**, Junior, Bioengineering, ENG*Fatigue and Its Association with Physiological and Psychological Variables in Persons with Multiple Sclerosis***Juhi Gupta**, Senior, Molecular & Cellular Biology, LAS**Matthew Siegel**, Senior, Molecular & Cellular Biology, LAS*How to Turn Your Child Into a Veggie Monster: Stuff Them in a Freezer or in a Can!***Chigozirim Asonye**, Senior, Community Health, AHS**Daniel Juarez**, Sophomore, Interdisciplinary Health Sciences, AHS*Bottle or Breast: What Promotes Difficult Eating Behaviors?***Dana Sharo**, Junior, Community Health, AHS**Alexandra Kieffer**, Junior, Molecular & Cellular Biology, LAS**Gabrielle Adochio**, Junior, Community Health, AHS*The Effect of Physical Activity on Cognition***Sean Zwicky**, Junior, Kinesiology, AHS**Jimmy Park**, Junior, Kinesiology, AHS**Jackson Evensen**, Senior, Kinesiology, AHS**Shaun Majeed**, Junior, Economics, LAS*Prevalence of the Hypertriglyceridemic Waist Phenotype in Hispanic Mothers***Octavio Herrera**, Senior, Molecular & Cellular Biology, LAS*Maternal and Infant Factors Associated With Human Milk Macronutrient Composition***Emily Mattaliano**, Senior, Dietetics, ACES*Participation in Chronic Disease Prevention and Management Programs: The Illinois Pathways to Health Project***Amy Diaz**, Senior, Audiology, AHS*One Year Later: Are Dietary Changes Maintained Following Sleeve Gastrectomy?***Leila Diab**, Senior, Food Science & Human Nutrition, ACES*Dinner Time or Show Time? Understanding Implications of Mealtime Distractions in Hispanic Families***Connie Martinez**, Sophomore, Community Health, AHS*Dietary Fiber and the Human Gastrointestinal Microbiota as Predictors of Bone Health***Anne Hou**, Junior, Human Nutrition, ACES*If You Don't Finish Your Vegetables: The Effect of Parent's Feeding Styles on Children's Food Preferences***Jamie Greenstein**, Senior, Human Nutrition, ACES**Mingbei (Bella) Tang**, Junior, Kinesiology, AHS*Americanized Test? Analyses of the Associations between Acculturation Health Literacy Assessments***Prerana Rao**, Junior, Community Health, AHS**Alejandro Vallejo**, Junior, Molecular & Cellular Biology, LAS*Eating Too Many Snacks? Stop Watching TV!***Jocelyn Ramirez**, Senior, Political Science, LAS*Effects of a Novel  $\alpha 7$  Nicotinic Acetylcholine Receptor Agonist on Neuronal Activity Evaluated by Multi-electrode Electrophysiology***Nainika Roy**, Senior, Molecular & Cellular Biology, LAS

*Peptide Vaccination Strategies for Glioma Tumors***Corinne Cannavale**, Senior, Molecular & Cellular Biology, LAS*Self-Rated Health in Brazil***Jeenal Mehta**, Junior, Community Health, AHS*Weight Status is Related to Intraindividual Variability in Cognitive Function***Melody Suh**, Senior, Kinesiology, AHS**Baldwin Lau**, Senior, Community Health, AHS**Hamad Niazi**, Junior, Molecular & Cellular Biology, LAS**Lizzie Tran**, Senior, Molecular & Cellular Biology, LAS*Hispanic Mothers' Body Composition Reflected in Physical Activity Patterns***Alejandra Flores**, Senior, Molecular & Cellular Biology, LAS*Association between Prenatal Exposure to Bisphenol A, Bisphenol F, and Bisphenol S and Visual Recognition Memory in 7.5-Month-Old Infants***Diana Pacyga**, Senior, Molecular & Cellular Biology, LAS*Female and Male Hospital CEOs: Who's Better?***Kaitlin Krumwiede**, Senior, Community Health, AHS**Mariah Matesi**, Senior, Community Health, AHS**Victoria Harris**, Senior, Community Health, AHS**Alexandra Palacios**, Senior, Community Health, AHS*One of These Cancers is Not Like the Other: Investigating the Relationship with Weight Status and Cancer Screenings***Aishat Tepede**, Senior, Community Health, AHS*Pre-, Pro-, and Synbiotic Alter Intestinal Goblet Cell Function in Piglets with Short Bowel Syndrome***Ashley Maras**, Sophomore, Molecular & Cellular Biology, LAS*Cultural Sensitivity to Increase Insulin Sensitivity: Community Intervention Impact on Dietary Patterns and Diabetes Risk***Andrea Huerta**, Senior, Food Science & Human Nutrition, ACES*Characterization of VacA Association with Host Cells***Jiayi Luo**, Senior, Biochemistry, LAS*The Relationship Between Sedentary Bout Duration and Attentional Inhibition***Bibiana Schell**, Senior, Kinesiology, AHS**Dakota Morales**, Senior, Kinesiology, AHS**Aleia Tripp**, Junior, Community Health, AHS**Tiffany Li**, Junior, Integrative Biology, LAS*Value Base Purchasing & Hospital Consumer Assessment of Healthcare Providers and Systems***Vivian Bui**, Senior, Community Health, AHS**Anessa Anand**, Junior, Interdisciplinary Health Sciences, AHS**PL SESSION – EDUCATION, SOCIAL SCIENCE, AND HUMAN BEHAVIOR****3:15 PM – 4:30 PM, South Lounge***Environmental Impact on Agriculture, Unemployment and Migration in the Middle East- Case Studies of Syria and Turkey***Emily Smith**, Senior, Global Studies & Political Science, LAS*Being Mean Behind the Screen: Parental Advice about Cyberbullying***Emily Wilensky**, Senior, Human Development & Family Studies, ACES*Verb Use by Individuals with Down Syndrome***Caitlyn Boni**, Senior, Speech & Hearing Science, AHS*An Assessment of the Use of Social Media in Sexually Transmitted Disease Campaigns***Bridgette Lona**, Senior, Nursing, NUR*Young Adult Speaks: Patient-centered Weight Screening in Primary Care***Devaki Belwalkar**, Junior, Human Nutrition, ACES*Values of Front and Backcountry Users at Denali National Park and Preserve Change Across Space and Scale***Saachi Kuwayama**, Senior, Natural Resources & Environmental Sciences, ACES*A Study on Student Communication Development in Elementary Schools***Kelly Wallace**, Freshman, Special Education, EDU**Marlinde Taylor**, Freshman, Elementary Education (Grades 1-6), EDU*The Influence of Phonological Development on Lexical Acquisition in Children with ASD***Samantha Larocca**, Senior, Speech & Hearing Science, AHS**Matthew Ibrahim**, Senior, Speech & Hearing Science, AHS*The Effect of Family Socio-Economic Status on Student Organization Involvement and Academic Major Selection***Timothy Callahan**, Senior, Agricultural Leadership Education, ACES**Olivia Schifferer**, Junior, Communication and Psychology, LAS**Nigel Smucker**, Senior, Communication and Statistics, LAS*Lexius Henson***Connor Monson**, Senior, History, LAS*Web Data Analysis: University Career Guidebook***Nuothen Lyu**, Junior, Electrical Engineering, ENG**Minkang Yang**, Junior, Computer Engineering, ENG*Managing Invasive Grasses on Private Land in the Grand River Grasslands: Exploring the Results of a Mail-Back Survey***Cora Wessman**, Junior, Earth, Society & Environmental Sustainability, LAS**Sara Dong**, Senior, Natural Resources & Environmental Sciences, ACES

*How the ACA & Changes in Charitable Care Law Have Affected Illinois Hospitals*

**Joseph Kenny**, Senior, Community Health, AHS  
**Sarah Lyons**, Senior, Community Health, AHS  
**Anvita Hariharan**, Freshman, Community Health, AHS

*Sketching and Self-Explanation for Diagram Comprehension in Math and Science*

**Amanda Gade**, Junior, Elementary Education, EDU

*Natural Language Processing in the Social Sciences*

**Jacob Bentley**, Senior, Economics, LAS

*Generation of Event Data using News Corpora and Natural Language Processing*

**John Carter**, Junior, Physics, LAS

*Men of Courage*

**Justin Peebles**, Junior, Economics, LAS  
**Laquayle Gray**, Junior, Economics, LAS  
**Eric Davis**, Junior, Advertising, COM  
**Ananth Nandakishore**, Junior, Psychology, LAS

*Electoral Consequences of Roll Call Inconsistency*

**Ethan Amburgey**, Senior, Political Science, LAS

*Perceived Impact That Leadership Characteristics and Leadership Skills Have on Asian Women's Campus Life in UIUC*

**Sok Man Chong**, Junior, Accounting, University of Macau  
**Qiuming Fu**, Junior, Economics, University of Macau

*The Case Study of Leadership Characteristics in Multicultural Advocate (MA) in Themed Residential Halls in UIUC - Saunders*

**I Leng Ao**, Junior, Elementary Education (Grades 1 – 6), University of Macau  
**Man Man Kuok**, Junior, Elementary Education (Grades 1 – 6), University of Macau

*The Management of Multicultural Members of Registered Student Organization (RSO) by Observing Two Groups: Volunteer Illini Projects (RSO1) and Dance 2XS Caliente (RSO2) at UIUC*

**Si Tong Lei**, Junior, Computer Science, University of Macau  
**Kit I Ho**, Junior, Primary Education, University of Macau

*The Topic for this Qualitative Study is About Multicultural Leadership*

**Weng Lam Wong**, Junior, Learning and Education Studies, University of Macau  
**Wai Keong Hoi**, Junior, Elementary Education, University of Macau  
**Bo Wu**, Junior, Elementary Education, University of Macau

*My Child, The Bully: How Do Parents React?*

**Hannah Levitz**, Senior, Human Development & Family Studies, ACES

*Southside Cool*

**Allison Henreid**, Junior, Advertising, COM  
**Kyle Lee**, Senior, Political Science, LAS  
**Hanna Udischas**, Senior, Urban Planning, FAA

**Devarsh Ruparelia**, Freshman, Computer Engineering, ENG

*Ghetto Genius*

**Timothy Klein**, Junior, Mathematics, LAS  
**Stacey Rhum**, Senior, Communication, LAS  
**Jordyn Kass**, Senior, Communication, LAS  
**Margaret Guetzloff**, Sophomore, Media & Cinema Studies, COM

*Revamping the Funk Center*

**Kieshana Beeler**, Senior, Advertising, COM

## College of Engineering's Illinois Scholars Undergraduate Research (ISUR) Symposium

**Thursday, April 28, 4:00 PM – 6:00 PM**  
**Illini Union, Room 104**

*Temporal Quantification of Angiogenic Receptor Levels and Heterogeneity in a 2D Endothelial-Fibroblast Co-Culture*

**Kareem Al-Qadi**, Junior, Bioengineering, ENG

*Detecting and Preventing Tracking Failure in ORB-SLAM*

**Christopher Benson**, Junior, Computer Science, ENG

*Beating the Coffee Ring Effect: Understanding Crystal Growth Mechanisms*

**Rebecca Boehning**, Senior, Chemical & Biomolecular Engineering, LAS

*Soft, Conformal Sensor for Thermal Characterization of Human Skin*

**Daniel Capua**, Sophomore, Bioengineering, ENG

*Improving Visual-Inertial Odometry Testing*

**Andrew Douglas**, Junior, Computer Engineering, ENG

*An Investigation of the Effect of Gear Ratio on Manual Wheelchair Kinetics*

**Elizabeth Gacek**, Senior, Bioengineering, ENG

*Optimization of Anisotropic Photonic Density of States for Raman Cooling*

**Indronil Ghosh**, Junior, Engineering Mechanics, ENG

*Turbulent Boundary Layer Response to Porous Obstacles*

**Allison Gibson**, Senior, Mechanical Engineering, ENG

*Multivariate Classification of an Isogenic Breast Cancer Cell Line Using Raman Spectroscopy*

**Pierce Hadley**, Junior, Bioengineering, ENG

*Autonomous Visual-Inertial Navigation for Ground Robot*

**Paulous Haile**, Junior, Computer Engineering, ENG

*Structure of the Turbulent Boundary Layer over Irregular Terrains***Dylan Harmon**, Sophomore, Mechanical Engineering, ENG*Sensor Calibration of a Visual-Inertial System***Kenneth Hoffman**, Senior, Mechanical Engineering, ENG*Preliminary Analog and Digital Electronic Evaluation for Semiconductor Positron Emission Tomography (PET) Imaging of Transgenic Mice***Jazz Kroeger**, Senior, Nuclear Plasma & Radiological Engineering, ENG*Intelligent Textual Entailment System***Kevin Lin**, Junior, Computer Science, ENG*Alternative Fabrication Techniques for Silica Aerogel for Solar Thermal Applications***Mateusz Lopez**, Junior, Nuclear Plasma & Radiological Engineering, ENG*Investigation of Hydrodynamic Focusing in Microcapillaries***Alan Luo**, Senior, Mechanical Engineering, ENG*Molecular Perspectives on Agrochemical Control of Drought Resistance***Moeen Meigooni**, Senior, Chemical & Biomolecular Engineering, LAS*Driving Spatially-Controlled MSC Responses in Multicompartment CG Scaffold for Tendon-Bone Junction Regeneration***Jordan Meyer**, Sophomore, Chemical & Biomolecular Engineering, LAS*Residue-Free Delamination Transfer of Graphene and Reuse of Copper Growth Substrate***Widianto Moestopo**, Senior, Mechanical Engineering, ENG*Fabrication and Analysis of Silica Aerogels for Solar Thermal Applications***Naveen Nagarajan**, Senior, Mechanical Engineering, ENG*Wireless Neural Implantable Needles for Optogenetics***Grace Pakeltis**, Senior, Materials Science & Engineering, ENG*Synthesis and Processing of Cyclic Polyphthalaldehyde Fibers***Christopher Plantz**, Sophomore, Materials Science & Engineering, ENG*Two Color Super-Resolution Imaging of AMPA Receptors and Synaptic Scaffolding Proteins***Gregory Romanchek**, Senior, Engineering Physics and Nuclear Plasma & Radiological Engineering, ENG*Comparison of Open-Source SLAM Algorithms on Aerial and Ground Robots***Matthew Romano**, Senior, Electrical Engineering, ENG*Transition to Turbulence over 2D and 3D Periodic Large-Scale Roughnesses***Matthew Sadowski**, Senior, Engineering Mechanics, ENG*Imprinting Activity Patterns in in-vitro Neuronal Circuits***Shreya Santhanam**, Junior, Bioengineering, ENG*Fabrication of Perovskite Solar Cells via Flow-Limited Field Injection Electrostatic Spraying***John Simonaitis**, Junior, Electrical Engineering, ENG*Developing Application Specific Semiconductor Imaging Modalities: High Resolution Neurological Imaging Using PET (Neuro-PET)***John Smith**, Senior, Nuclear Plasma & Radiological Engineering, ENG*The Design and Fabrication of a Non-Invasive Thermometry Platform for Accurate Dehydration Detection***Eddie Sun**, Junior, Mechanical Engineering, ENG*Effect of Windbreak Porosity on the Power Generation of Leeward Wind Turbines***Charles Tierney**, Senior, Mechanical Engineering, ENG*Addressing Climate Change: Next Generation Materials for Carbon Dioxide Capture Using Polymers***Regev Trigalo**, Senior, Chemical & Biomolecular Engineering, LAS*Fabrication of Complex Refractory Oxides (HfO<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub>-TiO<sub>2</sub>) and their Melting Points***Whitney Tso**, Sophomore, Materials Science & Engineering, ENG*Development of Liquid Assay Cartridge for Handheld Smartphone Biosensor***Elizabeth Woodburn**, Junior, Bioengineering, ENG*Improving Lithium-Ion Battery Efficiency: Production and Testing of Bi-Tortuous Graphite Anodes***Ivan Zlatanov**, Senior, Mechanical Engineering, ENG

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