



UNDERGRADUATE RESEARCH SYMPOSIUM



THURSDAY, APRIL 18, PROGRAM



elcome to the sixth annual campus-wide Undergraduate Research Symposium (URS). The breadth and scope of the oral and poster presentations as well as the

performances featured today 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 support and expand undergraduate research opportunities on campus and beyond.

The presentations, posters, and performances listed here address some of society's most pressing issues, including education, health care, violent conflict, and natural disasters. As is true of the mentors who support them, these students and their projects hold the potential to change the world for the better. The featured session during lunchtime includes presentations from three students who are engaged in applied research that seeks to construct practical solutions to the problems of environmental sustainability, prescription drug dispensing, and disability access.

URS 2013 includes a record number of participants from an expansive range of departments, colleges, and other units on campus. Also, for the first time, there will be awards in various categories for the best posters and presentations. Judges include university administrators and distinguished faculty members. URS is made possible by support from the Office of Undergraduate Research (OUR), a unit of the Provost's Office, as well as the Office of Admissions. Special thanks go to Dr. Matthew Price, the Undergraduate Research and National and International Scholarships Coordinator; Megan Weaver, intern for OUR; and OUR's Advisory Board members.

Paul F. Diehl
Director, Office of Undergraduate Research
Henning Larsen Professor of Political Science

EVENT OVERVIEW

THURSDAY, APRIL 18, 2013

ILLINI UNION

9:00-10:15 a.m.	Poster Presentations	PA Session: Illini Room A PB Session: South Lounge
10:00-11:00 a.m.	Oral Presentations	A Session: Room 209
10:45 a.m.-12:00 p.m.	Poster Presentations	PC Session: Illini Room A PD Session: Illini Room C PE Session: South Lounge
11:00 a.m.-12:00 p.m.	Oral Presentations	B Session: B.1—Room 209 B.2—Room 217 B.3—Room 215 B.4—Room 211
12:00-1:15 p.m.	Lunch	Featured Session: Illini Room B
1:30-2:30 p.m.	Oral Presentations	C Session: C.1—Room 209 C.2—Room 217 C.3—Room 215
1:30-2:45 p.m.	Poster Presentations	PF Session: Illini Room A PG Session: South Lounge PH Session: Illini Room C
2:30-3:30 p.m.	Oral Presentations	D Session: D.1—Room 209 D.2—Room 217 D.3—Room 215 D.4—Room 317
3:15-4:30 p.m.	Poster Presentations	PI Session: Illini Room A PJ Session: South Lounge
3:15-4:30 p.m.	Performances	Illini Room B
3:30-4:30 p.m.	Oral Presentations	E Session: E.1—Room 209 E.2—Room 217 E.3—Room 215

LEVIS FACULTY CENTER

4:30-6:30 p.m.	ISUR Poster Expo	1st Floor
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ORAL PRESENTATIONS

A SESSION, 10:00-11:00 A.M.

The Importance of Culture (Illini Union, 209)

Differences From the Eastern and Western Cultures Expressed Through Music

Kei U Lai, Junior, Civil Engineering, ENG
Michael Ayala, Freshman, Interdisciplinary Health, AHS

China and the United States: Differences in Attitudes on Foreign Cultures

Margaret Kiener, Senior, English, LAS
Katherine Bai (Xueqi Bai), Junior, Political Science, LAS

How Do Culture Differences Affect Negotiation?

Ryo Tanitsu, Non-Degree Seeking, LAS
Gloria Tang Kuai Fan, Junior, Elementary Education, EDU

When the World Watches: The Effects of Media on Rape Culture in India

Khushali Rami, Senior, Sociology and Economics, LAS

B SESSION, 11:00 A.M.-12:00 P.M.

B.1, Dimensions of Race and Ethnicity (Illini Union, 209)

African-American Humor and Audience

Lauren Jackson, Senior, English, LAS

American Communists and the Campaign to Abolish Segregation in Major League Baseball

Steven Bieszczyk, Senior, History, LAS

What Is in a Name? The Relationship Between Asians and Their Usage of English Names

Yukaro Kayma, Junior, Political Science, LAS
U Wang Iong, Junior, Japanese Studies, LAS

From Old School to Oriental: Turkish-German Rap, Language, and Identity

Elizabeth Mucha, Senior, Linguistics, LAS

B.2, Issues in the Writing Process (Illini Union, 217)

Writing Processes and Attitudes Across the Curriculum

Clara Mount, Junior, English, LAS
Joanna Chromik, Senior, English, LAS
Austin Gomez, Sophomore, English, LAS

Building Knowledge: Expectation and Execution in Writing Aesthetics

Todd Reese, Senior, English, LAS
Lauren Jackson, Senior, English, LAS
Julie Chamberline, Senior, English, LAS

Multilingual and Multicultural Writers

Grace Rosean, Junior, English, LAS
Alex Loh, Junior, English, LAS

Examining the Writing Tutoring Session

Anna Majeski, Senior, English, LAS
Reagan Roberts, Senior, English and Electrical Engineering, LAS and ENG

B.3, Issues in Curriculum and Instruction (Illini Union, 215)

Teaching Students Counseling Skills: Training in MSW Fieldwork

Kasandra Swanigan, Senior, English and Communication, LAS

Vocal Pedagogy: An Investigation of the Foundational Aspects of Singing and Methods to Identify and Remediate Vocal Dysfunction Caused by Chronic Respiratory Illness

Jasmine Henderson, Senior, Music, FAA

Mentorship and Academic Achievement in Higher Education Music Curriculum

Emily Malamud, Senior, Music Education, FAA

No Single Definition

Aliya Prescott, Senior, Social Work, SSW

B.4, Chinese Education Patterns, Part I (Illini Union, 211)

Teacher Preparation: A Comparison of Teacher Education and Development in China and the United States

Riley Wharton, Junior, Elementary Education, EDU
Mary Johnson, Junior, Elementary Education, EDU

Gaokao: China's National College Entrance Examination and Chinese Students' Perspective

Megan Lee, Junior, Elementary Education, EDU
Kristin Wang, Senior, Early Childhood Education, EDU

English Language Education in Chinese Schools

Kayla Bell, Senior, Elementary Education, EDU
Cheryl Deguzman, Senior, Elementary Education, EDU

Physical Education in China's Education System

Michelle Boston, Junior, Elementary Education, EDU
Stephanie Church, Junior, English, LAS

The Importance of Music Education in China

Amos Adekale, Freshman, Music Education, FAA
Catherine Anabella Lie, Junior, Architectural Studies, FAA

C SESSION, 1:30-2:30 P.M.

C.1, Literature as an Agent of Change (Illini Union, 209)

Domestic Sarcasm in the 1950s

Michelle Senger, Senior, English, LAS

Tourism, Terraforming, and the Picturesque: Visualizing Colonial India

Jonathan Cheng, Senior, English, LAS

The Man-Made Key to Women: How Women's Sexuality Was a Product of Male Desire

Reva Ghadge, Senior, English, LAS

Elizabeth Bowen and Narratives of Motion

Joanna Chromik, Senior, English and Communication, LAS

The Stereotype and Otherness

Nick Millman, Sophomore, Global Studies and English, LAS

C.2, Spaces and Places (Illini Union, 217)

The Interaction of Lighting Color, Intensity, and Placement in Defining Architectural Space

Diana Gedye, Senior, Architecture, FAA

Pussy Riot and Performance Space

Kelsey McGrath, Junior, Theater Studies, FAA

City Form, Public Space, and City Walkability

Shi-Yuan Yao, Junior, Urban and Regional Planning, FAA

Place, Meaning, and Identity in Architecture

Elisa Laurini, Junior, Architectural Studies, FAA

C.3, Integrative Biology (Illini Union, 215)

Mechanisms of Differential Limb Growth in *M. Domestica*, the Gray Short-Tailed Opossum

Anastasia Beiriger, Senior, Integrative Biology, LAS

Simultaneous Identification of Midwestern Tick-Borne Pathogens Using RLB Hybridization

David Forgacs, Senior, Integrative Biology, LAS

Using Gut-Passage Time and Mathematical Models to Predict Disease Prevalence in *Daphnia Dentifera*

Ping Lee, Senior, Integrative Biology, LAS

The Role of Gut Morphology and Physiology in Disease Transmission in *Daphnia Dentifera*

Grace Abernathy, Senior, Integrative Biology, LAS

D SESSION, 2:30-3:30 P.M.

D.1, Computer Science (Illini Union, 209)

Latency Measurement for Coordinated Omission

Danqing Xi, Senior, Computer Science, ENG

Monte Carlo Sampling: Pedigrees and Inheritance Paths

Shuxin Yu, Junior, Computer Science, ENG

Metastability in the 2D XY Model of Superconductors

Jack Weinstein, Sophomore, Computer Science, ENG

Topical Extraction and Ranking of Keyphrases from Text Documents

Nihit Desai, Senior, Computer Science, ENG

Human Activity Classification Based on TEEVE System Metadata

Aadhar Jain, Senior, Computer Science, ENG

D.2, Health Issues (Illini Union, 217)

Prevalence of Chlamydia in Champaign County, Illinois 2008-2012

Matt VanNatta, Senior, Community Health, AHS

Promoting Healthy Children: A Study of Public Nutrition Policy Barriers

Minyona Mason, Senior, Community Health, AHS
Catherine Topolinski, Senior, Political Science, LAS

Analyzing Charity Care Trends for Illinois Hospitals by Ownership Type, Population Density, and Services Provided

Ranait Mary O'Connor, Senior, Community Health, AHS
Gloria Frank, Senior, Community Health, AHS

60 Seconds to a Healthier You

Paige Cunningham, Senior, Food Sciences and Human Nutrition, ACES
Olivia Gordon, Sophomore, Community Health, AHS

D.3, Perceptions of Self and Others (Illini Union, 215)

Becoming Urban, Becoming American: Going Astray on the Jewish Lower East Side, 1870-1914

David Rahimi, Junior, History and Political Science, LAS

The Influence of Information Origin in Altering Individual Self-Image

Jacob Astin, Junior, Sociology and Political Science, LAS

Growing Up as a Latina Sexual Minority Adolescent Girl: Parent-Child Attachment and Related Developmental Concerns

Hortencia Arizpe, Senior, Social Work, SSW

D.4, Health, Disease, and Emergency Service Provision (Illini Union, 317)

The Evolution of Collaboration Among Emergency Response Organizations: The MABAS Story

John G. Moustis Jr., Senior, Communication, LAS

Emergency Department Costs by Methods of Payment

Doris Arevalo, Junior, Community Health, AHS

P450s: Nature's Silver Bullets

Brendan Colon, Senior, Integrative Biology and Chemistry, LAS

The Effects of Developmental Hypothalamic Cell Alterations in Obesity

George Naratadam, Junior, Molecular and Cellular Biology and Psychology, LAS

E SESSION, 3:30-4:30 P.M.

E.1, Depression and Psychological Processes (Illini Union, 209)

Perceptions of the Use of m-Health Technology to Conduct Prenatal Depression Screening in a Public Health Setting

Heather Sears, Junior, Social Work, SSW

Family Relationships and Communication in Suicide Survivor Families

Chye Hong Liew, Senior, Psychology, LAS

E.2, Chinese Education Patterns, Part II (Illini Union, 217)

Comparing Differentiation in the United States and China Education Systems

Alyssa Sturgeon, Junior, Elementary Education, EDU
Abbe Wienckowski, Junior, Elementary Education, EDU

China's Use of Technology in the Classroom

Kirsten Nold, Junior, Elementary Education, EDU
Jennifer Pael, Junior, Elementary Education, EDU

A Comparative Analysis of Special Education in China and the United States

Kelly Hahn, Junior, Early Childhood Education, EDU
Lexi Oreluk, Senior, Special Education, EDU

E.3, Literature in Motion: New Translations, New Contexts (Illini Union, 215)

Beowulf: Translated Text in the Canon

Julie Chamberlin, Senior, English, LAS

Milton and Avitus: A Legacy of Biblical Epic

Stephanie Hill, Senior, English, LAS

A Century of Metamorphosis: Translating Kafka in Context

Sarah Bragg, Junior, Psychology, LAS

Creation Narratives in Rabbinic Literature: You Didn't Build That

Zack Parker, Sophomore, Political Science and Religion, LAS

POSTER PRESENTATIONS

PA SESSION, 9:00-10:15 A.M., ILLINI ROOM A

PA.01 Comparison of Percent Fat in Boys and Girls Using DXA

Gayatri Satam, Senior, Molecular and Cellular Biology, LAS

PA.02 ZNF286 Isoforms and Their Impact on Neurogenesis

Jacqueline Brinkman, Sophomore, Molecular and Cellular Biology, LAS
Derek Caetano-Anolles, Graduate student, Cell and Developmental Biology, LAS

PA.03 A Microbiological Origin of High Frequency Zonations in Human Kidney Stones?

William Bruce, Junior, Molecular and Cellular Biology, LAS
Joe Weber, Senior, Molecular and Cellular Biology, LAS
Shelia Egan, Senior, Biochemistry, LAS

PA.04 Phleomycin-Induced DNA Damage, Chromosomal Fragmentation, and Cell Death

Paritosh Gangaramani, Junior, Molecular and Cellular Biology, LAS

PA.05 Sialic Acid Utilization in Colonization and Virulence in *S. Pneumonia*

Elizabeth Southworth, Junior, Molecular and Cellular Biology, LAS

PA.06 *Vulcanibacillus Sp. (Strain 5655), a Fermentative Iron-Reducing Bacterium Isolated from 1.72 Kilometer Depth Within the Cambrian-Age Mt. Simon Sandstone, Illinois Basin, USA*

Joseph Weber, Senior, Molecular and Cellular Biology, LAS

PA.07 Production and Characterization of New Lanthipeptides from *Escherichia Coli*

Candace Wong, Junior, Molecular and Cellular Biology, LAS

PA.08 Engineering Phosphite Dehydrogenase to Accept a Novel Substrate: A Mechanistic Study

Katarzyna Dubiel, Junior, Molecular and Cellular Biology, LAS

PA.09 Investigating Possible Acetyltransferase Modifying *HilD*, the Predominant Regulator of SPI-1 T3SS in *Salmonella*

Hae Lin Lee, Senior, Molecular and Cellular Biology, LAS

PA.10 Methods of Alcohol Oral Self-Administration and Assessment of Alcohol Intoxication in Rats

Minsu Kang, Senior, Psychology, LAS

PA.11 Characterization and Metabolomic Profile of the Small-for-Gestational-Age Piglet Following Arginine Supplementation

Alyssa Baratta, Senior, Animal Sciences, ACES
Caitlyn M. Getty, Graduate student, Animal Sciences, Vet Med

PA.12 Carbohydrate-Binding Module Length Determination in *Ruminococcus Albus*

Ana Skorupski, Senior, Animal Science, ACES

PA.13 Theoretical and Computational Model for the Two-Cone Visual System of the Largemouth Bass (*Micropterus Salmoides*)

Shannon Stanis, Senior, Integrative Biology, LAS
Nick Sutton, Sophomore, Integrative Biology, LAS
Zack Turner, Sophomore, Mathematics, LAS

PA.14 Cataract Screening by Minimally Trained Remote Observer with Non-Mydriatic Digital Fundus Camera

Ann Choi, Sophomore, Materials Science and Engineering, ENG

PA.15 Does There Exist a Non-Smooth Extremal?

Miaozhi Yu, Junior, Mathematics, LAS
Yuhao Zhu, Junior, Mathematics, LAS
Jacqueline Mentzel, Senior, Mathematics, LAS

PA.16 Intersecting Cylinders: From Archimedes and Zu Chongzhi to Steinmetz and Beyond

Abigail Turner, Sophomore, Mathematics, LAS
Ananya Uppal, Sophomore, Mathematics, LAS

PA.17 *Do Numbers Play Dice? Visualizing Order and Chaos in Number Theory Through Random Walks*
Natawut Monaikul, Senior, Mathematics, LAS
Tong Zhang, Senior, Mathematics, LAS
Yiwang Chen, Sophomore, Mathematics, LAS

PA.18 *Ideas in Marketing Mix with SAS for Online Marketers*
Joseph Jang, Senior, Mathematics, LAS
Jiyong Shin, Junior, Electrical and Computer Engineering, ENG

PA.19 *The Correlation Between BMI and Number of Meals Eaten in CACFP Centers*
Emily Samuel, Sophomore, Molecular and Cellular Biology, LAS
Elizabeth Villegas, Senior, Psychology, LAS
Stephanie Groeninger, Senior, Interdisciplinary Health, AHS

PA.20 *An Alternative to JPEG*
Moon Lee, Sophomore, Mathematics, LAS

PA.21 *Hydrologic Study at the Orr Research Center*
Rachel Welch, Senior, Natural Resources and Environmental Sciences, ACES

PA.22 *Random Points, Broken Sticks, and Triangles*
Lingyi Kong, Sophomore, Physics, LAS
Abigail Turner, Sophomore, Mathematics, LAS
Ananya Uppal, Sophomore, Mathematics, LAS
Luvсандондов Lkhamsuren, Freshman, Computer Science, ENG

PA.23 *Deep Borehole Storage of Spent Nuclear Fuel*
Robert Geringer, Senior, Nuclear, Plasma, and Radiological Engineering, ENG
Peter Mouche, Senior, Nuclear, Plasma, and Radiological Engineering, ENG
Jeffrey Zhou, Senior, Nuclear, Plasma, and Radiological Engineering, ENG

PA.24 *Avalanche Statistics in Micro-Pillar Compression*
Matthew Wraith, Senior, Physics, LAS

PA.25 *Use of Bone Char and Zerovalent Iron for the Removal of Arsenic and Uranium from Groundwater at the Pine Ridge Reservation*
Marika Nell, Junior, Civil and Environmental Engineering, ENG
Drew Bollinger, Sophomore, Chemical Engineering, LAS
Algimantas Marcinkevicius, Freshman, Chemical Engineering, LAS

PA.26 *Examining the Effects of Japanese Stiltgrass on Understory Fuels in Central Hardwood Prescribed Burn Locations*
Sean Hill, Junior, Natural Resources and Environmental Sciences, ACES

PA.27 *The Potential Barriers of Integrating Among International and American Students*
Katreena Casallo, Sophomore, Political Science and Global Studies, LAS
Tengio Cheong, Junior, Political Science, LAS

PA.28 *Weapons of Mass Cooperation: Conditions for Success in Achieving Multilateral Arms Control Agreements*
Elizabeth Philipp, Senior, Global Studies, LAS

PB SESSION, 9:00-10:15 A.M., SOUTH LOUNGE

PB.01 *How Accessible are Fire Escape Routes in UIUC Buildings?*
Guy Hainline, Sophomore, Agricultural Leadership Education, ACES
Will M. Firkins, Sophomore, Natural Resources and Environmental Sciences, ACES

PB.02 *Microfluidic Biosensor Based on Metalized Nanohole Array*
Pakapreud Khumwan, Senior, Agricultural and Biological Engineering, ENG

PB.03 *An Analysis of the Cost and Quality of Care at Illinois Hospitals by Region*
Alisha Morrow, Senior, Community Health, AHS

PB.04 *Physical and Chemical Comparison of Tomatoes Grown in Open-Field, Hydroponic, and High Tunnel Systems*
Lily Benner, Senior, Food Sciences and Human Nutrition, ACES
Carmen Au, Senior, Food Sciences and Human Nutrition, ACES

PB.05 *Identification of Bioactive Peptides from Cereal Storage Proteins and Their Potential Role in Prevention of Chronic Disease*
Ariel Cavazos, Senior, Food Sciences and Human Nutrition, ACES

PB.06 *Quantifying Effects of Nitrogen Flushing on Oxidation in Dehydrated Paprika*
Jun Ren Wong, Senior, Food Sciences and Human Nutrition, ACES

PB.07 *Youth's Commitment to Responsibilities in Youth Programs*
Natali Gracia, Junior, Human Development and Family Studies, ACES

PB.08 *Hemodynamic Responses in African Americans and Caucasian Americans Following an Acute Bout of Moderate Aerobic Exercise*
Michael Behun, Senior, Kinesiology, AHS

PB.09 *Maintenance of Academic Achievement During an Acute Bout of Exercise in Children*
Maren Dixon, Senior, Kinesiology, AHS

PB.10 *Effects of High-Fat Diet and Exercise on Muscle Function in Mice*
Paul Jung, Junior, Kinesiology, AHS
Adam Joseph, Sophomore, Kinesiology, AHS

PB.11 *The Acute Effects of Pomegranate Supplementation on Patients with Chronic Kidney Disease*
Julianne Sauer, Junior, Kinesiology, AHS

PB.12 *A Window into the Time Frame of Pronoun Case Errors*
Maeve McCartin, Senior, Speech and Hearing Science, AHS

PB.13 *Classroom Communication Practices Involving One Preschool-Aged Child with Complex Communication Needs*
Stephanie Russell, Senior, Speech and Hearing Science, AHS
Hillary Valentino, Senior, Speech and Hearing Science, AHS

PB.14 *A Multimodal Analysis of Interactional Timing: A Case Study of a Woman with Cerebral Palsy Using AAC*
Monique Kammo, Senior, Speech and Hearing Science, AHS
Amanda Rohde, Sophomore, Speech and Hearing Science, AHS

PB.15 *Investigating Copula Omission in Children 30 to 33 Months of Age: A Further Analysis of One Explanation*
Amy Strohmman, Senior, Speech and Hearing Science, AHS

PB.16 *What is the Relationship (If Any) Between PPE and School Location (Urban, Suburban, Rural, Small City), and Are There Relationships Between PPE and Student Characteristics such as Race, SES, and Achievement?*
Heather Graham, Senior, Elementary Education, EDU

PB.17 *Solutions for North First Street on Senior Housing*
Cody Blanchard, Senior, Psychology, LAS
Kevin Greene, Senior, Architecture, FAA

PB.18 *Meat Consumption and Blood Pressure: UP-Amigos Project*
Alexia Ng, Sophomore, Community Health, AHS

PB.19 *Comparing General and Nutritional Characteristics of High Tunnel-Grown Red Raspberry Cultivars*
Michael Fornaris, Junior, Food Science and Human Nutrition, ACES

PB.20 *Family Support for Older Adults in Brazil*
Zachary Polentini, Freshman, Kinesiology, AHS

PB.21 *Tense and Parent Input*
Theodora Papastratakos, Senior, Speech and Hearing Science, AHS

PB.22 *Demographic Warfare: The Politics of Ethnic Population Rates*
Jeremiah Pickert, Senior, Political Science and Psychology, LAS

PB.23 *Making Meaning in Art: The Placement of Art in Israeli Society*
Shanita Cadney, Senior, Anthropology, LAS

PB.24 *Owning Up to Development: Property Rights and Investment in South Africa*
Casey Thiel, Junior, Political Science and Economics, LAS

PB.25 *Do Women in Leadership Matter?*
Mary Feitz, Senior, Political Science, LAS

PB.26 *Optimal Pursuit of Flexibility and Scope: The Dynamics of Preferential Trade Agreements*
Kee Hee Lai, Senior, Political Science, LAS

PB.27 *“Demagogues Can’t Survive Humor. Truly Great Men Thrive On It”: A Historical Examination of Presidential Humor in Popular Media*
Glenna Nickerson, Senior, Political Science, LAS

PB.28 *The Nature of Supreme Ideology: Determining What Factors Affect Supreme Court Decisions in Environmental Cases*
Karissa Snouffer, Senior, Political Science, LAS

PB.29 *New Kid on the Block : Leadership Change and Territorial Dispute Recurrence*
Marcin Michniowski, Senior, Political Science and East Asian Languages and Cultures, LAS

PB.30 *Headliners: Analyzing National Media Coverage of the European Union*
Faith Kouimelis, Senior, Political Science and French, LAS

PB.31 *Rivalry Recurrence: It Ain’t Over ‘Til It’s Over*
Matthew Fishman, Senior, Political Science and Spanish, LAS

PB.32 *Analysis and Comparison of Bilingual Programs in Illinois*
Melissa Boyce, Freshman, Elementary Education, EDU

PB.33 *Behavior Management in Illinois*
Kelly Kopija, Junior, Elementary Education, EDU

PB.34 *Greater Academic Achievement in Chicago Charter Schools?*
Jazmin Landa, Freshman, Elementary Education, EDU

PB.35 *Factors of Condom Usage Among Certain Sub-Saharan African Populations*
Neetu Hariharan, Senior, Global Studies, LAS

PB.36 *Trade Agreements, Militarized Interstate Disputes, and Economic Activity: Establishing the Relationship*
Michael Henry, Senior, Global Studies, LAS

PB.37 *The Influence of Work on Self-Esteem and Social Inclusion of Persons with Disabilities in Subsistence Marketplaces: Cases from Mombasa, Kenya*
In Woo Jung, Senior, Global Studies, LAS

PB.38 *UN Voting: Changing Behaviors of Mid-Sized Powers*
Madeleine Cisneros, Senior, Global Studies, LAS

PB.39 *Fairy Lore in Shakespeare*
Natalie Farmer, Senior, English, LAS

PB.40 *Disability Accessibility to Fraternities and Sororities*
Margaret O'Connor, Junior, English, LAS

PC SESSION, 10:45 A.M.-12:00 P.M., ILLINI ROOM A

PC.01 *Evaluating Nutrition's Effect on Resting Brain Function*
Brent Cross, Senior, Radiological Engineering, ENG

PC.02 *Gender Difference in Response to Dietary Genistein-Induced Chromatin Remodeling of WNT Genes in Preneoplastic Rat Colon*
Julie Bray, Senior, Biochemistry, LAS

PC.03 *Pleiotropic Effects of ALS and PPO Inhibitor Resistance Alleles on Seed Dormancy*
Alicia Gardner, Senior, Crop Sciences, ACES

PC.04 *Leader Styles' Effect on Youth's Work and Ownership in Two Programs: Leader Restraint and Leader Dominant*
Melissa Negron, Senior, Integrative Biology, LAS

PC.05 *White Matter Changes in People with Hearing Disorders*
Louay Jajeh, Senior, Molecular and Cellular Biology, LAS

PC.06 *The Effects of Estrogen Receptor Alpha on Anxiety and Depression*
Steven Lord, Senior, Molecular and Cellular Biology, LAS

PC.07 *The Immuno-evasive Role of Molluscum Contagiosum Viral Protein MC160*
Catherine Selen, Senior, Molecular and Cellular Biology, LAS

PC.08 *MC160 Inhibits the Action of TBK-1 to Down-Regulate Expression of the Antiviral Cytokine IFN- β*
Marla Tharp, Junior, Molecular and Cellular Biology, LAS

PC.09 *Identification of Photorespiration Mutants in Arabidopsis*
Morgan Zenner, Sophomore, Molecular and Cellular Biology, LAS

PC.10 *Phage Display of Lantibiotics*
Dhruv Kumar, Sophomore, Molecular and Cellular Biology, LAS

PC.11 *Hurricane Impacts on Coral Bleaching in the Atlantic Basin*
Sarah Rivard, Senior, Integrative Biology, LAS

PC.12 *ATMS Building Energy Audit*
Dustin Conrad, Junior, Atmospheric Science, LAS

PC.13 *Quantitative Analysis of the Impact of Social Environment Factors on China Birthrates*
Liran Chen, Junior, Statistics, LAS

PC.14 *Physiological Characterization of an Iron-Reducing Bacterium Comprising the 2.02 Kilometer Deep Microbial Biosphere of the Cambrian-Age Illinois Basin, USA*
Sheila Egan, Senior, Biochemistry, LAS

PC.15 *Participatory Research to Strengthen Community Identity with Champaign's 5th and Hill Neighborhood*
Maryam Razafsha, Sophomore, Statistics, LAS

PC.16 *Cellular Modulation of Protein Folding in Organelles*
Jonathan Tai, Junior, Biochemistry, LAS

PC.17 *Beta-Hydroxy-Beta-Methylbutyrate (HMB) Clearance in Hemodialysis Patients*
Allyson Nicholas, Senior, Kinesiology, AHS

PC.18 *Lithium/Metal-Infused Trenches (LiMIT) for Heat Removal in Fusion Devices*
Travis Mui, Senior, Nuclear, Plasma, and Radiological Engineering, ENG
David Lee, Sophomore, Electrical and Computer Engineering, ENG

PC.19 *Feedlot Nutrition Research*
Amy Sneed, Senior, Animal Sciences, ACES

PC.20 *Interspecific Competition for Algal Resources Alters Disease Dynamics in Daphnia*
Glynn Davis, Sophomore, Mathematics, LAS

PC.21 *Dynamic Force-Induced Direct Dissociation of Protein Complexes in a Nuclear Body in Living Cells*
Ching Kai Wu, Senior, Biochemistry, LAS

PC.22 *Modeling Gas Motions in Spiral Galaxies*
Katrina Litke, Sophomore, Astronomy, LAS

PD SESSION, 10:45 A.M.-12:00 P.M., ILLINI ROOM C

PD.01 *Fire Escape Project*
Caitlin Landry, Senior, Community Health, AHS
Eric Cornell, Senior, Community Health, AHS

PD.02 *Effects of Interventions on the Quality of Life (QOL) of Patients with Amyotrophic Lateral Sclerosis (ALS): A Modified Integrative Literature Review*
Alexi Gurick, Senior, Nursing, College of Nursing

PD.03 *NPO After Midnight: An Outdated Practice?*
Samantha Ocampo, Senior, Nursing, College of Nursing

PD.04 *Childhood Leukemia and Secondary Cancer*
Stephanie Izral, Senior, Nursing, College of Nursing

PD.05 *Fueling Our Athletic Abilities: The Effects of Hydration on Athletic Performance and Health*
Renee Ayeh, Freshman, English, LAS

PD.06 *Peace and Conflict on the Home Front: Characteristics of Familial Discouragement Among National Guardsmen*
Amanda Hwu, Sophomore, Social Work, SSW

PD.07 *To Serve or Not to Serve: The Correlation Between National Guardsmen Employment and the Likelihood of Reenlistment*
Jessie Ruiz, Junior, Social Work, SSW

PD.08 *Perinatal Depression Screening in a Public Health Women, Infants, Children Program: Feasibility and Acceptability*
Madeline Root, Senior, Psychology and Social Work, LAS and SSW
Shinwoo Choi, second-year Ph.D. student, Social Work, SSW

PD.09 *North First Street Alley Clean Up*
Wesley Clayborn, Senior, Urban Planning, FAA

PD.10 *360-Degree Registered Student Organization*
Kathryn DiGiulio, Junior, English, LAS
Dana Glink, Senior, Human Development and Family Studies, ACES
Alex Romine, Sophomore, Molecular and Cellular Biology, LAS
Joseph Gasienica, Sophomore, Consumer Economics, ACES

PD.11 *Urban Uprisings: Chicago in the Summer of 1966*
Derek Hammitt, Senior, History, LAS

PD.12 *Initiation and Selection of Carrot Cell Cultures for Labeled Lutein Production*
Disha Gandhi, Senior, Food Sciences and Human Nutrition, ACES

PD.13 *Firemen Protocol for Persons with Disabilities*
Marguerite Mahowald, Senior, Community Health, AHS

PD.14 *Antioxidant Capacity and Total Polyphenols of Common Culinary Herbs*
Susan Marquez, Senior, Food Sciences and Human Nutrition, ACES

PD.15 *Eastern Pacific Surface Warming Due to Tropical Cyclones*
Jacqueline Costello, Senior, Atmospheric Sciences and Geographic Information Science, LAS

PD.16 *Characterizing American Sign Language Fluency Using the Spatiotemporal Index*
Allison Hilger, Senior, Speech and Hearing Science, AHS

PD.17 *Consumer Preferences in Wine*
Rachel Zook, Senior, Markets and Management, ACES

PD.18 *Broccoli and Cancer*
Jamie Keen, Senior, Food Sciences and Human Nutrition, ACES

PD.19 *Earnings Management Existed in Agribusiness Firms*
Yueyin Huang, Senior, Agricultural Accounting, ACES

PD.20 *The Effects of Weather on Market Price of Crops*
Kevin Conrath, Senior, Atmospheric Science, LAS

PD.21 *Sugar Uptake Inhibiting Factors and Flavonoid Compounds in Several Berry Juices*
Mellisa Yu, Junior, Food Sciences and Human Nutrition, ACES

PD.22 *Communication*
Erin Ross, Junior, Special Education, College of Education

PD.23 *Nutrition Policies and Menus: Differences Across Child-Care Contexts*
Laura Penrod, Junior, Speech and Hearing Science, AHS
Armi Grace Cortes, Junior, Community Health, AHS

PD.24 *Parent-Child Relationships, Social Support, and Sexual Behavior in Mexican Young Adults*
Olivia Atherton, Senior, Psychology, LAS

PD.25 *How Perceptions of Physical Activity Amongst Older Latina Women Residing in Chicago Affect Their Physical Activity Behavior*
Meredith Heneghan, Senior, Kinesiology, AHS

PD.26 *Comparison of General and Nutritional Characteristics of Five Strawberry Cultivars Grown Hydroponically in a High Tunnel Environment*
Sui Kwan Lau, Junior, Food Sciences and Human Nutrition, ACES

PE SESSION, 10:45 A.M.-12:00 P.M., SOUTH LOUNGE

PE.01 *Nationalism and Asian-American Identity*
Leah Matchett, Freshman, Global Studies and Geology, LAS

PE.02 *American University Meets the Pacific Century: Responses of American Students*
Jeffrey Harmon, Senior, Global Studies and East Asian Languages and Cultures, LAS
Mary Claire Gustafson, Senior, Anthropology, LAS

PE.03 *Age-Related Effects in Resolving Ambiguity: Evidence from an Idiom Comprehension Task with Younger and Older Adults*
Adina Raizen, Senior, Linguistics and Psychology, LAS

- PE.04** *The Influence of Time Pressure on Conformity*
Jared Matthew, Senior, Psychology and Communication, LAS
-
- PE.05** *How Does Learning Affect Dendritic Properties in the Mouse Primary Cortex?*
Alesia Prakapenka, Senior, Psychology and International Business Management, LAS and BUS
-
- PE.06** *Developmental Analysis of Neocortical Vasculature Abnormalities in a Mouse Model of Fragile X Syndrome*
Stephen Fleming, Junior, Psychology, LAS
-
- PE.07** *Inter-Strain Comparison of Exercise-Induced Hippocampal Neurogenesis*
Jennifer Merritt, Senior, Psychology, LAS
-
- PE.08** *Packaging Pasts and Envisioning Futures: Millennial Latin Americans and New Cosmopolitanism*
Tara McGovern, Senior, Anthropology, LAS
-
- PE.09** *Neoliberalism and Privatized Security: Causes, Context, and Implications*
Iilir Sulejmani, Senior, Sociology, LAS
-
- PE.10** *Emblematica Online II*
Jean Abbott, Senior, Spanish, LAS
Jacqueline Mentzel, Senior, Mathematics and English, LAS
Melina Nunez, Freshman, Psychology, LAS
-
- PE.11** *Stereotypes at the University of Illinois*
Stephanie Kreager, Senior, Political Science and Sociology, LAS
-
- PE.12** *The Arctic in Literature*
Sara Backlund, Junior, English and Comparative Literature, LAS
-
- PE.13** *Emblematica Online I: Digitization and Stitching*
Heidi Heim, Sophomore, Art History, LAS
Patricia Fleming, Freshman, English, LAS
Phillip Brumbaugh, Senior, English, LAS
-
- PE.14** *The Cultural Exchange Between Ancient Rome and China in Theatre*
Qianzhu Luo, Senior, Theatre, FAA
-
- PE.15** *The Role of Copper and Extractive Industries in the Andes*
Lara Sanoica, Senior, Global Studies and Spanish, LAS
-
- PE.16** *The Effect of Negative Emotional Stimuli on Relational Memory*
Inge Karosevica, Senior, Psychology, LAS

- PE.17** *Promoting Children's Outreach and Vocational Education in Uganda Through Applied Research in an International Service-Learning Course*
Courtney Kramer, Junior, Global Studies, LAS
Krish Ramadurai, Junior, Economics and Genetics, LAS
Elizabeth Melhop, Senior, Architecture, FAA
Vigneshwar Karthikeyan, Senior, Electrical Engineering, ENG
Christine Do, Senior, Molecular and Cellular Biology, LAS
Jones Soetoyo, Junior, Agricultural Engineering, ACES
Michal Szymulanski, Senior, Computer Science, ENG
-
- PE.18** *Policy Coherence in the European Union: Going Beyond Aid*
Valerie Ferrin, Senior, Political Science and Economics, LAS
-
- PE.19** *EU Influence on Immigration Policy and Its Implications for Maghrebian Immigrants*
Joshua Erb, Senior, Global Studies, LAS
-
- PE.20** *The Power of Capitalization and Race*
Miriam Kahn, Senior, Psychology, LAS
-
- PE.21** *Patent Pending: When Do National Intellectual Property Policies Lead to International Trade Disputes?*
Valerie Brankovic, Junior, Political Science, LAS
-
- PE.22** *The Effects of Hypothyroidism on Encoding and Retrieval of Paired-Associate Memory*
Aneesh Chawla, Senior, Psychology, LAS
-
- PE.23** *Comparing the Experimental and Calculated Equilibrium Water Activity of Dual-Textured Food Systems*
Alexandra Pierce, Senior, Food Sciences and Human Nutrition, ACES

LUNCH, 12:00-1:15 P.M., ILLINI ROOM B

FEATURED SESSIONS

- User-Centered Design Process: Next Generation Adaptive Driving Controls*
William Tham, Senior, Industrial Design, FAA
-
- Pill-Dispensing Prescription Bottle Caps: Working Toward the Right Product and Design*
Daniel D. Borup, Senior, Mechanical Science and Engineering, ENG
-
- From Corn to Trees: Staking My Claim*
Kevin Wolz, Senior, Integrative Biology, LAS

PF SESSION, 1:30-2:45 P.M., ILLINI ROOM A

- PF.01** *Tracing Learning in Aphasia*
Anna Ortigara, Senior, Speech and Hearing Science, AHS
Alexandra Karigan, Junior, Speech and Hearing Science, AHS
-
- PF.02** *Fitness Selectively Modulates: Aspects of Academic Achievement in Children*
Erin Lamb, Senior, Kinesiology, AHS
-
- PF.03** *Visual Attention Gradients and Written Word Processing*
Kristen Zwicky, Senior, Speech and Hearing Science, AHS
-
- PF.04** *Hospital Re-Admission: Causes and Comparisons*
Kayla Roeske, Senior, Community Health, AHS
Nicole Parkinson, Junior, Community Health, AHS
-
- PF.05** *Eating Away at the Relationship Between Mealtime Distractions and Child Food Consumption*
Allison Bryne, Sophomore, Community Health, ACES
Lily Benner, Senior, Food Science and Human Nutrition, ACES
Simi Jhajj, Senior, Community Health, ACES
-
- PF.06** *Efficacy of Intermittent or Continuous Blood Flow-Restriction Resistance Training*
Mark Walsh, Senior, Kinesiology, AHS
-
- PF.07** *Assessment of the Blended Classroom*
Ryan Warner, Senior, Community Health, AHS
-
- PF.08** *Dietary Intake of Carbohydrates Associated with Dental Caries Among Young Mexican College Students*
Jiaying Ren, Junior, Food Sciences and Human Nutrition, ACES
-
- PF.09** *Gray Matter Volume Changes in the Brain in Tinnitus and Hearing Loss*
Erika Lindgren, Junior, Speech and Hearing Science, AHS
-
- PF.10** *Neuroimaging and Behavioral Techniques in Speech Perception*
Alexander Senetar, Junior, Neuroscience, LAS
-
- PF.11** *Exploring Metabolic Risk Factors in Mexican College Students*
Erica Rivas, Junior, Community Health, AHS
-
- PF.12** *Space Bound: A Phenomenological Look at Contemporary Sensory Theatre in Non-Conventional Spaces*
Mateo Hurtado, Freshman, Acting, FAA
-
- PF.13** *House Finch and House Sparrow Interactions Along an Invasion Front*
Eric Janssen, Senior, Natural Resources and Environmental Sciences, ACES

- PF.14** *Identification of Chromatin Remodeling Enzymes Functioning in Planarian Regeneration*
Rivka Stelman, Sophomore, Molecular and Cellular Biology, LAS
-
- PF.15** *Characterization and Expression of Transcripts Involved in the Alkaloid Biosynthetic Pathways in Medicinal Plants*
Alyssa Osimani, Junior, Biochemistry, LAS
-
- PF.16** *Scintillation Detector Enhancement with Silicon Nanoparticles*
Charlie Yu (Haichuan), Junior, Electrical Engineering, ENG
-
- PF.17** *The Religion of Atheism: Types of Atheists and Disgust Responses to Christian Beliefs*
Ryan Paroline, Senior, Psychology, LAS
-
- PF.18** *Perceived Utility of Shame and Guilt and Rejection Sensitivity in Depression*
Fan Wu, Senior, Psychology, LAS

PG SESSION, 1:30-2:45 P.M., SOUTH LOUNGE

- PG.01** *Beyond Leadership Change: International Conflict and Regime Transitions*
Grace Lee, Junior, Political Science, LAS
-
- PG.02** *A Conflicted State*
Colin Zimmerman, Junior, Political Science, LAS
-
- PG.03** *Architects of National Destiny: When and How Do State Leaders Use Nationalist Appeals?*
Sungmin Lee, Senior, Political Science and East Asian Languages and Culture, LAS
-
- PG.04** *Dollars and Democracy: Regime Type and FDI*
Nathan Gilbert, Senior, Political Science, LAS
-
- PG.05** *Public Opinion and Foreign Aid: The Limits of Representation*
Nicholas Dietrich, Junior, Political Science, LAS
-
- PG.06** *Property Rights and Agricultural Growth*
James Reed, Junior, Political Science and Spanish, LAS
-
- PG.07** *Breastfeeding Education in Incarcerated Mothers*
Diana Dominguez, Senior, Nursing, College of Nursing
-
- PG.08** *Narcissism and Emotional Responses to Social Rejection*
Corinne Kacmarek, Senior, Psychology, LAS
-
- PG.09** *Effects of Perinatal Exposure to BPA on Adult Hippocampal Volume*
Tachyeon Kim, Senior, Psychology, LAS

PG.10	<i>The Relationship Between Conscientiousness and Physical Health</i> Olivia Atherton , Senior, Psychology, LAS
PG.11	<i>Marketplace Literacy</i> Anusha Narayanan , Senior, Economics, LAS Eric DeBellis , Senior, Economics and Political Science, LAS Umang Sood , Senior, Finance, BUS
PG.12	<i>Mad Money: Economic Motivations and Civil Uprising</i> Anuj Shah , Senior, Political Science and Economics, LAS
PG.13	<i>Risk and Protective Factors for Strain in Caregivers of Youth with Severe Emotional Disturbances</i> Kimberley Bryan , Senior, Psychology and Sociology, LAS
PG.14	<i>Assigning Physiological Function of Mannonate Dehydratase (ManD) in Chromohalobacter Saalexigens</i> Jean Vendiola , Senior, Molecular and Cellular Biology, LAS
PG.15	<i>The Experiences of Family Child Care Providers Serving Children with Special Needs</i> Hannah Kessler , Senior, Human Development and Family Studies, ACES
PG.16	<i>Comparison of Financial Performance of Agricultural Firms in Different Sectors Since 2008</i> Linlin Zhang , Senior, Agriculture Consumer Economics, ACES

PH SESSION, 1:30-2:45 P.M., ILLINI ROOM C

PH.01	<i>Disease Classification and Anatomical Discrimination Using In-Source Decay Coupled to Desorption Electro Spray Ionization Mass Spectrometry Imaging</i> Ji Eun Park , Senior, Chemistry, LAS
PH.02	<i>Polymer-Doped Carbon Nanotubes for Photovoltaics</i> Roshan Murthy , Senior, Materials Science and Political Science, LAS and ENG
PH.03	<i>Characterizing Neuromuscular Junctions Using Novel Microfluidic Devices for Biobot Prototypes</i> Samir Mishra , Sophomore, Bioengineering, ENG
PH.04	<i>Microfluidic Approaches to Chromatin Immunoprecipitation Assays</i> Mallika Modak , Senior, Bioengineering, ENG
PH.05	<i>Hydrogel Gradient Systems to Examine Paracrine Signaling on Hematopoietic Stem Cell Fate</i> Luke Skertich , Junior, Engineering, ENG
PH.06	<i>Metal Nanoparticles on Polymer-Wrapped Carbon Nanotubes for the Electrochemical Reduction of CO₂ to Value-Added Products</i> Paul Anderson , Senior, Chemical Engineering, LAS

PH.07	<i>Influence of Extracellular Matrix Microenvironment on Glioma Cell Malignancy</i> Eftalda Becka , Senior, Chemical Engineering, LAS
PH.08	<i>Optimization of a Microfluidic Platform for Electrochemical Reduction of CO₂</i> Saman Moniri , Junior, Chemical Engineering, LAS
PH.09	<i>Microfluidic Protein Crystallization</i> Michael Varel , Junior, Chemical Engineering, LAS
PH.10	<i>Refining and Utilizing Gray-Scale Photochemical Etching in GaAs Device Fabrication</i> Kaiyuan Wang , Senior, Electrical Engineering, ENG
PH.11	<i>Leukocyte Profiles of Birds Naturally Infected with Hematozoa</i> Julie Nelson , Senior, Animal Sciences, ACES
PH.12	<i>Characterization of VOC Adsorptive Properties for Electrothermal Swing Adsorption Systems</i> Daniel Malsom , Junior, Civil Engineering, ENG
PH.13	<i>Arginine Vasotocin Signaling Is Required for Behavioral Dominance in the Protandrous Clownfish Amphirprion Ocellaris</i> Courtney Yaeger , Senior, Neuroscience, LAS
PH.14	<i>Does the Stress Experienced by a Mother Affect Her Offspring's Ability to Apply Previously Learned Knowledge to a New Situation?</i> Sally Feng , Junior, Integrative Biology, LAS
PH.15	<i>Quantification of Flourey2-RFP Accumulation in the Illinois Protein Strain Recombinant Inbred Mapping Population</i> Jarai Carter , Junior, Crop Science, ACES
PH.16	<i>The Effects of High Grain-Induced Sub-Acute Rumen Acidosis on Urine pH in Dairy Cattle</i> Katie Haerr , Senior, Animal Sciences, ACES
PH.17	<i>Series-Connected Server Voltage Regulation</i> Yujia Zhang , Senior, Electrical Engineering, ENG Jeff Wheeler , Senior, Electrical Engineering, ENG Chengyang Xu , Junior, Electrical Engineering, ENG

PI SESSION, 3:15-4:30 P.M., ILLINI ROOM A

PI.01	<i>The Influence of the Great Lakes on the Poleward Propagation of Synoptic Warm Fronts</i> Robert Fritzen , Senior, Atmospheric Sciences, LAS
PI.02	<i>Identification of Ideal Architecture of Photoperiod-Sensitive Sorghum</i> Ithipong Assaranurak , Senior, Crop Sciences, ACES

PI.03	<i>Comparisons of Precipitation Extremes in the United States</i> Alex Goodman , Senior, Atmospheric Sciences, LAS
PI.04	<i>Understanding the Angular Anisotropy of Scattered Sunlight from Clouds as a Function of Measurement Resolution</i> Andrew Manaster , Senior, Atmospheric Sciences, LAS
PI.05	<i>Albedo-Weighted Arctic Climate Change</i> Pratik Patel , Senior, Atmospheric Sciences, LAS
PI.06	<i>Doppler Radar Observations of a Left-Moving Supercell Thunderstorm on 26 May 2009</i> Mark Savin , Sophomore, Atmospheric Sciences, LAS
PI.07	<i>Single- and Dual-Doppler Radar Observations of a Nontornadic Supercell Thunderstorm on 6 June 2010</i> Zachary Wienhoff , Senior, Atmospheric Sciences, LAS
PI.08	<i>New Definitions for the Rapid Intensification of Hurricanes</i> Amanda Silver , Senior, Atmospheric Sciences and Chemistry, LAS
PI.09	<i>G-Quadruplex DNA and the Regulation of Human Telomere Accessibility</i> Jacob Calvert , Sophomore, Bioengineering, ENG
PI.10	<i>The Bathroom of the Future</i> Matthew Entler , Senior, Bioengineering, ENG Christine Lekas , Senior, Bioengineering, ENG Frank Delgado , Senior, Bioengineering, ENG Hannah Friedman , Senior, Mechanical Sciences and Engineering, ENG
PI.11	<i>High-Resolution pH Detection with Nanoscale Biosensors: Field-Effect Transistors</i> Yu Zhong , Junior, Electrical Engineering, ENG
PI.12	<i>Tracking Non-Thermal Particles in Black Hole Accretion Disk</i> Alex Stec , Junior, Engineering Physics, ENG
PI.13	<i>Using Analytics to Forecast the Outcomes of U.S. National Elections</i> Bhargava Manja , Freshman, Computer Science, ENG Angela Ding , Senior, Industrial Engineer, ENG
PI.14	<i>The Preferences of Different Cultures Among U of I Students</i> Maia Wright , Freshman, Computer Science, ENG Lio Hak Kin , Junior, History, LAS Wei King , Junior, Early Childhood Education, EDU
PI.15	<i>PIV Particle Sizing: Particle Dynamics Across an Oblique Shock</i> Robyn Macdonald , Senior, Aerospace, ENG

PI.16	<i>Incorporation of Unnatural Amino Acids into the Lantibiotic Nisin</i> Alejandro Bueno , Senior, Chemistry, LAS
PI.17	<i>The Impact Parental Dietary Habits Have on Their Children</i> Jenny Tumba , Senior, Chemistry, LAS Alison M. Kobel , Senior, Speech and Hearing Science, AHS
PI.18	<i>Standing Water Wave Experiments to Characterize Sensor Accuracies</i> Chengfeng Mao , Freshman, Civil and Environmental Engineering, ENG
PI.19	<i>Role of Extracellular Polymeric Substances on Virus Removal in Biosand Filters</i> Hanting Wang , Senior, Civil Engineering, ENG
PI.20	<i>Guide to the Ticks of Kenya</i> Tyler Hedlund , Senior, Entomology, LAS
PI.21	<i>Fighting Flies: Brain Metabolism Influences Aggression in Drosophila</i> Jonathan Massey , Senior, Entomology, LAS
PI.22	<i>Yield Stress Droplet Impact</i> Marc Deetjen , Junior, Mechanical Engineering, ENG Brendan Blackwell , Graduate student, Mechanical Engineering, ENG Joseph Gaudio , Freshman, Mechanical Engineering, ENG
PI.23	<i>Mathematical Models of Gene Regulatory Networks in Limb Development</i> Rachel Poe , Sophomore, Mathematics, LAS Kari Kosog , Sophomore, Integrative Biology, LAS
PI.24	<i>Crackling Noise and Avalanches in Metallic Glasses</i> James Antonaglia , Senior, Physics, LAS
PI.25	<i>Bivalent Ligands as Potential Therapeutic Agents for Myotonic Dystrophy Type 1</i> Kali Miller , Senior, Chemistry, LAS
PI.26	<i>Desorption Electro Spray Ionization Mass Spectrometry of Intact Human Cells</i> Seung Woo Ryu , Junior, Biochemistry, LAS
PI.27	<i>Probing the Physics of Cosmic Inflation with Large-Scale Structure</i> John Hoffman , Senior, Physics and Mathematics, LAS
PI.28	<i>Flipping the Classroom: Advancing Engineering Education</i> Sierra Freeman , Senior, General Engineering, ENG

PI.29 *Carbon Sequestration Affected by Soil Managements with High C Input in Tropical and Subtropical Environments*
Thiago Massao Inagaki, Non-Degree Seeking, Crop Sciences, ACES

PI.30 *Exploring the Effects of Genetic Variation in Host Algal Resource Acquisition Traits on Disease Prevalence in a Competitive Disease System*
Sarah Duple, Junior, Integrative Biology, LAS

PI.31 *Improving Methods for Laboratory and Toxicity Testing: An Investigation of Life History Differences Between Laboratory and Wild Populations of the Amphipod *Hyalalella Azteca**
Abigail McEwen, Senior, Integrative Biology, LAS

PI.32 *Replacing Generic Parameterizations of Stomatal Function in Temperate Trees with Specific Functions Allows Modeling to Resolve Interspecific Variation in Carbon and Water Fluxes*
Kevin Wolz, Senior, Integrative Biology, LAS

PJ SESSION, 3:15-4:30 P.M., SOUTH LOUNGE

PJ.01 *The Mystery of American Goldfinch (*Spinus tristis*) Tail White*
Richard Hartland, Junior, Natural Resources and Environmental Sciences, ACES

PJ.02 *Experiences of Siblings of Persons with Autism*
Jordan Coleman, Senior, Human Development and Family Studies, ACES

PJ.03 *Smart Parents Get Their Kids Moving!*
Haley Highfill, Sophomore, Interdisciplinary Health, AHS
Samantha Renee Labus, Sophomore, Speech and Hearing Science, AHS

PJ.04 *Empathic Modeling in Design*
Lana Rottler, Junior, Industrial Design, FAA
Michelle Kwak, Junior, Industrial Design, FAA

PJ.05 *The Relationship Between Health Safety Scores and Patient Outcomes*
Olatoyosi Akinrotimi, Junior, Community Health, AHS
Emmon Biah, Senior, Community Health, AHS

PJ.06 *Assessment of Learning in the Classroom*
Alexandra Fushi, Senior, Community Health, AHS
Heather Weissinger, Junior, Community Health, AHS

PJ.07 *When Less Isn't More*
Megan Anderson, Senior, Political Science and Communication, LAS

PJ.08 *Department of LGBTQ Activism and Movement in the Former Yugoslavia*
Justin Ostrowski, Junior, Political Science and Economics, LAS

PJ.09 *Getting What They Wished For? Wartime Aid, Rebel Governments, and Their Foreign Donors*
Jon Ahern, Senior, Political Science and History, LAS

PJ.10 *The Price of Welfare*
Catherine Topolinski, Senior, Political Science, LAS

PJ.11 *How Adolescents Develop Interpersonal Skills in Leadership or Mentoring Roles in Youth Programs*
Alexis Bryd, Junior, Human Development and Family Studies, ACES

PJ.12 *Strategic Attention in Young Adults*
Jenna Marmitt, Senior, Speech and Hearing Science, AHS
Michelle Gutierrez, Senior, Speech and Hearing Science, AHS
Lukasz Pazdan, Junior, Molecular and Cellular Biology, LAS

PJ.13 *Emerging Tectonic Prototypes*
James Addison, Junior, Architectural Studies, FAA
Catherine Anabella Lie, Junior, Architectural Studies, FAA

PJ.14 *ERP Correlates of Familiarity and Recollection in Associative Recognition*
Luis Paneque, Senior, Psychology, LAS

PJ.15 *A Historical Comparison of Roman and Spanish Theatrical Spaces*
Julia Celentano, Junior, Theatre Studies, FAA

PJ.16 *Relationship Between Time Spent Playing Video Games and Sleep in 2- to 4-Year-Olds*
Emily Murphy, Junior, Human Development and Family Studies, ACES
Amanda Bergard, Senior, Psychology, LAS

PJ.17 *The Impact of Psychological Well-Being on Food Security: Uncovering a Trend of Significance*
Amanda Jacobs, Sophomore, Earth, Society, and Environmental Sustainability, LAS
Margaret Nowak, Senior, Speech and Hearing Science, AHS

PJ.18 *Long-Term Weathering Mechanisms in a Maine Spodosol: An SEM Approach*
Matthew Rundquist, Senior, Natural Resources and Environmental Sciences, ACES

PERFORMANCES

3:15-4:30 P.M., ILLINI ROOM B

Fully Interactive Virtual Labs for Training and Education
Ye Li, Senior, Nuclear, Plasma, and Radiological Engineering, ENG
Imran Haddish, Graduate student, Nuclear, Plasma, and Radiological Engineering, ENG
Daniel Roberts, Junior, Nuclear, Plasma, and Radiological Engineering, ENG
Benjamin Sturm, Junior, Nuclear, Plasma, and Radiological Engineering, ENG

Vocal Pedagogy: An Investigation of the Foundational Aspects of Singing and Methods to Identify and Remediate Vocal Dysfunction Caused by Chronic Respiratory Illness

Jasmine Henderson, Senior, Music, FAA

Marcel Tournier's Sonatine, Op. 30: A Study on French Romanticism and Harp Technique

Nol Wan, Junior, Music, FAA

Toward the Sea: An In-Depth Study of Performing Toru Takemitsu's Music

Erin Brooker, Junior, Music, FAA
Jennifer Shanahan, Junior, Music, FAA

ISUR POSTER EXPO

4:30-6:30 P.M., LEVIS FACULTY CENTER (1ST FLOOR)

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

A Developmental Model of Phoneme Differentiation for the iCub Humanoid Robot

Sameer Kumar Bojja Venkatarama, Sophomore, Computer Engineering, ENG

Assessment of Vibrotactile Proprioceptive Feedback Systems for Upper Limb Prosthetics

Brandon Boyce, Junior, Aerospace Engineering, ENG

Engineering Water Affinity of Zein Films Through Surface Mimicry

Serena Brodsky, Senior, Agricultural and Biological Engineering, ACES

Nanoprobe Fabrication for Intercellular Measurements

David Chiao, Sophomore, Mechanical Engineering, ENG

Proprioceptive Hardware Feedback Platform for Upper-Limb Robotic Prostheses

Shih-Hao Chien, Junior, Computer Engineering, ENG

Automatic Alignment of a Diffraction Phase Microscope for Wafer Defect Inspection

Melissa Crawford, Sophomore, Electrical Engineering, ENG

The Role of Geometry in Cellular Programming for Applications in Regenerative Medicine

Melanie Daugherty, Sophomore, Materials Science and Engineering, ENG

Effect of Corn Quality Parameters on Dry-Grind Ethanol Production

Lauren Delaney, Junior, Agricultural and Biological Engineering, ACES

Minimalist Multi-Robot Landmark-Based Navigation

Alex DiCarlo, Junior, Computer Science, ENG

Substrate-Supported Palladium Nanosheets

Adam Dornford, Sophomore, Chemical Engineering, LAS

Visualizations for Group Conversations

John Espinosa, Sophomore, Computer Science, ENG

Stochastic Modeling and Control of Wild Robots

Daniel Gierl, Senior, Computer Science, ENG

Distributed Algorithms Using Raspberry Pi with Power Applications

Laura Haller, Sophomore, Electrical Engineering, ENG

Analysis of B-Quark Data from the CDF Experiment

Donald Hane, Sophomore, Engineering Physics, ENG

Electrical Characterization of Hexagonal Boron Nitride and Graphene-Based Transistors

Jayan Hewaparakrama, Sophomore, Electrical Engineering, ENG

Earthquake Response of C-Shaped Concrete Wall

Donovan Holder, Junior, Civil Engineering, ENG

Flow Structures of Interacting Barchan Dunes

Andrew Horton, Sophomore, Mechanical Engineering, ENG

High-Speed Image Capture from a Moving Vehicle

David Huang, Junior, Computer Engineering, ENG

Protein Purification and Gene Therapy

Molly Imgruet, Sophomore, Bioengineering, ENG

Image Registration of Silicon Wafers with Infrared Grey-Field Polariscope

Alexander Kaczkowski, Sophomore, Mechanical Engineering, ENG

Linux Testbed for Primitive Distributed Functions

Elzabad Kennedy, Junior, Computer Engineering, ENG

Optimization and Modularization of the Image Processing Procedure for PCEM Data

Okan Koksai, Junior, Electrical Engineering, ENG

Thermal Conductivity Measurements of Bulk Carbon Nanotube Films and Composites

Juan Pablo Llinas, Sophomore, Electrical Engineering, ENG

Producing Axions

Stephanie Lona, Sophomore, Engineering Physics, ENG

Synthesis of Iron Oxide Core Silica-Coated Nanoparticles

Stephanie Nemeč, Junior, Materials Science and Engineering, ENG

The Effect of Surface Geometry on Stem Cell Differentiation

Taylor Perez, Sophomore, Materials Science and Engineering, ENG

High-Quality Thin-Film Solar Cells

Nicholas Rivera, Junior, Nuclear, Plasma, and Radiological Engineering, ENG

Impact of Viscous Flow Conditions on Airfoil Ice Accretion

Paul Schlais, Junior, Aerospace Engineering, ENG

Effects of Multipath and Side Lobe Algorithms at JFK

Sarah Shimizu, Junior, General Engineering, ENG

*Improving Contact Resistance
of Graphene Field-Effect Transistors (GFETs)*

Maryann Tung, Senior, Electrical Engineering, ENG

*Proprioceptive Hardware Feedback Platform
for Upper-Limb Robotic Prostheses*

Logan Wan, Junior, Mechanical Engineering, ENG

*Characterization of Metal Cavity Quantum Dot
and Quantum Well Nanolasers*

Eric Wei, Senior, Electrical Engineering, ENG

*Variability in Shoulder Movement and Force
During Wheelchair Propulsion: The Effect of Shoulder Pain*

Matthew Wesly, Senior, Bioengineering, ENG

*Developing Flavin-Based Fluorescent Proteins
for Biological Imaging*

Kevin Weyant, Senior, Chemical Engineering, LAS

*The Effects of PVP(Fe(III)) Catalyst
on Polymer Molecular Weight and siRNA Delivery
via Biodegradable Cross-Linked Polyethylenimine*

Connie Wong, Sophomore, Chemical Engineering, LAS

Investigation of Mutual Coupling in Patch Antennas

Yuou Zhang, Junior, Electrical Engineering, ENG

