Illinois Undergraduate Research Week

Events
April 17-23

University of Illinois at Urbana-Champaign
Welcome to Undergraduate Research Week, a celebration of student excellence in research across campus. The signature event is the ninth annual campus-wide Undergraduate Research Symposium (URS), held on Thursday, April 21st. The breadth and scope of the oral and poster presentations, as well as the performances, featured 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, 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 lunch time session demonstrates the range of research that occurs at the University of Illinois, from advanced designs in engineering to questions of energy and national stability.

The 2016 URS 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 of corporate sponsors.

Special thanks go to Dr. Karen Rodriguez, Associate Director of the Office of Undergraduate Research (OUR), Christopher Holmes and Mackenzie Kurth, graduate research assistant and undergraduate intern, respectively, for OUR, Noelle Easterday, graduate research assistant for Ethnography of the University Initiative, and OUR’s Advisory Board members.

Dr. Anna Stenport
Director, Office of Undergraduate Research
UNDERGRADUATE RESEARCH WEEK EVENTS

Office of Undergraduate Research – Getting Started in Research Workshop

Friday, April 15, 3:00–4:30 PM
Lincoln Hall, Rm 1060

With this Workshop, the Office of Undergraduate Research inaugurates its new annual workshop series for undergraduate students who are interested in conducting research. OUR 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.

Attendance is limited; registered participants only.

Political Science Student Research Symposium & Awards Ceremony

Saturday, April 16, 11:30 AM–1:15 PM
Heritage Room, ACES Library

Living-Learning Communities Researchers Initiative Poster Symposium

Sunday, April 17, 4:00–6:00 PM
Florida Avenue Residence Halls, Oglesby Pagoda

Using EEG to Study the Effects of Age-related Hearing Loss
Stephany Burz, Sophomore, Psychology, LAS
Novejot Sandhu, Sophomore, Molecular & Cell Biology, LAS

School Readiness: How the Experiences of Latino and African-American Parents’ Influence Their Children
Kennedy Davis, Freshman, Food Science & Human Nutrition, AHS
Stephanie Huerta, Sophomore, Psychology and Spanish, LAS
Gabrielle Maloney, Freshman, Human Development & Family Studies, ACES
Deiarah Wright, Freshman, Communication, LAS

Biomimcry: How Nature Inspires Design
Ishani Dutta, Freshman, Industrial Design, FAA

Empathic Modeling: How Experiencing the Experience of Another Supports Design
Timothy Ng, Junior, Mechanical Engineering, ENG
Associations between Functional Mobility, Quality of Life and Community Participation among Full Time Wheelchair Users Living with Spinal Cord Injury

**Alex Filflet**, Freshman, Biology, LAS

Laryngeal Flexibility: Neuromuscular Junction Differences in Rats with Varying Degrees of Vocal Training

**Annalea Forrest**, Freshman, Psychology and Community Health, LAS/AHS

**Diana Kowalski**, Freshman, Mathematics and Linguistics, LAS

PANIC at the DISSCO! Computer Music Composition Using Additive Sound Synthesis

**Monika Janas**, Freshman, Computer Science, ENG

**Kristopher Kwak**, Freshman, Aerospace Engineering, ENG

**Mengqi Xu**, Freshman, Industrial Design, FAA

**Hopi Long-Distance Runners**

**Emma Kosnik**, Freshman, Undeclared, DGS

**William Kozlowski**, Junior, Economics, LAS

**Prescription Fire Effects on Mycorrhizal Productivity and Host Tree Fitness**

**Victoria Laserna**, Freshman, Biology, LAS

**Aftereffects of Children and Teen's Everyday Activities on Their ADHD Symptoms**

**audrey lee**, Freshman, Materials Science & Engineering, ENG

**Across the Seder Table: Reclaiming Jewish Identity in the Cape Verdean Diaspora**

**Alia Muhammad Radzi**, Freshman, Economics, LAS

**Transgenerational Effects of Di-(2-ethylhexyl) Phthalate on Anxiety-like Behavior in Mice**

**Laura Olander**, Freshman, Biology, LAS

**Social Indicators and the Urban Water Cycle**

**Alishba Rehman**, Freshman, Biochemistry and Chemical Engineering, LAS

**Using Myoglobin-based Enzyme Models to Understand Heme-Copper Oxidases**

**Madeline Sponholtz**, Sophomore, Specialized Chemistry, LAS

**The Effects of Land Use on Grassland Biodiversity: Birds, Invertebrates, and Amphibians**

**April Wendling**, Earth, Society & Environmental Sustainability, LAS

**Stability Analysis of Benefit-harm Relationships Using Automaton-like Model for Plant-pollinator Community Assembly**

**Anton Bershanskiy**, Freshman, Computer Science & Mathematics, ENG

**Using Mathematical Models to Create Networks of European Languages**

**Diana Kowalski**, Freshman, Mathematics and Linguistics, LAS

College of Fine and Applied Arts (FAA) Symposium

**On Display, April 17–23**

**Art + Design Building**

The School of Art + Design’s Undergraduate Research Week Exhibition will feature outstanding creative research by nine 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 17–23**

**Temple Buell Hall (Upper West Entry Plaza and Lower Atrium)**

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.

Undergraduate Research Apprenticeship Program (URAP) Poster Symposium

**Monday, April 18, 3:00–5:00 PM**

**Illini Union Room 210**

A partnership between the Office of Undergraduate Research (OUR) and the Graduate College, URAP pairs first and second-year undergraduate students (including transfer students) with advanced graduate students. Under URAP, undergraduate students have an opportunity to conduct and learn the research process through a one-on-one research experience with their graduate student mentors.

**“Con su propia voz”: The Voice and Value of Disability in Mar adentro and “Receta de verano”**

**Madeline Decker**, Sophomore, English and Spanish, LAS

**Using Modified Science Trade Books to Enhance Elementary Science Instruction**

**Grace Liu**, Freshman, Elementary Education, EDU

**How Coca-Cola Manipulates Its Consumers**

**Mecca Muhammad**, Sophomore, Global Studies, LAS
The Psychology of Politics: Measuring Political Knowledge and its Relationship with Media Exposure

Stephen Duginger, Sophomore, Political Science and Economics, LAS

Undergraduate Research Apprenticeship Program

Miroslava Osorio, Sophomore, Political Science, LAS

Memory for Speech Categories

Naif Mansury, Sophomore, Molecular & Cellular Biology, LAS
William Kozlowski, Junior, Economics, LAS

Modern and Medieval Borders: Case Studies in Cyprus and Wales

Andrianna Kurzenberger, Sophomore, Political Science, LAS

The Relation between Flow Turbulence and Mixing Along A Stream Confluence Shear Layer

Yayu Zhou, Junior, Statistics and Mathematics, LAS

Analyzing the Relationship between Deflation and Recession

Payal Mallik, Sophomore, Economics and Finance, LAS/BUS

Increased Attention to Immigration Rights and Language in the United States

Shelby Gordon, Junior, Interdisciplinary Health Sciences, AHS

School of Literatures, Cultures, and Linguistics Symposium

Monday, April 18, 3:00–4:30 PM
Foreign Language Building Atrium

Explicit and Implicit Knowledge of English Articles in Second Language Acquisition

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

Special Presentation of Chatterbot, an Artificial Intelligence Program for Predicting Users’ Gender

By Students of Professor Judith Pintar

Friday, April 22, 3:00–4:30 PM
Foreign Language Building Atrium

The Impact of Visual Attractiveness on Opinion Convergence Online

Sarah Lord, Junior, Linguistics & Computer Science, LAS
Marina Terkourafi, Associate Professor, Linguistics, LAS

Ethnography of the University Initiative (EUI) Biannual Student Conference

Wednesday, April 20, 3:00–8:30 PM
Library and Information Science Building, 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). During this academic year, there were 15 courses affiliated with EUI, serving approximately 300 students. For the Spring 2016 conference, students from 9 courses, across a range of disciplines, will present their research. The EUI program is supported through a partnership between the Office of Undergraduate Research and the Department of Anthropology.

Department of English Symposium

Thursday, April 21, 4:30–6:00 PM
English Building Atrium

Baldwin and the Performance of (Something Other Than) Subjectivity

Evan Duncan, Senior, English, LAS

Sexual Assault and American Literature

Rebecca Baron, Senior, English, LAS

Knowledge Without Virtue: Revisiting Plato’s Republic Through Vladimir Bartol’s Alamut

Krupa Patel, Senior, English, LAS

Re:Search, The Undergraduate Literary Criticism Journal at Illinois

Melisa Puthenmadom, Senior, English, LAS
Ana Fleming, Senior, English, LAS

Department of Anthropology Capstone Conference

Thursday, April 28, 6:00–9:00 PM
161 Noyes Lab

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!
ORAL PRESENTATIONS

Human Health & Wellness
9:15–10:15 AM, Room 209

Prevalence of Blood Borne Viral Infections in Patients with Inflammatory Bowel Disease
Parnita Harsh, Sophomore, Molecular & Cellular Biology, LAS

Whole Fat Dairy: Spoiling the Hispanic Diet by Adding Excessive Saturated Fat
Amanda Ayers, Senior, Food Science & Human Nutrition, ACES

Youth at Risk
9:15–10:15 AM, Room 211

Are Neglect Subtypes Necessary From a Mental Health Perspective?
Arianna Jenkins, Junior, Psychology, LAS

A Maternal Perspective of School Readiness
Anita Oladunni, Senior, Human Development & Family Studies, ACES

Different Types of Parental Involvement yet There is a Common Goal: School Readiness at Kindergarten Level
Jazmin Landa, Senior, Kinesiology, AHSS

Unexpected Productions
9:15–10:15 AM, Room 213

Contemporary Works for Saxophone
Jeremy Loui, Senior, Music Education, FAA

Goat Song: An Unpublished Play by Tennessee Williams
Ryan Smetana, Senior, Acting, FAA
Jordan Pettis, Senior, Acting, FAA
Ellen Magee, Senior, Acting, FAA
Susan Schuld, Assistant Professor, Acting, FAA

The Social Support and Sexual Health of Latino Gay Men who Have Sex with Men
Xavier Ramirez, Senior, Social Work, SSW

Questions of Global Scale
9:15–10:15 AM, Room 215

Inequality from a Historical Perspective
Monica Ngo, Senior, Mechanical Engineering, ENG
Courtney Delaney, Freshman, Agribusiness, Markets and Management, ACES
Taylor Cygan, Freshman, Undeclared, DGS
The EU, the Schengen Area, and the Refugee Crisis
Marshall Janevicius, Senior, French, LAS

Cultivating Community
10:45–11:45 AM, Room 209
Newman: Faith as a Root in Community
Ariel Majewski, Freshman, Journalism, COM

Facilitators and Barriers of Community Gardens in the Chicagoland Area
Abigail Petersen, Senior, Natural Resources & Environmental Sciences, ACES

Society & Health
10:45–11:45 AM, Room 211
Social Determinants of Free Clinic Patients
Kirin Upadhyay, Junior, Community Health, AHS
Kaila Mitchell, Senior, Community Health, AHS
Ali Alagha, Junior, Community Health, AHS

Barriers to Cancer Care for Rural Populations
Kaila Mitchell, Senior, Community Health, AHS
Vivian Bui, Junior, Community Health, AHS
Cindy Hou, Senior, Community Health, AHS

Charitable Care in Hospitals
Shannon Casey, Senior, Community Health, AHS
Kaylee Arnold, Senior, Health Planning & Administration, AHS
Justice Hammers, Junior, Community Health, AHS
Sarah Klimchuk, Senior, Community Health, AHS

Elementary Literacies
10:45–11:45 AM, Room 213
Teaching Nature of Science in Schools
Aniruddha Aggarwal, Junior, Mathematics, LAS

Developing Environmental Literacy in Milwaukee Youth: The Effects of Age and Frequency of Participation
Jordan Williams, Senior, Natural Resources & Environmental Sciences, ACES

‘Body’ Politics
1:45–2:45 PM, Room 209
Unknown Name, Unknown Age: On Necropolitics, Transgender Suicide, and the Politics of Refusal
Stephanie Skora, Senior, Gender & Women's Studies, LAS

Baldwin and the Performance of Subjectivity
Evan Duncan, Senior, English, LAS

Diversity as a Crutch: Black Students and Inclusive Practices at Predominately White Institutions
Aaminah Long, Junior, Psychology, LAS

Marginalized Populations
1:45–2:45 PM, Room 211
Laboring in the Shadows: Latina Domésticas and the Politics of Employment
Amanda Lane, Senior, Anthropology, LAS

What Do They See? A Look at the Appeal of ISIS to Young Muslim Women Raised in Great Britain
Rebecca Davis, Senior, Global Studies, LAS

South Chicago Black Mothers’ Project
Osazomon Imarenezor, Senior, Chemistry, LAS
Lakrista Cummings, Senior, Sociology, LAS

Parental Involvement and Student Success
1:45–2:45 PM, Room 213
The Importance of Parental Involvement in Regards to Low-Income African-American Children’s Potential Educational Attainment
Theola Maxon, Senior, Human Development & Family Studies, ACES

Parent-Teacher Conferences: Contribution of Ethnicity in Parent-Teacher Communication
Tracy Reyes, Junior, Psychology, LAS

Form and Timing
3:15–4:15 PM, Room 209
Form Follows Future: Theatre Epistemologies of The New Brown Vortex
Mateo Hurtado, Senior, Latina/Latino Studies, LAS

Your Affectionate Tom
Mindy Shore, Senior, Acting, FAA
Samuel Babick, Senior, Acting, FAA
Dylan Connelly, Senior, Acting, FAA
Alexis DawTyne, Senior, Acting, FAA

The History of Chinese Students at the University of Illinois of Urbana-Champaign
Jiayi Li, Senior, History, LAS
Mindi Zhang, Junior, LAS
Xingjian Sun, Senior, COM
Junyi Tang, Junior, LAS
**Dance as Discourse**

3:15–4:15 PM, Room 211

The Maternal Body's Physical Habits and the Surrounding Social Environment within Performance

*Katherine Williams*, Senior, Dance, FAA

Conversations with an Audience

*Thomas Welsh-Huggins*, Junior, Dance, FAA

Dance in Society

*Danielle Mastricola*, Freshman, Dance, FAA

**Microbes and Cellular Processes**

3:15–4:15 PM, Room 213

Rapid Mass-spectrometry-based Screening of an Antibiotic Variant Enabled by Synthetic Biology

*Wen Ren*, Senior, Chemical & Biomolecular Engineering, LAS

Inferring Microbial Community Structure from Time Series Data

*Zachary Cohen*, Junior, Integrative Biology, LAS

Characterization of Helicobacter pylori VacA Association with Host Cells

*Jiayi Luo*, Junior, Biochemistry, LAS

**POSTER PRESENTATIONS**

**PA Session – Food, Plants, and Animals**

9:00–10:15 AM, Illini Room A

Dietary Peptides from *Phaseolus vulgaris* L. Decreased Angiotensin II-dependent Proliferation in HCT116 Human Colorectal Cancer Cells

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

A Stability Study of Purple Corn Anthocyanin Extracts in a Commercial Beverage

*Helen Bengtson*, Senior, Food Science, ACES

The Hunger Free Summer for Kids 2015: A Policy Analysis

*Elizabeth Berton*, Senior, Psychology, LAS

Stable Asexuality in Whiptail Lizards and Bdelloid Rotifers Explored in an Evolving Foraging Decision Model

*Paul Bogdan*, Junior, Molecular & Cellular Biology, LAS

**Developing a Genomic Protocol for Identification of Tick-borne Pathogens in Laikipia, Kenya**

*Katherine Lincoln*, Senior, Integrative Biology, LAS

CRISPR/CAS9 Genome Editing System for Increased Crop Production in Eudicots by Transient-Gene Expression by *Agrobacterium tumefaciens*

*Helen Liu*, Sophomore, Plant Biotechnology and Molecular Biology, ACES

The Root of the Matter: The Effects of Acculturation on Legume Consumption

*Jocelyne Lopez*, Sophomore, Biology, LAS

**Characterization of Toll-like Receptor Genes in Eastern Box Turtles (Terrapene carolina carolina)**

*Stephanie Heniff*, Senior, Integrative Biology, LAS

**Comparing Transcriptome Responses to N type in Tissues**

*Katerina Holan*, Senior, Crop Sciences, ACES

**Wing Interference Patterns (WIPs) of Neotropical Parasitoid Wasps (Braconidae: Microgastrinae)**

*Shuyang Jin*, Senior, Integrative Biology, LAS

**Shape-shifting: Predators, Parasites, and Plasticity in Daphnia**

*Samantha Kopec*, Senior, Integrative Biology, LAS

**The Monitoring of Genes Involved in Nitrogen Remobilization in Miscanthus x giganteus**

*Jessica Mattick*, Senior, Biochemistry, LAS
Potential of Maternal Imprinting to Suppress Symptoms of Fescue Toxicosis  
Lyndzi Miller, Senior, Animal Sciences, ACES

Aggressiveness in Northern Australian Ants against Invasive Species  
Katherine O'Connor, Senior, Agri-Accounting, ACES

Comparison of Desmin in Cooked and Raw Pork Chops  
Elaine Richardson, Junior, Animal Sciences, ACES

Effects of Foliar Fungicide Application on the Growing Corn Plant  
Karli Robinson, Senior, Animal Sciences, ACES

Effects of Arthropod Abundance within Dickcissel (Spiza americana) Territories on Nestling Body Condition.  
Katherine Rola, Senior, Natural Resources & Environmental Sciences, ACES

Genotyping Maize Inbreds for Glossy-15  
Parrish Smith, Sophomore, Crop Sciences, ACES

The Effect of Garden Plant Diversity on Mosquito Species that Act as Infectious Disease Vectors in Central Illinois  
Nathan Stables, Senior, Integrative Biology, LAS

Loss of Canonical Notch Signaling Results in Altered Development of Hypothalamic Regions Controlling Reproduction  
Robert Thompson, Senior, Molecular & Cellular Biology, LAS

The Octopus: Eight Arms or Eight Minds?  
Andrew Tran, Junior, Biology, LAS
Alex Duman, Junior, Biology, LAS

An Analysis of Broomcorn Diversity  
Abigail Vanderkloot, Junior, Crop Sciences, ACES

Effects of Prairie Management on Soil Characteristics and Bees  
Christina Vercillo, Junior, Integrative Biology, LAS

Effect of Nisin and Lysozyme on Fermented Ciders Contaminated by Lactic Acid Bacteria  
Joshua Warren, Senior, Food Science, ACES

Structural Rearrangements between the Dog and Red Fox Genomes  
Naomi Won, Sophomore, Molecular & Cellular Biology, LAS

How Cover Crops Affect the Soil Nitrogen Pool  
Tianyu Ying, Senior, Natural Resources & Environmental Sciences, ACES

Quantitative Trait Loci (QTL) Analysis of the Genes Controlling the Size of the Seed Head (panicle) under Wet Versus Dry Conditions in the Model C4 Grass, Setaria  
Finey Ruan, Senior, Integrative Biology, LAS

Development of Microsatellite Markers for the Characterization of Y-Haplotypes in the Red Fox  
Jeremy Stutchman, Sophomore, Animal Sciences, ACES

Determining the Identity and Possible Origin of a Collembola Pest of Lettuce and Tree Seedlings  
Alejandra Flores, Senior, Molecular & Cellular Biology, LAS

PB Session – Education, Social Science & Human Behavior
9:00–10:15 AM, Illini Room C

Effects of Student-faculty Interactions on African American Males in Higher Education  
Brandon Boston, Senior, Communications, LAS

Undergraduate Research Apprenticeship Program  
Miroslava Osorio, Sophomore, Political Science, LAS

From the Washington to the Beijing Consensus: China's Economic Rise and the IM  
John Knoblett, Senior, Political Science, LAS

Using Modified Science Trade Books to Enhance Elementary Science Instruction  
Grace Liu, Freshman, Elementary Education, EDU

Community-Based Instruction: What Happens to Students with Disabilities After High School?  
Stefanie Aylala, Freshman, Special Education, EDU

The Effects of Questioning as Educational Scaffolding in Writing Center Conferences  
Laura Bajkani, Freshman, English, LAS

The Importance of Literacy in Spanish-Speaking Homes and their Communities  
Gabriella Mirzala, Sophomore, Elementary Education (Grades 1–6), EDU

Factors that Motivate UIUC Engineering Students in Their In-Class Performance  
Oi Lam Fung, Junior, Electrical Engineering, University of Macau
Alexandre Lourenco, Junior, Electrical Engineering, University of Macau
How Does "Flipped Classroom" Affect UIUC Students' Academic Performance and Learning Attitudes?

Sin Tong Lam, Junior, Communication, University of Macau
Wai I Lam, Junior, Recreation, Sport and Tourism, University of Macau

Can Parent's Talk About Success and Failure in Math Influence their Child's Math Ability?

Samantha Shah, Senior, Psychology, LAS

Which Princess are You? Language and Gender in Children's Books

Ciara Reilly, Senior, Anthropology, LAS

Use of Technology and Movement in the Classroom to Improve Understanding

Jacqueline Shannon, Freshman, Elementary Education (Grades 1-6), EDU

EZ Investment

Jinghua Xing, Junior, Accountancy, BUS
Xinlu Tu, Senior, Finance and Statistics, BUS/LAS

Oppression of the Devoted

Janice Lin, Senior, Political Science, LAS

Synthesis and Characterization of Hollow Polydimethylsiloxane Microspheres

Samantha Fuchs, Senior, Chemistry, LAS

A Longitudinal Comparison of the Speech Rate of Active Declarative Sentences vs Repeated Sentences in Preschool Children

Bridget Maloney, Junior, Audiology, AHS
Brittany Greig, Senior, Junior, Audiology, AHS

Luxury in the Making

Hannah Russell, Senior, Urban Planning, FAA
April Swanson, Senior, Urban Planning, FAA

A Comparison of Early Childhood Screening Instruments: The Denver-II vs. the Bayley-III

Alexis Cirrincione, Senior, Human Development & Family Studies, ACES
Molly Harmon, Senior, Human Development & Family Studies, ACES

Bridging the Gap: Domestic, Native-English Speakers & the Writers’ Workshop

Matthew Ruby, Junior, Global Studies, LAS

PC Session - Science & Mathematics

9:00–10:15 AM, South Lounge

High-efficiency Method for Building a Multi-gene Rubisco activase Construct Library to Evaluate and Tune Performance of Schemes to Improve Rubisco activase Activity

Richard Field, Junior, Crop Sciences, ACES

Co- and Ni-based Perovskite Nano-Cubes as Electrocatalyst in Water Splitting Reaction; LaxNyOz, LaxCoyOz

Xuxia Chen, Senior, Chemical & Biomolecular Engineering, LAS

Development of a Control System and User Interface for the Quanser Shake Table II

Vivian Wen Hui Wong, Junior, Civil & Environmental Engineering, ENG

Is Big Data a Good Investment?

Megan Zheng, Senior, Agricultural & Consumer Economics, ACES

Alteration of Host Cell Autophagic Response by a Tripartite Bacterial Genotoxin

Hanlin Mok, Senior, Molecular & Cellular Biology, LAS

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, Junior, Mechanical Engineering, ENG
Dhruv Kanwal, Senior, Computer Engineering, ENG

Ultrasonication-assisted Water Extraction of Nitrogen-containing Compounds in Algal Biocrude Oil

Karalyn Scheppe, Senior, Agriculture & Biological Engineering, ENG

Characterization of the Pilocarpine-induced Epilepsy Model in Mice

Vincent Abejuela, Senior, Molecular & Cellular Biology, LAS

Application of Deep Learning on Cosmological Time Series Data

Sushma Adari, Sophomore, Computer Science & Astronomy, LAS

Novel Mouse Model for Studying the Function of New Neurons in Behavior

Madison Barker, Senior, Molecular & Cellular Biology, LAS

Effects of Vocoder Carrier Bandwidth on Binaural Fusion

Abbigail Buente, Senior, Audiology, AHS

Investigating the Binding Selectivity of Small Molecules that Target d(CTG) Trinucleotide Repeats

Luis Curet, Sophomore, Chemistry, LAS

Reinforcement of Collagen-GAG Scaffolds via Polycaprolactone Frame

Kevin Erning, Senior, Chemical & Biomolecular Engineering, LAS

Seismic Velocity of Augite through Brillouin Scattering

Paul Ginsberg, Senior, Geology, LAS
Numerical Simulation of Highly Pulsatile Blood Flow through Idealized Femoral Artery Bifurcations
Francisco Gonzalez, Senior, Aerospace Engineering, ENG

Development of New Drug Targets - IspH
Armaan Haleem, Junior, Molecular & Cellular Biology, LAS

Supramolecular Enthalpy Gradients for the Directed Transport of Chemical Agents
Mary Haugen, Junior, Chemistry, LAS

Tropical Cyclone Induced Sea Surface Temperature Anomalies in the Eastern Pacific
Andrew Huang, Junior, Atmospheric Sciences, LAS

Near-axis Seamounts as Probes of Mantle Melting at the East Pacific Rise
Ashly Hunt, Senior, Geology, LAS

Cloning, Overexpression, Purification and Characterization of Putative Bile Acid 7α-dehydratases from Clostridium leptum and Clostridium sordellii in Escherichia coli
Morgan Ivy, Senior, Molecular & Cellular Biology, LAS

Synthesis of Diiron thiolate Complexes
Rhiannon Jones, Junior, Chemistry, LAS

Using Microwells for Controlled Intestinal Differentiation of hiPS Cells
Elijah Karvelis, Sophomore, Chemical & Biomolecular Engineering, LAS

Measuring D-amino acids in Neuropeptides via Mass Spectrometry
Bora Kim, Senior, Chemistry, LAS

Astrocytic Modulation of Synaptic Inhibition using Optogenetics
Jason Lamano, Senior, Molecular & Cellular Biology, LAS

A Genetically Encoded System for Programmable Cell Assembly Using Surface-displayed DNA Oligonucleotides
Yuhao Min, Sophomore, Chemistry, LAS

Characterization of a Cortisol Transport Protein from Clostridium scindens ATCC 35704 in Escherichia coli
Sean Mythen, Senior, Animal Sciences, ACES

How Much Does the Public Care about Conservation Policy in China? Empirical Evidence from Weibo (Chinese Twitter) "Big Data"
Shiyuan Dong, Senior, Natural Resources & Environmental Sciences, ACES

Defining Friendship: The Relational Cognitive Dissonance Approach
Paul Bogdan, Junior, Molecular & Cellular Biology, LAS

The Sense of Belonging of Students from Illinois and International Students in UIUC
Hio Leng Le, Senior, Political Science, University of Macau
Sin Man Io, Senior, Political Science, University of Macau

Gender and Committee Assignments in the U.S. House of Representatives
Marie Johnson, Senior, Political Science, LAS

Nature’s Role on Family Interactions: Promoting Positive Relationships and Cohesiveness between Mothers and Daughters
Danette DeWeese, Senior, Human Development & Family Studies, ACES

Explicit and Implicit Knowledge of English Articles in Second Language Acquisition
Elizabeth Nowicki, Senior, Linguistics, LAS

SWOT Analysis of Bevier Cafe and its Marketing Options
Seul An Kim, Senior, Agriculture & Consumer Economics, ACES

The Role of Attractiveness in Opinion Convergence Online
Sarah Lord, Junior, Computer Science and Linguistics, ENG/LAS

Misrepresentations of Plurality in Language Processing
John Dempsey, Senior, Linguistics, LAS

The President vs. Congress: Agency Compliance and Control
Michelle Gong, Senior, Political Science, LAS

People’s (Inconsistent) Attitudes about Foundational Moral Beliefs
Madeline Reinecke, Junior, Psychology, LAS

Catalog Community
Cameron Letterly, Senior, Architectural Studies, FAA
Harmonia Project Part 1
Shannon Sledz, Junior, Statistics, LAS
Benjamin Olson, Junior, Statistics, LAS
Alex Kay, Senior, Statistics, LAS

Content Contradictions: How Ad-content Congruity Affects Brand Favorability and Purchase Intention?
Nicolette Highland, Junior, Advertising, COM
Mitchell Kahl, Junior, Advertising, COM
Lauren Cowin, Sophomore, Advertising, COM
Natalie Ang, Sophomore, Advertising, COM

Call for a Systematic Review of Survey Methodologies: Open-Ended vs Close-Ended Research Questions in Analyzing Coursera Respondent Data
Emily Forbes, Junior, Sociology, LAS
Sandra Franco, Senior, Linguistics, LAS
Yixin Zou, Junior, Advertising, COM

Understanding the Media Journey of Local Issues: The Case of the Flint Water Crisis
Wes Bremme, Senior, Media & Cinema Studies, COM

Development and Globalization: A Dissemblance of East-West Perceptions
Hung Lang, Junior, Communication, LAS

Gender Stereotyping Within the Education System
Brittany Barajas, Freshman, Special Education, EDU

The Disney Effect: Parents’ Ambivalence Toward Commercialization in Children’s Books
Simran Devidasani, Junior, Advertising, COM

Stereotypes of Duo in a Work Group
Siqi Wu, Senior, Accountancy, BUS

Evaluating the Effect of Environment vs Genetics on the Development of Hyperactivity in a Novel Mouse Model of ADHD
Elizabeth Grogan, Senior, Molecular & Cellular Biology, LAS

Test-retest Reliability and Participant Feedback on a Novel Measure of Emerging Adult Reasons for Substance Use
Emily Hartung, Junior, Social Work, SSW
Olivia Pinsof, Junior, Social Work, SSW

The Narrative Behind Avicenna Community Health Center: Reducing Healthcare Disparities and Promoting Wellness in Champaign County
Chitra Iyer, Senior, Molecular & Cellular Biology, LAS
Janki Thakkar, Senior, Molecular & Cellular Biology, LAS
Claire Daniel, Senior, Molecular & Cellular Biology, LAS

Stress and Coping Among Middle Childhood Youth
Erin LePoire, Senior, Child & Adolescent Development, ACES

The Effects of Varying Rental Arrangements on a Central Illinois Grain Farm
Kolten Postin, Senior, Agribusiness, Markets & Management, ACES

Impact of Grammatically Gendered Language in the Stock Market
Ziang Xiao, Senior, Psychology, LAS

Examining the Politicization of Indigenous People: Perceived Government Deliverance and Participation in Latin America
Alexandra Turcios, Senior, Political Science, LAS

PE Session - Science & Mathematics
10:45 AM–12:00 PM, Illini Room C
Preparing Lacticin 481 Mutant via Leader Peptide-directed Bioengineering
Shivaliben Patel, Junior, Molecular & Cellular Biology, LAS

Introduction to Stochastic Simulation Algorithms
Zhou Ran, Senior, Mathematics, LAS
Yunxiang Zhang, Senior, Mathematics, LAS
Tianyu Liang, Senior, Mathematics, LAS

Developmental Reprogramming of the Transcriptome is an Essential Component of Liver Regeneration
Edrees Rashan, Senior, Biochemistry, LAS

Surface Modification of Silicon Photonic Microring Resonators for Chemical Transport and Sensing
Nate Reed, Senior, Chemistry, LAS

Cellular Localization of SHANKT in Mouse Hippocampus throughout Development
Samantha Reed, Senior, Molecular & Cellular Biology and Psychology, LAS

Preparation of Enzymatic Redox-responsive Hydrogels as Cell Culture Platforms
Lillian Roderick Buescher, Sophomore, Chemical & Biomolecular Engineering, LAS

Sulphidation Mechanism of ZnO Nanoparticles
Ryan Sanders, Senior, Chemical & Biomolecular Engineering, LAS

Amino Acids Excite Orexin Neurons
Anna Serrano, Senior, Horticulture, ACES

Substrate Stiffness and Matrix Composition Coordinately Control the Differentiation of Liver Progenitor Cells
Benjamin Streeter, Senior, Bioengineering, ENG
Nicholas Cornell, Junior, Bioengineering, ENG
Elastic Block Modeling of Fault Slip Rates across Southern California Using Updated GPS Velocity Data From the San Bernardino Mountains and Vicinity

Tiffany Vlahopoulos, Senior, Geology, LAS

Designing a Fiber Reinforced Biomaterial Platform to Increase Mechanical Properties and Bioactivity for Multi-Tissue Regeneration

Alan Vucetic, Junior, Chemical & Biomolecular Engineering, LAS

Chromium in the Vadose Zone of the Eel River Critical Zone Observatory, Northern California

Jia Wang, Junior, Geology, LAS

MSL Fraternity and Sorority Analysis

Xiaoqing (Mia) Xin, Senior, Agribusiness, Markets & Management, ACES

The Feasibility of Healthy Eating: Meal Preparation and Family Dynamics Among Hispanic Families

Erin LePoire, Senior, Child & Adolescent Development, ACES

Hybrid Lipid Films for Drug Encapsulation and Controlled Drug Delivery

Aneysha Bhat, Senior, Bioengineering, ENG

Potential Reduction in the Absorption of Dietary Cholesterol by Legume Peptides Disrupting Niemann-Pick CI-Like 1 (NPC1L1) Intestinal Receptors

Luis Real Hernandez, Senior, Chemistry, LAS

Preventative Effects of Broccoli on Liver Cancer in Young Male Mice

Jennifer Kaczmarek, Senior, Dietetics, ACES

Breast Milk Composition, Milk Intake, and Their Relationship to Infant Weight Gain

Claire Varney, Senior, Human Nutrition, ACES

Targeting Drug-Resistant Bacteria: Deoxynybomycin Derivatives

Olivia Pattelli, Senior, Molecular & Cellular Biology, LAS

Breast Cancer Advancement is Increased by Toxicants Found in Thermally Abused Oil (TAO) of Fried Foods

Caleb Pflederer, Senior, Molecular & Cellular Biology, LAS

Samantha O’Connor, Senior, Molecular & Cellular Biology, LAS

Travis Pflederer, Sophomore, Molecular & Cellular Biology, LAS

Analysis of the Ability of Staphylococcus aureus to Use Glycerol-3-phosphate as a Phosphate Source

Kevin Grudzinski, Senior, Molecular & Cellular Biology, LAS

Effects of Exercise Training on Statin-Induced Skeletal Muscle Myopathy

Alay Parikh, Senior, Molecular & Cellular Biology, LAS

Association Between Income and Depressive Symptoms Among Postnatal Mothers in a WIC Supplemental Nutrition Program

Devaki Belwalkar, Sophomore, Food Science & Human Nutrition, ACES
Investigating the Relationship between Global Measles Incidence and Socio-determinants of Health

Maria Bohri, Health, Major, AHS

Effect of Vitamin and Mineral Supplementation on Childhood Obesity

Zhangying Chen, Junior, Integrative Biology, LAS
Kevin Tom, Junior, Economics, LAS
Oveyaa Vignesh, Senior, Interdisciplinary Health Sciences, AHS
Jessica Bustamante, Senior, Psychology, LAS

Family Factors in Childhood Obesity: Parental Health Literacy and Child’s BMI

Ruyu Liu, Junior, Dietetics, ACES
Jenna Bhatt, Junior, Integrative Biology, LAS
Amy Malinowski, Junior, Human Development & Family Studies, ACES

Bariatric Procedures: The Impact of Pre-operative Diets on Post-operative Outcomes

Rebecca Magnuson, Senior, Dietetics, ACES

Changes in Medication after Bariatric Surgery

Charlie Knox, Senior, Human Nutrition, ACES

The Social and Cultural Barriers that affect Hispanic Families, especially Mexican Families, to Make Health Changes

Daria Gonzalez, Senior, Human Development & Family Studies, ACES
Stephanie Gil, Sophomore, Community Health, AHS

Physical Activity Patterns among Hispanic Families

Nicauy Martinez, Sophomore, Creative Writing, LAS
Michelle Pavela, Sophomore, History, LAS

Vitro Evaluation of Cartilage Properties Due To Targeted Wear of the Tibial Plateau

Megan Fritz, Junior, Mechanical Engineering, ENG
Nicholas Runge, Senior, Chemistry, LAS

Project GEMS: Guidelines for Exercise in Multiple Sclerosis; A Home Based Behavioral Intervention Study

Maria Bohri, Senior, Community Health, AHS

Studies on the Interaction of Health Professionals with the U.S. Latino/a Population

Maura Benson, Senior, Spanish, LAS

Hepatic Fibrosis in Developmental and Postnatal Exposure to High-fat Diet

Paul Dudek, Senior, Molecular & Cellular Biology, LAS

Investigating the Role of Extracellular Matrix (ECM) Remodeling during Wing Disc Regeneration in Drosophila

Amanda Sul, Senior, Molecular & Cellular Biology, LAS

An Analysis of the Financial Health of Critical Access Hospitals in Illinois

Justice Hammers, Junior, Community Health, AHS
Jacob Bowers, Junior, Health Planning & Administration, AHS
Connie Yu, Senior, Community Health, AHS
Sarah Klimchuk, Senior, Community Health, AHS

Featured Presentations

Lunch: 12:00–1:15 PM, Illini Room B
The Beauty of Diversifying Your Research
Osazomon Imarenezor, Senior, Chemistry, LAS

Design and Sensory Feedback in Prosthetic Hands
Patrick Slade, Senior, Mechanical Engineering, ENG

Energy Security and State Vulnerability: A Case Study from Taiwan
Leah Matchett, Senior, Global Studies and Geology, LAS

PG Session - Science & Mathematics
1:30–2:45 PM, Illini Room A
Detecting microRNA Signatures to Differentiate Tissue Type by Developing a Signal Enhancement Strategy for Use on Silicon Microring Resonators
Christopher Para, Senior, Chemistry, LAS

The Manganese Importer MntABC Enhances the Ability of Staphylococcus aureus to Resist Host-imposed Metal Starvation
Jamie Zhu, Senior, Molecular & Cellular Biology, LAS

Experimental Search for Determinants of ACL Health
Edden Rabin, Senior, Mechanical Engineering, ENG

Data Resolution Effects on Avalanche Statistics in Bulk Metallic Glass
Aya Nawano, Senior, Physics, LAS

Nested Simulations for Financial Reporting
Qianyu Cheng, Senior, Actuarial Science, LAS
Tianyi Xing, Senior, Actuarial Science, LAS
Yitong Huang, Senior, Actuarial Science, LAS

Coadapted Genetic Algorithm for Solving the String Match Problem
Filip Gajowniczek, Senior, Mechanical Engineering, ENG

IoT Traffic Simulation: Data Pipeline
Anchal Agrawal, Senior, Computer Science, ENG
Using Petrophysics to Determine the Presence of Residual Oil Zones in the Thick Cypress Sandstone at Noble Field, Southeastern Illinois

Joshua Arneson, Senior, Geology, LAS

Differentiation of Liver Stem Cells

Lily Barghi, Sophomore, Bioengineering, ENG

Grating Project: Regarding the Demonstration of the Technology

Jose Beserra, Junior, Chemistry, LAS

Local and Global Randomness in the Leading Digits of Arithmetic Sequences

Zhaodong Cai, Junior, Mathematics, LAS
Matthew Faust, Sophomore, Computer Engineering, ENG
Shunping Xie, Junior, Computer Science, ENG

IoT Traffic Simulation: Predictive Analysis

Neeraj Asthana, Senior, Computer Science, ENG

Statistical Analysis of Historical Climate and Forecast Data from Illinois and Other Locations

Mario Cannamela, Senior, Mathematics, LAS
Sijia Huo, Sophomore, Mathematics & Computer Science, LAS/ENG
Yantong Zheng, Junior, Statistics, LAS

Distillation of Biocrude Oil Converted from Biowaste via Hydrothermal Liquefaction

Bianca Chan, Freshman, Agriculture & Biological Engineering, ACES
Alice Lin, Freshman, Agriculture & Biological Engineering, ACES

Cross Cylinder Calculation Agreement amongst Toric IOL Calculators and UniversIOL

Zhangying Chen, Junior, Integrative Biology, LAS

Development and Calibration of a Microwave-based Plasma Heating Source for the HIDRA Toroidal Fusion Device

Nirbhav Chopra, Sophomore, Engineering Physics, ENG
Jin Young Park, Sophomore, Civil Engineering, ENG
Benjamin Anderson, Sophomore, Mechanical Engineering, ENG
Daniel Johnson, Sophomore, Engineering Physics, ENG

Tough-Bonding Hydrogels on Silicon Photonic Mirroring Resonators for Molecular Sensing

Amanda Cowfer, Sophomore, Undeclared, DGS

The Development of a Custom Smartphone Cradle for Multimodal Spectral Analysis

Sonya Dave, Senior, Chemistry, LAS

The Effects of Bisphenol A on the Early Development of Xenopus Embryos

Erin Duffy, Senior, Animal Sciences, ACES

Investigating Volcanic Unrest and Eruption Potential at the Three Sisters Volcanoes in the Oregon Cascades

Sean Griffin, Junior, Geology, LAS

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

Zhuoli Huang, Senior, Biochemistry, LAS

Bayesian Estimation of the Generalized NIDA Model with Gibbs Sampling

Aaron Hudson, Senior, Statistics, LAS

IOT Traffic Simulation: Synthetic Modeling

Rishabh Jain, Junior, Computer Science, ENG
Vaishali Khandelwal, Junior, Computer Science, ENG

Spatial Patterning of Cholangiocyte Differentiation of Liver Progenitor Cells

Sameed Jamil, Junior, Bioengineering, ENG

Tongue-twister Error Variation: Place of Articulation and Individual Variability

Carolyn Jeon, Senior, Audiology, AHS
Mia Teehan, Senior, Speech & Hearing Science, AHS
Kristin Ogle, Junior, Speech & Hearing Science, AHS
Edith Ayala, Junior, Speech & Hearing Science, AHS

A New Method to Generate Cryptographically Secure Random Numbers

Malhar Jere, Junior, Electrical Engineering, ENG

Development of Virtual Labs, Games and Training Tools at the University of Illinois for 3D Immersive Exercises

Justin Joseph, Junior, Nuclear, Plasma & Radiological Engineering, ENG
Gavin Mattingly, Senior, Nuclear, Plasma & Radiological Engineering, ENG
Daniel Chun, Senior, Nuclear, Plasma & Radiological Engineering, ENG
Eric Riewski, Junior, Nuclear, Plasma & Radiological Engineering, ENG

The Harmonia Project Part 2

Rahul Kalluri, Junior, Economics, LAS
Varun Bhoopalam, Junior, Statistics, LAS

Machine Learning and Cosmological Simulations

Harshil Kamdar, Senior, Physics, LAS

Cavitation Fracture of Soft Materials

Woo Jae Kim, Senior, Mechanical Engineering, ENG
Steven Yang, Senior, Agriculture & Biological Engineering, ENG

Characterizing Cell to Cell Signaling Molecules in Pseudomonas Aeruginosa Biofilms Using Secondary Ion Mass Spectrometry

Kyungwon Ko, Senior, Chemistry, LAS
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<tr>
<th>Title</th>
<th>Presenter(s)</th>
<th>College or School</th>
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<tr>
<td>Bacterial Genotoxin Induced DNA Damage Response Modulates Autophagy</td>
<td>Jordan Kryza, Senior, Molecular &amp; Cellular Biology, LAS</td>
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<tr>
<td>Construct Development and DNA Methylation of FKBP5 Intron 7 to Assess Functional Effects Using In Vitro Models</td>
<td>Joseph Leasure, Senior, Molecular &amp; Cellular Biology, LAS</td>
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| Image Processing Algorithms for Haze (PM2.5) Mapping                                                                                    | Nuochen Lyu, Sophomore, Electrical Engineering, ENG  
Qin Li, Sophomore, Electrical Engineering, ENG                                                                                   |
| PH Session - Food, Plants & Animals                                                                                                     |                                                   |
| 1:30–2:45 PM, Illini Room C                                                                                                             |                                                   |
| Root System Response to Ozone Exposure for B73 and Mo17 Maize Inbred lines and the Hybrid                                                | Nicole Choquette, Senior, Earth, Society & Environmental Sustainability, LAS |
| Structure and Function of CYP6Z1 and CYP6Z2 in Anopheles gambiae                                                                         | Mellissa Grana, Senior, Molecular & Cellular Biology, LAS |
| Increasing the Accuracy of Leaf Models of Photosynthesis Through Improved Compensation Point Measurements                                      | Jessica Ayers, Senior, Integrative Biology, LAS |
| Adult Shrub-land Bird Behavior during Handling of Offspring along an Urban Rural Gradient                                               | Elizabeth Baehl, Senior, Animal Sciences, ACES    |
| The impact of Processing Stages on Stability of Vitamin D3 Fortified into Corn Flakes Using Nanoemulsions                                     | Yu-Ju Chen, Senior, Dietetics, ACES                |
| Diversity and Density of Insects in Alternative Agriculture                                                                              | Elizabeth Dabek, Sophomore, Crop Sciences, ACES    |
| Tough Trees for Tough Times                                                                                                            | Rene Gonzalez, Junior, Landscape Architecture, FAA  
Carlos Andrade, Junior, Landscape Architecture, FAA  
Yuxi Wan, Junior, Landscape Architecture, FAA                                                                 |
| The Taxonomic Status of Biscuit-roots, Wave-wings and Spring-parsleys in Western North America                                           | Erica Hernandez, Junior, Integrative Biology, LAS  
Ari Wolfe, Sophomore, Integrative Biology, LAS                                                                                       |
| Biological Potential of Black Bean Anthocyanin Rich Extract and Protein Fractions to Inhibit Enzymes Related to Type-2 Diabetes         | Riley Jackson, Senior, Food Science, ACES          |
| Effects of Eprinomectin on Heifers Grazed on Endophyte Infected Tall Fescue                                                             | Jessica Kordas, Junior, Animal Sciences, ACES     |
| A Landscape Study in Sierra Leone: Status of Women, Nutrition and Agriculture in Extension System                                         | Ruiting Liang, Senior, Agriculture & Consumer Economics, ACES |
| The Effects of Food Insecurity on Pregnant Women in the United States                                                                     | Viridiana Luna, Senior, Molecular & Cellular Biology, LAS |
| Sodium Content in Convenience Soups: A Tale of Two Countries                                                                            | Ahrianna Mitchell-Sodipe, Senior, Food Science & Human Nutrition, ACES |
| Development of a Cre-Lox Optogenetics Mouse Model to Study the Functional Role of New Neurons                                           | Heinrich Pinardo, Senior, Molecular & Cellular Biology, LAS |
| Prevalence, Impacts, and Implications of Odorous House Ant Colonies within Active American Robin Nests                                    | Danish Qazi, Senior, Integrative Biology, LAS     |
| Effects of Fire-driven Vegetation Change on Mycorrhizal Abundance, Colonization and Host Tree Fitness                                  | Valarie Repp, Senior, Natural Resources & Environmental Sciences, ACES |
| Motility of Stallion Spermatozoa after Centrifugation and Cooling in INRA96® or Walworth Extender                                          | Gabrielle Riccio, Senior, Science, ACES           |
| Molecular Basis for Genetic Resistance of Fusarium virguliforme, the Causal Agent of Sudden Death Syndrome in Soybean (Glycine max)     | Chloe Siegel, Sophomore, Crop Sciences, ACES      |
| Chronic Wasting Disease and Prion Protein Gene Sequence Variation of White-tailed Deer in Ogle County, Illinois                         | Lauren Walling, Senior, Molecular & Cellular Biology, LAS |
| Evidence of Selection for Better Dispersal Ability in Western Red Cedar over Migration Route since the Last Glacial Period             | Haolin Zeng, Senior, Crop Sciences, ACES          |
| Phylogenetic and Genomics Study of the Pineapple Cysteine Protease Family Bromelain                                                      | Megan McKeon, Senior, Integrative Biology, LAS    |
| Methodology for Assessment of Reproductive Status in Swine                                                                             | Audrey Walker, Senior, Animal Science, ACES       |
PI Session - Education, Social Science & Human Behavior

1:30–2:45 PM, South Lounge

Understanding the Use of First- and Second-person Pronouns on Complaining Behavior and Mood
Ashana Badlani, Senior, Psychology, LAS

Identifying the Relationship between Preschool Teachers’ Beliefs and their Practices
Jinwen Ye, Senior, Human Development & Family Studies, ACES

Analysis of Daily Illini College Football Predictions: Accuracy of Forecasters versus Betting Line and Random Predictions
Yayu Zhou, Junior, Mathematics, LAS
Qing Ma, Senior, Mathematics, LAS

The Effects of Political Strategy on the United States’ Aid Allocation
Naveed Cheraghchi, Senior, Political Science, LAS

Energy Security and State Vulnerability: A Case Study from Taiwan
Leah Matchett, Senior, Global Studies, LAS

How Message and Music Mood Affects Memorability in Advertising
Annie Keller, Junior, Advertising, COM
Parichay Swarup, Junior, Advertising, COM
Simran Devidasani, Junior, Advertising, COM
Alexander Studer, Junior, Advertising, COM
Connor Goetten, Sophomore, Advertising, COM

An American Evolution of LGB Public Opinions
Jack Carrera, Senior, Political Science, LAS

First-Visit Undergraduate Students’ Pre- and Post-Tutorial Perceptions of the University of Illinois Writing Center
Olivia Buck, Junior, Creative Writing, LAS

Student Revision of Personal Statements After an Appointment in the University of Illinois Writers’ Workshop
Renee Tillman, Sophomore, Speech & Hearing Science, AHS

Development and Conservation
Ashley Imyak, Freshman, Elementary Education (Grades 1–6), EDU
Jamie Gorden, Freshman, Elementary Education (Grades 1–6), EDU

The Geometry of Voting: From Lincoln’s Presidential Election to College Football Polls
Aubrey Laskowski, Freshman, Mathematics and Computer Science, LAS/ENG
Yukun Tan, Sophomore, Mathematics, LAS
Vivek Kaushik, Freshman, Mathematics, LAS
Mengzhou Tang, Senior, Mathematics, LAS

Big Interest Groups Making a Big Difference: Studying the Impact of Interest Groups on Agency Policymaking
Meredith Heim, Senior, Political Science, LAS

Where, Who and Why: Literacy Intervention in Communication Sciences and Disorders
Theresa Versaci, Senior, Speech & Hearing Science, AHS
Katie Appel, Senior, Audiology, AHS
Sierra Soland, Senior, Audiology, AHS

About a Boy, AAC, & Grown-ups: Using Mixed Methods to Study Communication Disorders
Paige Smiles, Junior, Speech & Hearing Science, AHS
Lauren De Vries, Sophomore, Speech & Hearing Science, AHS
Eve Zumwalt, Junior, Speech & Hearing Science, AHS

Campaign Finance: Effects on Voter Behavior and Opinion
Thomas Conroy, Senior, Political Science, LAS

Trends in Academic Qualifications of University of Illinois Education Students
Emily Katz, Sophomore, Elementary Education (Grades 1–6), EDU
Hannah Bohn, Sophomore, Elementary Education (Grades 1–6), EDU

Party Loyalty in Closed List Proportional Representation Systems
Ana Mafalda Fernandes, Senior, Political Science, LAS

"To me she is perfect": Perceptions of Self-Body Image among Mexican Kindergarten-aged Children and their Mothers
Raha Hosseini, Senior, Human Nutrition, ACES
Lyana Delgado, Senior, Community Health, AHS
Evelyn Zepeda, Sophomore, Interdisciplinary Health Sciences, AHS

Creating Supportive Environments for Children Who have been Exposed to Traumatic Events
Samantha Addante, Junior, Human Development & Family Studies, ACES

Memory for Speech Categories
Ben Somers, Freshman, Global Studies, LAS
Naif Mansury, Sophomore, Molecular & Cellular Biology, LAS

PJ Session - Science & Mathematics

3:15–4:30 PM, Illini Room A

Putative Regulatory Role of GlyS Small Antisense RNA in an Uncultivable Obligate Insect Symbiont Buchnera aphidicola
Siyuan (Lily) Cheng, Junior, Integrative Biology, LAS

Verbal Play as a Communicative Resource in Aphasia Treatment
Tara Marcoski, Senior, Speech & Hearing Science, AHS
Claire Smego, Junior, Speech & Hearing Science, AHS
Processing and Mechanical Characterization of cyclic Polyphthalaldehyde
Edgar Mejia, Junior, Mechanical Engineering, ENG

Microphysical Structure of Elevated Convection in Winter Cyclones
Amanda Murphy, Senior, Atmospheric Sciences, LAS

Characterization of the Protein-binding Domains of Eukaryotic Translation Initiation Factor eIF4G2 by a Pull-down Method
Xueting Nie, Sophomore, Biochemistry, LAS

Petrographic and Geochemical Analysis of Igneous Dikes and Keiths Dome Pluton in the Grass Lake Area in the Mount Tallac Roof Pendant; Eldorado County, California
Samuel Noethe, Senior, Geology, LAS

Synthesis of High-valent Nickel Complexes Supported by Electron Rich CCC Pincer Ligand Platform
Cristian Ocampo, Junior, Chemistry, LAS

Ecology of Stormwater Ponds
Xorla Ocloo, Senior, Integrative Biology, LAS

Geomagnetic Disturbance Mitigations on the Electric Grid via Topology Control Analysis
Jamie Padilla, Senior, Electrical Engineering, ENG

Effect of Removing Each of Three Adaptation Mechanisms on Bacillus subtilis Chemotaxis
Michael Pajor, Senior, Molecular & Cellular Biology, LAS

Computational Modeling of Generalized RTK Dimerization Kinetics
Alexandra Palasz, Senior, Bioengineering, ENG

Polarized Synchrotron Emission and Absorption Coefficients for Thermal, Nonthermal, and Kappa Electron Distributions
Alexander Pandya, Junior, Physics, LAS

Detecting microRNA Signatures to Differentiate Tissue Type by Developing a Signal Enhancement Strategy for Use on Silicon Microring Resonators
Christopher Para, Senior, Chemistry, LAS

An Engineered Hydrogel Platform Identifies Brain Tumor Categories Characterized by Response to Extracellular Hyaluronic Acid Concentration
Amanda Pritchard, Senior, Chemical & Biomolecular Engineering, LAS

Exploring the Organization of White Matter Tracts in Tinnitus Patients Using Diffusion Tensor Imaging
Ariana Romero, Senior, Speech & Hearing Science, AHS

Analysis of the Substrate Metabolism and Biochemical Properties of Cytochrome P450 725A4 in Nanodisc
John Rouck, Senior, Molecular & Cellular Biology, LAS

Multi-compartment Biomaterial Scaffolds to Promote Mesenchymal Stem Cell Differentiation and Proliferation at Tendon Bone Junction
Shayta Roy, Senior, Chemical & Biomolecular Engineering, LAS

Effects of a Novel a7 Nicotinic Acetylcholine Receptor Agonist on Neuronal Activity Evaluated by Multi-electrode Electrophysiology
Nainika Roy, Junior, Molecular & Cellular Biology, LAS

Understanding the Molecular Basis of the Interaction between Helicobacter pylori’s Vacuolating Cytotoxin and its Cellular Receptor
Wilhelm Salmen, Senior, Molecular & Cellular Biology, LAS

Calibration and Optimization of Microfluidic Spiral for Clinical Pathology
Kinsey Schultheis, Sophomore, Bioengineering, ENG
Reema Patel, Junior, Molecular & Cellular Biology, LAS

Rapid Evolutionary Adaptation of Escherichia coli to Step-Wise Increment in the Antibiotic Ciprofloxacin
Lauren Shechtman, Junior, Chemistry, LAS

The Effect of Elevated Intensity on Consonant Recognition in Noise by Normal Hearing, Aged Subjects
Robert Shepard, Senior, Molecular & Cellular Biology and Psychology, LAS

Kindle the Shadow of the eIF4G1 Transcription Model
Wenjun Song, Junior, Molecular & Cellular Biology, LAS

Effect of Auditory Feedback on Speech Errors - Evidence from Tongue Twisters
Mia Teehan, Senior, Speech & Hearing Science, AHS
Carolyn Jeon, Senior, Audiology, AHS
Kristin Ogle, Junior, Speech & Hearing Science, AHS
Edith Ayala, Junior, Speech & Hearing Science, AHS

Nutrient Driven Intestinal Stem Cell Proliferation
Ashton Townsley, Junior, Animal Sciences, ACES
Matthew Bertagna, Junior, Animal Sciences, ACES

Pitch Matching and Loudness Matching of Tinnitus
Kelli Utz, Senior, Molecular & Cellular Biology, LAS

Vibrational Behavior of Three-Dimensional Structures Assembled by Compressive Buckling
Gabe Velarde, Senior, Materials Science & Engineering, ENG

HTL Biocrude Oil Physicochemical Properties
Zhenwei Wu, Freshman, Agriculture & Biological Engineering, ENG
Genome-wide Screening for Improved Fatty Alcohol Production in Yeast Using a Biosensor

Yuying Wu, Junior, Chemical & Biomolecular Engineering, LAS

Detecting Non-randomness: A Suite of Statistical Tests to Detect Fake Coin Flips and Identify Patterns in Real-world Data

Jiarui Xu, Senior, Mathematics & Computer Science, LAS/ENG

Individual Genetic Variation in the Tumor Necrosis Factor Alpha gene (TNFA): Associations with Obesity and Metabolic Syndrome in Mexican College-age Students

Qian Zhang, Senior, Statistics, LAS

PK Session - Health & Wellness

3:15–4:30 PM, Illini Room C

The Role of Reported Speech as an Integral Part of Communicative Environments during Animal Assisted Therapy (AAT)

Jennifer Gerry, Senior, Speech & Hearing Science, AHS

Carley Serena, Senior, Speech & Hearing Science, AHS

The Effects of Outdoor Play/Physical Activity on Upper-level Elementary School Students

Victoria Robert, Sophomore, Elementary Education (Grades 1-6), EDU

Lindsey Pingsterhaus, Sophomore, Early Childhood Education (Birth - Grade 3), EDU

Can Exercise Serve as an Intervention for the mPFC-associated Behavioral and Anatomical Maladaptation's Induced by Alcohol Exposure?

Ivy Hernandez Delgado, Senior, Psychology, LAS

The Effect of Acute Aerobic Exercise and High-intensity Interval Training on Inhibitory Control and working Memory in Young Adults

Camille Garcia, Senior, Molecular & Cellular Biology and Psychology, LAS

Jack Soneson, Senior, Molecular & Cellular Biology and Psychology, LAS

An Exploratory Examination of Parental Communication Processes Related to Children's Developmental Screenings

Molly Harmon, Senior, Human Development & Family Studies, ACES

De Novo Metavirome Assembly from Cystic Fibrosis Lung Samples

Angelo Blancaflor, Senior, Molecular & Cellular Biology, LAS

Impact of Caffeine on Macronutrient Metabolism: A Review of Literature

Hoiting Cheung, Junior, Food Science & Human Nutrition, ACES

Can Feng, Sophomore, Food Science & Human Nutrition, ACES

Kar Wing Chan, Senior, Kinesiology, AHS

Hoi Ting Cheung, Senior, Food Science & Human Nutrition, ACES

Channel BMI: How Does a Child's TV Use Affect BMI?

Audrey Hoene, Sophomore, Interdisciplinary Health Sciences, AHS

Passang Gonrong, Junior, Interdisciplinary Health Sciences, AHS

Kyle Hoang, Junior, Chemistry, LAS

Diet or Surgery: What Accounts for Weight Loss Following Sleeve Gastrectomy?

Leila Diab, Junior, Dietetics, ACES

Balancing the Scale: the Effects of Socioeconomic Status on a Child's Health

Emma Dahlberg, Senior, Interdisciplinary Health Sciences, AHS

Aisha Tepede, Junior, Community Health, AHS

Elizabeth Tran, Junior, Molecular & Cellular Biology, LAS

Jenny Chang, Senior, Interdisciplinary Health Sciences, AHS

Postpartum Depression and Maternal Obesity

Mehta Jeenal, Sophomore, Biochemistry, LAS

"We are Mexicans and We Like ‘La Comida Rica’: Unhealthy Dietary Patterns among Hispanic Families

Andrea Huerta, Senior, Food Science & Human Nutrition, ACES

Amanda Ayers, Senior, Dietetics, ACES

Playing Safe: Patterns Influencing Physical Activity Among Hispanic Families

Kimberly Galvez, Sophomore, Psychology, LAS

Managing Self-Talk in Clinical Sessions: Implications for Speech-language pathology

Allison Virgilio, Senior, Speech & Hearing Science, AHS

Juliana Marks, Senior, Speech & Hearing Science, AHS

Incidence and Survival of Malignant Broad Ligament Cancer: A 40-year Population-based Analysis

Udit Nangia, Junior, Molecular & Cellular Biology, LAS

Cindy Hou, Senior, Community Health, AHS

Mimicking Complex Shoulder Motion using a Multi-DOF Actuator to Investigate Rotator Cuff Tears

Ben Slotarski, Senior, Mechanical Engineering, ENG

Blase Horn, Senior, Mechanical Engineering, ENG

Work Hard, Play Hard: A Study on Work and Leisure Activities in Romantic Relationships

Sydney Beck, Senior, Human Development & Family Studies, ACES

The Memeosity Approach to Words and Laughter

Paul Bogdan, Senior, Molecular & Cellular Biology, LAS

The Effects of Fluid Modulation on Changes in Hydration Status among Preadolescent Children

Lauren Schertzler, Senior, Food Science & Human Nutrition, ACES

Sewage Treatment by Genetical Modified Microorganism

Wenjun Song, Junior, Molecular & Cellular Biology, LAS
PL Session - Education, Social Science & Human Behavior

3:15–4:30 PM, South Lounge

Nuclear Confrontations

Amrutha Prasad, Senior, Political Science, LAS

How Does the University of Illinois Help Hong Kong Exchange Students adjust Themselves in a New Living Environment?

Hio Cheng Chang, Junior, Elementary Education (Grades 1-6), University of Macau
Soi Kei Wan, Junior, Learning & Education Studies, University of Macau

Perceptions of Teacher Education Preparation Programs at the University of Illinois Urbana-Champaign

Sydney Cooper, Freshman, Elementary Education (Grades 1-6), EDU
Megan Balk, Freshman, Elementary Education (Grades 1-6), EDU

Students’ Life in a Living-learning Community -- Global Crossroads as a Personal Choice Regarding Housing at UIUC

Yue Hong Gao, Junior, English Education, University of Macau
Mu Li, Junior, Mathematics & Application, University of Macau

How Adolescents Use Social Media to Cope with Parental Divorce

Ashley-Tate Hollis, Senior, Human Development & Family Studies, ACES
Rachel Smith, Senior, Human Development & Family Studies, ACES
Kristen Herdegen, Junior, Human Development & Family Studies, ACES
Alexandra Oliva, Sophomore, Human Development & Family Studies, ACES
Sonia Marinez, Senior, Human Development & Family Studies, ACES

Unfulfilled Promises: Mexico and Mexican Immigration in the Late 20th Century

Maria Valenzuela, Sophomore, Latina/Latino Studies, LAS

Technology Acceptance and US Small Businesses

Malik Lee, Junior, Information Systems & Information Technology, BUS

How Expatriate Students (Non-native English Speakers) Respond to Rational and Emotional Advertisements Relative to Native English-speaking Americans

Aphsha Islam, Sophomore, Advertising, COM
Manisha Venkat, Sophomore, Advertising, COM
Austin Herr, Senior, Advertising, COM
Beth Lee, Junior, Advertising, COM
Marissa Miller, Senior, Advertising, COM

Changes in Time: Influences on a Small Illinois Town

Matthew Kluge, Senior, Architectural Studies, FAA

Rising Above The ‘Nois: Identifying Effective Practices in Social Media

Masic Chen, Sophomore, Undeclared, DGS
Ruoxi Su, Senior, Communication, LAS
Aliaputri Kamal, Junior, Advertising, COM

An Analysis on Eminent Domain and the Supreme Court

Christopher Ponicki, Senior, Economics, LAS

When Does a Message Source’s Race Impact How that Message is Received – Racial and Social Justice Knowledge, Prejudice, and the Belief in Racism as a Zero-sum Game

Daniel Duan, Senior, Advertising, COM

Non-American = Naughty: Early Essentialism of National Identity Predicts Out-group Prejudice

Jacqueline Beck, Junior, Psychology, LAS

Knowledge Without Virtue: Revisiting Plato’s Republic Through Vladimir Bartol’s Alamut

Krupa Patel, Senior, English, LAS

Motivations for Undergraduate Engineering Students to Attend Writing Centers

Jillian Davis, Sophomore, History, LAS

Parent Advocacy

Hannah Curtis, Junior, Elementary Education (Grades 1-6), EDU
Corey Bilger, Junior, Elementary Education (Grades 1-6), EDU

The Effects of Gender, Class Year, and Mentoring on Long Term Leadership Self Efficacy Gains

Timothy Callahan, Junior, Agricultural Leadership Education, ACES
Sarah Wright, Senior, Agri-Accounting, ACES
Nicole Yaklich, Junior, Human Development & Family Studies, ACES

Voting in Taiwan and China: A Comparative Analysis on the Impact of Educational Attainment on Voter Turnout in Taiwan and China

Mekenah Merrill, Senior, Political Science, LAS

Does Implicit Institutional Approval of American Indian Mascots affect Racial Attitudes?

Hannah Swoboda, Senior, Psychology, LAS

Computer Science Integration in the Elementary Grades

Amanda Bila, Junior, Elementary Education (Grades 1-6), EDU

Costs and Benefits of Greek Life on the UIUC Campus

Madison Scanlan, Senior, Public Policy & Law, ACES

Teaching 5th Graders Consumerism Through Art

Melanie Angarone, Senior, Art Education (K-12), FAA

Parental Experiences Navigating Early Childhood Autism Diagnosis and School Placement in Visakhapatnam, Andhra Pradesh, India

Keerthana Hogirala, Senior, Individual Plan of Study, LAS
Examining Study Abroad Participation in Illinois Promise Students: Preliminary Study on Obstacles to Participation for Low-income, Minority Students
Jennifer Aguayo, Senior, Community Health, AHS

College of Engineering’s Illinois Scholars Undergraduate Research (ISUR) Symposium
Thursday, April 21, 4:00–6:00 PM
104 Illini Union

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

Surface Energy Effects on Thin Film Morphology for Solution Printed Organic Semiconductors
Reahman Afshar, Sophomore, Chemical Engineering, LAS

Microvascular Carbon Fiber Composites for Thermal Regulation
Philip Barnett, Senior, Aerospace Engineering, ENG

Vapor Diffusion for Fabricating Large Single Crystals for Flexible Electronics
Rebecca Boehning, Junior, Chemical Engineering, LAS

Modulating the Immune Response using Collagen Scaffolds Containing Amniotic Membrane Matrix
Amber Boyce, Sophomore, Chemical Engineering, LAS

Investigating Interpolation Methods for Improving New Spacecraft Trajectory Methods
Kristen Brusich, Junior, Aerospace Engineering, ENG

Improved Thermoelectric Properties in SiGe Quantum Dot Superlattices
Kevin Cruse, Sophomore, Mechanical Engineering, ENG

Creation and Validation of a Standard Materials Set for Tribological Experiments
Maribel DeLaTorre, Sophomore, Mechanical Engineering, ENG

Intrinsic Cavity Loss in Vertical Cavity Surface Emitting Lasers
Nicholas DeNardo, Junior, Electrical Engineering, ENG

Solution Based Method for Growing Metallic Nanowires
Siddhesh Dhanawade, Junior, Mechanical Engineering, ENG

Flow and Vortex Dynamics Past Tabs of Different Geometries Using Volumetric Velocimetry
Allison Gibson, Junior, Mechanical Engineering, ENG

Characterization of Clofazamine Salt Crystal Structures and Properties
Lucas Gonzalez, Senior, Chemical Engineering, LAS

Experimental Research on the Failure Modes of the Feature Tracker in PTAM
Paulous Haile, Sophomore, Aerospace Engineering, ENG

Microassembly of a Silicon Micro-House
Alex Nathan Kahn, Senior, Mechanical Engineering, ENG

Controlled Mechanical Buckling for 3D Micro/Nanostructures
Jung Hwan Kim, Junior, Chemical Engineering, LAS

It’s Just a Matter of Perspective(s): Crowd-Powered Consensus Organization of Corpora
Andrew Kuznetsov, Sophomore, Computer Science, ENG

Developing a Water Desalination Membrane Using Two Dimensional Materials
David Lisk, Sophomore, Mechanical Engineering, ENG

Automatic Grip Selection for a Myoelectric Prosthetic
Bhargava Manja, Senior, Computer Science, ENG

Methods for Quantifying Hip Circumduction in Overground Walking
Emily Matijevich, Senior, Bioengineering, ENG

Feedback Controlled pN Force Sensor for Biological Study
Thomas McGrath, Junior, Engineering Mechanics, ENG

Electrochemical Delamination of CVD-Grown Graphene
Widiianto Moestopo, Junior, Mechanical Engineering, ENG

The Fabrication of Neural Implantable Needles
Grace Pakeltis, Junior, Materials Science & Engineering, ENG

Guided Rendezvous of a Quadrotor
Mihir Patel, Senior, Aerospace Engineering, ENG

Impact of Height Heterogeneity on Canopy Turbulence
Matthew Sadowski, Junior, Engineering Mechanics, ENG
Synthesis via Steric Entrapment and the Characterization of the HfO2-TiO2-Ta2O5 Phase Equilibria

Nicholas Sherman, Senior, Materials Science & Engineering, ENG

Fabrication of Vertical GaN Devices via Flow-Limited Field-Injection Electrostatic Spraying

John Simonaitis, Sophomore, Electrical Engineering, ENG

Design of an Advanced, Low-Cost Myoelectric Prosthetic Hand

Patrick Slade, Senior, Mechanical Engineering, ENG

Optical Characterization of Pathogenic Biofilms in the Human Upper Respiratory System

Veronika Sowers, Junior, Bioengineering, ENG

Biological Dynamics and Gene Expression

Erik Steinbrenner, Senior, Chemical Engineering, LAS

Benchtop X-ray Fluorescence & Luminescence Computed Tomography System: Prototype Therapeutic and Diagnostic Imaging

Dan Strat, Senior, Nuclear, Plasma, & Radiological Engineering, ENG

Salt Assisted Synthesis of Few Layer and Monolayer Molybdenum Disulfide / Synthesis of Acrylate Based Shape Memory Polymer

Satoshi Takekuma, Senior, Materials Science & Engineering, ENG

Effect of Wind Turbine Winglets on the Mean and Fluctuating Foundation Loadings

Charles Tierney, Junior, Mechanical Engineering, ENG

Copper Catalyst Design for Controlling Dehydrogenation and Esterification Selectivities

Mark Triezenberg, Junior, Chemical Engineering, LAS

Carbon Dioxide Capture using Polyamines

Regev Trigalo, Junior, Chemical Engineering, LAS

Vibrational Behavior of Three-Dimensional Structures Assembled by Compressive Buckling

Gabriel Velarde, Senior, Materials Science & Engineering, ENG

Development of Liquid Assay Cartridge for Handheld Smartphone Biosensor

Elizabeth Woodburn, Sophomore, Bioengineering, ENG

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