UNDERGRADUATE RESEARCH SYMPOSIUM

APRIL 13-18, 2014
Welcome to Undergraduate Research Week, a celebration of student excellence in research across campus. The signature event is the seventh annual campus-wide Undergraduate Research Symposium (URS), held on Thursday, April 17th. The breadth and scope of the oral and poster presentations as well as the performances featured not only reflect the wide range of academic disciplines at the University of Illinois, but also speak to the caliber of our undergraduate students. Our students are enterprising and thoughtful, eager to learn from their advisors and mentors. Their projects also demonstrate the ongoing commitment of our faculty to supporting and expanding undergraduate research opportunities on campus and beyond.

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

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

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

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

Sponsors

Akuna Capital LLC
Intel Corporation
Intelligent Medical Objects (IMO)
Monsanto Corporation

Office of Admissions, University of Illinois
Office of the Provost, University of Illinois
Riverside Research
Stevick Foundation
Researchers Initiative Poster Symposium, Urbana South Living–Learning Communities

Sunday, April 13, 4:00-6:00 p.m.
Florida Avenue Residence Halls, Oglesby Pagoda

The Effects of Cognitive Behavioral Therapy (CBT) on Depression and Parental Self-Efficacy in Latino Immigrant Mothers
Hannah Adekale, Sophomore, Nursing, CON
Anna Fischer, Freshman, Undeclared, DGS
Keanya Jackson, Sophomore, Finance in Agribusiness, ACES
Sandy Perez, Freshman, Undeclared, DGS

Social Capital and Community Gardening: A Study of Inner-City Residents, Project
Ricardo Amaya, Sophomore, Molecular and Cellular Biology, LAS
Allison Hollatz, Freshman, Molecular and Cellular Biology, LAS
Marina Shah, Sophomore, Mathematics, LAS

School Readiness in Inner-City Children
Ricardo Amaya, Sophomore, Molecular and Cellular Biology, LAS
Allison Hollatz, Freshman, Molecular and Cellular Biology, LAS
Marina Shah, Sophomore, Mathematics, LAS

Developing Novel Biocatalysts for Alternative Energies
Chidinma Anigbogu, Sophomore, Chemical Engineering, LAS

The Effects of Vocal Use and Disuse on Neuromuscular Junctions in the Aging Voice
Jacob Bowers, Freshman, Molecular and Cellular Biology, LAS

Effects of Human Activities and Management on Forest Ecosystems
Taylor Cascia, Freshman, Undeclared, DGS
Tingxiao Chen, Freshman, Actuarial Science, LAS
Magdalena Guszyn, Freshman, Animal Sciences, ACES
Roshan Kumar, Sophomore, Biochemistry, LAS

Insect-Infested Hemlock’s Effects on Soil in Southern Appalachian Forests
Taylor Cascia, Freshman, Undeclared, DGS
Tingxiao Chen, Freshman, Actuarial Science, LAS

Neural Markers of Strategic Attention and Learning
Sopirinye Diri, Sophomore, Molecular and Cellular Biology/Psychology, LAS

Political and Media Action on Childhood Lead Poisoning and Gardening Activity in the Urban Environment
Vinsha Doshi, Freshman, Undeclared, DGS

Nutrient Biomarker Patterns, Cognitive Function, and MRI Measures of Brain Aging
Jason Ginzkey, Freshman, Molecular and Cellular Biology, LAS
Ana Tinoco Martinez, Sophomore, Molecular and Cellular Biology, LAS

Evaluating the Effectiveness of Diversity Training on Police Recruits’ Racial Beliefs
Zheng Yun Ji, Sophomore, Economics, LAS

Race and Digital Media
Christine La, Sophomore, Broadcast Journalism, COM
Brea Thompson, Sophomore, Communication, COM

Liam McHugh, Freshman, Aerospace Engineering, ENG

Meta-Analysis of the Perceived Satisfaction of Interracial Couples
Shree Modi, Freshman, Business, BUS

Social “Epidemics” on Networks: Mathematical Modeling of the Growth of Twitter Posts
Chihio Moon, Sophomore, Actuarial Science, LAS
Sneha Shrivastav, Sophomore, Mathematics, LAS

Genetic Regulation in Bacteria
Monal Patel, Sophomore, Molecular and Cellular Biology, LAS

Chinese and South Korean Students in Changing University of Illinois Demographics
Cassandra Phelps, Sophomore, Linguistics, LAS
Yiying Wang, Freshman, Economics, LAS
Wenting Zhu, Freshman, Economics/Industrial Engineering, LAS/ENG

Racial and Ethnic Representations of Latinas in the Media
Yeah In Po, Exchange Student

College of Media Symposium, Media and Cinema Studies

Monday, April 14, 12:00-1:00 p.m.
Gregory Hall, Room 231

SoundCloud, NoiseTrade, and the Platforming of Collaboration in Music Remix Cultures
Ian Reeves, Sophomore, Political Science, LAS

Trapped Onlinel!: Innovations in Electronic Music Through Digital Collaboration
Marty Arneberg, Senior, Media and Cinema Studies, COM

Television Broadcast History and Disruptive Innovations
Veronica Mullen, Sophomore, Media and Cinema Studies, COM
Erin Ray, Sophomore, Undeclared, DGS

Technologies of Accounting and a History of Disruptive Innovations
Tom Feigel, Senior, Accountancy, BUS
Daniel Keller, Senior, Accountancy, BUS
Kevin Mulligan, Senior, Accountancy, BUS
Teen Suicide Prevention Through Youth New Media Interventions
Elizabeth Weiler, Junior, Political Science/English, LAS

LGBT Youth and Anti-Bullying Activism Online
Michael Montalban, Senior, Accountancy, BUS

Effects of Pizza Advertising
Troy Farsakian, Sophomore, Undeclared, DGS
Ansley Heppner, Sophomore, Undeclared, DGS
Airius Reeves, Sophomore, Psychology, LAS
Krishna Somayajula, Senior, Agricultural and Consumer Economics, ACES
Zhizhe Zhang, Freshman, Sociology, LAS

UIUC’s Reaction to Violent Content
Sukeerthi Khadri, Sophomore, Computer Science, ENG
Feifei Cai, Junior, Communication, LAS
Samantha Terstriep, Sophomore, Atmospheric Sciences, LAS

Effects of the Media
Katerina Pappas, Sophomore, Advertising, COM
Katherine Holmes, Sophomore, Supply Chain Management/Marketing, BUS
Jennifer Heck, Sophomore, BUS
William Smolen, Sophomore, Finance/Information Systems and Information Technology, BUS
Tahar Bowen-Pinto, Sophomore, Accounting, BUS

Encoding and Decoding
Katherine Holmes, Sophomore, Supply Chain Management/Marketing, BUS
Jennifer Heck, Sophomore, BUS
William Smolen, Sophomore, Finance/Information Systems and Information Technology, BUS
Tahar Bowen-Pinto, Sophomore, Accounting, BUS

Effects of Violent Video Games
Timothy Campbell, Freshman, Undeclared, DGS
Paulina Burgoa, Freshman, Media and Cinema Studies, COM
Alexia Roc, Sophomore, Psychology, LAS
Disha Ankola, Senior, Molecular and Cellular Biology, LAS
Joseph Procopio, Sophomore, Psychology, LAS

Gendered Media Effects on Body Image
Jaclyn Shaps, Sophomore, Special Education, EDU
Lauren Pliskin, Freshman, Political Science, LAS
Nicole Brettman, Sophomore, Undeclared, DGS
Angela Hong, Sophomore, Molecular and Cellular Biology, LAS
Mary Kate Simon, Sophomore, Undeclared, DGS

Ethnography of the University Initiative Biannual Student Conference
Tuesday, April 15, 3:00-8:00 p.m.
Library and Information Science Building, Room 126
Since 2003, Ethnography of the University Initiative (EUI) has provided an innovative approach to teaching and learning focused on promoting student research at universities and colleges. In EUI-affiliated courses, students use a variety of ethnographic, archival, and related methods to examine the university in its broader social, political, and historical contexts. During this academic year, there were 13 courses affiliated with EUI serving approximately 250 students. At the end of each semester, students have the opportunity to present their research at this conference as well as contribute their work to the EUI collection in the university’s digital repository, Illinois Digital Environment for Access to Learning and Scholarship (IDEALS).

Department of English Symposium
Wednesday, April 16, 4:00-5:00 p.m.
English Building, Atrium, Lower Level

Popular and Critical Perceptions of Female Actors in Traditionally Male Roles in Contemporary Shakespearean Productions
Nicole Moore, Senior, English, LAS

College of Fine and Applied Arts Symposium
Monday, April 14, 2:00-4:00 p.m.
Krannert Center for the Performing Arts, Krannert Room, Level 5

The Theatre and Art: The Audience’s Role
Julianne Heuel, Senior, Art Education, FAA

Give Sorrow Words: Hamlet’s Death and Its Impact on William Shakespeare’s Work
Stephanie Svarz, Junior, Theatre/English, FAA/LAS

Early American Ibsenism
Jacob Davis, Senior, Theatre, FAA

Plays at Work: The In-Depth Exploration of New Play Development From Broadway to Illinois Theatre
Mateo Hurtado, Sophomore, Theatre, FAA

4:00-5:00 p.m.
Krannert Center for the Performing Arts, Choral Rehearsal Room, Level 2

Transcribing J.S. Bach’s Keyboard Music to Harp (performance)
Erin Brooker, Senior, Harp Performance, FAA

Composing a Woodwind Quintet (performance)
Joseph Meland, Junior, Composition/Theory, FAA

Between Misselthwaite Manor and the “Wild, Dreary” Moor: Children and Enclosures in The Secret Garden
Katy DiGiulio, Senior, English, LAS
**5:00-5:30 p.m.**  
English Building, Atrium, Lower Level  

*Refreshments hosted by the English Student Council*

*Welcome*

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

**5:30-7:00 p.m.**  
English Building, Room 107A  

*Research in the Writers Workshop*

*Research in the Writers Workshop: A Roundtable*  

**Leatrice Potter**, Senior, English, LAS  
**Debbie Newcomb**, Senior, English, LAS  
**Gwen Quigeley**, Junior, English, LAS  
**Susana Luna**, Junior, Creative Writing, LAS  
**Hillary Waldstein**, Senior, Creative Writing/English, LAS  
**Karthik Brahmandam**, Senior, Geography and Geographic Information Science, LAS

**6:00-7:00 p.m.**  
English Building, Atrium, Lower Level  

*Intersectional Identities in American Women Writers*

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

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

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

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

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

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

---

**Department of Anthropology Symposium**

**Wednesday, April 16, 6:00-9:00 p.m.**  
Noyes Lab, Room 161  

*Annual Anthropology Senior Capstone Conference*

*Untitled*  

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

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

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

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

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

---

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

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

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

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

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

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

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

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

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

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

---

**ORAL PRESENTATIONS**

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

**The Global Economy**

The Behavioral Components of the European Debt Crisis  

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

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

**ManoLasya Perepa**, Senior, Global Studies, LAS
Valerie Brankovic, Senior, Political Science, LAS

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

Fragile X

VEGF Expression and the Fragile X Syndrome
Nabiya Arshad, Senior, Psychology, LAS

Developmental Neocortical Vasculature Abnormalities in a Mouse Model of Fragile X Syndrome
Stephen Fleming, Senior, Psychology, LAS

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

Chinese and American Educational Experiences

Comparing Education Opportunities for Students With Disabilities Between China and the United States
Benjamin Appleby, Freshman, Special Education, EDU

Julia Malinowski, Sophomore, Special Education, EDU
Leslie Martin, Sophomore, Elementary Education, EDU

English in the Chinese Educational System
Sarah Kitz, Sophomore, Elementary Education, EDU
Kelly Burger, Junior, English, LAS
Dana Roesslein, Junior, Mathematics, LAS

Chinese Family vs. American Family
Meng Chi Ao, Junior, Computer Science, ENG
Connie Tan, Sophomore, Undeclared, DGS
Mingya Huang, Junior, Education, EDU

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

Challenges in Education

School Readiness: Insights From Low-Income African American Mothers
Lilli Melero, Junior, Psychology, LAS

Humanities Education Across Prison Boundaries
Michael Brawn, Non-Degree
Jose Carbrales, Education Justice Project, EDU
Gregory Donatelli, Education Justice Project, EDU

Education Barriers for the Children of Migrant Farm Workers in Illinois
Heather Sears, Senior, Social Work, SSW

The Role of Mentorship on the College Enrollment Rate of Mexican American Males
Jasmine Patron Vargas, Junior, Gender and Women’s Studies / Latina/o Studies, LAS

Promoting Education in an Urban Setting: How Well Does the University of Illinois School of Education Address and Work With It?
Dave Rodgers, Junior, Teaching of English, EDU

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

Issues in Engineering

Field-Dependent Simulations of Phase-Change Memory and Silicon Microelectronics for SJEM Measurements
Juan LLinas, Senior, Electrical Engineering, ENG

Thin-Layer Chromatography Using a Smartphone Biosensor
Venkata Pillarisetti, Senior, Electrical Engineering, ENG

Saman Moniri, Senior, Chemical Engineering, LAS

Quantification of Gene Expression in Angiogenic Receptors and Ligands Using qPCR
Dipen Kumar, Freshman, Bioengineering, ENG

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

Identity Issues

Shelley Jackson’s Patchwork Girl and Hypermediated Print
Bradley Williams, Senior, English, LAS

The Politics of Self-Progression
Jarvis Young, Senior, English, LAS

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

Cross-Cultural Interactions

Cultural Differences in Teenagers’ Lifestyles
Si Un Leong, Junior, Civil Engineering, ENG
Weng Si Kuan, Junior, Linguistics, LAS
Michael Allenworth, Senior, Political Science, LAS

Exploring Intercultural Friendship
Elizabeth Ortiz, Freshman, Media and Cinema Studies, COM
Cheang Hio Hei, Junior, English Education, EDU
Liu Tianbo, Junior, Mathematics, LAS

Islam and Women: Surveying the Academic Debate
David Rahimi, Senior, History/Political Science, LAS
Interacting Within Different Cultures

Fai Thompson, Junior, Psychology, LAS
Keith Leong, Exchange Student
Dominique Parker, Senior, Media and Cinema Studies, COM

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

Food Security

The Impact of Household Food Security on Parental Quality of Life

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

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

Paul Dolmon, Senior, Political Science, LAS

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

Literary Criticism

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

Michael Chan, Senior, English/Architecture, LAS/FAA
Jonathan Cheng, Senior, English, LAS
Nick Millman, Junior, English/Global Studies, LAS
Clara Mount, Senior, English, LAS
Lindsey Rolf, Senior, English, LAS
Stephanie Svarz, Senior, English/Theatre Studies, LAS/FAA
Mary Baker, Senior, English, LAS
Dave Rodgers, Junior, Teaching of English, EDU
Genevieve Scheele, Senior, Comparative Literature/East Asian Languages, LAS

POSTER PRESENTATIONS

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

PA Session—Plants and Animals

Identification of the Mutation Causing Platinum Coat Color in Foxes

Alexandra Kozysa, Junior, Animal Sciences, ACES

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

Flora Fong, Senior, Animal Sciences, ACES

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

Chelsey Coombs, Senior, Molecular and Cellular Biology, LAS

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

Erica Navis, Junior, Animal Sciences, ACES

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

Mary West, Senior, Animal Sciences, ACES

Reducing Chlorophyll Content in Soybeans Alters the Surface Energy Balance

Kaitlin Togliatti, Senior, Atmospheric Sciences, LAS

Methane Production From Anaerobic Digestion of Miscanthus X Giganteus “Illinois” Fermentation Residue

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

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

Rachel Cote, Senior, Food Science, ACES

Disease Resistance of Impatiens Walleriana Cultivars to Rhizoctonia Solani

Jeff Hansen, Senior, Horticulture, ACES

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

Karen Chen, Junior, Food Science, ACES

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

Rebecca Winters, Senior, Animal Sciences, ACES

Visual Acuity of Bass

Sally Feng, Senior, Integrative Biology, LAS
Numan Karim, Sophomore, Statistics/Molecular and Cellular Biology, LAS

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

Newton Hood, Senior, Anthropology, LAS

Determination of Forage Quality of Miscanthus at Different Cutting Times

Nicholas Reitz, Senior, Food Science, ACES

Culinary Herbs in the Fight Against Type 2 Diabetes

Luis Hernandez, Sophomore, Chemistry, LAS

Effects of Pyrethroid and Pyrethrin Insecticides on Beef Bull Reproductive Parameters

Sandra Poveda Jimenez, Junior, Animal Sciences, ACES

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

Michael Pirovano, Sophomore, Integrative Biology, LAS
Zack Cohen, Freshman, Integrative Biology, LAS
D’mario Turner, Sophomore, Mathematics, LAS
Environmental Stressors and Physiological Changes in Plants

Kyra Michon, Senior, Molecular and Cellular Biology, LAS

Temporal Variations in NH₃ Emissions From Agricultural Fertilization

Meng Wang, Senior, Civil Engineering, ENG

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

Sylvia Nunez, Junior, Integrative Biology, LAS

Host Specificity in the Common Yellow Morel, Morchella Esculenta

Jason Newton, Junior, Integrative Biology, LAS

Modeling Honey Bee Colony Population Dynamics and Interaction Networks

Ting Liao, Senior, Mechanical Engineering, ENG

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

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

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

PB Session—Science and Mathematics

Longitudinal Bayesian Diffusion Model for Two Choice Reaction-Time Studies

Kyle Payne, Senior, Statistics, LAS

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

Daniel Pak, Junior, Bioengineering, ACES

Long-Term Imaging Cellular Processes

Elliot Tague, Junior, Bioengineering, ACES

Design of Actively Controlled Reconfigurable Mechatronic System

Danny Lohan, Senior, General Engineering, ENG

Gene Expression in the Uterus of Monodelphis Domestica

Kathryn Dorhout, Senior, Integrative Biology, LAS

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

Michaela Eickhoff, Junior, Molecular and Cellular Biology, LAS

Automated Search for Gravitational Lenses

Sean McLaughlin, Junior, Engineering Physics, ENG

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

Susan Zelasko, Junior, Molecular and Cellular Biology, LAS

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

Manan Raval, Senior, Electrical Engineering, ENG

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

Rebecca Tippens, Senior, Physics, LAS

Intermediate-Scale Astronomical Image Composition

Britton Jeter, Senior, Physics, LAS

Competitive Advantage of Tissue-Specific Streptococcus Pneumoniae in Human Samples

Elizabeth Southworth, Senior, Molecular and Cellular Biology, LAS

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

Zita Hubler, Senior, Bioengineering, ACES

RNAi Knockdown of NPR-6 in Caenorhabditis Elegans

Sally Ladsaria, Sophomore, Integrative Biology, LAS
Katie Lincoln, Sophomore, Integrative Biology, LAS
Becky Michna, Sophomore, Integrative Biology, LAS

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

Rachel Haake, Senior, Psychology, LAS

Stationary Domain Wall Contributions to Dielectric Response in Ferroelectric Thin Films

Jason Fleischman, Sophomore, Materials Science and Engineering, ENG

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

Joseph Kus, Junior, Bioengineering, ENG

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

PC Session—Education

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

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

Why Do Children Learn Language Better Than Adults?

Julia Cronin, Senior, Linguistics, LAS
Illinois Farm-to-School Program: Determining the Educational Needs of Teachers for the Incorporation of School Gardens

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

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

Jennifer Mocarski, Freshman, Education, EDU
Anna L. Bolton, Freshman, Pre-Education, EDU

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

Ashley Ojiemwen, Senior, Speech and Hearing Science, AHS

The Diagnostic Accuracy of Parent Report in Assessing Grammatical Development

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

Relationship Between Personality Traits, Goal Difficulty, and Task Performance

Han Zhu, Senior, Psychology/Mathematics, LAS

Disciplinary Approach Utilized by University Primary School

Staci Fay, Sophomore, Elementary Education, EDU

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

Agnes Strojewska, Senior, Psychology, LAS

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

Jennifer Weber, Senior, Nursing, CON

Drawing as Assessment in Human Anatomy and Physiology Courses

Megan McKeon, Sophomore, Integrative Biology, LAS

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

Emily Fiedler, Junior, Art Education, FAA

Visual Arts Assessment in First and Second Grade

Adam Smith, Junior, Art Education, FAA

(R)E)Presen)ation With Third and Fourth Graders

Megan Swiertz, Junior, Art Education/Photography, FAA

Outdoor Interaction in the First Grade

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

Transitioning With Third and Fourth Graders

Erin Gleason, Junior, Art Education, FAA

Comparing the Chinese Education System to the American Education System

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

Integrating Computational Skills Into Curriculum to Aid Students With Disabilities

Christina Japuntich, Freshman, Special Education, EDU

Do We Making the Grade on Disability Awareness for Our Students?

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

Educate to Embrace Disabilities

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

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

Elizabeth Badskey, Junior, Social Work, SSW

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

Ga-Young Jin, Senior, Social Work, SSW

Evaluation of Nutrient Intakes of Pregnant and Non-Pregnant Women

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

Non-Communicable Diseases in Sub-Saharan Africa

Cristina Gratton, Junior, Molecular and Cellular Biology, LAS

Characterizing Change in Parent Input to Toddlers

Kelsey Haywood, Senior, Speech and Hearing Science, AHS
Victoria Ting, Senior, Speech and Hearing Science, AHS
Effects of Perioperative Beta Blockade on Patient Morbidity
Laura Sokolowski, Senior, Nursing, CON

Social Determinants of Health:
Analysis of Patients Utilizing a Free Clinic
Olatoyosi Akinrotimi, Senior, Community Health, AHS
Uzma Ahmad, Senior, Community Health, AHS

High Consumption of Saturated Fatty Acids Is Associated With Hypertriglyceridemia in Mexican College Students
Jiewen Li, Senior, Food Science and Human Nutrition, ACES

Frequency of Family Mealtimes in Families With Preschool-Aged Children
Melissa Raney, Junior, Food Science and Human Nutrition, ACES
Kelsey Galicia, Sophomore, Human Development and Family Studies, ACES

What’s the Big Deal About Allergies?: A Correlation Analysis of How Specific Allergies and Number of Allergies Affect Weight Status in Children
Tanis Klingler, Senior, Molecular and Cellular Biology, ACES
Eva Doyle, Senior, Food Science and Human Nutrition, ACES

The Search for the Missing Heritability of Obesity: Using Ancestry-Informative Markers to Account for Ethnic Differences in the STRONG Kids Cohort
Konstantin Tchalukov, Junior, Biochemistry, LAS
Vrajika Thakker, Sophomore, Molecular and Cellular Biology/Spanish, LAS
Anthony Wang, Medical Scholar, ACES

Impact of Nutritional Factors on Virulence in Staphylococcus Aureus
Gianna Vella, Junior, Animal Sciences, ACES

Depression, Adiposity, and Adiponectin in Young Mexican Adults
Jasmine Washington, Sophomore, Human Development and Family Studies, ACES

Engineering Brain Cancer in Vitro Models for Clinical Studies
Jacob Hanselman, Sophomore, Bioengineering, ENG
Sarah Laken, Junior, Bioengineering, ENG

Parent–Child Relationship Quality Moderates the Contribution of Peer Victimization to Depressive Symptoms
Samantha Welter, Senior, Psychology, LAS

Characterization of the Material Properties of Pig Right Femur Mid-Diaphysis From Ages 0 to 24 Months to Further Understanding of Human Child Bone Development
Kevin Chrzanowski, Junior, Molecular and Cellular Biology/Economics, LAS
So Hyun Ahn, Junior, Bioengineering, ENG
Carl Bohm, Senior, Mechanical Engineering, ENG

Youth Interventions: Teen Suicide
Elizabeth Weiler, Junior, Political Science/English, LAS

Analyzing HDL and LDL Levels in the Older Ecuadorian Adult Population During the Nutrition Transition
Joanne Jose, Senior, Food Science and Human Nutrition, ACES

Relationships Between Fasting Blood Glucose, Saturated Fat Intake, and Cognition Among Prepubertal Children
Brooke Pfest, Senior, Food Science and Human Nutrition, ACES
Alexis Tiller, Senior, Food Science and Human Nutrition, ACES

Postpartum Depressive Symptoms in Women Participating in a WIC Program
Noelle Bruce, Junior, Social Work, SSW
Heather Sears, Senior, Social Work, SSW

An Investigative Look Into the Current State of Illinois Child Care Providers’ Nutritional Knowledge Broken Down by Race
Erin Tompkins, Junior, Community Health, AHS
Rachel McCool, Senior, Human Development and Family Studies, ACES

High Maternal Prepregnancy BMI Negatively Affects Visual Recognition Memory in Infants
Khristian Bersamin, Senior, Psychology, LAS

Associations Between Interdialytic Weight Gain and Dietary Intake of Sodium and Fluid in Hemodialysis Patients
Alyssa Giovannoni, Junior, Food Science and Human Nutrition, ACES

Adiponectin Polymorphisms as an Early Marker for Metabolic Disorders
Abby Esker, Junior, Molecular and Cellular Biology, LAS

Simulations of Black-Hole Emission and Comparisons to Observation
Scott Luedtke, Senior, Physics, LAS

The Search for Surviving Companions of Type Ia Supernova Progenitors in the Large Magellanic Cloud: SNR 0509-67.5
Abigail Holmes, Senior, Astronomy, LAS

Machine Learning for Star-Galaxy Classification
Ching Chang, Junior, Physics, LAS

Predictive Skill of Temperature and Precipitation Forecast Deviations From Climatology in the Boulder, Colorado, Flood and the August 2013 Central U.S. Drought
Vincent Carretti, Senior, Atmospheric Sciences, LAS

Airmass Sources of the Comma Head Region of a Continental Winter Cyclone Using HYSPLIT
Matthew Macomber, Senior, Atmospheric Sciences, LAS
Use of Generative Algorithms in Heat Transfer Applications
Danny Lohan, Senior, General Engineering, ENG

Fractals, Primes, and Digital Dice: Patterns and Randomness in Number Theory
Yiwang Chen, Junior, Mathematics, LAS
Tong Zhang, Senior, Mathematics, LAS

The Strange Case of the Moebius Power Series: Reconciling Theory and Numerical Evidence
Tong Zhang, Senior, Mathematics, LAS
Yiwang Chen, Junior, Mathematics, LAS

Characterization of Histone H1.4 Variants Using Amphibian Lampbrush Chromosomes
Cara Schornak, Junior, Molecular and Cellular Biology, LAS

Evolution of Baby HII Regions in the LMC
Ju Zhu, Junior, Astronomy, LAS
LiZhong Zhang, Junior, Astronomy, LAS

Droplet-Based Microfluidic Device for Epigenetic Analysis of Small Cell Samples
Amy Oreskovic, Junior, Bioengineering, ENG
Mallika Modak, Junior, Bioengineering, ENG

Methods of Investigating the Subcellular Localization of VEGFR-3 in HUVECs
Audra Storm, Sophomore, Bioengineering, ENG

Computational Modeling and Prediction of G-Quadruplex Formation
Jacob Calvert, Junior, Bioengineering, ENG

Quantitative Flow Cytometry of Angiogenic Growth Factor Receptors in the EA.hy926 Cell Line
Brenda Mathias, Sophomore, Bioengineering, ENG
Xinyi Guo, Junior, Molecular and Cellular Biology, LAS
Osazomon Imarenezor, Sophomore, Undeclared, DGS

Symmetries in Nature
Michelle Zosky, Senior, Mathematics, LAS
Christopher Formosa, Sophomore, Mathematics, LAS
Chaofan Da, Junior, Mathematics, LAS
Junxian Li, Graduate Student, Mathematics, LAS

DNA-Guided Growth of Palladium Nanocubes
Arzeena Ali, Sophomore, Chemistry, LAS

Stimulated Brillouin Scattering Gain in Whispering Gallery Resonators
Nathan Dostart, Senior, Mechanical Engineering, ENG

Tracking EGF Activation With Quantum Dots on Hydrogel Platform
Ashley Peterson, Junior, Bioengineering, ENG

Yield-Stress Fluid Droplet Impact on Coated Surfaces
Marc Deetjen, Senior, Mechanical Engineering, ENG
Brendan C. Blackwell, Graduate Student, Mechanical Engineering, ENG

Carbon Accounting Methodology
Ilana Braverman, Sophomore, Natural Resources and Environmental Sciences, ACES

Creative Blocking
Daniel Hirsbrunner, Senior, Mathematics, LAS
Jeremy Dejournett, Junior, Electrical Engineering, ENG
Moon Hwan Lee, Junior, Political Science/Mathematics, LAS

Vacuole Recruitment and Recycling of the GEF Mon1 Are Regulated by Phosphatidylinositol 3-Phosphate and the Casein Kinase Yck3
Blake Flood, Senior, Biochemistry, LAS

Characterization of CREB-Binding Proteins: Chromatin-Modifying Enzymes Functioning in Planarian Regeneration
Rivka Stelman, Senior, Molecular and Cellular Biology, LAS

Detection of Glioblastoma Multiforme Microvesicles Using Microring Resonator Arrays
Nicholas Vertin, Sophomore, Integrative Biology, LAS

Intraspecific Variation Significantly Alters Outcomes Among Competing Cladocerans
Sarah Dupl, Senior, Integrative Biology, LAS

Quantitative Analysis and Computational Modeling of PDGF-VEGF Crosstalk
Manu Kumar, Senior, Bioengineering, ENG
Tyler Cowman, Senior, Bioengineering, ENG

Modeling and Design Analysis of a Permanent Magnet Linear Synchronous Generator
Xin Niu, Junior, Industrial Engineering, ENG

Survey of Bubbles Around Wolf-Rayet Stars in the Magellanic Clouds
Mohd Ireza, Sophomore, Astronomy, LAS
Yu Jin Yeo, Junior, Astronomy, LAS

Individual Differences in Binocular Rivalry
Lu Ye, Senior, Psychology, LAS
Analyzing Spatial Variations in Sea-Level Rise Due to Ocean Warming
Abigail Peterson, Junior, Atmospheric Sciences, LAS

Mitigation of Cognitive Decline Through Calcium Hydroxy-Beta-Methylbutyrate (CaHMB) Supplementation in Aged Rats
Lauren Ruvola, Senior, Psychology, LAS

Bootstrap Percolation and the Target Set Selection Problem
Kaiyue Hou, Senior, Mathematics/Economics, LAS
Yuxi He, Junior, Mathematics, LAS
Yibo Guo, Sophomore, Computer Science, ENG

G-Quadruplex Structure Variations and Gene Regulation
Molly Imgruet, Junior, Bioengineering, ENG

G-Quadruplex Structure Variations and Gene Regulation
Molly Imgruet, Junior, Bioengineering, ENG

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

PF Session—Social Science and Human Behavior

Not Your Parents’ Stereotypes: A Study of Student Perceptions of Foreign-Accented Speech
Katharine Tyndall, Junior, Linguistics, LAS

It’s Not You, It’s U.S.: The Influence of Domestic Forces on U.S. Foreign Conflict Engagement
Ewa Kaszuba, Senior, Political Science/Economics, LAS

The 10%: Explaining Bill Passage in the U.S. House of Representatives
Stephanie Westfall, Senior, Political Science/Sociology, LAS

Maximizing the Profits of Organizations by Retaining Employees: Using the Model of Social Exchange Theory to Examine Turnover Intentions in Higher Education
Gloria Kim, Sophomore, Psychology, LAS

Throw the Bums Out? The Impact of Term Limits on State Governance
Derek Miller, Senior, Political Science/History, LAS

Building a Leadership Lab at the University of Illinois
Melissa Brottman, Senior, Speech and Hearing Science, AHS
Patrick Proctor, Senior, Communication, LAS

Defining Shifting and Dividing Attention in Older Adults
Rachel Hopman, Senior, Psychology, LAS

The Timing of United State Intervention Militarily in International Intrastate Wars
Erin Dine, Senior, Political Science/Communication, LAS

An Examination of Middle Woodland Spatiotemporal Settlement Trends in the Lower Illinois River Valley
Taylor Thornton, Senior, Anthropology/Geography and Geographic Information Science, LAS

The Hashemite Kingdom of Jordan as a Country of Transition: An Examination of Iraqi and Syrian Refugees
Lauren Fritzsche, Senior, Global Studies, LAS

Auditory Gating in Response to Speech Stimuli
Jordan Barr, Senior, Speech and Hearing Science, AHS

American and Chinese Mothers’ Motivation Strategies: Predictions and Consequences
Chun Hei Yip, Senior, Psychology, LAS

Brightening the Future of the Financial Planning Industry
Colleen Dumke, Senior, Agricultural and Consumer Economics, ACES

Parental Monitoring of Youth’s Internet Activity
Jillian Mershon, Senior, Human Development and Family Studies, ACES

Senior Housing: North First Feasibility Study
Xiaodong Chen, Sophomore, Architectural Studies, FAA
Kayla Peck, Sophomore, Architectural Studies, FAA

The Potentials of Rezoning in the Fifth and Hill Neighborhood
Peiyong Yu, Senior, Urban and Regional Planning, FAA
William Goff, Junior, Political Science, LAS

Fifth and Hill Site Planning Project
Kayla Peck, Junior, Architectural Studies, FAA
Puchun Zhang, Sophomore, Architectural Studies, FAA

Connectivity and Accessibility of UIUC Campus Bike Paths
Russell Pildes, Senior, Geography and Geographic Information Science, LAS

Cross-Cultural Differences in Response Styles
Tianjun Sun, Junior, Psychology/Statistics, LAS

Employer and Employee Perceptions of Valuable Workplace Traits in Leisure Service Workplace Settings
Brian Sanderson, Junior, Psychology/Sociology, LAS

Emotion and Superstition
Yanqing Li, Senior, Psychology/Molecular and Cell Biology, LAS

Effects of Ideology on Mental Purity and Disgust
Daniel Relihan, Senior, Psychology/Communication, LAS
Use of Social Networking Applications and Sexual Interactions Among Latino MSM
Xavier Ramirez, Senior, Social Work/Latina/o Studies, SSW/LAS

Emblemas Morales
Melina Nunez, Sophomore, Psychology, LAS

Product Design
Yashvi Vira, Sophomore, Industrial Design, FAA

The Impact of Heifer International on Food Security in Zambia
Marin Thompson, Senior, Economics/Statistics, LAS

Consonant Harmony and Memory
Zach Greenlee, Senior, Psychology, LAS

A Cross-National Analysis of Protest Behavior and Governmental Response
Christopher Boidy, Senior, Political Science, LAS

Spotlight on Foreign Corrupt Practices Act
Chong Gu, Senior, Agricultural Accounting, ACES

Digital Trap!: Innovations in Electronic Music Through Networked Collaboration
Ian Reeves, Sophomore, Spanish/Political Science, LAS

Heritage and Dwelling: Opportunities for Reanimation of the Small Industrial City
Elisa Laurini, Senior, Architecture, FAA

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

Outer Space to the Operating Room: Microorganisms Showing the Past and Shaping the Future
William Bruce, Senior, Molecular and Cellular Biology, LAS

Brown Before 42: The Story of Three Latinos Playing Baseball for Chicago Before World War II
Mariano Nava, Junior, History, LAS

“Psyché” (by Emile Paladilhe), “Almen se non poss‘io” (by Vincenzo Bellini), “Till There Was You” (by Rodgers and Hammerstein)
Madeline Whitesell, Sophomore, Music Voice Performance, FAA
Accompanied by Casey Baker, Graduate Student, Piano, FAA

1:30-2:45 p.m., Illini Room A
PG Session—Education

Impact of Outreach on the LunchStop Summer Feeding Program
Natasha Wilkins, Senior, Agricultural and Consumer Economics, ACES

What Does the Chinese-English Interlanguage Look Like?: Using Test Design to Understand Difficulties in Language Learning
Lauren Colby, Senior, Global Studies, LAS

Do Mothers’ Expectations Influence Adolescents’ Perceptions of Their Achievements Across Cultures?
Erjing Cui, Senior, Psychology/Political Science, LAS

The Reading Study
Samantha Labus, Junior, Speech and Hearing Science, AHS
Ariana Grecco, Senior, Speech and Hearing Science, AHS
Margaret Briggs, Senior, Speech and Hearing Science, AHS
Kylie Ritter, Junior, Speech and Hearing Science, AHS

Science in Art
Ben Barber, Senior, Art Education, FAA

Journal Review of Causal Influences on Child Language Development
Clare Rogers, Junior, Speech and Hearing Science, AHS
Karissa Nulty, Senior, Molecular and Cellular Biology, LAS

The Importance of Mixed Pedagogy in K–12 Art Classrooms
Kelsey Mangler, Senior, Art Education, FAA

The Accessibility of Technology in Special Education Classrooms
Gregory Knapp, Freshman, Special Education, EDU

Students’ Attitude Toward Education in Macau and the United States
Melissa Boyce, Sophomore, Elementary Education, EDU
Angel Chan, Exchange Student
Queenie Lee, Exchange Student

Teachers Trained at the University of Illinois Working in High-Poverty Schools
Colleen Ross, Freshman, Elementary Education, EDU

Self-Attributes in South African University Students Differ Across Race and Gender
Taylor Lindbom, Senior, Psychology, LAS

Education Behind Bars: Beneficial for Prisoners?
Samantha Cherry, Freshman, Elementary Education, EDU
Mia Cadecki, Freshman, Elementary Education, EDU
Students and Art Media Exploration
Travis Smith, Senior, Art Education, FAA

Teacher Quality: Pre-Induction
Samantha Cherry, Freshman, Elementary Education, EDU

Gender and Technology in the Classroom
Katherine Farley, Sophomore, Elementary Education, EDU

Cost of Attendance: The Effect of Debt on Student Values and Political Participation
Casey Thiel, Senior, Political Science/Economics, LAS

CCTV High: An Agent-Based Computer Model of Student Surveillance in High Schools
Jeff Sheets, Senior, Sociology/Linguistics, LAS

Methods for Automatic Lecture Monitoring
Adam Miller, Senior, Computer Science/Electrical Engineering, ENG

Chinese Education System vs. American Education System
Melissa Feiger, Junior, Elementary Education, EDU
Jennifer Ummel, Senior, Elementary Education, EDU

Exploring the Frontiers of Fluency: Adaptation Under Delayed Auditory Feedback
Alyssa Hunter, Senior, Speech and Hearing Science, AHS
Carolyn Jeon, Sophomore, Speech and Hearing Science, AHS
Kyung Lee, Senior, Physics/Chemistry/Molecular and Cellular Biology, LAS
Elizabeth Jenkins, Junior, Speech and Hearing Science, AHS

Tracing Dialogic Patterns as Evidence of Learning in Severe Aphasia: A Treatment Case Study
Alex Karigan, Senior, Speech and Hearing Science, AHS
Amanda Rohde, Junior, Speech and Hearing Science, AHS

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

PH Session—Science and Mathematics

Distant Neighbors in the Night Sky
Kian Moslehi, Senior, Astronomy, LAS

Meteorological Interpretation of S- and X-Band Warm-Season Echoes Using the CSU-CHILL Dual-Frequency Radar
Jacqueline Costello, Senior, Atmospheric Sciences/Geography, LAS

NAM Model Forecast Verification System
Jacob Byrd, Senior, Atmospheric Sciences, LAS

Impacts of ENSO on the Formation of Cape Verde Storms
Robert Nystrom, Junior, Atmospheric Sciences, LAS

Severe Weather Risk Perception Among College Students
Jessica Shryock, Junior, Atmospheric Sciences, LAS

Search for Surviving Companions of Type Ia Supernova Progenitors in the Large Magellanic Cloud: DEM L316
Katrina Litke, Junior, Astronomy, LAS

Characterization of Systematic Effects in Sky Surveys
Michael Schubert, Senior, Physics/Astronomy, LAS

Comparative Dynamic and Thermodynamic Characteristics of Nontornadic New England Thunderstorm Environments
Manda Chasteen, Senior, Atmospheric Sciences, LAS

A Geochemical Analysis of Igneous Features in the Alta Stock Exposed at the Albion Basin, Utah
Allison Greaney, Senior, Geology, LAS

A Geochemical Study of Igneous Rocks: Petrogenesis of Intermediate Stocks and Dikes on Bonanza Ridge, Summit, and Wasatch Counties, Utah
Andrew Reinhard, Senior, Geology, LAS

Examining the Effects of Invasive Japanese Stiltgrass (Microstegium Vimum) on Forest Carbon and Nitrogen Cycles
Scott Cine!, Senior, Natural Resources and Environmental Sciences, ACES

Invasive Species in Fragmented Natural Areas
Lainey Pasternak, Senior, Natural Resources and Environmental Sciences, ACES

Computer-Based Modeling of Groundwater Impacts Due to “Live Fence” Catchment Protection in Northwestern Cameroon
Reshmina William, Senior, Civil Engineering, ENG

The Effect of Barge Traffic on Sediment Movement and Water Quality Monitoring in Illinois River
Ferisca Putri, Senior, Agricultural and Biological Engineering, ACES

Adhesion of Pathogenic Legionella on Copper Surfaces
Lance Langer, Senior, Environmental Engineering/Hydraulic Engineering, ENG

CocoaNuts iOS Development Group
Briana Chapman, Sophomore, Computer Science, ENG
Mariissa Hellesen, Junior, Computer Science, ENG
Shivam Gupta, Junior, Computer Science, ENG
Matt Rajca, Sophomore, Computer Science, ENG

Broker Model for Congestion Control
Akash Kapoor, Junior, Computer Science, ENG

Random Triangles
Gilad Margalit, Freshman, Mathematics/Physics, LAS
Can One Fake Randomness?
Rishabh Marya, Sophomore, Computer Science, ENG
Robert Weber, Junior, Mathematics/Computer Science, LAS/ENG
Chad Franzen, Freshman, Computer Science, ENG

Kinship Accuracy: Comparing Algorithms for Big Pedigrees
Shuxin Yu, Senior, Computer Science, ENG
Danni Sun, Senior, Mathematics, LAS
Zhencheng Wang, Senior, Computer Science, ENG

Correlation Function for LCDM Stripe Data
Fanshi Liu, Senior, Physics, LAS

A Generalizable Heuristic for Classification of Packed Malware
Yi Zhou, Junior, Computer Science, LAS
Matthew Tomei, Junior, Computer Engineering, ENG

A Probabilistic Two-Point Angular Correlation Function
Harshil Kamdar, Sophomore, Physics, ENG

Stability of Quasicrystalline Frameworks in 2D and 3D
Daniel Pugliese, Sophomore, Computer Science, ENG
Joseph Zeller, Junior, Mathematics, LAS
Zachary Miksis, Senior, Mathematics, LAS

Development and Application of a Bayesian Classification Method
Shangjie Gou, Sophomore, Physics, LAS

Search for Surviving Companion of Type Ia Supernova Progenitor in the Large Magellanic Cloud: SNR 0548-70.4
Rebecca Tippens, Senior, Physics, LAS

The Effects of Vitamin E and Selenium on Mouse Sperm Production and Fertility
Amanda Lehner, Senior, Animal Sciences, ACES

A Single PD7 Alcohol Binge May Be Sufficient to Cause Reductions in the Survival of Newly Generated Hippocampal Neurons
Paula Bucko, Senior, Individual Plan of Study, LAS

Using Percent Body Fat in Estimating Differences in Lipid Profiles of Males and Females with Metabolic Syndrome Risk Factors
Maggie Chung, Senior, Food Science and Human Nutrition, ACES

Comparison of Cardiovascular Disease Risk Assessment Using Two Different Waist-Circumference Cutoff Points in Young Mexican Adults
Ingrid Zago, Senior, Food Science and Human Nutrition, ACES
Courtney Marques, Graduate Student, Division of Nutritional Sciences, ACES

Plantazolicin: A Promising Agent in the Fight Against Antibiotic Resistance
Jeanna Wong, Senior, Molecular and Cellular Biology/Psychology, LAS
Agnieszka Maniak, Senior, Molecular and Cellular Biology/Chemistry, LAS

Comparative Study of the Chemical Characterization of Blueberry Extracts
Valerie Munoz, Junior, Food Science and Human Nutrition, ACES

Cardiobiotics: A Genetically Engineered Approach to Cardiovascular Health
Xinyi Guo, Junior, Molecular and Cellular Biology/Psychology, LAS
Ashley S. Moy, Sophomore, Bioengineering, ENG
Margaret S. Barbero, Sophomore, Bioengineering, ENG
Rachel Walker, Sophomore, Bioengineering, ENG
Blake Wilhelmsen, Sophomore, Bioengineering, ENG
Will Dolatowski, Senior, Agricultural and Biological Engineering, ENG
Arnav Rana, Sophomore, Molecular and Cellular Biology/Psychology, LAS

Aging Using Bone Ossification Centers in the Limbs of Illinois River Otters
Lucas Budden, Senior, Animal Sciences, ACES

Exercise and the Microbiome
Keith Whitlock, Senior, Molecular and Cellular Biology, LAS
Bredesen Hartmann, Sophomore, Molecular and Cellular Biology, LAS

Effects of CIMT and Plaque Presence on Cardiovascular Health in Hemodialysis Patients
Isaac Philip, Sophomore, Molecular and Cellular Biology, LAS

Dietary and Non-Dietary Factors Associated With Protein Status in Hemodialysis Patients
Tyler Brown, Senior, Food Science and Human Nutrition, ACES
The Climb

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

Long-Term Fructose Consumption Increases Body Fat and Decreases Physical Activity But Does Not Impair Learning, Memory, or Adult Hippocampal Neurogenesis Relative to an Isocaloric Diet Containing Glucose
Ashley Masnik, Senior, Molecular and Cellular Biology/Psychology, LAS

Genetic Ablation of Fxr and Shp Protects Mice Against Obesity
Phil VanDuyne, Sophomore, Molecular and Cellular Biology, LAS
Karthik Seetharaman, Sophomore, Molecular and Cellular Biology, LAS

Abolishment of Conditioned Place Preference for Cocaine as a Result of Voluntary Exercise Is Independent of New Neurons
Ashley Holloway, Senior, Independent Plan of Study, LAS

Nutrition and Healthy Brain Aging
Rachel Gonzales, Senior, Molecular and Cellular Biology/Psychology, LAS

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

PJ Session—Social Science and Human Behavior

The Marriage Dilemma: Shaping Attitudes Toward the Queer Community
Justin Ostrowski, Senior, Political Science, LAS

Disparities in Expectations in Newlyweds and How Relationship Education Can Help
Jeremy Kanter, Senior, Human Development and Family Studies, ACES

The History of Footwear and Cultural Influences
Kevin Hauger, Sophomore, Industrial Design, FAA

Implicit Racial Attitudes and Policy Choice: Does Our Subconscious Inform Our Policy Preferences?
Grant Snyder, Senior, Political Science/History, LAS

James Reed, Senior, Political Science, LAS

The Advocacy of International Human Rights Organizations (IHROs) and U.S. Foreign Policy in Latin America and the Caribbean
Magdala Boyer, Senior, Political Science, LAS

Rebel Violence Against Civilians in Civil War
Nicholas Dietrich, Senior, Political Science, LAS

Civic Engagement and Age Disparities
David Adeleye, Senior, Political Science, LAS

Playing it Safe: The Influence of Neighborhood Social Cohesion on Child Play
Allison Byrne, Junior, Community Health, AHS
Haley Highfill, Junior, I-Health, AHS

Predator–Prey Dynamics and Business Competition
Yimin Ge, Junior, Actuarial Science/Statistics, LAS
Zhiyi Guo, Junior, Actuarial Science/Statistics, LAS

System Justification
Carol Villanueva-Perez, Senior, Psychology, LAS

Word Frequency and Pronunciation Complexity in New Word Learning by a Child With a Severe Speech Sound Disorder: A Descriptive Treatment Case Study
Meghan Schassler, Senior, Speech and Hearing Science, AHS
Sarah Richards, Senior, Speech and Hearing Science, AHS
Hannah Radnitzer, Senior, Speech and Hearing Science, AHS
Connelly Thompson, Senior, Speech and Hearing Science, AHS

Dialect or Disorder: Use of the DELV in Three Kindergarten Children With Distinct Language Profiles
Alison Dey, Junior, Speech and Hearing Science, AHS
Megan-Brette Hamilton, Graduate Student, Speech and Hearing Science, AHS
Bridget Dumoulin, Senior, Speech and Hearing Science, AHS

The Effect of Country-Specific Technical-Assistance Aid Projects
Michael Bertucci, Senior, Political Science, LAS

Not I: Why International Organizations Participate in Peacekeeping in Some Conflicts and Not Others
Naomi Hill, Senior, Political Science/Sociology, LAS

The Influence of Lobbies on Policy Formation: A Comparative Study of the Dairy Lobby in the U.S. and EU
Elisha Gutmann, Senior, Political Science, LAS

Cash Transfers and Poverty in Ecuador
Colin Burnett, Senior, Global Studies, LAS

Does Violence Only Cause More Violence?: Internal Ethnic Conflict and Its Effects on External Interstate Conflict
Katherine Nugent, Junior, Political Science, LAS

An Examination of Middle Woodland Spatiotemporal Settlement Trends in the Lower Illinois River Valley
Taylor Thornton, Senior, Anthropology/Geography and Geographic Information Science, LAS

Listeners ... Um ... Pay More Attention to Disfluent Speech: Evidence From Event-Related Potentials
Michael Hudgins, Senior, Psychology, LAS
Risk Factors for Peer Victimization
Bo Dong, Senior, Psychology, LAS

Differences in Parent–Adolescent Autonomous Decision-Making Across Gender, Age, and Ethnicity
Lorraine Munoz, Senior, Human Development and Family Studies, ACES

The Influence of a Field’s Ability Beliefs and Gender Composition on Women’s Representation
Heeyoung Kim, Senior, Psychology, LAS

Analysis of Publicly Traded Fertilizer Companies’ Performance Since 2000
Mengzhu Wang, Senior, Agricultural and Consumer Economics, ACES

How Advertising Is Fueling Social Change
Jonathan Schultz, Senior, Advertising, COM

Baseball as Revolutionary: Purifying the Cuban Game
Mariano Nava, Junior, History, LAS

Implementing Enterprise Risk Management (ERM) Strategies in Public Universities
Tingting Gao, Junior, Actuarial Science/Statistics, LAS
Shaoyang Luo, Junior, Actuarial Science/Mathematics, LAS

Does Parents’ Child-Based Worth Disrupt the Quality of Their Relationships With Their Children?: The Case of the United States and China
Chengyi Xu, Senior, Psychology, LAS

How Do Nonmetropolitan LGBT Youth Get Support?: Triangulating Findings From a Mixed-Method Study
Amanda Hwu, Junior, Social Work, SSW

Does Working Memory Capacity Affect Mind Wandering During Meditation?
Matthew Voss, Senior, Psychology/Philosophy, LAS

Modern Slavery and the Global Economy
Brett Tucker, Senior, Sociology, LAS
David Huettner, Senior, New Media, FAA

Media, Democracy, and Social Movements: A Comparative Study of the Print Media’s Role on the U.S. Civil Rights Movement and the South African Anti-Apartheid Movement
Eden Gebregior, Senior, Global Studies, LAS

Globalization, Gender Equality, and Environmental Integrity in Rural Kenya
Courtney Kramer, Senior, Global Studies, LAS

Impulsivity in Rats Predicts Willingness to Consume Alcohol
Olubanko Aladesuyi Arogundade, Senior, Psychology, LAS

Southern Cone Pipeline Development: Risk Analysis and Policy Recommendation
Logan Nagel, Senior, Individual Plan of Study, LAS

The Sacrificial Love of a Military Mother
Beatrice Chen, Senior, Social Work, SSW

Through Wedding to Understanding
Estifanos Ijigu, Sophomore, Crop Sciences, ACES
Ho Cheong Seng, Junior, Civil and Environmental Engineering, ENG
Zhou Wanying, Junior, English Education, EDU

Women of Minority Groups in Israel: The Context in Which They Live and the Attitudes Toward Them
Britta Johnson, Junior, Global Studies, LAS

Women in Japanese Modernism
Genevieve Scheele, Senior, East Asian Languages and Cultures, LAS

Embodied Perception and Driving
Meer Zukosky, Senior, Psychology, LAS

The World Reflected in Martin Luther’s Ten Commandments Commentary
Robert Weber, Junior, Mathematics/Computer Science, LAS/ENG

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

PK Session—Science and Mathematics

Discovery of Novel Peptide Natural Products
Bryan Schaeffer, Sophomore, Molecular and Cellular Biology, LAS

Duplication of ZNF286 and Its Effect on Neurogenesis in the Brain
Jacqueline Brinkman, Junior, Molecular and Cellular Biology, LAS

Uncovering Germ-Cell-Specific G-Protein-Coupled Receptors in a Schmidtea Mediterranea Model
Ayana Jamal, Sophomore, Molecular and Cellular Biology, LAS

Female Mating Preferences in Sympatric vs. Allopatric Populations
Clare Rankhorn, Senior, Integrative Biology, LAS

Estradiol Down Regulates the Expression of Growth Factors in the Suprachiasmatic Nucleus of Mice
Athanasios Kondilis, Senior, Molecular and Cellular Biology/Psychology, LAS

The Urinary Microbiome and Renal Biomineralization
William Bruce, Senior, Molecular and Cellular Biology, LAS
Annette Merkel, Junior, Molecular and Cellular Biology, LAS
The Role of Matrix Metalloproteinases in Planarian Regeneration
Caitlin Dingwall, Sophomore, Molecular and Cellular Biology, LAS

Synthesis of Branched Single-Stranded DNA Molecules
Lily Chen, Junior, Chemical Engineering, LAS

Adiponectin Polymorphisms as an Early Marker for Metabolic Disorders
Abby Esker, Junior, Molecular and Cellular Biology, LAS

Production and Characterization of New Lanthipeptide Substrates
Candace Wong, Senior, Molecular and Cellular Biology, LAS

Effect of Resmethrin (+PBO) Insecticide on Predatory Activity of Juvenile Blue Crabs (Callinectes Sapidus)
Paige Oboikovita, Junior, Integrative Biology, LAS

Semantic and Syntactic Processing in Russian: ERP Investigation of N400 and P600 Components
Anastasiya Bagrova, Senior, Chemistry, LAS

Self-Healing Capability of Ionic Molecular Glass
Andrew Chancellor, Senior, Chemistry, LAS

Ligand Binding and Membrane Association Studies of Cytochrome p450 2J2
Amogh Kambalyal, Junior, Molecular and Cellular Biology, LAS

Optimized Magnetic Field Configuration for High-Power Impulse Magnetron Sputtering
Jake McLain, Junior, Nuclear, Plasma, and Radiological Engineering, ENG

Self-Healing of a Carbon-Fiber/Epoxy Interface
Alicia Cintora, Senior, Materials Science and Engineering, ENG

Liquid Lithium Flow in Vertical Narrow Trenches
Ian Haehnlein, Junior, Nuclear, Plasma, and Radiological Engineering, ENG
Aveek Kapat, Junior, Nuclear, Plasma, and Radiological Engineering, ENG

Alternative mRNA Splicing Has a Functional Role in Mammalian Liver Development
Darren Parker, Senior, Biochemistry, LAS

Comparison of miRNA Expression Profiles Obtained by qRT-PCR and Silicon Photonic Microring Resonators to Subclassify Glioblastoma Multiforme
Christopher Para, Sophomore, Chemistry/Communication, LAS

Oviposition and Development With Varying Leaf Detritus of Culex Pipiens
Lauren Frisbie, Senior, Integrative Biology, LAS

Electrophysiological Responses to Differences in Speaking Rate
Alexander Senetar, Senior, Neuroscience, LAS

Long-Term Control of Contact Angle on a Silicon Surface Using Nanowires and a Nanometer-Thin PDMS Coating
Christopher Marry, Sophomore, Mechanical Engineering, ENG

Advanced Microfabrication Techniques for Electronically Instrumented Interventional Surgical Tool
Jonas Kurniawan, Junior, Materials Science and Engineering, ENG

Environmentally Sustainable and Non-Precious Metal-Catalyzed C-N Bond Coupling
Dongyoung Kim, Senior, Chemistry, LAS

Numerical Investigation of Slag Entrainment in Continuous Casting Molds
Kenneth Swartz, Senior, Mechanical Engineering, ENG

Thermoelectric Module Temperature Distribution
Bruno Abedelnour, Senior, Mechanical Engineering, ENG

Geometric Model of the Visual Cortex
Mohammad Saad, Freshman, Electrical Engineering, ENG
Nishad Phadke, Freshman, Computer Science, ENG
Jon Graven, Senior, Mathematics, LAS

Determining the Intrinsic Shapes of Galaxies in the RESOLVE and ECO Surveys
Katrina Litke, Junior, Astronomy, LAS

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

PL Session—Health and Well-Being

The Effects of Mobile Phone and Internet Use on Psychological Health
Tayana Panova, Senior, Psychology/Communication, LAS

Is Electronic MediaDiminishing Your Child's Sleep?
Timothy Colombo, Senior, Kinesiology, AHS
Taylor Karhiker, Senior, Human Development and Family Studies, ACES
Hannah Gutzwiller, Sophomore, Molecular and Cellular Biology, LAS

Survey of College-Aged Mexican Americans’ Health Habits and Perceptibility to Health Intervention by Text Messaging
Ramona Montez, Junior, Food Science and Human Nutrition, ACES

Sociodemographic Determinants of Exercise Compliance in Hemodialysis Patients
Cory Buenting, Senior, Kinesiology, AHS
Can a Lifestyle Intervention Help Reduce Depressive Symptoms Among Latinas?
Laura Carlos, Senior, Psychology, LAS
Dalmina Lisette Arias, Senior, Community Health, AHS
Adriana Rodriguez, Senior, Community Health, AHS

The Relationship Between Race, Religion, and Suicide
Brandon Mitchell, Senior, Psychology, LAS

Hospital Pricing
Tapish Desai, Junior, Community Health, AHS

Importance of Sponsors in the Child and Adult Care Food Program
Stephanie Christin, Senior, Speech and Hearing Science, AHS
Noel Konken, Junior, Food Science and Human Nutrition, ACES
Veronica Burns, Junior, Human Development and Family Studies, ACES

Frequency of Family Mealtimes in Families With Preschool-Aged Children
Melissa Raney, Junior, Food Science and Human Nutrition, ACES
Kelsey Galicia, Sophomore, Human Development and Family Studies, ACES

Breastfeeding, Babies, and BMI: The Correlation Between Breastfeeding and Infant Physical Development
Kelly Uchima, Junior, Agricultural and Consumer Economics, ACES
Maria Pia Gomez Postigo, Junior, Animal Sciences, ACES

Differences in Mealtime Strategies Between Home-Based Day Care Providers, Center-Based Day Care Providers, and Parents Based on the Perception That Their Child/Student is a Picky Eater
Anisha Kothari, Senior, Food Science and Human Nutrition, ACES

Differences in Mealtime Duration Between Perceived Picky and Non-Picky Eaters Across Three Different Settings: Center-Based Day Care, Home-Based Day Care, and the Family Home
Alison Ganko, Junior, Human Development and Family Studies, ACES
Rachel Romer, Senior, Psychology, LAS

Aerobic Exercise is the Critical Variable in a Complex Environment That Accelerates Extinction for Cocaine-Conditioned Place Preference
Aya Kobeissi, Senior, Individual Plan of Study, LAS

The Analysis of Chronic Conditions of the Uninsured Utilizing Free Clinics
Anuoluwapo Osideko, Junior, Community Health, AHS

Brazilian Ideologies: Perceptions and Decisions in Regards to the Body
Natali Gracia, Senior, Human Development and Family Studies, ACES

Effects of Fatigue and Load Carriage on Firefighter Gait
Faith Bradley, Junior, Bioengineering, ENG

Impact of Different Kinds of Music on Exercise Intensity of Square Dancing Among Older Chinese
Shengzhang Su, Junior, Kinesiology, AHS

College of Engineering Illinois Scholars Undergraduate Research Symposium
Thursday, April 17, 4:30-6:30 p.m.
Illini Union, Room 210

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

Developing a Toolbox to Analyze the Motion of Zebrafish
Chamil H. Amithirigala, Sophomore, Computer Science, ENG

Spatio-Temporal Learning Using Neural Networks
Sameer Kumar Bojja Venkatarama, Junior, Computer Engineering, ENG

Electro-Tactile Sensation Control
Brandon Boyce, Senior, Aerospace Engineering, ENG

Methods for Analyzing Speech Data
Jonathan Buie, Senior, Electrical Engineering, ENG

The Effect of Mechanical Microenvironment on Stem Cell Growth
David Chiao, Junior, Mechanical Engineering, ENG

Flexible, Stretchable Sensor Arrays for Instrumented Surgical Guide Wires and Catheters
Timothy Chiu, Junior, Materials Science and Engineering, ENG

Reflective Fiber Ring Mirrors
Marjorie Dallmann, Sophomore, Computer Engineering, ENG

Effects of Fatigue and Self-Contained Breathing Apparatus on Firefighter Functional Balance
Grace Deetjen, Sophomore, Bioengineering, ENG

Biologically Modeled Self-Organizing Maps on FPGA Platform
Junia Findlay, Senior, Electrical Engineering, ENG

Analysis of Co-Crystal Formation Based on Supersaturation Levels
Lucas Gonzalez, Sophomore, Chemical Engineering, ENG
Deformation of Graphene Through Polymer Substrate
Ryan Han, Junior, Mechanical Engineering, ENG

Characterizing the Contact Effects of Metal/Graphene Interfaces
Jayan Hewaparakrama, Junior, Electrical Engineering, ENG

G-Quadruplex Effect on Expression in E. Coli
Molly Imgruet, Junior, Bioengineering, ENG

Developing Alternative Capabilities for Imaging Silicon Wafers
Alexander Kaczkowski, Junior, Mechanical Engineering, ENG

Understanding Student Strategies in Solving Adaptive Homework Assignments
Alhaji Mansaray, Junior, Computer Science, ENG

Kinematic Analysis of Compensation Strategies During Recovery From Injury
Emily Matijevich, Sophomore, Bioengineering, ENG

Mechanical Stimuli for Tissue Regeneration at the Tendon–Bone Interface in Collagen Scaffolds
Ashley S. Moy, Sophomore, Bioengineering, ENG

Wearable Ankle Angle Sensor
Katie Neville, Senior, Mechanical Engineering, ENG

Optimization of Horizontal Heat Exchanger for Residential Water Heat Recovery System
Mahir Sharif, Sophomore, Mechanical Engineering, ENG

Low-Cost OCT System
Anthony Shvets, Junior, Electrical Engineering, ENG

Multi-Degree of Freedom Robot Arm
Patrick Slade, Freshman, Mechanical Engineering, ENG

Mechanochemically Active Surfaces
Zoey Sowinski, Junior, Materials Science and Engineering, ENG

Differential Scanning Calorimetry of Copper Tin Zinc Sulfur Selenium System
Hannah Taylor, Sophomore, Materials Science and Engineering, ENG

Development of a Passive Proprioceptive Feedback System for Upper-Limb Amputees
Logan Wan, Senior, Mechanical Engineering, ENG

Plasma Interaction With Microscale Cavity Device for Sensor Applications
Yiou Zhang, Senior, Electrical Engineering, ENG