

Illinois Undergraduate Research Week

2015 Events
April 19-25
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 eighth annual campus-wide Undergraduate Research Symposium (URS), held on Thursday, April 23rd. 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 scientific analysis to creative arts.

The 2015 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 Karen Rodriguez'G, Associate Director of the Office of Undergraduate Research (OUR), Mackenzie Kurth and Emma Grimes, interns for OUR, and OUR's Advisory Board members.

Paul F. Diehl

Director, Office of Undergraduate Research

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UNDERGRADUATE RESEARCH WEEK EVENTS

Department of History Undergraduate Research Colloquium

Illini Union 314A

Saturday April 18, 2:00-4:00 PM

Access to Abortion After Roe v. Wade

Alicia Goodchild, Senior, History, LAS

Political Culture of Post-Independence Malawi

Nicholas Hopkins, Senior, History, LAS

*The New Deal and the Making of Democratic
Dominance in Chicago Politics*

Ned Rooney, Senior, History, LAS

Carlisle Indian School and Settler Colonialism

Terry Foster, Senior, History, LAS

Mexican Baseball and the US Color Line

Mariano Nava, Senior, History, LAS

*Mothers Against Drunk Driving and the
Political Imagination of Suburbia*

Ryan Fane, Senior, History, LAS

*French Use of Torture in Algeria and American
Public Reaction, 1955-1965*

Leanna Barcelona, Senior, History, LAS

Living-Learning Communities Researchers Initiative Poster Symposium

Sunday, April 19, 4:00-6:00 PM

Florida Avenue Residence Halls, Oglesby Pagoda

*Building Strong Communities and Families: Insights from
Studies of School Readiness and Adolescent Development
and Parenting in the Inner City*

Nikta Athari Anaraki, Freshman, Division of General Studies, DGS
Jacob Bowers, Sophomore, Health Planning and Administration, AHS
Vinisha Doshi, Sophomore, Molecular and Cellular Biology, LAS
Christine Wolfe, Freshman, Community Health, AHS

Understanding the Spread of Ebola through Stochastic Modeling

Daniel Carballal, Sophomore, Computer Science, ENG

Effects of Tree Mortality on Below Ground Carbon Storage

Taylor Cascia, Sophomore, Natural Resources and Environmental Sciences, ACES
Crystal Zhu, Sophomore, Community Health, AHS

Jews and Cape Verdeans: Crossed Diasporas

Huiyi Chen, Freshman, History and Economics, LAS

Beng Community Fund

Juliana Snarski, Sophomore, Global Studies and Mechanical Engineering, LAS

*Documenting Selection of Territorial Habitat by Breeding
Dickcissels over Fine Spatial and Temporal Scales*

Yanzhu Chen, Freshman, Division of General Studies, DGS

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

Mary Figura, Sophomore, Molecular and Cellular Biology, LAS
Kathleen Munoz, Freshman, Molecular and Cellular Biology, LAS

Technology-Assisted Vocal Exercise for Older Adults

Anna Fischer, Sophomore, Speech and Hearing Science, AHS

Development of Fluorescent Molecules for Sensing Parkinson's Disease

Hui Ting Iris Hou, Sophomore, Molecular and Cellular Biology, LAS

Patronization and Attitudes Towards Individuals with Disabilities

Sarah Kapolnek, Freshman, Material Science and Engineering, ENG
Diamond Kinermon, Sophomore, Community Health, AHS

Urban Environmental Equity Research

Nuochen Lyu, Freshman, Electrical and Computer Engineering, DGS
Kevin Zhu, Freshman, Division of General Studies, DGS

Impact of Shift Work on Attention: Initial Findings in a Rat Model

Adriana Martinez, Sophomore, Animal Sciences, ACES

A Model of Sea Star Associated Densovirus Epidemiology

Bridget Mueller-Brennan, Freshman, Mathematics, LAS

Using EEGs to Describe Dementia

Nicole Hasamear, Sophomore, Chemical Engineering, LAS
Kevin Wells, Sophomore, Molecular and Cellular Biology, DGS

Policing in a Multiracial Society Project

Heena Pithadia, Freshman, Psychology, LAS

*Disability and Relevant Design: A Case Study on Experiential and Collaborative Design***Ran Zhou**, Junior, Mathematics, LAS**Lydia Tanner**, Freshman, Engineering-Undeclared, ENG**Jing Yu**, Junior, General Engineering, ENG*Youth and Emerging Adults Civic Engagement Activities in the US and in Tanzania***Quan Trimble**, Sophomore, Political Science, LAS*Organizing Aquatic Species Data for Broader Energy-Water Nexus Analysis***Viviana Guaman**, Sophomore, Civil Engineering, ENG**Deeksha Singh Vijay Singh**, Sophomore, Electrical and Computer Engineering, ENG*Role of Copper Towards Oxygen Reduction Reactivity of Myoglobin Based-Cytochrome C Oxidase Mimics***Shuyan Wang**, Sophomore, Chemistry, LAS*Lab-on-a-Chip***Reuben Tan**, Freshman, Computer Engineering, ENG*Development of a Time and Cost Efficient Synthetic Route for Ssymmetric Xanthenes***Ryan Hoffman**, Freshman, Chemical Engineering, LAS**School of Literatures, Cultures, and Linguistics Symposium****Tuesday, April 21, 4:00-5:00 PM**

Foreign Language Building Atrium

*Comparing the Morphosyntactic Features of Languages Based on Descriptive Grammars***George Jabbour**, Junior, Linguistics, LAS**Ryan Grunow**, Freshman, Mathematics, LAS**Kelsey Lac**, Sophomore, Linguistics, LAS*Transcribing and Interpreting Experimental Spanish Recordings to Measure Age Effects***Michelle Patino**, Sophomore, Linguistics, LAS**Leslie Del Carpio**, Junior, Linguistics, LAS*Emblematic Project***Heidi Heim**, Senior, Art History, LAS**Patricia Fleming**, Junior, English, LAS**Melina Zavala**, Junior, Psychology and English, LAS**Department of English Symposium****Tuesday, April 21, 5:00-7:00 PM**

English Building Atrium

Welcome**Dale M. Bauer**, Professor of English, Director of Undergraduate Studies**Wendy Truran**, Assistant Director of ESC Studies in British and Irish Literature*Conquest, Revenge, and Resistance: Literal and Symbolic Rape in Shakespeare's Titus Andronicus***Ha (Sarah) Le**, Senior, English, LAS*The Invisible (S)elf***Gary Montesinos**, Senior, English, LAS*Audience Perception of Revenge and Sanity in Elizabethan Era Revenge Tragedies***Bryan Boccelli**, Senior, English, LAS*Bodily Function in Literature***Kirby Gamsby**, Senior, English, LAS**Studies in America, Latin America, and South Asian Studies***Divorce in American Literature, 1890-1940***Logan Lippert**, Senior, English, LAS*Sexuality, Marriage, and Negro Womanhood***Tumaini Ussiri**, Senior, English, LAS*Sexual Ambivalence in Marriage in Women's Modernist Novels***Brittany Frost**, Senior, English, LAS*Fractured Fictions: Subalternity and Rhetorical Rupture in 'El hablador / The Storyteller' and 'In an Antique Land'***Nick Millman**, Senior, English and Global Studies, LAS*The Dung Heap of History: Progress***Nate Kelly**, Junior, English, LAS*Re:Search, the Undergraduate Literary Criticism Journal: Undergraduate Research and Academic Publishing***Logan Lippert**, Senior, English, LAS**Marilyn MacNamara**, Sophomore, English, LAS**Audrey Majors**, Senior, English, LAS**Kevin Mallin**, Senior, English, LAS**Nick Millman**, Senior, English and Global Studies, LAS**Melisa Puthenmadom**, Junior, English, LAS

Department of Anthropology Capstone Conference

Tuesday April 21, 6:00-9:00 PM

Noyes Lab 161

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!

Ethnography of the University Initiative (EUI) Biannual Student Conference

Wednesday, April 22, 4:00-8:30 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. During this academic year, there were 10 courses affiliated with EUI, serving approximately 250 students. 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). For the Spring 2015 conference, high school students from Oak Park River Forest High School in the Chicago area—a new regional high school partnership with EUI, will also present their work for the first time. The EUI program is supported through a partnership between the Office of Undergraduate Research and the Department of Anthropology

College of Fine and Applied Arts (FAA) Symposium

On Display, April 20-25:

Temple Buell Architecture Gallery (Architecture Building)

Work from undergraduates in the School of Architecture, Department of Landscape Architecture, School of Art + Design (Ninth Letter, Studio, and Foundations) and the Department of Urban and Regional Planning.

On display April 19-25:

Temple Buell Hall (Upper West Entry Plaza and Lower Courtyard)

Illinois School of Architecture MakeSeries Design-Build Competition Winner: Inflated Canopy

Krissy Werner, Junior, Architectural Studies, FAA

Nico Hsu, Junior, Architectural Studies, FAA

Drew Smith, Junior, Architectural Studies, FAA

Damon Stich, Junior, Architectural Studies, FAA

Top Nasueb, Junior, Architectural Studies, FAA

On Display, April 20-25:

Art + Design Building

Work from undergraduates in the School of Art + Design, (Metals, Link Gallery; Industrial Design and Sculpture, first floor glass cases; New Media, first floor monitors; Photography, second floor hallway.)

Department of Political Science Honors Poster Day

Saturday, May 2, 11:30 AM-1:00 PM

ACES Library Heritage Room

A Perpetuating Negative Cycle: The Effects of Economic Inequality on Voter Participation

Jenine Saleh, Senior, Political Science, LAS

Differences in Memory and Credibility Across Media Platforms

Christina Lorey, Senior, Political Science, LAS

Implicit Racial Messages and Citizens' Attitudes

Darrah Perryman, Senior, Political Science, LAS

Don't Bank On It: The Incomplete Truth of Money in Congressional Elections

Patrick Flavin, Senior, Political Science, LAS

The Head of State Effect: Discovering the Role of the Head of State in Cabinet Longevity

Quinn Marschik, Senior, Political Science, LAS

Political Violence, Ethnic Fractionalization, and the Ratification of Human Rights Treaties

Ada Karacal, Senior, Political Science, LAS

Members of Congress and Congressional Staff Allocation

John Flach, Senior, Political Science, LAS

Progressive Ambition and Gender in Congress

Sarah Gortowski, Senior, Political Science, LAS

State's Attorney Gender and Rape Convictions

Richard Sledz, Senior, Political Science, LAS

Personality and the Environment: How Internal Motivations Affect Environmental Decisions

Lauren Krone, Junior, Political Science, LAS

Can Anti-corruption Aid Reduce Corruption?

Ricardo Alvarez, Senior, Political Science, LAS

Supreme Court Justices' Response to Public Opinion

Ejulus Adorno, Senior, Political Science, LAS

Antecedents of Victimization in the Americas

Jacob Lubben, Senior, Political Science, LAS

Illinois Undergraduate Research Week *Symposium*

23 April
Illini Union

IMAGE OF RESEARCH COMPETITION

On Display, 9:00 AM–4:30 PM
Illini A, B, and C

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

Awards

First prize: \$300
Second prize: \$200
Two honorable mentions

The judges for 2015

Karen Rodriguez'G, Associate Director, Office of Undergraduate Research
Sarah Christensen, Visual Resources Curator, University Library
Kayla Hays, Graduate Assistant, Scholarly Commons

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

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

ORAL PRESENTATIONS

The Implications of Information Technology

10:00-11:00 AM, Room 209

How Facebook Changes Our Way of Sharing Information

Pak Nin Lei, Junior, English Education, University of Macau
Chan Tat Ng, Junior, Biochemical Sciences, University of Macau

Enhancing Comprehension of Electronic Health Record Patient Portals

Cheryl Cheong, Junior, Psychology, LAS

Changing Neighborhoods

10:00-11:00 AM, Room 217

Bronzeville Community Revitalization

Hannah Cusick, Junior, Landscape Architecture, FAA

*Guifi as The Talk of the Town: Catalonia's
Wireless Community Network's Growth*

Michael V. Ochoa, Senior, Sociology, LAS

Issues in Latino Health

11:00 AM-12:00 PM, Room 209

*Promotora Model as a Method of Health Intervention
in US Latino Immigrant Populations*

Ramona Montez, Senior, Food Science and Human Nutrition, ACES

*Interaction Between Latino Specific Belief and Structural
Factors in Latina's Breast-Cancer Prevention Engagement*

Laura Hanley, Senior, Interdisciplinary Health Sciences, AHS
Haley Fox, Senior, Social Work, SSW

*The Social Support and Sexual Health of Latino
Gay Men who Have Sex with Men*

Xavier Ramirez, Senior, Social Work, SSW

FAA Performances - Dance Dynamics

11:00 AM-12:00 PM, Room 215

Slats

Katherine Williams, Junior, Dance, FAA
Charles Gowin, Senior, Dance, FAA

[Untitled] Form

Justin Yeung, Senior, Dance, FAA

The Outbreak of Violent Conflict

1:30-2:30 PM, Room 215

Path To War: Austria-Hungary and Russia WWI

Michael Colucci, Senior, Political Science, LAS

What Caused the First World War: A Dyadic Approach to Explaining the Outbreak of the War in Light of the Rivalry between Austria-Hungary and Russia

Moksha Muthukrishnan, Sophomore, Political Science, LAS

The Effects of Successful Democracy on the Proliferation of Ethnic Conflict in West Africa: A Case Study of Mali and Senegal

Morgan Hollie, Senior, Global Studies, LAS

Issues in Culture and Behavior

1:30-2:30 PM, Room 209

Mistreatment to Shame: A Call for Change in Public Policy

Dessiree Malone, Junior, Sociology, LAS

Exclusion within Inclusion: The Alienation and Retention Effects of Black Students on Campus

Aaminah Long, Sophomore, Psychology, LAS

Receptors and Transmitters

1:30-2:30 PM, Room 217

Effects of SERCA Inhibitors on Reversing Epileptic Encephalopathy Mutations

Dhruv Joshi, Senior, Molecular and Cellular Biology, LAS

Activity-Dependent Changes in K⁺ Channel Expression during Homeostatic Intrinsic Plasticity

Seungbae Lee, Senior, Molecular and Cellular Biology, LAS

Decreased DA D2 Receptors in the Striatum of High Alcohol Preferring Mice

Dimeji Williams, Junior, Chemistry, LAS

Understanding the Body

2:30-3:30 PM, Room 217

Sensory Feedback and Mechanical Design in Prosthetic Hands

Patrick Slade, Junior, Mechanical Engineering, ENG

Effect of Ankle Immobilization on Able-Bodied Gait as a Model for Understanding Bilateral Transtibial Gait

Antonia Nepomuceno, Senior, Bioengineering, ENG

Role of Muscleblind-Like Protein 1 in Alternative Splicing Transitions of Adult Mouse Liver

Kevin Yum, Senior, Biochemistry, LAS

Insects in the Modern World

3:00-4:00 PM, Room 209

Morphological Defects in Fruit Fly Compound Eyes

Samuel Taylor, Senior, Mechanical Engineering, ENG

Determining the Identity and Possible Origin of a Collembola Pest of Lettuce and Tree Seedlings

Alejandra Flores, Junior, Molecular and Cellular Biology, LAS

Pesticide Synergism Effects on the Navel Orange Worm

Brooks Hauser, Freshman, Biology, LAS

Writers Workshop: Researching Our Practice: What Do We Know About Writers and Writing?

3:30-4:30PM, Room 217

Writing in Undergraduate Philosophy

Ryan Woods, Sophomore, Philosophy, LAS

Issues in Tutoring ESL Writers

Allyson Cubr, Junior, History, LAS

The Impact of Expectations in Tutoring Sessions

McCall Macomber, Junior, English, LAS

POSTER PRESENTATIONS

PA Session – Food, Plants, and Animals

9:00-10:15 AM, Illini Room A

The Social Status of Urban Agriculture in Champaign-Urbana

Carly Norris, Senior, Natural Resources and Environmental Sciences, ACES

Investigating the Effect of Using Native Illinois Grasses on the Yield, Growth, & Nutritional Content of Oyster Mushrooms

Li Xin Wong, Senior, Food Science and Human Nutrition, ACES

Hox Gene Expression in Mammalian Limb Development

Paige Oboikovitz, Senior, Integrative Biology, LAS

*Effects of Different Pretreatments and Drying Methods on Quality and Nutrient Retention of Elm Oyster Mushrooms (*Hypsizygus Ulmarius*)*

Cheng Lu, Junior, Food Science and Human Nutrition, ACES

*The Effects of Supplementation on Spring Grazing Cows***Kankanit Doungkamchan**, Senior, Animal Sciences, ACES*Behavioral Freeze Avoidance Strategy in an Antarctic Fish***Mateusz Grobelny**, Senior, Integrative Biology, LAS*Soybean Amino Acids Excite Orexin Neurons***Anna Serrano**, Junior, Horticulture, ACES*Converging Wildlife Corridor***Jingxia Ma**, Senior, Landscape Architecture, FAA**Mengzhen Liu**, Senior, Landscape Architecture, FAA*Efficacy of Common Disinfectants Against Ophidiomyces Ophiodiicola, the Causative Agent of Snake Fungal Disease***Marta Rzadkowska**, Senior, Integrative Biology, LAS*Determination of Reduced-Moisture pH in Beet and Cane Sucrose Sources***Haena Yun**, Junior, Food Science and Human Nutrition, ACES*Application of Tobacco Rattle Virus-Based Virus-Induced Gene Silencing (VIGS) to Characterize Photorespiratory Transporters***Caroline Keller**, Senior, Plant Biotechnology and Molecular Biology, ACES*Ultrasonic Application in Dark Chocolate Formulation***Melissa Wang**, Senior, Food Science and Human Nutrition, ACES*Nutritive Evaluation of Sow's Milk***Stacey Johnson**, Senior, Animal Sciences, ACES*Evaluation of the Effects of a Clay Product (EcoMix) After a Grain Challenge on Rumen Health and Blood in Holstein Cows***Caroline Kalebich**, Senior, Animal Sciences, ACES*Multicultural Advocates in Nutritional Needs and Agriculture as Future Leaders***Ramona Montez**, Senior, Food Science and Human Nutrition, ACES*Impact of Maternal Colostrum on the Pro-Inflammatory Status of Newborn Calves***Sandra Jimenez Poveda**, Senior, Animal Sciences, ACES*Habitat Associations of Fish in the Kaskaskia River in Illinois***Claire Watson**, Senior, Fish and Wildlife Conservation, ACES*Antioxidant Testing of Blueberries in Dark Chocolate***Srushti Acharekar**, Sophomore, Agriculture and Biological Engineering, ACES*Too Connected to Fail: The Effect of Alliance Network Structure on Farm Survival***James Ozols**, Senior, Agriculture and Consumer Economics, ACES*Prescribed Fire Effects on Tree Fitness and Mycorrhizal Relations***Kevin Milla**, Sophomore, Natural Resources and Environmental Sciences, ACES*Optimal Harvest of White-tailed Deer in Texas***Amanda Ang**, Senior, Agriculture and Consumer Economics, ACES*Behavioral and Spatial Dynamics of Male Dickcissels (Spiza americana) Throughout the Nesting Cycle***Devin Jen**, Senior, Agri-Accounting, ACES*Cooled Stallion Semen Motility when Exposed to E-Z MIXIN CST and INRA 96 Extenders for Greater than 48 Hours***Taylor Rietveld**, Senior, Animal Sciences, ACES*Relationship Between Chlorophyll Content and Leaf Optical Properties in Senescing Tobacco Leaves***Elliot Brazil**, Senior, Chemistry, ACES*Avian Mortality at Solar Energy Facilities in Southern California***Stephanie Meyers**, Senior, Earth, Society and Environmental Sustainability, LAS*Boar Urine Pheromone Exposure Modifies Estrous Cycle Length and Regularity in Same-Sex Housed Female Red River Hogs (Potamochoerus Porcus)***Monica Jarboe**, Senior, Animal Sciences, ACES*Master Gardeners: Why They Work and What They Receive in Return***Shelby Cooper**, Junior, Agricultural Science Education, ACES**PB Session—Science and Mathematics****9:00-10:15 AM, Illini Room C***Modular Analysis Software for the ALMA Front End Test and Measurement System***Aaron Beaudoin**, Senior, Astronomy, LAS*Helping Fatima Help Itself***Francisco Battiti**, Freshman, Chemical Engineering, LAS*Intracellular Germination of Bacillus Anthracis Detected Using Terbium Fluorescence***Aakaash Meduri**, Junior, Molecular and Cellular Biology, LAS

*Can Bergmann's Rule Apply to Bees? Wing Size and Shape Differs over Climatic Gradients in a Mexican Bumble Bee Species, *Bombus Ephippiatus**

Christopher Petranek, Senior, IPS Entomology, LAS

Cell Surface Engineering of Embryonic Stem Cells with Modular Biomaterial Chemistries

Ravi Chandra Yada, Senior, Bioengineering, ENG

Deploying Big Data Applications to the Cloud

Anchal Agrawal, Junior, Computer Science, ENG

Data-driven Characterization of an Electric Motor

Nicholas Balko, Junior, General Engineering, ENG

Fractals, Patterns, and Randomness in Number Theory and Mathematical Physics: Unraveling the Mysteries of Number-Theoretic Fourier Series

Ryan Grady, Junior, Electrical Engineering, ENG

Yu Fu, Senior, Mathematics, LAS

Yuda Wang, Junior, Mathematics, LAS

Jia Yu, Junior, Mathematics, LAS

The Fake Randomness Project: How to Detect Fake Coin Flips and Made-up Data

Xusheng Zhang, Sophomore, Computer Science, ENG

Li Tong, Sophomore, Computer Science, ENG

Modeling Basic Financial Profitability of Businesses using Physical Mass-Spring System

Jigar Patel, Freshman, Industrial Engineering, ENG

Understanding the Relationship Between Diet, Fasting Blood Glucose, and Adiposity among Prepubertal Children

Madelyn Thanasouras, Senior, Dietetics, ACES

*Investigating the Terminal Oxidase in *V. Cholera*-a Potential Drug Target*

Andrew Plecki, Senior, Biochemistry, LAS

*The Determination of Population Level Variation in Folding and Stability of Phosphoglycerate Kinase in *Escherichia Coli* by Using FRET between GFP and ReAsh*

Timothy Chen, Sophomore, Chemical and Biomolecular Engineering, LAS

Orthogonal Patterning of 3D Cell Microenvironments Based on Hyperbranched Polyglycerols to Tune Stiffness Independently of Mesh Size

Amanda Pritchard, Junior, Chemical and Biomolecular Engineering, LAS

Synthesis and Characterization of Hollow Polydimethylsiloxane Microspheres

Samantha Fuchs, Senior, Chemistry, LAS

*RNAi Knockdown: The Role of *unc-25* in Mediating Nicotine Resistance in *Caenorhabditis elegans**

Andrew Tran, Sophomore, Integrative Biology, LAS

Emily Yaniz, Sophomore, Integrative Biology, LAS

Stephanie Martynenko, Sophomore, Integrative Biology, LAS

Community Inference

Zachary Cohen, Sophomore, Integrative Biology, LAS

Modeling Threat Assessment in Prey

Nicholas Sutton, Senior, Integrative Biology, LAS

*Implementation of a Transposon Mutagenesis Library in the Model Hyperthermophilic Archaeon *Sulfolobus Islandicus**

Carlos Vega, Junior, Molecular and Cellular Biology, LAS

Brain Computer Interface Based on the N2pc Event-Related Potential

Nhan Huynh, Junior, Molecular and Cellular Biology, LAS

Michon Kyra, Senior, Molecular and Cellular Biology, LAS

Buried Pleistocene Channels in the Tonle Sap Lake, Cambodia: their Morphology and Significance

Mackenzie Marti, Senior, Geology, LAS

Partition in the Age of Digital Reproduction: an Architectural Study

Seth Kopk, Senior, Architectural Studies, FAA

Gideon Schwartzman, Senior, Architectural Studies, FAA

PC Session - Education

9:00-10:15 AM, South Lounge

Transition and Adjustment Experiences of College Students: How the Experience Differs Between First Generation and Non-First Generation Students

Joy Sugihara, Senior, Social Work, SSW

Identifying and Addressing Obstacles that may Hinder Successful Undergraduate Research Involvement

Timothy Callahan, Sophomore, Agricultural Leadership Education, ACES

Rachel Hazen, Senior, Agri-Accounting, ACES

She uses her words and talks: Importance of After-School Programs to Latino Youth and Families

Stephanie Medina, Sophomore, Human Development and Family Studies, ACES

Sexual Assault in Higher Education Institutions

Carly Kenny, Senior, Agriculture and Consumer Economics, ACES

Home Education and Religious Fundamentalism: Mental Health Outcomes for Homeschool Alumni

Sarah Anderson, Senior, Social Work, SSW

Measuring out of State Enrollment at the University of Illinois

Jonathan Alton, Senior, Agriculture and Consumer Economics, ACES

Childhood Obesity: Can Healthcare Providers Aid Parents in Prevention?

Lauren Amendola, Junior, Human Nutrition, ACES

Megan Devine, Junior, Chemistry, LAS

School Readiness in Lincoln Heights

Anita Oladunni, Junior, Human Development and Family Studies, ACES

Theola Maxon, Senior, Human Development and Family Studies, ACES

Manual for Working with Children with Autism

Shira Schwartz, Senior, Human Development and Family Studies, ACES

Is Ball Really Life, or is School life: Exploring the Outcomes of African American Males in Higher Education

Brandon Boston, Junior, Communication, LAS

The Economic and Professional Development of Muslim Women Who Wear the Headscarf in France

Aamina Khan, Senior, French, LAS

The Head Start Program

Elizabeth Badskey, Senior, Social Work, SSW

Cyberbullying Motivators and Outcomes in the Female Population

Claire Donahue, Freshman, Elementary Education, EDU

Ashley Lenzini, Freshman, Early Childhood Education, EDU

Exploring Mathematics in a Project-Based Classroom

Jennifer Jozwiak, Sophomore, Elementary Education (Grades 1-6), EDU

Students with Disabilities and Their Engagement in Technology-Based Computer Programming Games

Kathleen Myers, Sophomore, Special Education, EDU

A Cultural Comparison: Classroom Participation Structures

Samantha Cherry, Sophomore, Elementary Education, EDU

Chark Chong, Junior, Educational Psychology, EDU

Che Yan, Junior, EDU

Augmentative and Alternative Communication in Special Education Classrooms

Emily Hodges, Freshman, Special Education, EDU

Kristin Gleason, Freshman, Special Education, EDU

An Investigation of a Rural Bilingual Education Program

Melissa Boyce, Junior, Elementary Education, EDU

The Use of Visual Supports in Special Education Classrooms

Morgan Havel, Freshman, Special Education, EDU

The Relationship Between Mothers' Mental State Talk and Children's Language Development

Sarah Reeves, Senior, Speech and Hearing Science, AHS

Transcribing and Interpreting Experimental Spanish Recordings to Measure Age Effects

Michelle Patino, Sophomore, Linguistics, LAS

Leslie Del Carpio, Junior, Linguistics, LAS

PD Session – Health and Well-Being

10:45 AM-12:00 PM, Illini Room A

The Impact of Family Leisure Activities on Health Status

Amber Alton, Junior, Human Development and Family Studies, ACES

Non-CpG Methylation in Spontaneous Breast Cancer Models

Taylor Person, Senior Animal Sciences, ACES

Helping Fatima Help Itself

Francisco Battiti, Freshman, Chemical Engineering, LAS

Characteristics of Food Insecure Women in the United States

Viridiana Luna, Junior, Molecular and Cellular Biology, LAS

Anthrax Lethal Factor N-terminus (LFN) Mediated Anti-botulism Delivery

Bingyan Wu, Senior, Biochemistry, LAS

The Impact of Delivery Mode and Early Nutrition on the Colonization of Gut Microbiota

Connie Lam, Senior, Food Science and Human Nutrition, ACES

Characterizing a Firefighter's Immediate Thermal Environment in Live-Fire Training Scenarios

Joseph Willi, Senior, General Engineering, ENG

Remote Acculturation and Dietary and Physical Activity Patterns in Jamaica: The Culture Health and Family Life Study

Melissa Bravo, Senior, Human Development and Family Studies, ACES

Impacts of BCO1 and BCO2 Loss on Hepatic Lipid Profiles

Connor Buchweitz, Senior, Food Science and Human Nutrition, ACES

Good for the Air, Bad for the Water, The Effect of Ethanol on Water Quality

Yu-Jen Chen, Senior, Policy, International Trade and Development, ACES

The Relationship Between Community Violence and PTSD in a Chicago Neighborhood

Aneisha Dunmore, Senior, Human Development and Family Studies, ACES

Changes in Family Cohesion and Links to Depression during the College Transition

Joao Guassi Moreira, Sophomore, Psychology, LAS

Under-referrals for Developmental Delays by Pediatricians: A Systematic Review

Molly Harmon, Junior, Human Development and Family Studies, ACES

Reversal Shift in Associative Learning of Phonotactic Constraints

Eric Holmes, Senior, Psychology, LAS

Evolutionary Perspectives Informing the Treatment of Major Depressive Disorder and Posttraumatic Stress Disorder

Paige Jamieson, Senior, Anthropology, LAS

Television Usage is Associated with Increased Adiposity and Caloric Intake among Preadolescent Children

Noel Konken, Senior, Dietetics, ACES

Illinois Hospitals - Women vs. Men CEOs

Kayla Moore, Senior, Community Health, AHS

Brittany Sanchez, Senior, Community Health, AHS

Relationship between Birth Weight, Age at Menarche, and Progesterone Levels in Adolescent Girls

Rachel Ogden, Senior, Anthropology, LAS

Gait Termination in Individuals with Multiple Sclerosis

Kathleen Roeing, Senior, Kinesiology, AHS

Tinnitus

Ariana Romero, Junior, Speech Language Pathology, AHS

Multimodality: What Does that Mean in the Field of Communication Sciences and Disorders Anyway?

Shanthi Sivasankaran, Senior, Speech and Hearing Science, AHS

Theresa Versaci, Junior, Speech and Hearing Science, AHS

The Effects of Amphetamine Exposure During Adolescence on Anxiety- and Depression-like Behavior in Young Adulthood

Mariah Wu, Senior, Psychology, LAS

Early Childhood Self-Regulation and Teenage Depression

Ziang Xiao, Junior, Statistics and Computer Science, LAS

The Attitudes and Perceptions of Asian Restaurant Managers/Owners Towards Healthy Menu Items

Chieh-Hui (Cindy) Yang, Senior, Human Nutrition, ACES

Effects of Corticosterone on Diet Preference

Haley York, Junior, Animal sciences, ACES

Breastfeeding Duration and BMI: A Study of the Relationship Between Breast Milk Exposure and Healthy Development

Michael Sheu, Senior, Molecular and Cellular Biology, LAS

Danielle Fontaine, Senior, Kinesiology, AHS

Robert Ferguson, Senior, Psychology, LAS

Community Engagement and Applied Research: Creating Sustainable Solutions for Improved Water Quality and Agricultural Development in Kapeeka, Uganda

Krish Ramadurai, Senior, Economics, LAS

Pratham Gandhi, Senior, Industrial Engineering, ENG

Kelsey Schreiber, Junior, General Engineering, ENG

Mary Rosenwinkel, Sophomore, Interdisciplinary Health Sciences, AHS

A Theoretical Examination of the Let's Move Campaign Using the Health Belief

Kalina Jozefina Gajda, Sophomore, Global Studies, LAS

Golden Gate Cloning in Building Multigene Constructs for Photorespiration Bypass in C3 Plants

Helen Liu, Freshman, Crop Sciences, ACES

Analysis of Social Needs and Chronic Conditions of the Uninsured Utilizing a Free Clinic

Anuluwapo Osideko, Senior, Community Health, AHS

PE Session - Science and Mathematics

10:45 AM-12:00 PM, Illini Room C

Predicting G-quadruplex Formation

Jacob Calvert, Senior, Bioengineering, ENG

Artificial Wall Climbing Hold

Geoffrey Tang, Senior, General Engineering, ENG

Affordable Electrogoniometer for Rehabilitative Gait Analysis

Zonghe Chua, Senior, Mechanical Engineering, ENG

Three Dimensional Interactions Between Spherical Inclusions and PDMS Matrix for Digital Volume Correlation

Manue Martinez, Senior, Aerospace Engineering, ENG

Impact of Perturbations to Photorespiration on Rubisco Activation State

Beau Barber, Junior, Agriculture and Biological Engineering, ENG

Personalized 3D Printed Bio-Absorbable Drug-Eluting Stent for the Treatment of Vascular Disease

Joseph Kus, Senior, Bioengineering, ENG

Divya Tankasala, Senior, Bioengineering, ENG

Ramya Babu, Junior, Bioengineering, ENG

Early Force Regulation of Fibroblast through Time-Lapse Traction Force Microscopy

Heyuan Huang, Junior, Mechanical Engineering, ENG

PA-MBE Growth of GaN-based HEMT Devices

Gabriel Velarde, Junior, Material Science and Engineering, ENG

Characterization of Sulfolobocins within a Sympatric Population of Sulfolobus Islandicus

Kimberly Allen, Junior, Molecular and Cellular Biology, LAS

Immunotoxic Effects of Bisphenol-A

Swetapadma Tripathy, Junior, Molecular and Cellular Biology, LAS

Phosphoprotein Expression Profiling of Tumor Samples for Cancer Sub-classification using Microring Resonator Arrays

Ruth Londono, Sophomore, Integrated Biology, LAS

Molecular Evolution for the Chemoreceptor Gene Families in the Common Eastern Bumblebee, Bombus impatiens

Yihui Zhu, Senior, Integrative Biology, LAS

DNA Fragment Length Heterozygosity PCR: Lab-on-a-Chip Method for Testing Bias in Prairie Root Metagenomics

Taylor Pederson, Senior, Integrative Biology, LAS

The Broken Stick Problem in Three Dimensions: From a Classic Puzzle to Modern Distance Geometry

Yuliya Semibratova, Sophomore, Mathematics, LAS
Alexander Page, Sophomore, Computer Science, ENG
Yi Xuan, Junior, Mathematics, LAS
Eva Rui Zhang, Freshman, Actuarial Science, LAS

A Model of Sea Star Associated Densovirus Epidemiology

Bridget Mueller-Brennan, Freshman, Mathematics, LAS

Summing Divergent Series: From Euler and Abel to Dirichlet and Beyond

Yiwang Chen, Senior, Mathematics, LAS
Huang Keran, Senior, Mathematics, LAS

Embedded-width, a Variation on Treewidth

Robert Weber, Senior, Mathematics and Computer Science, LAS

Connectivity of Substantia Innominata and Inferior Colliculus in Auditory System of Mouse

Junyu Li, Sophomore, Molecular and Cellular Biology, LAS
Stacy Sons, Junior, Molecular and Cellular Biology and Psychology, LAS

Fruit and Vegetable Consumption and Body Mass Index of Children

Amanda Donald, Senior, Molecular and Cellular Biology, LAS
Miles Mary, Senior, Interdisciplinary Health Sciences, AHS
Samantha Addante, Sophomore, Human Development and Family Studies, ACES

SRSF1 and the Splicing Regulatory Network of NASH

Gandhar Datar, Junior, Molecular and Cellular Biology, LAS

Reliable Hydrogen Detection Employing Palladium Fuzz

Casey Bryniarski, Junior, Electrical Engineering, ENG

Accelerated 4D flow MRI Using a Shared Subspace Constraint

Miguel Moscoto, Senior, Electrical Engineering, ENG

Sink for Electromagnetic Waves

Tom Kirsh, Sophomore, Physics, LAS

Chaos Induced Transparency

Juehang Qin, Sophomore, Physics, LAS

Machine Learning on Mock Galaxy Catalog

Harshil Kamdar, Junior, Physics, LAS
Dingcheng Yue, Sophomore, Computer Science, ENG
Rishabh Jain, Junior, Computer Science, ENG
Christopher Chan, Junior, Computer Engineering, ENG

3D Printing Finishing Techniques

Kevin Hauger, Junior, Industrial Design, FAA

Understanding Geochemistry and Microbial Communities Inhabiting Oil Sands from Grosmont Carbonate Reservoir of North Alberta, Canada

Jiwon Kim, Senior, Molecular and Cellular Biology, LAS

PF Session – Social Sciences, Human Behavior, and Education

10:45 AM-12:00 PM, South Lounge

WAR Career Trajectory Curves

Drew Jordan, Senior, Statistics, LAS

Mental Practice and Speech

Steven Anderson, Senior, Psychology, LAS

Using the Coping Strategies Index as a Measure of Food Security in Rural Honduras: A Preliminary Validation Study

Elise Ellinger, Senior, Human Nutrition, ACES

The Role of Image Features on Social Media

Mayanka Amencherla, Senior, Electrical Engineering, ENG

Why Do American and Chinese Mothers Respond Differently to Children's Performance?

Janice Ng, Senior, Psychology, LAS

Collective Memory, National Humiliation, and Historical Ties: Effects of the Ming Tributary System on Modern Chinese Relations

Mallory Meade, Senior, Anthropology, LAS

Study of Interpersonal Interactions on a Popular College Review Forum

Kaitlyn Taylor, Senior, Communication, LAS

An Analysis on Gun Violence

Anna Lin, Senior, Psychology, LAS

Policy Analysis of Public Act 95-1031

Stefany Loeza, Senior, Social Work, SSW

With Liberty and Theater for All: Revisiting Theatrical Skills in Community

Stephanie Svarz, Senior, Theatre Studies, FAA

The Knight and The Dragon: Exploring Representations in Video Games

Emilie Butt, Senior, Gender and Women's Studies, LAS

Vivian Shen, Senior, Sociology, LAS

Violence Against Women in Mongolian Movies

Ganchimeg Ganzorig, Junior, Global Studies, LAS

France, Germany, and 1914

Anthony Borrino, Sophomore, Global Studies, LAS

The Health Care System in Chile

Nina Clark, Senior, Latin American Studies, LAS

A Perpetuating Negative Cycle: The Effects of Economic Inequality on Voter Participation

Jenine Saleh, Senior, Political Science, LAS

Differences in Memory and Credibility Across Media Platforms

Christina Lorey, Senior, Political Science, LAS

Don't Bank On It: The Incomplete Truth of Money in Congressional Elections

Patrick Flavin, Senior, Political Science, LAS

Political Violence, Ethnic Fractionalization, and the Ratification of Human Rights Treaties

Ada Karacal, Senior, Political Science, LAS

Members of Congress and Congressional Staff Allocation

John Flach, Senior, Political Science, LAS

Progressive Ambition and Gender in Congress

Sarah Gortowski, Senior, Political Science, LAS

Can Anti-corruption Aid Reduce Corruption?

Ricardo Alvarez, Senior, Political Science, LAS

Who Bullies Whom? The Role of Race/Ethnicity in Bullying Among Elementary School Students

Matt Graden, Senior, Psychology, LAS

What Are The Odds? Using a Probability Judgment Task to Explore Individual Differences in Confidence

Carly Graham, Senior, Psychology, LAS

Partitions in the Age of Digital Reproduction - An Architectural Study

Mary Kate Cassidy, Senior, Architectural Studies, FAA

Seth Kopka, Senior, Architectural Studies, FAA

Gideon Schwartzman, Senior, Architectural Studies, FAA

Analysis on Welfare

Dorina Moore, Junior, Social Work, SSW

Why Americans Prefer Texting to Other Chatting Apps?

Xie Li, Freshman, Undeclared, EDU

Shihao Wen, Junior, EDU

Endocrine Disruptors in Plastics: What do Child Care Providers Know and What are They Doing to Limit Young Children's Exposure?

Emily Rohman, Sophomore, Community Health, AHS

CarolineAnne Buetow, Junior, Human Development and Family Studies, ACES

Examining I-Promise Students: Preliminary Study on Why Minority Students Don't Study Abroad

Jennifer Aguayo, Junior, Community Health, AHS

Sketching and Self-Explanation: How They Aid Student Learning in Math and Science

Logan Walther, Sophomore, Elementary Education, EDU

Very Superstitious: A Look at American and Chinese Taboos

Toni Wordlaw, Senior, Advertising, COM

Support, Hostility, and LGBTQ Well-being: The Role of Religion, Community, and Family

Sarah Anderson, Senior, Social Work, SSW

Featured Presentations

Lunch: 12:00-1:15 PM, Illini Union B

Things are Different: Bridging the Gap Between Parents and Teachers in a Chicago Head Start

Victoria Cross, Senior, Neuroscience, LAS

Einstein Meets Big Data: Searching for Exotic Objects with Bayesian Statistics

Sean McLaughlin, Senior, Physics, ENG

'I Remember' from Evening Primrose by Sondheim.

'O mio babbino caro', Lauretta's aria from Giacomo Puccini's Gianni Schicchi,

'I Could Have Danced All Night' from My Fair Lady by Frank Loewe (lyrics by Alan Jay Lerner).

Katherine Bokenkamp, Senior, Music - Vocal Performance, FAA
Accompanied by **Casey Baker**, Graduate Student, Piano, FAA

PG Session: Science and Mathematics

1:30-2:45 PM, Illini Room A

Modeling The Flow Through a Low-Speed Wind Tunnel with Reynolds-Averaged Navier-Stokes Simulations

Kevin Kim, Senior, Aerospace Engineering, ENG

Parallelized 2D Vortex Panel Model of a Rotating Airfoil

Francisco Gonzalez, Junior, Aerospace Engineering, ENG

Splitter Plate Aerodynamics

Kevin Kang, Senior, Aerospace Engineering, ENG

Atmosphere and Plume Explorer of Europa

Christopher Lorenz, Junior, Aerospace Engineering, ENG

Geometric Effects on the Performance and Wake Development of a Multielement Airfoil System

Aaron Perry, Senior, Aerospace Engineering, ENG

Hardware Development and Uncertainty Quantifications of a Seven Hole Pressure Probe

Leigh Honzatko, Sophomore, Aerospace Engineering, ENG

Genetic Analysis of Cellobiohydrolase I (cbhl) Gene Sequences and Production of Other Wood Degradation Enzymes in Tropical Aquatic Fungal Communities

Matthew Boyce, Senior, Integrative Biology, LAS

Monolithic Systems Applications

Hugo Freire, Senior, Industrial Engineering, ENG

Complex Magnetic Systems for High Power Pulsed Magnetron Sputtering

Matthew Cheng, Sophomore, Material Science and Engineering, ENG
Justin Weberski, Junior, Nuclear Plasma and Radiological Engineering, ENG

Interfacial Processes of Lithium Ion Batteries

Bogdan Dryzhako, Senior, Material Science and Engineering, ENG

Drying and Preservation Methods Between Varieties of Strawberries, Blueberries, and Raspberries

Janique Tyler, Junior, Food Science and Human Nutrition, ACES

The Role of Notch-Dependent Differentiation of Tumor Associated Macrophages in Mediating the Metastatic Effects of 27-Hydroxycholesterol

Ashabari Mukherjee, Junior, Molecular and Cellular Biology, LAS

Development of Dopaminergic Fibers during Adolescence in the mPFC of Male and Female Rats

Laura Cortes, Senior, Neuroscience, LAS

High Resolution DNA Melting Analysis for Identifying Biases in Prairie Root Community Metagenomics

Christopher Sligar, Sophomore, Biology, LAS

Kinetic Analysis of the Class II Lanthipeptide Synthetases ProcM

Yunhong Wang, Senior, Biochemistry, LAS

The Development of a Custom Smartphone Cradle for Multimodal Spectral Analysis and Biomolecule Detection

Sonya Dave, Junior, Chemistry, LAS

Single Polymer Studies Using Microfluidic Devices

Sarah Kuhl, Senior, Chemistry and Biomolecular Engineering, LAS

Development of a Preclinical Platform to Analyze Glioblastoma Specimens

Harshita Polishetty, Senior, Chemistry and Biomolecular Engineering, LAS

Gene Expression Profiles in Directed Cardiomyocyte Differentiation of HLHS Patient-Specific Induced Pluripotent Stem Cells

Kevin Erning, Junior, Chemistry and Biomolecular Engineering, LAS

Reinforcement of Collagen Scaffolds via Incorporation of Polycaprolactone Frame Enhances Mechanical Robustness

Kevin Erning, Junior, Chemistry and Biomolecular Engineering, LAS

Electrophysiological and Mass-Spectrometric Investigation of Aplysia L1-L7 Neurons

Feng Zhu, Senior, Integrative Biology, LAS

Elucidation of Dopamine's Influence in Peripheral Sensing in Pleurobranchaea.

Megan Flanagan, Junior, Integrative Biology, LAS
Andrew Tran, Sophomore, Integrative Biology, LAS

Improving the Accuracy of Photosynthetic Compensation Point Measurements

Jessica Ayers, Junior, Integrative Biology, LAS

Effects of Bile Acids on Adipogenesis

Akinrotimi Oludemilade, Senior, Molecular and Cellular Biology, LAS

Comparison between Automated Keratometer and Placido-Disc Topographer in Measuring Keratometry

Dorothy Pham, Senior, Molecular and Cellular Biology, LAS
Kevin Yum, Senior, Biochemistry, LAS
Jenny Baek, Sophomore, Human Nutrition, ACES

The Impact of Physical Activity on Circulating Fetuin-A in Healthy Adults

Michael Magnuson, Senior, Molecular and Cellular Biology, LAS

Toricity Ratio Analysis for Lens Selection in Advanced Refractive Cataract Surgery

Lauren Gabra, Sophomore, Molecular and Cellular Biology, LAS

Engineer Study

Matthew Cuvala, Senior, Sociology, LAS
Valerie Semeria, Senior, Sociology, LAS
Nikolay Todorov, Senior, Sociology, LAS

PH Session - Health

1:30-2:45 PM, Illini Room C

A Test Methodology for Evaluating the Sensitivity of Wrist Ligament Strain to Fracture Reduction Tolerances

Brian Abarbanel, Senior, Mechanical Engineering, ENG
Katob Mohammad, Senior, Mechanical Engineering, ENG
Blase Horn, Junior, Mechanical Engineering, ENG

Effects of EHR System Change on Nurse and Physician Perceived Workload and EHR Usability in Urgent/Convenient Care Clinics

Roy Bidisha, Junior, Psychology, LAS

Effect of Hyaluronic Acid on Brain Cancer Development

Sarah Laken, Senior, Bioengineering, ENG

Biomechanical Characteristics of Bone

So Hyun Ahn, Senior, Bioengineering, ENG
Peter Shyu, Junior, Bioengineering, ENG
Aditi Warhekar, Sophomore, Bioengineering, ENG

Understanding The Functional Role Of Esrp2 In Postnatal Liver Maturation

Edrees Rashan, Junior, Biochemistry, LAS

Single Nucleotide Polymorphisms in Cholesterol Ester Transfer Protein (CETP) are Associated with Differences in the Lipid pProfile of Young Mexican Adults

Michaela Margolis, Junior, Food Science and Human Nutrition, ACES

Technology's Impact on Sleep and Body Mass Index

Jordyn Fishman, Senior, Human Development and Family Studies, ACES
Kaitlin Keeley, Senior, Kinesiology, AHS

What Services Are You Receiving? African American Children with Autism Spectrum Disorders

Jasmine Brown, Junior, Human Development and Family Studies, ACES

ABCA1 Differences Between Determinants of Lipid Profile Phenotypes in Young Mexican Adults

Taneisha Griggs, Senior, Animal Sciences, ACES

Differential Association of Birth Weight and Cognitive Function among Preadolescent Female and Male Children

Joanna Manero, Senior, Dietetics, ACES

Chemotherapy Impairs Cognitive Performance and Reduces Neurogenesis, Independent of Nutritional Intervention

Andrew Sheriff, Senior, Psychology, LAS

Differential Effects of Approach and Avoidance Temperament on Risk-taking and Impulsivity

Leah Kling, Senior, Psychology, LAS

The Functional Significance of Neurogenesis in a Mouse Model of Fetal Alcohol Spectrum Disorder

Christopher Krebs, Senior, Psychology, LAS

Cardiovascular Fitness and Creativity in Children

Jason Steinberg, Senior, Psychology, LAS

Prenatal Fetal Alcohol Exposure Caused Decreased Amounts in Parvalbumin Interneurons in the mPFC

Ivy Hernandez, Junior, Psychology, LAS

A Systematic Review on the Comorbidity of Depression and Diabetes Among US Born Women

Caroline Quintanilla, Junior, Social Work, SSW

Volunteering as (Health) Intervention

Brian Summers, Sophomore, Social Work, SSW
Hayley Johnson, Senior, Social Work, SSW

*Empowerment of Families of Children with Autism***Rebecca Cuculich**, Junior, Special Education, EDU*Early Intervention in African American Families of Children with Autism Spectrum Disorder***Dana Hadley**, Sophomore, Early Childhood Education, EDU*The Role of Spectral and Temporal Cues in Binaural Fusion***Corey Shayman**, Senior, Audiology, AHS**Deepa Suneel**, Senior, Audiology, AHS*Psychophysiological Indices of Lexical Access in Hearing Learners of American Sign Language***Melissa Peterson**, Senior, Speech and Hearing Science, AHS**Haley Powles**, Junior, Speech and Hearing Science, AHS*Strategic Use of Complexity to Enhance Communication and Learning after Brain Injury***Amanda Rohde**, Senior, Speech and Hearing Science, AHS**Carissa Ernat**, Sophomore, Speech and Hearing Science, AHS*Breastfeeding vs Formula Feeding: The Role of Breastfeeding in Preventing Childhood Obesity***Marija Maretic**, Senior, Interdisciplinary Health Sciences, AHS**Natasha Joy**, Senior, Communication, LAS*TV Time and Sugary Drinks: How They're Making Your Child Obese***Kelsi Ubbenga**, Senior, Speech and Hearing Science, AHS**Michelle Moynihan**, Senior, Speech and Hearing Science, AHS**Alaina Ceron**, Junior, Sociology, LAS**Dior Chasanov**, Junior, Interdisciplinary Health Sciences, AHS*Quality Measures of Long Term Care***Margaret Palermini**, Senior, Health Planning and Administration, AHS*Analysis of Charitable Giving in Illinois Hospitals***Katie Sieloff**, Senior, Community Health, AHS*The Impacts of Socio-Economic Factors on Birth Weights among African American and White American Women in the US***Iyabode Adejumo**, Senior, Nursing, NUR*Reversing Tumor-induced Immune Suppression***Rebekah Landsman**, Senior, Molecular and Cellular Biology, LAS*Bisphenol A has Divergent Effects on Embryonic and Postnatal Pituitary Proliferation***Nicholas Baur**, Senior, Molecular and Cellular Biology, LASPI Session – Social Science and Human Behavior**3:15-4:30 PM, Illini Room A***Culture and Visual Cognition***Nicole Hakim**, Senior, Psychology and Spanish, LAS*Bronzeville Neighborhood Revitalization***Alfred Sus**, Senior, Landscape Architecture, FAA*Tourist Airports: Chinchero Case Study***Nicholas Bartholomew**, Junior, Urban Planning, FAA*Cultural Differences in Gift-Giving Between Eastern and Western Countries***Shuhan Yang**, Junior, Elementary Education, EDU**Shijie Wen**, Junior, EDU**Yilin Zhou**, Junior, Actuarial Science and Statistics, LAS*Remix Urban Planning***Sarang Chung**, Sophomore, Urban Planning, FAA*Causes and Outcomes of the Differences in US and Asian Greeting Styles***Rise Katsuda**, Junior, Political Science, LAS**Sut Leng Lao**, Junior, Political Science, LAS**Leong Chon Hin**, Junior, Mathematics, LAS*Follow the Light***Cindy Lawando**, Freshman, Undeclared, DGS*Supreme Court Justices' Response to Public Opinion***Ejulus Adorno**, Senior, Political Science, LAS*A Case For Cultural Relevance in Youth Programs***Rigoberto Campos**, Freshman, Political Science, LAS*Factors Contributing to Civic Engagement among Chinese Immigrants to the United States***Chengyu Fang**, Senior, Sociology, LAS*Policy Analysis: Illinois Domestic Violence Act of 1986***Emily Dietze**, Senior, Psychology, LAS*Discovering Remote Enculturation: Riding the First Wave of a New Concept***Julianna Ge**, Junior, Human Development and Family Studies, ACES*How Adolescents Deal with Parental Divorce***Ashley-Tate Hollis**, Junior, Human Development and Family Studies, ACES**Rachel Smith**, Sophomore, Human Development and Family Studies, ACES**Kristen Herdegen**, Sophomore, Human Development and Family Studies, ACES

Missing Links: A Quantitative Study of Online Headline Effectiveness for Habitual vs. Nonhabitual Readers

Kirsten Keller, Senior, Journalism, COM
Eli Murray, Senior, Journalism, COM
Tyler Davis, Junior, Journalism, COM

The Work and Activism of Women in East Africa and its Relevance for Implementing Safe Water and Sanitation Strategies

Arianna Jenkins, Sophomore, Psychology, LAS

Rise of Nationalism in China and Japan: the Consequences on Domestic Politics and Sino-Japanese Relations

Jooheon Kim, Senior, Political Science, LAS

Personality and the Environment: How Internal Motivations Affect Environmental Decisions

Lauren Krone, Junior, Political Science, LAS

Bronzeville Community Design

Xiaoyin Kuang, Junior, Landscape Architecture, FAA

A Whole New World: Mandarin Speaking Students in an English Immersion Preschool

Samantha Larocca, Sophomore, Rehabilitation Studies, AHS

Antecedents of Victimization in the Americas

Jacob Lubben, Senior, Political Science, LAS

Examining Online Resources to Help Adolescents Cope with Parental Divorce

Sonia Marinez, Junior, Human Development and Family Studies, ACES
Alexandra Oliva, Freshman, Human Development and Family Studies, ACES

The Head of State Effect: Discovering the Role of the Head of State in Cabinet Longevity

Quinn Marschik, Senior, Political Science, LAS

Investigating Climate Change Options through Statistical Simulation

Leah Matchett, Junior, Global Studies, LAS

Implicit Racial Messages and Citizens' Attitudes

Darrah Perryman, Senior, Political Science, LAS

State's Attorney Gender and Rape Convictions

Richard Sledz, Senior, Political Science, LAS

Gender and Leadership Emergence

Taiyi Yan, Senior, Psychology, LAS

Dye Landscape Project

Shurui Zhang, Senior, Landscape Architecture, FAA
Bridget Walsh, Senior, Landscape Architecture, FAA

Decision-Making, Favoritism, and In-Groups

Catherine Jimerson, Senior, Business Administration, BUS

The Brown Space Transversal: Pedro Pietri's The Masses Are Asses and the Performance of Race

Mateo Hurtado, Junior, Theatre Studies, FAA

Deviant Peer Group Affiliation Mediates Peer Victimization and Antisocial Behavior in Girls

Heather Ross, Senior, Spanish, LASA

PJ Session - Science and Mathematics

3:15-4:30 PM, Illini Room C

Holocene Climatic Changes in the Alaskan Arctic as Inferred from Sedimentological and Oxygen-Isotopic Analyses at Wahoo Lake

Richard Vachula, Senior, Geology, LAS

DNA Directed Assembly of Gold Nanocubes

Arzeena Ali, Junior, Chemistry, LAS

Scanning Electrochemical Microscopy (SECM) Using the Transfer of Ions Across an Interface between Two Immiscible Electrolyte Solutions (ITIES) to Image Desalination Membranes

Philip Benson, Senior, Chemistry, LAS

Amorphousness Zones within Zircon Crystals

Ryan Bowman, Senior, Geology, LAS

Extracting Latent Variables Related to User Preferences on Genres in Yahoo! Music Ratings Data

Xiaowen Chang, Senior, Statistics, LAS

Chemical Classification of the Cells in the Central Nervous System Using High Throughput Single Cell Mass Spectrometry and Statistical Analysis

Charles Doktycz, Senior, Chemistry, LAS

FTO-IRX3 Genotype Associations and Obesity in the STRONG Kids Cohort

Abby Esker, Senior, Molecular and Cellular Biology, LAS

Identifying Host Cell Protein Interactions by the Vacuolating Cytotoxin of Helicobacter pylori

Keerthana Hogirala, Junior, Individual Plan of Study, LAS

Levels of Cell Confluence Influence PDGFRalpha & PDGFRbeta Angiogenic Receptors Cell Surface Localization

Osazomon Imarenezor, Junior, Chemistry, LAS
Cathy Guo, Senior, Molecular and Cellular Biology, LAS

Evaluation of a De-Identification Process for Ocular Imaging

Michael LaPelusa, Senior, Molecular and Cellular Biology, LAS

Enhanced Wastewater Purification Using Haematococcus Pluvialis

Rachel Kohn, Junior, Molecular and Cellular Biology, LAS

Impact of Shift Work on Attention, Female Estrous Cycling, and Cholinergic Signaling: Initial Findings in a Rat Model

Michael Leventhal, Junior, Molecular and Cellular Biology, LAS

Characterization of Ammonia Emissions for Cropland in the Midwestern US

Jie Lin, Junior, Civil Engineering, ENG

Correlation Between Body Weight and Polymorphisms in AHSG in Children of the STRONG Kids 1 Cohort

Michael White, Junior, Molecular and Cellular Biology, LAS

Rediscovery, Curation, and Characterization of a Miocene Rhinoceros (Perissodactyla: Rhinocerotidae) Hash from Agate Springs, Nebraska

Willow Nguy, Senior, Geology, LAS

Validating the Use of Silicon Photonic Microring Resonators to determine tissue specific profiles of microRNAs and Comparison to qRT-PCR

Christopher Para, Junior, Chemistry, LAS

Elucidating the Individual Contributions of ArlR and ArlS to the Ability of Staphylococcus Aureus to Resist Host Imposed Nutrient Starvation

Angela Shupe, Senior, Molecular and Cellular Biology, LAS

Mode of Action Determination of Cyclothiazomycin C, a Novel Antibiotic Discovered Using Reactivity-based Screening

Karol Sokolowski, Senior, Chemistry, LAS

Examine the Topological Feature of Kondo Insulator SmB6 Using Planar Tunneling Spectroscopy

Lunan Sun, Senior, Physics, LAS

On-line Change Detection with Applications to Internet Security

Yitian Tang, Junior, Statistics, LAS

Influence of Bedrock Topography on Illinois Episode Glacial Ice and Meltwater Flow: Keyesport Quadrangle, Illinois

Katarzyna Walkowska, Senior, Geology, LAS

Uncovering Unidentified Fermi Sources

Lizhong Zhang, Senior, Physics, LAS

Searching for Imprints of Circumstellar Material in the Ultraviolet Spectra of Type Ia Supernovae

Aaron Beaudoin, Senior, Astronomy, LAS

Observations of Type IA Supernovae With The Swift Ultraviolet Optical Telescope

Steven Downing, Senior, Astronomy, LAS

Bayesian Lasso Application in Two-parameter Normal Ogive Model

Xinyue Zhou, Senior, Statistics, LAS

Yusheng Feng, Senior, Statistics, LAS

Radial Dependence of Axial Load Cells

Alex Nathan Kahn, Junior, Mechanical Engineering, ENG

Wire Actuated Streaming Flows

Kunal Chugh, Senior, Mechanical Engineering, ENG

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

Thursday, April 23, 4:30-6:30 PM

210 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.

Preliminary Swelling Tests for Self-Healing GMA Polymer Gels

Scott Becker, Sophomore, Materials Science and Engineering, ENG

Implementation of a Support Vector Machine to Predict the Aeroelastic Stability of a Wing

Dawei Chen, Junior, Aerospace Engineering, ENG

Duration of Exertion and SCBA Design Affect Firefighter Balance

Grace Deetjen, Junior, Bioengineering, ENG

Cell Sorting Using Bubble Mechanics

Brian Favis, Junior, Mechanical Engineering, ENG

Measuring the Energy of Alkali Metals with Hg-capped Electrochemical Probes

Amanda Genise, Sophomore, Chemical Engineering, LAS

*Microfluidic Approach to Parent Compound Crystallization***Lucas Gonzalez**, Junior, Chemical Engineering, LAS*Heterogeneous Three-Dimensional Texturing of 2D Nanomaterials***Ryan Han**, Senior, Mechanical Engineering, ENG*Impedance Sensing of Nitrate in Environmental Samples Using Microsensors***Ryley Higa**, Sophomore, Electrical Engineering, ENG*Synergistic Growth Regression in Triple Negative Breast Cancer via co-Inhibition of STAT-3 and Topoisomerase-II Pathways***Molly Imgruet**, Senior, Bioengineering, ENG*Analysis of Photoillumination Induced Atomic Charge State Shifts of AgInSe₂ with X-Ray Photoelectron Spectroscopy***Anna Jedralski**, Sophomore, Materials Science and Engineering, ENG*Flow Characterization over Two- and Three-Dimensional Wavy Walls***Arpeet Kamdar**, Sophomore, Mechanical Engineering, ENG*Mechanical Interactions of Optogenetic Skeletal Muscle Cells with Their Local Environment***Yoosub Lee**, Senior, Mechanical Engineering, ENG*Behavior of Oxidized and Reduced Surfaces of Ni/SiO₂ and NiP/SiO₂ Catalysts***Jaclyn Letzter**, Sophomore, Chemical Engineering, LAS*Measuring Changes in Gait Variability in Persons with Multiple Sclerosis While Wearing Pneumatically Powered Ankle Foot Orthosis***Emily Matijevich**, Junior, Bioengineering, ENG*Incorporation of Laminin into Collagen-gag Scaffolds for Muscle Tissue Engineering***Ashley Moy**, Junior, Bioengineering, ENG*Deuto-Dox for Vibrational Spectroscopy In Vitro for Tracking Doxorubicin Abundance in Cellular Cytoplasm***Ayako Ohoka**, Junior, Bioengineering, ENG*Next Generation Carbon Nanoparticles for Efficient Gene Therapy***Ayako Ohoka**, Junior, Bioengineering, ENG*Integration of Thin-Film Microscale III-V Lasers onto Si***Grace Pakeltis**, Sophomore, Materials Science and Engineering, ENG*Multi-body Dynamic Simulation of a Quadrotor and a Gripping Mechanism***Mihir Patel**, Sophomore, Aerospace Engineering, ENG*Real Time Quadcopter Simulation and Control***Sam Ricker**, Senior, Computer Science, ENG*Characterizing Bone Through Treatment***Peter Shyu**, Junior, Bioengineering, ENG*Tact: Design and Performance of an Open-Source, Affordable, Myoelectric Prosthetic Hand***Patrick Slade**, Sophomore, Mechanical Engineering, ENG*Aerogel Synthesis for Solar Energy Applications***Jesus Sotelo**, Senior, Mechanical Engineering, ENG*Physical and Biological Dynamics of the Gelatin Methacrylamide Polymer***Erik Steinbrenner**, Junior, Chemical Engineering, LAS*Valuation of American Options: Numerical Methods, and Developing Microbial Models***James Stronz**, Sophomore, Mathematics, LAS*Scalable Synthesis Methods of 2D Graphene, MoS₂, and Silicene through Thermolysis***Satoshi Takekuma**, Junior, Materials Science and Engineering, ENG*Photocatalytic Reactions on Titania Nanosheets***Emily Turner**, Junior, General Engineering, ENG*Molecular Beam Epitaxy Flux Modulation for GaN Schottky Barrier Diode Fabrication***Gabriel Velarde**, Sophomore, Materials Science and Engineering, ENG*ChromaTags: A Colored Fiducial Marker***Austin Walters**, Sophomore, Computer Science, ENG*Design of Electromyography System for Myoelectric Controlled Prosthetic Arms***Alvin Wu**, Sophomore, Computer Engineering, ENG



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