

# UNDERGRADUATE RESEARCH WEEK

April 25 – May 1, 2021



# Welcome

## 2021 Undergraduate Research Week

Welcome to Undergraduate Research Week (URW) and its signature event, the 14th annual Undergraduate Research Symposium. Even as the landscape of URW and the Symposium remains virtual, we hope you find this online space honors the essence and integrity of our in-person events. As the Illinois research community – like many others – has faced uncertainty this past year due to the ongoing global pandemic, the circumstances in which we have found ourselves have also engendered novel efforts in fostering and supporting undergraduate research. This year's URW and Symposium is, therefore, not only a celebration of undergraduate excellence and innovation in research at the University of Illinois, but an acknowledgment of the commitment of our campus community in its efforts to design and continue research opportunities for our undergraduates in ways virtual and otherwise. The presentations herein reflect the caliber of our students, the range and diversity of academic disciplines across our campus, and the institutional support and commitment to undergraduate research as an important component of the Illinois experience. A special thanks is due the Office of Undergraduate Research team, without

whom the planning of such a large-scale event would be impossible, and who worked tirelessly to imagine and provide this virtual space for hundreds of undergraduate student presenters: Dr. Chris Holmes, our Associate Director; David Aristizábal, doctoral student in Anthropology and our Program & Curriculum Specialist; Kari Darby, master's student in Library & Information Science and our Workshops Specialist; Tath Haver, our URAP Curriculum Developer and master's student in Library & Information Science; Caroline Capone, a Communications major and our undergraduate intern for Social Media & Communications; Michelle Nutlis, a Psychology (Clinical) major and our undergraduate intern for our Workshop Series; and Priyanka Krishnan, our Graphic Design undergraduate intern, and a Psychology/New Media dual major. Finally, many thanks to the Office of the Provost, and our Advisory Board for their ongoing support, and to our Undergraduate Research Ambassadors who continue to make their mark in supporting both their undergraduate colleagues and OUR programming and events.



**Karen Rodriguez'G, PhD**  
Director, Office of Undergraduate Research

### The Office of Undergraduate Research



**Christopher Holmes PhD**  
Associate Director



**David Aristizábal Urrea**  
Program & Curriculum Specialist



**Kari Darby**  
Workshops Specialist



**Tath Haver**  
URAP Curriculum Developer



**Priyanka Krishnan**  
Graphic Design Intern



**Caroline Capone**  
Social Media Intern



**Michelle Nutlis**  
Workshops Intern

# Stay up to date with OUR's programs, services, and events!

Sign up for the Office of Undergraduate Research e-newsletter to receive occasional emails about research programs, events, and opportunities.

Sign up at: <https://go.illinois.edu/subscribeOUR>

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# Undergraduate Research Week Events

## Department of History Senior Thesis Research Presentations

**April 12, 4:00-5:50 PM and  
April 19, 4:00-5:50 PM**

**Live Virtual Event:** Registration required; for Zoom link please contact Kristin Hoganson (hoganson@illinois.edu), Stefan Djordjevic (djordje1@illinois.edu), or Office of Undergraduate Research (ugresearch@illinois.edu) ahead of the events.

**April 12, 4:00-5:50 PM**

**4:00-4:25**

*Politics or Pilgrimage: Nationalism and Hindu Pilgrimage in Late Colonial India*

**Pranav Gulukota**, Senior, History, LAS

**4:25-4:50**

*Why did China Outpace the Soviet Union in the Economic Reforms? Analysis from Legitimacy Perspective*

**Qirui Ju**, Senior, History, LAS

**5:00-5:25**

*Prostitutes, Charity Girls, and Women of Ill Repute: How the First World War Reshaped Interpretations of Prostitution and Gender Relations within the United States*

**Kassidy Mahoney**, Senior, History, LAS

**5:25-5:50**

*A Place to Call Home: Families and Space in 1950s Suburban America*

**Benjamin Escobar**, Senior, History, LAS

**April 19, 4:00-5:50 PM**

**4:00-4:25**

*Origins of the Reformation: Origen of Alexandria's Influence on the Theology of Martin Luther and Huldrych Zwingli and the Construction of the Protestant Understanding of Church History*

**Ryan Yoakum**, Senior, History, LAS

**4:25-4:50**

*Palmyran Portraiture*

**Sam Ottley**, Senior, History, LAS

**5:00-5:25**

*Reading Revanche: French Irredentist Novels from 1872 to 1905*

**Patrick Sullivan**, Senior, History, LAS

**5:25-5:50**

*Nothing but Warts: Dermal Marking in Early Modern Witch Trials*

**Mary Danner**, Senior, History, LAS

## The Grainger College of Engineering Illinois Scholars Undergraduate Research (ISUR) Research Expo

**April 20 to April 22**

**Pre-recorded Virtual Event:**

<https://compass2g.illinois.edu/>

**(self-enrollment begins 4/19; look for OPEN LEARNING – ISUR Research Expo 2021)**

The Grainger College of Engineering Illinois Scholars Undergraduate Research (ISUR) program is a structured two-semester mentored research experience with a research learning community. The program facilitates opportunities to expand students' academic experience beyond the walls of the traditional classroom. Through the learning-by-apprenticeship model, students become familiar with research methodologies, develop their research skills, are exposed to what graduate school entails, and gain experience needed of graduate school acceptance or research in industry. The following programs are included in ISUR: Clare Boothe Luce Research Program, DaRin Butz Foundation Research Program, C3SR-Undergraduate Research in Artificial Intelligence, and Semiconductor Research Corporation Undergraduate Research Program.

*Bird-inspired Morphing Wings: Design and Experimental Evaluation of a Wing Folding Mechanism for Pitch Stability Control*  
**Anna Alvarez**, Senior, Mechanical Engineering, ENG

*Diabetes-Linked Peripheral Arterial Disease -Landmarks and Therapies*  
**Yamenah Ambreen**, Junior, Bioengineering, ENG

*Effect of Glycosaminoglycans on the Immune Response and Vasculature Formation in Mineralized Collagen Scaffolds*  
**Angela Andrada**, Senior, Chemistry, LAS

*Process Intensification Approaches for Improved CO2 Electroreduction*  
**Daniel Azmoodeh**, Senior, Chemical Engineering, ENG

*Tissue Engineering Platforms to Investigate Therapeutic Resistance of Glioblastoma*  
**Joe Boyce**, Junior, Materials Science & Engineering, ENG

*Predicting Stock Prices Using Machine Learning Models*  
**Abhi Chebiyam**, Sophomore, Electrical Engineering, ENG

*Label-Free Tissue Histopathology Using Infrared Spectroscopic Imaging*  
**Jaime Chen**, Junior, Bioengineering, ENG

*27-Hydroxycholesterol Promotes Breast Cancer Recurrence from Dormancy*  
**Joy Chen**, Senior, Bioengineering, ENG

*RokWall: Privacy Preserving COVID-19 Status Cards*  
**Nicholas Chen**, Senior, Computer Science, ENG

*A 3D Tissue Engineered Model of Endometrial Vessel Networks*  
**Noah Chiou**, Sophomore, Bioengineering, ENG

*Carbenoid-Boronate Building Blocks Enable Iterative Assembly of Saturated Small Molecules*  
**SriyankariChitti**, Senior, Chemistry, LAS

*Early Detection of Sepsis Through Sensor Integrated Wearable Device*  
**Sanjana Chunduri**, Sophomore, Computer Engineering, ENG

*Performance of Alkyl-Borane Healing Chemistry in Polymers for Composite Applications*  
**Ian Flueck**, Junior, Materials Science & Engineering, ENG

*Early Detection of Sepsis Through Sensor Integrated Wearable Device*  
**Saloni Garg**, Sophomore, Computer Engineering, ENG

*Using Alternative Indicators to Identify Damage with the Impact-Echo Method of Non-Destructive Evaluation*  
**Matt Grendzinski**, Senior, Civil Engineering, ENG

*Quantification of Osteointegration in Curvilinear 3D Printed Bone Scaffolds*  
**Nellie Haug**, Senior, Mechanical Engineering, ENG

*Portable Pathogen Diagnostics Using Microfluidic Cartridges Made from Additive Manufacturing*  
**John Heredia**, Senior, Bioengineering, ENG

*Doping of Electrodeposited Lithium Cobalt Oxide Cathodes for Lithium-ion Batteries*  
**Omar Kazi**, Senior, Electrical Engineering, ENG

*Bugs as Drugs: Engineering Commensal Bacteria for Therapeutic Delivery*  
**Shweta Khorana**, Junior, Bioengineering, ENG

*Library for University Distance Instruction*  
**Liana Koleva**, Sophomore, Electrical Engineering, ENG

*Discrete Generative Modeling via Cluster VAE's*  
**Jeffrey Lai**, Senior, Engineering Physics, ENG

*PolyWorld: A Touch and Voice Multimodal Interaction Method for Personalizing Voice Assistants*  
**Jaewook Lee**, Junior, Computer Science, ENG

*Extending CSRA: A Peer Reviewer Recommendation System for Scientific Literature*  
**Toby Liang**, Junior, Computer Science, ENG

*Sparse Matrix Multiplication Kernels*  
**Aneesh Lodhavia**, Junior, Computer Science, ENG

*Polymer Free Methods to Transfer Chemical Vapor Deposition (CVD) Grown Graphene*  
**Amanda Loutris**, Junior, Materials Science & Engineering, ENG

*Tuning the Properties of Ceramic Glazes for Coral Larval Recruitment*  
**Eliza Lovrich**, Sophomore, Bioengineering, ENG

*Optimization of Bimetallic Catalyst Synthesis to Select for Desirable Material Characteristics*  
**Melissa Manetsch**, Junior, Chemical Engineering, LAS

*Functional Stability of Extracellular Vesicles and Cellular Response Determined by Fluorescence Lifetime Imaging Microscopy*  
**Elisabeth Martin**, Junior, Bioengineering, ENG

*Deep Reinforcement Learning for IoT Network Optimization*  
**Aashna Mehta**, Sophomore, Computer Science, ENG

*Genetic Tool Development for Metabolic Engineering of Yeast Rhodosporidium Toruloides*  
**Andrea Mejia**, Junior, Chemical Engineering, LAS

*Influence of Solids Loading and Water Content on Ytria-Stabilized Zirconia (YSZ)*  
**AerogelsJordan Meyer**, Junior, Materials Science & Engineering, ENG

*Novel Signal Fusion for 3D Classification*

**Harris Mohamed**, Senior, Computer Engineering, ENG

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*Optimizing Sparse Matrix Multiplication For Neural Networks*

**Samraj Moorjani**, Sophomore, Computer Science, ENG

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*Developing a Non-static Biomaterial System for Hematopoietic Stem Cell Culture*

**Ali Nunes**, Junior, Materials Science & Engineering, ENG

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*Analysis of Variation (ANOVA) of an Additively Manufactured Metal Material*

**Nicholas O'Brien**, Senior, Mechanical Science & Engineering, ENG

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*Nanoparticle Detection Using Portable Photonic Crystal Enhanced Microscopy (P-PCEM)*

**Ege Onal**, Junior, Bioengineering, ENG

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*High-Throughput Analysis Reveals Microenvironmental Regulation of Primary Human Liver Sinusoidal Endothelial Cell Phenotype*

**Daniel Owen**, Junior, Bioengineering, ENG

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*Supercooled Droplet Impact on Superhydrophobic Surfaces*

**Andrew Pelster**, Senior, Aerospace Engineering, ENG

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*Generating High-Amplitude THz Fields for Ultrafast, Nonlinear Optical Experiments*

**Andrea Perry**, Senior, Engineering Physics, ENG

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*Characterization of Bioink and Fabrication of Curvilinear Bone Scaffolds*

**Arielle Pfeil**, Senior, Mechanical Engineering, ENG

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*Investigating the Effect of Compositional Factors in Collagen Scaffolds on hMSC Differentiation Along an Osteoblastic Lineage*

**Maxwell Polanek**, Sophomore, Chemical Engineering, LAS

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*Targeting Infected Host Cells in vivo via ROS Responsive Azido-Sugar*

**Jarron Roy**, Senior, Bioengineering, ENG

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*Characterizing the Rheology of Cementitious Material for the Development of a Standard Reference Material (SRM) for Concrete*

**Lauren Schissler**, Junior, Civil Engineering, ENG

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*Investigation of the Structural and Electrical Evolution of Lanthanum Strontium Manganate Thin Films during Crystallization*

**Joshua Simpson-Gomez**, Junior, Materials Science & Engineering, ENG

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*Screening for Gene Expression Fluctuations Reveals Latency Promoting Agents of HIV*

**Harpal Singh**, Senior, Bioengineering, ENG

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*Implementing an Equation of State with Baryon Number, Strangeness and Electric Charge*

**Lydia Sychalla**, Junior, Engineering Physics, ENG

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*Early Detection of Sepsis Through Sensor Integrated Wearable Device*

**Kavya Sudhir**, Sophomore, Bioengineering, ENG

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*Vision Modules for Online Intelligent Learning Assistant (CELA)*

**Xinglong Sun**, Junior, Computer Engineering, ENG

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*Individual Motors Apply Small Forces to Bypass Roadblocks on Hindered Pathways*

**Nikhila Swarna**, Senior, Engineering Physics, ENG

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*Hybrid Algal-Carbonate Substrates for Enhanced Coral Reef Restoration*

**Haley Tholen**, Senior, Engineering Mechanics, ENG

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*Smarter Data Pipelining for High-Complexity Deep Learning Recommender Systems*

**Nikash Walia**, Sophomore, Computer Science, ENG

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*Evaluating Image Compression Performance*

**James Wei**, Junior, Computer Science, ENG

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*Early Detection of Sepsis Through Sensor Integrated Wearable Device*

**Trisha Yadav**, Sophomore, Computer Engineering, ENG

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*Ternary Diboride Thin Films for Extreme Environments*

**Dana Yun**, Junior, Materials Science & Engineering, ENG

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*CELA: An AI Assistant Tool for Online Learning*

**Jiarui Zhang**, Senior, Computer Science, ENG

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*Engagement Recognition Module Investigation of the Online Learning Advisor CELA*

**Jason Zhu**, Junior, Computer Engineering, ENG

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## **Department of Communication Undergraduate Research Spotlight**

**April 23, 3:00-5:00 PM**

**Live Virtual Event:**

<https://illinois.zoom.us/j/82040599295?pwd=T0pSZm9mWVNDStVeTRJb09jUHkyZz09>

Undergraduate Communication students will present their experiences conducting research and their final research projects in this inaugural research spotlight event.

**Saad Abour**, Sophomore, Communication, LAS

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**Breanna Cordova**, Junior, Communication, LAS

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**Jack Everett**, Junior, Communication, LAS

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**Adelaide Hindsley**, Junior, Communication, LAS

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Luyuyang Li, Senior, Communication, LAS

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Conan Lau, Sophomore, Communication, LAS

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Alana Leonhard, Junior, Communication, LAS

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Avery Norwick, Junior, Psychology, LAS

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Rebecca Oriza, Junior, Communication, LAS

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Colin Poultney, Sophomore, Psychology, LAS

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Sirui Qiu, Junior, Communication, LAS

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Rachel Troeger, Senior, Communication, LAS

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Allison Wasielewski, Senior, Communication, LAS

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Lauren Weissman, Senior, Psychology and Communication, LAS

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Yonas Seyid, Senior, Communication, LAS

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Veronica Zhu, Senior, Communication, LAS

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## Department of Political Science PS496 Senior Theses Presentations

April 26, 9:00 AM

Live Virtual Event:

<https://go.illinois.edu/PS496SP21>

Political science honors students will present a five to seven minute video summarizing their thesis project. These presentations are the culmination of a year-long process in which students learn to design their research, and work with a faculty advisor to complete a significant research project. This year's cohort consists of 20 students completing a thesis.

## Humanities Research Institute Mellon Legal Humanities Undergraduate Research Symposium

April 30, 3:00-4:30 PM

Live Virtual Event:

<https://go.illinois.edu/LHUndergradResearch>

The HRI-Mellon Legal Humanities Undergraduate Research group invites you to a release party to showcase our collective research on the legal humanities—an emerging field that examines how the law both constitutes and shapes the social world,

reflecting and shaping societal values, aspirations, and notions of justice. The event will feature brief presentations on a broad range of research topics, including empire and gender, enslavement and sexual abuse, anxiety in modern democracies, transitional justice, the gig economy, Palestinian liberation, and the criminalization of Latino male youth. Join us in breaking the boundaries of your academic discipline and engaging with student researchers in other fields! This event is free and open to all undergraduates, graduates, faculty, and community members. This event is supported by a grant from the Andrew W. Mellon Foundation.

## Interns

*First Generation Latino Men: Cyclical Gang Violence a Reflection of Society and the Legal System*

**Maria Martinez**, Senior, English, LAS

HRI-Mellon Legal Humanities Intern, 2020–21

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*Proposition 22 and the Future of Labor in America*

**Adem Osmani**, Junior, Political Science, LAS

HRI-Mellon Legal Humanities Intern, 2020–21

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*Neoliberalism in the US Palestinian Liberation Movement in the US from the Oslo Accords to Today*

**Buthaina Hattab**, Junior, Political Science, LAS

HRI-Mellon Legal Humanities Intern, 2020–21

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## Collaborators

*Who Does the Rule of Law Rule Out? Examining the Access to Justice for Victims in Post-Conflict Societies*

**Jessica Angel**, Junior Political Science, LAS

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*Mental Health in a Modern Democracy: How Anxiety Impacts College Students' Political Behavior*

**Aishwarya Shekara**, Senior, Political Science, LAS

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*She Who Must Be Obeyed: Reciprocal Influences of Imperialism on Female Society In H. Rider Haggard's 'She'*

**Megi Mecolli**, Junior, English, LAS

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*Slavery, Sovereignty, and Sexual Abuse in the American South*

**Esme Snyder**, Senior, Geography, LAS

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## College of Applied Health Sciences Undergraduate Research Showcase

April 26 to May 1

Pre-recorded Virtual Event:

<https://ahs.illinois.edu/undergrad-research>

The Applied Health Sciences (AHS) Undergraduate Research Showcase will highlight the research done by AHS students and presented at the 2021 Undergraduate Research Symposium on campus. Student work will be categorized by the following criteria: major, James Scholar, I-LEAP, SPARK.

## Department of Art + Design

May 8

On Display (In-person)

Krannert Art Museum, 500 E. Peabody Drive

May 14

On Display (Online: <https://art.illinois.edu/>)

The School of Art + Design's Undergraduate Research Week Exhibition will feature outstanding creative research by students participating in the annual Art + Design BFA exhibition. This celebrates the breadth of research done in our programs, encompassing the Studio Arts, Graphic Design, Industrial Design, Photography, Art History, and Art Education. Work will be displayed in the Krannert Art Museum beginning May 8. It will also be available via an exhibition website beginning May 14. Please visit the School's website at <https://art.illinois.edu/> for more information.

## Inner Voices Social Issues Theatre

April 28, 12:00-1:30 PM

Live Virtual Event:

Registration required;

<https://illinois.zoom.us/j/85430010490?pwd=U2gvSkVqS1lNbnXFKM0hPaUZxUnNiQT09>

12:00-1:00 PM – Video screening

1:00-1:30 PM – Post-screening dialogue

Join us for this hybrid event, created during the pandemic, featuring theatre pieces, spoken word and artist interviews followed by a post-performance dialog. Underscoring INNER VOICES Social Issues Theatre's innovative ways of producing ensemble theatre during the pandemic, this 55-minute video centers our socially driven work. It reads as a letter to America, responding to police brutality, immigration, and racism, while unapologetically celebrating the human spirit. A post-per-

formance audience dialogue follows. INNER VOICES Social Theatre is co-sponsored by Illinois Theatre and the Counseling Center at the University of Illinois Urbana-Champaign.

*Land Acknowledgment Statement*

Offered by **Elena Escobar**

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*Introduction*

Delivered by **Skylar Harris**

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*A Simple Revolution*

Written by **Lisa Fay for Durell Callier**

Performed by **Victor Ruiz-Divas, Elena Escobar, and Alisa Williams**

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*Interview #1*

**Sarah Shen** interviews playwright **Andrew White**

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*Sequential Decay*

Written by **Andrew White** and **Apurva Chakravorty**

Performed By **Friday-Deja Boyd; LilMike -Andrew White**

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*Crossing the Line*

Written and performed by **Sarah Shen**

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*Interview #2*

**Elena Escobar** interviews **Victor Ruiz-Divas**

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*Una Vida Mejor -excerpt*

Written by **Victor Ruiz-Divas**

Performed by **Sarah Shen** and **Victor Ruiz Divas**

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*Interview #3*

**Brianna Bowman** interviews **Ruth Nicole Brown**

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*"Aminata" excerpt from Endangered Black Girls*

Written by **Dr. Ruth Nicole Brown**

Performed by **Alayna Hester** and **Brianna Bowman**

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*Excerpt "Scene Eleven: The Anti-narrative" from Endangered Black Girls*

Written by **Dr. Ruth Nicole**

Featuring **Tiatia Aluka, Brianna Bowman, Alyana Hester, Matilda Thompson-Smith** and **Alisa Williams**

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*Get Comments Like*

Written and Performed by **Deja Boyd**

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*Ode to the artist in me*

Written and Performed by **Alyana Hester**

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# 2021 Undergraduate Research Symposium

## Presentations on display April 26 – April 30

We invite members of the campus community to attend the 2021 Virtual Undergraduate Research Symposium set to be on display April 26 – April 30, 2021. Student presentations were pre-recorded and will be hosted online through Symposium by ForagerOne (Registration with an @illinois.edu email address is required to access the presentations).

<https://go.illinois.edu/URS2021>

## Featured Presentations

**April 26, 12:00 – 1:30 PM**  
**Live Virtual Event: [https://go.illinois.edu/URS2021\\_FeaturedPresentations](https://go.illinois.edu/URS2021_FeaturedPresentations)**

*Bird-Inspired Morphing Wings: Design and Experimental Evaluation of a Swept Wing for Pitch Stability Control*

**Anna Alvarez**, Senior, Mechanical Engineering, ENG  
 (Research Mentors: Chengfang Duan, Department of Mechanical Science & Engineering and Aimy Wissa, Department of Mechanical Science and Engineering)

*Extending Your Phone's Lifetime Using Electrodeposited Cathodes in Lithium-Ion Batteries*

**Omar Kazi**, Senior, Electrical Engineering, ENG  
 (Research Mentors: Arghya Patra, Department of Materials Science and Engineering and Paul Braun, Department of Materials Science and Engineering and Department of Chemistry)

*Math Anxious Parents' Response to Children's Difficulty in a Math Game*

**Michelle Nutlis**, Senior, Psychology, LAS  
 (Research Mentor: Eva Pomerantz, Department of Psychology)

*The Effects of Environmental Pollutants (Iodoacetic Acid) on the Development of Mouse Egg Cells*

**Royal Shrestha**, Sophomore, Molecular and Cellular Biology, LAS  
 (Research Mentor: Yiheng Ping, Department of Comparative Biosciences)

## Current Moment: Multidisciplinary Approaches to COVID-19

*Consumer Price Index and Healthcare Expenditures During the COVID-19 Pandemic*

**Emily Adams**, Senior, Agricultural and Consumer Economics, ACES  
 (Research Mentor: Angela Lyons, Department of Agricultural & Consumer Economics)

*The Impact of COVID-19 on Cyber-victimization Experiences Among Middle School Students*

**Jessica Baltierra**, Sophomore, Social Work, SSW  
**Sarah Aronson**, Junior, Social Work, SSW  
**Madisyn Welsh**, Junior, Social Work, SSW  
 (Research Mentor: Rachel Garthe, School of Social Work)

*Maintaining Sexual Health and Wellbeing During the COVID-19 Pandemic*

**Brooklyn Clough**, Freshman, Speech and Hearing Science, AHS  
 (Research Mentor: Yelyzaveta Kustanovich, Department of Recreation, Sport and Tourism)

*Diseases Don't Care About Your Politics: Xenophobia and Global Responses to SARS and COVID-19*

**Kolten Conklen**, Junior, Global Studies, LAS  
 (Research Mentor: Dan Shao, Department of East Asian Languages and Culture)

*Examining Disparities in COVID-19 Testing Access Within the City of Chicago*

**Yemariam Eyob**, Senior, Community Health, AHS  
 (Research Mentor: Fikriyah Winata, Department of Geography and GIS)

*COVID and its Effects on Immigrants in the C-U Community*

**Kathleen Flores**, Junior, Psychology, LAS  
 (Research Mentor: Annie Abbott, Department of Spanish & Portuguese)

*Acceptance and Usability of Telehealth from the Perspective of Registered Dietitians During the COVID-19 Pandemic*

**Emily Grayburn**, Sophomore, Community Health, AHS  
 (Research Mentor: Kristen DiFilippo, Department of Kinesiology and Community Health)

*The Role of News in the Perception of the COVID-19 Vaccine*

**Maha Hussain**, Junior, Statistics, LAS  
(Research Mentor: Jodi Schneider, School of Information Sciences)

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*Socio-Environmental Interactions Surrounding Argan in Morocco Before and During the Covid-19 Pandemic*

**Joseph Kreiling**, Senior, Global Studies, LAS  
(Research Mentor: Zsuzsa Gille, Global Studies)

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*Effects of Different Types of Face Masks on Speech-in-Speech Recognition in School-Aged Children*

**Lisa Lemajeur**, Junior, Interdisciplinary Health Sciences, AHS  
**Kelsey Libert**, Junior, Speech and Hearing Science, AHS  
(Research Mentor: Mary M. Flaherty, Department of Speech and Hearing Science)

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*The Impacts of COVID-19 on Sex Life*

**Jessie Li**, Sophomore, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Liza Berdychevsky, Department of Recreation, Sport and Tourism)

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*Time, Motivation, and Politics: How the COVID-19 Pandemic Increased Political Participation*

**Halle Noone**, Senior, Political Science, LAS  
(Research Mentor: Jacob Bowers, Department of Political Science)

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*How Contextual Factors Influence the Partisan Divide in Reactions to COVID*

**Jason Reed**, Senior, Political Science, LAS  
(Research Mentor: Scott Althaus, Department of Political Science)

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*Vulnerable Populations Responses to COVID-19 Shocks in India and Nepal*

**Ingrid Schaller**, Freshman, Earth, Society and Environmental Sustainability, LAS  
(Research Mentor: Jennifer Zavaleta Cheek, Department of Natural Resources and Environmental Sciences)

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*COVID-19 Long-Haulers' Experiences with Medical Providers*

**Yonas Seyid**, Senior, Communication, LAS  
**Lauren Weissman**, Senior, Communication, LAS  
(Research Mentor: Charee Thompson, Department of Communication)

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*Impact of Social Media on Adolescents Eating, Sleep, and Exercise Patterns During the COVID-19 Pandemic*

**Breana Shusterman**, Junior, Social Work, SSW  
**Emily Mikuta**, Junior, Psychology, LAS  
(Research Mentor: Rachel Garthe, School of Social Work)

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*Age Differences in Resilience to COVID-19's Impacts on Sexual Health*

**Brianna Silveira**, Senior, Community Health, AHS  
(Research Mentor: Yelyzaveta Berdychevsky, Department of Recreation, Sport, and Tourism)

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*Covid-19 Infodemic*

**Hadley So**, Freshman, Information Sciences, SIS  
**Claire OBrien**, Junior, Journalism, COM  
(Research Mentor: Ian Brooks, School of Information Sciences)

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*The Impact of COVID-19 on the Interpersonal Relationships of College Students*

**Rachel Troeger**, Senior, Communication, LAS  
**Avery Norwick**, Junior, Psychology, LAS  
(Research Mentor: Danni Liao, Department of Communication)

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*Impact of the COVID-19 Pandemic on Career Development and Goal Pursuit Among Undergraduate Students*

**Bansari Upadhyay**, Senior, Psychology, LAS  
**Esther Lee**, Junior, Psychology, LAS  
**Kaley Jackson**, Senior, Psychology, LAS  
**Courtney James-Atkins**, Junior, Psychology, LAS  
(Research Mentors: Chris Napolitano, Department of Educational Psychology & Bethany Hoff, College of Education)

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*The Impact of Covid-19 on Lifestyle Behaviors Among Children Living in Champaign County*

**Meghan Vanasco**, Freshman, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Shelby Keye, Department of Kinesiology and Community Health)

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*2020 vs. The Writing Tutor: Online Learning, Collaboration, and the Writer's Responsibility in the Relationship Between Writers and Writing Tutors*

**Kat Williams**, Junior, Media and Cinema Studies, COM  
(Research Mentor: Carolyn Wisniewski, Center for Writing Studies)

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*Statistical Analysis of Covid19 Forecasts*

**Zhanyuan Ye**, Senior, Mathematics, LAS  
**Ziyu Liu**, Senior, Mathematics, LAS  
(Research Mentor: A J Hildebrand, Department of Mathematics)

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## Data and Information

*Discovery of Biomarkers for Coronary Microvascular Disease*

**Saumya Agrawal**, Junior, Computer Science and Statistics, LAS  
(Research Mentor: Zeynep Madak-Erdogan, Department of Food Science and Human Nutrition, Justina Zurauskiene, Institute of Cancer and Genomic Sciences, University of Birmingham & Alicia Arredondo Eve, Department of Food Science and Human Nutrition)

*Digitization of Family Scrapbook Materials and Connecting to Online Information*

**Elijah Bentain**, Junior, Agricultural and Consumer Economics, ACES  
**Adeline Ru Xin Tan**, Senior, Econometrics and Quantitative Economics, LAS  
(Research Mentor: Micheal Twidale, Department of Computer Science)

*Humanitarian Considerations Within Video Game Preservation*

**Lisa Chasanov**, Freshman, Anthropology, LAS  
(Research Mentor: Hanna Leigh Dahlstrom, School of Information Sciences)

*Exploration of the Latent Structure of Personnel Selection Assessment Response Data*

**Rebecca Chen**, Junior, Psychology, LAS  
(Research Mentor: Susu Zhang, Department of Psychology & Department of Statistics)

*Who Paid for my Professor: Where do Endowed Chairs Come From?*

**Olivia Chester**, Junior, Community Health, AHS  
**Seethalakshmi Ramaswamy**, Senior, Sociology, LAS  
(Research Mentor: Michael Twidale, School of Information Sciences)

*Discrimination Technology and Pre-Election Violence as a Party Strategy to Win Elections*

**Hrishikesh Deshmukh**, Sophomore, Computer Science, ENG  
(Research Mentor: Tolgahan Dilgin, Department of Political Science)

*Waiting for Their Day in Court: A Closer Look at the US Federal Nomination Process*

**Ashna Gupta**, Sophomore, Economics, LAS  
(Research Mentor: Luzmarina Garcia, Department of Political Science)

*Speech-to-Text for Domain Specific Words*

**Jiayi Li**, Junior, Computer Science, ENG  
**Akhil Vyas**, Senior, Computer Science, ENG  
**Vicky Cai**, Junior, Computer Science and Math, LAS  
**Ivan Zhong**, Junior, Computer Science, ENG  
(Research Mentor: Lawrence Angrave, Department of Computer Science)

*Utilizing Natural Language Processing to Better Understand Stakeholders' Perspectives*

**Yixiao Liu**, Junior, Agricultural and Biological Engineering, ENG  
(Research Mentor: Luis Rodriguez, Department of Agricultural and Biological Engineering)

*Data Visualizations on Controversies in Health*

**Luis Ramirez Albavera**, Senior, Econometrics and Quantitative Economics, LAS  
(Research Mentor: Jodi Schneider, School of Information Sciences)

*The Times They Are A-Changin': Analysis of the Demographics of Rolling Stone Magazine Covers Through Time*

**Miriam Sadkhin**, Sophomore, Advertising, COM  
**Hanyu Zhao**, Sophomore, Information Sciences, SIS  
(Research Mentor: Michael Twidale, School of Information Sciences)

*Detecting Financial Ethic Violations Using Graph Databases*

**Shane Schatz**, Junior, Finance, BUS  
(Research Mentor: Jodi Schneider, School of Information Sciences)

*NLP of Social Media to Evaluate Patient Global Impression of Change in Acne Treatments*

**Ritika Sinha**, Senior, Computer Science and Statistics, LAS  
(Research Mentor: Ian Brooks, School of Information Sciences)

*Preserving Video Games Through Technical Application*

**Shulamit Wu**, Freshman, Political Science, LAS  
(Research Mentor: Hanna Dahlstrom, School of Information Sciences)

*Residential Electric Vehicle Charging Patterns and Their Management*

**Joe Ye**, Sophomore, Civil and Environmental Engineering, ENG  
(Research Mentor: Eleftheria Kontou, Department of Civil and Environmental Engineering)

*Pan-Cancer Survival Classification with Clinicopathologic and Targeted Gene Expression Features*

**Patrick Yu**, Freshman, Computer Science, ENG  
(Research Mentor: Jimmy Guo, Biological and Biomedical Sciences, Harvard Medical School)

*Using Citation Bias to Guide Better Sampling of Scientific Literature*

**Jasmine Yuan**, Freshman, Information Sciences, SIS  
(Research Mentor: Jasmine Yuan, School of Information Sciences)

## Design Thinking and Innovation

*Webcam Eye-Tracking Based Accessibility for ClassTranscribe*

**Harsh Deep**, Junior, Computer Science and Statistics, LAS  
**Joanna Huang**, Freshman, Computer Science, ENG  
**Rashi Dembi**, Junior, Computer Science, ENG  
**Omar Khan**, Senior, Computer Science and Crop Sciences, ACES  
(Research Mentor: Lawrence Angrave, Department of Computer Science)

*Designing for Usability: Human Factors Analysis in the Improvement of the Stretch Domestic Robot*

**Leonardo Galoso**, Junior, Mechanical Engineering, ENG  
(Research Mentor: Travis Kadylak, Human Factors & Aging Laboratory)

*Illinois LinkedIn Banner Image Generator*

**Ashley Grudzinski**, Senior, Computer Science and Statistics, LAS  
(Research Mentor: Wade Fagen-Ulmsneider, Department of Computer Science)

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*3D printing of Biomimetic Pneumatic Actuators by Direct-Writing of Ultraviolet-light Curable Elastomer Inks*

**Jonghyun Hwang**, Senior, Mechanical Engineering, ENG  
(Research Mentor: Nicholas Thompson, Department of Mechanical Science and Engineering)

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*A Contextual Innovation and Process Investigation of an International Student Entrepreneurial Organization*

**Ryan Lake**, Junior, Civil and Environmental Engineering, ENG  
**Kariem Hashem**, Junior, Civil and Environmental Engineering, ENG  
**Arin Rzonca**, Junior, Computer Science, ENG  
**Jessica Altenberg**, Sophomore, Mechanical Engineering, ENG  
(Research Mentor: Ann-Perry Witmer, Department of Agricultural and Biological Engineering)

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*Swelling Thin Layers of Plant Tissue Analogs*

**Milena Nutrobkina**, Senior, Chemical Engineering, LAS  
(Research Mentor: Shelby Hutchens, Department of Mechanical Science and Engineering)

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*Developing a Digital Home Assistant Recommendation and Instructional Support Application for Older Adults with Mobility Disability*

**Vikram Ramavarapu**, Sophomore, Mathematics and Computer Science, LAS  
(Research Mentor: Travis Kadylak, Human Factors and Aging Laboratory, AHS)

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*Detection of Various Biochemicals in Tears Through a Cellulose Membrane*

**Manushi Shah**, Sophomore, Chemistry, LAS  
(Research Mentor: Paul Braun, Department of Mechanical Science and Engineering)

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*Ushering Movement Analysis Tech into a More Immersive Dimension: Virtual Reality*

**Robert Siczkowski**, Junior, Media and Cinema Studies, COM  
(Research Mentor: Jenny Oyallon-Koloski, Department of Media and Cinema Studies)

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*Evaluation of the Withings BPM Connect Blood Pressure Monitor for Use Among Older Adults*

**Carson Smith**, Sophomore, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Timothy Hale, Department of Kinesiology and Community Health)

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*Smart Online Language Learning Modules: Exploring the Potential of Artificial Intelligence for Translingual Learning*

**Yani Su**, Senior, Digital Environments for Learning, Teaching, and Agency, EDU  
**Jacob Albus**, Freshman, Computer Science and Statistics, LAS  
(Research Mentor: Anastasia Olga Tzirides, Education Policy, Organization & Leadership)

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*Development of a Design Toolbox for Ballbot Designers*

**Piyush Sud**, Junior, Computer Engineering, ENG  
(Research Mentor: Chenzhang Xiao, Department of Mechanical Science and Engineering)

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*Illini Popcorn: An Application of a Molecular Marker-Based Plant Breeding Approach Involving the pr1 Gene*

**Winston Wong**, Senior, Crop Sciences, ACES  
(Research Mentor: Anthony Studer, Department of Crop Sciences)

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## Environment and Sustainability

*A Rawlsian Justification for International Climate Agreements*

**Kimmy Chuang**, Senior, Political Science, LAS  
(Research Mentor: Benjamin Miller, Department of Political Science)

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*The Disconnect Between Valuing Nature and Concern for Climate Change*

**Gina DeLascio**, Junior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Carena van Riper, Department of Natural Resources and Environmental Sciences)

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*Influence of Gender on Values and Pro-Environmental Behavior: A Literature Review*

**Gina Fumagalli**, Junior, Earth, Society and Environmental Sustainability, LAS  
(Research Mentor: Seunguk Shin, Department of Natural Resources and Environmental Sciences)

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*Maumee River Watershed Impacts on Phosphorus Nutrient Overloads*

**Christina Garcia**, Sophomore, Civil and Environmental Engineering, ENG  
(Research Mentor: Kevin Wallington, Department of Civil and Environmental Engineering)

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*Lacustrine Carbonate Grains in Kiritimati Island: Stable Isotope Ratios and Potential Biotic Mechanisms of Formation*

**Quinn Greven**, Sophomore, Chemistry, LAS  
(Research Mentor: Mingfei Chen, Department of Geology)

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*Long-Term Impacts of Trust Funds in Bhutan's Biodiversity Conservation*

**Rosemary Komes**, Junior, Earth, Society and Environmental Sustainability, LAS  
(Research Mentor: Jennifer Zavaleta Cheek, Department of Natural Resources and Environmental Sciences)

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*The Effects of Climate Change on Women's Security*

**Sophie Luijten**, Junior, Global Studies and Spanish, LAS  
(Research Mentor: Çağlayan Baser, New York University Abu Dhabi)

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*Environmental and Economic Impacts of Efficient Packaging - Transitioning from Single Use Plastic Containers to Reusable Devices with Refills*

**Alejandra Manrique**, Senior, Chemistry, LAS  
(Research Mentor: Renata Endres, Department of Agricultural and Consumer Economics)

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## Food Systems

*Comparing Mesotrione Metabolism Profiles in Multiple Herbicide-Resistant Waterhemp (*Amaranthus Tuberculatus*) and Palmer Amaranth (*Amaranthus Palmer*) Populations*

**Autumn Brandenburg**, Senior, Biochemistry, LAS  
(Research Mentor: Dean Riechers, Department of Crop Sciences)

*Copper Resistance in Illinois Field Isolates of *Xanthomonas perforans* and *X. gardneri**

**Veronica Casey**, Senior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Sarah Hind, Department of Crop Sciences)

*QuickOat: Developing a New Protocol to Accelerate Oat Improvement*

**Megan Choi**, Senior, Integrative Biology, LAS  
(Research Mentor: Juan Arbelaez, Department of Crop Sciences)

*Engineering Pumpkin Plants to Control Western Corn Rootworm, a Significant Insect Pest of Corn*

**Leonidas D'Agostino**, Senior, Crop Sciences, ACES  
(Research Mentor: Sarah Hind, Department of Crop Sciences)

*Effect of Progressive Limit Feeding in Feedlot Steers: A Pilot Study*

**Hattie Duncan**, Senior, Animal Sciences, ACES  
(Research Mentor: Josh McCann, Department of Animal Sciences)

*An Investigation into the Potential of Horticultural and Nature-Based Interventions for Well-Being and the Methods to Evaluate Their Effects*

**Liz Guenther**, Junior, Social Work, SSW  
(Research Mentor: Rachel Garthe, School of Social Work)

*Analysis of Fitness-related Traits of Different Isolates of *Setosphaeria turcica* In Vitro*

**Mirai Inaoka**, Sophomore, Crop Sciences, ACES  
(Research Mentor: Santiago Mideros, Department of Crop Sciences)

*Cognitive and Structural Brain Outcomes Associated with Supplementation of Human Milk Oligosaccharides in the Young Pig*

**Joel Kieser**, Senior, Animal Sciences, ACES  
(Research Mentor: Ryan Dilger, Department of Animal Sciences)

*Caring of Caregivers Organically (CoCO) Health Education Program*

**Sarika Kumar**, Freshman, Molecular and Cellular Biology, LAS  
(Research Mentor: Jacqueline Guzman, Department of Kinesiology and Community Health)

*Comparative Analysis of Coomassie Staining and Silver Staining used on Herbicide Safener-treated Sorghum Seedling Tissue*

**Ethan Lamons**, Senior, Crop Sciences, ACES  
(Research Mentor: Dean Riechers, Department of Crop Sciences)

*A Regulatory Timeline of Seawater Desalination in California*

**Julia Marsaglia**, Junior, Earth, Society and Environmental Sustainability, LAS  
(Research Mentor: Brian O'Neill, Department of Sociology)

*Simulating the Chicago River Flooding Issue*

**Eric Nieto**, Freshman, Computer Engineering, ENG  
(Research Mentor: Zhi Li, Department of Civil and Environmental Engineering)

*Holocene Variability in the Productivity of Kettle Lake, Northern Great Plains, Inferred from Stable Carbon Isotope Values of Organic Matter*

**Kate O'Brien**, Sophomore, Integrative Biology, LAS  
(Research Mentor: Jessica Conroy, Department of Geology)

*Biodiversity Conservation in Bhutan*

**Rui Qian**, Junior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Jennifer Zavaleta Cheek, Department of Natural Resources and Environmental Sciences)

*Mapping Governance in Protected Area Communities: An Institutional Map of Organizations Who Influence Protected Area Management in the Denali Region of Alaska*

**Gillian Rowe**, Senior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Carena van Riper, Department of Natural Resources and Environmental Sciences)

*Policy Insights on Electric Vehicle Subsidies*

**Tyler Swanson**, Sophomore, Agricultural and Consumer Economics, ACES  
(Research Mentor: Peter Christensen, Department of Agricultural and Consumer Economics)

*Convective Systems' and Climatic Conditions' Impacts on Crops During the Growing Season*

**Bridgette Mason**, Senior, Atmospheric Sciences, LAS  
(Research Mentor: Deanna Hence, Department of Atmospheric Sciences)

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*Application of Circularity in Animal Production to Reduce Waste*

**Zeyi Moo**, Senior, Agricultural and Biological Engineering, ENG  
(Research Mentor: Angela Green-Miller, Department of Agricultural and Biological Engineering)

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*Genetic Variation for Leaf Asparagine Accumulation: A Century of Selection for Grain Protein Concentration in Maize*

**Maya Salinas**, Freshman, Crop Sciences, ACES  
(Research Mentor: Edward Ross, Department of Crop Sciences)

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*Variation Amongst Inbred Corn Lines for Total Plant Transpiration and the Proportion of Daytime vs Nighttime Transpiration*

**John Searl**, Senior, Crop Sciences, ACES  
(Research Mentor: Anthony Studer, Department of Crop Sciences)

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*Commodity GMOs: Impacts on Yield and Global Trade*

**Jasmine Shi**, Senior, Agricultural and Consumer Economics, ACES  
(Research Mentor: Gary Schnitkey, Department of Agricultural and Consumer Economics)

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*Beneficiaries and Project Outcomes: The Role of Aid Beneficiaries in the Success of Sustainable Agricultural Projects*

**William Smithson**, Senior, Political Science, LAS  
(Research Mentor: Daniel Miller, Department of Natural Resources and Environmental Sciences)

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*Food Law Challenges in the US Olive Oil Market*

**Paul Tonner**, Senior, Agricultural and Consumer Economics, ACES  
(Research Mentor: Bryan Endres, Department of Agricultural and Consumer Economics)

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*Investigating Naturalized Hemp in Illinois for Crop Improvement*

**Ingrida Valaitis**, Senior, Technical Systems Management, ACES  
**Jane Olsson**, Junior, Crop Sciences, ACES  
(Research Mentor: Chance Riggins, Department of Crop Sciences)

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*Comparison of Experimental Cattle Temperature-Humidity-Index (THI) Equations for Cattle*

**Angela Wong**, Freshman, Mechanical Engineering, ENG  
(Research Mentor: Angela Green-Miller, Department of Agricultural and Biological Engineering)

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## **Health and Wellness: Society**

*Godspeed: Religion, Spirituality, and Support for COPD Patients and Caregivers*

**Semira Abera**, Senior, Psychology, LAS  
(Research Mentor: Brett Bergmann, Department of Psychology)

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*Aging in Place: A Review of Older Adults' Perceptions of the Efficacy of Home-Based and Wearable Fall Prevention Technologies*

**Ruth Ada**, Senior, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Shannon Mejia, Department of Kinesiology and Community Health)

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*Increased Risk of Childhood Obesity With A Rise In Media Usage*

**Avery Adamany**, Senior, Integrative Biology, LAS  
**Emily Williams**, Senior, Community Health, AHS  
**Caitlin Daza**, Senior, Human Development and Family Studies, ACES  
(Research Mentor: Brenda Koester, Department of Human Development & Family Studies)

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*The Impact of Volunteering at a Free Clinic on a Student's Outlook on Holistic Medicine*

**Aalishba Ahmad**, Junior, Community Health, AHS  
(Research Mentor: Irfan Ahmad, Carle Illinois College of Medicine)

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*The Daily Balance Project Remote Pivot: The Development of Remote Data Collection and Assessment*

**Amira Alburei**, Senior, Integrative Biology, LAS  
**Amanda Simon**, Junior, Psychology, LAS  
(Research Mentor: Aileen Griffin, Department of Kinesiology and Community Health)

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*The Translation of the I-ROLL Intervention from In-Person to Online*

**Jessica Alexander**, Senior, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Laura Rice, Department of Kinesiology and Community Health)

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*The Role of Respectability Politics in the Treatment of COPD*

**Gabrielle Balek**, Junior, Psychology, LAS  
(Research Mentor: Brett Bergmann, Department of Psychology)

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*How Does a One Hour Presentation on Vitamin A Affect Medical Student Knowledge and Attitudes Towards Supplementation?*

**Arushi Bharel**, Sophomore, Food Science and Human Nutrition, ACES  
(Research Mentor: Emily Johnston, Biomedical Education, California Health Sciences University)

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*Social Anxiety, Affect, and Alcohol Consumption: The Moderating Influence of Social Context*

**Eddie Caumiant**, Senior, Psychology, LAS  
(Research Mentor: Catharine Fairbairn, Department of Psychology)

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*Fostering Physical Activity for People with Disabilities Through Park District Programs*

**Cailey Cranny**, Senior, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Toni Liechty, Department of Recreation, Sport and Tourism)

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*The University of Illinois at Urbana-Champaign: An Age Friendly University*

**Maya Dye**, Freshman, Speech and Hearing Science, AHS  
(Research Mentor: Brian Pastor, Center on Health, Aging, and Disability)

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*Exploring Black Plurisexuality Disclosure of Sexual Identity Labels to Healthcare Providers*

**Caroline Egan**, Junior, Human Development and Family Studies, ACES  
(Research Mentor: Alyssa Billington, Department of Human Development and Family Studies)

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*Minority and Immigrant Nutrition Education Program*

**Sam Flesch**, Senior, Food Science and Human Nutrition, ACES  
**Karly Miller**, Sophomore, Food Science and Human Nutrition, ACES  
(Research Mentor: Annabelle Shaffer, Department of Food Science and Human Nutrition)

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*Exploring Technology Support and Strategies for Promoting Independence and Quality of Life for Older Adults With and Without Disabilities*

**Rebecca Goneh**, Freshman, Molecular and Cellular Biology, LAS  
(Research Mentor: Megan Bayles, Department of Kinesiology and Community Health)

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*Development of Instructional User Guides for Health Applications on the Amazon Echo Show for Older Adults*

**Saahithya Gowrishankar**, Senior, Global Studies, LAS  
(Research Mentor: Travis Kadylak, Human Factors & Aging Laboratory)

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*MIND Diet Adherence Among Middle-Aged Latinos*

**Jessica Guachichulla**, Junior, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Jacqueline Guzman, Department of Kinesiology and Community Health)

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*The Health Action Process Approach (HAPA) Applied to People with Spinal Cord Injury (SCI)*

**Yuanting Huang**, Senior, Community Health, AHS  
(Research Mentor: Chung-Yi Chiu, Department of Kinesiology and Community Health)

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*US Healthcare Customers Rank Most HCAHPS Questions as Mandatory: A Kano Analysis of HCAHPS Survey*

**Imadh Khan**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Sandeep Tripathi, OSF Saint Francis Medical Center)

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*Serving on the Evaluation Team of Asthma Home Visiting Program*

**Madison Lamphear**, Freshman, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Sarah Geiger, Department of Kinesiology and Community Health)

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*Effects of Stretching, Aerobic and Yoga Exercise on Neurocognition Among Middle Aged and Older Adults: Protocol for the SAY Exercise Trial*

**Leah Lasher**, Junior, Kinesiology, AHS  
**Daniel Boachie**, Junior, Kinesiology, AHS  
(Research Mentor: Neha Gothe, Department of Kinesiology and Community Health)

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*Family Caregivers of older Asian Immigrants: Navigating social and cultural norms in the health care system*

**Katherine Lim**, Junior, Community Health, AHS  
(Research Mentor: Minakshi Raj, Department of Kinesiology and Community Health)

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*Small Talk in the Patient Provider Context: A Systematic Review*

**Alana Leonhard**, Junior, Communication, LAS  
(Research Mentor: Lindsay Kelpinski, Communication)

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*Investigating the Potential of Digital Home Assistants for Older Adults With & Without Mobility Disabilities*

**Maya Malecki**, Junior, Community Health, AHS  
(Research Mentor: Travis Kadylak, Human Factors & Aging Laboratory)

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*Effects of an 8-Week Yoga Intervention on Self-Reported Stress and Cognitive Functioning in Full-Time Employees*

**Ella Meyerling**, Sophomore, Molecular and Cellular Biology, LAS  
**Allison Antman**, Junior, Psychology, LAS  
(Research Mentor: Madhura Phansikar, Department of Kinesiology and Community Health)

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*MIND Diet and Physical Activity Levels Among Middle-Aged Latinos*

**Diana Morales**, Junior, Speech and Hearing Science, AHS  
(Research Mentor: Susan Aguiñaga, Department of Kinesiology and Community Health)

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*Suggestions for a Fall Prevention Technology that Combats a Fear of Falling*

**Nicholas Olivieri**, Senior, Community Health, AHS  
(Research Mentor: Shannon Mejia, Department of Kinesiology and Community Health)

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*The Restorative Power of Voice and Advocacy in Medicalized Settings*

**Omorewo Osho**, Senior, Psychology, LAS  
(Research Mentor: Brett Boeh Bergmann, Department of Psychology)

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*Comparative Analysis of Mental Health Policies for Student Athletes in the NCAA Power 5 Conference Schools*

**Cheyenne Petersen**, Junior, Psychology, LAS  
**Julia Ilecki**, Junior, Psychology, LAS  
**Kaitlin Ratcliff**, Junior, Psychology, LAS  
**Rusi Dong**, Junior, Sociology, LAS  
**Dustin Epstein**, Graduated Fall 2020, Chemistry, LAS  
(Research Mentor: Caitlin Vitosky Clarke, Department of Kinesiology and Community Health)

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*Do Patient Narratives Improve Illness Self-Care?*

**Prim Poshyanonda**, Junior, Psychology, LAS  
**Isabella Feret**, Sophomore, Psychology, LAS  
**Natasha Najam**, Junior, Psychology, LAS  
**Emily Albert-Stauning**, Junior, Psychology, LAS  
(Research Mentor: Daniel Morrow, Department of Educational Psychology)

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*Identifying Characteristics of Trust Between Physicians and Family Caregivers*

**Ruchira Rao**, Sophomore, Community Health, AHS  
(Research Mentor: Minakshi Raj, Department of Kinesiology and Community Health)

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*Relationship Between Healthy Eating Index Scores and Weight Gain During Early and Late Pregnancy*

**Abigail Rich**, Sophomore, Integrative Biology, LAS  
**Carolyn Francart**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Arden McMath, Division of Nutritional Sciences)

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*Clinical Empathy in Speech-Language Pathology and Audiology Graduate Students: Comparing Students Empathy Level Across Training Years*

**Ella Schoendorff**, Junior, Speech and Hearing Science, AHS  
**Lianna Yang**, Junior, Speech and Hearing Science, AHS  
(Research Mentor: Keiko Ishikawa, Department of Speech and Hearing Science)

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*Human Trafficking in the United States: An Interdisciplinary Approach to Reduce the Number of Unidentified Cases in a Healthcare Environment*

**Tracy Wohlever**, Senior, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Valeria Bonatti, Global Studies)

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*Development of a Web-focused Weight Loss Management Program*

**Mary Yang**, Senior, Food Science and Human Nutrition, ACES  
**Gwendoline Balto**, Junior, Food Science and Human Nutrition, ACES  
**Abigail Fuller**, Junior, Food Science and Human Nutrition, ACES  
(Research Mentor: Annabelle Shaffer, Division of Nutritional Sciences)

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*Investigation of the Underlying Factors of Skin Diseases: A Development of Patient Interactive Diary in REDCap*

**Jennifer Zeng**, Senior, Food Science and Human Nutrition, ACES  
(Research Mentor: Ian Brooks, School of Information Sciences)

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*Are Health Worker Visits Positively Associated with Nutritional Outcomes in Children? An Exploratory Analysis Using Data from Bangladesh*

**Siyao Zhang**, Junior, Community Health, AHS  
(Research Mentor: Lila Cardell, Department of Agricultural and Consumer Economics)

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*Autonomy or Adherence to Medical Treatment: The Dilemma for COPD Patients*

**Chenhao Zhao**, Senior, Psychology, LAS  
(Research Mentor: Brett Boeh Bergmann, Department of Psychology)

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## Health and Wellness: The Body

*Assessing the Efficacy of a Saroglitazar Nanodrug in Reducing Adiposity in a Murine Model of Diet-Induced Obesity*

**Sophia Baer**, Senior, Animal Sciences, ACES  
(Research Mentor: Catherine Applegate, Department of Animal Sciences)

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*Fall Frequency & Fall Concern in Non-Ambulatory Adults with Spinal Cord Injury*

**Emma Blomberg**, Junior, Kinesiology, AHS  
(Research Mentor: Laura Rice, Department of Kinesiology and Community Health)

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*Trait Neuroticism and Its Role in the HRV and Depression Relationship in an Active Population*

**Jaelyn (Jackie) Buczkowski**, Junior, Kinesiology, AHS  
(Research Mentor: Jonathan North, Department of Kinesiology and Community Health)

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*Differential Relationships Between Changes in Lean and Fat Mass and Aerobic Fitness in Children*

**Savannah Burkhalter**, Junior, Food Science and Human Nutrition, ACES  
(Research Mentor: Naiman Khan, Department of Kinesiology and Community Health)

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*Robot and Older Adults: Perceived Roles and Importance*

**Weng Ian Chay**, Sophomore, Kinesiology, AHS  
(Research Mentor: Travis Kadylak, Human Factors & Aging Laboratory)

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*Effect of Dietary Exposure to Phthalate on Intestinal Development in Piglet Model*

**Sierra Coyne**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Marcia Monaco Siegel, Department of Food Science and Human Nutrition)

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*Methodological Considerations for the Enrichment of Bone Marrow Endothelial and Mesenchymal Stromal Cells*

**Evan Dray**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Daniel McKim, Department of Animal Sciences)

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*Relationship Between Temperament and Weight Status at 24 Months: An Analysis*

**Sarah Gale**, Senior, Human Development and Family Studies, ACES  
**Divya Thomas**, Senior, Molecular and Cellular Biology, LAS  
**Sahi Muppalla**, Senior, Psychology, LAS  
(Research Mentor: Brenda Koester, Department of Human Development and Family Studies)

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*Digestive Tolerance of Non-Digestible Soluble Fibers in Adults*

**Emily Galfano**, Senior, Food Science and Human Nutrition, ACES  
(Research Mentor: Hannah Holscher, Department of Food Science and Human Nutrition)

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*Synergistic Suppression of Breast Cancer Cell Proliferation by Combination Use of FOXM1 and CDK4/6 Inhibitors*

**Chirag Gopinath**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Benita S Katzenellenbogen, Department of Molecular and Integrative Physiology)

*Role of Methylation on Lysine 27 of Histone H3 (H3K27) in Chemotherapy Resistance in Testicular Germ Cell Tumors*

**Aleyah Hattab**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Sarah Spinella, Department of Comparative Biosciences)

*Sweet or Salty? Classification of Altered Taste Perception in Self-Reported COVID-19 Cases*

**Husna Hussaini**, Freshman, Sociology, LAS  
(Research Mentor: Raul Alfaro, Department of Food Science and Human Nutrition)

*Technology-Based Social Engagement Interventions Available for Caregivers of Persons with Dementia*

**Sarah Jones**, Junior, Speech and Hearing Science, AHS  
(Research Mentor: Raksha Mudar, Department of Speech and Hearing Science)

*An Investigation of PFOS Exposure in Cancer Cells*

**Amy Lee**, Sophomore, Bioengineering, ENG  
(Research Mentor: Wenjie Liu, Department of Bioengineering)

*The Effectiveness of Vocal Injury Prevention Methods: A Literature Review*

**Christina Lee**, Senior, Speech and Hearing Science, AHS  
**Arianna Bastys**, Graduated Fall 2020, Speech and Hearing Science, AHS  
(Research Mentor: Keiko Ishikawa, Department of Speech and Hearing Sciences)

*Relationship Between Strategic Attention and Inhibition in Older Adults with Varying Hearing Ability*

**Chloe Maghinang**, Sophomore, Speech and Hearing Science, AHS  
(Research Mentor: Raksha Mudar, Department of Speech and Hearing Science)

*Effect of Aggressive Breast Cancer Extracellular Vesicles on Breast Cell Metabolism Determined by Fluorescence Lifetime Imaging Microscopy*

**Elisabeth Martin**, Junior, Bioengineering, ENG  
(Research Mentor: Stephen Boppart, Department of Electrical and Computer Engineering)

*Incorporating Placental-Derived Membrane Matrix and Soluble Factors in Mineralized Collagen Scaffolds for Improved Bone Repair*

**Maxwell Polanek**, Sophomore, Chemical Engineering, LAS  
(Research Mentor: Vasiliki 'Aliko' Kolloiopoulos, Department of Chemical and Biomolecular Engineering)

*Cognitive Control in Individuals with Age-Related Hearing Loss*

**Grace Rochford**, Senior, Speech and Hearing Science, AHS  
(Research Mentor: Raksha Mudar, Department of Speech and Hearing Sciences)



*Epigenetic Targeting of the Polycomb Repressive Complex 2 Alters Hypersensitivity and Resistance of Cisplatin in Testicular Germ Cell Tumors*

**Khadeeja Shahid**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Ratnakar Singh, Department of Comparative Biosciences)

*Optimization of Procedure for THP-1 Monocyte to Macrophage Differentiation*

**Megan Shamsi**, Sophomore, Chemical Engineering, LAS  
**Melisande Wong Yan Ling**, Junior, Chemical Engineering, LAS  
**Reed Brockstein**, Sophomore, Bioengineering, ENG  
**Jared Buabeng**, Freshman, Chemical Engineering, LAS  
(Research Mentor: Vasiliki Kolloiopoulos, Department of Chemical and Biomolecular Engineering)

*Therapeutic Intervention Effects on Spatiotemporal Gait Parameters in Adults with Neurological Disorders*

**Meghna Shankar**, Junior, Kinesiology, AHS  
(Research Mentor: Manuel Hernandez, Department of Kinesiology and Community Health)

*Quantifying Brain Demyelination and Inflammation in Mice Models of Multiple Sclerosis Using Spatial Light Interference Microscopy Image Analysis*

**Julia Stillman**, Junior, Bioengineering, ENG  
(Research Mentor: Jorge Alexis Maldonado DeJesus, Neuroscience Program)

*$\beta$ -carotene Mitigates Liver Inflammation in an Experimental Model of Atherosclerosis Regression*

**Sanjana Tamane**, Senior, Food Science and Human Nutrition, ACES  
(Research Mentor: Jaime Amengual, Department of Food Science and Human Nutrition)

*Exercise and the Brain: The Role of Hippocampal Activation*

**Sanjana Venkataraman**, Senior, Psychology, LAS  
(Research Mentor: Justin Rhodes, Department of Psychology)

*Picture-Word Interference in Individuals with Mild Cognitive Impairment*  
**Sharbel Yako**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Raksha Mudar, Department of Speech and Hearing Sciences)

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*Effects of Habitual Low-Calorie Sweetener Use on Basic Taste Perception*  
**Ying Yang**, Senior, Food Science and Human Nutrition, ACES  
(Research Mentor: M. Yanina Pepino, Department of Food Science and Human Nutrition)

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## Humanities and The Arts

*Examining the Teaching and Literacy Practices of Education Justice Project*  
**Sophie Casaburi**, Freshman, Urban Studies and Planning, FAA  
(Research Mentor: Logan Middleton, Department of English)

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*Nothing but Warts: Dermal Marking in Early Modern Witch Trials*  
**Mary Danner**, Senior, History, LAS  
(Research Mentor: Craig Koslofsky, Department of History)

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*Politics or Pilgrimage: Nationalism and Hindu Pilgrimage in Late Colonial India*  
**Pranav Gulukota**, Senior, History, LAS  
(Research Mentor: Antoinette Burton, Department of History)

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*A Study of David Jones and the Understanding of the Great War*  
**Dylan Gunn**, Sophomore, History, LAS  
(Research Mentor: Peter Fritzsche, Department of History)

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*An Examination of Depictions of Slavery in Modern Textbooks*  
**Audrey Kermgard**, Freshman, Elementary Education, EDU  
(Research Mentor: Jon Hale, Education Policy, Organization and Leadership)

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*Film Reel Statecraft: Shaping U.S. Perceptions of Latin America Through Film, 1933-1945*  
**Zackary Landers**, Sophomore, History, LAS  
(Research Mentor: Amanda Rector, Spanish and Portuguese)

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*Discrepancies in Psychology Classes Between University and College-in-Prison Environments*  
**Melody Leung**, Sophomore, Psychology, LAS  
(Research Mentor: Logan Middleton, Department of English)

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*Reggaeton's Resistance: Bad Bunny & the Aesthetics & Politics of Perreo*  
**Issy Marquez**, Senior, English, LAS  
(Research Mentor: Sandra Ruiz, Department of Latina/Latino Studies and Department of English)

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*La Sublevación de la Mujer Indígena y Su Voz Silenciada; The Rebellion of the Indigenous Women and her Silenced Voice*  
**Alexis Martinez**, Sophomore, Middle Grades Education, EDU  
(Research Mentor: Megan Gargiulo, Department of Spanish and Portuguese)

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*Restarts and Self-Corrections by L2 Learner in Spanish*  
**Amanda Oversen**, Senior, Speech and Hearing Science, AHS  
**Kathleen Flores**, Junior, Psychology, LAS  
**Madalyn Velisaris**, Senior, Political Science, LAS  
(Research Mentor: Kara Yarrington, Department of Spanish and Portuguese)

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*Puppet Trade: The Importance of the Ryukyus in the Luxury Goods Trade Between the Qing, Satsuma and the Tokugawa*  
**Render Symanski**, Sophomore, History, LAS  
(Research Mentor: Kai-Wing Chow, Department of History)

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*A Restaging of Lynn Nottage's "Sweat" at Champaign's Murphy's Pub*  
**Ryan Yapp**, Senior, Theatre, FAA  
(Research Mentor: Kirsten Pullen, Department of Theatre)

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*Origins of the Reformation: Origen of Alexandria's Influence on Martin Luther's and Huldrych Zwingli's Understandings of Church History*  
**Ryan Yoakum**, Senior, History, LAS  
(Research Mentor: Carol Symes, Department of History)

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## Learning and Human Development

*Evaluating the Feasibility of a Structured Sentence Diversity Protocol*  
**Mary Buchheit**, Senior, Speech and Hearing Science, AHS  
(Research Mentor: Pamela Hadley, Department of Speech and Hearing Science)

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*An Investigation of Phenomenon-Based Curriculum and its Effects on Elementary Science Learning and Agency*  
**Peyton Carducci**, Junior, Elementary Education, EDU  
(Research Mentor: Christina Krist, Department of Curriculum and Instruction)

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*The Digital Divide and Computer Science Education*

**Kathy Chen**, Freshman, Learning and Education Studies, EDU  
(Research Mentor: H. Chad Lane, Department of Educational Psychology)

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*Is College Worth It? A Combined Analysis of the Effect of a College Education on Health Outcomes, Alongside the Effects of a Liberal Arts College Curriculum*

**Nick Chomko**, Senior, Econometrics and Quantitative Economics, LAS  
(Research Mentor: Anthony Sullers, Education Policy, Organization and Leadership)

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*The Role of Disciplinary Expertise in Shaping Undergraduate Tutor's Confidence in Writing Center Sessions*

**Eva Cornman**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Carolyn Wisniewski, Center for Writing Studies)

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*Heritage Spanish Speakers and Learners: Attitudes Towards Heritage Language Learning*

**Andrea Czart**, Sophomore, Spanish (Teaching), LAS  
(Research Mentor: Salvatore Callesano, Department of Spanish and Portuguese)

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*The Impact of Maternal Infant-Directed Singing on the Mitigation of Infant Distress and Emotional Self-Regulation*

**Caitlin Daza**, Senior, Human Development and Family Studies, ACES  
(Research Mentor: Nancy McElwain, Department of Human Development and Family Studies)

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*Infant Distress to Limitations and Parental Depression*

**Courtney Esker**, Junior, Human Development and Family Studies, ACES  
(Research Mentor: Nancy McElwain, Department of Human Development and Family Studies)

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*Quantitative Analysis of Principal's Perceptions of Kindergarten Transition Practices for Children with Disabilities*

**Kailey Fox**, Sophomore, Psychology, LAS  
(Research Mentor: Michelle Sands, Department of Special Education)

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*An Investigation on the Reasons Teachers Continue to Leave the Work Force*

**Lucia Galan-Garcia**, Freshman, Early Childhood Education, EDU  
(Research Mentor: Nancy Latham, Department of Curriculum and Instruction)

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*An Investigation of Preventative Classroom Management Strategies*

**Lindsay Garthwaite**, Freshman, Elementary Education, EDU  
(Research Mentor: Cheryl Light Shriner, Department of Special Education)

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*An Investigation of Teacher Education Preferences in the STEM Field*

**Lauren Godsell**, Sophomore, Middle Grades Education, EDU  
(Research Mentor: H. Chad Lane, Department of Educational Psychology)

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*The Crossroads of History Curricula and Perceptions of America*

**Abigail Greetis**, Freshman, Elementary Education, EDU  
(Research Mentor: Jon Hale, Education Policy, Organization and Leadership)

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*Learning Sign Through Games: An ASL STEM Vocabulary App*

**Mona Jawad**, Sophomore, Bioengineering, ENG  
**Aditi Adya**, Sophomore, Computer Engineering, ENG  
**Ethan Gaughan**, Sophomore, Bioengineering, ENG  
**Sri Medisetti**, Sophomore, Bioengineering, ENG  
(Research Mentor: Lawrence Angrave, Department of Computer Science)

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*Adolescent Sleep and Academic Outcomes: A Pre- and Post-Pandemic Group Comparison*

**Jacqueline Lee**, Graduated Fall 2020, Psychology, LAS  
(Research Mentor: Kelly Tu, Department of Human Development and Family Studies)

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*Positions of Power and Gender Dynamics in Mexico's *Regimientos de Mujeres**

**Jennifer Leon**, Junior, Media and Cinema Studies, COM  
(Research Mentor: Megan Gargiulo, Department of Spanish and Portuguese)

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*The Acculturation Rate of Online Learning Across Different Age Groups in East Asia*

**Qianxu (Morgan) Luo**, Senior, Digital Environments for Learning, Teaching, and Agency, EDU  
**Yani Su**, Senior, Digital Environments for Learning, Teaching, and Agency, EDU  
(Research Mentor: Emma Mercier, Curriculum & Instruction)

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*Principals' Perceptions and Roles Used to Support Children with Disabilities in Transition into Kindergarten*

**Bridget Marshall**, Sophomore, Special Education, EDU  
(Research Mentor: Michelle Sands, Department of Special Education)

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*Relationship Between Early Life Developmental Milestones and Coordination Skills in Later Childhood*

**Alyssa Martin**, Senior, Integrative Biology, LAS  
(Research Mentor: Shelby Keye, Department of Kinesiology and Community Health)

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*Linking Verbs with Events: How Syntactic Bootstrapping Assists Toddlers in Generalizing Novel Verbs*

**Dana Meyerson**, Senior, Psychology, LAS  
(Research Mentor: Cynthia Fisher, Department of Psychology)

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*Do African American Students Feel Increased Comfortability in the Classroom Among African American Teachers?*

**Kaitlyn Mullings**, Freshman, Learning and Education Studies, EDU  
(Research Mentor: Rachel Roegman, Education Policy, Organization and Leadership)

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*Do You Think I Look Cute? Unpacking the Relationship Between Puberty, Opposite-Sex Social Anxiety, and Depression*

**Samantha Nardella**, Senior, Psychology, LAS  
(Research Mentor: Karen Rudolph, Department of Psychology)

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*Exploring Writing Process and Transitioning Behavior in Developmental Writers*

**Minh Nguyen**, Sophomore, Bioengineering, ENG  
(Research Mentor: Carolyn Wisniewski, Center for Writing Studies)

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*Math Anxious Parents' Response to Children's Difficulty in a Math Game*

**Michelle Nutlis**, Senior, Psychology, LAS  
(Research Mentor: Eva Pomerantz, Department of Psychology)

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*Language Anxiety in Virtual Reality Classrooms*

**Diana Pham**, Sophomore, Mechanical Engineering, ENG  
**Savannah Sander**, Junior, Psychology, LAS  
(Research Mentor: Tricia Thrasher, Department of French and Italian)

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*The Role of Siblings in Cognitive, Language, and Temperament Development*

**Isabella Rico**, Senior, Human Development and Family Studies, ACES  
(Research Mentor: Nancy McElwain, Human Development and Family Studies)

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*Faculty Perceptions of Gender in Engineering Education*

**Dale Robbenolt**, Junior, Sociology, LAS  
(Research Mentor: Tim Liao, Department of Sociology)

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*Students with Disabilities in Higher Education*

**Taylor Rossi**, Junior, Speech and Hearing Science, AHS  
(Research Mentor: Anthony B. Sullers Jr., Educational Policy, Organization, and Leadership)

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*It's Not a Book. It's a BoK— Ruminating in the Margins on the Role of Self-Reflective Journaling in Fostering Personal and Professional Socialization*

**Paige Saddler**, Senior, Social Work, SSW  
(Research Mentor: Tara Earls-Larrison, School of Social Work)

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*Children, Cursing, and Censorship*

**MaKayla Schrock**, Senior, Linguistics, LAS  
(Research Mentor: Jeffrey Green, Department of Linguistics)

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*A UDL-Based Large-Scale Study on the Needs of Students with Disabilities in Engineering Courses*

**Yiyin Shen**, Senior, Computer Science and Statistics, LAS  
(Research Mentor: Hongye Liu, Department of Computer Science)

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*Does Restricting Your Child's Eating Behaviors Actually Help or Hinder Their Health?*

**Oviya Sougoumarane**, Senior, Integrative Biology, LAS  
**Sonia Zuleta**, Junior, Human Development and Family Studies, ACES  
**Julia Minkevitch**, Senior, Psychology, LAS  
(Research Mentor: Brenda Koester, Department of Human Development & Family Studies, Chelsea Hetherington, Department of Human Development & Family Studies)

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## **Life: Molecules, Microbes, and Cellular Processes**

*Bacterial Toxin Hacks its Way Through the Intestinal Firewall*

**Joshua Adisumarta**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Steven Blanke, Department of Microbiology)

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*Breaking Bad... Or Is It? Investigating the Cellular Response During Helicobacter pylori Infection*

**Sammy Alhayek**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Ami Seeger, Department of Microbiology)

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*Molecular Analysis of Arabidopsis thaliana Genes of an Unknown Function*

**Meghan Burns**, Junior, Chemistry, LAS  
**Jacob Milo**, Sophomore, Chemical Engineering, LAS  
(Research Mentor: Steven Burgess, Department of Crop Science)

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*The Effects of Cholesterol on Antimicrobial Peptides*

**Juan David Campolargo**, Freshman, Undeclared, DGS  
(Research Mentor: Kevin Jose Cheng, Biophysics)

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*Physiological Change of Salmonella Under Polyamine Stress*

**Hsuan-Yu (Taylor) Chen**, Junior, Bioengineering, ENG  
(Research Mentor: James Slauch, Department of Microbiology, Yumi Iwadate, Department of Microbiology)

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*Experience is the Best Teacher: How the Deadly Human Pathogen Bacillus anthracis Learned to Overcome Human Immune Responses Through Interactions with Soil Amoebae*

**Annie Cheung**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Tamilselvam Batcha, Department of Microbiology)

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*Role of Nuclear Receptor Liver Small Heterodimer Partner (SHP) and Farnesoid X Receptor (FXR) in Gallbladder Physiology*

**Nathanlown Dang**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Sayee Anakk, Department of Molecular and Integrative Physiology)

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*Investigating the Role of a Novel Cation Transporter in Bacterial Metal Homeostasis and Assessing the Importance of a Cambialistic Superoxide Dismutase in Staphylococcus aureus*

**Matthew Gao**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Thomas Kehl-Fie, Department of Microbiology)

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*Metabolic Regulation by FXR-Induced Long Non-Coding RNA, FincoR*

**Deepa Prakashini Govindasamy Rajagopal**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Jinjing Chen, Department of Molecular and Integrative Physiology)

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*Endothelin-2 in Ovulation*

**Eugene Ham**, Senior, Molecular and Cellular Biology, LAS  
**Ellie Cho**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: CheMyong Jay Ko, Department of Comparative Biosciences)

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*Understanding the Role that Manganese Transporters and a Small RNA have on the Ability of Staphylococcus aureus Superoxide Dismutases to Combat Oxidative Stress*

**Destiny Henning**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Thomas Kehl-Fie, Department of Microbiology)

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*Discovery of Ribosomally Synthesized and Post-Translationally Modified Peptides (RiPPs) to Understand Natural Product Roles in Plant-Bacteria Interactions*

**Edward Huang**, Junior, Integrative Biology, LAS  
(Research Mentor: Qiqi Tian, Chemistry, Biochemistry)

*The Effects of MYD88 S209R on Cell Death*

**Christopher Jones**, Senior, Community Health, AHS  
(Research Mentor: Sufia Bakshi, National Institutes of Health)

*Give Me a Break: Mitochondrial Defense Against Bacteria*

**Rachel Jones**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Steven Blanke, Department of Microbiology)

*Novel Paenibacillus and Pseudomonas Species Reduce the Symbiotic Effectiveness of Ensifer meliloti in Co-Inoculations of Medicago truncatula*

**James Kosmopoulos**, Junior, Integrative Biology, LAS  
(Research Mentors: Katy Heath, Department of Plant Biology & Rebecca Batstone, Carl R. Woese Institute for Genomic Biology)

*Construction and Purification of Recombinant Wildtype and Catalytically Inactive Mutants of DNT and CNF1 Protein Toxins from E. coli*

**James Lopez**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Brenda Anne Wilson, Department of Microbiology)

*A Sticky Situation: VacA, a Carcinogenic Toxin*

**Sean MacAllister**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Steven Blanke, Department of Microbiology)

*Oviduct Glycans Suppress Release of the Sperm Acrosome but Have No Effect on Motility*

**Katie McMorrow**, Junior, Animal Sciences, ACES  
(Research Mentor: David Miller, Department of Animal Sciences)

*War of the Worlds: How the Bacterial "Alien" Campylobacter jejuni uses a Bacterial Directed-Energy Weapon, Cytolethal Distending Toxin, to Invade into a New Home*

**Kyra Meyer**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Molly Crowder, Department of Microbiology)

*Characterization of a Conjugative Plasmid, pM164, in Archaeon, Sulfolobus islandicus*

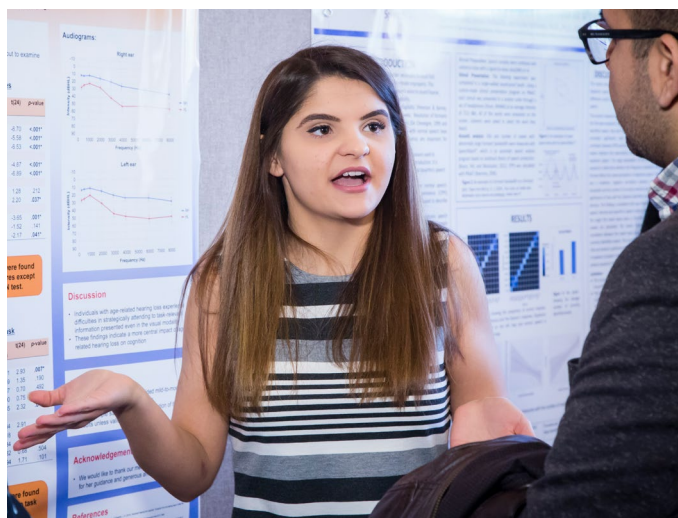
**Allison Narlock**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Rachel Whitaker, Department of Microbiology)

*Conditional Knockout (cKO) of the Negative Elongation Factor (Nelf) in Sertoli Cells of Mice Impairs Function Without Affecting Their Survival and Maintenance*

**Saakshi Pothina**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Helena Zomer, Department of Comparative Biosciences)

*The Spourne Identity: Germination-Mediated Escape of Intracellular Bacillus anthracis Spores from Infected Macrophage Cells*

**Shreya Rao**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Tamilselvam Batcha, Department of Microbiology)



*The Trifecta of Campylobacter jejuni Pathogenesis*

**Ria Ravi**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Steven Blanke, Department of Microbiology)

*An Imbalance in the Force: How DNA Damage Blocks Self-Renewal of Epithelial Barriers*

**Olivia Rodriguez**, Sophomore, Biochemistry, LAS  
(Research Mentor: Molly Crowder, Department of Microbiology)

*RNAi Knockdown of TDP-43 in Sertoli Cells Affects Cathepsin-L Expression*

**Allison Schierer**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Prabhakara Reddi, Department of Comparative Biosciences)

*Trojan War: Strategy of Deadly Bacillus anthracis Pathogen to Conquer Host Immune Cells*

**Yiting Song**, Junior, Food Science and Human Nutrition, ACES  
(Research Mentor: Tamilselvam Batcha, Department of Microbiology)

*Effects of Common Mutations in Human CYP27B1 (1 $\alpha$ -hydroxylase on 25-hydroxy vitamin D3) on the Synthesis of Calcitriol*

**Toma Tchernodrinski**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Mary Schuler, Department of Cell and Developmental Biology, Department of Biochemistry, Department of Plant Biology)

*The Curious Case of the Helicobacter pylori Toxin Twins*

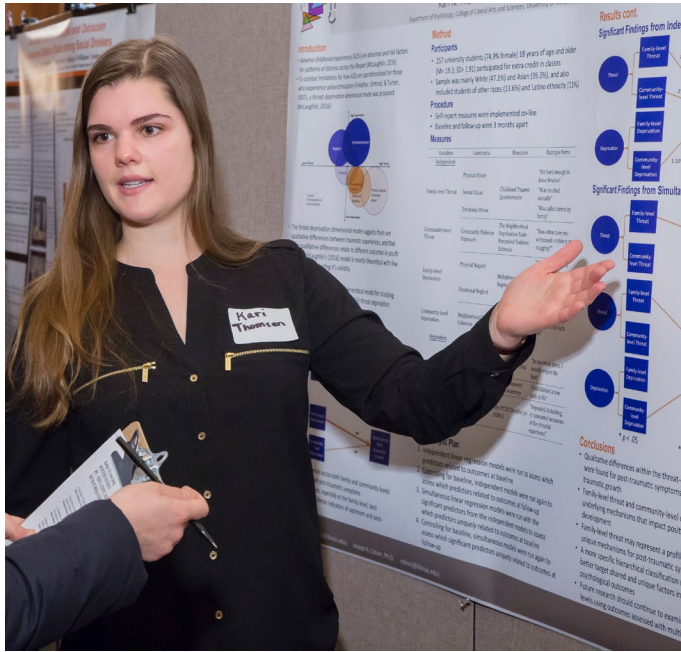
**Jan Uy**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Steven Blanke, Department of Microbiology)

*A New Delivery System for Biomacromolecules Delivery in Plant Cells*

**Nisheka Vanjani**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Quanbing Mou, Department of Chemistry)

*To Fission or Not to Fission? That is the Question During Helicobacter pylori Infection*

**Faisal Zaidi**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Ami Seeger, Department of Microbiology)



## Life: Plants and Animals 1

*Body Shape Diversity and Evolution of South American Catfishes of the Superfamily Aspredinoidea Using 2D and 3D Geometric Morphometrics*  
**Alexis Alvey**, Junior, Integrative Biology, LAS  
(Research Mentor: Milton Tan, Illinois Natural History Survey)

*Physiological Assessment of Non-Photochemical Quenching in Arabidopsis thaliana*  
**Meghan Blaszyński**, Junior, Integrative Biology, LAS  
(Research Mentor: Steven Burgess, Department of Plant Biology)

*Tomato Variety Influences Herbivore Induced Plant Volatiles*  
**Erinn Dady**, Senior, Earth, Society and Environmental Sustainability, LAS  
(Research Mentor: Esther Ngumbi, Department of Entomology)

*Identification of Fungi in Gorongosa National Park, Mozambique*  
**Grace Iovinelli**, Freshman, Integrative Biology, LAS  
(Research Mentor: Jason Karakehian, Department of Plant Biology)

*Incubation Activity, Water Drawdowns, and Predation Risk at Least Bittern (Ixobrychus exilis) Nests in Central Illinois*  
**Kellyn Johnson**, Sophomore, Earth, Society and Environmental Sustainability, LAS  
(Research Mentor: Stephanie Schmidt, Department of Natural Resources and Environmental Sciences)

*Relationship of Estrous Detection Patch Scores at Time of Estrous Synchronization and Artificial and Cow Body Condition Score, Days Postpartum, and Conception Rates*  
**Nicholas Kertz**, Senior, Animal Sciences, ACES  
(Research Mentor: Daniel Shike, Department of Animal Sciences)

*Analysis of High-Speed Video Footage*  
**Catherine Koterba**, Freshman, Undeclared, DGS  
(Research Mentor: Hannah Darcy, Department of Evolution, Ecology, and Behavior)

*Fungal Diversity of Gorongosa National Park, Mozambique*  
**Caden LaFond**, Junior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Jason Karakehian, Department of Plant Biology)

*Investigating the Role of the Serotonergic Nervous System in Heterodera Glycines Feeding Behavior*  
**Kanika Leang**, Sophomore, Biochemistry, LAS  
(Research Mentor: Nathan Schroeder, Department of Crop Sciences)

*An Investigation of Successional Responses to Eastern Hemlock Mortality Using Tree Core Data*  
**Katelyn McBride**, Senior, Integrative Biology, LAS  
(Research Mentor: Jennifer Fraterrigo, Department of Natural Resources and Environmental Sciences)

*Host-Symbiont Interactions Influence on Soybean Response to Acidic Soil pH*  
**Nevers Mushimata**, Senior, Molecular and Cellular Biology, LAS  
Julia Paoli, Senior, Marketing, BUS  
(Research Mentor: Katy Heath, Department of Plant Biology)

*Illinois Hemp Insect Pests*  
**Victoria Newman**, Senior, Crop Sciences, ACES  
(Research Mentor: Nick Seiter, Department of Crop Sciences)

*Pesticide-Virus Interactions in Honey Bees (Apis mellifera): Insights from a Novel Class of Insecticide (Butenolide)*  
**Vincent Prayugo**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Adam Dolezal, Department of Entomology)

*Analysis of How Mycorrhizal Fungi Impact Trees Based on Species*  
**Ebony Rankin**, Freshman, ACES Undeclared, ACES  
**Sydney Bell**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Joseph Edwards, Program in Ecology, Evolution and Conservation Biology)

*To Host or Not to Host: An Investigation on the Scent or Heat Preferences of the Amblyomma americanum and Dermacentor variabilis ticks*  
**Sarah Smail**, Freshman, Integrative Biology, LAS  
(Research Mentor: Erica Jean Hernandez, Department of Entomology)

*Effects of Centrifugation on Motility and Longevity of Equine Sperm*  
**Mikaila Smith**, Senior, Animal Sciences, ACES  
(Research Mentor: Kevin Kline, Department of Animal Sciences)

*Response Selectivity to Conspecific Songs in the Zebra Finch*  
**Katharine Stenstrom**, Senior, Integrative Biology, LAS  
(Research Mentor: Mark Hauber, Department of Evolution, Ecology, and Behavior)

*Salamander Bite Force in Response to Different Food*

**Jonathan Tinoco**, Senior, Integrative Biology, LAS  
(Research Mentor: Hannah Darcy, Department of Evolution, Ecology, and Behavior)

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*Does the Dilution Effect Operate in the Human Microbiome?: A Review of Microbial Diversity Studies and Human Health Outcomes*

**Fahren Zackery**, Senior, Integrative Biology, LAS  
(Research Mentor: Brian Allan, Department of Entomology)

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## Life: Plants and Animals 2

*Behavioral Responses to Nests and Eggs in Brood Parasitic and Parental Bird Species*

**Angela Alburei**, Senior, Integrative Biology, LAS  
(Research Mentor: Mark Hauber, Department of Evolution, Ecology, and Behavior)

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*Grisly Bears: Cannibalism and its Patterns in Bear Species*

**Emmarie Alexander**, Junior, Animal Sciences, ACES  
(Research Mentor: Maximilian Allen, Department of Natural Resources and Environmental Sciences)

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*Population Variation in Brain Size in Three-Spined Stickleback Fish*

**Eric Arredondo**, Junior, Integrative Biology, LAS  
(Research Mentor: Alison Bell, Department of Evolution, Ecology, and Behavior)

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*Sorghum Bicolor Induces a Rhizosphere Priming Effect in Soil from Zea Mays Fields*

**Iryna Blazhkevych**, Sophomore, Earth, Society and Environmental Sustainability, LAS  
(Research Mentor: Charles Hyde, Program in Ecology, Evolution and Conservation Biology)

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*To Cull or Not to Cull: Is Lyme Disease a Motivating Factor Behind White-Tailed Deer Population Control?*

**Anil Chakravorty**, Senior, Integrative Biology, LAS  
(Research Mentor: Brian Allan, Department of Entomology)

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*Genome Evolution and Comparative Synteny Between Ecologically Divergent Icefish Species*

**Shehani Gunawardena**, Senior, Integrative Biology, LAS  
(Research Mentor: Angel G. Rivera-Colón, Department of Evolution, Ecology, and Behavior)

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*An Investigation of Genetic Variants Involved in Fox Domestication*

**Miranda Hamilton**, Junior, Integrative Biology, LAS  
(Research Mentor: Anna Kukekova, Department of Animal Sciences)

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*Larval Survival Following Transgenesis in Amphiprion ocellaris*

**Emma Ibanez**, Sophomore, Molecular and Cellular Biology, LAS  
**Veronica Pronitcheva**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Justin Rhodes, Department of Psychology)

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*Investigating Ornate Box Turtle Emergence in Southern Illinois Prairies*

**Izabelle Jaquet**, Junior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Devin Edmonds, Department of Natural Resources and Environmental Sciences)

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*Effects of Mowing on Forage Availability and Quality During the Summer*

**Michelle Johnson**, Senior, Animal Sciences, ACES  
(Research Mentor: Daniel Shike, Animal Sciences)

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*Study of Aquarium Fish Response via Water Cortisol Levels*

**Rebecca Latham**, Junior, Animal Sciences, ACES  
(Research Mentor: John Bieber, Department of Natural Resources and Environmental Sciences)

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*Characterizing Variations of the DRD4 Gene of White-tailed Deer (Odocoileus virginianus)*

**Rachel Lupas**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Nohra Mateus-Pinilla, Illinois Natural History Survey)

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*Hatching Failure Dissected: Examining Factors that Lead to Embryonic Mortality Across Altricial Bird Species*

**Michael Miller**, Senior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Alex DiGiovanni, Department of Natural Resources and Environmental Sciences)

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*Above and Belowground Biomass of Sorghum Bicolor and its Relation to Exudate Output*

**Madison Stoltz**, Junior, Integrative Biology, LAS  
(Research Mentor: Charles Hyde, Program in Ecology, Evolution, and Conservation Biology)

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*Genomic Signatures of Domestication in the Red Fox (Vulpes Vulpes)*

**Anastasiya Sushkova**, Sophomore, Biochemistry, LAS  
(Research Mentor: Anna Kukekova, Department of Animal Sciences)

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*Differential Gene Expression of Daphnia dentifera in Response to a Fungal Pathogen*

**Emily Terrill**, Senior, Integrative Biology, LAS  
(Research Mentor: Carla Cáceres, Department of Evolution, Ecology, and Behavior)

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*Hybrid Algal-Carbonate Substrates for Enhanced Coral Reef Restoration*

**Haley Tholen**, Senior, Engineering Mechanics, ENG  
(Research Mentor: Amy Wagoner Johnson, Department of Mechanical Science and Engineering)

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*Chronic Wasting Disease in Fetal Spleens Tissues of White-tailed Deer (WTD)*

**YiYing Tung**, Junior, Natural Resources and Environmental Sciences, ACES  
(Research Mentor: Nohra Mateus-Pinilla, Illinois Natural History)

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## Media and Culture

*Friends, Follows, and Feelings: Diverse Online and Offline Social Interactions Predict Racial Empathy and White Guilt*

**Semira Abera**, Senior, Psychology, LAS

**Eleanor Humphreys**, Junior, Psychology, LAS

**Madeleine Fowler**, Senior, Psychology, LAS

**Yujia Bai**, Senior, Psychology, LAS

**Anna Wruck**, Senior, Psychology, LAS

(Research Mentor: Emily Blevins, Department of Psychology)

*An Analysis into How Authoritarian Regimes Build Popularity Through Social Media*

**William Bu**, Sophomore, Statistics and Computer Science, LAS

(Research Mentor: Lucie Lu, Department of Political Science)

*A Qualitative Analysis of the Media's Portrayal of Desalination*

**Toby George**, Freshman, Political Science, LAS

(Research Mentor: Brian O'Neill, Department of Sociology)

*Is "NewsNation" Really as Neutral as it Advertises?*

**Jackson Janes**, Sophomore, Journalism, COM

**Josie Alameda**, Sophomore, Journalism, COM

(Research Mentor: Mira Sotirovic, Department of Journalism)

*Studying the Potential Politicization of Public Health Crises in American News Media*

**Jefferson Mathews**, Sophomore, Statistics, LAS

**Maya Mosley**, Senior, Psychology, LAS

(Research Mentor: Jodi Schneider, School of Information Sciences)

*The Role of Transparency in Privacy Settings on User Brand Attitude*

**Annee Mattson**, Sophomore, Advertising, COM

(Research Mentor: Crystal Chen, Department of Advertising)

*Media and Celebrity Miscarriage*

**Ayesha Mehta**, Sophomore, Communication, LAS

(Research Mentor: Abbey Schneider, Department of Communication)

*Use of Facebook Groups in Illinois Local Politics*

**Claire O'Brien**, Junior, Journalism, COM

(Research Mentor: Emily Van Duyn, Department of Communication)

*The Study of Gen Z's Interaction with Social Commerce Advertisements*

**Grace Tessitore**, Junior, Advertising, COM

**Kenna Hansen**, Senior, Advertising, COM

**Evan Hawkins**, Senior, Advertising, COM

(Research Mentor: Michelle Nelson, Department of Advertising)

*Investigating the Influence of Parenting Styles on Children's Online Language Intensity in the Context of Celebrity Worship: Emotion Regulation as a Mediator*

**Sherry Zhang**, Junior, Media and Cinema Studies, COM

(Research Mentor: Chen Chen, Department of Communication)

## Numbers and Computation

*Charging Station Location Study to Support Electric Vehicle Evacuation Preparedness*

**Simon Balisi**, Junior, Industrial Engineering, ENG

(Research Mentor: Denissa Sari Darmawi Purba, Department of Civil and Environmental Engineering)

*Random Sums, Broken Sticks, and Intersecting Cylinders*

**Judy Chiang**, Sophomore, Mathematics, LAS

**Yifan Zhang**, Junior, Mathematics, LAS

**Wei Wang**, Sophomore, Mathematics, LAS

(Research Mentor: A J Hildebrand, Department of Mathematics)

*Homotopy, Modular Forms, and the Spectrum  $Q(l)$*

**Garrett Credi**, Freshman, Mathematics, LAS

**Xi Wang**, Senior, Mathematics, LAS

**Matthew Niemi**, Freshman, Mathematics, LAS

(Research Mentor: Vesna Stojanoska, Department of Mathematics)

*The Development of a Tool to Test Probabilistic Programming Models*

**Ankitha Damisetty**, Sophomore, Computer Science, ENG

**Sanjana Sarkar**, Sophomore, Computer Science, ENG

(Research Mentor: Saikat Dutta, Department of Computer Science)

*Anxiety Detection*

**Tongyun Huang**, Senior, Mathematics and Computer Science, LAS

**Ryu Okubo**, Junior, Computer Engineering, ENG

(Research Mentor: Abdul Alkurdi, Department of Mechanical Science and Engineering)

*Using MODFLOW Modeling to Investigate Unexplained Chloride Fluctuations in Will County's Shallow Dolomite Municipal Wells*

**Valerie Smykalov**, Sophomore, Geology, LAS

(Research Mentor: Cecilia Cullen, Illinois State Water Survey)

*Portable Power Monitor for Neural Networks on Mobile Devices*

**Victor Szabo**, Sophomore, Computer Science, ENG

(Research Mentor: Atul Sandur, Department of Computer Science)

*Theorem Proving in Lean*

**Kay Thompson**, Junior, Mathematics, LAS

**Tyler Behme**, Sophomore, Mathematics, LAS

**Andrew Yin**, Freshman, Mathematics, LAS

**Noble Wulffraat**, Junior, Mathematics and Computer Science, LAS

(Research Mentor: Philipp Hieronymi, Department of Mathematics)

*On Cyclic and Nontransitive Probabilities*

**Pavle Vuksanovic**, Sophomore, Mathematics, LAS

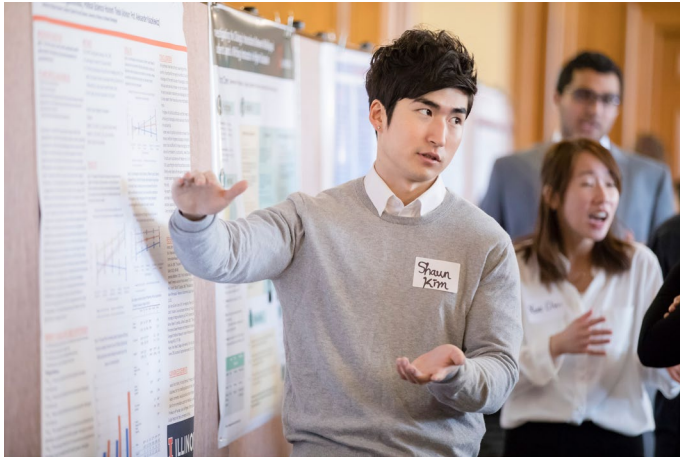
(Research Mentor: A J Hildebrand, Department of Mathematics)

*Random Strategies in the Iterated Prisoners Dilemma*

**Xiaorui Wang**, Senior, Econometrics and Quantitative Economics, LAS

(Research Mentor: A J Hildebrand, Department of Mathematics)





## Politics, Policy, and Society

*With Added Theory: A Contemporary Analysis of Political Thought*  
**Isaiah Adams**, Junior, Anthropology, LAS  
 (Research Mentor: Kristin Bail, Department of Political Science)

*Who Does the Rule of Law Rule Out? Examining Access to Justice for Victims in Post-Conflict Societies*  
**Jessica Angel**, Senior, Political Science, LAS  
 (Research Mentor: Jessica Alexandra Angel, Department of Political Science)

*Voices from the Bench: Evidence from Administrative Courts*  
**Reva Balakrishnan**, Freshman, Economics, LAS  
 (Research Mentor: Luzmarina Garcia, Department of Political Science)

*Exploring the Relationship Between Perceived Supports, Barriers, and Race in Bystander Intervention for Racial Microaggressions*  
**Lauren Batiste**, Junior, Statistics, LAS  
**Keziah Buabeng**, Senior, Agricultural and Consumer Economics, ACES  
 (Research Mentor: Andrea Kunze, Department of Educational Psychology)

*An Examination of Student-Athlete Identity Tensions and Administrative Policies*  
**Emma Eckenstein**, Junior, Communication, LAS  
**Sophia Mastroianni**, Senior, Communication, LAS  
 (Research Mentor: Luisa Ruge-Jones, Department of Communication)

*The Struggle for Liberation and Belonging of the Sahrawi Refugee Community in Tindouf, Algeria and the Role of the U.N.*  
**Victoria Esparza**, Senior, Political Science, LAS  
 (Research Mentor: Amanda Rector, Department of Spanish and Portuguese)

*Examining the Political Atmosphere of Sub-Saharan Discrimination Technology*  
**Kathleen Findlay**, Sophomore, Statistics, LAS  
 (Research Mentor: Tolgahan Dilgin, Department of Political Science)

*Operationalizing Discrimination Technology*  
**Miles Hayward**, Junior, Econometrics and Quantitative Economics, LAS  
 (Research Mentor: Tolgahan Dilgin, Department of Political Science)

*2020 Voting Behaviors: Did Racial Colorblindness and Authoritarian Views Matter*  
**Kolin Heck**, Senior, Psychology, LAS  
 (Research Mentor: Helen Neville, Department of Educational Psychology)

*Education and Racism in the United States: A Living History of African American Muslims' Experiences*  
**Neil Kasbekar**, Sophomore, Economics, LAS  
 (Research Mentor: Noor Doukma, Global Studies in Education)

*Foreign Policy Attitudes: Big Five Personality Traits and Risk Attitudes*  
**Ami Punatar**, Senior, Political Science, LAS  
 (Research Mentor: Aleksander Ksiazkiewicz, Department of Political Science)

*A Serious Leisure Perspective on the Role of Fandoms in the Creation of Community and Identity*  
**Kirin Schlabit**, Senior, Anthropology, LAS  
 (Research Mentor: Caitlin MacLennan Brooks, Department of Recreation, Sport and Tourism)

*Should Governments Subsidize or Mandate the Supply of Renewable Energy?*  
**Tyler Swanson**, Sophomore, Agricultural and Consumer Economics, ACES  
 (Research Mentor: Renata Endres, Department of Agricultural and Consumer Economics)

*The Effects of Racial Residential Segregation on Black Health*  
**Miciah Wilkerson**, Senior, Human Development and Family Studies, ACES  
 (Research Mentor: Anthony Sullers, Department of African American Studies)

*The Impact of International Aid on the Development of African Nations*  
**Bénédicte Yenyi Mulumba**, Senior, Journalism, COM  
 (Research Mentor: Yujeong Yang, Department of Political Science)

*Sexual and Gender Minority Populations' Housing Instability in Rural Areas and Health Outcomes*  
**Hanna You**, Senior, Human Development and Family Studies, ACES  
 (Research Mentor: Jasmine Routon, Department of Human Development and Family Studies)

*Comparing Multi-level Values and Behaviors of Stakeholders in Interior Alaska*  
**Genevieve Zilmer**, Senior, Integrative Biology, LAS  
 (Research Mentor: Carena van Riper, Department of Natural Resources and Environmental Sciences)

## Science and Technology

### *Fabrication of Voxelized Chiral Photonic Nanostructure*

**Liam Ackerman**, Senior, Electrical Engineering, ENG  
(Research Mentor: Lynford Goddard, Department of Electrical and Computer Engineering)

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### *Role of ORCA in Repressive Histone Methylation*

**Darya Asoudegi**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Supriya Prasanth, Department of Cell and Developmental Biology)

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### *The Sandusky Watershed and Phosphorous Pollution*

**Marisa Ban**, Freshman, Agricultural and Biological Engineering, ENG  
(Research Mentor: Kevin Wallington, Department of Civil and Environmental Engineering)

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### *The Effect of Time and Temperature On Solid-State Caramelization of Sucrose*

**Grace Boileau**, Sophomore, Food Science and Human Nutrition, ACES  
(Research Mentor: Shelly Schmidt, Department of Food Science and Human Nutrition)

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### *Can Robots Be the Future of Successful Aging for Older Adults? My Experience Working in the Human Factors and Aging Lab*

**Maxwell Chan**, Junior, Industrial Design, FAA  
(Research Mentor: Travis Kadylak, Human Factors & Aging Laboratory)

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### *Vibrational Analysis of Adsorbates Involved in CO<sub>2</sub> Reduction on Ag Nanoparticles*

**Maya Chatteraj**, Junior, Chemistry, LAS  
(Research Mentor: Prashant Jain, Department of Chemistry)

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### *Using a Rule-Based Model to Simulate Strand Escape from an [n]-Rung Ladder, Accounting for Diagonal Bond Formation and Rotation*

**Thomas Constertina**, Junior, Computer Science and Chemistry, LAS  
(Research Mentor: Morgan Cencer, Department of Chemistry)

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### *Analysis of Stallion Semen Longevity*

**Kelly Cook**, Senior, Animal Sciences, ACES  
(Research Mentor: Kevin Kline, Department of Animal Sciences)

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### *Nonlinear Wave Mixing in Phononic Materials with Periodic Rough Contacts*

**Songyuan Cui**, Junior, Mechanical Engineering, ENG  
(Research Mentor: Ganesh Patil, Department of Mechanical Science and Engineering)

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### *Studying Cloud Top Environmental Properties for Understanding Ice Processes*

**Vikram Dara**, Sophomore, Computer Science and Statistics, LAS  
(Research Mentor: Puja Roy, Department of Atmospheric Sciences)

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### *Characterizing Factors Controlling Flank Eruptions on Hawai'i's Mauna Loa-Kilauea Volcanic System*

**Brooke Dykstra**, Senior, Geology, LAS  
(Research Mentor: Patricia Gregg, Department of Geology & Robert Goldman, Department of Geology)

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### *Time-Course of Sex Change from Male to Female in Anemonefish*

**Abigail Histed**, Junior, Psychology, LAS  
**Sarah Craig**, Junior, Psychology, LAS  
(Research Mentor: Justin Rhodes, Department of Psychology)

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### *Reverse Engineering Hydraulic Modeling Visualization Tools by Implementing Delaunay Triangulation using Java*

**Brittany Ho**, Freshman, Undeclared, DGS  
(Research Mentor: Zhi Li, Department of Civil and Environmental Engineering)

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### *The Stability of Polymer Coated Quantum Dots*

**Jack Hovey**, Freshman, Chemical Engineering, LAS  
(Research Mentor: JuYeon Lee, Department of Chemistry)

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### *An Investigation of Ocular Epigenetic Alterations upon Corticosteroid Exposure*

**Vincent Lam**, Sophomore, Bioengineering, ENG  
(Research Mentor: Wenjie Liu, Department of Bioengineering)

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### *Exploring the Source of D-Serine in Caenorhabditis elegans: Optimization*

**Nissa Larson**, Senior, Agricultural and Biological Engineering, ENG  
(Research Mentor: Tian (Autumn) Qiu, Beckman Institute for Advanced Science and Technology)

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### *Multiscale-Modeling of Sterols in Membrane Environment*

**Andrew Lee**, Sophomore, Chemistry, LAS  
(Research Mentor: Taras Pogorelov, Department of Chemistry)

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### *Understanding the Older Adults' Consideration of Robot Appearance and Function*

**Jennifer Lee**, Senior, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Megan Bayles, Department of Kinesiology and Community Health)

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*Predicting the Stability of Inorganic Compounds via Computational and Numerical Methods*

**Josh Leeman**, Sophomore, Materials Science and Engineering, ENG  
(Research Mentor: Daniel Shoemaker, Department of Materials Science and Engineering)

*Exercise and Brain Interaction: Effects of Optogenetic Manipulation on Hippocampus*

**Shipping Li**, Senior, Psychology, LAS  
(Research Mentor: Justin Rhodes, Department of Psychology)

*Electrophysiological Analysis of Microglia and Neuron Co-Cultures*

**Jason Liu**, Junior, Molecular and Cellular Biology, LAS  
**Parker Meyer**, Junior, Molecular and Cellular Biology, LAS  
(Research Mentor: Karla Ramos-Cruz, Department of Bioengineering)

*Engineering Single Crystals to Exhibit Dichroism: Toward Next-Generation Polarizers*

**Rachel Liu**, Sophomore, Chemical Engineering, LAS  
(Research Mentor: Gonzalo Campillo-Alvarado, Department of Chemical and Biomolecular Engineering, Ying Diao, Department of Chemical and Biomolecular Engineering)

*Ion Transport and Viscoelasticity in Dynamic Network Electrolytes of Varying Linker Length*

**Patricia Mata**, Senior, Chemical Engineering, LAS  
(Research Mentor: Patricia Mata, Department of Materials Science and Engineering)

*Developing New Analytical Platforms for the Detection of Acetylcholine Using Nanoscale Interface Between Two Immiscible Electrolyte Solutions (nanoITIES) Electrodes*

**Conrad Milton**, Junior, Chemistry, LAS  
(Research Mentor: Mei Shen, Department of Chemistry)

*Computer Generated Music*

**Natalia Ozymko**, Senior, Computer Science, ENG  
(Research Mentor: Wade Fagen-Ulmschneider, Department of Computer Science)

*Phosphorus Pollution in Lake Erie*

**Anay Patel**, Freshman, Atmospheric Sciences, LAS  
(Research Mentor: Kevin Wallington, Department of Civil and Environmental Engineering)

*Development of Multimodal Imaging Agents for Early Diagnosis of Alzheimer's Disease*

**Shrey Patel**, Senior, Chemical Engineering, LAS  
(Research Mentor: Liviu Mirica, Department of Chemistry)

*Sub-Chronic Exposure to Di(2-ethylhexyl) Phthalate and Its Effects on the Colon of Adult Female Mice*

**Alyssa Ramir**, Senior, Animal Sciences, ACES  
(Research Mentor: Romana Nowak, Department of Animal Sciences)

*Investigations of All-Ferrous Oxidation State of Designed [4Fe-4S] Metalloenzymes and its Reactivity Towards CO<sub>2</sub> and CO*

**Haider Sarwar**, Senior, Biochemistry, LAS  
(Research Mentor: Yi Lu, Department of Chemistry)

*Molecular Interaction Networks Are Interdependent*

**Tyler Schwarz**, Junior, Biochemistry, LAS  
(Research Mentor: Tarun Mahajan, Department of Bioengineering)

*An Investigation on Meiotic Disruption in Female Oocytes by Iodoacetic Acid*

**Royal Shrestha**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Yiheng Ping, Department of Comparative Biosciences)

*Calcium Dynamics Between Cells with Different Retinal-Based Opsins*

**Brian Tibble**, Senior, Molecular and Cellular Biology, LAS  
(Research Mentor: Stephen Boppert, Department of Electrical and Computer Engineering)

*Interfacial Interactions of Additives for Cu Electrodeposition in the Absence of Cu Ions*

**Gabriella Zervakis**, Sophomore, Chemistry, LAS  
(Research Mentor: Christopher Bandas, Department of Chemistry)

## Social Science and Human Behavior 1

*An Updated Meta-Analysis - Men and Things, People and Women*

**Nadine Alkharat**, Senior, Psychology, LAS  
(Research Mentor: Daniel Newman, Department of Psychology, Anoop Javalagi, School of Labor and Employment Relations)

*Perceptions of Meditation Among Catholic Latinxs*

**Anya Bhagwakar**, Senior, Interdisciplinary Health Sciences, AHS  
(Research Mentor: Susan Aguiñaga, Department of Kinesiology and Community Health)

*Can Conversational Agents Teach Older Adults?*

**Isabella Feret**, Sophomore, Psychology, LAS  
**Saloni Sahni**, Sophomore, Information Sciences, SIS  
(Research Mentor: Dan Morrow, Department of Educational Psychology)

*A Longitudinal Investigation of Impulsivity and Drinking Behavior Associated with Sensitivity to the Emotional Rewards of Alcohol*

**Elizabeth Garrity**, Senior, Psychology, LAS  
(Research Mentor: Walter James Venerable III, Department of Psychology)

*Mission Possible: Exploring the Experiences of First Generation College Students from an Urban Community Participating in a Student Support Scholarship Program on a Predominately White Campus*

**Trey Harris**, Senior, Middle Grades Education, EDU  
**Jarissa Vega**, Senior, Psychology, LAS  
**Jose Vital Perez**, Senior, Advertising, COM  
**Kelin Mendoza**, Senior, Community Health, AHS  
(Research Mentor: Duwania Turner, Campus Center for Advising and Academic Services)

*Catholic Latina Mother's Perspectives of Adolescent Depression and Yoga*  
**Gabrielle Inawat**, Junior, Kinesiology, AHS  
(Research Mentor: Susan Aguinaga, Department of Kinesiology and Community Health)

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*An Exploration of Dating Violence Norms Among Early Adolescents*  
**Alexis Krones**, Junior, Social Work, SSW  
**Sarah Aronson**, Junior, Social Work, SSW  
**Amanda Yeazel**, Senior, Social Work, SSW  
(Research Mentor: Rachel Garthe, School of Social Work)

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*Semantic and Affective Spreading Activation, Speech Coherence and Psychometric Schizotypy*  
**Wen Li**, Senior, Psychology, LAS  
(Research Mentor: Howard Berenbaum, Department of Psychology)

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*Examining the Relationship Between Trust and Real-Time Response Latency in Radio-Telephone Mediated Communication of Multi-Team Systems (MTSs)*  
**Luyuyang Li**, Senior, Communication, LAS  
(Research Mentor: Luisa Ruge-Jones, Department of Communication)

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*Suicidal Ideation: A Systemic Review*  
**Neil Mueller**, Senior, Psychology, LAS  
(Research Mentor: Nidia Gracia-Ruedas, Department of Educational Psychology)

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*Childhood Trauma Stress-System Sensitization and Pregnancy*  
**Rosalie Ruhlmann**, Senior, Psychology, LAS  
(Research Mentor: Heidemarie Laurent, Department of Psychology)

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*A Meta-Analytic Review of the Big Five Personality Traits and Political Conservatism*  
**Jacob VanDeWoestyne**, Senior, Psychology, LAS  
(Research Mentor: Anoop Javalagi, School of Labor and Employment Relations)

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*Muslim Youth's Perspectives on Social Media and Activism*  
**Ruoqing Wang**, Sophomore, Digital Environments for Learning, Teaching, and Agency, EDU  
(Research Mentor: Noor Doukmak, Education Policy, Organization and Leadership)

---

*An Examination of Interdisciplinary Diversity and its Effect on Team Progress*  
**Allison Wasielewski**, Senior, Communication, LAS  
**Sirui Qiu**, Junior, Communication, LAS  
(Research Mentor: Luisa Ruge-Jones, Department of Communication)

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*Associations Between Parenting Practices and Acceptance of Dating Abuse Norms Among 7th Grade Students*  
**Amanda Yeazel**, Senior, Social Work, SSW  
**Alexis Krones**, Junior, Social Work, SSW  
**Sarah Aronson**, Junior, Social Work, SSW  
(Research Mentor: Rachel Garthe, School of Social Work)

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## Social Science and Human Behavior 2

*The Cultural Adaptation of the ASSIST Program for Latinx Families of Youth with Autism Spectrum Disorder*  
**Yarit Alcantara**, Senior, Linguistics, LAS  
(Research Mentor: Janeth Aleman Tovar, Department of Special Education)

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*Applying Posterior Probability Thresholds to Traditional Cranial Trait Sex Estimation Methods*  
**Tricia Avent**, Senior, Anthropology, LAS  
(Research Mentor: Cris Hughes, Department of Anthropology)

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*Children's Confidence in Their Thinking About Climate, Environment, and Weather*  
**Jenna Brody**, Junior, Social Work, SSW  
(Research Mentor: Ross Toedte, Department of Educational Psychology)

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*How Do I Do This ASDFJKL: an Investigation into the Syntax of Keysmashing*  
**Stephanie Chen**, Senior, Linguistics, LAS  
(Research Mentor: Jeffrey Green, Department of Linguistics)

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*Posters for Prevention: A Case Study of Chicago Public Schools' Mass Messaging Campaign Against Child Sexual Abuse*  
**Ella Dennis**, Freshman, Psychology, LAS  
(Research Mentor: Aggie Rieger, Department of Psychology)

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*A Meta-Analytic Review of Machiavellianism and Counterproductive Work Behaviors*  
**Kenna Ducoff**, Senior, Psychology, LAS  
(Research Mentor: Anoop Javalagi, School of Labor and Employment Relations)

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*Does Neuroticism Moderate the Association of Schizotypy and Negative Affect in Daily Life*  
**Laura Hernandez**, Senior, Psychology, LAS  
(Research Mentor: Thomas Kwapil, Department of Psychology)

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*I-Rural: Reimagining Illinois Rural Tourism*  
**Ke'Asia Keaton**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Caitlin Brooks, Department of Recreation, Sport and Tourism)

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*'Why do we love this team?' Motivations and Leisure Benefit of Spectatorship of Women Basketball for Older Women*  
**Jacob Li**, Junior, Econometrics and Quantitative Economics, LAS  
(Research Mentor: Xingxing Wu, Department of Recreation, Sport and Tourism)

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*Development and Investigation of a Novel Exercise Personality Questionnaire*  
**Erin Markowitz**, Sophomore, Molecular and Cellular Biology, LAS  
(Research Mentor: Allyson Box, Department of Kinesiology and Community Health)

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*The Association Between Early Traumatization and Psychopathic Traits*  
**Haley Paffumi**, Senior, Psychology, LAS  
(Research Mentor: Dolores Albarracin, Department of Psychology)

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*Cognitive Control in Persons with Mild Cognitive Impairment*  
**Holly Panfil**, Freshman, Speech and Hearing Science, AHS  
(Research Mentor: Raksha Mudar, Department of Speech and Hearing Science)

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*An Investigation into the Use of School Resource Officers*  
**Allie Pappas**, Freshman, Middle Grades Education, EDU  
(Research Mentor: Rebecca Hinze-Pifer, Department of Education)

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*How Navigation Information Affects Perceptions of Time and Space in Urban Environments*  
**Yinuo Peng**, Junior, Psychology, LAS  
**Edith Yao**, Sophomore, Statistics, LAS  
(Research Mentor: Emily Hutchinson, Department of Urban and Regional Planning)

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*The Effect of Group Membership on Praise*  
**Duoduo Qi**, Senior, Psychology, LAS  
(Research Mentor: Sean Laurent, Department of Psychology)

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*How Does Reading in One Language Affect Speaking in a Second Language? A Priming Study with Bilinguals*  
**Paulina Renteria**, Sophomore, Speech and Hearing Science, AHS  
(Research Mentor: Irati Hurtado, Department of Spanish and Portuguese)

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*Making Sense of Evidence in Meta-Analytic Studies on Psychotherapy Outcomes*  
**Latunde Sapara**, Senior, Psychology, LAS  
(Research Mentor: Jodi Schneider, School of Information Sciences)

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*Testing the Temporal Precedence of Family Functioning and Child Psychopathology*  
**Ashley Serina**, Senior, Psychology, LAS  
(Research Mentor: Daniel Briley, Department of Psychology)

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*The Mediation Effect of Resilience on the Link Between Explicit Emotional Regulation and Endorsed Trauma*  
**Roli Sharma**, Junior, Psychology, LAS  
(Research Mentor: Wendy Heller, Department of Psychology)

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*Cognitive Flexibility and Cued Task-Switching in Cognitively Healthy Young Adults*  
**Kelly Trevillian**, Junior, Speech and Hearing Science, AHS  
(Research Mentor: Raksha Mudar, Department of Speech and Hearing Science)

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*The Impact of Alcohol and Social Ostracism on Cognitive Performance in Group Settings*  
**Jiachen Yu**, Senior, Psychology, LAS  
(Research Mentor: Catharine Fairbairn, Department of Psychology)

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*Investigating How BDSM Practitioners Communicate Pain and Privacy Boundaries in Online Communities*  
**Yexin "Veronica" Zhu**, Senior, Communication, LAS  
(Research Mentor: Megan Farnworth, Department of Communication)

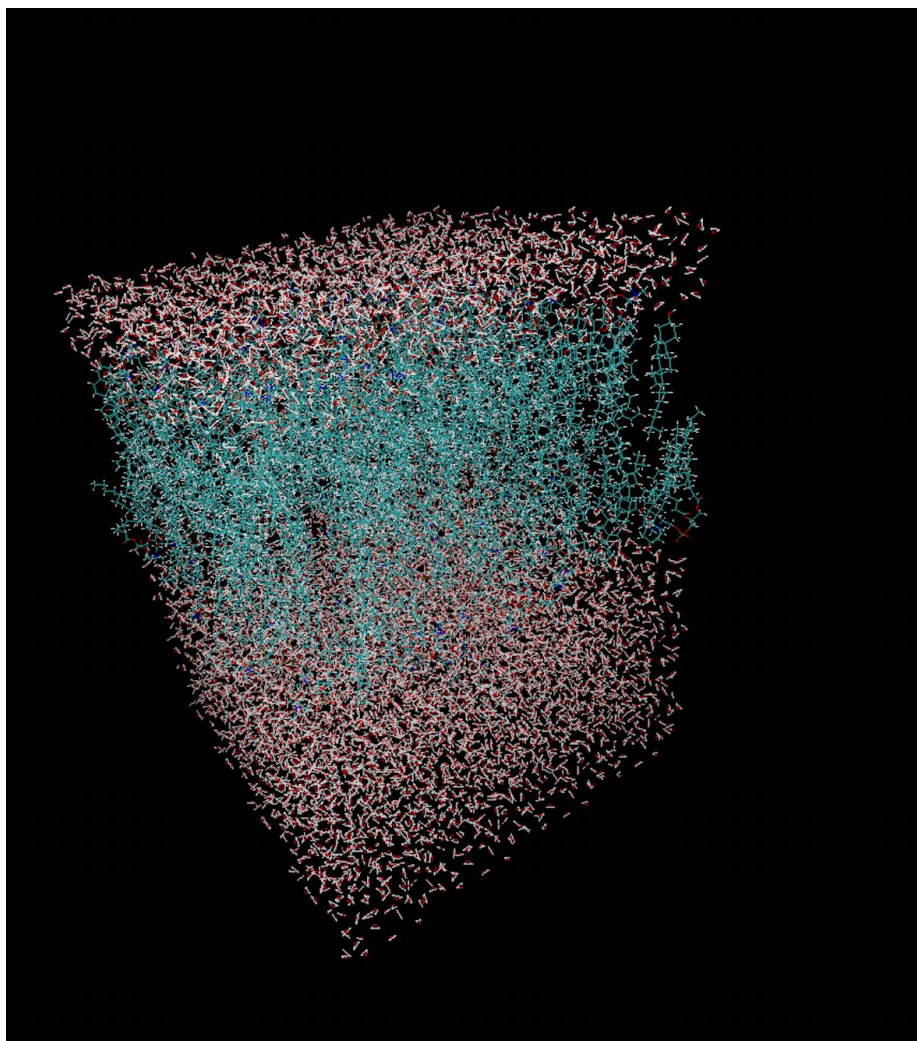
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# Image of Research Competition

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. 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.

To view past entries, please visit:

<https://publish.illinois.edu/imageofresearch/undergraduate-image-of-research/undergraduate-past-competitions/>



## One Kid, One Computer on the Shoulders of Illini Scientific Giants

**Juan David Campolargo**, Freshman,  
Systems & Industrial Engineering, ENG

We went from having four main “core elements” composed of earth, fire, water, and air to being able to describe the dynamics such as motion, interactions, speed of molecules with our fingers using a tool we called “computers.”

This picture isn’t just a bunch of atoms and molecules such as water, POPC, and others. Well, it is. Besides that, this picture represents the work of thousands researchers and scientists that came before me, and by using chemistry, biology, physics, and computer science allow an 18-year-old undergrad to engage in cutting-edge research, carrying the torch of scientific progress forward.

Let’s continue working on the shoulders of giants, especially giants from the University of Illinois at Urbana-Champaign who developed NAMD and VMD.

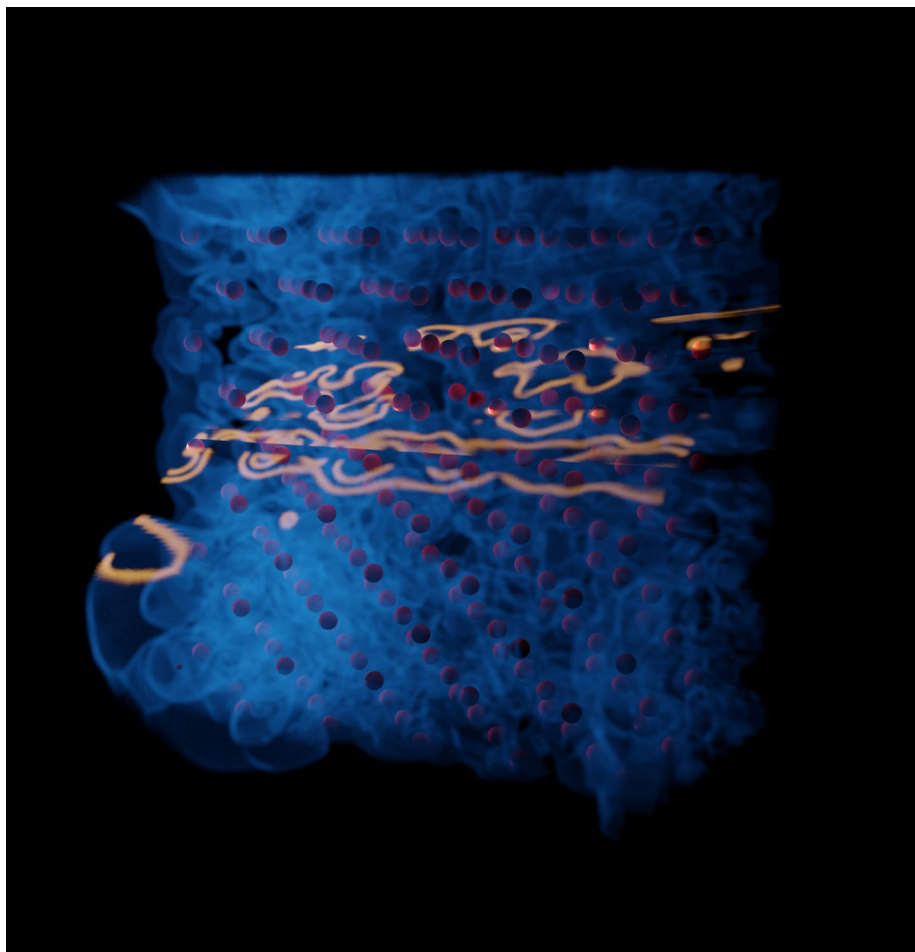
And that’s exciting!!

## Visualization of Isosurfaces of Electron Density

2<sup>nd</sup>  
PLACE

Zixuan Chen, Senior, Computer Science, ENG

I built this visualization of isosurfaces of electron density in Blender. The image is a snapshot of electron density that is ejected from a thin piece of aluminum after an energetic proton impacted the material. These processes happen in radiation environments, including nuclear reactors and outer space, but are also used in research labs to manipulate and characterize materials. From visualizations like this, we learn how the radiation affects the material and the time scales following ion impact.



## In Clenches

Isabel Hughes, Sophomore, Chemical Engineering, LAS

I am fabricating Platinum nanoelectrodes capable of detecting minuscule amounts of reactive oxygen species in cancer cells. The cutting edge aspect of my work is that I am working to be able to detect smaller amounts of these species than ever before by plating my electrodes with Prussian Blue complexes. This image depicts the cyclic voltammetry set up in a Faraday cage for plating my electrode with Prussian Blue and detecting the reactive species. Because this research has to do so much with cancer treatment, a disease that has evaded scientist's curing, the pictured alligator clips clench onto a potential cure.

## Active Feminization of the Brain in Anemonefish

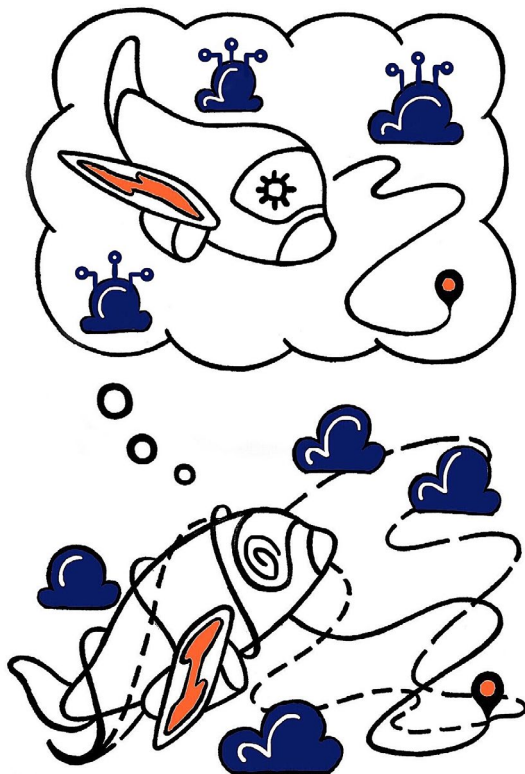


Veronica Pronitcheva, Junior, Molecular & Cellular Biology, LAS

Amphiprion ocellaris, also known as clownfish or anemonefish, live in small groups of 2-4 fish symbiotically in association with sea anemones on coral reefs of the Indo-Pacific. This image depicts a female clownfish emerging from an anemone within its blue-lighted coral reef tank. Clownfish are protandrous hermaphrodites meaning they start their lives off as male and then change sex into female, only if they achieve social dominance (alpha position) in the group.



During the feminization process, the brain changes first while the testes shrink away. Within the first few months, new neurons sprout up in an area of the brain that controls the gonads. Long before eggs develop, and the fish display female sex hormones, the fish behave as a female sometimes for years before they produce eggs. Anemonefish disrupt the traditional definition of sex, and provide a useful model for understanding how the female brain develops in absence of sex hormones.



## Penalized Information-Relaxation Bounds for Airline Recovery



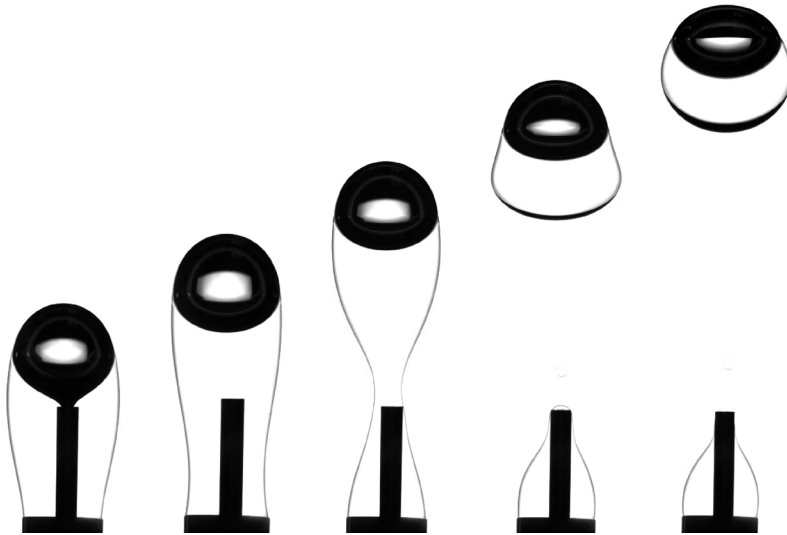
Bingyu Zhou, Junior, Industrial & Enterprise Systems Engineering, ENG

Large-scale airline recovery management is a near-real time dynamic programming problem that designed to manage the airline flight networks. Our research focus is on the algorithm improvement for the minimum cost route selection for airlines' disruption management. The image presented is an abstract artistic illustration on the research focus. The airplane's choice consists of many interconnected routes, but an algorithm needs to decide the optimal path with the help of data and computational technologies.

Another message behind this artistic illustration is that we, often faced with the inadequate information and numerous uncertainties during our research, and even in our life, need to find the optimal path to our own destination, hopefully with the help of these technology improvements.



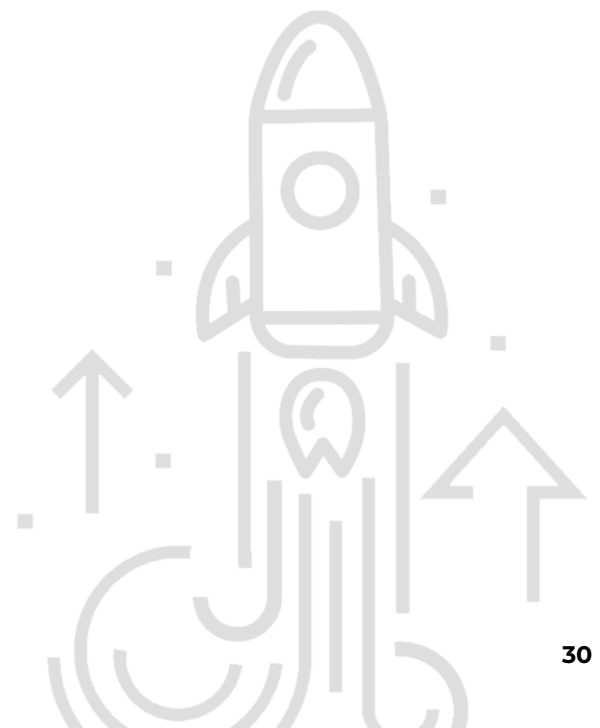
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## Compound Bubble Dynamics

Amrit Singh, Junior, Mechanical Engineering, ENG

Gas bubble dispersions in liquid media are ubiquitous in nature and industry. Often, such gas bubbles are enclosed within a layer of particulate matter or within a liquid that is different from the surrounding media, resulting in a three-phase compound bubble interface. Shown here is the underwater formation of a gas bubble within a droplet of silicone oil. This process, too quick and small to discern with the naked eye, is revealed through the wonders of high speed photography. Captured at 2000 frames per second, the bubble pinch-off dynamics can be carefully analyzed and quantified. Through our research, we hope to enrich the theory of compound bubble dynamics, resulting in better models that can be applied to a wide range of fields such as power generation or water desalination. So the next time you're sipping a glass of champagne or enjoying a foam bath, spare a thought for the humble bubble – there's much more going on than meets the eye!



# Celebrating our Student Scholars

The Office of Undergraduate Research (OUR) is committed to supporting Illinois undergraduates in all aspects of their research endeavors. Through Conference Travel Grants and Research Support Grants, OUR offers financial support to fund students' research and creative activities across all disciplines on campus. For more information on these grants and how they may support you during your research journey, please visit: <http://undergradresearch.illinois.edu/students/funding.html>

## Conference Travel Grant (CTG)

The Conference Travel Grant (CTG) provides undergraduate students with awards of up to \$350 to subsidize costs associated with presenting their research posters, papers, or creative works at in-person and virtual professional conferences. This year, we proudly supported 13 students in presentations of their scholarly and creative endeavors at a wide range of conferences.

**For more information, please visit:**

[http://go.illinois.edu/OUR\\_CTG](http://go.illinois.edu/OUR_CTG)

### FALL 2020 WINNERS:



*The Effects of Climate Change on Women's Security*  
**Sophie Luijten**, Junior, Global Studies, Spanish, LAS  
Research Mentor: Çağlayan Başer, Social Sciences Division at New York University Abu Dhabi



*Development of a Nitrox-Paraffin Hybrid Rocket Engine*  
**Vignesh Sella**, Senior, Aerospace Engineering, ENG  
Research Mentor: Michael Lembeck, Department of Aerospace Engineering (ENG)

## SPRING 2021 WINNERS:



*Friends, Follows, and Feelings: Diverse Online and Offline Social Interactions Predict Racial Empathy and White Guilt*  
**Semira Abera**, Senior, Psychology, LAS  
Research Mentor: Emily Blevins (Department of Psychology)



*Studying the Potential Politicization of Public Health Crises in American News Media*  
**Jefferson Mathews**, Sophomore, Department of Statistics, College of Liberal Arts & Sciences  
Research Mentor: Jodi Schneider (School of Information Sciences)



*Friends, Follows, and Feelings: Diverse Online and Offline Social Interactions Predict Racial Empathy and White Guilt*  
**Yujia (Grace) Bai**, Senior, Psychology and English, College of LAS  
Research Mentor: Emily Blevins (Department of Psychology)



*Studying the Potential Politicization of Public Health Crises in American News Media*  
**Maya Mosley**, Senior, Psychology, LAS  
Research Mentor: Jodi Schneider (School of Information Sciences)



*Current Situation and Defects of Mental Health Service for Student-athletes*  
**Rusi Dong**, Sophomore, Sociology, LAS  
Research mentor: Caitlin Vitosky Clarke (Department of Sociology)



*GCN in Text-Rich Network*  
**Xiangchen Song**, Senior, Mathematics & Computer Science, LAS  
Research Mentor: Jiawei Han (Department of Computer Science)



*Friends, Follows, and Feelings: Diverse Online and Offline Social Interactions Predict Racial Empathy and White Guilt*  
**Madeleine (Maddie) Fowler**, Senior, Psychology, LAS  
Research Mentor: Emily Blevins (Department of Psychology)



*SAIL-VOS 3D: A Synthetic Dataset and Baselines for Object Detection and 3D MeshReconstruction from Video Data*  
**Jiahong Wang**, Senior, Electrical and Computer Engineering, ENG  
Research Mentor: Alexander Schwing (Department of Electrical and Computer Engineering)



*Friends, Follows, and Feelings: Diverse Online and Offline Social Interactions Predict Racial Empathy and White Guilt*  
**Eleanor Humphreys**, Junior, Psychology, LAS  
Research Mentor: Emily Blevins (Department of Psychology)



*Friends, Follows, and Feelings: Diverse Online/Offline Social Interactions Predict Racial Empathy and White Guilt*  
**Anna Wruck**, Senior, Psychology, LAS  
Research Mentor: Nathan Todd (Department of Psychology)



*Small Talk in the Patient-primary Care Physician Context: A Systematic Review*  
**Alana Leonhard**, Junior, Communication, LAS  
Research Mentor: Lindsay Kelpinski (Department of Communication)

## Research Support Grant (RSG)

The Research Support Grant (RSG) provides students from all disciplines with the funds necessary to conduct research or creative projects during the academic year both on and off campus (including summer terms). Awards are issued up to \$2,000 and are meant to cover research travel costs, living expenses incurred during academic breaks, and materials or other ancillary costs. This past fall, we celebrate the 9 funded projects of students and give gratitude to those mentors that have supported this scholarly work.

For more information, please visit:

[http://go.illinois.edu/OUR\\_RSG](http://go.illinois.edu/OUR_RSG)

### FALL 2020 WINNERS:



*Simulation of Novel Transistors for Computing that can Operate under Extreme Temperature and Voltage*

**Sevan Brodjian**, Sophomore, Computer Engineering, ENG  
Research Mentor: Can Bayram (ENG)



*A DNA-break-repair-independent Homologous Pairing System Promoted by Matching Euchromatin Regions Along Homologous Chromosomes*

**Royal Shrestha**, Sophomore, Molecular and Cellular Biology (Honors), LAS  
Research Mentor: Yiheng Peng, Department of Comparative Biosciences (Vet Med)



*Heritage Spanish Speakers and Learners: Attitudes Towards Heritage Language Learning*

**Andrea Czart**, Sophomore, Global Studies & Spanish, LAS  
Research Mentor: Salvatore Callesano (LAS)



*Optogenetic Manipulations in Exercise Induced Brain Interactions*

**Sanjana Venkataraman**, Senior, Psychology, LAS  
Research Mentor: Justin Rhodes (LAS)



*3D Printing of Bio-Inspired Soft Actuators Based on UV Curable Inks for Subaquatic Propulsion*

**Jonghyun Hwang**, Senior, Mechanical Engineering, ENG  
Research Mentor: Girish Krishnan, Department of Industrial and Enterprise Systems Engineering (ENG)



*Residential Electric Vehicle Charging Patterns and their Management*

**Joe Ye**, Sophomore, Civil and Environmental Engineering, ENG  
Research Mentor: Eleftheria Kontou, Department of Civil and Environmental Engineering (ENG)



*Neurogenomic Mechanisms Underlying Tradeoffs Between Courtship and Aggression in Threespine Sticklebacks*

**Mira McLain**, Senior, Integrative Biology (Honors), LAS  
Research Mentor: Alison Bell (LAS)



*Seccomp eBPF Support in the Linux Kernel*

**YiFei Zhu**, Senior, Computer Engineering, ENG

Research Mentor: Tianyin Xu (ENG)



*Development of a Nitrox-Paraffin Hybrid Rocket Engine*

**Vignesh Sella**, Senior, Aerospace Engineering, ENG  
Research Mentor: Michael Lembeck, Department of Aerospace Engineering (ENG)

# Undergraduate Research Apprenticeship 2021 Cohort

The Undergraduate Research Apprenticeship Program (URAP@UI) offers undergraduate students with little or no research experience the opportunity to work with advanced graduate students on their research projects. Through a one-on-one research experience with their graduate student mentor and participation in GC295-Introduction to Research, undergraduate students have the opportunity to learn what it means to do research, create knowledge, and produce scholarship.

This year, we received a record number of applications with close to 400 students competing for 76 available spots in the program. Below we showcase and celebrate the 76 undergraduate scholars as well as their graduate student mentors and thank them for an outstanding semester.

**More information about URAP can be found at:**

<https://undergradresearch.illinois.edu/programs/urap.html>

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**Isaiah Adams**, Junior, Socio/Cultural Anthropology + Linguistics, LAS  
Research Mentor: Kristin Bail, Political Science

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**Jacob Albus**, Freshman, Statistics and Computer Science, LAS  
Research Mentor: Anastasia Olga Tzirides, Learning Design & Leadership

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**Yarit Alcantara**, Senior, Linguistics, LAS  
Research Mentor: Janeth Aleman-Tovar, Special Education

---

**Allison Antman**, Junior, Psychology and Spanish, LAS  
Research Mentor: Madhura Phansikar, Kinesiology

---

**Reva Balakrishnan**, Freshman, Economics, LAS  
Research Mentor: Luzmarina Garcia, Political Science

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**Simon Balisi**, Junior, Industrial Engineering, ENG  
Research Mentor: Denissa Sari Darmawi Purba, Civil & Environmental Engineering

---

**Marisa Ban**, Freshman, Agricultural and Biological Engineering, ENG  
Research Mentor: Kevin Wallington, Civil & Environmental Engineering

---

**Lauren Batiste**, Junior, Statistics and Spanish, LAS  
Research Mentor: Andrea Kunze, Educational Psychology

---

**Sydney Bell**, Sophomore, Molecular and Cellular Biology, Minor Spanish, LAS  
Research Mentor: Joseph Edwards, Ecology, Evolution, & Conservation Biology

---

**Iryna Blazhkevych**, Sophomore, Earth, Society, and Environmental Sustainability, LAS  
Research Mentor: Charles Hyde, Ecology, Evolution, & Conservation Biology

---

**Jenna Brody, Junior**, Social Work, SSW  
Research Mentor: Ross Toedte, Educational Psychology

---

**William Bu**, Sophomore, Statistics and Computer Science, LAS  
Research Mentor: Lucie Lu, Political Science

---

**Keziah Buabeng**, Senior, Agriculture and Consumer Economics, ACES  
Research Mentor: Andrea Kunze, Educational Psychology

---

**Juan David Campolargo**, Freshman, Systems and Industrial Engineering, ENG  
Research Mentor: Kevin Cheng, Biophysics & Quantitative Biology

---

**Sophie Casaburi**, Freshman, Urban Studies & Planning, Economics, FAA  
Research Mentor: Logan Middleton, English and Center for Writing Studies

---

**Lisa Chasanov**, Freshman, Spanish and Sociocultural & Linguistic Anthropology, LAS  
Research Mentor: Hanna Dahlstrom, Library & Information Science

---

**Nick Chomko**, Senior, Econometrics and History, LAS  
Research Mentor: Anthony B. Sullers Jr, EDU Policy, Organization & Leadership

---

**Ankitha Damisetty**, Sophomore, Computer Science, ENG  
Research Mentor: Saikat Dutta, Computer Science

---

**Vikram Dara**, Sophomore, Statistics & Computer Science, LAS  
Research Mentor: Puja Roy, Atmospheric Science

---

**Ella Dennis**, Freshman, Psychology and English, LAS  
Research Mentor: Agnes Rieger, Psychology

**Hrishikesh Deshmukh**, Sophomore, Computer Science, ENG  
Research Mentor: Tolgahan Dilgin, Political Science

---

**Victoria Esparza**, Senior, Spanish and Political Science, LAS  
Research Mentor: Amanda Rector, Spanish and Portuguese

---

**Yemariam Eyob**, Senior, Community Health, AHS  
Research Mentor: Fikriyah Winata, Geography & GIS

---

**Kathleen Findlay**, Sophomore, Statistics, Econometrics, LAS  
Research Mentor: Tolgahan Dilgin, Political Science

---

**Kailey Fox**, Sophomore, Psychology, LAS  
Research Mentor: Michelle Sands, Special EDU

---

**Toby George**, Freshman, Political Science, LAS  
Research Mentor: Brian F. O'Neill, Sociology

---

**Quinn Greven**, Sophomore, Chemistry, LAS  
Research Mentor: Mingfei Chen, Geology

---

**Jessica Guachichulca**, Junior, Interdisciplinary Health Sciences, AHS  
Research Mentor: Jacqueline Guzman, Kinesiology

---

**Ashna Gupta**, Sophomore, Economics, LAS  
Research Mentor: Luzmarina Garcia, Political Science

---

**Miles Hayward**, Junior, Econometrics & Quantitative Economics, LAS  
Research Mentor: Tolgahan Dilgin, Political Science

---

**Michael Herrada**, Sophomore, Human Nutrition, ACES  
Research Mentor: Raul Alfaro, Food Science and Human Nutrition

---

**Brittany Ho**, Freshman, Undeclared, DGS  
Research Mentor: Zhi Li, Civil & Environmental Engineering

---

**Jack Hovey**, Freshman, Chemical and Biomolecular Engineering, LAS  
Research Mentor: JuYeon Lee, Chemistry

---

**Husna Hussaini**, Freshman, Sociology, LAS  
Research Mentor: Raul Alfaro, Food Science and Human Nutrition

---

**Grace Iovinelli**, Freshman, Biology, LAS  
Research Mentor: Jason Karakehian, Plant Biology

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**Izabelle Jaquet**, Junior, Natural Resources & Environmental Science, ACES  
Research Mentor: Devin Edmonds, Natural Resources & Environmental Sciences

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**Kellyn Johnson**, Sophomore, Earth, Society & Environmental Sustainability, LAS  
Research Mentor: Stephanie Schmidt, Natural Resources & Environmental Sciences

---

**Neil Kasbekar**, Sophomore, Economics and Sociology, LAS  
Research Mentor: Noor Doukmaq, Global Studies in Education

---

**Ke'Asia Keaton**, Sophomore, Molecular and Cellular Biology, LAS  
Research Mentor: Caitlin Brooks, Recreation, Sport & Tourism

---

**Rosemary Komes**, Junior, Earth, Society, and Environmental Sustainability, LAS  
Research Mentor: Jennifer Zavaleta Cheek, Natural Resources & Environmental Sciences

---

**Catherine Koterba**, Freshman, Undecided: Pre-Health Track, DGS  
Research Mentor: Hannah Darcy, Evolution, Ecology, & Behavior

---

**Sarika Kumar**, Freshman, Biology, LAS  
Research Mentor: Jacqueline Guzman, Kinesiology

---

**Caden LaFond**, Junior, Natural Resource and Environmental Sciences, ACES  
Research Mentor: Jason Karakehian, Plant Biology

---

**Vincent Lam**, Sophomore, Bioengineering, ENG  
Research Mentor: Wenjie Liu, Bioengineering

---

**Zackary Landers**, Freshman, History, LAS  
Research Mentor: Amanda Rector, Spanish and Portuguese

---

**Amy Lee**, Sophomore, Bioengineering, ENG  
Research Mentor: Wenjie Liu, Bioengineering

---

**Jennifer Leon**, Junior, Media & Cinema Studies, COM  
Research Mentor: Megan Gargiulo, Spanish

---

**Melody Leung**, Sophomore, Psychology, LAS  
Research Mentor: Logan Middleton, English--Writing Studies

---

**Jacob Li**, Junior, Econometrics & Quantitative Economics, LAS  
Research Mentor: Xingxing Wu, Recreation, Sport & Tourism

---

**Bridget Marshall**, Sophomore, Special Education, EDU  
Research Mentor: Michelle Sands, Special Education

---

**Alexis Martinez**, Sophomore, History, Political Science, and Spanish, LAS  
Research Mentor: Megan Gargiulo, Spanish

---

**Ella Meyering**, Sophomore, Molecular & Cellular Biology and Psychology, LAS  
Research Mentor: Madhura Phansikar, Kinesiology

---

**Eric Nieto**, Freshman, Engineering Undeclared, ENG  
Research Mentor: Zhi Li, Civil & Environmental Engineering

---

**Anay Patel**, Freshman, Atmospheric Sciences, LAS  
Research Mentor: Kevin Wallington, Civil & Environmental Engineering

---

**Yinuo Peng**, Junior, Psychology, LAS  
Research Mentor: Emily Hutchinson, Urban & Regional Planning

---

**Diana Pham**, Sophomore, Mechanical Engineering, ENG  
Research Mentor: Tricia Thrasher, French

---

**Rui Qian**, Junior, Natural Resources & Environmental Sciences, ACES  
Research Mentor: Jennifer Zavaleta Cheek, Natural Resources & Environmental Sciences

---

**Ebony Rankin**, Freshman, ACES Undeclared, ACES  
Research Mentor: Joseph Edwards, Ecology, Evolution & Conservation Biology

---

**Paulina Renteria**, Sophomore, Speech and Hearing Science, AHS  
Research Mentor: Irati Hurtado, Spanish Linguistics

---

**Taylor Rossi**, Junior, Speech and Hearing Sciences, AHS  
Research Mentor: Anthony B. Sullers Jr, Education Policy, Organization & Leadership

---

**Savannah Sander**, Junior, Psychology, French, LAS  
Research Mentor: Tricia Thrasher, French

---

**Sanjana Sarkar**, Sophomore, Computer Science, ENG  
Research Mentor: Saikat Dutta, Computer Science

---

**Ingrid Schaller**, Freshman, Earth, Society & Environmental Sustainability, LAS  
Research Mentor: Jennifer Zavaleta Cheek, Natural Resources & Environmental Sciences

---

**Kirin Schlabitz**, Senior, Anthropology, LAS  
Research Mentor: Caitlin Brooks, Recreation, Sport & Tourism

---

**Tyler Schwarz**, Junior, Biochemistry, LAS  
Research Mentor: Tarun Mahajan, Bioengineering

---

**Madison Stoltz**, Junior, Integrative Biology, LAS  
Research Mentor: Charles Hyde, Ecology, Evolution & Conservation Biology

---

**Yani Su**, Senior, Learning and Education Studies, EDU  
Research Mentor: Anastasia Olga Tzirides, Learning Design & Leadership

---

**Victor Szabo**, Sophomore, Computer Science, ENG  
Research Mentor: Atul Sandur, Computer Science

---

**Jonathan Tinoco**, Senior, Integrative Biology, LAS  
Research Mentor: Hannah Darcy, Evolution, Ecology & Behavior

---

**Ruoqing Wang**, Sophomore, Learning and Education Studies, EDU  
Research Mentor: Noor Doukmak, Global Studies in Education

---

**Shulamit Wu**, Freshman, Political Science, LAS  
Research Mentor: Hanna Dahlstrom, Library & Information Science

---

**Edith Yao**, Sophomore, Statistics, LAS  
Research Mentor: Emily Hutchinson, Urban & Regional Planning

---

**Gabriella Zervakis**, Sophomore, Chemistry, LAS  
Research Mentor: Christopher Bandas, Chemistry

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**Siyao Zhang**, Junior, Community Health, AHS  
Research Mentor: Lila Cardell, Agricultural and Consumer Economics

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# Celebrating our Research Mentors

Good mentoring requires substantial support, time, and commitment. This year we invited the undergraduate presenters on our program to speak about their experiences with their research mentors. The following represents but a small showing of the overwhelming response we received, and we would like to further recognize and offer thanks to all those who mentor undergraduate researchers at Illinois.

“*Dr. Garthe, I cannot express how thankful I am for your overwhelming support, encouragement, and kindness throughout my research endeavors. My efforts would not have been possible without you!*”

**- Alexis Krones**  
(Junior, Social Work)

Research Mentor: Rachel Garthe, School of Social Work



“*Dr. Angrave, thank you so much for your support of this project this semester! Your feedback and sponsorship has meant the world to our team. A huge thank you to Colin Lualdi as well, for supporting us and helping us make essential connections for our app!*”

**- Mona Jawad**  
(Sophomore, Bioengineering)

Research Mentor: Lawrence Angrave, Department of Computer Science





“ Thank you, Professor Hildebrand! I really enjoyed our meaningful research process and learned a lot from it! Thank you so much for your support and inspiration throughout this project. You have guided me in our research every step along the way while providing invaluable insights and advice. In addition, thank you for all the help and advice that you provided throughout my whole senior year! ”

”

**- Xiaorui Wang**

(Senior, Econometrics and Quantitative Economics)

Research Mentor: A.J. Hildebrand, Department of Mathematics

“ Thank you Dr. Flaherty for the support you’ve given us in the creation of this project and the time you’ve taken to teach us about the research process! The skills and knowledge you’ve imparted on us have been invaluable and will continue to drive our passions forward throughout our careers. ”

”

**-Kelsey Libert**

(Junior, Speech and Hearing Science)

and **Lisa Lemajeur**

(Junior, Interdisciplinary Health Sciences)

Research Mentor: Mary M. Flaherty, Department of Speech and Hearing Science



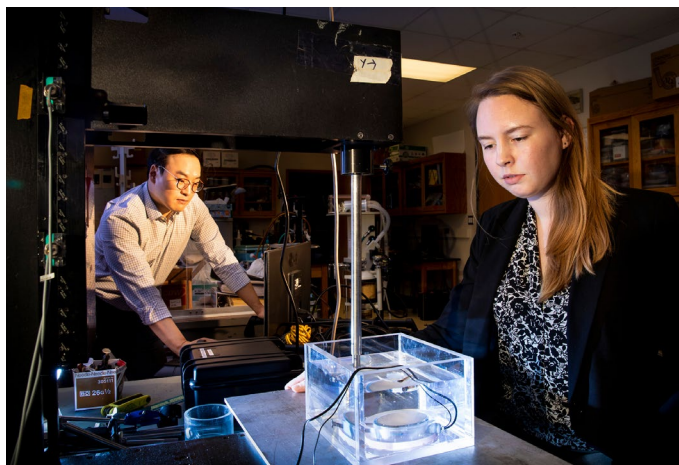
“ Alyssa, thank you so much for all your support through my time in college! Working with you has helped me learn and grow academically and has given me skills that I will use for the rest of my life! ”

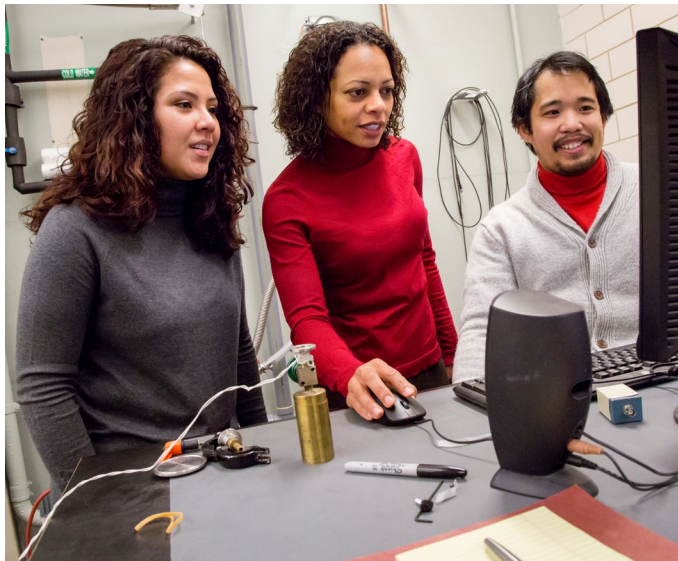
”

**-Caroline Egan**

(Junior, Human Development and Family Studies)

Research Mentor: Alyssa Billington, Department of Human Development and Family Studies





“ Thank you Allyson Box, Jonathan North, and Dr. Petruzzello for supporting me through the development of my symposium presentation, introducing me to the field of kinesiology, and inspiring me to continue to pursue research. ”

**- Erin Markowitz**  
(Sophomore, Molecular and Cellular Biology)

Research Mentor: Allyson Box, Department of Kinesiology and Community Health

“ Dear Aggie, I am so grateful for the guidance, unwavering support, and constant encouragement you have given me this past semester. Working with you has shown me how enjoyable and impactful research can be, and I am so excited to continue researching under your guidance in the future! ”

**- Ella Dennis**  
(Freshman, Psychology)

Research Mentor: Aggie Rieger, Department of Clinical-Community Psychology



“ Dr. Wisniewski, thank you for all your work in making me (and everyone you meet) a better writer, educator, researcher, and person. You're the best! ”

**- Kat Williams**  
(Junior, Media and Cinema Studies)

Research Mentor: Carolyn Wisniewski, Center for Writing Studies



# Supporting Undergraduate Research

The Office of Undergraduate Research is proud to collaborate with many offices that promote and support undergraduate research and scholarship at Illinois.

## National and International Scholarships

Every year, University of Illinois students successfully compete for prestigious national and international scholarships, supported and guided by the National and International Scholarships (NIS) Program. NIS aims to help high-achieving Illinois undergraduates and alumni prepare for these scholarships through valuable advising and feedback for applicants. Students should consider applying for one or more awards if you are dedicated to a mission or vocation, whether it is research, policy or service-based! If you are interested in pursuing such awards, NIS can help you unlock your potential and become a stronger candidate. Interested students—from freshmen to recent alumni—are encouraged to visit NIS to discuss these opportunities. For more information, please contact us!

The Office of Undergraduate Research applauds the work by NIS and proudly congratulates the following winners of these competitive scholarships.

### The Goldwater Scholarship

**Are you a STEM researcher?** The Barry M. Goldwater Scholarship recognizes students who demonstrate a strong commitment to a research career in math, science, or engineering. Successful applicants display intellectual curiosity and intensity and possess potential for significant future contributions in their chosen field. The Goldwater scholarship is for juniors or exceptional sophomores who are current U.S. citizens, U.S. nationals, or resident aliens. In addition to receiving one- or two-year \$7,500 awards, Goldwater scholars also become part of a prestigious and elite cohort. Applicants should be committed to pursuing a Ph.D. in the research fields of mathematics, sciences, or engineering.

**Deadline:** The campus deadline is November 29, 2021.  
For more information and support with applying, please contact NIS.

### RECENT WINNERS:



Sriyankari Chitti



William Lyon



Philip Kocheril

#### Website:

<https://topscholars.illinois.edu/>

#### Email:

[topscholars@illinois.edu](mailto:topscholars@illinois.edu)

#### Physical Location:

National & International Scholarships Program  
University of Illinois at Urbana-Champaign  
807 South Wright Street, 5th Floor  
MC-317  
Champaign, IL 61820

## The Udall Scholarship

**Are you a passionate environmentalist?** The Udall Scholarship awards \$7,000 to sophomores or juniors who are taking action to address environmental concerns and are committed to a career related to the environment. There are also awards for Native American students interested in Tribal policy or health care. The Udall scholarship honors the legacies of Morris Udall and Stewart Udall, whose careers had a significant impact on Native American self-governance, health care, and the stewardship of public lands and natural resources. Students must be U.S. citizens, U.S. nationals, or U.S. permanent residents. A successful applicant will have a GPA of 3.0 or higher and demonstrate leadership and a commitment to service.

**Deadline:** The campus deadline is February 3, 2022.  
For more information and support with applying, please contact NIS.

### RECENT WINNERS:



**Joseph Kreiling**



**Jonah Messinger**

## The Fulbright Scholarship

**Are you looking for an exciting way to spend a year abroad after you graduate?** The Fulbright U.S. Student Program awards approximately 2,200 full scholarships annually for U.S. citizen students and alumni to pursue an academic year experience in over 140 countries worldwide. Students and alumni may apply to pursue a research project or a graduate degree program abroad. In addition, applications may be submitted to spend one year as an English Teaching Assistant (ETA) in any of almost 80 countries. The University of Illinois has been recognized by The Chronicle of Higher Education as a Top Producing Institution of Fulbright student awards for 10 out of the past 11 years.

**Deadline:** The campus deadline is August 30, 2021.  
For more information and support with applying, please contact NIS.

### RECENT WINNERS:



**Aboorva  
Sivasankaran**



**Deniz Namik**



**Alicia Barbas**

## Schwarzman Scholars

**Are you aspiring to be a global leader in your field?** Schwarzman Scholars is a program for the next generation of young leaders, anchored in a fully-funded, 11-month Master's Degree in Global Affairs at Beijing's Tsinghua University. The experience encompasses amazing opportunities in and outside the classroom, including extensive leadership training, a network of senior mentors, optional internships, career development, and travel seminars around China. Schwarzman Scholars prepares young leaders for a world where China plays a vital role. Scholars learn from world-class faculty and guest speakers about the emergence of China as an economic and political force through a rigorous and dynamic core curriculum. Students and alumni of any citizenship are eligible, though deadlines differ for students holding passports from Greater China.

**Deadline:** The campus deadline is August 26, 2021.

## RECENT WINNERS:



**Katie Pollman**



## Writers Workshop

A research university is a writing university. The Writers Workshop provides support for all writers in the campus community—undergraduate and graduate students, post-doctorates, faculty, and staff—via writing consultations, writing groups and retreats, and webinars and presentations. By doing so, the Writers Workshop advances the mission of the University to create an inclusive learning environment that fosters students' abilities to achieve their academic, professional, and personal goals.

The Writers Workshop supports all forms of academic and professional writing, at any stage of the writing process. We provide feedback on essays, research papers, personal statements, cover letters, theses and dissertations, manuscripts for publication, presentations, digital compositions, and anything between and beyond.

**Find more information at:**

<https://writersworkshop.illinois.edu/>

## University Library

Librarians and staff provide innovative services, technology, collections, and environments to enhance collaboration and exploration; engage students in the inquiry process and educate them in their roles as content consumers and creators in the design, production, and delivery of content and media for research, discovery, and learning; and anticipate new and emerging needs to facilitate undergraduate student success.



# Supporting the Office of Undergraduate Research

## Invest in Scholars Today

Gifts of all sizes will help the Office of Undergraduate Research support the success of undergraduate students involved in research and creative activities at Illinois. All funds go directly to students through grants and awards.



**Donate Now:** Every dollar has a tremendous impact on the bright and talented undergraduate student researchers at the University of Illinois Urbana-Champaign. Consider making a one time or monthly recurring donation today.

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<http://undergradresearch.illinois.edu/giving>

# Thanks to Our Sponsors

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**Stevick Foundation**

This program may be obtained in alternative formats upon request. Please contact the Office of Undergraduate Research at [ugresearch@illinois.edu](mailto:ugresearch@illinois.edu), or at 217-300-5453



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