

2024

UNDERGRADUATE

RESEARCH &

ARTS

EXPOSITION

May 23, 2024

2024 Program Front Cover Design

By

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McCormick School of Engineering,
Class of 2027

The 2024 Undergraduate Research and Arts Exposition

Northwestern University's
twenty-fourth annual celebration of
undergraduate research and creativity

Wednesday May 23, 2024

Norris University Center and
Wirtz Black Box 101

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Program of Events

Wednesday May 23, 2024

- | | |
|----------------|--|
| 10:00-11:30 AM | Northwestern University Poster
Session One
Louis Room (205) |
| 10:30-12:00 PM | Northwestern University Oral Presentation
Session One
Lake Room (203), Arch Room (206),
Rock Room (207), Armadillo Room (208) |
| 12:30-2:00 PM | Northwestern University Oral Presentation
Session Two
Lake Room (203), Arch Room (206),
Rock Room (207), Armadillo Room (208) |
| 1:30-3:00 PM | Northwestern University Poster
Session Two
Louis Room (205) |
| 7:00-8:30 PM | Creative Arts Festival
Wirtz Black Box 101 |

Dear exposition attendees,

The 2024 Undergraduate Research and Arts Exposition is the culmination of a year of tremendous accomplishment for our students, and we are excited to resume the event in person this year, bringing researchers from across the University together to share and learn from each other.

This year's Expo is co-sponsored by the Office of Undergraduate Research (OUR) and the Northwestern Undergraduate Research Journal (NURJ), the only peer- and faculty-reviewed journal of undergraduate research at Northwestern. NURJ serves to introduce undergraduates to the review and publication processes that are so critical to the research world, and this partnership provides a valuable opportunity for the NURJ team and the research community to engage with one another.

A record number of student participants will be featured at this year's Expo, including the work of 42 students giving oral presentations, 168 students giving poster presentations and 17 students showcasing their work at the Creative Arts Festival. These presentations and performances cover the range of student experience at Northwestern, from the laboratory to the stage, and they include representatives from every undergraduate school, including the School of Professional Studies and NU-Qatar.

All of this work would not be possible without the dedicated support of faculty mentors, who provide the guidance and training necessary for students to develop as undergraduate

researchers. It is our goal that students – confident in their ability to acquire new knowledge and skills through a process of inquiry and discovery – will be more prepared for pursuing their aspirations, whether that be graduate school, industry, nonprofit work, artistic pursuits or entrepreneurship. It is this process that makes undergraduate research so impactful, and I am proud that Northwestern is a leader in this space.

I congratulate the students and faculty involved in the 2024 Undergraduate Research and Arts Exposition, and I hope you enjoy their work as much as I do.

Sincerely,

A handwritten signature in black ink, reading "Kathleen Hagerty". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Kathleen Hagerty
Provost and Professor

Abstract Guide

1. Scan the QR code to access the Abstract Guide
2. Abstracts are alphabetical by last name
3. Click "Download"



Guide to Oral Presentations

Oral Presentation Session One

10:30-12:00

New Biological Advancements

Lake Room (203)

Moderator: Thomas Meade, Chemistry Department

Elizabeth Campisi, *Optimizing Transepidermal Water Loss Collection and Molecular Analysis for Early Non-Invasive Skin Disease Detection*

Nicole Constante, *Investigating Mechanisms of Radioresistance in TYK2 Knockout Head and Neck Cancer Cells*

Min Kang and Anthea Luo, *Fat Regulation in Drosophila Melanogaster Fat Body*

Gia Karamchandani, *Disrupting Antibiotic Resistance: Harnessing Cobalt Schiff base complexes' Inhibitory Effects on NDM-1 to Restore Antibiotic Efficacy*

Amy Wang, *Uncovering Oncogenic Driver Mutations in Non-Hodgkin's Lymphoma*

Deep Engagements with Health and Well-Being

Arch Room (206)

Moderator: Adriana Weisleder, Communication Sciences & Disorders Department

Jennifer Baik, *The Acculturative Foodways and Gut Microbiomes of Korean Americans in the New York Metropolitan Area*

Aman Datta, *Self-Conceptualising Mental and Physical Health: A Comparative and Outcomes-based Analysis*

Elizabeth Dudley, *Complicating Cottagecore: Nostalgia, Imagination, and the Eighteenth Century*

Courtney Sindelar, *Pandemic Impacts on Parent-Child Relationships*

Jack Uhlman, *Federal Legalization of Sports Betting, Five Years Later - A Dangerous Wager?*

Perception and Perspective

Rock Room (207)

Moderator: Richard Ashley, Music Theory and Cognition Department

Veronika Izmaylova, *Irrational Beliefs: Cognitive Failure or a Rational Way of Navigating an Irrational World?*

Alex Arnold, *The Effect of Musical Tempo, Genre, and Mode on Narrative Listening*

Joy Chou, *Decoding K-Pop: A Computational Analysis of Musical Elements*

Maelea Tan, *Grief Unmasked*

Rosemary Sissel, *Evaluating the Effectiveness of Jewish Environmental Education*

Expanding Computational Innovations

Armadillo Room (208)

Moderator: Gerald Gabrielse, Physics and Astronomy Department

Ahmad Alhayek, *Designing a Novel Interactive RC Airplane Testbed for Aerospace Engineering Education*

Alex Gerber, *Investigating the Effects of Water and Crosslinking Content on the Mechanical Properties of Mussel Foot Protein 5*

Alyssa Matthews, *Acquiring Positrons for the Most Precise Test of Matter-Antimatter Asymmetry in Leptons*

William Pattie, *Adaptive Regression Trees: A Flexible Approach to Regression using Smooth Functions and Decision Trees*

Shilin Ray, *Machine Learning for Quantum Sensor Data Analysis in Dark Matter Search*

Oral Presentation Session Two

12:30- 2:00

Innovative Quantitative Explorations

Lake Room (203)

Moderator: Santiago Canez, Mathematics Department

Ashwat Dhamotharan, *Myoelectrical Estimation of the Ankle Joint Torque in Real-Time*

Jenna Kim, *Understanding Pretest Perceptions and Concept Retention Factors to Enhance Industrial Engineering Program Assessment*

Camille Kennedy, *Subsquares in Random Latin Squares and Rectangles*

Adam Leif, *Investigating N-Movement in English: Presence and Proposals*

Kayla Shen, *Increasing the Adaptive Potential of Corals to a Warmer Ocean*

Supporting Equity

Arch Room (206)

Moderator: Geraldo Cadava, History Department

Asiyah Arastu, *Representation of Muslims in Middle-grade and Young Adult Fiction*

Bryan Carcamo, *Undocumented Status as a Legally Produced Vulnerability to U.S. Racial Capitalism*

Maddie Kerr, *Constructing the Autistic-Transgender Intersection: A Critical Discourse Analysis*

Molly McCarthy, *Exploratory Analysis of Women's Reactions to Body Positive Affirmations*

Austin Segal, *"These Things Exist, Back to Talking About Hetero Relationships:" The Content, Style, and Organization of Gender and Sexual Identity in High-School Health Education*

Beyond Our Borders

Rock Room (207)

Moderator: Craig Duff, Medill School of Journalism

Sam Keimweiss, *Pain Without Gain: Intolerable Suffering and Physician Assisted Death*

Ishmael Nyame, *Brokers in Migration from Ghana to Qatar*

Gideon Pardo and Beckett Sands, *Math Education in Education in Rwanda*

Natalie Peterson, *How Often Do You Think About the Roman Empire? A Closer Look at the Lives of Romans We Should Think About More*

Camryn Tirico, *Sportswashing Revisited: An analysis of international relations principles in the cases of Qatari and Saudi Arabian investment in sport*

Understanding Identity Formation

Armadillo Room (208)

Moderator: Jolie Matthews, Learning Sciences Department

David Bogner, *Two Studies on Trait Mindfulness, Self-Compassion, and Affective Polarization*

Anna Chen, *Impact of Experiences at a Music Conservatory on Identity, Health and Social Relationships*

Lillian Fu, *Acceptance Takes Practice: Emotional Acceptance and Parasympathetic Activation in Older Adults*

Kristen Johnson, *Perceptions of Aging: Narrative Identity Across Gender, Race, and Time*

Yiyang Liu, *LGBTQIA+ Identity Exploration and Expression Through Self-Insert Fanfiction*

Guide to Poster Presentations

Poster Session One

10:00-11:30, Louis Room (205)

Arts & Humanities

Selina Liu, *Sunrise On Faraway Waters: A Transnational Activist Musical* [Poster 257]

Elyse Malamud, *"Its charity shall be as broad and expansive as the firmament of Heaven": How Chicago's First Jewish Hospital Transcended the Demarcations of Faith* [Poster 200]

Sofia Martinez, *Jammin', Jazz, and Jawaiian: "Black Music in Hawai'i"* [Poster 178]

Mia Rhee, *Beabadoobee and Artistic Expressions of Asian Identity* [Poster 548]

Natural Sciences & Engineering

Eduardo Andrade, *Forward Genetic Screen for a GABA Exporter in Bacillus Subtilis* [Poster 527]

Lily Browdy, *Oasis: Using a Dynamic Reward to Study Planning in Mice* [Poster 431/432]

Isabella Candal, *The Effects of Membrane Fluidity on Membrane Protein Folding* [Poster 521]

Anthony Chen, *Design and synthesis of a nitrogen-free spin-correlated radical pair* [Poster 266]

Joshua Chi, *The Oasis: a New Paradigm to Study Foraging Behavior* [Poster 431/432]

Aishani Das-Ghosh, *Determining Spatial Distribution and Thermal Properties of the Interstellar Medium in the Local Bubble* [Poster 245]

Justin Dynes, *Levetiracetam Decreases Amyloid-beta Production in Alzheimer's Disease* [Poster 552]

Samantha Foerster, *The role of cyclical voluntary exercise in an Alzheimer's disease mouse model* [Poster 575]

Emily Gal, *Autonomic Activity During Bladder Distension Task Predicts Development Of Menstrual Pain* [Poster 404]

Ariel Gordon, *Virtual reality training for improving older adults' long-term memory* [Poster 243]

Dylan Hakken, *Recombinant Production of Cyanophycin in E. Coli* [Poster 298]

Simon Hedin, *Synthesis and analysis of layered SiO₂/TiO₂ photocatalysts for hydrogen fuel release from common organic molecules* [Poster 333]

Wesley Ho, *Processing-Structure Relationships in Battery Coatings* [Poster 438]

Elijah Huang, *Characterizing variability in responses to acute intermittent hypoxia (AIH) using blood oxygen saturation time-series* [Poster 273]

David Jones, *Examining the Nesting Microclimate of Olive Ridley Sea Turtles.* [Poster 297]

Elizabeth Lakoma, *STAT3 Domains on STAT3-JAK2 Function* [Poster 448]

Aiden Linderman, *Synthesis and Modulation of a Double Network Hydrogel via Cell-Free Expression of the Protein APOL3* [Poster 488]

Christopher Luey, *Online Robotic Gait Learning using Generative AI* [Poster 579]

Shreya Mahesh, *Investigating mechanism and dosing of BACE1 inhibitors for the treatment of Alzheimer's disease* [Poster 258]

Gaby Min, *Investigating Neural Modulation in Essential Tremor Through Peripheral Electrical Stimulation* [Poster 510]

Felicia Mou, *Performance of Social LEAP Estimates Animal Poses (SLEAP) Improves with Visual Distinction Across Different Experimental Situations* [Poster 470]

Andrea Penrose, *Comparative Histological Analysis of the Ferret, Dog and Mouse Olfactory Systems* [Poster 596]

Sophia Pi, *The Propagation Puzzle: Unraveling Community Clusters in the Stochastic Block Model Network* [Poster 416]

Collin Porter, *Exploring high concentrations of bird collisions with windows on the Northwestern University campus* [Poster 455]

Eva Potjer, *JB13's Therapeutic Potential to Recover Plasticity and Normalize Brain Changes in Alzheimer's: Insights from ELISA Testing* [Poster 384]

Puja Pradhan, *TAMs and hypoxia enhance glioblastoma stem-like cell enrichment and may impact radioresistance* [Poster 272]

Angelina Shi, *Dilute Plasmonic Alloys for Photocatalytic CO Oxidation* [Poster 372]

Nicolas Stanciu, *Advancing ALS Research: Development and Analysis of a Novel Mouse Model for Studying TDP-43 Mislocalization* [Poster 239]

Cooper Stringer, *Tracking the aryl hydrocarbon receptor in skin's xenobiotic response and differentiation* [Poster 329]

Marilene van den Berg, *Evaluating regenerative dressings in a clinically relevant model* [Poster 465]

George Warfel, *A Closer Look At Coral Bleaching* [Poster 382]

Andrew Watson, *Microscopic Espionage: Investigating the Role of Bacterial Defense Systems Towards Prediction of Successful Phage Therapy* [Poster 492]

Rohan Wedam, *Exploring Lewis Acidity and pH dependence of Zirconium/Hafnium-based Metal-Organic Frameworks for Enhanced Nerve Agent Hydrolysis* [Poster 546]

Jaemin Yoo, *Hexagonal Boron Nitride Ionogels for Iontronics Applications* [Poster 237]

Helena Young, *Soft Stewart Platform: a Novel Device for Connecting Material Properties and Robot Learning* [Poster 405]

Jeffrey Yuan, *Advancing Scientific Replication with NexusGraph: A Novel NLP Approach* [Poster 357]

Michelle Zhang, *Swarm Robotics Simulator* [Poster 461]

Social Sciences & Journalism

Aparnaa Ananthakrishnan, *The Failures of Global Health Imagery: The Continuation of Colonialism in Global Health* [Poster 259]

Adrian Ayala-Perez, *Teacher Learning Communities: Its Impacts on Equitable Education* [Poster 175]

Daniela Barajas-Lee, *Investigating Individual Differences in Block Assembly Strategies* [Poster 427/460]

David Bogner, *Nothing is Fiction, Everything is Reality: Perspectives on Demons and Spirits in Tibetan Buddhism* [Poster 505]

Emma Chiu, *The Impacts of Teacher Turnover: A Comparative Study of Public and Charter Schools in Illinois* [Poster 507]

Betty Dong, *Social Influences on Coffee Consumption* [Poster 531]

Sean Dukes, *Motivations for Becoming Mothers or Remaining Childless: A Comparative Study of Black Mothers and Non-Mothers in Chicago* [Poster 300]

Talia Ginsberg, *Mapping water insecurity interventions to promote climate-resilient communities in Chicago* [Poster 430]

Nate Hanrahan, *Examining the Relationship between U.S. and Chinese-led Development Aid Commitments and International Political Alignment in Cameroon* [Poster 378]

Katie He, *Effects of Medicaid Coverage of GLP-1 Agonist Drugs on Measures of Racial Disparities* [Poster 487]

Nicole Hebert, *Balancing Act: Exploring the Influence of the Federal Work-Study Program's Impact on College Student Identity, Experience, and Self-Perception* [Poster 281]

Michelle Da-Hyun Hong, *Investigating the Relationship Between Personality Traits and Leadership Outcomes in College Students* [Poster 466]

Jamie Kim, *Who Do You Believe?: The Generalizability of Vested Interest Effects on Source Credibility* [Poster 242]

Anna Lansford, *The Birds, The Bees, and Bureaucracy: A Cross-National Analysis of Abortion Policy Determinants* [Poster 412]

Samson Mbogo, *Chinese Investments in Kenya: A Local Knowledge Perspective* [Poster 576]

Ayesha Mohammed, *Circumscribed Race, Space & Place: Transportation & Embodiment in Everyday Cuba* [Poster 177]

Eden Moore, *"They made it feel like anything was possible": Exploring the Impacts of High School Mentorship on Black Adolescent Girls in Undergrad* [Poster 341]

Melany Morales Ghinaglia, *Investigating the Effects of Phoneme Sensitive Period Timing on Language Learning* [Poster 194]

Jordan Muhammad, *The Power of Community Engagement: Investigating Mutual Aid Group Longevity* [Poster 255]

Ishmael Nyame Bonsu, *Exploring Identity and Affiliation: A Comparative Analysis of Inclusion Among International Students in the U.S. Branch Campuses in Education City, Qatar* [Poster 497]

Fai Pongpeth, *Investigating Individual Differences in Block Assembly Strategies* [Poster 427/460]

Nithan Rajappa, *The Music for Childhood Well-Being Initiative: A Group-Singing and Breathwork Intervention For Supporting Youth Well-Being Globally* [Poster 193]

Kate Rooney, *BDUs to Blazers: The Role of Identity and Interpersonal Relationships in the Transition to Civilian Life* [Poster 563]

Rj Schechner, *Behind the Swipe: Examining Decision Patterns with Transgender Profiles in Mock Online Dating Simulation* [Poster 565]

Shine Seon, *Exploring Activities* [Poster 352]

Leah Simon, *Analysis of Eye-Tracking Technology for Infant Cognition Research* [Poster 256]

Supraja Sudarsan, *Conflicts Arising from Autonomy in Space Teams* [Poster 529]

Sheena Tan, *What Is the Right Way to Talk? Using Master Narratives to Analyze Singaporean Parents' Experiences Speaking Singlish* [Poster 593]

Ashley Trattner, *Stress and Adolescent Identity Development* [Poster 202]

Anna Truong, *Exploring the Impact of Dating App Usage on Mental Health in Adolescents: A Focus on Sexual and Gender Minority Youth* [Poster 278]

Jillian Umstead, *Bisexual individuals comfortability with straight and gay potential romantic partners* [Poster 506]

Marissa Valdespino, *The Children's Depression Rating Scale (CDRS): Whether Subscales Track Nuances in Adolescent Depression* [Poster 401]

Brian Whetsell, *"I'm FGCS": Multivocal Idioms of Wellness, Distress, and Ambivalence Among First-Generation College Students (FGCS)* [Poster 454]

Addison Williams, *Examining the relation between infant irritability and language* [Poster 469]

Ty'shea Woods, *Stop Selling College as a White Dream to Black Bodies* [Poster 176]

Jinwen Wu, *Exploratory Machine Learning Analysis of the Determinants of Covid Cases, Mortality, and Implication for Effective Governance* [Poster 509]

Janie Xu, *Analyzing the Perception of Public School Resource Officers on Social Media* [Poster 530]

Erica Zhou, *Impacts of Pandemic Instruction Mode on High School Students' Education Outcomes: Evidence from U.S. States* [Poster 568]

Poster Session Two

1:30-3:00PM, Louis Room (205)

Arts & Humanities

Cydney Brown, *Poetry Creating a Pathway to the Past* [Poster 425]

Chloe Chow, *Depictions of Slavery in Macrobius' Saturnalia and Augustine's City of God* [Poster 253]

Audrey Clarendon, *Depersonalization/Derealization Disorder Captured Through Oil Painting* [Poster 410]

Nate Jayaram, *Watching a Disease: How Popular Narrative Media Has Addressed the Covid Pandemic* [Poster 517]

Gaby Nyambura, *The Latin Mass: Tradition, Family Values and Politics in American Catholicism* [Poster 513]

Ria Parker, *"A Butterfly Turns Orange": Depiction of Pediatric Multiple Sclerosis in Film and TV Without Ableism* [Poster 399]

Natural Sciences & Engineering

Jack Anderson, *Musculoskeletal Modeling of Locomotor Muscle Synergies in People Post-stroke* [Poster 123]

Franny Bengtson, *Assessing Biocide Efficacy in Inhibiting Growth and Reducing Viability of Microorganisms in Biodiesel* [Poster 320]

Ty Bennett, *Non-Traditional Recumbent Tricycle Steering* [Poster 446/540]

Nico Bers, *A Symphony of Binary Black Hole Collisions: Studying Cosmic Noon with Gravitational Wave Backgrounds* [Poster 413]

Lauren Bichelmeir, *Fostering AI Literacy Amongst Middle Schoolers through Unplugged Activities* [Poster 422]

Daniel Campos, *Testing the Feasibility of Using Acoustic Sensors for Bubble Detection for the Scintillating Bubble Chamber Experiment* [Poster 556]

Kate Carver, *Identifying Epigenetic Influences on Drug Response: MethQTL and eQTM Analyses in African American Hepatocytes* [Poster 503]

Eric Shang Nan Chen, *Simulation Study of Average Convergence Rates of Self Healing Distributed Optimization Algorithm* [Poster 554]

Rebecca Chen, *Investigating the Role of Oncometabolite L-2-hydroxyglutarate in the Chemoresistance of Glioblastoma Temozolomide Therapy* [Poster 394]

Lynna Deng, *Plastic Recycling with Bacteria at Scale: Dicarboxylic Acid Tolerance of Comamonas testosteroni KF-1* [Poster 227]

Juan Desmaras, *Developing Spherical Nucleic Acids as a Brain Cancer Therapeutic* [Poster 289]

Pranav Doradla, *High-Throughput Determination of Amino Acid Coupling in Protein Domains* [Poster 477]

Bela Filstrup, *Visualizing Warehouse Locations in CONUS to See Idling Effects from Heavy Duty Vehicles* [Poster 196]

Shayna Garla, *Regional and Basin-Specific Controls on Primary Productivity in a Suite of South Greenland Lakes* [Poster 274]

Maddie Haas, *Mechanisms of Steroid Receptor Coactivator Recruitment* [Poster 369]

Iva Hammitt-Kess, *Elucidating the Mechanism of Toll-Like Receptor 4 Signal Induction* [Poster 373]

Meghana Karan, *Assessment of phage susceptibility of CHG-resistant *Pseudomonas aeruginosa* from hospital ICUs* [Poster 294]

Sofie Kennedy, *Neurobiological Pathway Behind Motion Sickness in the Mouse Model* [Poster 489]

Nathan Kim, *The Role of Light in Sleep Health and Sleep Disparities* [Poster 381]

Uju Kim, *Encoding within an Abstract Dimension of the Hippocampus using a Mouse Model* [Poster 249]

Louis Lee, *Greening Pilsen: Mapping Native Plant Species for Equitable Biodiversity and Green Spaces* [Poster 368]

Taeyoung Lee, *Non-Traditional Recumbent Tricycle Steering* [Poster 446/540]

Emily Leibfritz, *Accurate and Sensitive LC-MS/MS Analysis of the Loading of the Anti-Inflammation Drugs Calcitriol and Calcifediol in High-Density Lipoprotein (HDL) and Poly(Lactic Acid-Co-Glycolic Acid) (PLGA) Nanoparticles* [Poster 247]

Olivia Li, *Single Shot Reinforcement Learning in Robotic Hardware* [Poster 424]

Ting Ting Li, *Cradle-to-Grave Life Cycle Assessment of Interventional Radiology MRI, Stereotactic, and Ultrasound Biopsy Kits* [Poster 340]

Yiyi (Grace) Liu, *Spectral Characteristics and Exciton Dynamics of Mixed-dimensional Organic/Inorganic Heterostructures* [Poster 370]

Shravya Pant, *How does the human ovarian microenvironment change after exposure to alkylating chemotherapy?* [Poster 331]

Armana Patel, *The Therapeutic Role of Annexin A6 in Alzheimer's Disease* [Poster 408]

Dhruv Patel, *Advancing Human Neuromuscular Junction Simulation with a Novel Soft Electronic Device* [Poster 218]

Krupal Patel, *Identification of Type 4 Secretion System Substrates in *S. maltophilia** [Poster 377]

Madison Polinski, *Sustainable Recovery of Critical Metals using Manganese Oxide Adsorbents* [Poster 433]

Dawson Ren, *Learning to Allocate Fairly* [Poster 523]

Marcos Rios, *Ain't Afraid of No Ghosts: Network Analysis and Equity Impacts of CTA Bus Service Disruption During Pandemic* [Poster 435]

Winnie Sung, *Design Optimization of Skin-Interfaced Humidity Sensors for Improved Stability and Accuracy in Skin Barrier Function Assessment* [Poster 564]

Matthew Thakur, *Innate Immune Mechanisms of Transfusion Alloimmunization* [Poster 421]

Danielle Toleno, *MrgprD-Expressing Neurons and Mast Cells in Type-2 Diabetic Wound Healing* [Poster 462]

Brock Tweedy, *Eye Regeneration in the Worm *Hofstenia miamia** [Poster 233]

Ritvik Viniak, *Development of a Novel Mouse AMD Model to Study Immune Cell Role in the Disease* [Poster 235]

Vincent Xiong, *Preparation and formulation of supramolecular calcitriol as wound-healing agents for skin and eyes.* [Poster 246]

Alex Yu, *Synthesis and Analysis of Drug-loaded Microspheres with cannabinoids for potential use in Uterine Fibroid Embolisation* [Poster 238]

Social Sciences & Journalism

Evie Berg, *All or Nothing: Exploring Asymmetric Information and Resource Sustainability* [Poster 265]

Alexandra Bomhorski, *Help Employees to Help Businesses* [Poster 180]

Haley Brown, *The Effects of Overconfidence on Academic Achievement* [Poster 355]

Jackson Buffonge, *The Relationship Between Identity and Psychopathology in Late Childhood and Early Adolescence* [Poster 418]

Evan Carman, *Rabbis and Rabble-'Rousers: A Comparative Analysis of Mid-to-Late-20th Century Jewish Activism in the US and South Africa* [Poster 260]

Timothy Chen, *Understanding the Role of Interpersonal mindfulness and Other Foundations of Healing in a Traditional Chinese Medicine encounter: A Qualitative Study* [Poster 161]

Hannah Christensen, *Sound Science: Investigating DPOAE Methodologies for Hearing Diagnostics* [Poster 208]

Winnie Chui, *The role of praise on children's exploratory behaviors during spatial activities.* [Poster 512]

Shanti Gallivan, *Following or Blocked: College Students' Perspectives and Utilization of Sexual Health Information Present on Social Media* [Poster 219]

Kaitlyn Hurka, *Tinkering here to there: Parent-child interactions and spatial conversation in home and museum settings* [Poster 434]

Emily Jiang, *Racial Disparities in San Francisco Arrest Dispositions* [Poster 495]

Sebastian Marmol Gaviria, *Kombilesa Palenque : African Legacy in Colombia* [Poster 288]

Claire Marrie, *The Impact of Stressful Life Events on Psychopathology: A Comparative Study of Clinical High-Risk for Psychosis and Major Depressive Disorder* [Poster 125]

Zidi Mu, *The Effects of Social Support and Self-Awareness on the Career Decision-Making Self-Efficacy of College Students* [Poster 514]

Averi Muniz, *Exploring the relationship between parasocial relationships and human perception of emotionally intelligent AI chatbots* [Poster 295]

Gulsimo Osimi, *Understanding Space Crew Interactions Through Modeling Dialogue as Networks* [Poster 597/675]

Gabriela Pesantez, *Representation in Voting: The Intersection of Descriptive and Substantive Representation from the Experiences of Black and Latine Communities* [Poster 179]

Arman Rahim, *Understanding Space Crew Interactions Through Modeling Dialogue as Networks* [Poster 597/675]

Shara Reimer, *Investigating the validity of automated language sample analysis as a predictor of narrative ability in individuals with co-occurring autism spectrum disorder and impairments in expressive language* [Poster 403]

Morgan Tinsley, *Examining the association between traditional working memory performance versus motor-involved working memory tasks in people at clinical high-risk for psychosis* [Poster 459]

Winnie Wang, *Me vs We: How Attachment Style Informs Optimal Distinctiveness in Relationships* [Poster 254]

Anna Wittcoff, *Innovating Alone, Together: The Impact of Innovation Incubators on Female Founders* [Poster 516]

Stephanie Wong, *Reward and Flow: The Link Between the Reward Prediction Error Model and Sustaining Flow States in a Perceptual-Motor Skill Learning Paradigm* [Poster 386]

Binhao Wu, *"What Makes Me an Ethnic-Racial In-group": Exploring the Content Underlying One's Ethnic-Racial Identity*
[Poster 117]

Yao Xiao, *Learning STEM From Analogies: Scaffolding as the Stepping Stone* [Poster 411]

Guide to The Creative Arts Festival

13th Annual Creative Arts Festival

Wirtz Center | Black Box 101
May 23, 2024 7:00 PM

Eli Civetta and Christina Warner – *Emcees*

Professional Jury

Maris O'Tierney, Poet-Musician

Mickie Pascal, Pascal-Rudnicke Casting

Jennifer Rudnicke, Pascal-Rudnicke Casting

Joey Slotnick, Actor

William Blake, Visual Artist

VISUAL ART

Alphabetical by last name

Audrey Clarendon *Depersonalization/Derealization
Disorder Captured Through Oil Painting
(Oil paintings)*

Zara Hasnani *Tradition: A Series (Oil paintings)*

**Matthias
Neumann** *Cut Our Tongues, We Use Our Teeth,
2024 (Linocut triptych)*

Carter Shannon *Fish of Lake Michigan (Pencil drawings)*

Ellie Siu *Mother and Child (Digital art)*

Maelea Tan *Grief Unmasked (Masks)*

PERFORMANCES

Devaki Jayal	<i>Heathland</i> (Fiction reading)
Adelina Marinello	<i>My Body Has a Mind of Its Own</i> (Staged reading)
Sebastian Marmol Gaviria	<i>Almost</i> (Short film)
Daniela Morales	<i>El Shomburg & Brenda</i> (Short film)
Cydney Brown	<i>Poetry Creating a Pathway to the Past</i> (Poetry reading)
Ria Parker	<i>A Butterfly Turns Orange</i> (Pilot script reading)
Isra Fejzullaj	<i>Memory Mosaic</i> (Documentary)
Dayeon Son	<i>War through the eyes of a boy</i> (Creative writing reading)
Mya Vandegrift	<i>Pythia: a new opera</i> (Opera)
Andre Visperas	<i>Questioning Adonis</i> (Short film)
Cecelia Olszewski	<i>Devoted (Excerpts)</i> (Filmed opera)

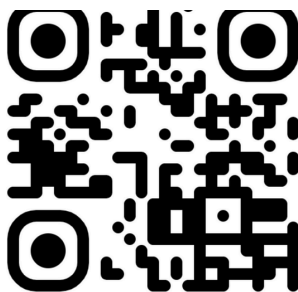
NURJ | Northwestern Undergraduate Research Journal



We are the Northwestern Undergraduate Research Journal. As the only peer- and faculty-reviewed journal of undergraduate research at Northwestern University, NURJ serves to introduce undergraduates to the review and publication processes indicative of the research world. It is an opportunity for students to engage with the research community and networks.

Aside from our yearly print editions, we have quarterly online editions, special editions, and unique collaborations like research conferences.

Scan to learn more!!



Undergraduate Research & Arts Exposition Judges

Katherine Amato	Anthropology
Mark Aparece	Chemistry
Jacqueline Ashley	Center for Leadership
Matt Bailey	Chemistry
Moya Bailey	Communication Studies
Connor Bain	Computer Science
Abigail Barefoot	Center for Legal Studies
Sai Praneet Batchu	Chemical and Biological Engineering
Veronica Berns	Chemistry
Neal Blair	Civil and Environmental Engineering/Earth and Planetary Sciences
Brianna Borger	Theatre
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