The 24th Annual UROP Undergraduate Research Symposium

Poster Presentations
11am to 1pm

October 22nd, 2021
GSU Metcalf Ballroom
Welcome to Boston University’s 24th Annual Undergraduate Research Symposium! We are honored to have you engage with our high-achieving students and supportive faculty mentors who have collaborated over the past year working on groundbreaking research.

The Undergraduate Research Opportunities Program (UROP) is a university-wide program that funds undergraduate students to conduct research with BU faculty members in all disciplines. UROP’s mission is to nurture curiosity, to capture imagination, and to cultivate relationships between faculty and students beyond the classroom to shape independent, innovative, and collaborative leaders.

Enjoy and be inspired!

John Celenza
Director
Melissa Johnson
Assistant Director
Diána Hughes
Program Administrator

Acknowledgments

UROP primarily is supported by Boston University’s Office of the Provost. We also thank our faculty advisory committee for their efforts in reviewing applications and guiding UROP to achieve its mission. Most importantly, we thank our faculty mentors for providing learning environments for our undergraduates and thus making UROP possible.

In addition, we thank the following financial sponsors for their generosity:
Funds from faculty research grants
Boston University Arts Initiative
National Science Foundation
Clare Boothe Luce Program of the Henry Luce Foundation
New England Biolabs
Friends & Family of Dr. Mark Riemen
Friends & Family of Dr. Mary Erskine
Dr. Loren E. Wold
Outstanding Students
Students who’ve excelled

Bella Faber Rico (‘23)
CAS Psychology; Anthropology

Jieyu Liu (‘22)
COM Public Relations; CAS Religion

Yulu Peng (‘23)
CAS Astronomy; Physics

Rakiya Washington (‘22)
CAS Psychology

Outstanding Mentors
Mentors who’ve inspired

Andreea Bujor
(MED Medicine)

Thomas Byrne
(SSW Social Work)

David Frankfurter
(CAS Religion)

Manher Jariwala
(CAS Physics)
Presentation Times

About half of the student researchers will be presenting in each poster session.

Poster Session 1
11am to 12pm

Poster Session 2
12pm to 1pm

Please limit your stay to 30 minutes!

Symposium Key

What do you want to learn?

- Biological Sciences (1 - 36)
- Physical Sciences (37 - 64)
- Social Sciences (65 - 116)
- Arts & Literature (117 - 146)
- Sargent College & Public Health (147 - 167)
- Medical - Basic, Clinical, & Dental Sciences (168 - 216)
- Computational & Mathematical Sciences (217 - 220)
- Engineering (221 - 265)
- Sanitizing Station
- Electronic Poster
Student Presenters

Alktaish, Ward (168)  
**Project Title:** Differential Effect of Antibiotics Induced OMV on Receptor Expression in Alveolar Macrophages  
**Faculty Mentor:** Yang Jin (MED Pulmonary)

Alvarado, Douglas (105)  
**Project Title:** An Investigation of Genetic Mechanisms Underlying Strategic Growth in the Clown Anemonefish Amphiprion percula  
**Faculty Mentor:** Peter Buston (CAS Biology)

Alvarado, Sophia (65)  
**Project Title:** Prosecuting White Power: How does White Identity Shape American Legal Institutions?  
**Faculty Mentor:** Jeremy Menchik (Frederick S. Pardee School of Global Studies)

Amato Bauer, Eva (66)  
**Project Title:** Student Perceptions of Safety on the Boston University Residential Campuses  
**Faculty Mentor:** Erika Wells (CAS Psychological & Brain Sciences)

Ausra, Nojus (169)  
**Project Title:** Investigating the Novel Molecular Regulators of Bacteria-Induced Inflammation and Sepsis in Mouse Alveolar Macrophages and Lung Epithelial Cells  
**Faculty Mentor:** Yang Jin (MED Medicine)

Ayre, Meghan (Electronic Poster)  
**Project Title:** The Costs of Extreme Weather Events on United States Military Installations  
**Faculty Mentor:** Rosella Cappella Zielinski (CAS Political Science)

Bacchus, Yeelin (170)  
**Project Title:** Implementation of CenteringParenting during the COVID-19 Pandemic  
**Faculty Mentor:** Renee Boynton-Jarrett (MED Pediatrics)

Bahlous-Boldi, Adam (221)  
**Project Title:** Measuring Lyman-Alpha Emissions with GISSMO  
**Faculty Mentor:** Brian Walsh (ENG Mechanical Engineering)

Bakre, Shirin (222)  
**Project Title:** Engineering Protein Signal Peptides for More Effective WNT Ligand Secretion from Endothelial Cells  
**Faculty Mentor:** Christopher Chen (ENG Biomedical Engineering)

Ballecer, Violette (37)  
**Project Title:** A Relation Between Local Forcing, Climate, and Biological Components of Carbon Uptake in an Urban Environment: A Case Study of Boston, Massachusetts  
**Faculty Mentor:** Robert Kaufmann (CAS Earth & Environment)
Barnes, Katie (Electronic Poster)
Project Title: Positivity For Which Bodies: Exploring Body Positivity and Fat Acceptance on TikTok
Faculty Mentor: Cati Connell (CAS Sociology)

Battcock-Emerson, Madelyn (2)
Project Title: Improving Camelina Sativa’s Anti-Herbivory Chemical Defense Repertoire by Introduction of the Arabidopsis Genes Known to Increase Glucosinolate Production
Faculty Mentor: John Celenza (CAS Biology)

Beatty, Charlotte (Electronic Poster)
Project Title: Throwing Out Tradition and Creating New Timelines: College Student Attitudes Towards Marriage and Family
Faculty Mentor: Nancy Smith-Hefner (CAS Anthropology)

Beaudry, Paige (38)
Project Title: Amine Functionalized Poly-Amidosaccharide-RNA Nanoparticle for RNA Interference Therapeutic Delivery
Faculty Mentor: Mark Grinstaff (CAS Chemistry)

Becerril, Carolina (147)
Project Title: Evaluation of the Influence of Social Media on College Students
Faculty Mentor: Paula Quatromoni (SAR Health Sciences)

Belcher, Hadwin (148)
Project Title: The Effect of Lateral Trunk Position and Hip Adduction on Frontal Plane Hip Moments
Faculty Mentor: Cara Lewis (SAR Rehabilitation Sciences)

Bender, Joshua (223)
Project Title: Modeling Elastogranular Interactions via Simulation
Faculty Mentor: Douglas Holmes (ENG Mechanical Engineering)

Berard, Brennon (39)
Project Title: RET-Mediated Signaling Dynamics and Cross-Talk in Differentiating NB4A3-GFRα3 Cells
Faculty Mentor: Adrian Whitty (CAS Chemistry)

Bernard, Michelle (171)
Project Title: Contribution of Mutations in SMAD6 to Risk of Craniosynostosis
Faculty Mentor: Shannon Fisher (MED Pharmacology & Experimental Therapeutics)

Berniac, Gabriela (224)
Project Title: Conditioning Neural Progenitor Cells for Transplantation into Injurious Environments in the Central Nervous System
Faculty Mentor: Timothy O’Shea (ENG Biomedical Engineering)

Bhargava, Kaveri (3)
Project Title: Exploring the Interplay Between Alternative Nearby Promoters
Faculty Mentor: Ana Fiszbein (CAS Biology)

Bolognino, John (Electronic Poster)
Project Title: Fisheye Re-ID: Reliably Counting People in Large Indoor Spaces
Faculty Mentor: Prakash Ishwar (ENG Electrical & Computer Engineering)
Bronson, Hayden (40)
Project Title: Search for Top-W Scattering in CMS
Faculty Mentor: Indara Suarez (CAS Physics)

Bruno, Beverly-Danielle (67)
Project Title: Does Bias among Medical Professionals Correlate with Black-White Disparities in Postpartum Depression and Mental Healthcare?
Faculty Mentor: Stephanie Currenton-Jolly (Wheelock Education Leadership & Policy Studies; Applied Human Development)

Campion, Mary (172)
Project Title: The Effect of Perinatal Choline Supplementation on the Cognitive Function and Amyloidosis in the APPNL-G-F Mouse Model of Alzheimer’s Disease
Faculty Mentor: Tiffany Mellott (MED Pathology)

Caplan, Sophie (225)
Project Title: Print Path Routine for Multimaterial 4D Printing Applications
Faculty Mentor: J. William Boley (ENG Mechanical Engineering)

Captan, Fiona (68)
Project Title: The Western Shoshone Radiation Poisoning and the Nevada National Security Site
Faculty Mentor: Jayita Sarkar (Frederick S. Pardee School of Global Studies)

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Project Title: Characterizing Differences in Children’s Executive Function for Forgiveness
Faculty Mentor: Peter Blake (CAS Psychological & Brain Sciences)

Chaharom, Caspian (41)
Project Title: Trigger Development on DarkQuest Experiment
Faculty Mentor: David Sperka (CAS Physics)

Challain, Julie (70)
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Faculty Mentor: Anthony Rosellini (CAS Psychological & Brain Sciences)

Chan, Nora (149)
Project Title: Investigating the Role of Soft Robotic Exosuits in Gait Training Post-Stroke: The Beginning Stages of a Parallel Group Randomized Controlled Trial
Faculty Mentor: Louis Awad (SAR Physical Therapy)

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Faculty Mentor: Mary Yang (CFA Graphic Design)

Charny, Kira (71)
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Faculty Mentor: Peter Blake (CAS Psychological & Brain Sciences)

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Project Title: Screening Compound Collections for Inhibitors of the KEAP1-Nrf2 Protein-Protein Interaction
Faculty Mentor: Adrian Whitty (CAS Chemistry)
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Project Title: Identification of Small Molecule Inhibitor IGGi-11 of GIV-Gai Interaction for Cancer-Associated Signaling Complex Targeting
Faculty Mentor: Mikel Garcia-Marcos (MED Biochemistry)

Chen, Roy (226)
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Faculty Mentor: Radhakrishna Sanka (ENG Computer Engineering)

Chen, Wanyi (118)
Project Title: Digital Humanities: The China Historical Christian Database
Faculty Mentor: Daryl Ireland (CAS History)

Chen, Yongting (174)
Project Title: LC-MS/MS Analysis of Glycans Derivatized with a Reducing-end Fixed Charge
Faculty Mentor: Chenglin (MED Biochemistry)

Cheng, Fangzhou (175)
Project Title: A Novel Oxalate-Curcumin-Based Imaging Probe: Enabling to Visualize Reactive Oxygen Species in Atherosclerosis
Faculty Mentor: Jingyan Han (MED Vascular Biology)

Cheng, Victoria (119)
Project Title: Mapping the History of Christianity in China from 1550-1950
Faculty Mentor: Eugenio Menegon (CAS History)

Chiulli, Nicole (72)
Project Title: Production of Central Tendency Effects in Interval Timing Tasks via Reinforcement Learning
Faculty Mentor: Ben Scott (CAS Psychological & Brain Sciences)

Chodes, Allison (73)
Project Title: Children’s Propensity for Generalizing (CPG)
Faculty Mentor: Kathleen Corriveau (Wheelock Applied Human Development)

Clark, Morgan (74)
Project Title: From the Net to the Met: Reducing the Barrier to Arts Engagement Through TikTok
Faculty Mentor: Jane Rayburn (COM Mass Communication, Advertising & Public Relations)

Clark, Quentin (227)
Project Title: High-throughput Finite Temperature Properties of 2D Materials from First Principles
Faculty Mentor: Sahar Sharifzadeh (ENG Electrical & Computer Engineering)

Cole, Rebecca (176)
Project Title: Oxycodone Behaviors in Cacna1h Knockout Mice
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Cordeiro Lopes, Elisa (228)
Project Title: Classifying States of Anesthesia in Mice using Electrical and Optical Activity
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**Project Title:** GDOC Freeze Frame Policies: Leaving Inmates Frozen in Time
**Faculty Mentor:** Heather Schoenfeld (CAS Sociology)

Dahlstrom, Maximillian (76)
**Project Title:** French Critical Appropriations of Nietzsche: Deleuze and Foucault
**Faculty Mentor:** Allen Speight (CAS Philosophy)

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**Project Title:** Non-Fullerene Acceptor Syntheses for Application in Organic Solar Cells
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**Project Title:** Perceptions of Academic Misconduct at Universities in the United States
**Faculty Mentor:** Andrea Mercurio (CAS Psychological & Brain Sciences)

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**Project Title:** Pedagogy in Practice: Exploring the Use of Pedagogy Course Knowledge by Learning Assistants
**Faculty Mentor:** Manher Jariwala (CAS Physics)

Del Deo, Luca (120)
**Project Title:** The Creation of Subconscious Agents as Religious Practice: Consideration of the Tulpamancy Case
**Faculty Mentor:** Deeana Klepper (CAS Religion and History)

deLange, Julie (150)
**Project Title:** Assessing heat exposure in Chelsea and East Boston through a summer field study: Boston University School of Public Health & GreenRoots, Inc., Chelsea, MA
**Faculty Mentor:** Madeleine Scammell (SPH Environmental Health)

Denker, Alexandra (121)
**Project Title:** Sexual Restriction in Religions of the Ancient Mediterranean
**Faculty Mentor:** David Frankfurter (CAS Religion)

Desai, Niharika (4)
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**Faculty Mentor:** Thomas Gilmore (CAS Biology)

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**Project Title:** Increasing the Throughput of an Autonomous Experimentation System for Mechanics
**Faculty Mentor:** Keith Brown (ENG Mechanical Engineering)

DiFillipo, Alexis (78)
**Project Title:** Disparities Amongst Popular Epidemiology Movements: How Power Structures Enforce Racism and Classism
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Dolynuk, Alexandra (230)
Project Title: Characterizing eLightOn for E. coli; a Single-Component, Highly Tunable, Optogenetic System
Faculty Mentor: Mary Dunlop (ENG Biomedical Engineering)

Dorst, William (177)
Project Title: Setting Up Studies of Flamenco Mutant Flies and P-element Transposition in S2 Cells
Faculty Mentor: Nelson Lau (MED Biochemistry)

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Project Title: Improving CT-based Lung Cancer Diagnosis Via In Silico Deformation Mapping Biophysical Characteristics of the Lungs
Faculty Mentor: Hadi Nia (ENG BME)

Duffy, Erin (79)
Project Title: How Does Parental Social Support Buffer Against Stress from COVID-19 to Promote Parent and Child Mental Health?
Faculty Mentor: Nicholas Wagner (CAS Psychological & Brain Sciences)

Dunn, Sierra (277)
Project Title: Transverse Modulational Dynamics of Patterns
Faculty Mentor: Ryan Goh (CAS Mathematics)

Edwards, Raphael (5)
Project Title: Northern Diamondback Terrapin Nesting Response to Climate Change in Buzzards Bay
Faculty Mentor: Peter Buston (CAS Marine Science)

Edwards, Thierry (6)
Project Title: Dissecting Protein Interactions with Multi-Domain Human Cofactors
Faculty Mentor: Trevor Siggers (CAS Biology)

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Project Title: Endothelial Scavenger Receptors in the Hematopoietic Niche
Faculty Mentor: Elliott Hagedorn (MED Medicine)

Faber-Rico, Bella (80)
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Faculty Mentor: Merav Shohet (CAS Anthropology)

Famin, Dina (122)
Project Title: The Development of the Artist in Franz Kafka’s Fiction
Faculty Mentor: Abigail Gillman (CAS World Languages & Literatures)

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Faculty Mentor: Linda Doerrer (CAS Chemistry)

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Faculty Mentor: Anita Patterson (CAS English)
Fayie, Soumaya (232)
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Faculty Mentor: Catherine Klapperich (ENG Biomedical Engineering)

Feng, Helen (7)
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Faculty Mentor: Ana Fiszbein (CAS Biology)

Filippova, Sofiya (233)
Project Title: Using Computational Modeling to Optimize Carbon Capture Systems
Faculty Mentor: Emily Ryan (ENG Mechanical Engineering)

Finn, Delaney (124)
Project Title: Trust in Music Education - Understanding How Trust is Facilitated in A Music Making Space While Dismantling Power Structures
Faculty Mentor: Karin Hendricks (CFA Music Education)

Foran, Christine (8)
Project Title: Genotyping and Investigating Immune Response of Aldolase B Deficient Mice
Faculty Mentor: Dean Tolan (CAS Biology)

Fraser, Kate (125)
Project Title: Listener Perception and Identification of Asian American Speech
Faculty Mentor: Charles Chang (CAS Linguistics)

Frias, Jodee (234)
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Faculty Mentor: Haiyan Gong (MED Ophthalmology)

Fulton, Samuel (46)
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Faculty Mentor: Sarah Davies (CAS Biology)

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Faculty Mentor: David Starobinski (ENG Electrical & Computer Engineering)

Garcia, David (180)
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Faculty Mentor: Vickery Trinkaus-Randall (MED Biochemistry)
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<td>The Racialized Dating Experiences of Asian, Black, and Latine Members of the LGBTQ Community</td>
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<td>Do Economic and Social Resources Buffer the Impact of Life Shocks on Housing Instability?</td>
<td>Thomas Byrne (SSW Social Work)</td>
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Faculty Mentor: John Snyder (CAS Chemistry)

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Project Title: Optimized Synthesis of an Air-Stable Fe(III) Fluorinated Hydroxide Alkoxide
Faculty Mentor: Linda Doerrer (CAS Chemistry)

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Faculty Mentor: Hui Feng (MED Pharmacology)

Ho, Isabella (15)
Project Title: Exploring Viral Mechanisms of Immune Evasion through Inhibiting Interferon Signaling
Faculty Mentor: Juan Fuxman Bass (CAS Biology)

Holbrook, Otto (16)
Project Title: Evaluation of Differential Expression between Endogenous Scabrous and the Scabrous 5-120 Mutant
Faculty Mentor: Kyle Gobrogge (CAS Biology)

Hoyt, Deidra (Electronic Poster)
Project Title: Moctezuma Xocoyotzin: The Benefits of Historical Fiction in Depicting the Indigenous Perspective of the Mexican Conquest
Faculty Mentor: Maria Datel (CAS Romance Languages)

Huang, Sarah (183)
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Faculty Mentor: Hui Feng (MED Pharmacology)

Hui, Veronica (235)
Project Title: Exploring the Role of Akt Isoforms on the Morphologic and Migratory Behavior of Breast Cancer Mutants
Faculty Mentor: Christopher Chen (ENG Biomedical Engineering)

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Project Title: A Statistical Study on Fast Plasma Streams in the Inner Magnetosphere
Faculty Mentor: Toshi Nishimura (ENG Electrical & Computer Engineering)

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Faculty Mentor: Laura Lowery (MED Hematology/Oncology)

Hwangpo, Diane (17)
Project Title: The Effect of Distorted Visual Cues on the Adaptive Size Modification of Clown Anemonefish (Amphiprion percula)
Faculty Mentor: Pete Buston (CAS Biology)
Jacimovic, Nadja  (50)
Project Title: How Students Learn and Prepare Effectively for Classroom Work in Chemistry: Assessing the Utility of Question-Embedded Videos  
Faculty Mentor: Binyomin Abrams (CAS Chemistry)

Jain, Arkash (Electronic Poster)
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Faculty Mentor: Lawrence Ziegler (CAS Chemistry)

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Project Title: Microfluidics Reimplemented  
Faculty Mentor: Radhakrishna Sanka (ENG Engineering)

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Kaufmann, Marine (84)
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Faculty Mentor: Sam Ling (CAS Psychological & Brain Sciences)

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Faculty Mentor: Jeffrey Gavornik (CAS Biology)

Kilcawley, Shana (152)
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Kim, Connor (186)
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Faculty Mentor: Vipul Chitalia (MED Medicine)

Kim, Dain (51)
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Faculty Mentor: Cedric Fichot (CAS Earth & Environment)
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Lee, Harin (241)
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**Faculty Mentor:** Kei Suzuki (MED Surgery)

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**Faculty Mentor:** Kelly Bylica (CFA Music Education)

Li, Brandon (191)
**Project Title:** Application of Telemedicine Consultations for Chronic Pulmonary Disease: A Scoping Review
**Faculty Mentor:** Seppo Rinne (MED Medicine, Pulmonology)

Li, Man (20)
**Project Title:** Temperature Regulation of Anti-herbivory Defense Compounds in Arabidopsis thaliana
**Faculty Mentor:** John Celenza (CAS Biology)

Li, Yuke (242)
**Project Title:** Screening of Genomic Loci in Natural Isolates of D. discoideum for Targeted Integration Sites
**Faculty Mentor:** Allyson Sgro (ENG Biomedical Engineering)

Liao, Sarah (153)
**Project Title:** Effect of Gradually Reduced Portion Size Estimation Training on Portion Size Estimation Accuracy and Plausibility of Reported Energy Intake from a Web-Based Food Diary
**Faculty Mentor:** Megan McCrory (SAR Health Sciences)

Lim, Zi Heng (243)
**Project Title:** Development of Fully Soft Robot Stabilization System for Minimal-invasive Intracardiac Surgery
**Faculty Mentor:** Tommaso Ranzani (ENG Mechanical Engineering)

Lin, Ben (192)
**Project Title:** Role of Neutrophil Elastase (NE) on Autophagy Activities in Mouse Livers
**Faculty Mentor:** Zhen Jiang (MED Pharmacology)

Lin, Mable (21)
**Project Title:** Studying Mouse Monocular Visual Cortex Potentiation with C-fos Immediate Early Gene Expression in Response to Monocular Visual Sequence Stimulation
**Faculty Mentor:** Jeff Gavornik (CAS Biology)
Liu, Amber (193)
Project Title: Characterizing the Role of Aortic Carboxypeptidase-like Protein in Connective Tissue Disease
Faculty Mentor: Matthew Layne (MED Biochemistry)

Liu, Jieyu (131)
Project Title: Comparing the Construction and Maintenance of Religious Worlds and Video Game Worlds
Faculty Mentor: April Hughes (CAS Religion)

Liu, Timothy (194)
Project Title: Use of Electron Microscopy to Characterize Aα-PrPC Assembly’s Structures
Faculty Mentor: David Harris (MED Biochemistry)

Lohse, Max (195)
Project Title: Creation of a Conditional hnRNPU1 Knock-out in Human Cell Culture Using CRISPR/Cas9
Faculty Mentor: Michael Blower (MED Biochemistry)

Love, Mattie (89)
Project Title: Using Automated Activity Monitoring to Detect Preference in Drosophila
Faculty Mentor: Kyle Gobrogge (CAS Neuroscience)

Lu, James (196)
Project Title: The Effect of the Hippo Pathway on Multiciliated Cells in the Airway Epithelium
Faculty Mentor: Xaralabos Varelas (MED Biochemistry)

Lu, Zhangchi (Electronic Poster)
Project Title: Automatic Inter-Person Distance Measurement using Overhead Fisheye Cameras
Faculty Mentor: Janusz Konrad (ENG Electrical & Computer Engineering)

MacVeagh, Lincoln (132)
Project Title: Constructing the Religious Other: Space and Spatial Practice in Medieval Christian-Muslim travel narratives
Faculty Mentor: Deeana Klepper (CAS History; Religion)

Madsen Hardy, Ione (154)
Project Title: Building Prosodic Proles for Pediatric Autism Spectrum Disorder and Developmental Language Disorder
Faculty Mentor: Jennifer Zuk (SAR Speech, Language, and Hearing Sciences)

Mahan, Lydia (155)
Project Title: Analysis of the Utilization of Intervention Foods as Nutritional Supplementation in the TB-LION Study
Faculty Mentor: Lindsey Locks (SAR Health Sciences)

Malekan, Deborah (156)
Project Title: Resistance to Frailty: Investigating Evidence of Osteoarthritis in a Mouse Model of Longevity
Faculty Mentor: LaDora Thompson (SAR Physical Therapy & Athletic Training)
Malkin, David (133)
Project Title: A Cultural History of the American Strip Mall
Faculty Mentor: Andrew Robichaud (CAS History)

Man, Alexi (90)
Project Title: Disciplinary Talk and Spatial Talk Analysis in Urban Head Start Preschool Classrooms
Faculty Mentor: Stephanie Currenton (Wheelock Education Leadership & Policy Studies; Applied Human Development)

Marrujo, Simone (22)
Project Title: Voltage-Gated Calcium and Potassium Channel Activity are Required for Normal Skeletal Patterning in Lytechinus variegatus
Faculty Mentor: Cynthia Bradham (CAS Biology)

Martin, Rachel (157)
Project Title: Racial Disparities in Child Exposure to Neighborhood Firearm Violence Before and During the COVID-19 Pandemic
Faculty Mentor: Jonathan Jay (SPH Community Health Sciences)

Martinez, Catalina (23)
Project Title: Localizing Muscarinic Receptors Involved in Sequence Learning in Mouse V1
Faculty Mentor: Jeffrey Gavornik (CAS Biology)

Mascarello, Alexandra (134)
Project Title: In Defense of the Humanities: A Play
Faculty Mentor: Kyna Hamill (CAS Core)

Mazumder, Miguel (197)
Project Title: Microbial and Somatic Mutation Biomarkers in Male Prostate Cancer Inflammation
Faculty Mentor: William Johnson (MED Medicine: Computational Biomedicine)

McCutcheon, Kelley (24)
Project Title: PFAS Compounds are Teratogenic in Sea Urchin Embryos
Faculty Mentor: Cynthia Bradham (CAS Biology)

McDonald, Riley (25)
Project Title: The Effect of 4-AP on Action Potential and Synaptic Potential in the Crayfish Neuromuscular Junction
Faculty Mentor: Jen Wei Lin (CAS Biology)

Meara, Grace (198)
Project Title: Exploring the Effect of a Chemokine on MYCN Amplification Neuroblastoma
Faculty Mentor: Hui Feng (MED Pharmacology & Experimental Therapeutics)

Medeiros, Gianna (199)
Project Title: Determining The Effects of Chronic Intermittent Alcohol Drinking on the Levels of the Neuropeptide PACAP in the BNST
Faculty Mentor: Valentina Sabino (MED Pharmacology)
Melsheimer, Trevor (244)
Project Title: Modeling the Effect of Pulse Plating Protocols on Dendrite Growth in Li Metal Batteries
Faculty Mentor: Emily Ryan (ENG Mechanical Engineering)

Menchaca, August (52)
Project Title: Surveying Past Participants to Assess the Long-Term Impact of Project Accelerate
Faculty Mentor: Andrew Duffy (CAS Physics)

Mikhail, Moriah (135)
Project Title: Gender and Nationalism in Palestinian Resistance Literature
Faculty Mentor: Margaret Litvin (CAS World Languages & Literatures)

Mikolaitis, Jayna (136)
Project Title: Weaving as Metaphor: An Arts Investigation of Female Labor, Memory Retention, and Storytelling through the Fiber Arts
Faculty Mentor: Felice Amato (CFA Art Education)

Milgrim, Kira (53)
Project Title: Seeing the Forest AND the Trees: Computer Vision and Machine Learning Applied to Unmanned Aerial Vehicle Imagery at Harvard Forest
Faculty Mentor: Mark Friedl (CAS Earth & Environment)

Miller, John (91)
Project Title: Understanding the Influence of the Gut Microbiome on Serotonin via the Gut-Brain Axis
Faculty Mentor: Kyle Gobrogge (CAS Neuroscience)

Minarik, Gillian (54)
Project Title: Toward Controllable and Scalable Synthesis of 2D Ni(OH)\textsubscript{2} with Large Domains via the Hydrothermal Method
Faculty Mentor: Xi Ling (CAS Chemistry)

Morrison, Cristina (92)
Project Title: Onwards and Underground: Nuclear Waste Storage and Community Consent at New Mexico’s Waste Isolation Pilot Plant (WIPP)
Faculty Mentor: Jayita Sarkar (Frederick S. Pardee School of Global Studies)

Mullens, Isabel (93)
Project Title: Supporting Students with Learning and Attention Issues During COVID-19: Insights from General Educators
Faculty Mentor: Jonathan Zaff (Wheelock Applied Human Development)

Munsiff, Leela (137)
Project Title: Multilingualism in Limol, Papua New Guinea
Faculty Mentor: Kate Lindsey (CAS Linguistics)

Murillo, Homar (200)
Project Title: Facilitators and Barriers of Youth Advisory Boards in Healthcare
Faculty Mentor: Astraea Augsberger (MED Clinical Practice)

Murray, Liam (245)
Project Title: Increasing 3DuF Microfluidics Design Potential
Faculty Mentor: Radhakrishna Sanka (ENG Electrical & Computer Engineering)
Negassa, Abgel (158)
**Project Title:** Building response capacity to extreme heat exposure in Chelsea and East Boston through Participatory Action Research  
**Faculty Mentor:** Madeleine Scammell (SPH Environmental Health)

Newell, Carly (26)  
**Project Title:** The Role of Nrp1 on Osteocyte Function  
**Faculty Mentor:** Paola Divieti Pajevic (SDM Biology)

Ngo, Julie (159)  
**Project Title:** Density of Inhibitory Populations of Neurons In First and High Order Thalamic Nuclei (LGN and MD) in Neurotypical Primate Brains  
**Faculty Mentor:** Basilis Zikopoulos (SAR Health Sciences)

Nguyen, Nicole (201)  
**Project Title:** Optimal Concentrations of Deoxycytidine Analog Decitabine that Maximize Fetal Hemoglobin Expression and Cell Vitality  
**Faculty Mentor:** Shuaiying Cui (MED Medicine)

Novakovic, Alexander (218)  
**Project Title:** A Topological and Non-Euclidean Dynamic Model of Biological Membranes and Viral Infection  
**Faculty Mentor:** Emma Previato (CAS Mathematics)

O’Brien, Annalie (160)  
**Project Title:** Designing, Pretesting and Finalizing of the REDCap Database for the A-PLUS Growth & Microbiome Study  
**Faculty Mentor:** Lindsey Locks (SAR Health Sciences)

Obenreder, Mackenzie (246)  
**Project Title:** How Obesity Affects Human Breast Cancer Cell Invasion and Escape in a 3D Microfluidic Model  
**Faculty Mentor:** Joe Tien (ENG Biomedical Engineering)

Olsen, Christopher (27)  
**Project Title:** KHK Inhibition as a Potential Therapeutic Target for Type 2 Diabetes Mellitus  
**Faculty Mentor:** Dean Tolan (CAS Biology)

Onipede, Yeshim (94)  
**Project Title:** Precommitment: Exploring the Effect of Volatility in a Decision Environment  
**Faculty Mentor:** Joseph McGuire (CAS Psychological & Brain Sciences)

Osipovich, Maria (138)  
**Project Title:** Abridged Versions of Don Quixote: A Study  
**Faculty Mentor:** James Iffland (CAS Romance studies)

Osman, Sarah (28)  
**Project Title:** The Effect of Tryptophan Metabolism Mutants on Gene Expression in Arabidopsis thaliana  
**Faculty Mentor:** John Celenza (CAS Biology)

Ostrovsky, Nicole (Electronic Poster)  
**Project Title:** Engineering Peptides and Peptidomimetics to Interfere at the SARS-CoV-2 Spike Protein-ACE2 Interface  
**Faculty Mentor:** Diane Joseph-McCarthy (ENG Biomedical Engineering)
Ouyang, Beining (247)
Project Title: Improving the user interface of 3DμF, an Interactive Design Environment for Continuous Flow Microfluidic Devices
Faculty Mentor: Radhakrishna Sanka (ENG Electrical & Computer Engineering)

Panchmatia, Ashna (202)
Project Title: The Efficiency of ERG in Lymphatic Endothelial Cells that Induces Lung and Heart Fibrosis
Faculty Mentor: Maria Trojanowska (MED Rheumatology)

Panetta, Eli (95)
Project Title: Uncertainty Effect in Evaluating Moral Decisions in a Foreign Language
Faculty Mentor: Catherine Caldwell-Harris (CAS Psychological & Brain Sciences)

Pang, Yanni (248)
Project Title: MicroFaaS: Bare Metal Serverless on Single-board Computers
Faculty Mentor: Ayse Coskun (ENG Electrical & Computer Engineering)

Paredes, Christian (161)
Project Title: “I wish I actually had known what the heck sex was:” A Mixed Methods Analysis of What Adolescent Sexual Minority Males Wish They Knew Prior to their Sexual Debut with a Male Partner
Faculty Mentor: Kimberly Nelson (SPH Community Health Sciences)

Park, Christopher (55)
Project Title: Expression and Purification of Proteins to Interact with the CIA targeting complex
Faculty Mentor: Deborah Perlstein (CAS Chemistry)

Park, Elaine (203)
Project Title: Reconstitution of RNAi in Zebrafish
Faculty Mentor: Daniel Cifuentes (MED Biochemistry)

Pascuccio, Krizia (96)
Project Title: Female Labor Participation, Crime Rates, and Entrepreneurship
Faculty Mentor: Rachel Brule (Frederick S. Pardee School of Global Studies)

Paul, Eleanor (204)
Project Title: The Interactions of Eukaryotic Translation Initiation Factor eIF5 with eIF1A and eIF2’s beta Subunit
Faculty Mentor: Assen Marintchev (MED Physiology & Biophysics)

Peart, Jada (29)
Project Title: Analysis of Gene Activation by a Protist Nuclear Factor αB (NF-αB) Transcription Factor
Faculty Mentor: Tom Gilmore (CAS Biology)

Peng, Yulu (Electronic Poster)
Project Title: Statistical Properties of Chorus-induced Electron Bursts with Butterfly Distributions Observed by Van Allen Probes
Faculty Mentor: Wen Li (CAS Astronomy)

Pfaff, Amelia (56)
Project Title: Understanding the Mechanism of NEMO Dimerization
Faculty Mentor: Adrian Whitty (CAS Chemistry)
Phillips, Jensine (97)
Project Title: How a Lesson on Earth's History Impacts Judgments about Environmental Transgressions
Faculty Mentor: Deborah Kelemen (CAS Psychological & Brain Sciences)

Phillips, Maxine (57)
Project Title: Continued Development of System Tests for the CMS Endcap Timing Layer Detector
Faculty Mentor: Indara Suarez (CAS Physics)

Pickering, Alexis (98)
Project Title: Developing Pedagogical Approaches for Facilitating Active Learning in Remote Engineering Laboratories
Faculty Mentor: Kathleen Corriveau (Wheelock Applied Human Development)

Pickering, Sydney (99)
Project Title: Gender and Professional Military Education (PME) in the United States: A Case Study of the Naval War College
Faculty Mentor: Sandra McEvoy (CAS Political Science)

Pinto, Felicia (249)
Project Title: The Role of Glutamine Supplementation in Protein Synthesis of Murine Tendon Explants
Faculty Mentor: Brianne Connizzo (ENG Biomedical Engineering)

Pintor-Hoffmann, Lucia (100)
Project Title: Qualitative Approach in Investigating Parental Autonomy Supportive Behavior and Child Engagement
Faculty Mentor: Kathleen Corriveau (Wheelock Applied Human Development)

Pollak, Benjamin (58)
Project Title: Optimization of Expression and Purification of Human Adenosine Kinase in BL21 E. coli for X-ray Crystallographic and Inhibition Studies with Keto-hexokinase Inhibitors
Faculty Mentor: Karen Allen (CAS Chemistry)

Pompa, Isabella (205)
Project Title: Plasma Exosomes Drive Prostate Cancer Progression in Men with Co-morbid Metabolic Disease
Faculty Mentor: Gerald Denis (MED Hematology/Oncology)

Prabhu, Meha (206)
Project Title: The Clinical Application of Digital Technology in Alzheimer’s Disease Dementia
Faculty Mentor: Rhoda Au (MED Anatomy & Neurobiology)

Price, Eliza (162)
Project Title: Registered Dietitian/Nutritionists (RDNs) in Intensive Outpatient Program (IOP) Treatment for Eating Disorders
Faculty Mentor: Paula Quatromoni (SAR Health Sciences)

Qi, Estelle (59)
Project Title: Structural Determination of Enzymes PglA and PglC from Campylobacter Concisus
Faculty Mentor: Karen Allen (CAS Chemistry)
Raiff, Laura (163)
**Project Title:** The Impact of Remote Communication on Relative Fundamental Frequency
**Faculty Mentor:** Cara Stepp (SAR Speech, Language, and Hearing Sciences)

Rajeh, Sahrah (30)
**Project Title:** Purification of Fructose 1,6-Bisphosphate Aldolase from Saccharomyces Cerevisiae for Use in an Assay to Measure Fructose 1-phosphate Levels In Vitro
**Faculty Mentor:** Dean Tolan (CAS Biology)

Rakoczzy, Maya (164)
**Project Title:** Density of Parvalbumin, Calbindin, and Calretinin Inhibitory Neurons in Subgenual Cingulate Area 25 of the Neurotypical Human
**Faculty Mentor:** Helen Barbas (SAR Health Sciences)

Reiter, Harrison (60)
**Project Title:** Sequence and Truncation Effects on the Population of Aggregation-Prone States on the Evolutionarily Conserved Lipid Scavenger Protein, Serum Amyloid A
**Faculty Mentor:** John Straub (CAS Chemistry)

Reynolds, Leanna (101)
**Project Title:** Strength of Aversive and Appetitive Associations and Maladaptive Behaviors
**Faculty Mentor:** Steve Ramirez (CAS Psychological & Brain Sciences)

Richter, Sarah (102)
**Project Title:** Hypergamy in America
**Faculty Mentor:** Erika Wells (CAS Psychological & Brain Sciences)

Riese, Gabrielle (Electronic Poster)
**Project Title:** Framing and its Uses in a Second Grade Science Investigation
**Faculty Mentor:** Eve Manz (Wheelock Science Education)

Roberts, James (Electronic Poster)
**Project Title:** Developing an Annotation Scheme for Referring Expressions
**Faculty Mentor:** Elizabeth Coppock (CAS Linguistics)

Rodriguez, Gisela (139)
**Project Title:** Puente: The Development of an International Latin American Theatre Conference.
**Faculty Mentor:** Kristin Leahy (CFA School of Theatre)

Rowe, Nicholas (140)
**Project Title:** Documenting and Illustrating New Findings on the Mughal Gardens of Kashmir, India
**Faculty Mentor:** Jan Haenraets (CAS Preservation Studies)

Ruan, Xiangzhe (250)
**Project Title:** 3DuF Feature and Algorithm Implementation
**Faculty Mentor:** Radhakrishna Sanka (ENG Electrical & Computer Engineering)

Russell, Kelsey (103)
**Project Title:** Women of Color Party Too
**Faculty Mentor:** Sadia Grundy (CAS Sociology)
Russo, Lily (104)
Project Title: Online Professional Development to Assess and Improve Teachers’ Comprehension of Natural Selection
Faculty Mentor: Deborah Kelemen (CAS Psychological & Brain Sciences)

Rustom, Faris (105)
Project Title: Applying Animal Camouflage Training to Enhance Neural Network Detection of Brain Tumors from Imaging Data
Faculty Mentor: Arash Yazdanbakhsh (CAS Neuroscience)

Saab, Anthony (251)
Project Title: Improvement of the Power Supply unit for Electrodynamic Screen (EDS) film and Development of Electric Field Monitoring Methods for monitoring the EDS film’s Performance for Self-cleaning Solar Panels
Faculty Mentor: Malay Mazumder (ENG Electrical and Computer Engineering)

Sadler, Justin (252)
Project Title: Pythia: An Automated, Cross-Layer Instrumentation Framework for Diagnosing Performance Problems in Distributed Application
Faculty Mentor: Ayse Coskun (ENG Electrical & Computer Engineering)

Salame, Cedric (61)
Project Title: Molecular Simulation of Ionic Liquids: From Molecular Interactions to Transport Properties
Faculty Mentor: David Coker (CAS Chemistry)

Santos, Ana (106)
Project Title: Working Conditions and Instructional Decision Making in Classrooms for Students with Emotional and Behavioral Disabilities (EBD)
Faculty Mentor: Elizabeth Bettini (Wheelock Teaching and Learning)

Sarpong, Afua (31)
Project Title: Using Amplification-Refractory Mutation System-PCR to Discern Rising Frequency of Hereditary Fructose Intolerant Mutations
Faculty Mentor: Dean Tolan (CAS Biology)

Sen, Riya (253)
Project Title: Formulation of Trehalose Based Nanoparticles for Therapeutic Protein Delivery
Faculty Mentor: Timothy O’Shea (ENG BME)

Sena, Katherine (207)
Project Title: A Mouse model for Neonatal Opioid Withdrawal Syndrome (NOWS) induces Brain Region-specific Changes in Proteins Associated with Microglial Activation (IBA1) and Myelin Protein Expression (MBP)
Faculty Mentor: Camron Bryant (MED Pharmacology)

Serafini, Angelina (32)
Project Title: Probing the Effects of Habitat Geometry on Bacillus Subtilis Swarming Morphology
Faculty Mentor: Joe Larkin (CAS Biology)
Sgrizzi, Samantha (165)
Project Title: Investigating the Role of the Calponin-1 Isoform in Aortic Smooth Muscle Contractility and Signal Transduction Scaffolding in CNNI Knockout Mice
Faculty Mentor: Kathleen Morgan (SAR Health Sciences)

Shah, Shashwat (254)
Project Title: Development of a Behavioral Task Measuring Functional Activation Post-Stroke to Track Behavioral Recovery
Faculty Mentor: David Boas (ENG Biomedical Engineering)

Shanabrook, Kristin (208)
Project Title: Leveraging the Framingham Study to Investigate Relationships between Traumatic Brain Injury, Alzheimer’s Disease and Related Dementias
Faculty Mentor: Jesse Mez (MED Neurology)

Shekhar, Medha (255)
Project Title: Characterization of Cell Death in Injured Heart Tissues
Faculty Mentor: Christopher Chen (ENG Biomedical Engineering)

Shen, Vivian (33)
Project Title: Uncovering Inhibitory Viral Mechanisms of Interferon Signaling
Faculty Mentor: Juan Fuxman Bass (CAS Biology)

Shterenberg, Joshua (256)
Project Title: Anomaly Detection and Diagnosis in High Performance Computing Systems via Semi-Supervised Machine Learning
Faculty Mentor: Ayse Coskun (ENG ECE)

Silfen, Zachary (257)
Project Title: In Silico Prototyping for Intranasally-Administered Agents for COVID-19 and Other Respiratory Pathogens
Faculty Mentor: Diane Joseph-McCarthy (ENG Biomedical Engineering)

Simone, Iris (62)
Project Title: Functionalization of Betulin to Terpene-Separated Amino Acids
Faculty Mentor: John Snyder (CAS Chemistry)

Smith, Blaire (258)
Project Title: Developing a Biologic AND Gate
Faculty Mentor: Ahmad Khalil (ENG Biomedical Engineering)

Smolina, Darya (259)
Project Title: Evaluating the Use of Homomorphic Encryption for CNN-based Inference on MNIST Dataset
Faculty Mentor: Ajay Joshi (ENG Electrical & Computer Engineering)

Song, Angela (107)
Project Title: The Fukushima Disaster: The Management of Radiation, Victims, Public Health, and Global Relations After a Decade from the 2011 Accident
Faculty Mentor: Jayita Sarkar (Frederick S. Pardee School of Global Studies)

Sotiropoulou, Katherine (34)
Project Title: Effects of Pine Encroachment into Hardwood Forests on Fungal Communities and Soil Biogeochemistry
Faculty Mentor: Jennifer Bhatnagar (CAS Biology)
Speranza, Nicholas (141)
**Project Title:** Socializing Under Siege: Cataloging Relationships in Minnie Vautrin’s Nanjing  
**Faculty Mentor:** Daryl Ireland (STH Mission)

Subramanian, Sandya (260)
**Project Title:** Creating an Anatomical Atlas of Brainstem Cell Types  
**Faculty Mentor:** Michael Economo (ENG Biomedical Engineering)

Summit, Rebecca (209)
**Project Title:** Attitudes and Practice Patterns in Breastfeeding Counseling in Women with Epilepsy among Neurologists and Obstetricians  
**Faculty Mentor:** Abrar Al-Faraj (MED Neurology)

Surets, Michelle (108)
**Project Title:** Investigation of Chronic Hyperactivity for the Induction of Neurodegenerative Pathology  
**Faculty Mentor:** Steve Ramirez (CAS Psychological & Brain Sciences)

Swift, William (166)
**Project Title:** Turn Detection in Post Stroke Walking Using Inertial Measurement Unit  
**Faculty Mentor:** Louis Awad (SAR Physical Therapy)

Tasich, Ksenija (261)
**Project Title:** Developing a Minimally-Invasive Device that Quantifies Fibrosis and Assesses Chronic Kidney Disease Using Optical Spectroscopy  
**Faculty Mentor:** Ousama Aamar (ENG Biomedical Engineering)

Thakar, Bhargavi (109)
**Project Title:** Perkins Automation Project  
**Faculty Mentor:** Philip Muirhead (CAS Astronomy)

Thaniana, Anusha (35)
**Project Title:** Expression of a Library of Proteins Encoded by the Sars-Cov-2 Coronavirus  
**Faculty Mentor:** Tom Gilmore (CAS Biology)

Tharani, Yashasvi (210)
**Project Title:** Effects of Fli 1 Downregulation on THP1 Migration  
**Faculty Mentor:** Andreea Bujor (MED Rheumatology)

Ting, Dayi (142)
**Project Title:** China Historical Christian Database, Mapping Christianity in China, 1550-1950  
**Faculty Mentor:** Daryl Ireland (STH Mission)

Torres, Daniela (63)
**Project Title:** Improving Student Learning by Embedding Questions and Feedback in Video Resources  
**Faculty Mentor:** Binyomin Abrams (CAS Chemistry)

Trachtenberg, Benyamin (Electronic Poster)
**Project Title:** Two-Temperature Model for Femtosecond Laser Ablation of Graphene  
**Faculty Mentor:** Michelle Sander (ENG Electrical & Computer Engineering)
Tran, Kimberly (36)
Project Title: Investigating the Effects of Zaire Ebola Virus Transcription Factors on Host Chromatin Structure
Faculty Mentor: Juan Fuxman Bass (CAS Biology)

Truong, Emily (211)
Project Title: VEGFA Promotes Cholangiocyte-driven Liver Regeneration in a Chronic Liver Injury Mouse Model
Faculty Mentor: Valerie Gouon-Evans (MED Medicine)

Unni, Prasida (212)
Project Title: In silico and Behavioral Analyses of CSNK2A1 Variants related to Okur-Chung Neurodevelopmental Syndrome
Faculty Mentor: Maria Isabel Dominguez (MED Hematology/Oncology)

Vachani, Venika (64)
Project Title: Using Computer Simulations To Model Viruses
Faculty Mentor: Erramilli Shyam (CAS Physics)

VanWyngarden, Madison (110)
Project Title: Identification of 63 New Pulsating White Dwarf Stars with TESS
Faculty Mentor: JJ Hermes (CAS Astronomy)

Voetsch, C. Priya (111)
Project Title: Providing Quality Career Programming in Elementary Schools: What Does it Take to Do it Well?
Faculty Mentor: Kimberly Howard (Wheelock Counseling Psychology & Applied Human Development)

Walija, Anika (219)
Project Title: Clinical Validation of a Deep-Learning Based Model To Predict Lung Cancer Risk from Chest X-Rays
Faculty Mentor: Vineet Raghu (MET Computer Science)

Wang, Jiayi (143)
Project Title: Hyakunin Isshu: Learning the Hundred Classical Japanese Poems with Maps
Faculty Mentor: Sarah Frederick (CAS Japanese and Comparative Literature)

Washington, Rakiya (112)
Project Title: Exploring the Logical Strategies Children Use to Remember Hidden Objects
Faculty Mentor: Melissa Kibbe (CAS Psychological & Brain Sciences)

Watkins, Luisa (262)
Project Title: Mitigating Current Variation in Particle Beam Microscopy
Faculty Mentor: Vivek Goyal (ENG Electrical & Computer Engineering)

Watts, Cheyenne (213)
Project Title: The Relationship Between Perceived Social Discrimination and Amygdala to Hippocampus Ratio Volume in Older Adults
Faculty Mentor: Karin Schon (MED Anatomy & Neurobiology)

Welser, Carrie (144)
Project Title: Reconstructing the Past in Stephen Sondheim and John Weidman’s “Assassins” and “Pacific Overtures”
Faculty Mentor: Phillip Haberkern (CAS History)
Xie, Ziwen (Electronic Poster)
Project Title: Engineering Small Molecules and Peptides that Bind to SARS-CoV-2 Spike Protein in Closed Form
Faculty Mentor: Diane Joseph-McCarthy (ENG Biomedical Engineering)

Xu, Kailin (167)
Project Title: Understanding Clinical Settings for Cervical Cancer Screening and HPV Vaccination in the U.S.
Faculty Mentor: Eleanor Murray (SPH Epidemiology)

Yakumithis, Sophia (145)
Project Title: Establishing Prestige: Holland's Golden Age in the Modern American Museum
Faculty Mentor: Charles Dellheim (CAS History)

Yamin, Nikka (113)
Project Title: The Direct and Interactive Effects of Identity Centrality and Community Connectedness on Mental Health Among LGBTQ+ people
Faculty Mentor: Anthony Rosellini (CAS Psychological & Brain Sciences)

Yang, Joanna (214)
Project Title: Effect of Antibiotics Use in Outcomes in Subarachnoid Hemorrhage (SAH) Patients
Faculty Mentor: Anna Cervantes-Arslanian (MED Neurology)

Ye, Jonathan (263)
Project Title: Developing a Pneumatic Soft Robotic Haptic Feedback Glove to Assist Minimally Invasive Surgery
Faculty Mentor: Sheila Russo (ENG Mechanical Engineering)

Ye, Young (114)
Project Title: Assessment of a Manual Tracking Algorithm for Dense Reconstruction of Transgenic Zebra Finch Neurons
Faculty Mentor: Ben Scott (CAS Psychological & Brain Sciences)

Yin, Junze (220)
Project Title: Fractal Analysis of the Urbanization Development in Boston: 2000-2020
Faculty Mentor: Emma Previato (CAS Mathematics)

Yucebas, Defne (115)
Project Title: Associations of Category Fluency Clustering and Switching Performance with in vivo Brain Pathology in Autosomal Dominant Alzheimer’s Disease
Faculty Mentor: Alice Cronin-Golomb (CAS Psychological and Brain Sciences)

Zdanowicz, Victoria (116)
Project Title: Fiber Digestibility in Wild Bornean Orangutans: Age-Sex Class Differences and Implications for Slow Juvenile Growth
Faculty Mentor: Cheryl Knott (CAS Anthropology)

Zhai, Jintao (146)
Project Title: The Catholic Missions in Modern Chinese History: Case-Studies based on the U.S. Passionist Archives (1921-1951) and the Maryknoll Archives (1918-1955) for the Boston University China Historical Christian Database (1550-1950)
Faculty Mentor: Eugenio Menegon (CAS History)
Zhang, Tao (264)  
**Project Title:** Investigating Machine Learning-Based Optical Flow Algorithms on a Simulated Beating Heart  
**Faculty Mentor:** Emma Lejeune (ENG Mechanical Engineering)

Zhang, Xiaoyu (215)  
**Project Title:** Improving the Accuracy of Glycan Structural Assignments with Stable Isotope Labeling  
**Faculty Mentor:** Catherine E Costello (MED Biochemistry)

Zheng, Allyson (216)  
**Project Title:** The Effect of SARS-CoV-2 on Heart Muscle Cells: Comparison of Cultured Cardiomyocytes and Serum of COVID-19 Patients  
**Faculty Mentor:** James Hamilton (MED Physiology and Biophysics)

Zheng, Minglan (265)  
**Project Title:** X-World: Accessibility, Vision, and Autonomy Meet  
**Faculty Mentor:** Eshed Ohn-Bar (END Electrical & Computer Engineering)

Zhou, Brian (266)  
**Project Title:** Comparing Spo0A Activity Level in B. Subtilis Using Fluorescent Reporters  
**Faculty Mentor:** Allyson Sgro (ENG Biomedical Engineering)

Zhou Peng, Hui Cong (Kreiver) (267)  
**Project Title:** Measurement of Thin SiO2 Films on IRIS Chips Using Color Images  
**Faculty Mentor:** Selim Unlu (ENG Electrical & Computer Engineering)
Get Involved!

How to Apply to UROP:

Step 1: Find a research mentor in your field of interest

Step 2: Select or Propose a Project
Contribute to your mentor’s existing projects or design your own!

Step 3: Complete UROP’s online application
- Contact UROP team to schedule an application review.
- Follow up with your mentor to confirm that they have sent in your letter of recommendation.

Step 4: Receive funds to research!

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