

Fall 2022 Award Recipients

College of Arts and Sciences

Adams, Lindsey

White pine encroachment into hardwood forests: effects on leaf litter and soil microbial communities and biogeochemistry

Faculty Mentor: Jennifer Bhatnagar (Biology)

Ahmed, Sanaa

Characterizing the cellular and circuit-level mechanisms of therapeutic psychedelics

Faculty Mentor: Steve Ramirez (Psychological & Brain Sciences)

Allbert, Kathleen

The Limits of Generosity in Children

Faculty Mentor: Peter Blake (Psychological & Brain Sciences)

Amin, Vibhuti

Determining the impact of tethering on inhibitor binding through kinetic studies of BoNT/A-LC

Faculty Mentor: Karen Allen (Chemistry)

Amir, Emily

Evaluating the Chemoselectivity of a Novel Vanadium (V) Catalyst

Faculty Mentor: John Snyder (Chemistry)

Arevalo Gonzalez, Lyda

Mobile applications for assessment of memory and cognition

Faculty Mentor: Yakeel Quiroz (Psychological & Brain Sciences)

Attarwala, Aaquib

Silk-assisted virus delivery to large brain volume.

Faculty Mentor: Mark Howe (Neuroscience)

Bao, Mengting

Marketing Analytics on Sociopolitical Events

Faculty Mentor: Shuba Srinivasan (Marketing)

Barbaro, Sabrina

Studying Lopsidedness in redMaPPer Galaxy Clusters

Faculty Mentor: Tereasa Brainerd (Astronomy)

Barnard, Emily

Disseminating Skills from Motivational Interviewing for Loved Ones

Faculty Mentor: Emily Kline (Psychiatry)

Bausha, Charlotte

Examining Changes in the Quality and Quantity of Speech and Non-Speech Vocalizations in Minimally Verbal Autistic Children Receiving Intervention

Faculty Mentor: Helen Tager-Flusberg (Psychological & Brain Sciences)

Bhogal, Sukhneet

Understanding the Biophysics of Deep Brain Stimulation

Faculty Mentor: Xue Han (Biomedical Engineering)

Blumenthal, Emmy

Community Ecology as Convex Geometry

Faculty Mentor: Pankaj Mehta (Physics)

Broeker, Erica

Determining the Role of the Dlk1-Dio3 Locus in Cardiomyocyte Differentiation

Faculty Mentor: Francisco Naya (Biology)

Burnell, Hannah

Identifying the effects and potential benefits of enrichment and its impact on fear regulation in adolescent mice

Faculty Mentor: Heidi Meyer (Psychological & Brain Sciences)

Camacho, Yazmin

Engineering a DNA barcode-based Bacteriophage Detection System and Recombinase A-based Readout Strategy

Faculty Mentor: Alexander Green (Biomedical Engineering)

Cardosi, Daniel

Visually Guided Hearing Aid

Faculty Mentor: Geraod Kidd (Speech, Language, and Hearing Sciences)

Carhee, Ashley

Evaluation and Technical Assistance Provider (ETAP) for the Black Women First Initiative

Faculty Mentor: Melanie Rocco (School of Social Work)

Chaharom, Darya

Using a STM break-junction to characterize the single molecule conductance and binding mechanisms of phenols

Faculty Mentor: Maria Kamenestka (Physics)

Chen, Xingru

Physics-Based Simulation of Natural and Realistic Behavior of People with Disabilities

Faculty Mentor: Eshed Ohn-Bar (Electrical and Computer Engineering)

Choudhury, Sabah

Effect of p300 Inhibition on Melanoma Invasion

Faculty Mentor: Rhoda Alani (Dermatology)

Chun, Iris

Characterization of synaptic inputs on inhibitory neurons in thalamic reticular nucleus

Faculty Mentor: Basilis Zikopoulos (Neuroscience/Human Physiology)

Deckard, Roni

Venezuelan immigrants and the F-1 visa

Faculty Mentor: Heba Gowayed (Sociology)

den Boon, Saskia

How many sonnets did Ben Jonson write?

Faculty Mentor: Laurence Breiner (English)

Dong, Marshal

The Tale of Genji Database and Web Application Project

Faculty Mentor: Keith Vincent (World Languages and Literature)

Douglas-Robertson, Denitra

Evaluating Police Incident Reports in Response to Mental Health Crises Among Young Children in Boston Public Schools

Faculty Mentor: Jennifer Green (Special Education)

Duan, Shiqi

Testing the Regulatory Security State Model - A Case Study on the US

Faculty Mentor: Kaija Schilde (International Relations)

Feng, Zitong

Public Opinion Versus Profit: The weight of firms environmental social-political risk event in company decision

Faculty Mentor: shuba Srinivasan (Marketing)

Fetherston, Colleen

Investigating Host Plant Driven Chemical Defense in Adult Red Spotted Purple Butterflies

Faculty Mentor: Sean Mullen (Biology)

Figueiras, Francisco

Identifying Novel Viral Protein Interactions with Host Cell Apoptosis and Growth via a Tiling Approach

Faculty Mentor: Juan Fuxman Bass (Biology)

Fitzsimmons Christensen, Iris

Digital Mapping of the García Lorca Archive

Faculty Mentor: Christopher Maurer (Romance Studies)

Freitas, Matthew

Determining molecular and functional properties of novel structures in mosquito olfactory brain regions using ultrastructural data in electromagnetic datasets

Faculty Mentor: Meg Younger (Biology)

Glastein, Sophia

Understanding cryptic coral host and algal symbiont diversity across Panamanian reefs in Bocas del Toro

Faculty Mentor: Sarah Davies (Biology)

Glynn, Morgan

The relationship between ENSO, suspended particulate matter, chlorophyll-a, and sea surface temperature in Java Sea and their potential effects on human-driven stressors

Faculty Mentor: Magaly Koch (Earth & Environment)

González, Eliana

Elementary School Career Development: Exemplars of Practice

Faculty Mentor: Kimberly Howard (Counseling Psychology)

Grant, Bergen

Shelf-Life: An Archival Approach to the “Who”s and “What”s Behind a Donor's Book Collection.

Faculty Mentor: J. Keith Vincent (World Languages and Literatures)

Ha, Jicheol

Trends in Anti-Fraud Enforcement Using Machine Learning and Text as Data

Faculty Mentor: Jetson Leder-Luis (Markets, Public Policy, and Law)

Heyrich, Griffin

Birobotic Smart Control Systems

Faculty Mentor: Tommaso Ranzani (Mechanical Engineering)

Hunyadi, Olivia

Optogenetic investigation of the role of cholinergic interneurons during associative learning

Faculty Mentor: Mark Howe (Psychological & Brain Sciences)

Jayasinghe, Thisara

Qualitative Analysis of Stakeholder Interviews for Implementation of WRAP Without Walls

Faculty Mentor: Amy Yule (Psychiatry)

Jo, Sehjin

An Anatomical mapping and characterization of the Drosophila Melanogaster Circadian Rhythm Circuit

Faculty Mentor: Kyle Gobrogge (Neuroscience)

Kang, Insoo

Trajectories of Doctoral Students in the Biological Sciences: Impacts of Identity on Teaching and Learning

Faculty Mentor: Jerry Whitmore (Wheelock)

Kelly, Camila

Exploration of International Arbitration in Central America in the Early Twentieth Century

Faculty Mentor: Andrei Mamolea (Pardee School of Global Studies)

Kelly, Thomas

Relation between Global Positioning System signal scintillation and aurora

Faculty Mentor: Toshi Nishimura (Space Physics)

Kil, Raymond

Detecting Signals for Soft Unclustered Energy Pattern (SUEP) at CMS

Faculty Mentor: Zeynep Demiragli (Physics)

Kostina, Elizabeth

Effective Altruism: The Religion of Ethical Conduct

Faculty Mentor: Joshua Pederson (Humanities)

Krick, Sam

Examining the Comorbidity of Alcoholism and Depression in Drosophila melanogaster

Faculty Mentor: Kyle Gobrogge (Neuroscience)

Kumar, Ankita

Does the form of explanation children repeatedly hear from an informant influence their own initial spontaneous explanatory form preference over time?

Faculty Mentor: Deborah Kelemen (Psychological & Brain Sciences)

Lama, Dechen

Dissecting the Role of lncRNAs in White and Beige Adipogenesis

Faculty Mentor: Nabil Rabhi (Biochemistry)

Lannon, Owen

Reconstructing the Hellenistic agricultural economy in the greater Galilee region

Faculty Mentor: John Marston (Archaeology)

Lau, Charles

Exploring the SNAI1/2-CoREST Interaction in Melanoma

Faculty Mentor: Rhoda Alani (Dermatology)

Lee, David

Visualizing pre-symptomatic impact of Alzheimer's Disease onto MRI scans with Generative Adversarial Networks to assist in early detection

Faculty Mentor: Arash Yazdanbakhsh (Psychological & Brain Sciences)

Lee, Jason

Generalizing Computer Vision from Simulation to Real for Accessibility

Faculty Mentor: Eshed Ohn-Bar (Electrical and Computer Engineering)

Liang, Joyce

Pax3 in Melanoma: Regulation of Nonsense-Mediated Decay (NMD) and Its Molecular Mechanisms

Faculty Mentor: Deborah Lang (Dermatology)

Liu, Andy

Integrating concurrently recorded fMRI responses with neuronal activity in awake mice

Faculty Mentor: Anna Devor (Biomedical Engineering)

Liu, Kolvin

Leadership and Mentoring Lab – Trajectories of Doctoral Students in the Biological Sciences: Impacts of Identity on Teaching and Learning

Faculty Mentor: Jerry Whitmore (Educational Leadership and Policy Studies)

LoMonaco, Jay

Creating Light Curves from TESS 20-Second Data to Search for Exoplanets around White Dwarfs

Faculty Mentor: JJ Hermes (Astronomy)

Lu, Candice

Creating graphics and maps to illustrate the Mughal gardens history in Kashmir, India

Faculty Mentor: Jan Haenraets (History of Art & Architecture)

Lu, Simon

Using LSTM model to predict chronological aging from DNA methylation data

Faculty Mentor: Chao Zhang (Computational Biomedicine)

Mapaye, Russell

Locating Locations of Spectra taken

Faculty Mentor: Luke Moore (Space Physics)

Markovic, Daniel

The Praxis School as a Forerunner to the Capabilities Approach

Faculty Mentor: Neal Leavitt (Humanities)

Nguyen, Tuyet-Anh

The Role of Ribosomal m6A in the Translational Stress Response of Tauopathy

Faculty Mentor: Benjamin Wolozin (Pharmacology)

Nicolas, Kristina

Investigating the Role of the Epigenetic Repressor CBX5 in Fibroblast Activation and Lung Fibrosis

Faculty Mentor: Giovanni Ligresti (Medicine)

Nikorich, Iana

Investigation of regulatory proteolytic cleavage of MYC family proteins in cancer cell lines

Faculty Mentor: Alla Grishok (Biochemistry)

O'Connor, Briana

Nonliteral Language in Autistic Adults

Faculty Mentor: Catherine Caldwell-Harris (Psychological & Brain Sciences)

Onipede, Yeshim

The Recency Project: Context-Dependent Decision Making

Faculty Mentor: Joseph McGuire (Psychological & Brain Sciences)

Ozturk, Zeynep

Effect of Chronic Social Defeat Stress on PACAP and CGRP levels in central amygdala

Faculty Mentor: Valentina Sabino (Pharmacology / Psychiatry)

Pappu, Jaii

Spatial Co-Occurrence of Firearm Violence, Opioid Overdoses and COVID-19 Deaths: Expanding and Deepening A Case Study of Chicago, Illinois

Faculty Mentor: Jonathan Jay (Community Health Sciences)

Park, Edison

Empathy Levels on Medical Mask Attraction

Faculty Mentor: Erika Wells (Psychological & Brain Sciences)

Ponda, Ruhika

#Truth: How to Navigate Modern News Media Like a Platonic Philosopher-King or -Queen

Faculty Mentor: Sophie Klein (Core Curriculum/Classics)

Robayo, Antonia

Competing for Talent: Startup growth and the labor market

Faculty Mentor: James Bessen (Law)

Saunders, Luke

Furthering the Optimizations of NIM+ and Improving the HGAL Hexaboard

Faculty Mentor: Lawrence Sulak (Physics)

Schimmelpfennig, Emilia

Analyzing the relationship between cardiac and respiratory rhythms between periods of sleep deprivation and well-rested wakefulness

Faculty Mentor: Laura Lewis (Biomedical Engineering)

Sebastian, Alissa

Sustained Attention and Parkinson's Disease: an fNIRS study

Faculty Mentor: Alice Cronin-Golomb (Psychological & Brain Sciences)

Semaan, Marc

Unraveling the determinants of altered cell preference exhibited by the SARS-CoV-2 Omicron variant.

Faculty Mentor: Mohsan Saeed (Biochemistry)

Seo, Margaret

The Comparison of Actigraph data vs. Self-reported data utilizing participants' FitBit physical activity and sleep data to assess the exposures of individuals attempting to conceive

Faculty Mentor: Lauren Wise (Epidemiology)

Sharma, Sia

Developing Deep Neural Networks for Identification and Early Diagnosis of Alzheimer's Disease.

Faculty Mentor: Arash Yazdanbakhsh (Neuroscience)

Shepardson, Katie

Curiosity and Learning

Faculty Mentor: Kathleen Corriveau (Counseling Psychology and Applied Human Development)

Sloane, Eleanor

Investigating alpha carbon-carbon bond cleavage promoted by a vanadium(V) catalyst

Faculty Mentor: John Snyder (Chemistry)

Song, Su Yeon

Investigating the Role of Endothelial-Expressed Sorting Nexins During Blood Stem Cell Migration.

Faculty Mentor: Elliott Hagedorn (Hematology & Medical Oncology)

Sotiropoulou, Rina

The role of ectomycorrhizal fungi in white pine (*Pinus strobus*) encroachment in New England's forests.

Faculty Mentor: Jennifer Bhatnagar (Biology)

Stroumbakis, Dimitri

Determine whether overexpression of C4 in PV-interneurons leads to alterations in the interactome of PSD95 in those neurons.

Faculty Mentor: Alberto Cruz-Martin (Biology)

Subedi, Sambridhi

Utilizing Trauma and Stress Models to Investigate Hypervigilance after Traumatic Experiences in Adolescents

Faculty Mentor: Heidi Meyer (Psychological & Brain Sciences)

Subramonian, Reshma

Brain pH and altered TGFB signaling in schizophrenia (SCZ) and bipolar disorder (BD): A study of underlying mechanisms for pathogenesis

Faculty Mentor: Sam Thiagalingam (Biomedical Genetics)

Sun, Jingyi

The Emotional Resonances of Language: Studying Its Growth in Immersion vs. Classroom Contexts

Faculty Mentor: Catherine Caldwell-Harris (Psychological & Brain Sciences)

Swanson, Morgan

Fecal Particle Size Analysis and DNA Barcoding of Orangutan Plant Samples

Faculty Mentor: Cheryl Knott (Anthropology)

To, Stanley

Pairing Motion Captured Data and Ground Reaction Force to Inform Character Animation

Faculty Mentor: Emily Whiting (Computer Science)

Tom, Ashley

Characterizing the Inspection of Medical Images by Measuring Image Similarities and Differences Using Perceptual Distances

Faculty Mentor: Arash Yazdanbakhsh (Psychological & Brain Sciences)

Tong, Lily

Understand the role of cortico-striatal plasticity in learning: large-scale simultaneous recording of strial input and output dynamic with an integrated approach.

Faculty Mentor: Mark Howe (Psychological & Brain Sciences)

Vianna, Isabella

Higher-Order Clustering of RET in Modified Human Mesothelioma Cells

Faculty Mentor: Adrian Whitty (Chemistry)

Wong, Audrey

Identifying coral-associated algal and microbial communities

Faculty Mentor: Sarah Davies (Biology)

Wu, Sam

Analysis of miRNA Seed Genesis

Faculty Mentor: Daniel Cifuentes (Biochemistry)

Yaggi, Anna

An Analysis of the Diversity, Equity, and Inclusion Climate in Boston University's Computational Majors

Faculty Mentor: Daniel Sussman (Mathematics)

Yang, Xiaoqiu

Chronic Moderate Alcohol Consumption In ApoE^{-/-} Mice Damages Vascular Endothelial Function Via Redox Dysregulation of Small RhoGTPase Rac1

Faculty Mentor: Jingyan Han (Health Sciences)

Ye, Harry

Foreign Language Effect: Does Native Language Affect Emotional Arousal when Encountering Decisional Process in Foreign Language Context?

Faculty Mentor: Caldwell-Harris Catherine (Psychological & Brain Sciences)

Zhang, Angela

Predynastic settlements in Upper Egypt: reconstructing woodland vegetation in Halfiah Gibli and Semaine

Faculty Mentor: John Marston (Anthropology)

Zhang, Caiwei

Jump Process Simulation Algorithms for modeling biological systems

Faculty Mentor: Samuel Isaacson (Mathematics & Statistics)

Zhou, Myles

Development of a GINIP-based biosensor for detection of G protein signaling at intra-membrane compartments

Faculty Mentor: Mikel Garcia-Marcos (Biochemistry)

Zhou, Vivian

Is Adversarial Training Privacy-Perserving? Tools to Preserve User Privacy for Data-Driven Platforms

Faculty Mentor: Lance Galletti (Computer Science)

College of Fine Arts**Had, Lauren**

Typeface Development and Historical Research for Potential Use in Museum Publications

Faculty Mentor: Christopher Sleboda (Graphic Design)

Mang, Jacqueline

Framework and Database for Exploring Works of Experience Design

Faculty Mentor: Nicholas Rock (Graphic Design)

Nie, Michelle

Information Transparency Empowers People: An Educational Hub of Gynecological, Sexual, and Reproductive Health for People of Color.

Faculty Mentor: Tejumola Adegoke (Obstetrics & Gynecology)

Riedl, Jenna

Drawing Trees: An Examination of the Social Benefits and Emotional Symbolism of Trees in Urban Communities

Faculty Mentor: Breehan James (Painting)

Engineering**Alsadoun, Woud**

Development of an Agri-Voltaic System with Bifacial PV (BPV) modules with External Reflectors with Ultra-white Coating with BaSO₄ nanoparticles for high diffuse reflectivity

Faculty Mentor: Malay Mazumder (Electrical and Computer Engineering)

Bajaj, Rohin

To develop a hindlimb ischemia animal model with a new OCT-based photo-thrombosis approach.

Faculty Mentor: Jingyan Han (Vascular Biology)

Bhalla, Varun

Size Comparison of Giant Vacuoles in the Inner Wall of Schlemm's Canal of Human Eyes Measured at 7 mmHg, 15 mmHg, and 30 mmHg.

Faculty Mentor: Haiyan Gong (Ophthalmology)

Border, Olivia

Multiplexed Viral Diagnostic

Faculty Mentor: Alex Green (Biomedical Engineering)

Borunov, Timothy

Log-Structured Virtual Disk (LSVD)

Faculty Mentor: Orran Krieger (Electrical and Computer Engineering)

Chin, Jacob

Estimating Cardiovascular Health Parameters from Blood Flow Index Extrapolated from Speckle Contrast Optical Spectroscopy (SCOS)

Faculty Mentor: Darren Roblyer (Biomedical Engineering)

Cho, Eric

Multiple Input Multiple Output Phase Shifter Printed Circuit Board

Faculty Mentor: Rabia Yazicgil (Electrical and Computer Engineering)

Dholiya, Prakruti

Investigating the various molecular mechanisms of DOT1L histone methyltransferase beyond its role of histone modification; Dissecting the C-terminus of DOT1L

Faculty Mentor: Alla Grishok (Biochemistry)

Dolynuk, Alexandra

Evaluating Split Universal CAR T Cells with AND Gates in their Ability to Target Cancer Cells with Variable Antigen Expression Levels

Faculty Mentor: Wilson Wong (Biomedical engineering)

Duong, Eileen

Hardware Validation of Constant Curvature in Soft Robotic Limb

Faculty Mentor: Andrew Sabelhaus (Mechanical Engineering)

El sherif, Nourhan

Measuring and Quantifying Cell Contractility of Primary Vascular Smooth Muscle Cells using a Chronic Kidney Disease Rat Model

Faculty Mentor: Michael Smith (Biomedical Engineering)

Filippova, Sofiya

Calibration & Validation of XCO2 and Solar-Induced Fluorescence (SIF) for Urban Targets

Faculty Mentor: Lucy Hutyra (Earth & Environment)

Fukuda, Chase

Creating and understanding electrodes made from polymeric spongelike membranes and their applications in solid state and liquid electrolyte batteries

Faculty Mentor: Joerg Werner (Mechanical Engineering)

George, Abin

MicroFaaS: Energy Efficient Serverless on Bare-metal Single-board Computers

Faculty Mentor: Ayse Coskun (Electrical and Computer Engineering)

Grubb, Chloe

Electrical and Mechanical Design of the Endcap Timing Layer

Faculty Mentor: Indara Suarez (Physics)

Guan, Zixin

Improving vascular smooth muscle cell culturing methods

Faculty Mentor: Francesca Seta (Medicine)

Huang, Qintian

Active Learning-Based Online Diagnosis of Anomalies in High Performance Computing Systems

Faculty Mentor: Ayse Coskun (Electrical and Computer Engineering)

Huang, Ronald

openEyeTrack 2.0 – expanding a flexible, high-speed, and affordable eye tracker

Faculty Mentor: Chandramouli Chandrasekaran (Neuroscience, Psychological & Brain Sciences)

Hui, Veronica

Studying the role of PI3K signaling intensity in the progression of breast cancer.

Faculty Mentor: Christopher Chen (Biomedical Engineering)

Ianus-Valdivia, Miguel

Hybrid Robotics: Mimicking Biomechanical Motion Using Soft Robots With Skeletons

Faculty Mentor: Andrew Sabelhaus (Mechanical Engineering)

Jiang, Daniel

Characterization of Infrared Light-induced Temperature Transients during Infrared Neuromodulation

Faculty Mentor: Michelle Sander (Electrical and Computer Engineering)

Kankkunen, Marcus

Characterizing the Role of Foxr1 expression in Embryonic Mouse Brains

Faculty Mentor: Angela Ho (Biology)

Karabay, Emre

IRIS/Microarray Implementation of Multi-Colour LED Pulse With Modulation

Faculty Mentor: Selim Unlu (Electrical and Computer Engineering)

Keller, Madelyn

Comparing Aged, Young, and Senescent Murine Tenocytes

Faculty Mentor: Brianne Connizzo (Biomedical Engineering)

Kelly, Owen

In-vitro Lymphatic Vessel Stability and Characterization

Faculty Mentor: Joe Tien (Biomedical Engineering)

Korna, Farida

Raman Arthroscopic Needle Probe for Early-stage Osteoarthritis Diagnostics

Faculty Mentor: Michael Albrow (Mechanical Engineering)

Lahiri, Nikhil

The Effect of Metabolically Activated Macrophages on the Kinetics of Invasion and Escape in Triple Negative Breast Cancer

Faculty Mentor: Joe Tien (Biomedical Engineering)

Langenbrunner, Eva

The Development of the Logic Functions for Soft Robot's Demultiplexer

Faculty Mentor: Tommaso Razani (Mechanical Engineering)

Leal, Matthew

Soft Foldable Surgical Robotic Actuators using Pop-Up Book MEMS Fabrication

Faculty Mentor: Sheila Russo (Mechanical Engineering)

Lee, Jungjae

Development of a Soft Robotic Grasper for Atraumatic Manipulation and Retraction of the Intestines

Faculty Mentor: Tommaso Ranzani (Mechanical Engineering)

Li, Jeffrey

Exploring the role of differential lymphatic gene expression in the drainage capacity of blood-derived lymphatic endothelial cells

Faculty Mentor: Christopher Chen (Biomedical Engineering)

Li, Siyuan

Conjugation of Ketamine to a Novel Mucoadhesive Polymer for Improved PTSD and Severe Depression Treatments

Faculty Mentor: Mark Grinstaff (Biomedical Engineering)

Li, Yuke

Exploration of Behavioral and Neural Effect of Methylphenidate (Ritalin) on Perceptual Decision-Making

Faculty Mentor: Chandramouli Chandrasekaran (Psychological & Brain Sciences)

Licata, Joseph

Removing Ballistocardiogram Artifacts in the Lewis Lab's Sleep Research Data by Creating a Reference Layer for the EEG-fMRI Head Cap.

Faculty Mentor: Laura Lewis (Biomedical Engineering)

Lin, Sunni

Prototyping a Contrastive Unpaired Translation (CUT) Framework for Virtual Staining OCT

Faculty Mentor: Lei Tian (Electrical and Computer Engineering)

Lu, Yongjun

Modeling a lifetime trajectory of non-human primates' brain aging

Faculty Mentor: Bang-Bon Koo (Anatomy & Neurobiology)

Ma, Bowen

“Inverse design of nano-photonic devices based on deep neural networks”

Faculty Mentor: Luca Dal Negro (Electrical and Computer Engineering)

Mauro, Nick

Raman Spectroscopic Monitoring of Osteoarthritic Cartilage Degradation in an Ex Vivo Live Tissue Model

Faculty Mentor: Michael Albro (Mechanical Engineering)

O'Connor, Payton

Trehalose-Guanosine glycopolymer hydrogels regulate adaptive glia responses in CNS injury

Faculty Mentor: Timothy O'Shea (Biomedical Engineering)

Pang, Johann

Bleeding Detection Soft Sensor for Safer Colonoscopies

Faculty Mentor: Sheila Russo (Mechanical Engineering)

Pemaraj, Ananya

Sensing RNA Using Fluorescent RNA Aptamers

Faculty Mentor: Alexander Green (Biomedical Engineering)

Perliss, Alec

Understanding Stroke/Cortical Injury and its Effect on Fine Motor Movements

Faculty Mentor: Chandramouli Chandrasekaran (Neurobiology)

Pyltsov, Vlad

FPGA board programming for the signal processing of the noise measurements of the tuning fork in a constant air flow.

Faculty Mentor: Kamil Ekinci (Mechanical Engineering)

Raiff, Laura

Imaging neuronal membrane response to transcranial focused ultrasound stimulation

Faculty Mentor: Xue Han (Biomedical Engineering)

Rathi, Anushka

Testing music-based walking intervention in people with knee osteoarthritis

Faculty Mentor: Deepak Kumar (Physical Therapy)

Spada, Jessie

Indirect measurement of anterior-posterior ground reaction forces (AP-GRF) during walking using lightweight sensors for individuals with Multiple Sclerosis

Faculty Mentor: Lou Awad (Physical Therapy)

Stack, Eric

Preventing Chromium Poisoning in Electrodes for Reversible Solid Oxide Electrochemical Cells
Faculty Mentor: Srikanth Gopalan (Mechanical/Material Science Engineering)

Wilderotter, Sabrina

Computational Identification of Antibody-Binding Epitopes from Mimotope Datasets
Faculty Mentor: Diane Joseph-McCarthy (Biomedical Engineering)

Zhang, Yiwen

Mid-infrared Photothermal Microscopy for Characterization of the Thermoresponsive Smart Polymers
Faculty Mentor: Michelle Sander (Electrical and Computer Engineering)

Zheng, Chengze

Examine the Cultural Discount From Social Media Platforms Policy Change in Global Scale
Faculty Mentor: Su Chao (Emerging Media Studies)

Sargent College**Consigli, Anthony**

Impact of SQ-LNS on Intestinal Health and Growth among Zambian Infants
Faculty Mentor: Jacqueline Lauer (Health Sciences)

Di Filippo, Lauren

Exploring automated approaches for assessing non-fluency in post-stroke aphasia using connected speech analysis
Faculty Mentor: Swathi Kiran (Speech, Language & Hearing Sciences)

Dunsmuir, Courtney

Investigation of auditory and somatosensory feedback in vocal and articulatory motor control function for individuals with Parkinson's disease
Faculty Mentor: Cara Stepp (Speech, Language & Hearing Sciences)

Ekezie, Brittany

The Reduction in Anemia through Normative Innovations (RANI) Project
Faculty Mentor: Yilma Hagere (Health Sciences)

Guan, Noelle

Sensorimotor Development and Recognition of Topographical Body Mapping in Infants
Faculty Mentor: Claudio Ferre (Occupational Therapy)

Isakova, Stacey

Projections from Area 25 to the Nucleus Accumbens Shell

Faculty Mentor: Helen Barbaas (Health Sciences)

Kim, Hahnbie

Characterizing the Effects of Disease-Causing Mutations in NEMO on Homodimer Stability

Faculty Mentor: Adrian Whitty (Chemistry)

Lin, Yunkeli

Plausibility of Self-Reported Fruit and Vegetable Intake: A Biomarker Study

Faculty Mentor: Megan McCrory (Health Sciences)

Murray, Sophia

Effects of HDAC1/LSD1 inhibition on TNBC-macrophage interactions and tumor progression in 3D tumor models

Faculty Mentor: Ruben Dries (Hematology & Medical Oncology)

Nguyen, Celina

Are tendencies toward social motivation and pleasure associated with daily social experiences? An experience sampling study.

Faculty Mentor: Daniel Fulford (Occupational Therapy)

Nguyen, Mina

Effects of decreased dosage of ISM1 on cranial neural crest cells migration in vitro: A study with *Xenopus laevis* embryos

Faculty Mentor: Laura Lowery (Medicine)

Pan, Alex

Is vocal fry gendered? Creak prevalence among cisgender males, cisgender females, and transmasculine individuals on testosterone therapy and its association with perception of gender

Faculty Mentor: Carolyn Hodges-Simeon (Anthropology)

Rasheed, Samaa

The Effects of Lactic Acid on Epithelial Integrity and HIV Susceptibility

Faculty Mentor: Deborah Anderson (Infectious Diseases)

Rodriguez, Grace

Evaluating Police Narratives in the Context of Mental Health Crisis among Children in Boston Public Schools

Faculty Mentor: Jennifer Green (Special Education)

Yang, Yiwen

Music-Based Wearable Sensor Walking Intervention for People With Chronic Knee Pain

Faculty Mentor: Deepak Kumar (Physical Therapy & Athletic Training)

Zaltz, Emily

Determine if ROBO2 is a novel glomerular basement membrane regulator in mice

Faculty Mentor: Weining Lu (Nephrology)

Zheng, Jane

Role of Aortic Carboxypeptidase-like Protein in Collagen and Extracellular Matrix Assembly

Faculty Mentor: Matthew Layne (Biochemistry)

Other**Ambrosetti, Jacopo**

Hiding the Security State in Markets: Outsourcing Security and Defense in the US and Europe

Faculty Mentor: Kaija Schilde (International Relations)

Aydinol, Sahika

To His "Nazlı" Mistress

Faculty Mentor: Roberta Micallef (World Languages & Literatures)

Bestavros, Kristen

The Metastable state in the FPUT problem and the approach to thermal equilibrium.

Faculty Mentor: David Campbell (Physics)

Bugara, Billie

Coming Out as Non-Binary on Social Media: A Twitter Analysis of Rapper Lil Uzi Vert and the Emergence of New Forms of Self-Identification

Faculty Mentor: Traci Hong (Media Science)

Grusby, Naomi

The Pre-Communist Geopolitics of Regional China As Influenced by Christian Missionary Countries

Faculty Mentor: Daryl Ireland (Theology/Mission)

Longo, Emma

How Fossil Fuel Companies Use Native Advertisements to Promote Climate Denialism in U.S. Media

Faculty Mentor: Michelle Amazeen (Mass Communication, Advertising and Public Relations)

Patro, Bontu Ankit

Weaponizing Europe? Rule-Makers and Rule-Takers in EU Defense Markets

Faculty Mentor: Kaija Schilde (International Relations)

Theobald, Serena

Prevention of cervical cancer

Faculty Mentor: Eleanor Murray (Epidemiology)

Weinberg, Sara

Understanding Science Misinformation and Correction

Faculty Mentor: Arunima Krishna (Mass Communications)

Xie, Heshan

Mobile Money Cash Merchants in Africa

Faculty Mentor: Jonathan Greenacre (International Relations)