



**CALIFORNIA STATE  
UNIVERSITY, LONG BEACH**

**38<sup>th</sup> ANNUAL STUDENT  
RESEARCH  
COMPETITION**

Showcasing excellence in scholarly  
research, and highlighting creative  
activity

Friday, February 27, 2026 | 9am-4pm  
Held In-Person

# Room Overview

*Please go to your designated room in the Liberal Arts 2 Building (LA2). Rooms are separated by discipline. Please refer to the CSULB Map at the end of the program.*

<b>Room: LA2-100</b>	Engineering & Computer Science
<b>Room: LA2-104</b>	Behavioral & Social Sciences
<b>Room: LA2-106</b>	Behavioral & Social Sciences
<b>Room: LA2-107</b>	Health, Nutrition, and Clinical Sciences
<b>Room: LA2-108</b>	Physical & Mathematical Sciences / Interdisciplinary
<b>Room: LA2-120</b>	Physical & Mathematical Sciences
<b>Room: LA2-202</b>	Education / Business, Economics, and Public Administration
<b>Room: LA2-203</b>	Humanities & Letters
<b>Room: LA2-204</b>	Biological & Agricultural Sciences
<b>Room: LA2-205</b>	Humanities & Letters
<b>Room: LA2-206</b>	Engineering & Computer Science
<b>Room: LA2-208</b>	Creative Arts and Design / Engineering & Computer Science



**Room: LA2-100**

**Friday, February 27, 2026**

**Engineering and Computer Science**

**9:15AM-9:35AM**

**Nathan Alonso, *Biological Chemistry***

Faculty Sponsor: Roger Lo

Title: Colorimetric Bisphenol A Paper-based Microfluidic Device

**9:35AM-9:55AM**

**Eric Harper, *Biochemistry***

Co-Presenter: Jorge Orellana

Faculty Sponsor: Derek Hu

Title: Identifying Early Biomarkers of Treatment Efficacy in Lennox-Gastaut Syndrome based on Computational Characteristics of Interictal EEG

**9:55AM-10:15AM**

**Phat Du, *Electrical Engineering***

Faculty Sponsor: Anna Lee

Title: Thermo-decoupled Photon-stimulated Enhancement In Prussian Blue Electrodes For Aqueous Sodium-ion Batteries

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Daniel Ghobriel, *Computer Engineering***

Faculty Sponsor: Eric Hernandez

Title: Analyzing Thermal Effects on FPGA Performance and Computational Reliability

**11:15AM-11:35AM**

**Ryan Huynh, *Electrical Engineering***

Faculty Sponsor: Ava Hedayatipour

Title: Sensing Safety: Developing a Flexible, Portable Alcohol Detection Patch for Community Wellness

**11:35AM-11:55AM**

**Axel Lopez, *Mechanical Engineering***

Co-Presenter: Joseph Baldry

Faculty Sponsor: Mortaza Saeidi

Title: Highly Stretchable Thermoelectric Generators for Low-Grade Energy Harvesting

**11:55AM-12:15PM**

**Kai Macro, *Biomedical Engineering***

Faculty Sponsor: Perla Ayala

Title: Differentiation of Mouse Myoblast Cells on Fibrin Hydrogels

**Room: LA2-100**

**Friday, February 27, 2026**

**Engineering and Computer Science**

**12:15PM-12:35PM**

**Louai Mimoune**, *Aerospace Engineering*

Co-Presenter: Thomas Bartolotti

Faculty Sponsor: Mortaza Saeidi

Title: Paraffin-Based Hybrid Rocket Fuels Reinforced with Carbon Nanomaterials

**12:35PM-12:55PM**

**Mikaela Miranda**, *Computer Engineering*

Faculty Sponsor: Ga-Young Kelly Suh

Title: Vision-Guided Reinforcement Learning for Cochlear Spiral Navigation During Electrode Insertion

**12:55PM-1:15PM**

**Maro Aziz**, *Biomedical Engineering*

Co-Presenter: Helen Cardenas-Rios

Faculty Sponsor: Siavash Ahrar

Title: Hydra in Flow- Investigating the Flow Response of Hydra via Microfluidics Systems

**1:15PM-1:35PM**

**Cameron Toland**, *Biomedical Engineering*

Co-Presenter: Steven Harris II

Faculty Sponsor: Maricela Maldonado

Title: Engineering a 3D composite scaffold to culture pancreatic  $\beta$ -cell aggregates

**1:35PM-1:55PM**

**Tony Hanna**, *Biomedical Engineering*

Faculty Sponsor: Ga-Young Kelly Suh

Title: Aortic Remodeling due to TEVAR with PETTICOAT Technique to Treat Type B Aortic Dissection

**Room: LA2-104**

**Friday, February 27, 2026**

**Behavioral and Social Sciences**

**9:15AM-9:35AM**

**Miranda Arnold, *Psychology***

Faculty Sponsor: Samar Needham

Title: Cognitive Functioning Partially Mediates the Relationship between Special Education Status and Elevated Anxiety Post-TBI

**9:35AM-9:55AM**

**Adam Bird, *Political Science***

Faculty Sponsor: Charles Mahoney

Title: Terrorism, Transposition, and the Constitutive Outside

**9:55AM-10:15AM**

**Maya Escalante, *Sociology***

Faculty Sponsor: Martha Franco

Title: The Lived Experiences of Second Generation U.S. Born Latinos

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Kathleen Munoz, *Social Work***

Faculty Sponsor: Jonathan Ramirez

Title: Mandated Reporting and Adverse Childhood Experiences: A Critical Race Theory Policy Analysis

**11:15AM-11:35AM**

**Aeron Frye-Jones, *Psychology***

Faculty Sponsor: Guido Urizar

Title: Adverse Childhood Experiences and Romantic Relationship Quality on Perinatal Depression

**11:35AM-11:55AM**

**Mika Muyango, *Africana Studies***

Faculty Sponsor: Keith Claybrook

Title: How Cultural Heritage Understands and Defines Blackness

**11:55AM-12:15PM**

**Alexandra Gryciuk, *Linguistics***

Faculty Sponsor: Sergio Sandoval Sanchez

Title: Can stylistic speech pattern analysis detect differences in political parties?

**Room: LA2-104**

**Friday, February 27, 2026**

**Behavioral and Social Sciences**

**12:15PM-12:35PM**

**Daysia James, *Africana Studies***

Faculty Sponsor: Keith Claybrook

Title: History loss, Identity Lost: The Impact on Identity Development Among African American Adolescence

**12:35PM-12:55PM**

**Sophia Saldana, *Psychology***

Faculty Sponsor: Guido Urizar

Title: Stress and Financial Strain on Maternal Antenatal Attachment

**12:55PM-1:15PM**

**Mariana Ramirez Lemus, *Psychology***

Faculty Sponsor: Araceli Gonzalez

Title: Suicidality Prediction Model Among College Students

**1:15PM-1:35PM**

**Leeaneli Juarez, *Psychology***

Faculty Sponsor: Guido Urizar

Title: Relationship Quality and Parent Gender on Resilience in Early Pregnancy

**Room: LA2-106**

**Friday, February 27, 2026**

**Behavioral and Social Sciences**

**9:15AM-9:35AM**

**Fionn Entus, *Linguistics***

Faculty Sponsor: Rebekha Abbuhl

Title: “Autistic Accent” by Ear: Listener Perception of Autistic Accent

**9:35AM-9:55AM**

**Sage Greenstein, *Criminology and Criminal Justice***

Co-Presenter: Kai Cleveland

Faculty Sponsor: Sarah Taylor

Title: Addressing the Gap: Desired Online Relationship and Sexual Education Content of Emerging Adults

**9:55AM-10:15AM**

**Anna Fejes, *Psychological Research***

Faculty Sponsor: Araceli Gonzalez

Title: Identifying Early Predictors of Key Therapeutic Processes in a Transdiagnostic Brief Behavioral Therapy (BBT) for Youth Anxiety and Depression

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Gianna Giacomotto, *Psychological Research***

Faculty Sponsor: Guido Urizar

Title: Positive Childhood Experiences as a Buffer for Postpartum Depression

**11:15AM-11:35AM**

**Ainsley Nommensen, *Sport, Exercise, and Performance Psychology***

Faculty Sponsor: Jana Fogaca

Title: Internalization of Gender Roles and its Relationship with Body Surveillance and Sense of Belonging Among Female Surfers

**11:35AM-11:55AM**

**Odeta Rivera, *Political Science***

Faculty Sponsor: Rich Haesly

Title: Grassroots Digital Diplomacy as a Form of Narrative Building and Cross-Cultural Communication

**11:55AM-12:15PM**

**Break**

**Room: LA2-106**

**Friday, February 27, 2026**

**Behavioral and Social Sciences**

**12:15PM-12:35PM**

**Jillian Arriola**, *Sport, Exercise, and Performance Psychology*

Faculty Sponsor: Leilani Madrigal

Title: Behind the Brace: Exploring Re-Injury Anxiety, Athletic Identity, and Return to Sport in Female Collegiate Athletes Following ACL Reconstruction

**12:35PM-12:55PM**

**Emily Linstead**, *Anthropology*

Faculty Sponsor: Jeanelle Uy

Title: Examining the Use of Biological Anthropology and the Prevalence of Pelvic Typologies in Obstetrics Education

**12:55PM-1:15PM**

**Mario Salazar**, *Geography*

Faculty Sponsor: Gary Hytrek

Title: Reimagining Housing Development Planning in Altadena, CA, after the Eaton Fire (January 7, 2025 – January 31, 2025)

**1:15PM-1:35PM**

**Emily Siu**, *Psychological Research*

Faculty Sponsor: Arturo Zavala

Title: One-Trial Fentanyl Locomotor Sensitization in Adolescent and Adult Rats

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**Health, Nutrition, and Clinical Sciences**

**9:15AM-9:35AM**

**Maria Alvarez Arriaga**, *Social Work*

Co-Presenter: Kristen Gmerek

Faculty Sponsor: Rashida Crutchfield

Title: Rio Hondo College HOPE Scholars Evaluation

**9:35AM-9:55AM**

**Olivia Amalfitano**, *Community Health Education*

Faculty Sponsor: Judy Jou

Title: From Needs to Action: Supporting CSULB Undergraduates

**9:55AM-10:15AM**

**Arianna Burneo**, *Biochemistry*

Faculty Sponsor: Yuan Yu Lee

Title: Bisphenol A-Induced Genotoxicity in Mice Pancreas:  
Evidence from Waterborne Exposure

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Jacklynn Lee**, *Psychology*

Faculty Sponsor: Guido Urizar

Title: Effects of Advanced Maternal Age and Cortisol on Adverse  
Birth Outcomes

**11:15AM-11:35AM**

**Tanjima Rahman**, *Applied Statistics*

Faculty Sponsor: Olga Korosteleva

Title: Evaluating Regression and Machine Learning Models for  
Predicting Progression from Normal Cognition to Mild Cognitive  
Impairment

**11:35AM-11:55AM**

**Hannan Salam**, *Psychological Research*

Faculty Sponsor: Guido Urizar

Title: The Impact of Racial Discrimination and Stress on Adverse  
Birth Outcomes

**11:55AM-12:15PM**

**Chloe Qian Yu Yeap**, *Molecular and Cellular Biology*

Faculty Sponsor: Arturo Zavala

Title: The Effects of Liraglutide, A GLP-1 Receptor Agonist,  
Pretreatment on Methamphetamine Preference in Adolescent Males  
and Female Rats

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Physical and Mathematical Sciences

9:15AM-9:35AM

**Narith Chan**, *Physics*

Faculty Sponsor: Claudia Ojeda-Aristizabal

Title: The electronic transport measurement of Graphene and hexagonal Boron Nitride heterostructure

9:35AM-9:55AM

**Brenda Garcia**, *Biochemistry*

Faculty Sponsor: Paul Buonora

Title: Stereo-controlled Reduction of Ketones Using Biological Systems as Catalysts

9:55AM-10:15AM

**Areen Jain**, *Applied Statistics*

Faculty Sponsor: Olga Korosteleva

Title: Stochastic Lotka-Volterra Dynamics in Macroeconomics: A Bounded Goodwin Wage-Employment Cycle

10:15AM-10:55AM

**Break + Evacuation Drill**

10:55AM-11:15AM

**Dorsa Kamyab**, *Molecular cell biology and physiology*

Faculty Sponsor: Fangyang Tian

Title: Directed Control of PCN-222(Fe) Crystal Morphology Through Systematic Synthesis Modulation

11:15AM-11:35AM

**Sabrina Kramer**, *Mathematics*

Faculty Sponsor: Jeffrey Pair

Title: Multilingual Proof-Writing Groups

11:35AM-11:55AM

**Chi Vo**, *Computer Science*

Faculty Sponsor: Laurie Huning

Title: Unraveling Drought Propagation Uncertainty Across Forested Biomes

11:55AM-12:15PM

**Om Lala**, *Applied Statistics*

Faculty Sponsor: Olga Korosteleva

Title: Bayesian vs Frequentist Analysis of Parkinson's Disease Diagnosis

**Interdisciplinary**

**12:15PM-12:35PM**

**Break**

**12:35PM-12:55PM**

**Sarvenaz Dirakvand, *Information Systems***

Faculty Sponsor: Mostafa Amini

Title: Design and Evaluation of an AI-Assisted Clinical Documentation System for Physical Therapy Using Large Language Models

**12:55PM-1:15PM**

**Edgar Villasano, *Earth Science***

Faculty Sponsor: Benjamin Hagedorn

Title: HydroOHS – An Optimized Hydrograph Separation Algorithm For Baseflow- And Quickflow Estimation From High Resolution Streamflow And Specific Conductance Data

**1:15PM-1:35PM**

**Coryn Bray, *Environmental Science and Policy***

Faculty Sponsor: Heather Barker

Title: Gray to Green: Biophilic Designs for the Present

**1:35PM-1:55PM**

**Taiyo Hayashi, *Mathematics***

Faculty Sponsor: Hui Sun

Title: Phasefield Modeling of Bacterial Colony Formation with Multigrid Method and GPU Acceleration

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Physical and Mathematical Sciences

9:15AM-9:35AM

**Lauren McWilliams**, *Biochemistry*

Faculty Sponsor: Deepali Bhandari

Title: Employing a Click-Chemistry-Based Approach to Investigate Protein Targets of Aspirin in Colonic Organoids

9:35AM-9:55AM

**Jessica Chon**, *Applied Statistics*

Faculty Sponsor: Hojin Moon

Title: Early Detection of Ovarian Cancer using miRNA Biomarkers via Machine Learning Methods

9:55AM-10:15AM

**Truc Hoang**, *Applied Statistics*

Faculty Sponsor: Seungjoon Lee

Title: Rare Defect Detection in High-Dimensional Manufacturing Data: A Comparative Study of Feature Reduction and Oversampling Methods Using SECOM

10:15AM-10:55AM

**Break + Evacuation Drill**

10:55AM-11:15AM

**Nicholas Januario**, *Geology*

Faculty Sponsor: Benjamin Hagedorn

Title: A Framework Tool for Identifying Gauge Sites with Multiple Hydrologic Variables in Undisturbed Watersheds

11:15AM-11:35AM

**Tanner Massimino**, *Physics*

Faculty Sponsor: Thomas Klaehn

Title: Probing Extreme Matter: The Interacting Hadron Resonance Gas Model

11:35AM-11:55AM

**David Morales-Zapien**, *Physics*

Faculty Sponsor: Prashanth Jaikumar

Title: G-Objects as Primordial Black Hole-Neutron Star Remnants: Population Modeling and Multi-Wavelength Observables

11:55AM-12:15PM

**Matthew Murnane**, *Applied Statistics*

Faculty Sponsor: Laurie Huning

Title: A Novel Probabilistic Approach to Estimating Rain-on-Snow Events Triggering Snowpack Loss

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Physical and Mathematical Sciences

12:15PM-12:35PM

**Joy Seo**, *Biochemistry*

Faculty Sponsor: Katarzyna Slowinska

Title: Introducing Cysteine-Containing Tripeptides into Synthetic Collagen-Like Polymers for Disulfide-Bond Driven Crosslinking

12:35PM-12:55PM

**Elliott Sutter**, *Pure Mathematics*

Faculty Sponsor: Joshua Sack

Title: Quaternionic Quantum Theory

12:55PM-1:15PM

**Rio Bungalon**, *Pure Mathematics*

Faculty Sponsor: Ryan Blair

Title: Wirtinger Number on Knots and Zero Forcing Number on Diagraphs

1:15PM-1:35PM

**Nicolas De Brouwer**, *Electrical Engineering*

Faculty Sponsor: David Lee

Title: Orbital Mirror Terraforming of Extreme Latitudes

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**Education**

**9:15AM-9:35AM**

**Julio Aguirre Ortiz**, *Consumer Affairs*

Faculty Sponsor: Kimberly Kelly

Title: Scaffolding Parent-Child Science Talk

**9:35AM-9:55AM**

**Bethanie Ceja**, *Mathematics for Educators*

Faculty Sponsor: Pavneet Kaur Bharaj

Title: Visual and Symbolic Representations in Fraction Instruction: Insights from Mathematics Teacher Education Lecturers

**9:55AM-10:15AM**

**Jenna Ersheid**, *Liberal Studies*

Faculty Sponsor: Pavneet Kaur Bharaj

Title: Questioning Practices of Elementary Preservice Teachers in Virtual Teaching Simulations

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Michael Pile**, *Educational Leadership Development*

Co-Presenter: Rachelle McClendon-Alexander

Faculty Sponsor: Devery Rodgers

Title: Coalition-Building Through Affinity: A Case Study of Black Graduate Student Success

**11:15AM-11:35AM**

**Loren Thompson**, *Psychology*

Faculty Sponsor: Joan Fisher

Title: Learning Models and Diverse Student Needs

**11:35AM-11:55AM**

**Break**

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**Business, Economics, and Public Administration**

**11:55AM-12:15PM**

**Keanu Hua, *Applied Statistics***

Faculty Sponsor: Olga Korosteleva

Title: The Community College Bachelor's Degree in Nursing: Local Effect on Degrees Awarded

**12:15PM-12:35PM**

**Shakhzoda Khodjakhonova, *Finance***

Co-Presenter: Ngan Nguyen

Faculty Sponsor: Laura Gonzalez

Title: Understanding Lender Behavior in AI-Enriched Pro-Social Peer-to-Peer Lending Platforms with Community Language

**12:35PM-12:55PM**

**Giovanni Sciacqua, *Italian***

Co-Presenter: Yashaira Gonzalez-Ledesma

Faculty Sponsor: Claudia Barrulas Yefremian

Title: Research Case

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**Humanities and Letters**

**9:15AM-9:35AM**

**Jordan Gallardo, *History***  
Faculty Sponsor: Jane Dabel  
Title: Chavez Ravine: DisPLacement

**9:35AM-9:55AM**

**Emma Gonzales, *Philosophy***  
Faculty Sponsor: Kavitha Koshy  
Title: Gender Games: Making Sense of Trans Sport Through Walton's Philosophy of Fiction

**9:55AM-10:15AM**

**Yesenia Gonzalez, *Classical Studies***  
Faculty Sponsor: Debby Sneed  
Title: The Reality and Rhetoric of Roman Cosmetics

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Nicole Gregg, *Anthropology and Human Development***  
Faculty Sponsor: Stacy Macias  
Title: Latina Lesbian Lineages

**11:15AM-11:35AM**

**Charlotte Hamilton, *History***  
Faculty Sponsor: Jane Dabel  
Title: "Cowhides, Fire, and Death": The 1881 Atlanta Washerwoman Strike in the Atlanta Constitution

**11:35AM-11:55AM**

**Naomi Liller, *History***  
Faculty Sponsor: Andrew Fogleman  
Title: Peeling Back The Colonial Legacy of The United Fruit Company in Latin America and The Caribbean

**11:55AM-12:15PM**

**Sophia Martinez, *Political Science***  
Co-Presenter: Isaac Obert  
Faculty Sponsor: Debito Beamer  
Title: The Politics of Conspiracy Theories

**Humanities and Letters**

**12:15PM-12:35PM**

**Thai Butterfield**, *Religious Studies*

Faculty Sponsor: John Becker

Title: Tonantzin–Guadalupe: A "Nepantla" of Colonial Hegemony and Indigenous Epistemology in Luis Laso de la Vega's "Nican mopohua," 1649

**12:35PM-12:55PM**

**Mei Ikeda**, *History*

Faculty Sponsor: Andrew Fogleman

Title: Nagano Female Silk Workers: Embodying Inakanoko (Child of Countryside Periphery) in Rural Industrialization in Japan

---

**Biological and Agricultural Sciences**

**9:15AM-9:35AM**

**Rami Al Harastani**, *Biology*

Faculty Sponsor: Bryan Rourke

Title: Environmental variation in myosin isoform expression in coyotes

**9:35AM-9:55AM**

**Jo Ann Derrick**, *Molecular Cell Biology*

Faculty Sponsor: YuanYu Lee

Title: Deciphering domain-specific interactions of endocrine disruptor bisphenol A with the human androgen receptor

**9:55AM-10:15AM**

**Alan Chau**, *Molecular Biology & Physiology*

Faculty Sponsor: Jennifer Johnston

Title: Production of CRISPR/Cas9 Tools for the Deletion of C1q in Thp-1 cells

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Luci Herrera-Lopez**, *Cellular, Molecular, Physiological Biology*

Faculty Sponsor: Benjamin Perlman

Title: What's the point?: barb morphology of the Round Stingray (*Urobatis halleri*)

**11:15AM-11:35AM**

**Aatika Anis**, *Biochemistry*

Faculty Sponsor: Vasanthi Narayanaswami

Title: Isoform-Specific Effects of Apolipoprotein E on Cholesterol Regulation and Tight Junction Integrity in the Blood–Brain Barrier

**11:35AM-11:55AM**

**Break**

**11:55AM-12:15PM**

**Keira Spiller**, *Marine Biology*

Faculty Sponsor: Benjamin Perlman

Title: Holy Sheep! Assessing the Effects of Marine Protected Areas on California Sheephead and Crowned Sea Urchin Population Structures on Santa Catalina Island, CA

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**Biological and Agricultural Sciences**

**12:15PM-12:35PM**

**Guinness Ng**, *Biology, Cell Molecular Biology and Physiology*

Faculty Sponsor: Houng-Wei Tsai

Title: How Sex, Aging, and Androgen Receptors Shape Social Behavior in Mice

**12:35PM-12:55PM**

**Amber Peek**, *Biochemistry*

Faculty Sponsor: Deepali Bhandari

Title: Salicylate Treatment Activates IRE1 Signaling in Colorectal Cancer

**12:55PM-1:15PM**

**Alexandra Fernandes**, *Biology*

Faculty Sponsor: Jiae Lee

Title: Identifying proteomic biomarkers candidates enriched in STING-dependent extracellular vesicles from malignant tumors in *Drosophila melanogaster*

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**Humanities and Letters**

**9:15AM-9:35AM**

**Zack Medway, *English***

Faculty Sponsor: Erin Caron

Title: Feminism and Fun in Fornes's Avant-Garde "Fefu and Her Friends"

**9:35AM-9:55AM**

**Eileen Parslow, *English***

Faculty Sponsor: Neil Hultgren

Title: "That Sense of Loneliness": Ambition, Isolation, and the Constrictions of Small-Town Life in George Eliot's Middlemarch

**9:55AM-10:15AM**

**Liz Sato, *Philosophy***

Faculty Sponsor: Marie Jayasekera

Title: Thomas Reid's conception of reason and moral sense

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Nathan Wagester, *Philosophy***

Faculty Sponsor: Kyle Banick

Title: Independence, Infinity, and the Breakdown of General Propositions in Wittgenstein's Tractatus

**11:15AM-11:35AM**

**Mikayla Winfery, *History***

Faculty Sponsor: Keith Claybrook

Title: Samurai and Sambo: American Cultural Imperialism and the Diffusion of Anti-Blackness into East Asia

**11:35AM-11:55AM**

**Oliver Di Martino, *Philosophy***

Faculty Sponsor: Cory Wright

Title: Was I Ever a Zygote?

**11:55AM-12:15PM**

**Jamie Carmichael, *Philosophy***

Faculty Sponsor: Per Milam

Title: Stop Expressing Blame

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Humanities and Letters

12:15PM-12:35PM

**Fiona Eustace**, *English*

Faculty Sponsor: Neil Hultgren

Title: Beneath the Quakerish Mrs. Casaubon: A Woman of Desire—  
Visual Art and Feminine Identity in George Eliot’s Middlemarch

12:35PM-12:55PM

**Lancy Lopez**, *Philosophy*

Faculty Sponsor: Cory Wright

Title: Intervening on Autonomy Interferences: Paternalistic Bald-  
Faced Lies

12:55PM-1:15PM

**Samuel King**, *Geography*

Faculty Sponsor: Lily House-Peters

Title: “From the American People”: USAID Aid Exit in Zambia and  
the Retrenchment of U.S. Soft Power

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**Engineering and Computer Science**

**9:15AM-9:35AM**

**Sebastian Carrillo**, *Mechanical Engineering*

Co-Presenter: Jeong Gyu Lee

Faculty Sponsor: Anna Lee

Title: Cavity –Assisted Plasmonic Amplification via TiO<sub>2</sub> Spacer-Controlled Resonance Coupling

**9:35AM-9:55AM**

**Zahra Darestani**, *Chemical Engineering*

Co-Presenter: Khin Nyein Chan

Faculty Sponsor: Sergio Mendez

Title: Optimization of Anaerobic Digestion of Food Waste with Aspen Plus® Simulations

**9:55AM-10:15AM**

**Rishit Goel**, *Information Systems*

Co-Presenter: Neha Rajesh Vedak

Faculty Sponsor: Deepti Singh

Title: NeuroPhish: Measuring LLM Susceptibility to Psychological Manipulation in Cybersecurity Decision Support

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Lizbeth Herrera-Cuen**, *Mechanical Engineering*

Co-Presenter: Isis Solis

Faculty Sponsor: Mortaza Saeidi

Title: Graphene-based Antifouling Coatings for Naval Applications

**11:15AM-11:35AM**

**Break**

**11:35AM-11:55AM**

**Steve Maldonado Melendez**, *Mechanical Engineering*

Faculty Sponsor: Tarian Liu

Title: Towards Generalized Immunity Against System Perturbations

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Engineering and Computer Science

11:55AM-12:15PM

**Saad Abdullah Malik**, *Aerospace Engineering*

Faculty Sponsor: Mortaza Saeidi

Title: Multifunctional Cementitious Nanocomposites for Self-Sensing Applications

12:15PM-12:35PM

**Aaron Gunawardena**, *Biomedical Engineering*

Co-Presenter: Ulises Velasco

Faculty Sponsor: Derek Hu

Title: Identifying Early Biomarkers of Treatment Response in Lennox-Gastaut Syndrome Using EEG Functional Connectivity

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**Creative Arts and Design**

**9:15AM-9:35AM**

**Caleb Cohen**, *Human Factors*  
Co-Presenter: Polo Zahir-Rodriguez  
Faculty Sponsor: Sam Anvari  
Title: Designing Multimodal Takeover Requests for  
Semiautonomous Driving

**9:35AM-9:55AM**

**Elise James**, *Instrumental Music Education*  
Faculty Sponsor: Jennifer Olson  
Title: A Contemporary Lens on Compositions for the Modern Flute  
Player: The Benefits of Extended Techniques

**9:55AM-10:15AM**

**Samuel Mercado**, *Human Factors Engineering*  
Co-Presenter: Shelby Trainor  
Faculty Sponsor: Sam Anvari  
Title: Effects of Weather and Interface Contrast and Simulated  
Driving

**10:15AM-10:55AM**

**Break + Evacuation Drill**

**10:55AM-11:15AM**

**Alexander Homami**, *Music Composition*  
Faculty Sponsor: Adriana Verdie de Vas-Romero  
Title: A Cultural and Compositional Exploration of Iranian  
Traditional Music

**11:15AM-11:35AM**

**Arturo Solorio**, *Cinematic Arts*  
Faculty Sponsor: Susan Bloom  
Title: TAPS

**11:35AM-11:55AM**

**Break**

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Engineering and Computer Science

11:55AM-12:15PM

**Shibi Rahul Senthilkumar**, *Computer Science*

Faculty Sponsor: Basit Ur Rahim

Title: Multi-Agent AI system for Code Vulnerability Detection and Auto-Remediation in Python

12:15PM-12:35PM

**Abhay Kaushik Nudurupati**, *Aerospace Engineering*

Faculty Sponsor: Surajit Roy

Title: Ultrasonic Wave Propagation Enhancement in Polymer Composites Through Hybrid Carbon Nanotube–Copper Oxide Nanoengineering

12:35PM-12:55PM

**Aaditya Ojha**, *Civil Engineering*

Faculty Sponsor: Shadi Saadeh

Title: Enhancing Durability and Interfacial Bonding in Rubberized Asphalt Composites Using Waste-Based Additives

12:55PM-1:15PM

**Anuja Sawant**, *Computer Science*

Faculty Sponsor: Abdul Basit

Title: Using Automated Test Generation for Lightweight Architectural Validation

1:15PM-1:35PM

**Fahim Maksud Shaikh**, *Chemical Engineering*

Faculty Sponsor: Sergio Mendez

Title: Development of a Supercritical Water Treatment Method to Address the Problems with Disposing of Sewage Sludge at the Orange County Sanitation District



## Special Thanks

### Committee

Chelsea Acevedo, Elyzza Aparicio, Noah Barrera, Jo Ann Derrick, Sage Greenstein, Daniela Martinez, Victoria Min, Jackie Morales, Ammisha Opoku-Boamah, Dina Perrone, Bryan Skorka, Barbara Taylor, Kristine Torres, Sarah Velasco

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### Jurors

Juror names are not revealed, they are sent a special thanks and signed certificate from Interim Associate Vice President of Research and Sponsored Programs,  
Dr. Barbara Taylor

