

**APRIL 24, 2020**

**34TH ANNUAL**

**CSU**

**STUDENT  
RESEARCH  
COMPETITION**

**@ CAL STATE EAST BAY**

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## ***Event Schedule***

**Friday April 24, 2020**

<b>12:00pm-2:30pm</b>	Sessions: 1, 3, 5, 7, 9, 11, 13, 15, 17, 20
<b>3:00pm-5:30pm</b>	Sessions: 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21

2020

**A Message from Dr. Timothy P. White, Chancellor**  
*California State University*



As the chancellor of the California State University, it is my pleasure to welcome you to the online home of the 34<sup>th</sup> annual CSU Student Research Competition.

Thank you to the competition's organizers at Cal State East Bay and throughout the CSU, whose quick and creative action ensured that this highly anticipated competition could move forward, despite the fact that we could not physically gather together.

The weeks leading up to this competition have undoubtedly tested us all, demanding adaptability, ingenuity, and resolve. These challenging and unprecedented times have powerfully underscored the value and vitality of California State University's research and creative activities.

As we face the COVID-19 pandemic together, we look to the sciences and technology for answers, we aim to understand the far-reaching and long-lasting societal and economic implications of new policies, and we celebrate our fundamental, shared human experience through the arts.

Thank you to all of this year's competitors for your dedication to pursuing research and creative activities in a wide array of fields, across all 23 CSU campuses. Congratulations on being selected from a deep and talented applicant pool to participate in this rigorous and respected competition. Your projects are worthy representations of the groundbreaking work conducted across the CSU that makes a difference in our communities, our state and our world.

In the future, whether you decide to continue your research and creative endeavors or transition into industry, your experiences at this competition, where you present before peers and receive feedback from professionals, will benefit you in innumerable ways.

My deep appreciation also goes to the faculty and staff at each of our campuses, who mentor and encourage students in their research and creative pursuits. You are developing a new generation of leaders and innovators, whose lights shine brightly and who are spreading hope when we need it most.

Congratulations to all, and best of luck to this year's competitors.

Sincerely,

A handwritten signature in black ink that reads "Timothy P. White". The signature is written in a cursive, flowing style.

Timothy P. White  
Chancellor

**A Message from Dr. Leroy M. Morishita**  
*President, Cal State East Bay*



On behalf of Cal State East Bay, I am pleased to welcome you to the 34th Annual California State University Student Research Competition. To be selected to present in this prestigious event is an honor and I congratulate each of you for representing your university.

During the competition, I encourage you to take a moment to reflect on your achievement as a student researcher. The experience you have gained, whether in the field or inside the classroom or lab, has provided you with new skills or may have helped clarify your eventual career path. Some of you may have experienced unexpected or surprising results from your investigations. No matter what the outcome, the process of academic inquiry is an invaluable exploration into your journey as a critical, analytical and independent thinker.

In addition, take time to be inspired by the work of your fellow competitors and team members. Perhaps you will have an opportunity to watch a presentation in a discipline unfamiliar to you or learn about a methodology you can adapt to your own research. The CSU Student Research Competition is about celebrating your achievements as student researchers and I am proud Cal State East Bay is the host for such an important and significant event in your academic career.

Thank you to everyone attending the CSU Student Research Competition, including the judges who have taken the time to participate. I hope each of you finds the experience rewarding, informative and inspirational.

Please use this link to access President [Morishita's video welcome](#) to the Competition.

**A Message from Dr. Edward Inch**  
**Provost and Vice President for Academic Affairs, *Cal State East Bay***



On behalf of the California State University System, we are pleased to welcome you to the Annual CSU Research Competition at Cal State East Bay. This is the 34<sup>th</sup> year of this event, which celebrates student accomplishments in research and creative activities. It is a very exciting time and one that unites all of us in recognizing the importance of research and creative endeavors to student learning, faculty teaching, and engaging our communities in the pursuit of knowledge.

I want to thank all of the faculty who have worked with their students to guide, mentor, and support them as they move forward toward producing their work. The research and creative presentations we will see today are a hallmark of our University System, which at its core, hopes to produce critical thinkers, lifelong learners, creative professionals, and engaged citizens. The CSU is known for its work in providing rigorous, hands-on learning experiences that help change lives both on the campus and in the community. The unique opportunities our faculty provide their students are key to their development both intellectually and personally. We are very grateful to the dedicated faculty and staff who make this growth possible.

To the students here today: You are among our best and brightest! We salute you for the extra effort you have put into trying something new, researching a topic you want to know more about, or creating something that ignites your passion. You have also gone the extra mile and shaped your work into a presentation from which others may learn and contemplate new perspectives. We hope that some of you will consider becoming our faculty of the future. We know that all of you will continue to make significant contributions to the learning of others, and help shape the future of California. You are the thought-leaders of tomorrow. Congratulations on making it to this competition. I wish you luck with your projects.

For all of us in the California State University System, this is a premier event that gives us the opportunity to pause and admire the great work being done at every campus to encourage research and creative expression. Hats off to all who helped to organize this event, are participating today, and have come to our beautiful campus. Welcome, we hope you enjoy the great competition.

## *Session Overview*

Session 1	<b>Behavioral and Social Sciences</b> Undergraduate	Session 12	<b>Engineering and Computer Science</b> Undergraduate
Session 2	<b>Behavioral and Social Sciences</b> Undergraduate	Session 13	<b>Engineering and Computer Science</b> Graduate
Session 3	<b>Behavioral and Social Sciences</b> Graduate	Session 14	<b>Education</b> Graduate
Session 4	<b>Behavioral and Social Sciences</b> Undergraduate and Graduate	Session 15	<b>Health, Nutrition, and Clinical Sciences</b> Undergraduate
Session 5	<b>Biological and Agricultural Sciences</b> Undergraduate	Session 16	<b>Health, Nutrition, and Clinical Sciences</b> Undergraduate and Graduate
Session 6	<b>Biological and Agricultural Sciences</b> Undergraduate	Session 17	<b>Humanities and Letters</b> Undergraduate
Session 7	<b>Biological and Agricultural Sciences</b> Graduate	Session 18	<b>Humanities and Letters</b> Undergraduate and Graduate
Session 8	<b>Biological and Agricultural Sciences</b> Undergraduate and Graduate	Session 19	<b>Interdisciplinary</b> Undergraduate and Graduate
Session 9	<b>Business, Economics, and Public Administration</b> Undergraduate and Graduate	Session 20	<b>Physical and Mathematical Sciences</b> Undergraduate
Session 10	<b>Creative Arts and Design</b> Undergraduate and Graduate	Session 21	<b>Physical and Mathematical Sciences</b> Graduate
Session 11	<b>Engineering and Computer Science</b> Undergraduate		

## *Sessions*

*\*Please note: Presentations that are crossed out represent students who, unfortunately, had to withdraw from the Competition due to various constraints imposed upon them by the Competition's last-minute pivot to an online format (in response to COVID-19 social gathering restrictions). We recognize and thank these students for their great efforts, understand their need to withdraw from the Competition, and last, encourage them to find another opportunity to share their work with others!*

### **Session 1 12-2:30pm**

**Friday, April 24, 2020**

#### **Behavioral and Social Sciences Undergraduate**

- 12:05 PM** **Nicole Bernal, Jeremy Alexander, CSU Channel Islands**  
Appropriating Without Earmarks: Institutional Reform and the Law of Unintended Consequences
- 12:15 PM** **Saray Valenzuela Jaime, CSU Dominguez Hills**  
A mindful approach to improving work performance among college students
- 12:25 PM** **Beda Castillo, CSU Long Beach**  
The Under and Over Management of Nepali Domestic workers
- 12:35 PM** **Sarah Hwang, CSU Northridge**  
Leveraging Augmented Reality to Promote Mental Health Outcomes in Aging Asian Americans
- 12:45 PM** **Kianna Avilez, CSU San Marcos**  
Effectiveness of Bilingual Instruction Training at Sustaining a Strong Bilingual Teacher Identity

**12:55 PM** **Mary Vardh, Arlena Liryce Gavino, *CSU Stanislaus***  
Informing the Need for Critical Thinking in Mathematics

**1:05 PM** **Sarah Holden, *Humboldt State***  
A Symbol of Hope: An Ethnographic Analysis of Religion and Disaster following the Camp Fire

**1:15 PM** **Christopher Everett, Rowan Graening, *Sonoma State***  
The Orthographies of Coast Miwok

**Session 2**  
**3-5:30pm**

**Friday, April 24, 2020**

**Behavioral and Social  
Sciences**  
Graduate

**3:05 PM** **Madison Tinsley, *Sonoma State***  
Aesthetic Resistance: The Paintings of the Native American Occupation of Alcatraz Island

**3:15 PM** **Arely Saldana, *CSU Chico***  
Pre-Trial Media and Passive Voice: Effects of Mock Jury Decision Making

**3:25 PM** **Margott Dela Cruz, Gabrielle Makrdichian, Yadira Ramirez, Ceferino Vinas, *CSU Dominguez Hills***  
www.fakenews.you: Cognition's Influence on People's Reactions to False Internet Information

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**3:35 PM** ~~Weng Kei (Crystal) Loke, CSU Monterey Bay~~  
~~Does knowledge lead to wiser decision making? The role of awareness of green certifications, willingness to tradeoff in influencing sustainable hotel booking decisions.~~

**3:45 PM** **Kevin Ramirez, CSU Northridge**  
Salvadoran Child Soldiers: Their Motives for Emigrating to the United States (1980-1985)

**3:55 PM** **Kyra Terry, CSU San Marcos**  
Increasing Identification with Computer Science While Sustaining Gender Identity among High School Girls

**4:05 PM** **Danielle Simpson, CSU Stanislaus**  
Examining the Relationship Between Physical Activity and Cognitive Function in Older Adults

**4:15 PM** ~~Bianca Valencia Barraza, Sonoma State~~  
~~The Lived Experience of the Latinx Formerly Incarcerated in Latinx Communities~~

**Session 3**  
**12-2:30**

**Friday, April 24, 2020**

**Behavioral and Social  
Sciences**  
Graduate

**12:05 PM** **Kyle Palazzolo, CSU Chico**  
When Mortars Speak Volumes: Assessing the Influence of Mortar Cavity Size on Processing Efficiency

**12:15 PM** **Irene Gonzalez-Herrera, Humboldt State**

Bully-victimization, depression, and school connectedness in early adolescent students

- 12:25 PM** **Jason Sanchez**, *Cal State LA*  
Biological Father vs. Father Figure Involvement: Mental Health Implications
- 12:35 PM** **Rachel Windsor**, *San Jose State*  
The Moderating Effects of Gender and Occupation on Age Discrimination in Hiring
- 12:45 PM** **Taylor Doty**, *CSU Northridge*  
Reading between the lines: The effects of reading in virtual reality and other mediums on the visual system
- 12:55 PM** **Elizabeth Rahmani, Holly Timblin**, *CSU San Bernardino*  
The Mediating Role of Leisure Activities on the Relationship Between Depressive Symptoms and Cognitive Functioning in Individuals with Parkinson's Disease
- 1:05 PM** **Amy Verneti, Hilary Vedder, Kathy Nguyen, Jasmine Okamoto**, *CSU Dominguez Hills*  
Through the lens of veterans with symptoms of Post-Traumatic Stress Disorder (PTSD): The impact on perceived quality of life
- 1:15 PM** **Ivette Lorona**, *San Diego State*  
The Right to Health Care: Central American Asylum Seekers Passing Through the Mexico-Guatemala Border Region
- 1:25 PM** **Benjamin Holt**, *San Francisco State*  
Marijuana Misinformation: History, Modern Myths, and Current Research Issues

**1:35 PM** **Carrie Tully, Cody Henrikson, Humboldt State**  
Imagining an Indigenized Campus

**Session 4**  
**3-5:30pm**

**Friday, April 24, 2020**

**Behavioral and Social  
Sciences**  
Graduate

**3:05 PM** **Cesar Contreras, Abraham Bahlibi, Cal State East Bay**  
The Role of Race and Gender in Salary Negotiations

**3:15 PM** **Jacob Richardson, CSU Bakersfield**  
Affirmative Consent Policy and Conceptualization of Consent for Gay Men

**3:25 PM** **Dylan Serpas, CSU Fullerton**  
Group cognitive rehabilitation for community-dwelling survivors of traumatic brain injury

**3:35 PM** **Tatev Sarkissyan, Cal State LA**  
Perceptions of Victims of Childhood Physical and Sexual Abuse

**3:45 PM** ~~**Jennifer Shaver, CSU Sacramento**~~  
~~Queer Community in Christian Churches~~

**3:55 PM** **Ciara Emery, Humboldt State**  
Bringing climate change home to meet your viewshed: stakeholder perceptions of offshore wind energy in Humboldt County, California

**4:05 PM** **Melanie Nicholls, San Diego State**  
Homeless and Polysubstance Use: A Qualitative Study on Treatment Access Solutions

**4:15 PM** **Laura Lu, San Francisco State**  
Early adversity and young adult coping efficacy are associated with election-related distress in an ethnically diverse sample of young adults

**4:25 PM** **Sovannie Len, San Jose State**  
In This Global, Multicultural World: Juggling Cultural Identities and Racial Microaggressions

**4:35 PM** **Cassie Mingoia, Kallie Miller, Elisabeth Lawson, CSU Dominguez Hills**  
Maneuvering the Minefield: The Lived Experience of Dating for Individuals with Congenital Disabilities

**4:45 PM** **Rosa Hunt, CSU San Marcos**  
Was it you, the other Zazz, or that Flurp? Children's Moral Evaluation of Self-Serving and Prosocial Lies in the Context of Social Groups.

**Session 5**  
**12-2:30pm**

**Friday, April 24, 2020**

**Biological and Agricultural Sciences**  
Undergraduate

**12:05 PM** **Mica Cabrera, Cal State East Bay**  
Exploring Antioxidant Capacity in Green Tea Dependent on Types of Water

- 12:15 PM** ~~**Angelica Zavala, Heather Artinian, CSU Channel Islands**~~  
~~Engineering Drought Tolerant Plants via Small Intrinsically Disordered Proteins~~
- 12:25 PM** **Kallie Griffin, CSU Chico**  
Novel Antagonist of Growth Receptor-Bound Protein-2 (GRB2) Inhibits Proliferation of Chronic Myeloid Leukemia (CML) Cells
- 12:35 PM** **Ann Lobo, CSU Dominguez Hills**  
Assessing the function of genes involved in aromatic compound metabolism in  $\neg$ Escherichia coli survival
- 12:45 PM** **Elizabeth Hitch, CSU Fullerton**  
Determining the role of linker regions in Polypyrimidine Tract Binding Protein 2 neuronal splicing regulation
- 12:55 PM** **Nicholas Heyer, CSU Monterey Bay**  
Development of New Genomic Tools and Discovery of Novel Alleles in Human-Specific Paralogs of NOTCH2NL Genes, Associated With Neurodevelopmental Disorders
- 1:05 PM** **Ayesha Shabbir, CSU Sacramento**  
Optimization of reversion assay to elucidate gene amplification mutation in Acinetobacter baylyi
- 1:15 PM** **Karen Ngo, CSU San Marcos**  
Aggregation of HEK 293 Tumorigenic Cell Line Using Sound Waves of Varying Frequencies
- 1:25 PM** **Arleigh Earnest, Garrett Bozzo and Omar Fernandez, CSU Stanislaus**  
Population Dynamics of Red Hills Roach in Relation to Rainfall and Pool Volume

**1:35 PM** **Ana Gomez Ramirez, San Diego State**  
Analyzing trophic structure of island ecosystems using stable isotopes: what is the role of nutrient subsidies from seabird nesting and foraging behavior?

**1:45 PM** **Michael Academia, Humboldt State**  
Food Provisioning, prey composition, and nesting success of Ospreys in Northwestern California

**Session 6**  
**3-5:30pm**

**Friday, April 24, 2020**

**Biological and Agricultural  
Sciences**  
Undergraduate

**3:05 PM** **Chase Baker and Chase Khedmatgozar, CSU Channel Islands**  
Screening the Effects of Brain Targeting Compounds on a Multisensory Behavioral Assay in *C. elegans*.

**3:15 PM** **Natalie Shink, CSU Channel Islands**  
Investigation of Neuropeptides and their Receptors in mediating multi-sensory behavior in *C. elegans*

**3:25 PM** **Claire Monahan, CSU Chico**  
Post-Fire Regeneration of Common California Foothill Woody Plants

**3:35 PM** **Devon Lee, CSU Fresno**  
Particulate Matter Composition as a Determinant of Subcellular ROS Production

- 3:45 PM**     **Jordan Thompson, CSU Fullerton**  
Investigation of amino acid and dipeptide inhibitors for botulism
- 3:55 PM**     **Lillian Murphy, CSU Sacramento**  
Exposure to Hydroxylated Polybrominated Diphenyl Ethers (PBDEs)  
Impairs Axon Pathfinding in Wild Type Drosophila
- 4:05 PM**     ~~**Yesenia Mora, CSU San Marcos**~~  
~~The Effect of "Wing-Flashing" Behavior on Prey Capture Efficiency in~~  
~~San Clemente Loggerhead Shrikes~~
- 4:15 PM**     **M. Gohazrua Butler, Humboldt State**  
Transgenic zebrafish labeling chloride transporters, key regulators of  
brain activity and behavior.
- 4:25 PM**     **Chynna Bowman, San Diego State**  
Using Transmission Electron Microscopy to investigate the effect of  
pulsed 450 nm blue light on methicillin-resistant Staphylococcus  
aureus
- 4:35 PM**     **Ariel Moline, Cal State East Bay**  
How does the developmentally regulated enzyme,  
Glucose-6-Phosphate Isomerase, contribute to stage conversion during  
Toxoplasma pathogenesis?
- 4:45 PM**     **Jeffrey Jones, San Diego State**  
Examining the role of High Mobility Group Box 1 (Hmgb1) in  
cardiomyocyte senescence

**Session 7**  
**12-2:30pm**

**Friday, April 24, 2020**

**Biological and Agricultural  
Sciences**

Graduate

- 12:05 PM** **Lelyzaveta Slarve**, *Cal Poly Pomona*  
Effects of Type II Diabetes Mellitus on Pharmacokinetics of Liposomal Amphotericin B in Mice
- 12:15 PM** **Kat Ivey**, *Cal Poly San Luis Obispo*  
Thermal Ecology of the Federally Endangered Blunt-nosed Leopard Lizard (*Gambelia sila*)
- 12:25 PM** **Apoorva Karekai**, *San Jose State*  
Development of an optogenetic method to stimulate gamma motor neurons in vitro
- 12: 35 PM** **Leandra Boodoo**, *CSU Chico*  
Bat Presence and Foraging Patterns over California Vernal Pools: The Pilot
- 12:45 PM** **Anna Costanza**, *San Francisco State*  
Participatory risk assessment of humpback whale (*Megaptera novaeangliae*) and leatherback turtle (*Dermochelys coriacea*) bycatch in Northern Peru
- 12:55 PM** **Edwin Aguilar**, *CSU Fullerton*  
Exploring the limits of promiscuity of microbial RFAP synthase, a potential target for anti-obesity drug treatment
- 1:05 PM** **John English**, *Cal State LA*  
Effect of Urban Temperature Gradients on Grassland Microclimate



Amelioration and Diversity

- 1:15 PM** **Chloe Welch**, *CSU Sacramento*  
Bisphenol A Exposure Differentially Impairs Neurodevelopmental Phenotypes in Wild-type *Drosophila* and in a *Drosophila* Model of Fragile-X Syndrome
- 1:25 PM** **Erin Trent**, *Humboldt State*  
Detection, Isolation, and Characterization of *Rickettsia* Species Phylotype G022 from *Ixodes pacificus*
- 1:35 PM** **Larissa Smulders**, *CSU Fullerton*  
Boosting cancer therapy by blocking a protein's travel to the cell surface
- 1:45 PM** **Stephanye Frias**, *CSU Chico*  
~~Investigating the Effect of microRNA-375 on Pancreatic Beta-Cell Mass, Proliferation, and Insulin Secretion~~

**Session 8**  
**3-5:30pm**

**Friday, April 24, 2020**

**Biological and Agricultural  
Sciences**  
Graduate

- 3:05 PM** ~~**Kenneth Rangel**~~, **Zuhayr Khan**, *Cal Poly Pomona*  
The Effect of Environmental Enrichment on the Number of NADPH-d Positive Interneurons in the Dentate Gyrus of the Dorsal Rat Hippocampus
- 3:15 PM** **Mykayla Latronica**, *Cal Poly San Luis Obispo*  
Reduction of human pathogens, *E. coli* 0157:H7, *Salmonella* and *Listeria monocytogenes*, in contaminated agricultural soil by glucosinolate hydrolysis products in mustard seed meal

- 3:25 PM** **Jaycie Fickle**, *CSU Bakersfield*  
Xylem structure and hydraulic function in the roots and stems of chaparral shrub species in the Sierra Nevada
- 3:35 PM** **Jacob Ewald**, *CSU Chico*  
Species Boundaries in Two Northern California Monkeyflowers
- 3:45 PM** **Brent Beadell**, *Cal State LA*  
Inhibition of Biofilm Formation of *Pseudomonas aeruginosa* by Human  $\beta$ -Defensin 2 and Cholesteryl Linoleate is Accompanied by Ultrastructural Lesions of the Bacterial Surface
- 3:55 PM** **Ben Chubak**, *CSU Northridge*  
Evaluating the Importance of Reef-Based Resources for Reproduction in a Temperate Reef Fish
- 4:05 PM** **Stephanie Parker**, *CSU Chico*  
Rudimentary Social Behavior and Spatial Distribution of Exuviae of the Gall-Inducing Aphid, *Tamalia coweni*
- 4:15 PM** **Amber Myers**, *CSU Fullerton*  
Characterizing the source and function of lipid droplet accumulation in fly macrophages
- 4:25 PM** **Cassidy Cooper**, *CSU San Marcos*  
The Thermal Physiology and Metabolic Rates of *Archocentrus nigrofasciatus* Acclimated to a Large Daily Temperature Fluctuation Reflects its Success as an Invasive Species
- 4:35 PM** **Melissa Giluso**, *San Diego State*  
Computational Discovery of Novel Bacteriophages in the Human Gut

Metagenome

**4:45 PM** **Ashley Pereira**, *San Francisco State*  
Nitric Oxide Signals in Regulation of Heart Looping in Chicken Embryos

**Session 9**  
**12-2:30pm**

**Friday, April 24, 2020**

**Business, Economics, and  
Public Administration**  
Undergraduate and  
Graduate

**12:05 PM** **Anthony Ponce**, *CSU Bakersfield*  
Water Quality and Economic Growth: Testing the Environmental  
Kuznets Curve for US Counties

**12:15 PM** ~~**Elliot Meme**, *CSU Fresno*~~  
~~An Examination of Ethical Decision Making Differences Between  
Reserve Officer Training Corps and Civilian College Students~~

**12:25 PM** **Manuel Collazo IV**, *CSU Fresno*  
On the Size, Composition, and Impact of the Gig Economy in the U.S.

**12: 35 PM** **Nicholas Roy**, *CSU Long Beach*  
Port Drayage Disruptions

**12:45 PM** **Sarah Ricks**, *CSU Monterey Bay*  
Social Media Use of Mothers in India: Empowering Mother's Spending  
on Children's Education

**12:55 PM** **Austin Tse**, *San Jose State*

Finding Optimal Investment Strategies Using Monte Carlo Simulation

**1:05 PM**     **Cailin Kuchenbecker, Guillermo Marquez**, *Cal Poly Pomona*  
Should Business Faculty Encourage Their Undergraduate Students to Participate in Research?

**1:15 PM**     **Michael Aguilera**, *CSU Dominguez Hills*  
Revealing the hidden risks in gig work: From the perspective of Uber and Lyft drivers

**1:25 PM**     **Edward Zakher**, *CSU San Bernardino*  
A reason to Move; a State-Wide Story

**Session 10**  
**3-5:30**

**Friday, April 24, 2020**

**Creative Arts and Design**  
Undergraduate and  
Graduate

**3:05 PM**     **Briana Stanley**, *CSU Long Beach*  
Natural Disasters: A Visual Dialogue

**3:15 PM**     **Jose Espinoza**, *CSU Dominguez Hills*  
Illustrating Historical Truth Through Visual Research

**3:25 PM**     **Derek Schmidt**, *Cal State East Bay*  
The Folk Music Paradox: The Transformation of European Folk Music Into the Innovation of 20th C. Music

**3:35 PM**     **Elyse Durand**, *CSU Northridge*

Silent Spring: A New Folk Musical

**3:45 PM** ~~**Sarah Bricke**, *CSU San Marcos*~~  
~~Undines at the Salton Sea~~

**3:55 PM** **Jazmine Logan**, *San Francisco State*  
Yoruba Theater in the UC and CSU Campus: Analyzing the Pedagogy  
of West African Theater in California's Public Universities

**4:05 PM** **Reilly Milton**, *Sonoma State*  
Representations of Biraciality on the American Stage: the Character of  
Margaret in Nathan Alan Davis' Origin Story

**4:15 PM** **Travis Peterson**, *CSU Bakersfield*  
Ethics and Time Travel in Virtual Reality

**Session 11**  
**12-2:30**

**Friday, April 24, 2020**

**Engineering and Computer  
Science**  
Undergraduate

**12:05 PM** **Adrian Nguyen, Casey Jo, Taylor Sprague, John Wang**, *Cal  
Maritime Academy*  
Creative Approaches For Wind Power Generation

**12:15 PM** **Jacob Norman, Jaymn Singh, Jordyn Park, Matt Irwin**, *Cal Poly  
Pomona*  
Oxide Scales on Metallic Alloys

**12:25 PM** **Aaron Narag, Ega Herlim, Andrew Wilson, Benjamin Kong**,

**Christopher Salerno, Ronnell Lim, Nicole Garcia, Joseph Kiriakos, *Cal Poly Pomona***  
Testing of Thermal Energy Storage using Reverse Osmosis Concentrate

**12: 35 PM**     **Paul Blanco, *CSU Bakersfield***  
Wireless Solid Set Canopy Delivery System for Tree-Cooling

**12:45 PM**     **Robert Wong, Sumanjit Gill, *CSU Fresno***  
A Data-Centric Approach to Taming the Message Dissemination in the Internet of Vehicles

**12:55 PM**     **Jeremy Satterfield, *CSU Long Beach***  
Improved Manufacturing Method for Hail Simulates in Impact Testing

**1:05 PM**     **Justin Phan, *San Francisco State***  
Developing the Next-Generation Neural-Machine Interfaces for Neurorehabilitation Applications by Utilizing Sensor Arrays and Spatial Features

**1:15 PM**     **Gurpreet Klar, *San Jose State***  
Development of a microfluidic approach for rapid and continuous detection of pathogens in food and water samples

**1:25 PM**     **~~Joshua Paine, *Sonoma State*~~**  
~~Electromagnetic Property Detection of Meta Materials and Meta Surfaces~~

**1:35 PM**     **Pratyush Muthukumar, *Cal State LA***  
A Stochastic Time-Series Model for Predicting Financial Trends with NLP

**Session 12**  
**3-5:30pm**

**Friday, April 24, 2020**

**Engineering and Computer  
Science**  
Undergraduate

- 3:05 PM**      **Samuel Benzoni, Charlie Vidal, *San Francisco State***  
From the health of structure to that of its occupants
- 3:15 PM**      **Joel Lee, Jaime Castro, *Cal Poly Pomona***  
BANSHE UAV
- 3:25 PM**      **Andrew Eljumaily, Giovanni Oey, *Sonoma State***  
Evaluating the Performance and Energy-Efficiency of  
Heterogeneous Computing Systems
- 3:35 PM**      **Abdulmohsen Aleissa, Abdallah Almodhyan, *CSU Fullerton***  
Wildfire-averting forecast and early response system: Numerically  
estimating fire behavior for streamlined wildfire suppression
- 3:45 PM**      **Lorena Bennett, *Cal Poly Pomona***  
Solids Analysis of a UASB-HRAP System in Brazil
- 3:55 PM**      **Aldrich Mangune, Junlan Lu, Nikhil Saunshi, *San Jose State***  
A SERP-Mining Approach for Classification of DNS Requests
- 4:05 PM**      **Chase Hargrove, David Calderon, Harrison Porter, Lisbeth  
Pelayo, *Cal Poly Pomona***  
Aluminum Metal Matrix Composites – Processing and Stability

**4:15 PM**      **Omar Santizo, Claire Ladan, *CSU Dominguez Hills***  
Hacking Electrochemistry: Improving undergraduate chemistry education analyzing biochemical redox analytes using a student-built potentiostat

**4:25 PM**      **Maya Horii, *Cal State LA***  
Solid-State Li-Ion Battery Modeling in Python

**4:35 PM**      **Alexander McGinnis, Joseph Haun, Anthony Aboumrad, *Sonoma State***  
Autonomous Recharging of Aerial Vehicles

**Session 13**  
**12-2:30**

**Friday, April 24, 2020**

**Engineering and Computer  
Science**  
Graduate

**12:05 PM**      **Jenna Williams, Tracy Doan, *Cal Poly San Luis Obispo***  
Assessment of Modeling Strategies for Lightly Reinforced Concrete Structural Walls

**12:15 PM**      **Munahil Murrieum, *Cal State East Bay***  
Building Energy Performance Prediction using Machine Learning: A Data- Driven Decision-Making Framework for Energy Retrofits

**12:25 PM**      **Samir Mulgaonkar, *CSU Fullerton***  
Reducing automobile greenhouse gas emissions using generative design process and additive manufacturing

**12: 35 PM**      **Sonia Perez-Gamboa, *CSU San Bernardino***



Human Recognition using a convolutional long short-term memory (C-LSTM) neural network.

**12:45 PM**      **Maricruz Carrillo**, *San Diego State*  
Fabrication of Ceramic Bone Scaffolds by Solvent Jetting 3D Printing and Sintering Towards Load-Bearing Applications

~~**12:55 PM**      **Olivia Piazza**, *Sonoma State*  
Natural Language Processing for Robotic Navigation Through Unknown Environments~~

**1:05 PM**      **Ryan Kohls, Joshua Grassel**, *Cal Poly San Luis Obispo*  
Production Planning in Integrated Circuit Supply Chains

**Session 14**  
**3-5:30pm**

**Friday, April 24, 2020**

**Education**  
Graduate

**3:05 PM**      **Darielle Blevins**, *San Diego State*  
Visualizing Girlhood

**3:15 PM**      **Matthew Sweeney**, *San Francisco State*  
Examining the Efficacy of Social Justice Teacher Preparation Programs for White Teachers

**3:25 PM**      **Alvir Sangha**, *CSU Fresno*  
Improving Future Elementary Teachers' Scientific Explanations by Adopting Guided-Inquiry Approaches in Physical Science Laboratory Curriculum

- 3:35 PM**      **Alexander Ordonez**, *CSU Long Beach*  
The Supports System for Change: A Conceptual Framework to Support Reassigned, Veteran Elementary School Teachers and Beyond
- 3:45 PM**      **Matthew Atherton**, *CSU San Bernardino*  
The efficiency of using 3D models to teach lifting and rigging concepts to learners of varying spatial ability
- 3:55 PM**      **Taylor Reinke**, *Cal State East Bay*  
Using a Social-Emotional Learning Program to Enhance Students' Well-Being
- 4:05 PM**      **Katherine Galinas**, *San Francisco State*  
Investigating Instructor Talk in Undergraduate Biology Laboratory Classrooms Taught by Graduate Teaching Assistants
- 4:15 PM**      **Meredith Galloway**, *CSU Sacramento*  
Policies of Promise: What Policies Produce Student Success Outcomes in California Community colleges?
- 4:25 PM**      **Haley Huffaker, Elizabeth Osuna**, *Humboldt State*  
An Autoethnographic Exploration of Resilience among Student Parents in College: Voices of Latina Student Mothers
- 4:35 PM**      **Chase Gause**, *CSU Bakersfield*  
Exploring the Role of Anticipatory Processing on Micro Delayed Feedback

2020

**Session 15**  
**12-2:30pm**

**Friday, April 24, 2020**

**Health, Nutrition, and  
Clinical Sciences**  
Undergraduate

- 12:05 PM**      **Sumaiya Olia, *CSU Bakersfield***  
Endostatin Administration Effects on PECAM-1 of the Medial Prefrontal Cortex in Relation to Estrous Phases
- 12:15 PM**      **Nicholas Olveda, *CSU Fresno***  
Luteolin derivatives selectively suppress androgen receptor-positive LNCaP prostate cancer cell proliferation
- 12:25 PM**      **Josh Murillo, *CSU Long Beach***  
The Effects of Eating Habits on Levels of Stress in Pregnant Women: Role of Socioeconomic Factors
- 12: 35 PM**      **Selina Espinoza, *CSU Monterey Bay***  
Cannabis Use and Perceptions Among Veterans with Post-Traumatic Stress Disorder
- 12:45 PM**      **Valeria Gonzalez, *CSU Sacramento***  
Preliminary Evaluation of the Suitability of Spanish-Language Hearing Aid User Guides
- 12:55 PM**      **Brandon Light, *Humboldt State***  
Loss of LGL 1 affects Akt and Girdin in murine neural progenitor cells in a mTOR dependent manner
- 1:05 PM**      **Allison Bui, *San Jose State***  
Impaired autonomic and cardiovascular function in children with

autism spectrum disorder

**1:15 PM**

**Cami Christopher**, *Cal Poly San Luis Obispo*  
Impact of Physical Activity Trajectories on Colon Cancer Risk

**Session 16**  
**3-5:30pm**

**Friday, April 24, 2020**

**Health, Nutrition, and  
Clinical Sciences**  
Undergraduate and  
Graduate

**3:05 PM**

**Nicole Zeltser**, *Cal Poly San Luis Obispo*  
High-fat fructose diet is associated with neuronal loss in juvenile Iberian pigs

**3:15 PM**

**Claudia Romero Medina, Sena Harley, Daniel Den Briones, Jorge Gonzalez**, *Cal State East Bay*  
Bilateral bone Strength Differences in Division II Female Volleyball Players

**3:25 PM**

**Jessica Folck**, *CSU Monterey Bay*  
Electrocardiographic Parameters of Sedated Southern Sea Otters

**3:35 PM**

**Jamie DeRevere**, *CSU San Marcos*  
The effect of Ethnicity on Changes in Cardiorespiratory Fitness in Response to Short-Term High Intensity Interval Training (HIIT)

**3:45 PM**      **Grace Shefcik, San Jose State**  
Assessment of Non-binary Individuals' Self-perception of Voice

**3:55 PM**      **Ciara Nagao, Kelsey Santos, Madison Werchowsky, CSU Dominguez Hills**  
Experiences of Occupational Therapists Working with High-Needs, High-Risk Youth

**4:05 PM**      **Isaiah Lachica, CSU Northridge**  
Comparing the effects of three different augmented reality-based action-relevant sensory cues on Parkinsonian gait

**Session 17**  
**12-2:30p**

**Friday, April 24, 2020**

**Humanities and Letters**  
Undergraduate

**12:05 PM**      **Joseph Esparza, CSU San Marcos**  
Revising Birmingham: The Natural Law and Just War Traditions in Martin Luther King Jr's Letter From a Birmingham Jail

**12:15 PM**      **Natassja Martin, CSU San Bernardino**  
The Memory of the War: A Glance into Public Support for WWII and Vietnam

**12:25 PM**      **Fionna Fahey, Cal Poly San Luis Obispo**  
Feminist Epistemologies of Sex Work: (Re)memberance in Practice

**12: 35 PM**      **Alvin Wong, Isaias Martinez, Randell Monzon, Michelle**

**Allende, Cal Poly Pomona**  
Populist Discourse in African President Speech

**12:45 PM**      **Bryan Cantero, CSU Dominguez Hills**  
Mexican (American) Corridista students: Resisting educational  
oppression through Corridos

**12:55 PM**      ~~**Anastasia Nesbitt, CSU Long Beach**~~  
~~Existential Risk: A Discourse of Democrazy~~

**1:05 PM**      **Kevin Ginosian, CSU Northridge**  
Value Vortex: Values in Contemporary Hip-Hop Spreading on  
Social Media

**1:15 PM**      **Fernando Sanchez, CSU San Bernardino**  
Umm Kulthum and Arual Celebrity

**1:25 PM**      **Lauren Ybarra, Cal Poly Pomona**  
Factory Farming: A Violation of Human Rights

**1:35 PM**      ~~**Jennifer Gonzalez, CSU Fresno**~~  
~~Grain-Size Analysis of Sediment from The Canterbury Basin,  
New Zealand, to Determine the Impact of Global Sea-Level  
Change on Deposition Cyclicality~~

**Session 18**  
**3-5:30pm**

**Friday, April 24, 2020**

**Humanities and Letters**  
Graduate

2020

- 3:05 PM**      **Natalie Hernandez**, *CSU Bakersfield*  
The Life Cycle of a Self-Sacrificial Mother Vampire
- 3:15 PM**      **Arielle Steimer-Barragan**, *Cal State LA*  
“Las viudas de las letras: Women Printers in Colonial Mexico“
- 3:25 PM**      **Rachel Birke**, *CSU Northridge*  
Yesterday, Tomorrow, and Fantasy: The Cartoon Gothic of  
Disney's Animated West, 1948-1961
- 3:35 PM**      **Shane Burrell**, *CSU San Bernardino*  
Identification in Virtual Environments; Identifying Virtual Reality
- 3:45 PM**      **Juan Vega**, *CSU Chico*  
This Happened in a Matter of a Single Generation: From Farmer  
to Retired Capitalist, the Life of Charles H. Lindsey 1841-1923
- 3:55 PM**      **Andrés León González, Lindsey Fox**, *Cal State East Bay*  
Patient perspectives of transgender health care in family  
planning clinics in the US

**Session 19**  
**3-5:30pm**

**Friday, April 24, 2020**

**Interdisciplinary**  
Undergraduate and  
Graduate

- 3:05 PM**      **Karin Chao-Bushoven**, *Humboldt State*  
Why People Donate? Motivation in Major Donors in Higher  
Education

- 3:15 PM**      **Beenish Niazi, CSU Northridge**  
The Struggle to Mitigate Children's Privacy Risks
- 3:25 PM**      **Heather Fletcher, CSU Sacramento**  
We built it, but do students know what it is? Student perceptions of a Programmatic Undergraduate Research Experience (PURE)
- 3:35 PM**      **Lisa Ouyang, Cal State East Bay**  
Peripherally-restricted opioids restore normal activity without disruptive side effects in rats with chronic inflammatory pain
- ~~**3:45 PM**      **Taylor Grindey, Karmyn Luong, CSU Channel Islands**  
Special Education Litigation and Privilege Project: The Effects of "Wealth" in Special Education Litigation Outcomes~~
- ~~**3:55 PM**      **Vishwani V. Naidu, Cal State East Bay**  
The Emergency Response of Community-Based Organizations in Puerto Rico after Hurricane Maria~~
- 4:05 PM**      **Kelly Condron, Cal Poly San Luis Obispo**  
The impact of CalFresh Outreach on food security status among Cal Poly students
- 4:15 PM**      **Maddie Roman, Cal Poly San Luis Obispo**  
Banksy: A Conversation Beyond the Wall
- 4:25 PM**      **Rachael Dal Porto, CSU Sacramento**  
The use of Rhodamine WT for the characterization of hydraulic residence times in wetlands



**Session 20**  
**12-2:30pm**

**Friday, April 24, 2020**

**Physical and Mathematical  
Sciences**  
Undergraduate

- 12:05 PM**      ~~**Jennifer Gonzalez**, *CSU Fresno*~~  
~~Grain Size Analysis of Sediment from The Canterbury Basin,  
New Zealand, to Determine the Impact of Global Sea Level  
Change on Deposition Cyclicality~~
- 12:15 PM**      **Andy Ponce, Kohl James, Victoria Morado**, *CSU Stanislaus*  
Finding the Center of the Galaxy
- 12:25 PM**      ~~**Rachael Dal Porto**, *CSU Sacramento*~~  
~~The use of Rhodamine WT for the characterization of hydraulic  
residence times in wetlands~~
- 12: 35 PM**      **Joseph McGuire, Jorge Ruiz Gonzalez**, *Sonoma State*  
Ramp Metering for Minimization of Traffic Emissions
- 12:45 PM**      ~~**Ashley Bustamante**, *CSU Stanislaus*~~  
~~Synthesis of anomoian B~~
- 12:55 PM**      **Elide Herrera Valdez**, *Cal Poly San Luis Obispo*  
Evaporation-Driven Capillary Flow in Paper-Based Microfluidic  
Devices
- 1:05 PM**      **Abigail Klein**, *CSU Bakersfield*  
Characterization of Full-Length Lysyl Oxidase

- 1:15 PM**      **James Calvo, CSU Chico**  
Nanomaterials for Water Remediation
- 1:25 PM**      **Anthony Perez, CSU Sacramento**  
Synthesis of Non-Native Oligomeric Sugars for Biomedical Applications
- 1:35 PM**      **Melissa Taha, CSU San Bernardino**  
Shaking the Ground with NASA
- 1:45 PM**      **Emily Lyon, CSU San Marcos**  
A microwave assisted gold-catalyzed substitution reaction of benzylic alcohols with benzimidazole
- 1:55 PM**      **William Terry, CSU Fullerton**  
Quotients of matrix spaces
- 2:05 PM**      **Nikolay Maslov, Aaron Keniston, CSU San Bernardino**  
Understanding the Binding Mode of Falcilysin, an Essential Metalloprotease

**Session 21**  
**12-2:30pm**

**Friday, April 24, 2020**

**Physical and Mathematical**  
**Sciences**  
Graduate

- 3:05 PM**      **Rachel Hohn, CSU Northridge**  
Downstream Impacts of the Abandoned New Idria Mercury Mine, California Coast Ranges, Ca

- 3:15 PM**      **Nivedha Murugesan**, *San Jose State*  
Evaluating Adaptive Ramp Metering through Partial Least Squares Path Modeling
- 3:25 PM**      **Ricky Lee**, *CSU Long Beach*  
Wirtinger Width
- 3:35 PM**      **Viviane (Zurdo) Costa**, *San Francisco State*  
Temperature-dependent Raman studies of a naturally occurring van der Waals heterostructure
- 3:45 PM**      **Cindy Rodriguez**, *CSU Bakersfield*  
Wildfire impacts on soil physical properties: 2016 Erskine Fire, CA

## ***The California State University System***

*California State University is a leader in high quality, accessible, student-focused higher education. With 23 campuses, 474,600 students, and 49,000 faculty and staff, we are the largest, the most diverse, and one of the most affordable university systems in the country. We offer unlimited opportunities to help students achieve their goals. We prepare graduates who go on to make a difference in the workforce. We engage in research and creative activities leading to scientific, technical, artistic, and social advances. And, we play a vital role in the growth and development of California's communities and economy.*

### **California State University, Bakersfield (1965)**

Centrally located on a 375-acre site in the southern San Joaquin Valley, California State University, Bakersfield is a continuously growing comprehensive regional university that is committed to transforming the lives of its students and community through its established excellence in academia, diversity, service, and community engagement since its founding in 1965. The faculty across the Western Association of Schools and Colleges (WASC) fully accredited University is world-class, with nearly 75% holding terminal degrees in their respective fields. A NCAA Division I school, CSUB has competed successfully in the Western Athletic Conference (WAC) since 2012 and is but one important aspect of a growing and vibrant student-life experience. The University serves more than 9,000 students at either the main campus in Bakersfield or CSUB Antelope Valley and counts over 40,000 alumni from its four schools: Arts and Humanities, Business and Public Administration, Natural Sciences, Mathematics and Engineering, and Social Sciences and Education. The University offers undergraduate, graduate, post-graduate, and credential programs, and CSUB's Extended University serves the community by offering additional professional development, certificate, and degree programs. With over 70 percent of its alumni remaining and working within the central valley, CSU Bakersfield supports ongoing social, cultural and economic development in the region.

9001 Stockdale Highway, Bakersfield, CA 93311-1099

Dr. Lynnette Zelezny, President

(661) 654-2781 • <http://www.csub.edu>

### **California State University, Channel Islands (2002)**

Nestled in a picturesque setting five miles from the Pacific Ocean, Channel Islands is the newest CSU campus. Offering a student-centered education, CSU CI is known for its interdisciplinary, multicultural, service learning, and international emphases.

Undergraduate, credential programs, and graduate programs create a close-knit atmosphere in which students receive individual attention from dedicated faculty.

Opportunities for student research allow students to participate in faculty-mentored and independent research projects. Community-based research and community service opportunities allow students to develop their personal, professional, and leadership

skills.

One University Drive, Camarillo, CA 93012

Dr. Erika D. Beck, President

(805)437-8400 • [www.csuci.edu](http://www.csuci.edu)

### **California State University Chico (1887)**

CSU Chico, the second oldest campus in the CSU, is one of the highest rated public universities in the West. It has excellent graduation and job placement rates and boasts a beautiful residential campus located in a college-town setting. Ninety percent of the students live within a one-mile radius. Many programs, including social work, nutritional science, anthropology, teacher education, and communication science and disorders, are known for their innovation and outreach to the university's primary service area and beyond. A distance education trailblazer, CSU Chico was the first university in the world to offer a graduate degree via satellite. Students have won national awards in business, engineering, construction management, journalism, political science, and speech.

400 West First Street, Chico, CA 95929

Dr. Gayle E. Hutchinson, President

(530) 898-4636 • [www.csuchico.edu](http://www.csuchico.edu)

### **California State University, Dominguez Hills (1960)**

More than half a century after its founding, California State University, Dominguez Hills serves as a conduit between the reality of today's America and a vision put forth by the CSU. In 1960, CSU Dominguez Hills was deliberately placed in Carson to serve as the intersection of promise and hope for a community in crisis. The university offers more than forty undergraduate majors, twenty master's degrees, and numerous certificate and credential programs. At CSU Dominguez Hills student success is our highest priority—we offer a strong selection of academic programs reflecting today's high-demand fields. We create opportunities in and out of the classroom for students, faculty and staff to work and learn together, promoting a student-centered atmosphere. We are a university where pride and purpose meet; where upward mobility begins; where public policy is created; where diversity is celebrated and where our students gain knowledge and skills that prepare them to live and work in a multicultural, global world. As a public state university, we are continually committed to transforming the lives of our students.

1000 East Victoria Street, Carson, CA 90747-0005

Dr. Thomas A. Parham, President

(310) 243-3696 • [www.csudh.edu](http://www.csudh.edu)

### **California State University, East Bay (1957)**

Cal State East Bay primarily serves northern California counties with two scenic campuses: one in the Hayward Hills and the other in the Concord foothills. Cal State East Bay also has a professional development center, located in downtown Oakland.

With an enrollment of more than 15,000, the university attracts students from throughout the region and from more than 80 countries. Named a “Best in the West” college by *The Princeton Review*, Cal State East Bay is recognized as one of the most diverse campuses in the continental US and offers more than 100 fields of study, award-winning curricula, small classes, expert faculty, and exceptional outside-of-the-classroom student programming. It confers bachelor’s and master’s degrees, as well as an Ed.D. in educational leadership.

25800 Carlos Bee Boulevard, Hayward, CA 94542

Dr. Leroy M. Morishita, President

(510) 885-3000 • [www.csueastbay.edu](http://www.csueastbay.edu)

### **California State University, Fresno (1911)**

Fresno State is the premier university serving Central California’s diverse, growing population. Faculty and students work with community partners on research focused on key regional challenges: water development and conservation, air quality, crop development and child-obesity prevention. The campus is home to the nation’s first university commercial winery, the Downing Planetarium, the ultra-modern Henry Madden Library and the Smittcamp Family Honors College, which admits 50 top high school graduates each year with full scholarships. Fresno State’s beautifully landscaped academic campus (officially an arboretum since 1978) is near the Sierra Nevada Mountains, just two hours’ drive from Yosemite, Kings Canyon and Sequoia national parks.

5241 North Maple Avenue, Fresno, CA 93740

Dr. Joseph I. Castro, President

(559) 278-4240 • [www.fresnostate.edu](http://www.fresnostate.edu)

### **California State University, Fullerton (1957)**

A first-choice institution known for its national rankings in both academic rigor and lowest net cost, Cal State Fullerton offers the unique advantage of a dynamic, metropolitan university in an inclusive, small-college atmosphere. With a vibrant, multicultural student population, CSUF is No. 1 in California for conferring baccalaureate degrees to both women and Hispanics, and No. 2 in the nation for graduating underrepresented students. The institution’s eight Colleges offer 110 exceptional degree programs — 55 undergraduate and 55 graduate, including doctorates in both education and nursing practice — with full accreditation from the WASC Senior College University Commission. These programs are further distinguished by top faculty and staff who are dedicated to providing equitable access to high-impact learning experiences that shape and empower the academic goals and life dreams of 40,000 students every year.

800 N. State College Boulevard, Fullerton, CA 92834-9480

President Framroze “Fram” Virjee, JD  
(657) 278-2011 • [www.fullerton.edu](http://www.fullerton.edu)

### **Humboldt State University (1913)**

Humboldt State University is a comprehensive, residential campus located on California’s pristine north coast. The campus is distinguished by its emphasis on real-world learning. Opportunities abound for undergraduate fieldwork in both the natural and social sciences. With annual enrollment of 7,000, Humboldt State is large enough to offer a lively campus with major research facilities, but small enough that students are not lost in a crowd. It is a tight-knit community where professors and staff are known for getting to know their students. Humboldt State is home to one of the strongest natural resource and environmental studies departments in the nation and is consistently ranked by national publications as among the top regional colleges. One Harpst Street, Arcata, CA 95521-8299  
Dr. Tom Jackson, Jr., President  
(707) 826-3311 • [www.humboldt.edu](http://www.humboldt.edu)

### **California State University, Long Beach (1949)**

Founded in 1949, California State University, Long Beach (CSULB) is the No. 10 top public university in the country, lauded nationally for its diversity and powering upward social mobility. The 322-acre campus enrolls more than 38,000 students and boasts more than 325,000 alumni who positively impact the community, state, and the nation. The Office of Undergraduate Research Services (OURS), established in 2016, is charged with expanding undergraduate research opportunities to CSULB students. OURS accomplishes this by developing a coordinated approach, collaboration with staff and faculty, outreach, and our numerous research programs, such as UROP and BUILD. The Undergraduate Research Opportunity Program (UROP) is a one-year program that offers first- and second-year students the chance to participate in the research and creative process with faculty. The CSULB BUILD program offers intensive, hands-on research and training opportunities for undergraduate students designed to prepare them to excel in doctoral programs, as well as health-related research careers. It is one of 10 programs in the United States funded by the National Institutes of Health (NIH) BUILD Initiative. 1250 Bellflower Boulevard, Long Beach, CA 90840  
Dr. Jane Close Conoley, President  
(562) 985-4111  
[www.csulb.edu](http://www.csulb.edu)

### **California State University, Los Angeles (1947)**

California State University, Los Angeles is the premier public comprehensive university in the heart of Los Angeles. The University is part of the 23-campus California State

University system, which is the largest public university system in the nation. Cal State LA promotes academic excellence, achievement, leadership and well-being to more than 28,600 students. The student population reflects the rich diversity of the Los Angeles region. The majority of students—23,440—are undergraduates who are taking courses in more than 60 majors, often in small classes where professors know them by name. The University has eight colleges that are recognized for outstanding programs and professors who are accomplished mentors and researchers. Cal State LA strives to provide a small-campus feel at a public university in a global city.

5151 State University Drive, Los Angeles, CA 90032

William A. Covino, President

(323) 343-3000 • [www.calstatela.edu](http://www.calstatela.edu)

This campus is on the semester system.

### **California State University Maritime Academy (1929)**

The California Maritime Academy, which joined the CSU in 1995, is one of only seven degree-granting maritime academies in the U.S. and the only one on the West Coast. Its graduated cadets include the first woman to captain a commercial vessel. Cal Maritime graduates enjoy a very high job placement rate, thanks to a unique experiential learning curriculum that includes at least one international training cruise. Located in Vallejo on the shore of San Pablo Bay, Cal Maritime offers accredited degrees in business administration, marine transportation, facilities engineering technology, maritime policy and management, marine transportation, facilities engineering technology, maritime policy and management, marine engineering technology, and mechanical engineering. A program of intellectual learning, applied technology, global awareness, and leadership development prepares graduates for positions of responsibility in the areas of maritime, business, logistics, intermodal transportation, and engineering.

200 Maritime Academy Drive, Vallejo, CA 94590

Dr. Thomas A. Cropper, President

(707) 654-1000 • [www.csum.edu](http://www.csum.edu)

### **California State University, Monterey Bay (1994)**

CSU Monterey Bay provides more than 7,600 students an extraordinary opportunity to learn on a

residential campus on the beautiful Monterey Peninsula. The diverse student body receives personal attention in small classes while pursuing degrees in 25 undergraduate and nine graduate majors. Founded in 1994 by educators and community leaders on the former site of Fort Ord military base, CSUMB faculty and staff build on that legacy to explore innovative ways to meet the needs of a new generation of students while simultaneously powering the economy in Monterey, San Benito and Santa Cruz counties.

100 Campus Center, Seaside, CA 93955-8001

Dr. Eduardo M. Ochoa, President



(831) 582-3330 • [www.csumb.edu](http://www.csumb.edu)

**California State University, Northridge (1958)**

One of the largest universities in the country, California State University, Northridge (CSUN) is an urban, comprehensive university that delivers award-winning undergraduate and graduate programs to nearly 40,000 students annually and counts more than 330,000 alumni who elevate Southern California and beyond. Since its founding in 1958, CSUN has made a significant and long-term economic impact on California, generating nearly \$1.9 billion in economic impact and more than 11,700 jobs each year. The LAEDC recognized CSUN as its 2015 Eddy Award winner for its positive economic impact. Serving more students on Pell Grants than any other institution in California, CSUN is also a social elevator and one of the most diverse universities in the country. CSUN ranks 13th in awarding bachelor's degrees to underrepresented minority students and seventh in bachelor's degrees to Latino students, serves the 13th largest Jewish student population, and enrolls the largest number of deaf and hard-of-hearing students of any U.S. state university. The journal *Nature* recently named CSUN a Rising Star for scientific research, and the NSF ranks CSUN in the top five nationally among similar institutions for graduates who go on to earn doctorates in the sciences. CSUN is where individuals rise. And through them, so does Greater Los Angeles and beyond.

1811 Nordhoff St., Northridge, CA 91330

Dr. Dianne F. Harrison, President

(818) 677-1200 • [www.csun.edu](http://www.csun.edu)

**California State Polytechnic University, Pomona (1938)**

Cal Poly Pomona is internationally recognized for its outstanding academic programs, including offerings in hospitality management, architecture, and engineering. One of only six polytechnic universities in the United States, Cal Poly Pomona champions an approach that places learning-by-doing at the center of every program, course, and activity. Millions of dollars in grants are helping the university make a difference in its surrounding and academic communities, from advancing agricultural practice to improving teacher training. Cal Poly Pomona ranked No. 10 in the nation among the universities that help low-income students find financial success after graduation, according to the "2019 Social Mobility Index." The university is one of only four CSU campuses that has ranked in the top 20 for six consecutive years.

3801 W. Temple Avenue, Pomona, CA 91768

Dr. Soraya M. Coley, President

(909) 869-7659 • [www.cpp.edu](http://www.cpp.edu)

**California State University, Sacramento (1947)**

Sacramento State is California's capital university and a recognized leader in education, innovation, and engagement, dedicated to transforming lives by preparing students for

leadership, service, and success. Located in a 3,500-tree urban forest just six miles from the State Capitol, our diverse student body of 30,000 enjoys unique opportunities to live, work, and learn in the political, cultural, and economic heart of California. Founded in 1947, the University has grown to offer 58 undergraduate majors, 41 master's degrees, 20 credential programs, two independent doctorates, and a joint doctorate. Our passionate students, dedicated faculty, and more than 235,000 alumni shape the landscape of California, providing valuable insight and community leadership in one of the nation's fastest-growing and most innovative regions.

6000 J Street, Sacramento, CA 95819

Dr. Robert S. Nelsen, President

(916) 278-6011 • [www.csus.edu](http://www.csus.edu)

### **California State University, San Bernardino (1960)**

Cal State San Bernardino, at the foot of the San Bernardino Mountains, was named by students as the most beautiful campus in the CSU system. Serving the Inland Empire region, its nationally accredited College of Business and Public Administration offers an M.B.A. tailored for executives. In addition, the university has a nationally acclaimed writing program and highly respected offerings in computer science, geographic information and decision sciences, psychology, public health administration, and accounting and finance. The university has a leading state-accredited teacher preparation program that is one of the nation's largest. Courses are also offered at off-campus locations, including a permanent satellite campus in Palm Desert.

5500 University Parkway, San Bernardino, CA 92407-2397

Dr. Tomás D. Morales, President

(909) 537-5000 • [www.csusb.edu](http://www.csusb.edu)

### **San Diego State University (1897)**

San Diego State University is the oldest and largest higher education institution in the San Diego region. Since it was founded in 1897, the university has grown to offer bachelor's degrees in 85 areas, master's degrees in 76, and doctorates in 21 disciplines. SDSU's 31,000 students participate in an academic curriculum distinguished by direct contact with faculty and an increasing international emphasis that prepares them for a global future. SDSU is designated by the Carnegie Foundation as a research university with high research activity and is ranked among the top 150 public universities in research support, with \$145 million in 2010-11.

5500 Campanile, San Diego, CA 92182

Dr. Adela de la Torre, President

(619) 594-5200 • [www.sdsu.edu](http://www.sdsu.edu)

### **San Francisco State University (1899)**

Located in one of the world's most vibrant and beautiful cities, San Francisco State University is a recognized leader in addressing issues both global and close to home.

The University has been the launchpad for thousands of successful, world-changing alumni, including Black Lives Matter co-creator Alicia Garza, San Francisco's first African American mayor, Willie Brown, Jr., and tech pioneers who played pivotal roles in the development of the microprocessor and the Internet. At last count, San Francisco State graduates had won 21 Pulitzers, 16 Oscars, 49 Emmys, 10 Grammys, and 12 Tonys. And the University itself has won top honors while encouraging innovations that put it at the forefront of academia. Home to the nation's first and only College of Ethnic Studies, SF State was #7 for ethnic diversity among national universities in the 2019 U.S. News & World Report Best Colleges rankings. Both Variety and The Hollywood

Reporter have named SF State's School of Cinema one of the top film programs in the country, and the University's Estuary & Ocean Science Center makes it the only institution of higher education with a marine science laboratory on San Francisco Bay.

### Academic Life

Ever since it was established in 1899 as a teacher-training school, SF State has been known for its commitment to excellent teaching. Students work closely with senior professors and other instructors from freshman year through graduation. Trained in some of the finest institutions in the world, faculty members include winners of prestigious teaching awards, cutting-edge researchers, and professionals devoted to solving community problems.

SF State awards bachelor's degrees in 72 academic areas with an additional 39 areas of concentration, master's degrees in 62 academic areas with an additional 28 areas of concentration and a Doctorate in Educational Leadership. The University also offers a clinical doctorate, Doctor of Physical Therapy (D.P.T.), jointly with UC San Francisco. In addition, SF State offers 16 credential programs and 41 certificate programs.

SF State's motto is *Experientia Docet* — Experience Teaches. Graduates consistently say that hands-on learning was what helped them most when beginning their careers. Students apply their talents and classroom learning to real-world challenges through community-service learning, credit-earning internships, and participation with community-focused centers and institutes that address issues relating to health, education, the environment, business, child care, and underserved communities.

1600 Holloway Avenue, San Francisco, CA 94132

Lynn Mahoney, Ph.D.

President of San Francisco State University

(415) 338-1111 • [www.sfsu.edu](http://www.sfsu.edu)

### **San José State University (1857)**

San José State University (SJSU), a metropolitan university, has a long and proud history as a supplier of excellent higher education, a contributor to the skilled workforce in the Bay Area, and an incubator for innovations that have local and global impacts.

Through the decades, the key mission of the university has remained the same – to offer an exceptional and affordable education to all students so they find success in

their careers and become engaged citizens of California. SJSU is committed to providing rigorous course work, along with research, scholarship, and creative activity (RSCA) opportunities, to a diverse population of nearly 33,000 undergraduate and graduate students in seven colleges. The university is especially dedicated to enhancing the connection between RSCA and classroom activities to provide context and relevance for the curriculum while also engaging and inspiring students. These opportunities combine learning with discovery, mentoring with teaching and knowledge with application. SJSU also recognizes the importance of RSCA to move disciplines forward, improve quality of life on local and global levels, provide experiences for students that support retention, build the reputation of our institution and bring in resources from outside agencies. SJSU is situated in a region known for innovation with extensive global connections that leads the United States and the world in many industries. The university is proud to be a partner with Silicon Valley through engagement and intellectual contributions with industry leaders, government agencies and nonprofits.

One Washington Square, San José, CA 95192-0001

Dr. Mary A. Papazian, President

(408) 924-1000 • [www.sjsu.edu](http://www.sjsu.edu)

#### **California Polytechnic State University, San Luis Obispo (1901)**

With a student body of approximately 21,800, Cal Poly fosters teaching, scholarship and service in a Learn by Doing environment where students and faculty are partners in discovery. As a polytechnic university, Cal Poly promotes the application of theory to practice. As a comprehensive institution, Cal Poly provides a balanced education in the arts, sciences and technology while encouraging cross-disciplinary and co-curricular experiences. As an academic community, Cal Poly values free inquiry, cultural and intellectual diversity, mutual respect, civic engagement, and social and environmental responsibility.

One Grand Avenue, San Luis Obispo, CA 93407

Dr. Jeffrey D. Armstrong, President

(805) 756-1111 • [www.calpoly.edu](http://www.calpoly.edu)

#### **California State University, San Marcos (1989)**

Celebrating three decades of service, CSUSM is a pioneer in providing broad access to quality instruction and a trail-blazer in hands-on education relevant to today's global and technology-rich society. The University is nationally recognized as a model of public accountability, institutional innovation and community engagement. CSUSM Builds regional alliances that foster economic, social, and cultural development while inspiring student excellence and supporting faculty engagement in cutting-edge research and creative activities. At CSUSM, students graduate prepared to be tomorrow's leaders and equipped to solve critical 21<sup>st</sup> century problems.

333 S. Twin Oaks Valley Road, San Marcos, CA 92096-0001

Dr. Ellen Neufeldt, President

(760) 750-4000 • [www.csusm.edu](http://www.csusm.edu)

**Sonoma State University (1960)**

Sonoma State University, founded as a teacher education center for the North Bay, is now a liberal arts and sciences university that provides high-quality undergraduate education and selected professional graduate programs. Dedicated to the liberal arts and sciences and known for its active use of technology, the Sonoma State educational experience fosters intellectual, cognitive, social, and personal growth. The university's faculty and staff provide close mentoring relationships and an education that fosters ethical exploration, civic engagement, social responsibility, and global awareness combined with a solid foundation in an academic discipline.

1801 East Cotati Avenue, Rohnert Park, CA 94928-3609

Dr. Judy Sakaki, President

(707) 664-2880 • [www.sonoma.edu](http://www.sonoma.edu)

**Stanislaus State University (1960)**

As the only public four-year university in the Northern San Joaquin Valley, Stanislaus State University serves a diverse student body of more than 10,000 on a beautiful 228-acre campus that is the region's largest urban forest. It has top programs in four colleges offering 42 undergraduate major programs, 23 master's programs, a doctoral program, seven credential programs, and eight certificate programs as well as an acclaimed executive MBA program. It is a federally-designated Hispanic-Serving Institution (HSI) that helps meet the workforce needs of the region with partnership programs in nursing, teacher education, business, and agriculture. Stanislaus State was ranked the No. 1 public university in the nation for helping its students exceed expectations by *Money*. The University is designated with the Carnegie Foundation's Community Engagement Classification and has been named to the national President's Higher Education Community Service Honor Roll each year since its 2006 inception.

One University Circle, Turlock, CA 95382-0299

Dr. Ellen N. Junn, President

(209) 667-3122 • [www.csustan.edu](http://www.csustan.edu)

34TH ANNUAL



STUDENT  
RESEARCH  
COMPETITION