18th Annual
Pacific Undergraduate Research & Creativity Conference
PURCC-2018

University of the Pacific
Stockton, CA 95211

April 23 – May 12, 2018
Program volume compiled and edited by
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Director of Undergraduate Research

Cover design by Alexandra McBride ‘18
Program

April 23 - May 12
Senior Art & Design Exhibition
Reynolds Art Gallery

April 28 - Research Day

Oral Session 1
10:00 AM – 12:00 PM
DeRosa University Center, Room 211

Poster Session 1
10:00 AM – 12:00 PM
DeRosa University Center, Ballroom

Oral Session 2
1:00 PM – 4:00 PM
DeRosa University Center, Room 211

Poster Session 2
1:00 PM – 3:00 PM
DeRosa University Center, Ballroom

May 1
Composer's Club Concert
7:30 PM
Faye Spanos Concert Hall

May 5
Engineering and Computer Science Senior Project Demonstrations
2:30 – 4:30 PM
School of Engineering and Computer Science

May 8
Pacific Student Film Showcase
7:00 – 10:00 PM
Janet Leigh Theatre
Senior Art Exhibition  
April 23 – May 12, Reynolds Gallery

Graphic Design

Everything is by Design.
Joanna Thi Duong  
Faculty Mentor: Marie Lee

Design for Pacific Recreation
Adriana G Flores  
Faculty Mentor: Marie Lee

Listen
Andrea Marilu Lara Alvarez  
Faculty Mentor: Marie Lee

Sunrise Seaport Initiative
Alexandra E McBride  
Faculty Mentor: Marie Lee

Sunlight give me life
Dustin S McPhillips  
Faculty Mentor: Maree Lee

Back At It
Prajakta Prasana  
Faculty Mentor: Marie Lee

Pursuit of Peace
AnneRose Leigh Ross  
Faculty Mentor: Marie Lee

Little Manila Recreation
Kyle Anthony Sabbatino  
Faculty Mentor: Marie Lee

Decolonize and Dream
Jon O Sanchez  
Faculty Mentor: Marie Anna Lee
Studio Art

Short Story Illustration - One Friday Morning
Delany Na'imah Carr
Faculty Mentor: Jeniffer Little

The Traditional art of China
YiFei Di
Faculty Mentor: Jennifer Littl

The Visible Self-Concept
Meghan E Lacombe
Faculty Mentor: Jennifer Little

Sophia
Maria F MacDonald
Faculty Mentor: Jennifer Little

Rooted while Wandering
Kelly C Masterson
Faculty Mentor: Daniel Kasser

Naturally Unnatural
Prajakta Prasana
Faculty Mentor: Jennifer Little
The Downfall of Native American Culture within Louise Erdrich’s The Round House  

10:00  
Kendall Mead, English  
Faculty Mentor: Cynthia Dobbs, English

Unaccustomed Love and Grief  

10:20  
Nadia Monroy, English  
Faculty Mentor: Cynthia Dobbs, English

The Suspended Landscape: Celan's Spatial Trauma and the Poetic Abyss  

10:40  
Domenic Suntrapak, English  
Faculty Mentors: Jeffrey Hole, Camille Norton, English

W.E.B. Du Bois and the Antisemitic Blindspot  

11:00  
Raquel Lipken, English  
Faculty Mentor: Jeffrey Hole, English

A New America: Comparing The Works of Walt Whitman and Robert Frost  

11:20  
Victoria Rodriguez, English  
Faculty Mentor: Jeffrey Hole, English

Rebellious Women of the French Revolution: Women’s Politics and Feminism during the French Revolution  

11:40  
Mallory Alorro, History  
Faculty Mentor: Andreas Agocs, History
Oral Session 2 – DeRosa University Center, Room 211
April 28, 1:00 – 4:00

1:00
Prostitution and the Sex Industry on the Barbary Coast, 1849-1900
Hannah Julia Tvergyak, History
Faculty Mentor: Laura Gutierrez, History

1:20
Back At It
Prajakta Prasana, Graphic Design and Studio Art
Faculty Mentors: Marie Lee, Brett DeBoer, Art and Graphic Design

1:40
Ice is Melting While Discussions of Global Warming Freeze
Maria MacDonald, Environmental Studies and Studio Art
Faculty Mentor: Karrigan Bork, Geological and Environmental Sciences

2:00
Get Over it? The True Effects of Violence in the Francophone World
Josephine Kraemer, French Studies and Music, Tasha Unninayar, Speech Language Pathology and Audiology; French, Zaina Chaban, Biology, Luis Ortiz, Applied Mathematics; Economics
Faculty Mentor: Cosana Eram, Modern Languages - French

2:20
Alcohol, Pacifics Part Scene, and Islam
Zill-e-huma Khan, Biological Sciences & Religious Studies
Faculty Mentor: Alan Lenzi, Religious Studies

2:40
Contraceptives: There’s A Discrepancy
Erica Magana, Sociology. Brianna Gonzalez, Alma Tinoco
Faculty Mentor: Marcia Hernandez, Sociology
Intersectionality and the Pathways to Incarceration

3:00  Rukaiyah Jones, Sociology, Ahmanni Scott, Sociology, Ashley Baxter, Sociology

Faculty Mentor: Marcia Hernandez, Sociology

Protecting our Youth: Gun Control in Schools

3:20  Andie Shelton, Sociology, Alana Manning, Sociology

Faculty Mentor: Marcia Hernandez, Sociology

Turning the Paddlewheel Towards Inorganic Synthesis

3:40  Luis Leal, Chemistry

Faculty Mentor: Qinliang Zhao, Chemistry

Graduate Student Mentor: Michael Pastor, Chemistry
Microdissection of Black Widow Spider Silk-Producing Glands and Proteomic Analysis

01B
Sumi Hwang, Biological Sciences, Sam Delarosa, Biological Sciences, Kelvin Lal, Biological Sciences, Calvin Phen, Biological Sciences

Faculty Mentor: Craig Vierra, Biological Sciences

Spider Dragline Silk Contains Water Soluble Proteins

02B
Dong Chan Lee, Pre-Dentistry, Bright Test, Biological Sciences, Jacob Phen, Pre-Dentistry, Cindy Kim, Biological Sciences, Ik Kyun Kwon, Pre-Dentistry, Hayoung Kim, Pre-Dentistry

Faculty Mentor: Craig Vierra, Biological Sciences

Purification of Dragline Silk Proteins to Explore Effects of Silk Components on Wound Healing

03B
Su Jeong Oh, Biological Sciences, Dilpreet Basram, Biological Sciences, Elaine Chu, Biological Sciences, Patricia Ilas, Biological Sciences, Alycia Chung, Biological Sciences, Caroline Hang, Biological Sciences, Soyeon Shim, Biological Sciences, Ivy Hang, Biological Sciences, Ike Kwon, Biological Sciences, Hayoung Kim, Biological Sciences, Soyeon Shim, Biological Sciences

Faculty Mentor: Craig Vierra, Biological Sciences

Expression and Purification of zebrafish GADD34 and CReP

05B
Louis Chen, Biological Sciences, Loren Chue, Biological Sciences, Chelsea Kim, Biological Sciences, Jisoo Kim, Biological Sciences, Emika Lewis, Biological Sciences, Seyed Lotfizadeh, Biological Sciences, Youngin Park, Biological Sciences, Jacob Scheel, Biological Sciences

Faculty Mentor: Douglas Weiser, Biological Sciences

Investigating the Role of HmpF in Regulating Hormogonium Motility in Nostoc punctiforme

05C
Thomas Harwood, Biological Sciences

Faculty Mentor: Douglas Risser, Biological Sciences
06B
Interspecific Comparison of Venom Secretions in Corydoras Catfish

Justin He, Biological Sciences, Vincent Huang, Pre-Dentistry, Youyoung Min, Pre-Dentistry, Nancy Seo, Biological Sciences

Faculty Mentor: Eric Thomas, Biological Sciences
Graduate Student Mentor: Erik Wictor, Biological Sciences

2017 Summer Undergraduate Research Fellowship Project (Justin He)

06C
Blubber Proteome Response to Fasting in Adult Female Elephant Seals

Rasool Maan, Pre-Dentistry, Reeti Banerjee, Pre-Dentistry, Melony Mody, Pre-Dentistry

Faculty Mentors: Jane Khudyakov, Biological Sciences
Graduate Student Mentor: Jared Deyarmin, Ryan Kekman, Biological Sciences:

07B
Metabolic Gene Expression in Blubber of Fasting Elephant Seals

Angela Ngo, Pre-Dentistry, Alicia Stephan, Pre-Dentistry, Eileen Abdollahi, Pre-Dentistry, Gureet Sandhu, Pre-Dentistry

Faculty Mentor: Jane Khudyakov, Biological Sciences
Graduate Student Mentor: Laura Pujade Busqueta, Biological Sciences,

08B
Sculpin Out a Fishy Situation: Bioinformatic Analysis of Fish in the McCloud River, California

Erica Chien, Pre-Dentistry, Jamie Lam, Biological Sciences

Faculty Mentor: Jason Baumsteiger, Biological Sciences
Graduate Student Mentor: Erin Thompson, Biological Sciences

09B
Comparing McCloud River Sculpins’ FST using Genomics and Bioinformatics

Young Soo Choi, Biological Sciences, Peter Park, Biological Sciences

Faculty Mentor: Jason Baumsteiger, Biological Sciences
Fish Forensics: Exposing Discrepancies in Contemporary Species of Sculpin

Seonggon Yoo, Pre-Dentistry, Wonjoon Choi, Pre-Dentistry

Faculty Mentor: Jason Baumsteiger, Biological Sciences
Graduate Student Mentor: Erin Thompson, Biological Sciences,

Recombinant Expression of the Water-clarifying Moringa oleifera Cationic Protein, MOCP, in the Yeast, Pichia pastoris

Ruchika Agrawal, Biological Sciences, Jacob Scheel, Biological Sciences

Faculty Mentors: Joan Lin-Cereghino, Geoff Lin-Cereghino, Mark Brunell, Biological Sciences

Testing for Cryptic Species within Adelpha basiloides (H. W. Bates, 1865)

Nina Chachad, Biological Sciences, Kathleen Nguyen, Biological Sciences,
Kayla Pham, Geological and Environmental Sciences

Faculty Mentor: Ryan Hill, Biological Sciences

Cheetahs of the Caterpillar World: Are Ground-feeding Speyeria Faster than Vine-feeding Agraulis?

Amanda Lo, Biological Sciences, Jenny Pham, Biological Sciences

Faculty Mentor: Ryan Hill, Biological Sciences

Quantifying the Collapse of Vertical Stratification at Costa Rica Forest Edges

Gunimat Samra, Biological Sciences, Brian Oye, Biological Sciences

Faculty Mentor: Ryan Hill, Biological Sciences

Analyzing Bottlenose Dolphin Whistles in Social Contexts

Christine Duong, Biological Sciences, Abigail Masbrata, Pre-Dentistry, Thucdan Nguyen, Pre-Dentistry, Esha Patel, Pre-Dentistry, Yuchen Xie, Biological Sciences

Faculty Mentor: Stacie Hooper, Biological Sciences
Optimization of Chicken Microsatellite Markers

13B Heather Chaban, Biological Sciences, James Kamada, Biological Sciences
Faculty Mentor: Tara Thiemann, Biological Sciences

Bloodmeal Identification for Mosquitoes in Lake County

13C Susan Shiroma, Biological Sciences, Jenny Yoo, Biological Sciences
Faculty Mentor: Tara Thiemann, Biological Sciences

Social Vocalizations of Humpback Whales

14B Jessica Niccum, Biological Sciences, Ben Nguyen, Pre-Dentistry, Devon Le, Pre-Dentistry, Derrick Dao, Biological Sciences, Jordan Minor, Pre-Dentistry
Faculty Mentor: Stacie Hooper, Biological Sciences

Is the tradeoff between reproduction and locomotion plastic in response to oxidative stress and food limitation?

15B Narin Jeong, Pre-Dentistry, Nicholas Meckfessel, Pre-Dentistry, Biological Sciences
Faculty Mentor: Zachary Stahlschmidt, Biological Sciences

Effects of environmental variability and mate quality on reproductive success in sand field crickets

15C Christina Koh, Pre-Dentistry, Iris Chu, Pre-Pharmacy
Faculty Mentor: Zachary Stahlschmidt, Biological Sciences

Species, Season, and Sex - Effects on Hematological Characteristics in a Snake Community

16B Jacquelyn Louie, Pre-Dentistry, Garrett Masuda, Pre-Dentistry
Faculty Mentor: Zachary Stahlschmidt, Biological Sciences

Poster Session 1 – DeRosa University Center Ballroom
April 28, 10:00 AM – 12:00 PM
Development of optimized synthetic route towards dicyclohexano-18-crown-6

16C

Vinh Truong, *Biochemistry*
Faculty Mentor: Vyacheslav Samoshin, *Chemistry*
Graduate Student Mentor: Carim van Beek, *Pharmaceutical and Chemical Sciences*

Trash or Recycle: The Influence of Product Characteristics on Recycling Plastic Bottles

17B

Faculty Mentor: Carolynn Kohn, *Psychology*
Graduate Student Mentor: Meagan Strickland, *Psychology*

Improving the Interview Skills of a Military Veteran Using Behavioral Skills Training

17C

Caterina Grossi, *Psychology*
Faculty Mentor: Corey Stocco, *Psychology*

2017 Summer Undergraduate Research Fellowship Project

Positive Affect and Adjustment in Shy Toddlers

18B

Stephany Barajas, *Psychology*
Faculty Mentor: Jessica Grady, *Psychology*

The Role of Inhibitory Control in Shy Toddlers' Adjustment

18C

Jocelyn Camargo, *Psychology*
Faculty Mentor: Jessica Grady, *Psychology*

2017 Summer Undergraduate Research Fellowship Project
Activities Adjusting Attitudes: The Impact of Lifestyle on Age Stereotype and Beliefs

19A

Lluvia Garnica, Psychology. Sebastian Getman, Psychology. Alexis Gutierrez, Psychology

Faculty Mentor: Carla Marie Strickland-Hughes, Psychology


19B

Kezhia Barba, Psychology and Political Science. Mercedes Ball, Psychology

Faculty Mentor: Carla Strickland-Hughes, Psychology

An Evaluation of the Efficacy of and Preference for Predictable versus Unpredictable Conditions of Reinforcement and Demands.

19C

Kezhia Barba, Psychology and Political Science

Faculty Mentors: Mahshid Ghaemmaghami, Psychology
Graduate Student Mentor: Matthew Boliard, Psychology

Help, Mom, I’m Scared! Toddlers’ Proximity to Parent when Introduced to Strangers, Puppets, and Clowns.

20A

Alvina Cheng, Psychology. Ariella Aung, Psychology

Faculty Mentor: Jessica Grady, Psychology

Waiters or Instant Snackers?

20B

Emily Zavalza, Psychology. Jocelyn Camargo, Psychology

Faculty Mentor: Jessica Grady, Psychology
A Clinical Application of Functional Communication Training plus Extinction and Contingency-based Delay under Typical and Socially-relevant Contexts.

21A Alvina Cheng, Psychology, Kelly Clark,
Faculty Mentor: Mahshid Ghaemmaghami, Psychology
Graduate Student Mentor: Kelly Clark, Psychology,

An Evaluation of the Efficacy of and Preference for Predictable versus Unpredictable Conditions of Reinforcement and Demands.

21B Sindhu Vatikuti, Psychology
Faculty Mentor: Mahshid Ghaemmaghami, Psychology
Graduate Student Mentor: Erin MacKelvie, Psychology

Identification of Genes Involved in Hormogonium Polysaccharide Synthesis in Nostoc punctiforme

22A Natalie Figueroa, Health & Exercise Science, Krithika Giresh, Biological Sciences, Daniel Nguyen, Pre-Dentistry
Faculty Mentor: Douglas Risser, Biological Sciences

Thicker Than Water: The Inequality of Water Distribution in California's Central Valley

22B Nicole Rosillo, Sociology
Faculty Mentor: Ahmed Kanna, School of International Studies

It’s not You, it’s Your Gender: Do Shy Children Communicate Differently Based on the Other Person’s Gender?

23A Caitlin Reynolds, Psychology
Faculty Mentor: Jessica Grady, Psychology
Investigation of Aminoglycosides Binding to G-Quadruplex DNA Using the FID Assay

**01B**

Charlie Lin, Pre-Pharmacy, Eileen Rad, Biochemistry, Ethan Trinh, Biochemistry, Jerry Ye, Medicine, University of Melbourne

Faculty Mentor: Liang Xue, Chemistry
Graduate Student Mentor: Siwen Wang, Chemistry

Application of the Knob Socket Model to predict changes in alpha helical structure

**02B**

Caitlin Erler, Biochemistry, Danielle MacArt, Biochemistry, Nickraj Singh, Biochemistry, Sarah Schneeberger, Biological Sciences, Sonakshi Maheshwari, Biological Sciences

Faculty Mentor: Jerry Tsai, Chemistry
Graduate Student Mentor: Taylor Rabara, Melina Huey, Chemistry

Rational Analysis of Coiled-Coil Packing Specificity Using the Knob-Socket Model

**03B**

Thao Nguyen, Biochemistry, Roos Nederstigt, Biochemistry, Carolyn Keim, Biochemistry, Chou Hang, Chemistry

Faculty Mentors: Jerry Tsai, Chemistry, Hyun Joo, Chemistry

Saponification of Triglycerides and Sodium Hydroxide in the Soap-Making Process

**05B**

Faith Ching, Biochemistry, Danni Li, Biochemistry, Mingheng Ling, Chemistry

Faculty Mentor: Liang Xue, Chemistry

Knob-Socket Model: A novel method of predicting protein stability

**05C**

Joshman Singh, Biological Sciences, Bianca Nguyen, Biochemistry, Huy Pham, Biochemistry, Isabelle Huynh, Bioengineering, Danielle MacArt, Biochemistry

Faculty Mentors: Jerry Tsai, Hyun Joo, Chemistry
Graduate Student Mentor: Taylor Rabara, Melina Huey, Chemistry
06B  Acoustical species recognition triggers oviposition in the túngara frog (Engystomops pustulosus)

Jenica Emerson, Biochemistry, Karina Tom, Biological Sciences

Faculty Mentor: Marcos Gridi-Papp, Biological Sciences

06C  The Effects of Water Quality on Tadpole Development

Rebecca Lee, Pre-Pharmacy  Lillian Phan, Biological Sciences

Faculty Mentor: Marcos Gridi-Papp, Biological Sciences

07B  Are Skull-Vibrations Causing High Frequency Artifacts in Membrane Measurements of the Túngara Frog (Engystomops pustulosus)?

Mark Morozumi, Biological Sciences

Faculty Mentor: Marcos Gridi-Papp, Biological Sciences

07C  Low Frequency Acoustic Isolation Boxes

Kelsi Navalta, Biological Sciences

Faculty Mentor: Marcos Gridi-Papp, Biological Sciences

08B  Nutritional Requirements During Larval Development in the Túngara Frog

Montana Pawek, Biological Sciences, Harman Singh, Biological Sciences

Faculty Mentor: Marcos Gridi-Papp, Biological Sciences

08C  The Effect of Vitamins Associated with Bone Development on Túngara Frog Larvae

Jessica Sheu, Biological Sciences

Faculty Mentor: Marcos Gridi-Papp, Biological Sciences
Larval Development of the Túngara Frog under UVB Exposure (Engystomops pustulosus)

09B

Josephine Tran, Pre-Dentistry

Faculty Mentor: Marcos Gridi-Papp, Biological Sciences

Synthesis of Oligopeptides for Magnetic Bead Application

09C

Jessica Chan, Pre-Pharmacy, Nuha Haque, Biological Sciences

Faculty Mentor: Jianhua Ren, Chemistry
Graduate Student Mentor: Yuntao Zhang, Chemistry

Solid Phase Peptide Synthesis and Mass Spectrometry Analysis Ac3-P3-D

10B

Celine Chandler, Biochemistry, I-Ting (David) Lee, Pre-Dentistry

Faculty Mentor: Jianhua Ren, Chemistry
Graduate Student Mentor: Yadwinder Singh Mann, Chemistry

The Synthesis of Small Oligopeptides Containing Cysteine Residues

10C

Danny Luu, Biochemistry, Shelley Park, Biochemistry

Faculty Mentor: Jianhua Ren, Chemistry
Graduate Student Mentor: Michael Browne, Chemistry

Retelling an Old Tale using Mass Spectrometry Analysis

11B

Dan Shao, Biochemistry

Faculty Mentor: Qinliang Zhao, Chemistry
Graduate Student Mentor: Chao Feng, Chemistry
The Road Less Traveled: a Bifunctional Molecular Approach to Cancer Medicine

11C  Amy Xiao, Biochemistry
Faculty Mentor: Qinliang Zhao, Chemistry
Graduate Student Mentor: Chao Feng, Chemistry

Mineral weathering and groundwater flow in Spring Mountains Springs

Sara Warix, Geology

12B  Faculty Mentor: Laura Rademacher, Geological & Environmental Science
External Collaborators: Marty Frisbee, Earth Atmospheric Planetary, Purdue University, Brian Hedlund, School of Life Sciences, UNLV, Zachary Meyers, Carolyn Box, Earth Atmospheric Planetary, Purdue University, Ariel Friel, School of Life Sciences, UNLV. Don Sada, Khaled Pordel, Desert Research Institute

Dynamical Constraints on Nontransiting Planets Orbiting Trappist-1

13B  Vinh Truong, Biochemistry
Faculty Mentor: Daniel Jontof-Hutter, Physics

U(1) Lattice Gauge Theory

13C  Johnson Liu, Physics, Applied Mathematics, and Spanish
Faculty Mentors: James Hetrick, Physics

Observations Using the Department's Telescopes

14B  Nina Madsen, Physics
Faculty Mentors: Helene Flohic, Physics

The Transfer Function of a Circular Membrane Using Laser Vibrometry

15B  Katherine Ram, Physics
Faculty Mentors: Aleksei Beltukov, Mathematics, Marcos Gridi-Papp, Biological Sciences
Cell Phones in the Lab: An App for the Dynamic Simulation of Voltage-Gated Ion Channels

15C  Kyle Poe, Bioengineering, Beau Forest, Computer Science
Faculty Mentor: Carlos A. Villalba-Galea, Physiology and Pharmacology

What Have you Done for me Lately? The Relationship Between Employee Satisfaction with Training, Financial incentives, Engagement, and Intent to Leave

16B  Evelyn Keovongsa, Business Administration
Faculty Mentors: Chris J. Sablynski, Eberhardt School of Business

Feeling Stuck on the Job? The Big Five Personality Dimensions and Job Embeddedness

16C  Meredithe Welsh, Business Administration
Faculty Mentor: Chris J. Sablynski, Eberhardt School of Business

William and William: The Parallels Between Faulknerian and Shakespearean Tragedy

17B  Ericka Wong, English
Faculty Mentor: Cynthia Dobbs, English

Catastrophic Health Spending in Uganda

17C  Timothy Cheng, Economics
Faculty Mentor: Michelle Amaral, Economics

2017 Summer Undergraduate Research Fellowship Project

Reconstruction of the Ballet Royal de la Nuit

18A  Jason Thompson, Music History
Faculty Mentor: Sarah Waltz, Conservatory of Music
Culturally Adapted Music Repertoire for Elderly Chinese-American Immigrants

18B

Erica Wan, Music Therapy

Faculty Mentor: Feilin Hsiao, Music Therapy

Music in the Archives: Information Literacy for a Better Performer

18C

Mia Watts, Music History

Faculty Mentors: Mike Wurtz, Library; Holt-Atherton Special Collections, Veronica Wells, Library

The Price of Cotton: The San Joaquin Valley Cotton Strike of 1933

19A

Katelyn Getchel, History

Faculty Mentor: Laura Gutierrez, History

A2Cloud: Practical Application-to-Cloud Matching To Empower Scientific Computing on a Budget

19B

Cody Balos, Computer Engineering; Zachariah Abuelhaj, Computer Engineering

Faculty Mentors: Vivek K. Pallipuram, David Mueller, Electrical and Computer Engineering, Chadi El Kari, Computer Science

Graduate Student Mentor: David De La Vega, Electrical and Computer Engineering

Comparing Post-Exertional Symptoms Following Serial Exercise Tests

20A

Lariel Mateo, Health & Exercise Science

Faculty Mentor: Mark VanNess, Health & Exercise Science

Obesity Associated Hypertension in Admitted Patients: Treating Isolated Systolic Hypertension May Be Short Sighted

20B

Kelly McKinnie, Health & Exercise Science

Faculty Mentors: Mark VanNess, Courtney Jensen, Health & Exercise Science, Michelle Amaral, Economics
Composer’s Club Concert
May 1st, 7:30 PM - - Faye Spanos Concert Hall

Distances for Trumpet Octet
Kevin Swenson
Theodore Stone, Leonard Ott, Shane Ryan, Ryan Abdelmalek,
Kevin Iwai, Kevin Swenson, Evan Abounassar, Thomas Hubel

"Fleeting Light”
Peter D. Altamura
Violin 1 Sabrina Boggs, Violin 2 Joanne Wu
Viola Ryan Villahermosa, Cello Laura Robb Martin

Piece: hot tongues & burnt coffee for Saxophone Quartet
Andrew Lu
Zachary Grenig, soprano saxophone, Matthew Loya, alto saxophone
Trevor Trinity- Rees, tenor saxophone, Alexandria Mendoza, baritone saxophone

Madness
Alexandrea Mendoza
Violin: Micah Vogel, Cello: Jon Ivy, Piano: Bhakti Chan

"Animate"
Robert Huntington
Bassoon: Tristan Collinsworth, Trumpet: Theodore Stone, Piano: Joy Chiang

Intermission

Black Dreams
Alexandrea Mendoza
Soprano Sax: Beau Haygood, Alto Sax: Mitchell Beck,
Tenor Sax: Chris Sacha, Baritone Sax: Shelbey Evans

String Quartet no. 1
Kevin Swenson
Micah Vogel, Emily Criss, Violins
Krista Swenson, Viola
Laura Robb Martin, Cello

Buchlidian Landscape no. 2
Kevin Swenson

MACHINE
Scott Nelson
Saxes: Mitchell Beck, Emmanuel Ferndandes, Zachary Grenig, Matthew Loya
Bioengineering:

Cost-Effective Tissue Perfusion Bioreactor
Keon Anderson, Maxwell Peterson, Devon Thompson
Faculty Mentor: Huihui Xu, Bioengineering

EEG-controlled Non-invasive Upper Limb Prosthesis
Priscilla Hernandez, Gerardo Martinez, Matthew Ng
Faculty Mentor: Huihui Xu, Bioengineering

Feline Prosthetic for Gait Normalization
Taylor Gray, Megan Murphy, Elizabeth Peden
Faculty Mentor: Huihui Xu, Bioengineering

Improving Posture and Relief to Lower Back Pain
Firdaus Jahangir, Jonas Sung, Johnny Lam
Faculty Mentor: Huihui Xu, Bioengineering

Mosquito Collection Device Utilizing Positive Phonotaxis and Positive Chemotaxis
Phoebe Wetherbee, Liana Stoddard, Ashley Abraham
Faculty Mentor: Huihui Xu, Bioengineering

Sleep Right, Sleep Tight: A Pneumatic Pillow with Active Adjustment
Nicholas Heredia, Yodit Hiabu, Eric Martin, Austin Shima
Faculty Mentors: Huihui Xu, Bioengineering
Civil Engineering:

Pacific Media X Building

Rebecca Corner, Leah Classen, Micaela Robertson, Saima Uz-Zaman

Faculty Mentors: Mary Kay Camarillo, Hector Estrada, Camilla Saviz, Scott Meery Civil Engineering

Other Mentors: Patrick C. Dell, Ryan Dole, Aaron Mejorado (Terracon), Martin Van Houten (Physical Plant), Matthew Ward (Ward Engineering)

Safe Disinfection of Potable Water: Design of the North Stockton Pipeline Sodium Hypochlorite Facility

Stefanos Word, Khalid Bafakih, Hana Owaidat, Khuong Tran

Faculty Mentors: Mary Kay Camarillo, Luke Lee, Hector Estrada, Camilla Saviz, Civil Engineering

Stockton Revamped-Oak Park Skate Park

Joseph Prescott, Alisha Rodriguez, Jose Ruvalcaba, Tamara Turton

Faculty Mentors: Mary Kay Camarillo, Hector Estrada, Civil Engineering

The Future of Downtown Stockton: A Multi-Use Development

Jayanne Asuncion, Amer Alamoudi, Mauricio Arias, Chengyao Wang

Faculty Mentors: Mary Kay Camarillo, Hector Estrada, Luke Lee, Scott Meert, Camilla Saviz, Civil Engineering

Other Mentors: Jonathan Wright (Crawford & Associates)
Computer Science:

Cram for Tests and Cram for Food: The Grove
Tom Vo, An Nguyen
Faculty Mentor: Shon Vick, Computer Science

Crop Insights: Data Visualization and Management for Farmers and their Orchards
Kyle Cookerly, Jiaying Zhang, Abhijit Chakravarthy, Victor Zamarian
Faculty Mentor: Shon Vick, Computer Science

Flip
Jeremy Ronquillo, Courtney Banh, Devin Lim
Faculty Mentor: Shon Vick, Computer Science

Hermes
Hillary Tong, Carissa Forrister, Jacob Baizer, Jeremy Chrestionson, Gary Dunn
Faculty Mentor: Shon Vick, Computer Science

Nenki
Carlos Flores, Spencer McKean
Faculty Mentor: Shon Vick, Computer Science

Pour Decisions
Lisa Her, Darrel Holt, Norlan Prudente, Malvika Sriram
Faculty Mentor: Shon Vick, Computer Science

Proof read for me
Chiyu Cheng
Faculty Mentor: Shon Vick, Computer Science
rsthread: A Safe Parallel Threading Library for Python
Obaid Rehman
Faculty Mentor: Shon Vick, Computer Science

STAHL: Compressing Data for Easy Random Access
Peter Rogers
Faculty Mentor: Shon Vick, Computer Science

The Black Box: Portable Network Monitoring Device
Mark Bely, Jaskaran Virk, Lonny Rasberry
Faculty Mentor: Shon Vick, Computer Science

The Creation of Blaster Boy
Justin Sy, Jeremy Songster, Mitchell Chang
Faculty Mentor: Shon Vick, Computer Science

TrackHub
Edgar Oregel, Clement Garcia, Kyle Hartman, Drew Overgaard, Ryan Espinosa
Faculty Mentor: Shon Vick, Computer Science

What’s Your Sign: Everything You Need to Know About the Zodiac
Sidney Brooks
Faculty Mentor: Shon Vick, Computer Science

Who’s There? Examining Voice Recognition with Deep Learning
Evan Sano, Alex Hall, Austin Van, Taylor Togo
Faculty Mentor: Shon Vick, Computer Science

Sign Stealer
Nate Verlin
Faculty Mentor: Shon Vick, Computer Science
School of Engineering & Computer Science – Senior Projects
May 5, 2:30 – 4:30 PM
School of Engineering and Computer Science

Electrical & Computer Engineering:

Autonomous Controlled Pollination of Kiwifruit
Cody Balos, Gustavo Bartolo, Chuck Hu
Faculty Mentors: Cherian Mathews, Vivek K. Pallipuram, Electrical and Computer Engineering

Michele The Robot Tour Guide
Caleb Rash, Zachary Allen, Kelvin Hu, Nick Vaughn
Faculty Mentor: Cherian Mathews, Electrical and Computer Engineering

Mobile Solar
Logan Sanne, Ford Sheldon, Cory Tran
Faculty Mentors: Cherian Mathews, David Mueller, Jeremy Hanlon, Electrical and Computer Engineering

RAMA – The Robotic Arm Medical Assistant that Reaches for Health
Amril D'Souza, Zachariah Abuelhaj, Paul Vuong, Jonathan Samson
Faculty Mentors: Cherian Mathews, Ken Hughes, Fadi Muheidat, Electrical and Computer Engineering
Other Mentors: Jeremy Hanlon Technical Support/ Innovation Spaces Coordinator, Mark Foreman, Technical Support/ Technician

Nanoparticle Desalination
Guy Moore, Daymian Villapudua
Faculty Mentors: Rahim Khoie, Cherian Mathews, Electrical and Computer Engineering
Mechanical Engineering:

Adjustable and Portable Projector Stand
Belal Ahmed, Ross Anderson, Dustin Carter, James Ling
Faculty Mentor: Kyle Watson, Mechanical Engineering

Automated S’more Press
Jacob Campbell, Rob Delucca, Kevin Geng, Romina Rodriguez, Steffano Vidal Espinoza
Faculty Mentor: Kyle Watson, Mechanical Engineering

Homebrew-Inspired Fluid Transport Proof of Concept
Joseph Coria, Jason Davis, Daniel Quenga, Michael Sabate
Faculty Mentor: Kyle Watson, Mechanical Engineering

Motorized Morphicism: Automated Movable Panel Art Installations
Adnan Alkashi, Asher Bergtraun, Brian Elder, Clay Ferguson
Faculty Mentor: Kyle Watson, Mechanical Engineering

PacRacer: An Affordable DIY Go-Kart
Marielle Cortez, William Hambrick, Vanessa Sillman, Richard Vanwinkle
Faculty Mentor: Kyle Watson, Mechanical Engineering

Portable CNC Machine for Stone Countertops
Sean Hilken, Zachary Matsumoto, Nasser Saleh, Zachary Shields
Faculty Mentor: Kyle Watson, Mechanical Engineering
### Student Film Showcase  
**May 8, 7-10 PM - Janet Leigh Theatre**

Faculty Mentor: Patti McCarthy

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<td>Covere♫</td>
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