

53RD ANNUAL
SCHOOL OF ENGINEERING

SENIOR DESIGN

CONFERENCE

May 11, 2023
2:00 P.M.



**Santa Clara
University**

School of Engineering

ENGINEERING WITH
A MISSION

WELCOME



Dear students, alumni/ae, parents, partners, and friends:

Welcome to the 53rd Annual Senior Design Conference. We are excited to have you join us for this exhibition of our students' work.

At the School of Engineering our mission is to prepare diverse students for professional excellence, responsible citizenship, and service to society. We look to educate the whole person with distinctive academic programs designed to produce engineers who approach their profession with competence, conscience, and compassion. Today's presentations showcase hands-on, practical experience and theoretical learning that enable our students to graduate with the knowledge, skills, and vision necessary to make a difference in their communities and the world.

Through a wide range of capstone projects—everything from a cost-efficient prosthetic leg for skiers who have suffered from a transfemoral amputation to a project that addresses the housing shortage in the city of Oakland, and more—our students have spent their senior year applying their knowledge to complex problems for the benefit of society, putting theory into practice while working collaboratively.

The types of projects our students are working on have changed vastly from those of the first Senior Design Conference, 53 years ago, but what remains the same is our inspiration to continue sharing these innovations with our ever-growing community of Bronco engineers. We appreciate those of you who have come back to help with the conference today and we congratulate our seniors for bringing their projects to fruition. Thank you to everyone who has contributed to their success and to that of the School of Engineering.

Sincerely,



Elaine P. Scott, Ph.D.
Dean
School of Engineering

PROGRAM



12–1:15 p.m. Judges' Check-in

Locatelli Student Activity Center

12:30 p.m. Judges' Lunch and State of the School Address*

Elaine Scott, Dean
School of Engineering

Locatelli Student Activity Center

1:30 p.m. Judges' Welcome and Orientation

Elaine Scott, Dean
School of Engineering

Ruth Davis, Associate Dean of Undergraduate Studies
School of Engineering

Locatelli Student Activity Center

2:15–5:30 p.m. Senior Design Presentations

*Benson Center, Bergin Hall, Heafey Hall,
The Harrington Learning Commons,
Orradre Library, and Sobrato Campus for
Discovery and Innovation*

5:30 p.m. Project Demonstrations

*Sordello Family Courtyard at Sobrato Campus
for Discovery and Innovation*

6:30 p.m. Dinner

Locatelli Student Activity Center

**Due to space constraints, this event is open only to conference judges and invited guests.*



BIOENGINEERING SESSION 1

Learning Commons, St. Clare Room

MilkGuard

2:15–2:45

Karina Camarillo, Anna Green, Cole Kitchen

Advisor: Unyoung Kim

MilkGuard is a microfluidic paper-based analytic sensor designed to detect E. coli in breast milk samples. Intended for use in rural areas, this product minimizes risk of infection to infants while decreasing the time it takes for donations to get from donor to infant.

Impact-Reducing Prosthetic Liner with Integrated Haptic Feedback

2:50–3:25

Zena Fasheh, Gavin Cormier, Misha Manushree, Rebecca McKinny

Advisors: Prashanth Asuri, Unyoung (Ashley) Kim

Transfemoral amputees experience a loss of sensation and changes to the residual limb's shape/volume that make prosthetics uncomfortable. This project aims to create a variable volume, impact-reducing socket liner with integrated haptic nodes that correlate to points on the prosthetic to maximize quality of life, comfort, and sensation.

Controlled Prosthetic Leg for Skiers with Transfemoral Amputation

3:30–3:55

William Bennett, Jacob Gilbertson

Advisors: Yuling Yan, Emre Araci, Michel Hell

Our project is a cost efficient prosthetic leg for skiers who have suffered from a transfemoral amputation. The prosthetic is controlled by buttons on your ski pole that controls the extension and flexion of the knee to the angle that is needed to ski dynamically down the slopes.

.....

BIOENGINEERING SESSION 3

Learning Commons 133, Viewing & Taping B

Nano-Scavenger Platform for Precision Medicine

2:15–2:45

Jonathan Ayache, Noah Kuehn, Victoria Sanchez-Monroy

Advisor: Bill Lu

This project creates a scavenging drug platform using exosomes, small lipid nanovesicles. We are using recombinant gene technologies to mount a single-chain variable fragment based binding protein to the surface of exosomes. They can reach more areas of the body including the brain for drug targeting.

Anti-infective drug discovery

2:50–3:20

Maiya Fujiwara, Brandon Pang, Colette Caspar

Advisor: Jonathan Zhang

With antibiotic resistance on the rise, bacterial infections such as Methicillin-resistant Staphylococcus aureus are rendering common antibiotics ineffective. Thus, in response to this health threat, our project focuses on developing a novel immuno-anti-infective drug that targets Sortase A, an enzyme crucial to the invasion of Gram-positive bacteria into mammalian cells.

New Generation of Nanovaccines

3:30–3:55

Joy Ku, Renceh Flojo

Advisor: Bill Lu

Exosomes are an up-and-coming target for diagnostics, drug delivery, and imaging. Alongside robust computational software, we designed a high-throughput epitope identification and mapping program to aid antigen optimization and nanovaccine generation. This program finds highly immunogenic sequences, maximizing compatibility between immune receptors and our target antigen utilizing binding affinity data.

McLaughlin-Walsh Residence Hall Expansion

4:05–4:30

Rebecca Huang, Shanelle Smith

Advisors: Tracy Abbott, Sukhmander Singh

This project aims to increase the amount of on-campus student housing accommodations to meet the needs of Santa Clara University's increasing student population. The team provides a unique vertical expansion above McLaughlin-Walsh Residence Hall that requires no demolition to the existing housing structure.



**CIVIL, ENVIRONMENTAL AND SUSTAINABLE
ENGINEERING SESSION 2**

Sobrato Campus for Discovery and Innovation 1308

Supetai Well Filtration System

2:15–2:45

Nicholas Holtz, Shirley Naranjo, Eduardo Villegas Chavez

Advisors: Aria Amirbahman, Steve Tarantino

A community in Kenya lacks clean water as their well is contaminated with high levels of fluoride; forcing them to retrieve spring water 5 km away. Collaboration between SCU, the NGO, Sabore's well, and KU Leuven has led us to implement a RO water filtration system to purify their water.



Highway 17 Wildlife Crossing

2:50–3:20

Taryn Chisholm, Seema Singh, Justin Uyeno

Advisors: Sukhmander Singh, Tracy Abbott, Laura Doyle, Rachel He

Highway 17 is an essential corridor for commuters that creates a barrier between wildlife migratory routes. The highway is a hotspot for wildlife-vehicle collisions that endangers both animals and humans. This project provides a design for a wildlife crossing to ensure a safe passageway for key species across Highway 17.

Coastal App

3:30–4:00

Will Maddrey, Daniel Schott, Michael Zetino

Advisor: Sean Choi

Coastal is a mobile application that crowdsources data of coastal phenomena from user reports for scientific and safety purposes. It allows users to submit reports, view nearby reports from other users, and provides users with educational resources where they can learn more about potential coastal phenomena they might encounter.

Dominican Republic Greenhouse Automation

4:05–4:35

Ryan Le, Erik Mitchell, Mark Castillo

Advisor: Sean Choi

The Dominican Republic's Loyola University needs a wirelessly connected network of sensors for their greenhouses. Our project uses LoRa communication to receive data on soil temperature and humidity levels, then organizes and displays this information on an interactable application.

Climate Cloud

4:45–5:10

Atiyut Khemkhon, Dylan Lin

Advisor: Sean Choi

Our project, Climate Cloud, is a machine learning-based drought prediction model that utilizes data from the National Oceanic and Atmospheric Administration (NOAA) and the United States Drought Monitor (USDM) to accurately predict the likelihood of drought in western regions of the United States.



COMPUTER SCIENCE AND ENGINEERING SESSION 2

Heafey Hall 125

Obujulizi Share — Enabling Voices for Rural Ugandan Communities

2:15–2:40

Aastha Khare, Sravani Polkampalli

Advisor: Silvia Figueira

Our project consists of a system of applications created to enable communities in impoverished areas of rural Uganda to tell their stories. Our applications will be used as a centralized platform to take interviews, write stories, and display the stories for easy viewing.

ACAT 2.0: An AI Transformer-Based Approach to Predictive Speech Generation

2:50–3:15

Kairan Quazi

Advisors: Nam Ling, Ahmed Amer

The project involves the design of a sophisticated NLP pipeline that will predict and generate full-sentence conversational responses in real time. This project pipeline is composed of three phases: (1) detect and record human speech; (2) diarize and transcribe speech; and (3) generate predictive sentences.

Whether Weather

3:30–4:00

Lucas Voron, Graham Purvis, Josh Kelleran, Malcolm Weaver

Advisor: Silvia Figueira

Whether Weather is an interactive website that analyzes the relationship between harsh weather and transportation safety. Our platform will show how a variety of weather conditions impact the statistical safety of every segment of road within certain geographical regions.

A Study of Processing Beehive Monitoring Data in Edge and Cloud

2:50–3:25

Cheng Zhang, Jason Fong, Yen-Jung Lu, Niyitanga Inosa, Chan Nam Tieu

Advisor: Behnam Dezfouli

Working alongside the Master Beekeepers' Association, this project leverages machine learning methods to analyze and protect bees' health. We evaluate both edge- and cloud-based processing of bees' image data in terms of computational resources. The platform also provides a web interface for monitoring and analyzing bees' activities.

AI-Powered IoT Monitoring and Security for Smart Homes

3:30–4:00

Timothy Hradil, Pavel Boldyrev, Matthew Ding

Advisor: Behnam Dezfouli

This project presents a novel approach for detecting attacks from Internet of Things (IoT) devices. In particular, we designed and implemented methods on a home gateway device (such as a Wi-Fi router) running machine-learning models for continuous traffic monitoring and analysis to detect botnets.

W.A.R.N (WI-FI Attack Recognizer & Notifier)

4:05–4:35

Sudhish Sewpaul, Tate Musante, Jaden Ngo, Roshan Sevalia

Advisor: Behnam Dezfouli

This project presents an affordable and scalable system to detect WiFi attacks in smart homes. The system continuously monitors and analyzes the captured data and alerts the user if an attack is underway. For example, we show how this system alerts users about attacks on surveillance cameras.

Packify: Machine vision assisted 3D Bin Packing

4:45–5:10

Zen Yamao

Advisor: David Anastasiu

Packify is an application that helps users pack household objects and products. It does this by using machine vision to scan and identify objects and runs a 3D bin packing algorithm to find the optimal packing for a given bin size.

.....

**COMPUTER SCIENCE AND ENGINEERING
SESSION 5**

Heafey Hall 122

.....

Immersive SCU Campus Tour with Augmented Reality

2:15–2:45

Axel Perales, Tristan Limawan, Alfredo Perry

Advisor: Sharon Hsiao

An augmented reality web application that will help alleviate the pressure on incoming and potential first-year students with having to sign up for an on-campus tour. It would also allow people to explore the campus at their own pace and convenience, and familiarize themselves with the school's alums.

.....

Film Viability Evaluator

2:50–3:15

Caitlin Lopez, Kulsoom Sabit

Advisor: Yi Fang

A web-based portal that generates a set of analysis models based on historic film data. Intended for students, writers, and producers, this application recommends feasible criteria when producing a new film.

.....

Finder: A Diverse Music Recommendation Algorithm

3:30–3:55

Matt Seminatore, Peter Hay

Advisor: Yi Fang

Our project seeks to address a common problem in recommender systems: Bias toward popular results. By taking into account the musical characteristics of songs, our algorithm aims to generate recommendations that better support diverse artists and sounds.

Generative Art Influenced by Chromesthesia

4:05–4:30

Spencer Goles

Advisor: Xiang Li

A site to generate art based on audio files, influenced by the medical condition Chromesthesia, which allows people to interpret sound into shapes and colors. The site will take audio input and generate unique art based on how humans with Chromesthesia naturally interpret sound.

Wyclef

4:45–5:10

Rosaura Hernandez Roman, James Dameris

Advisor: Max Kreminski

Using JavaScript, we will reconstruct an open-source version of Versu, focusing on its social practice engine. Reconstruction of Versu will be done through architectures described within research papers by the creators of Versu and by extrapolating off of adjacent works such as Ensemble.

COMPUTER SCIENCE AND ENGINEERING SESSION 6

Sobrato Campus for Discovery and Innovation 3302

Capturing the Social Experience of SCU Campus Housing Options in Virtual Tours

2:15–2:45

Eva Stenberg, Kian Malakooti, Matthew Gates

Advisor: Kai Lukoff

For incoming students, Santa Clara University offers very limited resources for choosing campus housing. To address this, we aim to create a virtual tour for each campus housing option and provide a sense of the unique social character of each residence hall.

Nutrition Visualization for Mindfulness

2:50–3:20

Jake Tsuchiyama, Jarin Simon, Landis Fusato, Ryan Wong

Advisor: Sharon Hsiao

A mobile application that increases user awareness of their nutrient intake by utilizing AR to visualize nutrients in scale through mindful eating. Users can scan or manually input items they eat and our app will display the nutritional information to help consumers make more informed health choices.

A Digital Twin of the SCU Campus: Telling Immersive Stories About Student Life

3:30–4:00

Hasmik Galstyan, Venus Li, Trisha Nguyen, Marianne Fuyu Yamazaki Dorr

Advisor: Kai Lukoff

Existing tours fail to capture the lives of the people who inhabit those spaces and turn them into actual places. Our goal is to answer the questions of prospective students by creating virtual tours of Santa Clara University that put storytelling at the forefront.

Developing an Open-source Tool for Systematic App Reviews for Non-Technical Researchers

4:05–4:35

Lauren Xie, David Truong, Tino Theodoropoulos, Jason Vu

Advisor: Kai Lukoff

The process of scraping metadata from app stores, called systematic app reviews, does not have defined best practices and the process of scraping app store data is costly and time-consuming. Our goal is to develop an open-source tool that non-technical researchers can use to easily scrape the Google Play store.

MC (Monster Creator)

4:45–5:10

Harrison Bui

Advisor: Maya Ackerman

Provides a free-to-use character creator UI that allows users to create creatures and humans from their imagination. Also supports a character generator option using a user-specified body structure.

.....

ELECTRICAL AND COMPUTER ENGINEERING SESSION 1

Learning Commons Training and Instruction 203

Neural Network Based Satellite Image Processing

2:15–2:40

Rikesh Mehta, Cathy Yin

Advisor: Hoesek Yang

Our project will be a continuation of previous efforts that will feature the implementation of modern optimization techniques on an existing satellite image object detection neural network system. This technique takes into consideration the hardware and software characteristics of our deployment target to produce a reduction in inference latency with minimal decrease in accuracy.

Ultra-Low Power Neural Network for Audio Recognition

2:50–3:15

Luka Kitamura, Alexander Luo

Advisor: Hoesek Yang

The objective of this project is to outline effective methodologies that enable a wide range of audio classifier neural networks to be characterized as consuming ultra-low power while maintaining accuracy and inference response time. The applications for this project allow for longer battery life in edge computing devices.

Low Power TinyML for Image Recognition

3:30–3:55

Robb Chun, Anonna Hasan

Advisor: Hoesek Yang

To train and prune an image recognition neural network that can be used to assist the visually impaired.

Air Conditioner Fail Safe Detector

4:05–4:30

Jonathan Li

Advisor: Dat Tran

Air Conditioner Detector will alert users of any malfunction within the system. Using sounds generated by the fan's blower motor as an indicator, the detector will alert users when detecting abnormal sounds for a failure threshold.



ELECTRICAL AND COMPUTER ENGINEERING SESSION 2

Learning Commons Training and Instruction 205

Biomimicry in Solar Energy Applications

2:15–2:45

Terrin Cramer, Ryan Ogino, Yicheng Kang

Advisor: Maryam Khanbaghi

Our project aims to implement a biomimetic cooling system modeled after the ghost plant in order to reduce byproduct heat while increasing efficiency of photovoltaic arrays.

PROJECT HERMES: Hermes Tour Robot Gives Guided Tour

2:50–3:20

Aly Khater, Justin Sun, Fernando Camou

Advisor: Maria Kyrarini

Implement an interactive guided-tour with a robot. The robot will walk to a room, give information about that room via speech, and continue to walk to the next one. It will loop through every room then back to its default position.

Microgrid Control System

3:30–3:55

Nathan Kehl, Sofia Brumbaugh

Advisor: Maryam Khanbaghi

We are designing and simulating a control system that can stabilize the voltage, frequency, and power of a microgrid consisting of a photovoltaic array, battery storage, and loads. Our control system will be able to island the microgrid in the event of a fault then resynchronize and re-enter grid-connected mode.

Santa Clara Radio Astronomy Program II (SCRAP II)

4:05–4:35

Aria Rouzmehr, Logan Barnes, Michael Quang

Advisor: Kurt Schab

Santa Clara Radio Astronomy Program (SCRAP II) is designed to provide a potential outlet for a radio astronomy setup. This program will focus on building a parabolic radio telescope that can provide insights to the sky, research, and collaboration for students and faculty at SCU.



INTERDISCIPLINARY SESSION 1

Benson Center, CA Mission Room

Automated Greenhouse

2:15–2:45

Henry Kayser, Pedro Henrique de Sousa e Silva Alvarenga

Advisor: Jes Kuczenski

A simple replicable way to provide an easier, more efficient, and effective way for food insecure people and families to produce their own food. A solution that can be customized to be adopted in different circumstances worldwide and is environmentally friendly.

Rhea Breast Pump: Implementation of Biomimicry Technology

2:50–3:25

Julia Yaklich, Harper Daniels, Leanne James, Laini Reynolds, Courtney Rowe

Advisors: Calvin Tszeng, Emre Araci

A breast pumping device that utilizes actuators, heating elements, and pressure differentials to mimic the natural motion of a baby's mouth during breastfeeding.

Thermometer Servo Loop for Actuating Marine Permaculture

3:30–4:00

Connor Grady, Anna Gabriele, Jeremiah Rufus, Illan Vargas

Advisors: Jes Kuczenski, Prashanth Asuri

We are prototyping and developing a control system for the Climate Foundation's "Marine Permaculture" (MP) platforms in the Philippines designed for offshore seaweed cultivation. The Thermometer Servo Loop will sense and remotely communicate underwater temperature readings in real-time; consequently, the platform will change depth to consistently achieve optimal growing conditions.

Robotic Arm Extrusion End Effector

4:05–4:35

Savannah Hunt, Nico Figueroa, David Blouin, Nicolas Viamin

Advisors: Andy Wolfe, Peter Woytowicz

Our project's goal is to extrude materials with high viscosities in a manner which mimics 3D printing. This will allow us to print complex ceramic projects, precision-dependent manufacturing tasks, and much more. By the end of the term, we hope to print a precisely formed and water-tight bowl.

Nautilus ROV Robot Manipulator

4:45–5:25

Andrew Stewart, Dana Stefanides, Rebecca Walters, Matt Hayes, Steven Reimer, Jenny Huynh, Andrew Nguyen

Advisors: Christopher Kitts, Michael Neumann

A low-cost robot arm, end effector, and storage system for the Nautilus underwater ROV that can retrieve, store, and record the location of multiple marine samples in one deployment.

INTERDISCIPLINARY SESSION 2

Benson Center, Parlors B & C

DreamTemp: Sleep Monitoring and Improvement System

2:15–2:45

Kyle Pedersen, Michelle Lim, Will Cockrum

Advisors: Yuling Yan, Benham Dezfouli

DreamTemp is a platform for sleep monitoring and improvement. Using a Fitbit to determine sleep stage and a Nest Thermostat to control the temperature of the room, DreamTemp dynamically adjusts the room temperature based on a person's sleep stage with the goal to improve quality of sleep.

SafeHome

2:50–3:15

Siddharth Raj, Meryem Esa

Advisors: Jes Kuczenski, Silvia Figueira

SafeHome provides newly arrived refugees with notifications, access to resources, and a secure place to store important documents. This app streamlines the overwhelming process of assimilating into a new community by offering information on the camp they reside in and surrounding areas thereby empowering refugees with the knowledge and resources they need to build a better future.

NeuroGen: EEG and Near-Infrared Light Stimulation Control System

3:30–4:00

Arnold Nieto, Karina Aguirre, Matthew Tamanaha, Jaylinn Solis

Advisors: Emre Araci, Julia Scott, Sally Wood

Transcranial photobiomodulation is an experimental treatment for neurodegenerative disorders and neuroinflammatory conditions. NeuroGen is a hybrid photobiomodulation and electroencephalography device whose purpose is to optimize light-stimulation therapy methods. This will open new possibilities for better clinical outcomes and research on the effects of photobiomodulation on the brain.

Lever Driven Wheelchair with Gear Changing Concept

4:05–4:40

Dylan Hsu, Anugrah Murali, Julian Hermosura, Brian Burke

Advisor: Jessica Kuczenski

This project aims to prototype a system where wheelchair users can propel forwards via levers and bike gears rather than hand rims. This system is designed to provide wheelchair users with a less strenuous mechanism of movement that can allow them to explore light hiking trails and go faster.

MECHANICAL ENGINEERING SESSION 1

Benson Center, Williman Room

AIAA Design Build Fly: Aerodynamics

2:15–2:45

Victor Bueno Garcia, Julian Brown, Keaton Viadro, Kyle Lam

Advisor: Mohammad Ayoubi

The AIAA Design, Build, Fly Competition is an international aerospace competition that is built around designing and manufacturing an unmanned aircraft to perform specific tasks. Our team focused on the aerodynamics side of the project and performed simulations as well as calculations to ensure our design is capable of flight.

AIAA Design Build Fly: Structures and Controls

2:50–3:20

Peyton Clark, George Simon, Gabe Shedid, Jonathan Kleinman

Advisor: Mohammad Ayoubi

Our project focuses on the control and structural design of a balsa fixed wing UAV, meant to be used at the Design/Build/Fly Competition with AIAA.

Active Car Spoiler

3:30–4:00

Connor McCabe, Kaiden Marouf, Shane Nelson

Advisor: Calvin Tszeng

Our goal is to build the most advanced, efficient, and affordable active car spoiler for retail production. The spoiler will adjust the angle of attack for the purpose of generating the maximum downforce and/or drag according to the current driving conditions.

STAR (Stabilization, Trajectory, And Recovery System)

4:05–4:40

Aaron Juan, Anne Paloma, Robert Canalas, James Oblitas, Miles Nguyen

Advisor: Robert Marks

STAR is a stabilization, trajectory, and recovery system that allows weather balloons to make trajectory adjustments during descent. Not only does STAR allow researchers to gather more precise data, but it also ensures that their measurement equipment lands in preferred environments for proper recovery.

Soft Shell Helmet Cover

4:45–5:20

Jo Espiritu, Caleb Chiang, Matthew Franke, Serry Srouji, Jay Laborin

Advisor: Jun Wang

A reusable soft helmet was developed using bi-stable structures and additive manufacturing.

We wish to thank the following alumni/ae, friends, and industry partners whose participation as judges contributes greatly to the success of the Senior Design Conference.

David Aguilar Rodriguez '18
Level 10 Construction

Kishore Akshintala '14
Hewlett Packard Enterprise

Gabriel Alcantar '08
Mott MacDonald

Brad Allen MS '00
Retired — Moog CSA

JP Allport '15
Supernicro

Michael Amato '07, MS '11
Apple

Jan Areepitak '98
dbt Labs

Himanshu Barapatre
Pixelberry Studios

Beth Avon '14
SC Builders Inc.

Nikita Bhatnagar '17
Alector Inc.

Amandeep Bhupal '21
Microsoft

Eva Bouzos '18, MS '20
Cepheid

Chris Brady '98
Stanislaus County Public Works

Kirk Bresniker '89
Hewlett Packard Enterprise

Martin Bringuel '81
Trimble Inc.

Erik Burd '05
Abbott Diabetes Care

Louis Chen '10
Amazon.com

Graeme Coakley '01
August Home

Kaleo Cuaresma '05
Voltera Power

Ross Dakin '07
Criticality Sciences, Inc.

Nayana Dawalbhakta '00
Criterion Networks

Satej Desai
Meta

Mark Dettle '79
Retired

Sripriya Devarajan '15

Sushma Devarapalli '15
ServiceNow

Travis Duncan '12
DECA

Victoria Figueroa MS '17
Intuitive Surgical

Hudson Gasvoda
Santa Clara University

Devang Gaur
PayPal

Andy Gonzales '75
Retired — NASA

Ashwin Gour
Mindtree Limited

Jesse Harder '15
Electronic Arts

Caroline Harieg '21
Precision Medicine Group

Keith Hung '22
LinkedIn

Maria Joseph Israel '22
Santa Clara University

Asad Khamisy
Broadcom Inc.

Bill Kirkwood
MBARI

Bob Kleinhenz '71
Santa Clara University

Brady Knowles '10, MS '12
Intuitive Surgical

Jonathan Lee '17
KLA

Justin Lent '00
Active Yield Capital Management

Erik Levine '94
CACI — OPS West

Philippe Levy '88
Levee Solutions

Justyn Li '18
Intuitive Surgical

Billy Li '00
Google

John Lin
Zencatalyst Partners LLC

Ellen Linardi '01
Fiserv

Mike Liu '04

Louie Lombardo '80, MS '85
Retired — Lockheed Martin

Wen-Pai Lu
Santa Clara University

Jerard Madamba '18
Bayer

Shashikala Mahadevappa
Software AG

Jeff Maloney
Google

Brian MapeI '93
BMA Construction Engineers Inc.

Conrad Marotta '87, MS '94
dB Control

Patrick McGuire '81

Michael Meyer '92
NVIDIA

Amanda Moran '12
NVIDIA

Sri Mudigere '07

Hesham Naja '16
Palisade Builders, Inc.

Paul Nauleau '18

Christine Nolan-Brady '02
Google

Athmane Nouiouat '94, MS '97
Encoders Inc.

John O'Hagan '19
Forell/Elsesser

Kortney Opshaug
Blue Ocean Gear

Richard Pardini '67
San Jose Water Company

Mark Pedrazzi '81
Retired — BAE Systems

Richard Pottorff '97
Self Employed

Joshua Ramayrat '17
Waymo

Ashwin Ramesh Babu

Suyash Ranjan
Qualcomm

Nagini Reddy
Western Governors University

Greg Richmond '85, MS '91
Intuitive Surgical

Michael Robinson '00
Jacobs Engineering

Steve Rodriggs '85
Lockheed Martin Space

Shane Rogers
RPM Training Co.

Lexi Rohrer
Intuit

Bart Rupel '85
Lockheed Martin

Dion Salfen '61
Retired

Phillip Satterfield '00
Google

Warren Savage '93
University of Maryland

Tahir Sheikh '95
Contracting and Consulting

Richard Sherman '61, MS '64
Retired

Mitchell Shiver '03
Nova Measuring Instruments

Emmanuele Spera
NEXT

Nataliya Starostina
Santa Clara University

Eric Steuben BSME '90, MBA '95
Calyxo, Inc.

Guillermo Surraco '90
RH Borden

Noel Tamayo '90
Applied Materials

Danesh Tavana '84
Carroll Project LLC

Jenny Van Truong '14, MS '15
Safebuilt

Donald Van Buren '70
Retired

Ursula Vaughan '10, '12
Intuitive Surgical

Michael Wang MS '93, MBS '97
Silicon Moiton Inc.

Jason Weaver '96, MS '03
Apple

Laura Webb '11
City of San Mateo

Claire Wemp '14
DuPont

Rebecca Whelan
Silicon Valley International School

Roy Yang '07
Lam Research

Jose Ysaguirre '79
Becton Dickenson

Mariela Zúñiga '22
Santa Clara University

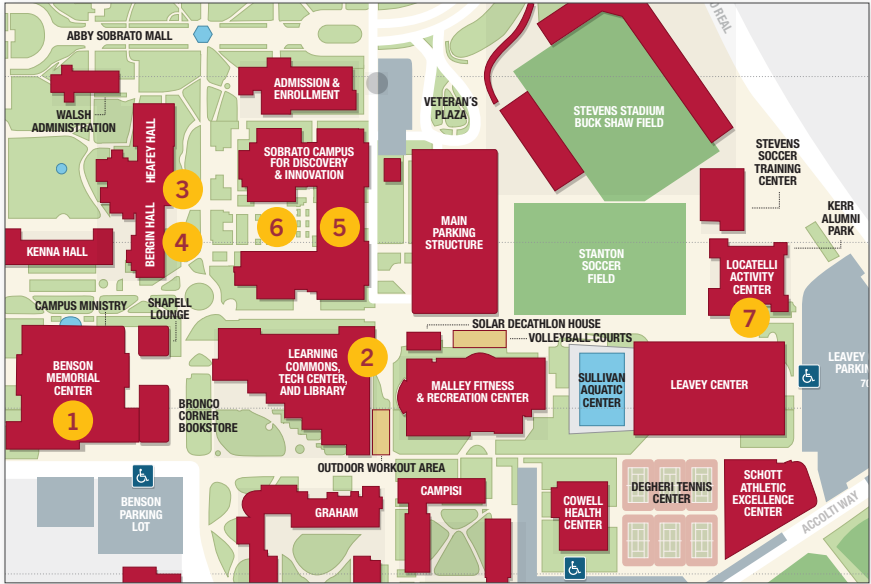
SANTA CLARA UNIVERSITY

SCHOOL OF ENGINEERING

The School of Engineering provides an outstanding theoretical and practical experience for both undergraduate and graduate students. Distinguished faculty, academic excellence, personal attention, and a culture of social responsibility are hallmarks of our program.

To learn more, visit www.scu.edu/engineering.

SENIOR DESIGN CONFERENCE MAP



1 BENSON MEMORIAL CENTER

Senior Design Presentations

- Interdisciplinary Sessions 1, 2
- Mechanical Engineering Session 1

2 THE HARRINGTON LEARNING COMMONS & ORRADRE LIBRARY

Senior Design Presentations

- Bioengineering Sessions 1, 2, 3
- Electrical and Computer Engineering Sessions 1, 2

3 HEAFEY HALL

Senior Design Presentations

- Computer Science and Engineering Sessions 2, 5

4 BERGIN HALL

Senior Design Presentations

- Computer Science and Engineering Session 1

5 SOBRATO CAMPUS FOR DISCOVERY AND INNOVATION

Senior Design Presentations

- Civil, Environmental and Sustainable Engineering Sessions 1, 2, 3
- Computer Science and Engineering Sessions 3, 4, 6
- Electrical and Computer Engineering Session 3

6 SCDI SORDELLO FAMILY COURTYARD

Project Demonstrations

7 LOCATELLI ACTIVITY CENTER

Judges' Check-in

Judges' Lunch and State of the School Address

Judges' Welcome and Orientation

Dinner