



CALIFORNIA STATE UNIVERSITY

FULLERTON

COLLEGE OF ENGINEERING
AND COMPUTER SCIENCE

2022 ECS STUDENT PROJECTS COMPETITION AND SHOWCASE

Monday, May 2, 2022

Thank you for supporting the students of
Cal State Fullerton!

Susan Barua, Dean
Sang June Oh, Associate Dean

Thank You Corporate Partners!

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Raytheon
RJE International

College Leadership Council

Fred L. Alexander
John D. Britigan ('76)
Kevin M. Carnino
Peter M. Fiacco ('91)
Caecilia Gotama ('82, '86)
Laurie A. Haack ('79, '06)
Darrell F. Jodoin, P.E. ('85)
Howard K. Lam, S.E. ('79)
Cathy M. Lekawa
Henry Martinez ('75)
Sean M. Peasley ('88)
Mona C. Simpson ('87)
Hal J. Walbrink ('76)
Wayne "Tony" Girard
Bill Ruh ('83, '84)
Greg Wolff ('03, '06)
James Ribbe ('97, '00)

Thank You Participating Students!

*Top 20 Projects Entered in Competition

**Corporate Partners

***Top 20 Projects Entered in Competition & Corporate Partners

Civil & Environmental Engineering

Effective Methodology for Reduction of Carbon Emission in Concrete with Use of Various Mixtures of Pozzolans: Carlos De La Sancha, Dr. Pratanu Ghosh

Evaluation of Concrete Strength and Durability by Maturity and Electrical Resistivity: Abril Herrera, Dr. Pratanu Ghosh

Geotechnical Behavior of Wildfire-Exposed Slopes: Ramzieh Kanaan, Zuly Arevalo, Dezire Enriquez, Dr. Xenia Wirth*

MSE Retaining Wall: James Pham, Cindy Tran, Simran Batra, Brisa Bernal, Vanessa Antunez, Jorge Zepeda, Dr. Xenia Wirth**

Service Life Model of Zeolite Based High Performance Concrete Mixtures Using Life 365 Software: Curtis Zimmerman, Carlos De La Sancha, Abril Herrera, Dr. Pratanu Ghosh*

Computer Engineering

Automated Golf Ball Retriever: Ali, Elizabeth, Brandon, Dr. Kiran George

Automobile Monitoring System (AMS): Joel Giron, Jordi Verduzco, Ghanim Almatar, Jimmie Dale Reyes, Dr. Kiran George

Autonomous Trash Disposal System (ATDS): Paul Nguyen, Erik Garcia Montoya, Jonathan Perez, Dr. Kiran George

Autonomous Underwater Vehicle (AUV): Henry Lin, Tyler Groom, Nate Ruppert, Douglas Shimizu, Kayla Lee, Dr. Kiran George***

Drone Security System: Acacia Coddling, Stephanie Casillas, Emmanuel Khlout, Jasper Hsu, Dr. Kiran George*

Orbital Labs: Microgravity Manufacturing Experiments: Brad Williams, Jon Hillier, Jade Hurtado, Armando Martinez, Erica Jiang, Dalton Caron, Mario Hernandez, Justin Bui, Alvaro Garcia, Conner Cook, David Mouser, Maxwell Weissenberg, Steven Nuno, Raymond Yanez, Joseph Rau, Marlene Gonzales, Matthew Cesena, Dr. Yoonsuk Choi

Project Eden: Aaron Nguyen, Pedro Corona, Cassandra Guillen, Hidalgo Arturo, William

Knight, Andy Nguyen, Timothy Trinh, Salem Edrees, Dr. Kiran George

T-100 Automated Umpire: Brendan Grier, Malik Awan, Lamisha Sultana, Dr. Kiran George

Titan Rover: Josephine Overbeek, Ashlye Pena Velez, Daniel Cuadra, Holland Priest, Kaulin Hall, Bob Mohammadian, Ivan Morales, Josue Plaza, Runlong Zhou, Jesus Gama, Alex Thai, Raquel Preciado, Vincent Dinata, Carol Esparragoza, Hannah Duarte, Jacob Patrick, Isaiah Odunze, Ryan Luong, Andy Nguyen, Brian Fonseca, Dr. Nina Robson

(Underwater Remotely Controlled Vehicle) ROV: Dakota Barrios, Humberto Portillo, Thuan Truon, Sean Sese, Dr. Kiran George***

Voice Controlled Robotic Arm Helper for Visually Impaired People: Brian Fonseca, Timothy Kheang, Sergio Minera, Dr. Kiran George

Voice Controlled Smart Door: Farbod Movagharnemati, Austin Weber, Sean Hui, Mohammad Alzahem, Dr. Kiran George

Computer Science

Automatically Recognizing Mentions of Food in Social Media Posts for Targeted Messaging about Food Storage: Lyba Batla, Eduardo Gomez, Dr. Anand Panangadan

BnB Secure: Tina Cao, Mohamed Soliman, Danny Diep, Maia Nguyen, Nick Aoki, Kurt Prutsman, Dr. Kyoung-Seop Shin

Cotion: Charlie Taylor, Rishub Goel, Karnikaa Velumani, Alex Tran, Daniel Truong, Dr. Paul Salvador Inventado

Data Analysis on Air Quality: Nicholas Renteria, Diane Le, Dr. Doina Bein

Metadata-Driven Schedule and Note Management Mobile/Web-App: Jamie Lambrecht, Wayne Lin, Zayan Tofeeq, Marcellus Jones, Dr. Linda Morrison*

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Quick Key Password Manager: Brock Gieszl, Austin Kim, Nguyen Le, Enrico Jan Salapong, Dr. Kyoung-Seop Shin

Recommendation Algorithm: Brandon Evans, Kevin Dillion, Eduardo Gomez, Yujin Chung, Vibha Rajagopalan, Dr. Kyoung-Seop Shin***

Slakr: Harshul Jain

SOC In a Box - A Security Tool for Disney Corporation: Chris Ly, Yao Lin, Mathias Nguyen, Nick Caravaggio, Ben Heng, Dr. Mikhail Gofman**

SONARVERSE - Business Intelligence Analytics: Raileen Del Rosario & Bilal El-haghasan, Ferah Yilmaz, Shaochen Ren, Steven Tran, Eric Corona, Isaac Estrada, Tilak Ghorashainee, Dr. Kyoung-Seop Shin***

Titan Rover: Josephine Overbeek, Ashlye Pena Velez, Daniel Cuadra, Holland Priest, Kaulin Hall, Bob Mohammadian, Ivan Morales, Josue Plaza, Runlong Zhou, Jesus Gama, Alex Thai, Raquel Preciado, Vincent Dinata, Carol Esparragoza, Hannah Duarte, Jacob Patrick, Isaiah Odunze, Ryan Luong, Andy Nguyen, Brian Fonseca, Dr. Nina Robson

Vehicular Traffic Forecasting in Areas with Limited Data Availability: Victor Tran, Dr. Anand Panangadan

Electrical Engineering

Anti-Collision Self Driving Vehicle: Duc Nguyen, Dr. David Cheng*

Auto Face Recognition Door Lock and Opener: Nasser Karim, Abdullrahman Alansari, Dr. David Cheng

Crime Spotter: Brian Fonseca, Edison Chingay, John Daniyarov, Dr. David Cheng*

E- Lawnmower: Waleed Almarri, Mohammad Abuejel, Dr. David Cheng

Fever Detection and Response System (F.D.R.S): Aaron Mendis, Kevin Martinez, Karim Elkotn, Dr. David Cheng

Gel Nail Polish Curer: Brian Fonseca, Abulaiti Nuerbiya, Robert Hernandez, Lori Avila, Ulysis, Woo Kim, Hunter Davis, Neil Sorto, Javier Oliveros, Vincent Nguyen, Chen Chengjing, Brock Nguyen, John Milian, Hugo Lopez, Vanessa Roque, Noe Mateos, Minjae Kang, Isaiah Odunze, Joel Bayquen, Joseph Rau, Dr. David Cheng

Lightspeed Rescue: Ryan Apides, Dr. David Cheng

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Robotic Noise-Cancelling Vacuum: Mohammad Mustafowi, Dhari Taleb, Jasem Alharmi, Dr. David Cheng

Smart Irrigation System: Darian Nguyen, Brian Tochilin, Gabriel Gaspar, Dr. David Cheng*

Smart Pillow Alerting System: Abdulrahman Almethen, Ahmad Alabdullah, Dr. David Cheng

Solar Tracking Solar Panel Charging System: Radhika Sharma, Adel Nasir, Carlos Moreno, Dr. David Cheng

Sorting Robot: Mohammed Alsharekh, Yousef Ashkanani, Dr. David Cheng

Titan Rover: Josephine Overbeek, Ashlye Pena Velez, Daniel Cuadra, Holland Priest, Kaulin Hall, Bob Mohammadian, Ivan Morales, Josue Plaza, Runlong Zhou, Jesus Gama, Alex Thai, Raquel Preciado, Vincent Dinata, Carol Esparragoza, Hannah Duarte, Jacob Patrick, Isaiah Odunze, Ryan Luong, Andy Nguyen, Brian Fonseca, Dr. Nina Robson

Windows-Cleaning-Robot (WCR): Mohammed Alkandari, Aqeel Alqattan, Ali AlBaloshi, Dr. David Cheng

Mechanical Engineering

CSUF Arboretum: Interactive Device: Karry Lawson, Agustin Valadez, Natalie Gomez, Aaron Corona, Dr. Jin Woo Lee

CSUF HVAC Design: Ethan Mendoza, Fernando Gonzalez, Wuilfren Paz, Sultan Almarar, Dr. Sagil James

Disney Sailing Ship Columbia Rigging Model: Antonio Magallon Medina, Danny Ha, Omar Lopez-Deniz, Cesar Jauregui, Abdulrahman Qtaish, Dr. Jin Woo Lee**

Edwards Lifesciences Flow Chamber: William Worth, Justin Fernandez, Jesenia Honorato, Jiahua Shi, Brent Kosin, Dr. Jin Woo Lee**

Edwards Lifesciences HARPOON: Tony Dang, John Tran, Jimena Londono, Sebastian Solis, Keith McKinney, Dr. Jin Woo Lee

Edwards Lifesciences ID-Deburring: Nicolas Herrera, Cesar Rivera Urrutia, Fabrizio Mejia, Manuel Martinez, Ryuko Geronimo, Sagar Patel, Dr. Nina Robson***

Energy Hydrogen Fuel: Elston Lewis, Aaron Lum, Benjamin Farinas, Evangelyn Balcita, Isaac Rodriguez, Jesse Diaz, Dr. Sagil James

Flexural Indentation Fixture and Test Method: James Hong, Cuong Pham, Enrique Resendiz, Tin Luong-Uhl, Dr. Sagil James***

Leg Up: Dylan Kunzmann, Kyle Skulski, Brandon Arredondo, Matt Kim, Brandon Rosales, Joshua Perez, Damian Marquez, Dr. Nina Robson*

Project Eden: Aaron Nguyen, Pedro Corona, Cassandra Guillen, Hidalgo Arturo, William

Knight, Andy Nguyen, Timothy Trinh, Salem Edrees, Dr. Kiran George

Runnin' On Fumes: Andrew Eddy, Adam Avila, Daniel Hernandez, Brandon Mortelliti, Juan Marco Epino, Dr. Jin Woo Lee

Splash Mountain Transfer Device Optimization: Cassidy Rungo, Meiling Choy, Esteban Patino, Obeid Lankhani, Joseph Reza, Aaron Huerta, Chris Lopez, Dr. Nina Robson***

Titan Aero: Jacob Husband, David Covarrubias, Uriel Castaneda, Jorge Jaquez, Daniel Solano, Ahmed Osman, Ezequiel Zurita, Dr. Salvador Mayoral

Titan Baja Racing: Marwan Ahmed, Kerolos Shenouda, Preston Shepherd, Jack Lou, David Torres, Daniel Ruhe, Sam Soliman, Michael Ballasch, Jonathan Cabral, Jonathan Kaczmarek, Dr. Salvador Mayoral

Titan EV: Shane Mcgrath, Russell Whitman, Cesar Robles, Moises Hernandez, Dr. Sagil James*

Titan Fire: Hamad Alromaithi, Dr. Sagil James*

Titan Hygiene Station: Fernando Villa, Lemuel Piguing, Daniel Cuevas-Ramirez, Dr. Jin Woo Lee

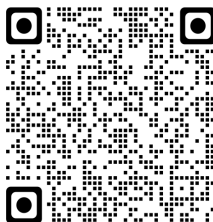
Titan Racing Formula: Edward Park, Charlie Zeigler, Daniel Cruz, Cameron Crowe, Cesar Cardenas, Nicholas Martindale, Joshua Sim, Joshua Sanchez, Saul Mazariegos, Chistofer Martinez, Kevin Estrada, Zachary Chacon, Dr. Salvador Mayoral*

Titan Rocket: Project Daedalus: Isaac Farias, Steven Sykes, Christopher Martinez, Jonah Roberts, Pedro Carrasco, Mahavirsinh Zala, Hutton Smith, Justine Christopher Santiago, Bailey Young, Gibin Kwon, Dr. Salvador Mayoral*

Titan Rover: Josephine Overbeek, Ashlye Pena Velez, Daniel Cuadra, Holland Priest, Kaulin Hall, Bob Mohammadian, Ivan Morales, Josue Plaza, Runlong Zhou, Jesus Gama, Alex Thai, Raquel Preciado, Vincent Dinata, Carol Esparragoza, Hannah Duarte, Jacob Patrick, Isaiah Odunze, Ryan Luong, Andy Nguyen, Brian Fonseca, Dr. Nina Robson

Wildfire Detection CubeSat: Subha Lal, Joshua Guzman, Raghu Bathala, Eduardo Ayala, Dr. Sagil James*

***Scan here to access the Competition
and Showcase Website!***





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