



CIMA-LSAMP 2021 VIRTUAL STEM RESEARCH 8TH ANNUAL ~2nd VIRTUAL SYMPOSIUM



ST. PHILIP'S COLLEGE

Research Title: Investigation of Potential Antimicrobial Producing Organisms from a Soil Sample

Research Presenter: Rima Bhakta, Biology

Research Mentor: Dr. Ana Vallor, University of the Incarnate Word

Research Title: Creating Academic Discipline Lessons with EON Reality

Research Presenter: Zuleika Ceja, Biology

Research Mentor: Mr. Hilario Garcia, St. Philip's College

Research Title: Gender Bias in the Extraction of Chemicals from Text

Research Presenter: Marci Garcia, Cyber Security

Research Mentor: Dr. Anthony Rios, University of Texas at San Antonio

Research Title: The Impact of AR/VR in a Classroom or Educational Environment

Research Presenter: Landon Hill, Biology

Research Mentor: Mr. Jemal Nelson, Saint Philip's College

Research Title: EV's, Vivo and Vitro Cell Culture

Research Presenter: James Mack, Biology

Research Mentor: Dr. Natasha Sosanya, U.S. Army Institute of Research

Research Title: ImmerseMe Virtual Reality language software

Research Presenter: Maria Miranda-Madrid, Biology

Research Mentor: Ms. Spencer Galvan, St. Philip's College

Research Title: Investigation of the microbial ecology present in a South Texas urban park

Research Presenter: Victor Tiscareno, Biology

Research Mentor: Dr. Ana Vallor, University of the Incarnate Word

SAN ANTONIO COLLEGE

Research Title: Following an Anti-Cancer Flavanone through Tillandsia Recurvata's Leaves, Flowers, and Root Hairs

Research Presenter: Bali Daniels, Biology

Research Mentor: Ms. Lourdes Alba, St. Philip's College

Research Title: Deep Learning for Lifeguarding

Research Presenter: Pedro Davila, Computer Science

Research Mentor: Mr. Garrett Hall, University of Texas at San Antonio

Research Title: Bioretention Basin Effects on Invertebrate Biodiversity and Soil Quality on the Main UTSA Campus

Research Presenter: Erika Dyer, Environmental Science

Research Mentor: Dr. Brian Laub, University of Texas at San Antonio

Research Title: Deep Learning for Lifeguarding

Research Presenter: Oscar Galvan, Engineering

Research Mentor: Mr. Garrett Hall, University of Texas at San Antonio

Research Title: Title: Prototype Gravity-Based Electrical Generator

Research Presenter: Jhorman Reyes Fen, Engineering

Research Mentor: Mr. Klaus Bartels, San Antonio College

Research Title: Implementation of 360 Media as a Teaching Tool in a Lab Classroom

Research Presenter: Logan Harrison, Computer Science

Research Mentor: Mr. Mauro Frazier, St. Philip's College

Research Title: Bioretention Basin Effects on Invertebrate Biodiversity and Soil Quality on the Main UTSA Campus

Research Presenter: Isaiah Hernandez, Environmental Science

Research Mentor: Dr. Brian Laub, University of Texas at San Antonio

Research Title: Linguistic Patterns in Social Media Discourse

Research Presenter: Ibad Safi, Computer Science

Research Mentor: Dr. Anthony Rios, University of Texas at San Antonio

Research Title: Optimized Solar Panel System

Research Presenter: Gerardo Silva Carmona, Engineering

Research Mentor: Ms. Kazumi ("Niki") Stovall, San Antonio College

NORTHEAST LAKEVIEW COLLEGE

Research Title: Incapacitating Sars-Cov-2 Delta Variant (B.1.617) By Developing mRNA Vaccines through Eterna RNA Folding Software

Research Presenter: Robert Klupka, Biology

Research Mentor: Dr. Robert Miranda, Palo Alto College

Research Title: Mitochondria in Cancer Cells

Research Presenter: Dominique Kuehn, Computer Science

Research Mentor: Dr. Robert Miranda

Research Title: The Potential of Tillandsia recurvata as Biofilter for Volatile Organic Carbon Compounds

Research Presenter: Andrea Luna, Biology

Research Mentor: Ms. Lourdes Alba, St. Philip's College

Research Title: Manual Segmentation of the Endoplasmic Reticulum in Cells to Aid in Computer Learning

Research Presenter: Marissa Schultz, Biology

Research Mentor: Dr. Robert Miranda, Palo Alto College

PALO ALTO COLLEGE

Research Title: Prototype Gravity-Based Electrical Generator

Presenter: Abraham Almarez, Engineering

Research Mentor: Mr. Klaus Bartels, San Antonio College

Research Title: Assessing Rhesus Macaques Health Using Blood Smears

Research Presenter: Infinity Alvarez, Biology

Research Mentor: Dr. Robert Miranda, Palo Alto College

Research Title: Pathogen-Mediated Nutrient Dynamics on Discrete Time Scale

Research Presenter: Alexa Garcia, Biology

Research Mentor: Dr. Lale Asik, University of the Incarnate Word

Research Title: Pathogen-Mediated Nutrient Dynamics on Discrete Time Scale

Research Presenter: P. Lorraine Shanahan, Biology

Research Mentor: Dr. Lale Asik, University of the Incarnate Word

Research Title: Optimized Solar Panel System
Research Presenter: Farhan Majid, Engineering
Research Mentor: Ms. Kazumi ("Niki") Stovall, San Antonio College

Research Title: Pipe-Freezing Preventative Mechanism (PFPM) for Flash Temperature Drops in Texas
Research Presenter: John Pham, Engineering
Research Mentor: Mr. Ravi Novan, Southwest Research Institute

Research Title: Pipe-Freezing Preventative Mechanism (PFPM) for Flash Temperature Drops in Texas
Research Presenter: Francisco Sanchez, Civil Engineering
Research Mentor: Mr. Ravi Novan, Southwest Research Institute

NORTHWEST VISTA COLLEGE

Research Title: Bioretention Basin Effects on Invertebrate Biodiversity and Soil Quality on the Main UTSA Campus
Research Presenter: Isabella Pangilinan, General Science
Research Mentor: Dr. Brian Laub, University of Texas at San Antonio

Research Title: Catalog Photos of Beluga Whales in Hudson Bay for Age, Sex, and Distinguishing Marks
Research Presenter: Sergio Silva, Biology
Research Mentor: Dr. Robert Miranda, Palo Alto College

Research Title: Pipe-Freezing Preventative Mechanism (PFPM) for Flash Temperature Drops in Texas
Research Presenter: Ruben Solis, Engineering
Research Mentor: Mr. Ravi Novan, Southwest Research Institute

GROUP PRESENTATIONS

Research Title: Prototype Gravity-Based Electrical Generator
Presenter 1: Abraham Almarez, Engineering, Palo Alto
Presenter 2: Jhorman Reyes Fen, Engineering, San Antonio College
Research Mentor: Mr. Klaus Bartels, San Antonio College

Research Title: Pipe-Freezing Preventative Mechanism (PFPM) for Flash Temperature Drops in Texas
Presenter 1: John Pham, Engineering, Palo Alto College
Presenter 2: Francisco Castillo Sanchez, Palo Alto College
Presenter 3: Ruben Solis, Northwest Vista College

Research Mentor: Mr. Ravi Novan, Southwest Research Institute

Research Title: Deep Learning for Lifeguarding

Presenter 1: Pedro Davila, Computer Science, San Antonio College

Presenter 2: Oscar Galvan, Engineering, San Antonio College

Research Mentor: Mr. Garrett Hall, San Antonio College

Research Title: Bioretention Basin Effects on Invertebrate Biodiversity and Soil Quality on the Main UTSA Campus

Presenter 1: Erika Dyer, Environmental Science, San Antonio College

Presenter 2: Isaiah Hernandez, Environmental Science, San Antonio College

Presenter 3: Isabella Pangilinan, General Science, Northwest Vista College

Research Mentor: Dr. Brian Laub, University of Texas at San Antonio

Research Title: Optimized Solar Panel System

Presenter 1: Gerardo Silva Carmona

Presenter 2: Farhan Majid

Research Mentor: Ms. Kazumi ("Niki") Stovall, San Antonio College

Research Title: Pathogen-Mediated Nutrient Dynamics on Discrete Time Scale

Research Presenter 1: Alexa Garcia, Biology - Palo Alto College

Research Presenter 2: P Lorraine Shanahan, Biology - Palo Alto College

Research Mentor: Dr. Lale Asik, University of the Incarnate Word

ALAMO COLLEGES DISTRICT UTSA-NASA CAMEE RESEARCHERS

Research Title: Titration in Texas Natural Waters

Research Presenter: Desiree Arbizu, Engineering, Northeast Lakeview College

Primary Investigator (PI): Dr. Yongli Gao

Research Title: Human impact on the dynamics of biogeochemical processes in Upper San Antonio River Watershed

Research Presenter: Chrishall Armstrong, Mechanical Engineering, St. Philip's College

Primary Investigator (PI): Dr. Daniel Pineda

Research Title: Analysis of a TIE-Fighter at Mach 7 Flight

Research Presenter: Ta'Lya Brooks, Mechanical Engineering, St. Philip's College

Primary Investigator (PI): Dr. Christopher Combs

Research Title: Developing a Test Setup to Study Wave Propagation in Periodic Material

Research Presenter: Juan Carrasco, Engineering, Northeast Lakeview College

Primary Investigator (PI): Dr. David Restrepo

Research Title: Laser Spectroscopy and Chemical Propulsion Lab

Research Presenter: Vincente Flores, Biochemistry, St. Philip's College

Primary Investigator (PI): Dr. Saugata Datta

Research Title: SR-72 Mach 7 Tested

Research Presenter: Steve Lara, Engineering, Palo Alto College

Primary Investigator (PI): Dr. Christopher Combs

Research Title: Converting simulation data

Presenter 1: Bianca Reusch, Cyber Security, San Antonio College

Primary Investigator (PI): Dr. Kiran Bhanganagar

Research Title: Learning How to Retrieve and Plot Data Using Python

Presenter 1: Emily Pressler, Cyber Security, San Antonio College

Primary Investigator (PI): Dr. Kiran Bhanganagar

Research Title: Evolution of supraglacial lake on Nansen Ice Shelf from 2018-2021

Presenter 1: Nicholas Tkatchuk, Engineering, Northeast Lakeview College

Primary Investigator (PI): Stephen Ackley & Dr. Hongjie Xie

Research Title: Machine Learning and Data Testing

Presenter 1: Jaylin R. Wilson, IT-Network Administration, St. Philip's College

Primary Investigator (PI): Dr. Sushil Prasad & Dr. Wei Wang