



# 2020-2021 Annual Report



401 Golden Shore Long Beach CA 90802

Website: www.calstate.edu/stem-net

**#CSUSTEMNET** 



# Letter From Executive Director



#### Dear Friends,

This past year has been a remarkable one for the California State University (CSU) system spurred on by the COVID-19 pandemic. No one in their wildest dreams could have imagined the effects of a once in a lifetime pandemic and the devastating economic and social disruption it has wrought. The ramifications of the past 18 months will be long lasting and impact the way we live for decades to come.

Yet, our institutions, battered and worn by existential threats inflicted by some who have attempted to take advantage of these chaotic times, still endure. I can say the same about the CSU and how students, faculty and staff have weathered this storm and stayed the course true to the mission of the CSU. Yes, the CSU is a special place and the role it plays for hundreds of thousands of students across this great California landscape. Even during this tumultuous time, the CSU is still that stepping-stone to upward mobility, lifelong learning, and opportunities historically not accessible to all people. This last point is especially salient for the pandemic has allowed us to examine longstanding barriers impeding the success of marginalized and underrepresented peoples across the world and to explore ways to eradicate these barriers so as to achieve equity for all.

STEM-NET continues to be the leader among the multi-campus collaboratives in collaborating with all 23 CSU campuses in the CSU system and in disseminating best practices via webcasts, podcasts and our social media platforms. Through these activities STEM-NET is the main catalyst, facilitator, and connector in the CSU system in STEM. By linking STEM faculty, we nurture, foster and drive innovation and collaboration across the CSU critical to developing a strong California

workforce for tomorrow.

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This coming year, STEM-NET will continue to push the envelope by offering programs to support cutting edge research in STEM and education and activities demonstrating the great wealth of work by CSU faculty and students. This will all be viewed through a lens of equity and opportunity for all students of the CSU. By working together, STEM-NET will continue to make an impact in developing our tomorrow's STEM leaders.

Dr. Frank A. Gomez

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**Executive Director** 



#### **MISSION**

To enable CSU STEM leaders to share expertise and leverage system-wide opportunities to foster the implementation of global best practices for our students and faculty in pedagogy, learning and research related to STEM fields within the CSU system.

#### **VISION**

To make the CSU a world-wide leader in increasing the pipeline, preparation, graduation and employment of outstanding, diverse STEM students.



#### STRATEGIC OBJECTIVES

- Foster and support research and educational scholarship in STEM throughout the CSU system.
- Promote, foster, and support faculty development to improve STEM teaching and learning across the CSU.
- Develop long-term sustainable funding for STEM-NET.
- Communicate with and engage key stakeholder groups in collaborative strategies supporting the vision.
- Promote and develop collaborative partnerships to increase capacity for K-12 STEM teacher preparation.



#### STEM-NET FACULTY GRANT PROGRAMS

This year STEM-NET developed two programs to support faculty research, their pursuit of extramural funding, and professional development.

The goal of the Faculty Fellows program is to develop and submit targeted STEM-based proposals of a collaborative (multi-campus) nature with potential for a high investment return and with an aim to increase capacity across the CSU system. 11 faculty were nominated by their respective campus provosts to participate in a year-long program to work collaboratively to develop intercampus interdisciplinary proposals.

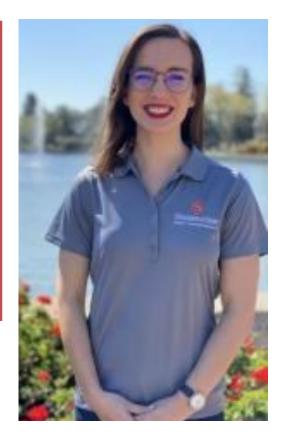
The goal of the Faculty Education SEED Grants is to support and encourage the development of a strong program of education research or scholarship by faculty members in STEM fields.

STEM-NET provided \$171,031 in support to faculty members through Grant Development Programs in AY 2020-21.





"Serving as a STEM-NET Faculty Fellow will grant me the ability to grow as a teacher-scholar through the development of proposals to support my research program and Stanislaus State initiatives. The value of this fellowship is deeply rooted in its position within the larger STEM-NET network, giving access to a community of potential collaborators at the CSU-wide level."



#### Dr. Jessica De Silva

Stanislaus State
Assistant Professor, Mathematics

#### STEM-NET FACULTY FELLOWS

FACULTY FELLOWS	CSU CAMPUS	Department
AWARDEES		
Dr. Subodh Bhandari	Cal Poly Pomona	Aerospace Engineering
Dr. Lynn Cominsky	Sonoma State	Physics and Astronomy
Dr. Jessica De Silva	Stanislaus State	Mathematics
Dr. Louise Edwards	Cal Poly San Luis Obispo	Physics
Dr. Kamila Larripa	Humboldt State University	Mathematics
Dr. Laura Newcomb	Cal State San Bernardino	Biology
Dr. Mary Leech	San Francisco State	Earth & Climate Science
Dr. Arturo Pacheco-Vega	Cal State LA	Mechanical Engineering
Dr. Nina Robson	Cal State Fullerton	Mechanical Engineering
Dr. Monica So	Chico State	Chemistry and Biochemistry
Dr. Wencen Wu	San Jose State	Computer Engineering



## STEM-NET FACULTY EDUCATION SEED GRANT Program

FACULTY	PROJECT TITLE	FUNDING
<b>EDUCATION SEED</b>		AMOUNT
GRANT AWARDEES		
Drs. John Chen ( PI),	Turning Evidence-based Learning	\$39,250
(Co-PI) Dr. Hocheol Yang	Competencies into Habits to Help Students	
Campus: Cal Poly San Luis Obispo	Thrive	
Dr. Tammie Visintainer (PI)	Transforming Science Teaching and Learning	\$19,938
Campus: San José State	in School: Empowering Teachers and Students	
	as Justice-Centered Science Action	
	Researchers and Change Agents	
Drs. Huda Munjy (PI),	Improving STEM Teaching through Active-	\$39,947
(Co-Pls) Yu Bai,	Learning Tools that Promote Inquiry-based	
Kenneth John Faller,	Comprehension in Statics (iSTATICS)	
Phoolendra Mishra,		
Campus: Cal State Fullerton		

#### **ACTIVITIES**

#### STEM-NET WEBCASTS

The webcasts are the perfect forums for faculty to foster research collaborations leading to potential funding opportunities. A myriad of topics is presented demonstrating the high level of research and scholarship conducted in the CSU. This is the perfect forum for faculty to foster research collaborations leading to potential funding



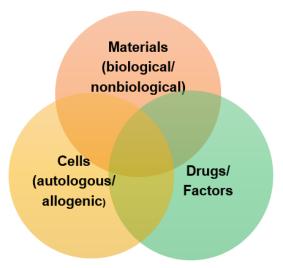
#### **Exemplars in Engineering Research (**September 3, 2020)

**Dr. Chris Bachman,** Cal State LA, Electrochemical Energy Storage for Sustainable Technologies **Perla Ayala**, Cal State Long Beach, Engineering Models for Tissue Repair

**Sankha Banerjee**, Fresno State, Design and Fabrication of Electro and Photo-active Materials for Applications in Biomedical Devices and Water Purification

Christy Dykstra, San Diego State, Resource Recovery Using Bioelectrochemical Systems (BESs)Christopher Heylman, Cal Poly San Luis Obispo, Vascularized Human Tumors on a Chip for DrugScreening

**Dahyun Oh**, San Jose State, Making Nonflammable Lithium-Ion Batteries **Subhradeep Roy**, CSUN, Study of Interactions in Complex Dynamical Systems



The field of tissue engineering focuses on the development of methods and technologies to regenerate, repair or replace tissues.





Jennifer Sanchez, CSUF Student

# Computational Gravitational-Wave Physics and Astronomy at California State University, Fullerton



Image & simulation by Jennifer Sanchez

#### STEM-NET WEBCASTS

#### CSU NSF CAREER Awardees (October 22, 2020)

**Chantal Stieber**, Cal Poly Pomona, Building a Research Program to Target Pollutant Reduction: From Small Internal Grants to an NSF CAREER Award and a Brighter Future **Cheryl Van Buskirk**, CSUN, A CURE for Disordered Sleep

**Kimberly Blisniuk**, San Jose State, A Geologic Perspective on Assessing Seismic Risk in California, and How my CAREER Grant Relates to it

**Blake Riggs**, San Francisco State, Asymmetric ER Partitioning as a Pathway for Cell Fate Specification

**Geoffrey Lovelace**, Cal State Fullerton, Computational Gravitational-Wave Physics and Astronomy at California State University, Fullerton

**Matthew Povich**, Cal Poly Pomona, BUILD: Bringing the Universe to Inland Empire and Los Angeles Districts

Nina Robson, Cal State Fullerton, Research Highlights Since Receipt of the NSF CAREER Award





#### **Applications in Artificial Intelligence/Machine Learning** (November 19, 2020)

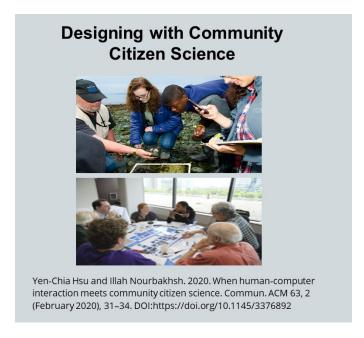
**Ilmi Yoon**, San Francisco State, Machine Learning Enhanced Video Accessibility for Visually Impaired Users

**Mohammad Pourhomayoun,** Cal State LA, Artificial Intelligence: From Science Fiction to Real Life with Case Studies in Healthcare

**Jonathan Ventura,** Cal Poly San Luis Obispo, Adventures in Deep Learning: Learning to Predict Depth in Panoramic Video and Count Trees in Remote Sensing Data

**Xiaorong Zhang,** San Francisco State, Toward the Next-Generation Neural-Machine Interfaces for Neurorehabilitation

Jongwook Woo, Cal State LA, Introduction to Big Data and AI for Data Analytics and Prediction Franz Kurfess, Cal Poly San Luis Obispo, Artificial Intelligence and Human-Computer Interaction in Class-Based Projects







#### **CSU Exemplars in Biology** (December 19, 2020)

**Scott Roy**, San Francisco State, Origins and Diversity of Introns and other Bizarre Genetic Phenomena

**Kelly Young**, Cal State Long Beach, Intraovarian Regulation of Photostimulated Gonadal Recrudescence

**Gilberto Flores,** CSUN, Genomic and Functional Diversity of the Human Gut Symbiont Akkermansia Muciniphila

Pleuni Pennings, San Francisco State, Fitness Costs of Mutations in Viruses

Lisa Hua, Sonoma State, The Inevitable Divorce: Segregation of Maternal and Paternal Genomes

Clinton Francis, Cal Poly San Luis Obispo, Sensory Ecology in the Anthropocene







**CSU NSF IUSE Program Exemplars** (February 4, 2021)

**Pushpa Ramakrishna**, National Science Foundation, An Invitation to Engage in Undergraduate STEM Education at NSF

**Anthony Rathburn,** CSU Bakersfield, Using Marine Science Research Experiences on Land and at Sea as Gateways to Geoscience Careers

**Resa Kelly,** San Jose State, Exploring How Students Compare Conflicting Atomic Level Animations of Chemical Reaction Events

**David Brookes,** Chico State, Can Physics Students Develop Scientific Habits of Mind Through Video-Based Experimentation?

**Janet Bowers & Bori Mazzag,** San Diego State & Humboldt State, How Can Math Departments Revise their Curricula to Best Serve Partner Disciplines?

**Edward Price,** CSU San Marcos, Community Transformation Through Faculty Online Learning Communities

**Scott Kelley,** San Diego State, From Practice to Theory: Anticipatory Learning Builds Confidence and Competence in Computational Biology

**Carol Hood,** Cal State San Bernardino, ISSUES-X: Investigating Student Success Using Evidence-based Strategies.





**Culturally Sensitive Teaching in STEM** (March 10, 2021)

Heather Macias, Cal State Long Beach, Culturally Responsive Teaching: Serving the Needs and Integrating the Strengths of Historically Marginalized STEM Students

Aletha M. Harven, Stanislaus State, Culturally Responsive Teaching in STEM: Transformative Tools for Student Engagement

Melissa Navarro Martell, San Diego State, Ideological Perspectives in STEM with Latinx Students at HSIs

Cathrine Maiorca, Cal State Long Beach, Using an Equity-oriented Framework to Teach STEM Rouhollah Aghasaleh, Humboldt State, Another STEM Teaching is Possible: Toward a Phronetic Scientific Knowledge

Ximena Cid, CSU Dominguez Hills, The Demographics of PER and How our Knowledge is Impacted by Who We Do and Do Not Study







**Transportation Research in the CSU** (April 15, 2021)

**Karen Philbrick,** Mineta Transportation Institute, Improving Mobility for People and Goods: An Introduction to the California State University Transportation Consortium

**Aly Tawfik, Fresno State,** The Transportation [R]Evolution: Opportunities and Needs for Collaboration

Mehran Mazari, Cal State LA, Sustainable and Resilient Transportation Infrastructure

Daniel Whisler, Cal State Long Beach,
Composites for Improved CA Road Surfaces

Serena Alexander, San Jose State, Local
Climate Action Planning as a Tool to Harness
the Greenhouse Gas Emissions Mitigation and
Equity Potential of Autonomous Vehicles and
On-Demand Mobility

Hovannes Kulhandjian, Fresno State, Intelligent Transportation Systems using Visible Light Communications and Machine Learning Shadi Saadeh, Cal State Long Beach, Transportation Materials Research at CSULB, Fundamental, Practical and Workforce Development

## **CSU Department of Defense (DoD) Awardees** (May 13, 2021)

**Reginald Williams,** Department of Defense, Department of the Navy (DoN) Historically Black Colleges and Universities and Minority Institutions (HBCU/MI) Program

**Abraham Wolcott,** San José State University, Diamond Surface Science, Synchrotron Radiation, and the Transition Edge Sensor Detector

**Scott Hauswirth,** California State University, Northridge, Development of a CSUN GeoAnalytical Center for Research, Teaching, and Outreach in Earth Systems Science

**Daniel Fernandez,** California State University, Monterey Bay, An Infusion of DoD Equipment Funding to Help Advance an Existing Fog Research Program: My Experience

**Joseph Kalman,** California State University, Long Beach, DoD Funded Solid Propulsion and Combustion Research at CSULB

**Akm Newaz,** San Francisco State University, Electrical and Optoelectrical Properties of Natural Van der Waals Heterostructures









**CSU NSF Research at Undergraduate Institutions (RUI) Exemplars (June 17, 2021)** 

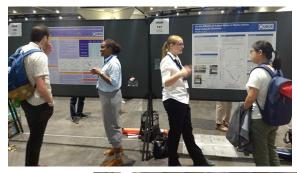
Michelle Bushey & Rebecca Peebles, National Science Foundation, Developing Successful Proposals at Primarily Undergraduate Institutions: NSF insights on the RUI and MRI Programs Amy Furniss, Cal State East Bay, Enabling CSU Undergraduates, the Opportunity to Provide Impactful Contributions to Very High Energy Astrophysics Research

**John Goeltz,** CSU Monterey Bay, Writing a Successful NSF RUI Grant Proposal When Your Campus Doesn't Offer a Major in Your Discipline

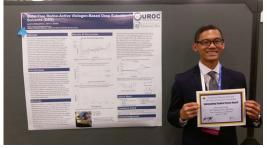
**Melanie Michalak,** Humboldt State, Evaluating Crustal Deformation in Southern Cascadia: A Collaborative Approach

Nan Wang, Fresno State, Low Power Bulldog Mote Design for Wireless Sensor Networks Rosemary Sherriff, Humboldt State, Diverse Conifer Responses to Drought in Northern California

Andres Martinez, Cal Poly San Luis Obispo, Research on Paper











**US Department of Education HSI STEM Grantees Webcast** (July 22, 2021)

Mark Filowitz & Megan Drangstveit, Cal State Fullerton, Project RAISE

**Eric Marinez**, Cal State Long Beach, CSULB Sí Puedo (Strengthening the Impact by Providing Undergraduate Educational Development Opportunities)

**S.K. Ramesh,** CSUN, AIMS2 : Enhancing Student Success with a Multi-Institutional Collaborative Program

**Sastry Pantula**, Cal State San Bernardino, Advising for Undergraduate Success (A4US) **Iqbal Atwal & Harold Stanislaw,** Stanislaus State, STEM Success at Stanislaus State







## VIRTUAL RESEARCH CAFÉ 10.0

The "Café" brings together CSU newly hired CSU faculty to help foster research collaborations across the CSU system and catalyze the submission of intercampus proposals. Each café involves three Assistant Professor's research and ideas (10 minutes) for future work. Q&A takes place during the virtual mixer following the presentations.

**Café** (October 7, 2020)



**Dr. Yixian Wang**Assistant Professor
Department of Chemistry & Biochemistry
Cal State LA

**Presentation Topic:** Plasmonic Based Imaging Tools for Single Entity Analysis



**Dr. Sudhir Shrestha**Assistant Professor
Department of Electrical Engineering
Sonoma State University

**Presentation Topic:** Developing a Sensing System for Non-Invasive Blood Glucose Monitoring Using Breath Volatile Organic Compound System



**Dr. Ornella Mattei**Assistant Professor
Department of Mathematics
San Francisco State University

Presentation Topic: Modeling wave propagation in time-modulated



Café (November 5, 2020)



**Dr. Marta Miletić**Assistant Professor
Department of Civil, Construction, and Environmental Engineering
San Diego State University



**Presentation Topic:** Towards Increased Resilience, Durability, And Sustainability: Computational and Experimental Modeling of Novel Civil Infrastructure Materials



**Dr. Jorge H. Monteiro**Assistant Professor
Department of Chemistry
Humboldt State University

**Presentation Topic:** Lanthanide Luminescent Compounds for more Efficient Diagnosis And Photodynamic Therapy



**Dr. Kristen Gorman**Assistant Professor
Department of Biological Sciences
Chico State

**Presentation Topic:** Seeking to Characterize Mechanical Properties of Scoliosis

Café 8 (February 19, 2021)



**Dr. Carlie Pietsch**Assistant Professor
Department of Geology
San Jose State University

**Presentation Topic:** Using Paleontology to Advocate for the Earth and Ocean



**Dr. David Krum**Assistant Professor
Department of Computer Science
Cal State LA

**Presentation Topic:** Immersive Environments for Collaboration and Training



**Dr. Lua Lopez Perez**Assistant Professor
Department of Biological Sciences
Cal State San Bernardino

**Presentation Title:** Genetic and Phenotypic Responses to Climate Change Over time and Space



#### **Café** (March 19 2021)



**Dr. Aubrey Kemp**Assistant Professor
Department of Mathematics
CSU Bakersfield



**Presentation Topic:** Improving Student Understanding and Application of Mathematical Definitions



**Dr. Farbod Khoshnoud**Assistant Professor
Department Electromechanical Engineering Technology
Cal Poly Pomona

**Presentation Topic:** Self-powered Dynamic Systems, Bio-inspired Dynamic Systems, Quantum Robotics and Autonomy



**Dr. Morgan Hawker**Assistant Professor
Department of Chemistry and Biochemistry
Fresno State

Presentation Topic: Silk and the Forgotten State of Matter

**Café** (April 23, 2021)



**Dr. Alona Kryshchenko**Assistant Professor
Department of Mathematics
CSU Channel Islands

**Presentation Topic:** Nonparametric Estimation of Population Parameters



**Dr. Yunfei Hou**Assistant Professor
School of Computer Science and Engineering
Cal State San Bernardino

**Presentation Topic:** Leveraging Big Data in the Inland Empire's Public Transit Systems



**Dr. Hyewon Pechkis**Assistant Professor
Department of Physics
Chico State

**Presentation Topic:** Making a Difference in First Generation and Underrepresented Students' Education through Research: Quantum Coherence in a Bose Thermal Gas



**Dr. Julian C. Lozos**Assistant Professor
Department of Geological Sciences
CSUN



**Presentation Topic:** Investigating the Physics of the Earthquake Process Using Computer Simulations



**Dr. Parvin Shahrestani**Assistant Professor
Department of Biological Sciences
Cal State Fullerton

**Presentation Topic:** Phenotype to Genotype Mapping of Health-Relevant Traits in Fruit Flies



**Dr. Stephanie Zaleski**Assistant Professor
Department of Chemistry #Biochemistry
California State University, San Bernardino

**Presentation Topic:** Developing Surface-Enhanced Raman Spectroscopy-Based Sensors for the Detection of Volatile Organic Compounds

**Café** (June 30, 2021)



**Dr. Ettore Vitali**Assistant Professor
Department of Physics
Fresno State

**Presentation Topic:** Toward the Possibility of Visualizing Quantum Systems on the Screen of a Computer



**Dr. Ga-Young Kelly Suh**Assistant Professor
Department of Biomedical Engineering
Cal State Long Beach

**Presentation Topic:** Lanthanide Luminescent Compounds for more Efficient Diagnosis And Photodynamic Therapy



**Dr. Logan Smith**Assistant Professor
College of Agriculture
Chico State

**Presentation Topic:** Can Regenerative Agriculture, Fungus, and Soil Health Help Save the World?



**Dr. Lucy Kerhoulas**Assistant Professor
Department of Forestry & Wildland Resources
Humboldt State



#### **Presentation Topic:**

Forest Ecology and Management: Comprehensive Evaluations From Leaf-level Physiology to Ecosystem Biodiversity



**Dr. Dalton D. Marsh**Assistant Professor
Department of Mathematics
CSU San Bernardino

#### **Presentation Topic:**

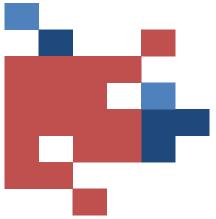
Student Interest and Persistence in STEM



**Dr. Lluvia Flores-Renteria**Assistant Professor
Department of Revolutionary Biology
San Diego State University

#### **Presentation Topic:**

Evolutionary Ecology of Native Species in the Anthropocene







#### **ACHIEVEMENTS**



# Collaborative Research: HSI Implementation and Evaluation Project: Active Learning in Introductory STEM Courses with Extended Reality (ALIS-XR)

**Total Amount :** \$1,000,000

In collaboration with Fresno State, San Jose State, and Sonoma State, STEM-NET obtained funding (\$1,000,000; \$75,000 to STEM-NET) from the National Science Foundation (NSF) HSI STEM program. This is a collaborative research project to implement and evaluate active learning with extended reality (XR) technologies to improve learning outcomes and narrow achievement gaps for underrepresented minority (URM) students in introductory STEM courses. The objectives are to develop a community of practice to engage peer educators and transfer and sustain XR-enhanced, student-centered active learning, develop an online repository of XR open educational resources, conduct in-class trials and pilots, and conduct professional development to engage a broader STEM education community in determining and disseminating best practices of pedagogical use of XR.



#### **Edison Student Research Fellowship Program Awardees**

Total Amount: \$84,000

The Edison Student Research Fellowship program provided funds for 33 undergraduate students to work collaboratively with a CSU STEM faculty member on a research project during the spring 2021 semester. On May 7, 2021, at the 2021 Edison STEM-NET Student Research Fellowship Symposium, the students had the opportunity to showcase their research findings.

#### **ACHIEVEMENTS**

#### **All Things STEM Podcast**

On this show we will explore all things STEM. Most importantly we will highlight the incredible work of our CSU STEM faculty, students, staff, administrators and



programs. Listen to our podcast here: www.calstate.edu/all-things-stem-podcast or wherever you may listen to your podcast.

#### **Episodes**

#### January 2021

San Francisco State's Build Program

Dr. Leticia Marquez-Magana, Professor, Department of Biology, San Francisco State



#### February 2021

Culturally Responsive Pedagogy (CRP) in STEM Fields

Dr. Heather Macias, Assistant Professor, Department of Teacher Education, Cal State Long Beach

#### March 2021

Health Disparities Among Communities of Color During COVID-19

Dr. Melanie Sabado-Liwag, Assistant Professor, Department of Public Health, Cal State LA

#### **April 2021**

Institutional Barriers, Change and Powerful Student Advising

Dr. Katy Pinto, Professor, Department of Sociology, Cal State Dominguez Hills

#### May 2021

Fire Science, Wildfires, and its Impact on the State of California

Dr. Craig Clements, Professor, Department of Meteorology and Climate Science, San Jose State

#### August 2021

Critical Race Theory in Education

Dr. Gabriela Chavira, Professor, Department of Psychology and NIH BUILD PI, CSUN





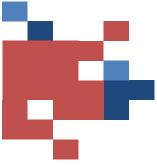




#### **ACHIEVEMENTS**

During the past year, STEM-NET has:

- Facilitated the development and submission of over 20 multi-campus proposals.
- Continued to obtain external funding to ensure the future viability of STEM-NET.
- Facilitated collaborative STEM-based research and education programs and initiatives across the CSU system and with external partners.
- Developed and produced ten webcasts covering topics as diverse as applications in artificial intelligence/machine learning, culturally sensitive teaching in STEM, and NSF CAREER awardees.
- Promoted STEM achievements of faculty and students of the 23 CSU campuses.
- Developed and produced XX podcasts highlighting the research and scholarship of CSU faculty and students.
- Effectively managed and budgeted for all STEM-NET activities.





#### **FINANCIALS**

In academic year 2020-21 STEM-NET made significant investments in faculty and student research to enhance CSU STEM education and research.

This year STEM-NET:

- Provided \$171,031 directly to CSU faculty members and students.
- STEM-NET awarded funds to 18 faculty members at 12 CSU campuses.



#### **Budget Allocated**

Salaries, Wages, Benefits	\$375,036
Operating Expenditures (OE)	\$38,000
Faculty Grants	\$179,164
Balance Forward from the Previous FY	\$180,665
Total	\$772,865

### **Budget Operating Expenditures**

Salaries, Wages, Benefits	\$344,094
Supplies and Services	\$264
Faculty Fellows Grants Paid	\$171,031
Total Fiscal Year Expenses	\$515.389

CARRYOVER	
OE to be carried over to FY 2021-22	\$76,811
Grant funds to be carried over to FY 2021-22	\$180,665





## LEADING TOWARDS THE FUTURE

Increase external funding & broaden funding streams for STEM-NET to sustain programs & operations.

Further develop webcast and podcast program content exploring a broader array of topics.

Increase the development of collaborative proposals with faculty and catalyze multicampus initiatives.

Pilot new and diverse programs involving different segments of the CSU.

Further disseminate research and educational best practices of the CSU.

Build more STEM communities of excellence across disciplines and the CSU.



#### STEM-NET GOVERNING BOARD

#### PRESIDENTIAL CONSORTIUM



**Dr. Jeffrey D. Armstrong**President
Cal Poly San Luis Obispo



**Dr. Adela de la Torre** President San Diego State



**Dr. Ellen Junn** President Stanislaus State



**Dr. Lynn Mahoney** President San Francisco State

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Cal State LA



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