SJSU RESEARCH FOUNDATION ANNUAL REPORT 2018

SJSU | RESEARCH FOUNDATION
FISCAL YEAR 2016-2017

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GIS DATA ANALYST AT APPLE COMPUTER

JOSEPH LAFFOON, '18 MS HUMAN FACTORS & ERGONOMICS
HUMAN FACTORS RESEARCHER, STERIS CORPORATION; STUDENT ASSISTANT, SJSU

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GALADRIEL BURR, '16 MASTER OF URBAN PLANNING/ENVIRONMENTAL PLANNING
PLANNING INTERN, CITY OF BERKELEY, BUILDING AND SAFETY DIVISION

MESSAGES

ANDREW HALE FEINSTEIN

Provost & Senior Vice President for Academic Affairs, SJSU

President, Research Foundation Board of Directors

Research, scholarship and creative activity (RSCA) has significant impact well beyond our campus borders, as illustrated in this year's annual report. Most importantly, our robust RSCA enterprise allows students to engage in high-impact experiences that benefit them in many ways. This hands-on learning helps our students flourish in their future careers, prepares them for master's or doctoral programs, and fosters strong bonds with faculty mentors and peers. I am deeply committed to expanding support for faculty and students to engage in these meaningful opportunities.

PAMELA C. STACKS

Associate Vice President Office of Research, SJSU

Vice President, Research Foundation Board of Directors

Literature shows that students engaged in research, scholarship and creative activity are more likely to be academically and professionally successful. The SJSU faculty members we are profiling this year involve both undergraduate and graduate students in labs, in fieldwork, and in community projects, with tangible results. They serve as mentors and advisors, and proactively connect students with businesses, government agencies, and external academic partners. Their efforts inspire students to pursue noteworthy internships, meaningful employment, and opportunities for graduate study. We applaud these faculty members, and all the other SJSU faculty who do equally engaging work with our students.

RAJNESH PRASAD

Executive Director SJSU Research Foundation

Secretary, Research Foundation Board of Directors

It is an exciting time to be part of the Research Foundation given our unique focus on engaging SJSU faculty, staff, and students in sponsored research, community partnerships, and other educational activities that support the university's mission. This year's improvements in the administrative infrastructure through which local, state, and federal agencies and businesses connect with our faculty were made possible because of the remarkable work of our Research Foundation staff. Particular thanks go to our Board of Directors. We could not do the work we do without their leadership. We celebrate our shared results and look forward to what the next year holds.

CONNIE BRASIL

DEPARTMENT OF PSYCHOLOGY,
HUMAN SYSTEMS INTEGRATION
COLLEGE OF SOCIAL SCIENCES
SPONSOR: NASA

Given its congested airspace, flight delays in and out of New York airports are the norm. With so many flights arriving from the west coast, mid-west and internationally, there is minimal airspace and fewer departing slots available for the arrival of 'internal flights,' those coming into New York from what are considered local areas, like Washington D.C. or Boston.

Three thousand miles away in Mountain View, California, researcher Connie Brasil is creating and testing an integrated demand management system that could get more aircraft into New York-area airports on time and reduce both arrival and departure delays.

"Integrating the FAA's Traffic Flow Management System with the FAA's Trajectory Based Flow Management systems can help ease the congestion and delay problems within the New York airspace," she explains.

One method to accomplish this is to modify the way traffic is scheduled and adjust departure times to meet the airport capacity. Another tactic is to integrate the way time-based metering tools are used. At present, the system schedules arrivals based on planes' positions at 400 miles.

However, as Connie explains, "A lot can change in 400 miles. If we moved that system in closer to the airport, when they are ~200 miles out, we would have a much more accurate reading of the order in which aircraft will approach the airport. An integration of both methods would allow us to smooth out traffic flow, ensure departure slots for 'internal flights' and reduce delays."

> In the simulated environment in our NASA lab, we can research and test futuristic air traffic management concepts. It allows me to delve deeper into the brain and the underlying mechanisms that control what we do and how we think. Where does the biology stop and the psychology begin?

Gita S. Hodell, '17 MS Research & Experimental Psychology
Research Associate at NASA

> My responsibilities are developing, debugging and maintaining an application that is critical to Integrated Demand Management research. Although my degree will be in Computer Science, I've been encouraged to use this opportunity to increase my aviation knowledge and gain a grasp of the overall system.

Sahil V. Motadoo, '18 MS Computer Science
Student Research Assistant at NASA

MICHELE BURNS

DEPARTMENT OF COUNSELOR EDUCATION
COLLEGE OF EDUCATION
SPONSOR: COUNTY OF SANTA CLARA

Michele Burns believes that prison inmates deserve a chance to pursue higher education. “Students on the ‘inside’ should have the opportunity to reach their full potential,” she explains. “Many incarcerated individuals dropped out of school due to un-remediated learning difficulties. They grew up in under-resourced communities, and may have missed out on social modeling from other college-going individuals.”

Burns has extensive experience with inmates in nearby Elmwood Correctional Facility. In winter 2016, Santa Clara County released a request for college courses for inmates, and Burns and her colleagues were encouraged to submit a proposal. The result is a fairly new SJSU program, in collaboration with the Office of Reentry Services, which provides academic and career counseling, plus instruction in transferable, credit-bearing courses.

“Students report that they had no idea that they would be capable of completing a college course,” Burns says, “and because of their success, they are now motivated to enroll in more college classes upon release. In fact, several students have continued their education at local community colleges upon release from custody.”

Inmate and philosophy student Samuel Gonzales echoes a similar sentiment: ”Due to education struggles early in life, I never thought of myself as college material. Thanks to this life-changing experience, with success in my first college course (English 1A), I’ve gained confidence to complete college courses in the future.”

The program’s success, in Burns’ view, is due to the teamwork of everyone involved. “The success of the program is due to the dedication, passion, empathy, and commitment of each faculty, staff, and community constituent who has joined the team,” she says.

“My experience working with the In-Custody Educational Services Project has made me become interested in working with juveniles. I have had the opportunity to build a direct connection with the inmates at Elmwood, and I can see how they appreciate and value the education that the project offers to them. I’d like to be able to make a similar positive impact on juveniles.

Charlene Vo, ’17 Child and Adolescent Development
Project Assistant, In-Custody Education Services Program

ADDRESSING ILLEGAL DUMPING

KATHERINE CUSHING, JASON DEHANN

DEPARTMENTS OF ENVIRONMENTAL STUDIES, SOCIOLOGY & INTERDISCIPLINARY SOCIAL SCIENCES
COLLEGE OF SOCIAL SCIENCES
SPONSORS: CITY OF SAN JOSÉ, GLOBAL PHILANTHROPY PARTNERSHIP

An unsightly problem is on the rise in San José, afflicting many neighborhoods across the city: illegal dumping. In response to this growing issue, two research projects brought together several groups, including SJSU faculty and students, local residents, business owners and the City of San José.

The projects were developed under the umbrella of CommUniverCity San José, an innovative partnership between SJSU, the City of San José, and downtown neighborhoods. Each year, CommUniverCity spearheads forty to fifty neighborhood-based projects, helping build capacity for residents living in primarily immigrant, low-income communities to engage with their local and regional government.

The first project, directed by Sociology Lecturer Jason DeHaan, focused on community outreach. Students on the research team knocked on doors, attended neighborhood association meetings and other events, and distributed educational materials. These materials, provided in English, Spanish and Vietnamese, included information on how to get support for large item disposal and how to report illegal dumping.

A second project, led by DeHaan and Katherine Cushing, SJSU Professor of Environmental Studies, researched the effectiveness of a program designed to help and support local businesses. Students developed, conducted, and analyzed surveys, revealing the extent and the expense of the illegal dumping problem.

Cushing credits CommUniverCity and its bridge building role as being central to bringing different groups together to combat illegal dumping. “The partnership between the city, the community, and the university is an incredibly important one,” she says. “It connects people and institutions, allowing us to share resources and data in ways that wouldn’t be possible if we were working on our own.”

“I enrolled at San Jose State University as a Sociology major. My desire to find a career quickly transformed into a passion for expanding the field of knowledge. I had no idea that sociological fieldwork could be so labor intensive and require detailed planning. The execution of each phase of the project necessitated advanced scheduling and precise choreography of the surveyors. My goals now include conducting quality research, analyzing collected data and disseminating that information into the public sphere – free of charge.

Michelle Williams, ’17 Sociology

CIRRUS CLOUD AND CLIMATE SCIENCE

MINGHUI DIAO

DEPARTMENT OF METEOROLOGY AND CLIMATE SCIENCE
COLLEGE OF SCIENCE
SPONSOR: NATIONAL SCIENCE FOUNDATION

When Minghui Diao visited Princeton University as a student, her soon-to-be Ph.D. advisor introduced her to a project using aircraft to study clouds. Diao, captivated by the project and her advisor's enthusiasm, decided to pursue an academic career. Now part of the Meteorology and Climate Science at SJSU, Diao leads a student team conducting similar research, using aircraft to study clouds and the impact of human activity on cloud formation.

Her latest project is to observe cirrus cloud formations. "Cirrus clouds — high clouds composed of ice crystals — are one of the most challenging components in the atmosphere for climate models to capture accurately," Diao says. "Because of the high elevations, it is very difficult to measure them, which is why we use instruments onboard a research aircraft."

Eight field campaigns have taken Diao to locations all over the world. "One of the campaigns was based at the U.S. Virgin Islands, focusing on hurricanes," she says. "Another targeted sea-air exchange in the Southern Ocean, based on Punta Arenas, Chile. Then we also had a first-ever flight campaign that flew from the North Pole to the Antarctic Circle."

Diao's research, in partnership with the University of Wyoming, has far-reaching implications for climate science. "The collaboration brings in another piece of the puzzle," she says, "which is to use supercomputer model simulations to predict future climate. Combining observations and simulations enables us to achieve goals that cannot otherwise be accomplished."

Much like the Ph.D. advisor who inspired her, Diao brings an enthusiasm for her work into the classroom and the field. "I certainly hope that one day I will be remembered by my students as that professor who inspired them to pursue a career in science," she says.

"Meteorology is a high-level combination of physics, chemistry, math, computer science and environmental science. Their are so many different fields open ahead.

Ching An Yang, '19 Meteorology & Climate Science

"Weather and how it affects us fascinates me. I look forward to learning about extreme weather phenomenon, such as tornadoes, and I hope to storm chase to study these events.

Abril Abierto '19 Meteorology & Climate Science

PREPARING VETERANS FOR LIBRARY AND INFORMATION SCIENCE CAREERS

SANDRA HIRSH

SCHOOL OF INFORMATION
COLLEGE OF APPLIED SCIENCES & ARTS
SPONSOR: INSTITUTE OF MUSEUM AND LIBRARY SERVICES

"Reaching Those Who Served," a project led by Sandra Hirsh, director of the SJSU School of Information, seeks to help more U.S. veterans pursue careers in library and information science.

The project achieves its mission with two initiatives. The first is awarding scholarships for twelve veterans to attend library and information science graduate programs, four at each of the partner universities: SJSU, the University of Texas at Austin, and the University of Hawaii at Manoa.

A second initiative surveys admissions staff and faculty in LIS programs, admitted students and librarians who are veterans. "Research on recruiting and advising practices will help attract more veterans to the information professions," Hirsh says. Based on findings, researchers will develop new guidelines and tools for veteran recruitment and create new partnerships with local organizations that serve veterans.

"After all that our veterans have done for our country," Hirsh says, "it is gratifying to offer these veterans the opportunity to pursue an MLIS degree at our school with full support."

"I am both honored and grateful for the veterans scholarship that is making my schooling possible. This program is doing an excellent job at helping me bring together my past experiences, including those as an officer in the U.S. Army, with the knowledge I need to make a difference as a future information professional.

Heather Canfield, '20
Master of Library and Information Science (MLIS)

HYERAN JEON

DEPARTMENT OF COMPUTER ENGINEERING
COLLEGE OF ENGINEERING
SPONSOR: CALIFORNIA ENERGY COMMISSION

In a new collaboration with UC Riverside, Hyeran Jeon and a team of SJSU students will be researching ways to improve the energy efficiency of data center servers and power distribution networks. SJSU students are contributing to the project by integrating and running workloads on SJSU's simulation servers and developing the proposed migration systems.

Jeon and her colleagues on the grant determined early on that SJSU would be an ideal place to start their research.

"As SJSU is at the center of the Silicon Valley and has a huge student body, we thought the SJSU data center would be the good place to implement our design. That began our journey."

However, the application is in no way limited to SJSU. The system being developed will bring down consumption and costs for other data centers in U.S.

As for Jeon's journey, she is thrilled to have studied in the U.S., to be living in Silicon Valley and to be teaching and conducting research at SJSU. "SJSU has a special environment where faculty and students collaborate, where we work with nearby innovative companies, and where the profound evolution of computers is taking place."

"As industry moves towards cloud-based services, data center energy efficiency will play a big role in sustainability of the cloud-based business by significantly saving electricity costs. The potential effect this research might have on the industry in the near future is huge.

Aditya Sunil Choudhari, '18
MS Computer Engineering

"We are working on data center workload balancing using deep learning. The intent is to smartly balance load across multiple servers to reach better energy efficiency, thus reducing power consumption. Because it is a hot topic in industry, getting to work on this at an academic level is a great opportunity.

Abhishek Singh, '18
MS Computer Engineering

DAN NATHAN-ROBERTS

DEPARTMENT OF INDUSTRIAL & SYSTEMS ENGINEERING
COLLEGE OF ENGINEERING
SPONSORS: HERMAN MILLER INC., STERIS CORPORATION, WAVELET HEALTH INC.

Dan Nathan-Roberts was drawn to science and engineering from a young age. “I always liked figuring out how things worked, and I was fortunate to be encouraged to attend science camps and study math and engineering.”

Today he works in cognitive ergonomics, a field that explores the relationship of human cognitive abilities with systems and technology, particularly in health care and in the workplace.

Cognitive ergonomics has many applications, as Nathan-Roberts’ diverse research demonstrates. He collaborates with businesses in health care, medical devices, technology and more.

For example, furniture manufacturer Herman Miller approached Nathan-Roberts for help with the ergonomics of a new product line, which included features new to the industry.

“The undergraduate team and I had the opportunity to conduct an ergonomic analysis of the fit of an unreleased Herman Miller product,” explains Nathan-Roberts. “We generated research reports and briefed Herman Miller on our findings.”

Working with students has been especially inspiring. “The students in my classes and in my research group are hard-working, smart and engaged,” he says. “Their enthusiasm and curiosity inspire me to provide as many opportunities for them as I can.”

“In the HF/E masters program I have been able to apply my science background and exercise creativity in different ways compared to my previous career in engineering, which is very freeing. This program also enabled me to find a position in the healthcare industry, the field in which I’ve always wanted to work.

Janet Wu Chastain ’17 MS
Human Factors and Ergonomics
User Experience Researcher
Proteus Digital Health

SUBAQUEOUS VOLCANIC ERUPTIONS

RYAN PORTNER

DEPARTMENT OF GEOLOGY
COLLEGE OF SCIENCE
SPONSOR: NATIONAL SCIENCE FOUNDATION

Geologist Ryan Portner studies a kind of volcanic activity that is seldom seen: volcanoes that erupt deep below the surface of the ocean. "Submarine volcanism remains underexplored and underexamined," he says, despite the fact that "three quarters of Earth lies beneath water, and a substantial majority of Earth's volcanic eruptions take place in this subaqueous realm."

With the help of new submarine and robotic technologies, Portner aims to change our understanding of these underwater phenomena.

"Our ability to address these and other fundamental questions is continually expanding with technological advancements in marine geology and direct observations of active deep-sea eruptions," he says.

Portner uses robotic submarines to dive down to the ocean floor. These robots are equipped with "manipulators"—robotic arms and hands—to collect sediment and rock samples for study.

Armed with these samples, Portner explores fundamental questions about volcanism on Earth from the ascent of molten rock (magma) below the surface to its eruption onto the sea floor. He views his research as a piece of a larger scientific puzzle: humanity's understanding of the Earth.

"Ultimately," he says, "this work supports scientific research by my students and colleagues who aim to understand the interactions between the solid-earth, hydrosphere and biosphere and how these interactions evolve through time."

"I have always loved my research experiences here at SJSU, both as an undergrad and as a graduate student. All my professors have been mentors in one way or another, and they have encouraged me at every turn. You cannot help but share in their joy regarding research.

Beth Johnson, '15 Physics, '18 MS Geology

"The geology department encourages us to develop a broad knowledge of our field that includes both research and career-related skills. Given what I've learned at SJSU, I'm hoping to go into private industry, potentially working in environmental consulting and remediation.

Jacob Danielsen, '17 Geology, '19 MS Geology

KRISTEN REBMANN

SCHOOL OF INFORMATION
COLLEGE OF APPLIED SCIENCES AND ARTS
SPONSOR: INSTITUTE OF MUSEUM AND LIBRARY SERVICES

In today's world, internet access is crucial to many aspects of life, from communication and information accessibility to disaster response. But many people lack basic digital access, particularly those in rural areas, in locations affected by natural disaster, and in other underserved communities.

Kristen Rebmann sees potential for expanding access in an emerging, low-cost wireless technology called TV White Spaces. TV White Spaces, or TVWS, are broadcast frequencies made available where the spectrum is not being used by licensed services such as television broadcasting.

A new project, led by the School of Information, seeks to install technology in libraries and test a new model for digital access and inclusion that can be replicated nationwide.

"The project has two primary audiences," Rebmann says. "Underserved populations and library practitioners. Our project addresses challenges in access and inclusion by raising awareness of TVWS networking in the library community and supporting practitioners' abilities to use TVWS to expand internet access to underserved populations."

Rebmann envisions a new role for TVWS and community libraries to help in the aftermath of natural disasters. "Libraries in these affected areas," she says, "might have been able to assist in facilitation of internet access with portable TVWS network connection points. By virtue of their mobility, TVWS hotspots can provide essential digital access in times of crisis by moving along with their affected populations."

"I gained a whole level of appreciation for the potential that TVWS technology has for public libraries in serving their communities, especially historically underserved populations. It is imperative now more than ever that this conversation continues, in light of the current threat to net neutrality, which in my opinion plays a huge role in ensuring the continued success of TVWS implementations in public libraries and beyond.

Emmanuel Edward Te, '17
Master of Library and Information Science

SUSAN SHILLINGLAW

DEPARTMENT OF ENGLISH & COMPARATIVE LITERATURE
COLLEGE OF HUMANITIES & THE ARTS
SPONSOR: NATIONAL ENDOWMENT FOR THE HUMANITIES,
DIVISION OF EDUCATION PROGRAMS

John Steinbeck wrote many books—including classics like *The Grapes of Wrath*, *East of Eden* and *Of Mice and Men*—that continue to resonate in classrooms across the country. For many students, Steinbeck is known as a writer of migrants and workers, but his work reflects an array of additional interests, including a passion for ecology and natural science.

Susan Shillinglaw, SJSU professor, Steinbeck scholar, and Director of the National Steinbeck Center in Salinas, California, studies the many layers of the writer's work, and there she sees an opportunity to expand how we teach Steinbeck in the classroom.

The three-week Steinbeck Summer Institute for middle and high school teachers, which Shillinglaw founded in 2007, explores Steinbeck's creative, social and ecological ideas, as well as his contemporary relevance. The institute convenes annually in Monterey, combining lectures and workshops with explorations of the California landscape that inspired the author.

The program attracts both English and science teachers, examining how science teachers can integrate narrative ideas, and how literature teachers can integrate Steinbeck's ideas around natural science. Shillinglaw seeks to "bridge this gap between art and science."

"We needn't see them as separate ways of thinking, but rather look at how teachers can integrate the written word with science, because science is a narrative. A lot of scientific endeavors are stories about where do you start, where do you end up, what happens and how does it impact us, and how does it change our understanding of the world."

> "The Institute gave me a historical and cultural understanding of Steinbeck's literature. Because of the Institute I have worked with students in 8th grade English, 11th grade American History, and AP Environmental Science. Students are learning how to relate to literature beyond the book; they are making connections to the region's agriculture, marine resources, and economy.
>
> Christina Pommer, Technology Director
> Association of Independent School Librarians

ALISON STIMPERT

MOSS LANDING MARINE LABORATORIES
COLLEGE OF SCIENCE

SPONSOR: CASCADIA RESEARCH COLLECTIVE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) FISHERIES

Alison Stimpert studies marine mammals and their unique reliance on underwater sound for communication and navigation. To the concern of Stimpert and her fellow scientists, whales and dolphins are not the only ones making noise in the ocean.

Human noise generated by military and commercial sources can interfere with the sounds of the mammals, and may change their behavior.

"Commercial shipping is one of the biggest contributors," Stimpert says, "and overlaps with the frequency range used by most baleen whales. Navy sonar and seismic airguns used for oil exploration can also have strong effects."

Stimpert's research seeks to understand the impact of human noise. One multi-year project, a collaboration with the U.S. Navy and several other academic, government and non-profit institutions, involves tagging marine mammals off the California coast. Another, working with NOAA, characterizes the acoustic impact of demersal fish survey gear. With tags, sonar exposure and passive acoustic recording, Stimpert's team generates large sets of acoustic data that shed new light on the behavior of several species, including blue whales and Risso's dolphins.

Stimpert sees her research as part of a larger conservation effort. "I became interested in marine mammals because they are an excellent ambassador species for conveying messages of conservation. Whales and dolphins are very charismatic, and people want to protect them. Fortunately, changes that we make to help whales and dolphins help other species in the ocean as well."

> "I am researching killer whale and Risso's dolphin acoustics. Studying at Moss Landing Marine Labs has provided me with extensive field work opportunities, and I have been fortunate to do thesis work in such a dynamic area as Monterey Bay.
>
> Brijonnay Madrigal, '18 MS Marine Science
> Aboard the MLML Rigid Hulled Inflatable Boat

MARK YARBROUGH

MOSS LANDING MARINE LABORATORIES

COLLEGE OF SCIENCE

SPONSORS: NASA, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

Mark Yarbrough's life changed the moment he set foot in the Moss Landing Marine Laboratories (MLML). "My first interaction with MLML was as a junior in high school, when I took a day trip in search of advice regarding my Science Fair project. The laboratory I found in Moss Landing was an amazing place."

These interests eventually led him to a career back at MLML. Stints developing oceanographic instrumentation and conducting shipboard research took Mark from Alaska to the Antarctic, the Azores and Hawaii. "I had found a niche that married my two primary interests: technology and natural sciences."

The Marine Optical Sensor (MOS) and the Marine Optical BuoY (MOBY) design process started with NOAA funding in 1988, and in 1992 MLML was selected through a NASA grant process to participate in the engineering and construction of the initial system. Construction was followed by deployments of prototypes, first in Monterey Bay (1993) and then in Hawaii (1995). The buoy was tested in the fall of 1996 in Hawaii, and MOBY became operational at the current Lanai site in July 1997.

The buoy is a primary ocean observatory for the calibration of satellite ocean color sensors. By measuring water-leaving radiance, and assessing the resulting water color, MOBY provides data that satellites can use to continuously calibrate and validate their on-orbit measurements.

Today, MOBY is in its 21st year of continuous operation, supporting over a dozen U.S. and international ocean color satellite programs. "MOBY has become a life's work for me," Yarbrough says. "The opportunity to regularly work at sea and face new technological and scientific challenges almost daily has provided motivation and held my interest for decades. There is great satisfaction in knowing your work can provide tangible benefit to the extremely valuable satellite programs we support."

The MOBY Team:
Research Associate Michael Feinholz, Research Technician Stephanie Flora, Research Technician Terrence Houlihan, Research Associate Sean Mundell, Research Technician Darryl Peters, Project Coordinator Sandy Yarbrough

CSU STUDENT RESEARCH COMPETITION

Each year the California State University (CSU) system organizes a statewide student research competition. The competition is held to promote excellence in undergraduate and graduate scholarly research and creative activity by recognizing outstanding student accomplishments throughout the twenty-three campuses of the California State University. Students are nominated to participate by their home campus and present written and oral overviews of their research projects at the two-day competition.

The SJSU undergraduate and graduate research students listed below had the opportunity to present their work and compete as SJSU's representatives in the 2017 CSU Student Research Competition, which was held at California Polytechnic State University (Cal Poly), San Luis Obispo. Mary Ryan and Ryan T. Scott each took second place in their respective categories at the CSU competition.

Student Researcher(s)	Title of Presentation	College	Faculty Mentor
Alexander Cabot and Irene Lin	Search for O[1-] Earthquake-Like Precursors: an MEμSR MgO Study	Physics and Astronomy College of Science	Carolus Boekema
Bryan Dang and Jeland Palicte	Virtual Reality in Simulation Training: A Comparative Study for Heightening Learning Immersion to Increase University Bandwidth	The Valley Foundation School of Nursing College of Applied Sciences & Arts	Colleen O'Leary-Kelley
Kunal Goswami	Reinforcement Learning Based Adaptive Threat Response in Software Defined Networks	Computer Engineering Charles W. Davidson College of Engineering	Younghee Park
Sarah Lysgaard	Ballet de la Nuit: Staging the Absolute Monarchy of Louis XIV	Art and Art History College of Humanities and the Arts	Anne Simonson
Maryam Runiassy	Modeling Cloud Computing Threats and Vulnerabilities	Computer Engineering Charles W. Davidson College of Engineering	Weider D. Yu
Mary Ryan Awarded Second Prize	A Functional Explanation of Word-Final [s] Lenition in Spanish: Comparing Corpus Data From Western Andalusian and Castilian	Linguistics and Language Development College of Humanities and the Arts	Daniel Silverman
Ryan T. Scott Awarded Second Prize	Zoledronate Prevents Simulated Weightlessness-Induced Bone Loss in the Cancellous Compartment While Blunting the Efficacy of a Mechanical Loading Countermeasure	Kinesiology College of Applied Sciences and Arts	Peggy Plato
Hadil Shalan	Improved Photocatalytic Activity of Hybrid P450 Biocatalysts by Substituent Variation in the Ru(II)-Polypyridyl	Chemistry College of Science	Lionel Cheruzel

EARLY CAREER INVESTIGATOR AWARDS

DAVID SCHUSTER

ESHAN KHATAMI

Assistant Professor Ehsan Khatami from the Department of Physics and Astronomy, College of Science, and Assistant Professor David Schuster from the Department of Psychology, College of Social Sciences, were chosen to receive the Early Career Investigator Awards for 2017.

The Research Foundation Early Career Investigator Award recognizes tenure-track faculty who have excelled in research, scholarship or creative activity (RSCA) as evidenced by their success in securing funds for RSCA, publishing in peer-reviewed journals, and carrying out other important scholarly and creative activities at an early or beginning point in their careers at SJSU.

David Schuster joined SJSU's faculty in 2013 and established himself early on as a highly productive grant writer and scholar. His research is designed to increase understanding of individual and shared cognition in complex environments and is applicable to areas such as the cognitive aspects of cybersecurity and perceptual training for real-world pattern recognition in such domains as aviation, transportation security training and military human-robot interaction.

Dr. Schuster's grant activity and success have been remarkable. He was granted the NSF's most prestigious award for early career faculty, the CAREER Award, in 2016. Additionally, he serves as Co-PI with an SJSU colleague on a collaborative research NSF grant. He was also awarded a supplemental grant by NSF in support of undergraduate research training at SJSU. Dr. Schuster has been successful in his pursuit of internal grant funding as well, earning a number of awards in support of his research and the research of SJSU students.

Dr. Schuster has also been a productive scholar. He has authored four peer-reviewed articles in his short time at SJSU, as well as multiple peer-reviewed proceedings papers, two book chapters and a number of invited research presentations.

Further, Dr. Schuster has made tremendous contributions to his students' research productivity. He serves on thesis committees and has an active research lab of undergraduate and graduate students. He is highly committed to providing SJSU students with top-notch educational opportunities and research training.

Since he joined the Physics & Astronomy faculty, Ehsan Khatami has made remarkable contributions to the computational infrastructure and capabilities in the department and college; published extensively in the highest-ranked science journals, including one paper in *Nature* and two in *Science*, with co-authors from institutions like MIT, Harvard, and Princeton; and served as research mentor for seven undergraduate and six graduate students.

Dr. Khatami was hired to help expand the department's offerings in computational physics throughout the curriculum. The first project he undertook was to build the department's first modern high-performance computational cluster, teal.physics.sjsu.edu, which is used extensively by students enrolled in big-data courses and undertaking computational research.

Because of his computational expertise, Dr. Khatami joined Dr. Sen Chiao as Co-PI on the successful National Science Foundation (NSF) Major Research Instrumentation proposal that funded the $900K supercomputer now installed at the Research Foundation. He also was awarded a three-year NSF Research at Undergraduate Institutions grant for his project on "Disorder in Strongly Correlated Systems."

Dr. Khatami and his students have also expanded their research focus to apply machine learning techniques to the solution of complex quantum problems, and one of his graduate students has been the lead author on two papers, one already published in *Physical Review X*.

CONTRACT AND GRANT AWARDS FY2016-2017

COLLEGE OF APPLIED SCIENCES AND ARTS

HEALTH SCIENCE AND RECREATION

Joshua Baur and William Spain
East Bay Regional Park District Adventure Crew Program Study - Phase 1
East Bay Regional Park District: $24,000

HOSPITALITY MANAGEMENT

Yinghua Huang
Revenue Management Strategies and Best Practices in Hospitality Industry
Henan Chenzhong Real Estate Co: $30,000

JUSTICE STUDIES

Edith Kinney and Danielle Arlanda Harris
Survey of Sex Offenders under the Supervision of the California Department of Management Board
California Department of Corrections and Rehabilitation: $25,000

Margaret E. Stevenson
The Record Clearance Project (RCP) at SJSU
County of Santa Clara: $257,413

William Armaline and Edith Kinney
DACA and DAPA Immigration Services in Santa Clara County
Sacred Heart Community Service: $2,600

Wilson Yue Yuan and Matthew R. Capriotti
Impact of Mental Health Court: A Sacramento Case Study
CSU, Sacramento: $15,000

KINESIOLOGY

Nancy Megginson
Timpany Center: Diabetes Prevention in Urban American Indians
Stanford University: $283,259

NUTRITION, FOOD SCIENCE AND PACKAGING

Lucy McProud and Ashwini Wagle
Cal-Pro-Net Center 2016-2017
California Department of Education: $216,447

SCHOOL OF INFORMATION

Kristen Rebmann
Libraries Leading in Digital Inclusion and Disaster Response via TV WhiteSpace Wireless Connections
Institute of Museum and Library Services: $249,998

Lili Luo
Institute for Research Design in Librarianship (IRDL)
Loyola Marymount University: $18,497

Sandra Hirsh
Reaching Those Who Served: Recruiting and Preparing Military Veterans for Careers in Librarianship
University of Texas at Austin: $99,992

SCHOOL OF NURSING

Tamara H. McKinnon
Regulatory and Policy Issues: Counting International Clinical Experiences
National Council of State Boards of Nursing: $122,377

SCHOOL OF SOCIAL WORK

Edward Cohen
Independent Evaluator for the Co-Occurring Substance Abuse and Mental Health Adult Drug Court Program
Superior Court of California, County of Santa Clara: $60,000

Evaluation of Santa Clara County's Dual Diagnosis Juvenile Treatment Court - Year 3
County of Santa Clara: $52,500

2015 SAMHSA/BJA MH
Superior Court of California, County of Santa Clara: $60,000

Santa Clara County Heart Failure Program Community Field Study
County of Santa Clara: $17,000

Laurie Drabble
Sexual Orientation Differences: Prevalence & Correlates of Substance Use & Abuse
Public Health Institute: $50,694

Laurie Drabble and Edward Cohen
Valley Healthcare and Housing for the Homeless Project Evaluation
County of Santa Clara: $72,000

Peter Lee
Title IV-E Child Welfare Training 2016-2017
University of California, Berkeley: $1,834,897

COLLEGE OF BUSINESS

DEAN'S OFFICE

Dan Moshavi and Karen E. Philbrick
Mineta Consortium for Transportation Mobility (MCTM)
Department of Transportation: $1,402,200

California High-Speed Rail Project
State of California: $665,000

Hilary Nixon and Karen E. Philbrick
Summer Transportation Institute 2017
California Department of Transportation: $51,979

Measuring the Economic Impact of High Speed Rail
California High Speed Rail Authority: $135,121

Malu Roldan and Karen E. Philbrick
Update of the MTI Database on Terrorist and Serious Criminal Attacks against Public Surface Transportation
University of Connecticut: $132,253

Peter Haas
Discover Opportunities - In Transit! (DO-IT!)
Santa Clara Valley Transportation Authority: $93,000

CONTRACT AND GRANT AWARDS FY2016-2017

COLLEGE OF EDUCATION

COMMUNICATIVE DISORDERS AND SCIENCES

Wendy Quach and June McCullough
Project EPICS - Educating Pacific Island Clinicians in Speech
Department of Education: $250,000

Wendy Quach and Pei-Tzu Tsai
Project Tapestry: Preparing Culturally Competent Speech-Language Pathologists to Deliver High Quality Services to Child
Department of Education: $500,000

Wendy Quach and Gloria Weddington
Project AACES (AAC in Educational Settings) - Preparing Speech-Language Pathologists in AAC Service Delivery
Department of Education: $250,000

COUNSELOR EDUCATION

Michele C. Burns
In-Custody Education Services
County of Santa Clara: $159,300

ELEMENTARY EDUCATION

Roxana Marachi
SESAP - School Engagement and Suspension Alternatives/ SCCPDF
County of Santa Clara: $13,433

Ferdinand Rivera
Franklin-McKinley Mathematics Initiative
California Department of Education: $252,189

SECONDARY EDUCATION

Katya Aguilar
SJSU Single Subject Intern Program 2016-2017
Milpitas Unified School District: $80,535

Katya Aguilar and Mark Felton
The Trio Project: Addressing Academic Language Development across the Teacher Continuum
Department of Education: $358,041

COLLEGE OF ENGINEERING

DEAN'S OFFICE

Belle Wei, Amy Strage, Xiao Su and David Schuster
Collaborative Research: A Technology Pathway Program in Data Technology and Applications
National Science Foundation: $482,106

Jinny Rhee and Blanca Sanchez-Cruz
2014-2015 MESA Engineering Program (MEP)
Regents of the University of California: $10,000

BIOMEDICAL, CHEMICAL AND MATERIALS ENGINEERING

Folarin Erogbogbo
I-Corps Site: A Biological Sciences Site for the CSU
San Diego State University Foundation: $5,000

Anand Ramasubramanian
Systems Biology Based Tools for Modeling Platelet Storage Lesion for Optimal Blood Transfusions
CFD Research Corporation: $119,999

Liat Rosenfeld
SEWEC Valve Calibration
IProTech, LLC: $1,153

Guna Selvaduray
Post-Earthquake Business Recovery: Learning from Japan's Experiences
Seismic Safety Commission: $49,949

CIVIL AND ENVIRONMENTAL ENGINEERING

Akthem Al-Manaseer
In-situ Comprehensive Strength of Precast Concrete Bridges Girders in California
California Department of Transportation: $17,000

Juneseok Lee
Right Sizing Tomorrow's Water Systems for Efficiency, Sustainability, and Public Health
Purdue University: $24,937

COMPUTER ENGINEERING

Hyeran Jeon
Enabling Energy Efficient Data Centers in Smart Power Distribution Systems
University of California, Riverside: $227,112

Kaikai Liu, Younghee Park, Jerry Gao and Francis L. Edwards
Creating a Community Infrastructure for Interoperable Emergency Connectivity
National Science Foundation: $199,921

Xiao Su and Hsin-Yi Meng
NASA Aeronautics Undergraduate Student Scholarship (Meza)
NASA: $5,424

ELECTRICAL ENGINEERING

Essam Marouf
Investigation of Saturn's Rings By Cassini Radio Occulation: Cassini Equinox Mission to Saturn
Jet Propulsion Laboratory: $60,250

Youngsoo Kim and Chang Choo
High Performance Computing for Radar Signal Processing Acceleration
Department of Defense: $9,563

Thuy T. Le and Winncy Y. Du
Vietnam Education Foundation 2016 Visiting Scholar Program
Vietnam Education Foundation: $31,780

INDUSTRIAL AND SYSTEMS ENGINEERING

Dan Nathan-Roberts
Aperture Research Phase I
Herman Miller Inc: $4,970

Dan Nathan-Roberts and Alessandro Bellofiore
Proposal to Test Device Performance for Wavelet Health
Wavelet Health Inc: $50,000

Yasser Dessouky, Ayca Erdogan and Minnie Patel
CPHT Statistician
Veterans Administration: $40,000

MECHANICAL ENGINEERING

Saeid Bashash
Automated Plant Clustering and Multiple Servo Controllers for Hard Disk Drives
Western Digital Corporation: $65,000

COLLEGE OF HUMANITIES

DEAN'S OFFICE

Lisa Vollendorf
SJSU Building Public Will for the Arts Implementation Grant
City of San José: $9,500

ART AND ART HISTORY

Anne Simonson
The California Arts Project- CSMP
Regents of the University of California: $20,074

The California Arts Project- NCLB13
CSU, San Bernardino: $30,489

ENGLISH AND COMPARATIVE LANGUAGE

Cathleen Miller
Center for Literary Arts Program Funding 2016-2017
City of San José: $15,000

Jonathan H. Lovell
San Jose Writing Project 2016-2017-CSMP
University of California, Berkeley: $23,330

San Jose Writing Project 2016-2017- NCLB13
University of California, Berkeley: $36,289

LINGUISTICS AND LANGUAGE DEVELOPMENT

Roula Svorou and Chris Donlay
Documenting Domaaki (dmk), a Severely Endangered Indo-Aryan Language
National Science Foundation: $80,350

SCHOOL OF MUSIC AND DANCE

Diana Hollinger
2015 Local Arts Grant
Silicon Valley Creates: $2,500

TV, RADIO, FILMS, AND THEATRE

Amy Glazer Connolly
Guest Artist Series
The Kanbar Charitable Trust: $5,000

COLLEGE OF SCIENCE

DEAN'S OFFICE

Elaine D. Collins
SJSU Mesa Schools Program (MSP) Academic Year 2016-2017
Regents of the University of California: $185,490

SJSU MESA SCHOOLS PROGRAM RCLA (Roberto Cruz Leadership Academy) Agreement 17-18
Roberto Cruz Learning Academy: $4,200

SJSU MESA Schools Program ARUESD Agreement
Alum Rock Unified Elementary School District: $25,200

SJSU MESA Schools Program CUSD
Campbell Union School District: $5,750

SJSU MESA Schools Program MHUSD Agreement 13-15 (Morgan Hill Unified School District)
Morgan Hill Unified School District: $16,000

SJSU MESA Schools Program - Bridges Academy (of Franklin McKinley School District)
Franklin-McKinley School District: $4,200

SJSU MESA Schools Program - Downtown College Prep
Downtown College Prep: $8,400

SJSU MESA Schools Program ESUHSD Agreement
East Side Union High School District: $42,000

SJSU MESA School Programs SJUSD Agreement (Partner School Site: Lincoln High School & Gunderson)
San Jose Unified School District: $8,400

Gavilan College STEM Grant Subproject
Gavilan Joint Community College District: $341,000

BIOLOGICAL SCIENCES

Miri Van Hoven
Molecular Mechanisms of Neural Circuit Formation
Department of Health and Human Services: $107,550

IOS: RUI: Investigation of the Role of a Receptor Protein Tyrosine Phosphatase in Synaptic Partner Recognition
National Science Foundation: $140,000

The Effects of Normal and Prolonged Sensory Activity on Neural Circuits
UC San Francisco: $164,869

*MARC U*STAR at SJSU 2017-2018*
Department of Health and Human Services: $219,040

Julio Soto, Miri Van Hoven and Rachael French
REU Site: Research by Undergraduate using Molecular Biology Applications (RUMBA)
National Science Foundation: $124,747

Brandon Joseph White
Stanford - SJSU Postdoctoral Training Program to Enhance URM Teaching
Stanford University: $116,533

CONTRACT AND GRANT AWARDS FY2016-2017

CHEMISTRY

Lionel Cheruzel
RU(II) Diimine Labeled P450 Mutants for Selective Hydroxylation of Substrate C-H Bond Using Innovative Photo-Oxidative
Department of Health and Human Services: $108,375

RUI: Light-Driven Biocatalysts for the Selective Functionalization of Substrate C-H Bonds
National Science Foundation: $52,445

Laura Miller-Conrad
Blocking Cationic Antimicrobial Peptide-Resistance in Pseudomonas Aeruginosa
Department of Health and Human Services: $108,375

Gilles Muller
Chiroptical Induced CPL-Based Tool as a Probe of Biological Substrates
Department of Health and Human Services: $107,550

Alberto A. Rascon, Jr.
Vector Control Strategy Through Inhibition of Aedes Aegypti Midgut Proteases
Department of Health and Human Services: $108,375

Annalise Van Wyngarden
Undergraduate Summer School in Nuclear and Radiochemistry
University of Missouri: $94,428

Karen A. Singmaster
SJSU LSAMP Program
CSU, Sacramento: $30,000

CSU SJSU LSAMP Program
CSU, Sacramento: $40,000

Karen A. Singmaster, Cleber C. Ouverney and Alberto A. Rascon, Jr.
San José State University Rise Program
Department of Health and Human Services: $475,563

COMPUTER SCIENCE

Margareta Ackerman
Unsupervised Learning (Clustering) of Odontocete Echolocatation Clicks
San Diego State University Foundation: $24,929

Ronald Mak
Student Travel Support for the CGO 2017 / HPCA 2017 / PPoPP 2017 Symposia Co-located in Austin, Texas
National Science Foundation: $30,000

GEOLOGY

Ellen Metzger
New Haven Unified School District a California Math and Science Partnership Professional Development Program
New Haven Unified School District: $77,760

Ryan Portner
Collaborative Research: Fingerprinting Source-to-Sink Associations for Deep-Marine Vitriclastic Deposits and their Associations
National Science Foundation: $198,640

MATHEMATICS AND STATISTICS

Roger Alperin
EFRI-ODISSEI: Origami and Assembly Techniques for Human-Tissue-Engineering (OATH)
Northeastern University: $83,970

Joanne Rossi Becker
UT Dana Center Project of 5th Grade Video Project with SJSU Research Foundation
University of Texas at Austin: $30,000

Silicon Valley Mathematics Initiative 2017-18
Silicon Valley Community Foundation: $80,000

Daniel Brinkman
Solution for Predictive Physical Modeling in CCDTE and Other Thin-Film PV Technologies
Arizona State University: $78,306

Elizabeth Gross
RUI: Computational Algebraic Geometry and Combinatorial Algorithms for Neuroscience and Biological Networks
National Science Foundation: $133,547

Joanne Rossi Becker and Cheryl Roddick
Santa Clara Valley Mathematics Project - CSMP
Regents of the University of California: $20,000

Joanne Rossi Becker, Cheryl Roddick and Jordan Schettler
Santa Clara Valley Mathematics Project (NCLB13)
Regents of the University of California: $27,000

Wesley Maciejewski
Basic Skills Partnership Pilot Program
CSU East Bay: $70,000

Ferdinand Rivera
Integrated Teacher Preparation Grant
California Commission on Teacher Credentialing: $250,000

Slobodan Simic and Guangliang Chen
Verizon + CAMCOS Proof of Concept
Verizon: $31,935

METEOROLOGY AND CLIMATE SCIENCE

Eugene Cordero
Do-It-Yourself Home Energy Savings Toolkit Program
City of San José: $79,121

Sen Chiao
I-Corps: Real-Time Big Data Based Decision Support System for Water Use in California
National Science Foundation: $50,000

Atmospheric Boundary Layer Responses of the 2017 North America Total Solar Eclipse
University of California, San Diego: $8,000

The NOAA Cooperative Science Center in Atmospheric Sciences and Meteorology
Howard University: $100,000

Ozonesonde Measurements during CABOTS
Bay Area Air Quality Management District: $75,000

Upper Air Ozone Measurements in the Bay Area
Bay Area Air Quality Management District: $29,635

Sen Chiao and Frank Freedman
QPF Forecasting for SCVWD
Santa Clara Valley Water District: $24,975

Sen Chiao and Ehsan Khatami
MRI Acquisition of Hybrid CPU/GPU High Performance Computing and Storage for STEM Research and Education at SJSU
National Science Foundation: $900,798

Frank Freedman and Sen Chiao
ROSES-2015/Health and Air Quality Applied Sciences Team
NASA: $123,785

MOSS LANDING MARINE LABORATORIES

Ivano W. Aiello
Beach Recovery and Sediment Budget in the Southern Monterey Bay National Marine Sanctuary after the 2015-2016 El Nino
California Marine Sanctuary Foundation: $20,000

Participation of Ivano Aiello on IODP Expedition 363
Columbia University: $59,025

Ross Clark
Completing the Core Objectives of the Moro Cojo Slough Management and Enhancement Plan
Coastal Conservation and Research: $340,690

Storm Water Resources Plan for Greater Monterey County IRWMP Region
Coastal Conservation and Research: $236,150

Conservation Innovation Grant (USDA) Project
Resource Conservation District of Monterey County: $808,700

Kenneth H. Coale
In Situ Sampling of Thermodynamics and Fog at the Air-Sea Interface
Naval Postgraduate School: $250,000

Kenneth Coale, Thomas Connolly, Kenneth H. Coale and G. Jason Smith
CeNCOOS: Long-Term Monitoring of Environmental Conditions in Support of Marine Area Management in Central & Northern CA
Monterey Bay Aquarium Research Institute: $53,720

Kenneth H. Coale and Qing Wang
Microwave Radiometer and Temperature/Humidity Calibration Chamber for Sampling Atmospheric Refractive Environment with Temporal Coverage and Accuracy
Office of Naval Research: $280,564

Colleen Durkin
Collaborative Research: Particle-Specific DNA Sequencing to Directly Observe Ecological Mechanisms of Biological Pump
National Science Foundation: $162,417

Change Affect the Export of Phytoplankton to the Seafloor?
University of California, San Diego: $59,608

Russell Fairey
SWAMP7-Field Surveys
CA State Water Resources Control Board: $83,452

Jonathan Geller
MISP Supplemental Research for Detection and Monitoring
CA State Department of Fish and Wildlife: $312,940

Pire: Understanding Marine Biodiversity Along Geographic and Anthropogenic Stress Gradients
San Diego State University Foundation: $129,820

Metagenetic Analysis of Zooplankton of Valdez Alaska for the Prince William Sound Regional Citizens' Advisory Council
Prince William Sound Regional Citizens' Advisory Council: $4,999

Gary H. Greene
Predictive Rockfish Habitat Modeling of Salish Sea
Department of Commerce: $40,000

James Harvey
BeachCOMBERS South Coast Chapter
U.S. Fish and Wildlife Service: $24,193

Estuarine Wetland and Near Shore Ecology Studies along the Pacific Flyway
U.S. Geological Survey: $160,000

Beach Cast Organism Surveys and Integration of Data into the Central and Northern California Ocean Observing System
Department of Commerce: $9,939

Training of Marine Mammal Observers
U.S. Geological Survey: $1,908

CSU Chico Service Agreement - Specific Analytes for Water Chemistry to be Analyzed for the CNRA Study, 2016-2017
CSU Chico Research Foundation: $25,908

Monterey Bay Aquarium - Storm Water Sampling
Monterey Bay Aquarium Research Institute: $1,042

Water Sample Analysis - The CSU Chico Research Foundation
CSU Chico: $23,932

Spring Rivers Ecological Sciences LLC-PO SJSURF-1-PG&E Cyanotoxin Analysis
Spring Rivers Ecological Sciences: $4,618

State of New Mexico Purchase Order 51600-0000054862
New Mexico, Department of Fish and Game: $13,680

City of Chico/Public Works - Engineering PO 139236
City of Chico: $3,929

James Harvey and Jonathan M. Prince
Office of Naval Research (ONR) Service Requirement AGOR Support
Office of Naval Research: $93,829

Auxiliary General Purpose Oceanographic Research (AGOR) Support Services
Office of Naval Research: $193,694

James Harvey and Wesley Heim
SFEI Contract 1243 San Leandro Bay PCB Study - WPCL
San Francisco Estuary Institute :$15,400

SFEI Contract 1243 San Leandro Bay PCB Study - WPCL
San Francisco Estuary Institute: $9,800

James Harvey, Alison Stimpert and Birgitte McDonald
Incidental Harassment Authorization for Waterfront Repairs at USCG Monterey
Amec Foster Wheeler Environment: $11,137

Michael Graham
Contract between the Phycological Society of America and SJSU Research Foundation 2017-2021
Phycological Society of America: $543,742

Contract Between the Phycological Society of America and SJSU Research Foundation
Phycological Society of America: $2,806

Scott L. Hamilton
Using Habitat-Specific, Spatial Demographic Information to Improve Stock Assessments of Ground Fishes
Department of Commerce: $114,971

Forecasting the Effects of Ocean Acidification and Hypoxia on Reproduction of West Coast Groundfish
Department of Commerce: $298,206

Using Spatial Variation in Demography and Life History to Improve Stock Assessments of West Coast Groundfish
Department of Commerce: $299,782

Effects of Climate Change Induced Ocean Acidification and Hypoxia on Reproduction of Rockfishes
University of California, San Diego: $42,954

Wesley Heim
DWR Yolo Bypass Mercury Studies
CA State, Water Resources Control Board: $200,000

SWRCB-SWAMP MPSL Year 3
CA State, Water Resources Control Board: $51,738

SFEI Contract 1243 San Leandro Bay PCB Study
San Francisco Estuary Institute: $3,299

Wesley Heim and Autumn Bonnema
Seal Beach Mussels N62473-15-2-0014- MPSL
Department of the Navy: $10,536

Seal Beach Mussels N62473-15-2-0014- WPCL
Department of the Navy: $6,387

Contract No: 1222 Between San Francisco Estuary Institute/ Aquatic Science Center and SJSU Research Foundation
San Francisco Estuary Institute: $90,000

Contract No: 1268 - San Francisco Estuary Institute/ Aquatic Science Center
San Francisco Estuary Institute: $7,289

Contract: Surf to Snow Environmental Resource Management
S2S Environmental Research Management: $9,286

SMUD UARP FERC Project # 2101 Fish Collection
Sacramento Municipal Utility District: $78,875

Birgitte McDonald
Heart Rate Logging in Deep Diving Toothed Whales; A New Tool for Assessing Responses to Disturbance
Office of Naval Research: $139,511

UC Davis Agreement #A31534- Support for California Sea Lion Unusual Mortality Event
University of California, Davis: $62,925

Zachariah Peery
Developing a Scientific Basis for Barred and CA Spotted Owl Management in the Sierra Nevada
CA State, Department of Fish and Wildlife: $198,400

Richard Starr
Species Distribution Models for Mgmt. of Fisheries and MPAs: Innovative Approaches to Cost-Effective Data Collection
University of California, San Diego: $39,542

Statewide MPA Monitoring
California Natural Resources Agency: $500,000

Workshops to Support the Design and Use of Visual Surveys for Monitoring of California's Deep Ecosystems
California Natural Resources Agency: $55,180

G. Jason Smith
The Alliance for Coastal Technologies (ACT): National-Scale Efforts toward Verification and Validation of Observing
University of Maryland Center for Environmental Science: $181,000

Validation Study: The Relationship between Bulk Metrics and Direct Counts of Living Organisms in Ballast Water
University of Maryland: $35,000

Phase X Part3, Test Methods and Compliance Monitoring of Ballast Water Discharge Regulations
University of Maryland Center for Environmental Science: $45,000

Tim Stanton
Long Term Observations of Inertial Waves and Turbulent Diffusivity in the Upper Pycnocline of the Beaufort and Chukchi
Office of Naval Research: $97,271

Alison Stimpert
Data Analysis of Passive Acoustic Data from Rockfish Behavioral Response Study
Department of Commerce: $24,945

Project Support for the Southern California Behavioral Response Study: Effects of Naval Sonar on Marine Mammals
Cascadia Research Collective: $50,000

Nicholas Welschmeyer
DNVGL Envirocleanse Ballast Project
California Maritime Academy: $40,748

DNVGL Envirocleanse Ballast Project
California Maritime Academy: $14,419

DNVGL Envirocleanse Ballast Project
California Maritime Academy: $466,070

Mark Yarbrough
Marine Optical Buoy (MOBY) Operations and Technology Refresh
University of Miami: $2,434,307

PHYSICS AND ASTRONOMY

Aaron Romanowsky
Collaborative Research: Dark Matter in Galaxy Halos
National Science Foundation: $102,655

Ultra-diffuse Galaxies in Clusters and the Field: Masses and Stellar Populations
Space Telescope Science Institute: $49,207

A Close-Up View of the Star Formation History of a Young Ultracompact Dwarf
Space Telescope Science Institute: $53,108

Collaborative Research: Rethinking the Fundamentals of Massive Star Clusters
National Science Foundation: $14,097

Alejandro L. Garcia
Stochastic and Hybrid Models and Algorithms for Fluids
Lawrence Berkeley National Laboratories: $103,509

Ehsan Khatami
RUI: Disorder in Strongly-Correlated Electrons on a Lattice
National Science Foundation: $171,000

Michael Kaufman
Developing the Astronomical Infrared Bands into Calibrated Probes of Astrophysical Conditions Using the NASA Ames PAH IR
NASA: $62,614

Using the Astronomical Infrared Bands as Calibrated Probes of Astrophysical Conditions with the NASA Ames PAH IR
NASA: $50,598

A GREAT Map in M20
Universities Space Research Association: $29,000

Thomas Madura
A Robust Method for Modeling 3-D HST/STIS Data Cubes Using Time-Dependent 3-D Simulations
Space Telescope Science Institute: $77,435

COLLEGE OF SOCIAL SCIENCES

ANTHROPOLOGY

Albert J. Faas
Workshop: Cultural Competency for Disaster Risk Reduction and Recovery
National Science Foundation: $18,165

COMMUNICATION STUDIES

Matthew Spangler and David Kahn
NEH SUMMER INSTITUTE: The Immigrant Experience in California through Literature and Theatre
National Endowment for the Humanities: $171,323

ECONOMICS

Matthew J. Holian
An Analysis of GHG Emissions from Construction Industries
Regents of the University of California: $47,135

ENVIRONMENTAL STUDIES

Bruce Olszewski
SJSU Move Out, Clean-Up
City of San José: $7,000

CDR San Mateo Recycling and Household Hazardous Waste Hotline
County of San Mateo: $35,000

Recycling Hotline
County of Santa Clara: $70,374

Household Hazardous Waste Hotline
County of Santa Clara: $38,734

TAC Projects
County of Santa Clara: $21,996

Katherine Kao Cushing and Jason Dehaan
Investigating Innovative Illegal Dumping Support for Businesses in San José
Global Philanthropy Partnership: $4,964

MEXICAN AMERICAN STUDIES

Julia Curry
IME BECAS Scholarship Program
IME BECAS: $16,158

POLITICAL SCIENCE

Garrick Percival
IPACE Internship Program
Senate Committee on Rules: $4,661

PSYCHOLOGY

Vernol Battiste
Single Pilot Understand through Distributed Simulation (SPUDS)
CSU Long Beach Foundation: $35,000

Dorrit Billman
Training for Generalizable Skills & Knowledge: Integrating Principles and Procedures
NASA: $200,000

Kevin Gregory
2017 Fatigue Management Training for San Francisco Bar Pilots
California Maritime Academy: $2,000

Kevin Jordan
Autonomous Flight, Future Vertical Lift Systems, and Human Systems Integration
NASA: $32,590

Randall J. Mumaw
Technologies for Indicating System Status and Dependencies during Complex Non-Normal Situations
University of Iowa : $50,000

Sean Laraway
A Proposal to Conduct Collaborative Human Systems Integration Research between NASA Ames Research Center and SJSU
NASA: $11,401,778

IPA Assignment - Brian Gore
NASA: $5,334

IPA Assignment - Steven Hillenius
NASA: $13,412

IPA Assignment - Paul Lee
NASA: $454,751

Human Systems Integration: Collaborative Human Factors Research to Improve Safety, Efficiency, and Reliability of NASA's Aeronautics and Space Missions
NASA: $3,831,083

IPA Assignment - Kristle McCracken
NASA: $558,024

Enable Reduced Crew Operations (RCO) with Human Automation Teaming (R-HATS)
Human Automation Teaming Solutions: $49,627

Audra Ruthruff
Test Subject Recruitment Office
NASA: $344,264

David Schuster
CAREER: Understanding the Cognitive Processes of Computer Network Defense
National Science Foundation: $16,000

Susan Snycerski
Advanced Rotorcraft Research: Adaptive Autonomy, Future Lift Systems, and Human-Centered Display Design
NASA: $2,545,659

URBAN AND REGIONAL PLANNING

Dayana Salazar
Community Leadership Development Program
City of San José: $50,000

UNIVERSITY PROGRAMS

OFFICE OF RESEARCH

James L. Wayman
Consultancy Support to the CESG Biometrics Test Programme
Communications-Electronics Security Group: $100,254

PROVOST OFFICE

Amy Strage
Transforming College Teaching: Statewide Implementation of the Faculty Learning Program to Improve STEM Undergraduate
University of California, Berkeley: $32,925

SJSU RESEARCH FOUNDATION

Sandeep Muju
Design, Delivery, and Management of a Programme to Support Technology Client Companies of Enterprise Ireland
Enterprise Ireland: $171,699

STUDENT ACADEMIC SUCCESS SERVICES

Maria Cruz
The Ronald E. McNair Post Baccalaureate Achievement Program
Department of Education: $500,580

ASPIRE (Student Support Services) - San José State University
Department of Education: $882,169

Patricia Backer
Project Succeed: 2013 Title III Strengthening Institutions Program
Department of Education: $449,980

UNIVERSITY LIBRARY

Rebecca Kohn
California State University Japanese American Digitization Implementation Grant
CSU, Dominguez Hills Foundation: $2,500

VP FOR STUDENT SERVICES

Romando Nash and Julie Sedlemeyer
San Jose State WorkAbility IV Program
California Department of Rehabilitation: $577,260

STATEMENT OF ACTIVITIES
FY2016-2017

REVENUE AND SUPPORT

Federal Contracts and Grants	$24,307,256
State Contracts and Grants	7,081,615
Other Contracts and Grants	7,166,814
Indirect Cost Recovery-C&G	7,741,694
Administrative and Program Fees	537,894
Gifts	580,008
Investment Income	1,840,679
Other Revenue and Support	632,031
Campus Organization Other Revenue and Support	7,640,119
Total Revenue	**$57,528,110**

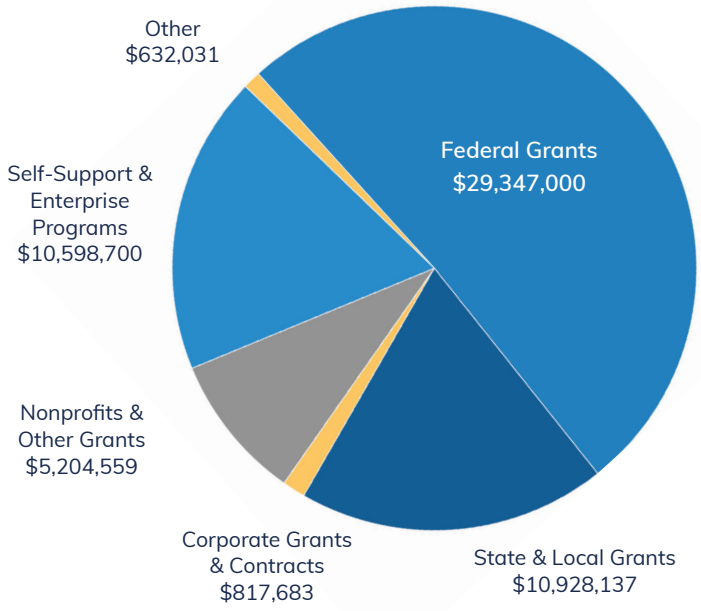
EXPENSES

Program Activities	
Sponsored Programs	$37,977,995
Board Designated Programs	446,763
Campus Organization Expenditures	8,593,929
Support Activities-Management and General	8,331,964
Other Expenses and Transfers	730,000
Total Expenses	**$56,080,651**

CHANGE IN NET POSITION **$1,447,459**

Net Position - beginning of year	16,372,216
Net Position - end of year	17,819,675

SOURCES OF FUNDING



BOARD OF DIRECTORS

FROM THE SJSU ADMINISTRATION

Andrew Hale Feinstein
Board President, SJSU Research Foundation
Provost and Senior Vice President for Academic Affairs, SJSU

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EDITOR

Marilyn Dion
SJSU Research Foundation

PHOTOGRAPHY

James Tensuen, '15 Photojournalism
jamestensuen.com

Bonnie Rae Mills
bonnieraemillsphoto.com

CONTRIBUTORS

Melissa Anderson
San José State University

Michelle Frey
San José State University

James Knutila
jamesknutila.com

Daria Naidenov
darianaidenov.com

Pooja Patel, '18 Computer Sciences
SJSU Research Foundation

Carmina Som, '10 Psychology
SJSU Research Foundation

Brenda Swann
SJSU Research Foundation

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