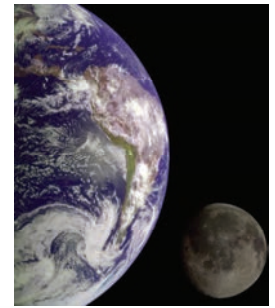


THE SCIENTIST

Science in Our World and Beyond

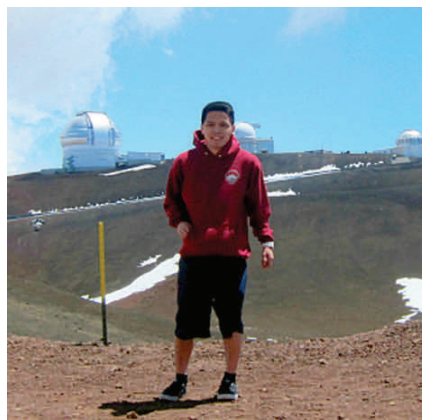


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Physics Undergrads Make Record-Breaking Discoveries

RICHARD VO: ULTRA COMPACT DWARF GALAXY



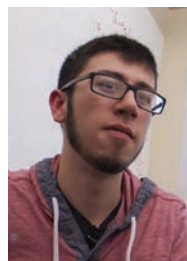
Richard Vo on Mauna Kea, Hawaii (R. Vo)

Richard Vo, a Physics undergrad followed his passion to learn about distant objects in the sky. Vo took a computational methods class with Assistant Professor Aaron Romanowsky. It kindled a passion to learn more about astronomy and the stars. In January 2013, Vo asked Dr. Romanowsky if he could learn independent study of astrophysical research.

Dr. Romanowsky introduced Vo to using software to find different astronomical objects other than stars, supernovas, galaxies or asteroids. Richard Vo stated, "I saw a whole different side of the computer world." Vo used the giant digital cameras and discovered a super dense compact galaxy, younger than other objects. Vo traveled to the top of Mauna Kea in Hawaii to further his research at the W.M. Keck Observatory.

Vo hopes to attend San Francisco State in the fall and continue building on his research.

MICHAEL SANDOVAL : HYPERCOMPACT CLUSTER



M. Sandoval

Michael Sandoval, a Physics undergraduate had learned of classmate Richard Vo's discovery and wanted to find one, too! In using some of Richard's research methods, Michael searched and found "something weird" as stated to his professor, Dr. Aaron Romanowsky. This 'weird' object turned out to be a hypercompact cluster. Romanowsky stated "If a dwarf galaxy is like an apple core, what Sandoval found is like the seeds.

Sandoval's discovery is unlike anything I've ever seen."

They are keeping the location of these discoveries secret until the students have been published.

College of Science *Dean's Message*



J. Michael Parrish, Dean

I continue to be amazed at the accomplishments of the outstanding student and faculty researchers in the College of Science, and 2014 has been another banner year for noteworthy discoveries, publications, and new facilities.

In August, **Moss Landing Marine Laboratories** celebrated the opening of their new Aquaculture Facility, built on the shore of Monterey Bay on the site of the original MLML building. The new facility will allow researchers and corporate partners to grow organisms in seawater under controlled conditions – something that is important to those wanting to explore ways to utilize marine plants or animals as food items or as other types of natural products.

Also at Moss Landing, Assistant Professor **Scott Hamilton** was one of two faculty members awarded the SJSU Research Foundation Outstanding Young Investigator awards for 2014 for his work on the physiology and ecology of rockfish. Chemical Oceanography Professor **Kenneth Coale** was just elected as a fellow of the American Association for the Advancement of Science. This honor is only bestowed to a few scientists each year, and recognizes the esteem to which Coale, and his research on trace element concentrations in the oceans, are held by his peers.

In the Department of Physics and Astronomy, **Richard Vo** and **Michael Sandoval**, both students of astrophysicist **Aaron Romanowsky** made national headlines by discovering, within weeks of one another, the two densest galaxies found to date. The students, who learned the data mining techniques in Romanowsky's computational astrophysics class, are in the process of publishing their remarkable finds now. Vo was able to confirm his findings by visiting the Keck Observatory in Manua Kea, Hawaii over spring break.

Chemistry faculty members **Joe Pesek** and **Maria Matyska-Pesek** were each recipients of separate research grants from Science Without Borders to do cooperative research with scientists in Brazil. The Pesek lab was also awarded a \$250,000 research grant from the Keck Foundation that will allow them, along with faculty in Biology, Forensics, and Chemical and Materials Sciences to develop active learning experiences for students employing cutting-edge instrumentation.

In the Department of Biological Sciences, assistant professor **Katie Wilkinson** was awarded an Early Policy Fellowship by the Society for Neurosciences that took her to Washington to discuss the need for greater funding in the sciences with representatives. Wilkinson has also established a Science Policy blog.

Biology Associate Professor **Scott Shaffer's** latest project involves the development, along with some engineering students at Stanford, of an egg logger that will allow the study of egg placement and movement during nesting in birds. The logger, which is designed to look like an egg, records temperature, position, and angular movement of the logger after it is placed among the real eggs in a nest.

Our **Cybersecurity and Big Data Initiative**, which involves five departments in five colleges, continues to gain momentum. In recent weeks, SJSU was recognized as an Information Security Center of Excellence by the NSA and DHS, and our Silicon Valley Cybersecurity and Big Data Center was approved on campus. These developments will position the faculty and students working on these initiatives to have greater access to federal funding, as well as new opportunities for internships and collaborative research.

— J. Michael Parrish, PhD
Dean, College of Science

NEW: Science Policy Blog

IN June, 2014, **Dr. Katie Wilkinson**, Assistant Professor in the Department of Biological Sciences at San José State University has created the [Science Policy Blog](#) which discusses a variety of science-related topics. Some current topics include information about the Ebola virus and the Senate and House election results in regards to the outlook for science.

Dr. Wilkinson's reasons for writing this blog include being exasperated with the decisions made in Washington, DC—*obviously funding science is worthwhile and our policies should be informed by science!* Katie states that our job is to keep Washington informed. When funding for the MARC (Minority Access to Research Careers) program was cut 50%, she contacted her elected official Rep. Mike Honda's office. His office was very interested in this issue and a meeting was scheduled. As a result of Rep. Honda's actions, MARC funding was restored!

With this success, Dr. Wilkinson applied for and received a 2014 Society for Neuroscience Early Career Policy Fellow award. As a Fellow, she received training in the legislative process and advocacy, and since has been helping educate colleagues about science policy and advocacy.

The blog will be used to keep the SJSU community updated on issues related to science policy, including information about relevant legislation and tips for how, if you wish, to get involved in advocacy. Dr. Wilkinson plans to post weekly to the **Science Policy Blog** and gladly accepts article contributions or suggestions for a topic. Past topics include "The State of Science Funding in the US: Is it really that bad?"

— Dr. Katie Wilkinson

Silicon Valley Big Data and Cybersecurity Center

San José State University's Big Data and Cybersecurity Center has been designated as a National Center of Academic Excellence in Information Assurance/Cybersecurity education for the academic years 2014 to 2019. SJSU is the first Bay Area institution to receive this designation from the U.S. Department of Homeland Security and the National Security Agency's U.S. Cyber Command.

"The designation reflects the important role San José State University plays in increasing the number of professionals in Silicon Valley with information assurance and cybersecurity expertise, ultimately contributing to the protection of the national information infrastructure," President Qayoumi said. The designation builds on more than a decade of research and education at SJSU in information assurance and related fields. SJSU also has a history of collaborating with academic, industry, and government organizations. Several units on campus have participated in the development of curriculum components and specializations in areas related to information assurance. SJSU recently made a major interdisciplinary investment in cybersecurity and related areas, hiring a cohort of nine faculty members across five colleges, forming the core of the SJSU Silicon Valley Big Data and Cybersecurity Center.

"Our aim is to address the critical shortages of information security professionals by creating career pathways into this field for students with a variety of backgrounds," said Michael Parrish, Dean of the College of Science and Executive lead of this interdisciplinary endeavor.

— Pat Lopes Harris
SJSU News, 12/2/14

Jay Pinson STEM Education in the News!

A REFLECTION FROM AN AMERICORPS VISTA



STEM students playing the computer games they developed! (Photo: Nina Levine)

With all the recent talk about privilege in the news media and on campus, I started thinking about my privilege. My name is **Nina Levine** and am a college educated white female with an upper-middle class family from here in the Bay Area. Growing up, college was always a given – it’s just what people in my family do when they graduate from high school. But that’s not the case for everyone – a lot of kids living in and around the San Jose area don’t have the same outlook on higher education. That’s why I’m choosing to use my privilege to help others who are at an unfair disadvantage. I work here – at SJSU – in the Jay Pinson STEM Education Program (JPSEP).

Our mission here at JPSEP is to inspire and encourage youth to enter and excel in the STEM career pipeline. At the Jay Pinson STEM Education Program (Directed by **Dr. Virginia Lehmkul-Dakhwe**), we collaborate with ComUniverCity San Jose and YWCA Silicon Valley, and are currently working with 13 different K-12 after school program sites in cybersecurity and computer science. We bring laptops and other infrastructure into the classrooms and in a 10-week program, the K-12 students get to design and code their own computer games. Incorporated in the computer science content, we also teach the students about cybersecurity and other important computer skills. At the end of the 10 weeks, the students put on a final showcase where their friends from school, family members, and local community partners play their games and see all the work they’ve done throughout the semester. These final showcases provide an opportunity for the youth to show pride in and be recognized for their accomplishments. Through these after school programs, the students we work with are given a safe environment where they can learn, ask questions, and be creative without feeling self-conscious or ashamed of their lack of computer knowledge. Exposing these students to this type of technology and computer science content will likely increase their chances of pursuing higher education in a STEM field.

Instructing at 13 different after school program sites each week is no easy feat. This program would not be possible without our partnership with the Upper Division Area S Elective class COMM 157 SL – Community Action/Community Service. COMM 157 is a service learning class here at SJSU where students work with our program to volunteer in the classrooms. Engaging with the K-12 students allows SJSU students to mentor the youth, as well as learn from them and their struggles. STEM students are especially encouraged to enroll in the class, but all SJSU students are welcome to join. **Amarylliz Baysa**, a Chemistry Senior who took the COMM 157 class this Fall 2014 says, “The reason I love this class is I felt this service learning experience was a source of inspiration and motivation for

Jay Pinson STEM Education in the News!

A REFLECTION—PAGE 2

me. It gave me a new outlook on my own major and a better understanding that STEM can not only enrich my life but the lives of others.”

Service learning is one of ten High-Impact Practices (HIPs) identified by the Association of American Colleges. HIPs are teaching and learning designs which have been demonstrated to increase student engagement and persistence. They are beneficial to all students and are offered across our beautiful SJSU campus, as well as the California State University (CSU) system. Some other HIPs are: undergraduate research, internships, learning communities, and capstone courses and projects. The CSU system is so fond of HIPs, that the CSU Center for Community Engagement has recently launched the first system-wide AmeriCorps*VISTA program. One of the main goals of this program is to support and reward implementation of effective High Impact Practices. AmeriCorps*VISTA (Volunteers in Service to America) is part of a national service movement through the Corporation for National and Community Service and is often referred to as the domestic Peace Corps. Currently, 12 AmeriCorps*VISTAs are serving across the CSU system in STEM fields, and I’m one of them!

As a CSU STEM AmeriCorps*VISTA, my job is to collaborate with our community partners, local schools, and on-campus allies to increase the success of our service learning students and the JPSEP. So far this year, I have been building capacity for the JPSEP by developing curricula for the after school program, investigating and implementing on-site resources such as existing computer infrastructure, and developing and nurturing community partnerships



CSU STEM AmeriCorp*Vistas (Nina is located in the top row, third from right)

that will help enhance our program. Being a VISTA in the College of Science has allowed me to work with so many diverse individuals and groups of people. I have already accomplished so much, but I have many more goals already set for next semester. Working as a VISTA has allowed me to use my privilege to help others, all the while aiding others with privilege to do the same. I can’t wait to see what the rest of my journey as a VISTA has in store!

For more information about the Jay Pinson STEM Education Program, go to <http://www.sjsu.edu/stem/>.

— Nina Levine
CSU STEM AmeriCorps*Vista
Jay Pinson STEM Education Program

AmeriCorps*Vista celebrates 50 years and began as an idea of President John F. Kennedy. Learn more at [Americorps](http://www.americorps.gov).

Medical Product Development (MPDM) Program

SCIENCE DRIVES INNOVATION OF THE MPDM PROGRAM

Next time you reach for that prescription in your medicine cabinet, consider the thousands of scientists, clinicians, and manufacturers involved in making it!

In 2004, extensive consultation with mid-level to senior executives in San Francisco Bay Area companies engaged in these activities defined the philosophy and curriculum of the **MPDM** Graduate program. A planning team within the College of Science at SJSU supported by a system-wide CSU-Sloan Foundation planning grant assessed the feasibility and desirability of a new Master's degree program. They found a pressing need for experts that have oversight and managerial responsibility for the effective and efficient conduct of clinical trials of a new drug, medical device, diagnostic test or other kinds of products whose evaluation for safety and efficacy is regulated by the FDA.

The MPDM program began enrolling students in 2008. The program provides advanced courses related to the administration, supervision and management of the development of medical products regulated by the federal Food and Drug Administration (FDA) or other regulatory authorities worldwide.

There is universal and strong support for the MPDM graduate program given the need for experienced employees with more formal exposure to a broader view of pre-clinical research and clinical trial management. As a result of this in-depth analysis, the MPDM program was designed to differ from other programs as students have education and practical exposure to the economic/legal/managerial context of the organizations where they intend to be employed. Such focused education and experience includes business administration, principles of management, project management, clinical research operations and administration, regulatory/legal affairs, etc. The educational experience is designed to prepare students for employment in organizations that conduct research of new medical products or procedures. Graduates will thus be highly qualified for employment in clinical, regulatory, drug safety, quality and project management positions.

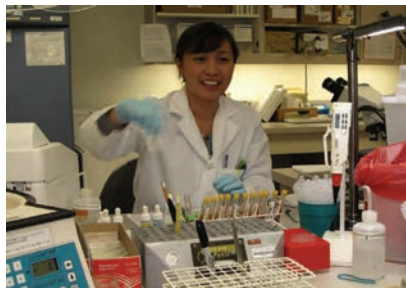
This innovative and unique Master of Science degree program is for students who elect to pursue applied clinical research endeavors in a commercial setting. There is an acute need for scientists, technologists and managers who understand the complexities of drug and device development under FDA regulations. This work requires a wide variety of scientific disciplines. The program is structured to enable students to work while attending classes. Classes are offered evenings, weekends, and on-line. For more information, visit the [MPDM](#) program's website.

— Tonja Green
Director, MPDM



Clinical Laboratory Scientist (CLS) Program

THE CLS PROGRAM CELEBRATES 10TH ANNIVERSARY



In 2013, the **Clinical Laboratory Scientist Training Program** celebrated 10 years of success given that 100% of CLS graduates have passed their board exam! CLS is a 12-month post-baccalaureate program which prepares students to take a national board exam for Clinical Laboratory Scientists administered by the American Society for Clinical Pathologists and obtain a California State Clinical Laboratory Scientist license. The program is accredited by the National Accreditation Agency for Clinical Laboratory Science.

The training program is a 40-hour per week commitment with an emphasis on hands-on learning in a hospital laboratory setting. Most weeks, students will spend four days training at a clinical site and one day in lecture. The program began with four clinical affiliates in the Bay Area. There are now have 23 affiliates all over the state, from Chico in the north to Ridgecrest in the Mojave Desert.

As of March 2014, 318 students have graduated from the program. Our graduates are working in hospitals, blood donor centers, bone marrow transplant facilities, public health and biotechnology laboratories all over California.

For more information, visit the [CLS](#) website. For information on careers in the clinical laboratory, visit [lab science careers](#).

Chemistry *in the News!*

SCIENCE WITHOUT BORDERS GRANT AWARDEES

Professor **Joseph Pesek** and Adjunct Professor **Maria Matyska-Pesek** have been awarded “Special Visiting Researcher” grants from the Brazilian government. The fellowship will cover a three year period beginning on February 1, 2015.

Joseph’s project involves evaluating the chemical composition of various rice products in order to determine which have the highest amount of certain compounds known to be beneficial to human health. The chemical analysis also involves the technology developed at San José State University (SJSU). Maria’s project involves research into methods for the analysis of pesticides and toxic substances produced by fungi in various agricultural crops grown in Brazil using the technology, also developed at SJSU.

Science Without Borders began in 2011 as a scholarship program to attract senior foreign STEM (Science, Technology, Engineering, and Mathematics) researchers recognized internationally to conduct projects with Brazilian research groups. This program is sponsored by the Conselho Nacional de Desenvolvimento Científico e Tecnológico (**CNPq**; English: **National Council for Scientific and Technological Development**), an organization of the Brazilian federal government under the Ministry of Science and Technology, including additional support from the private sector.

For more information, visit www.laspau.harvard.edu/current-programs/science-without-borders

— Dr. Joseph Pesek

Science Education Program *in the News!*

EDUCATORS ATTEND NEXT GENERATION SCIENCE STANDARDS FORUM



Craig Gabler, Paula Messina, Julie Olsen, and Melissa Miller atop the tallest building in the world, the Burj Khalifa in Dubai.

Dr. Paula Messina, Director of the Science Education Program and Geology Professor has been working with [Achieve Inc.](#) in Washington D.C. since January 2011. Achieve received a multi-million dollar grant from the Carnegie foundation, the National Science Teachers Association and other funding sources to develop the [Next Generation Science Standards \(NGSS\)](#), based on the National Academies of Science’s [Framework for K-12 Science Education](#) (2010).

Last fall, Dr. Messina was invited to apply for a position as developer/facilitator of an NGSS workshop to be held in Dubai, United Arab Emirates. In December 2013, she was notified that she would be among four NGSS writers to lead the workshop.

Dr. Messina was selected from a competitive field of science educators and was one of only two from California represented on the 41-member writing team. She worked with five others on the Earth and Space Science committee; for the first time in history, the geosciences and astronomy will be required subjects spanning the K-12 curriculum.

On April 26, 2014, 150 educators and school administrators from American curriculum schools and technology institutes across the Middle East and North Africa (MENA) region attended the NGSS Forum at Collegiate American School in Dubai. The event was organized by [Know.Do.Serve.Learn](#) (KDSL), a global initiative that partners with education organizations worldwide to increase student achievement, teacher knowledge and education leadership.

The event was a first of its kind in the region to cater exclusively to American curriculum teaching professionals who specialize in science and technology. Teams of administrators, teachers, heads of departments, and curriculum coordinators were trained to dissect the new science standards, engaged in sample standards-based tasks, and provided time to reflect and plan next steps.

“What’s astounding,” Dr. Messina remarked, “is how similar the questions and concerns voiced by these teachers are to those we hear at home. It is a challenge to implement new standards, especially since the NGSS requires that educators allow their students to investigate phenomena and processes with less teacher intervention. Science will no longer be taught as a body of knowledge, but as an iterative process that yields testable results.” Collegiate American School second grade teacher **Monique Childress** commented, “The NGSS forum was a doorway for educators to see that challenging boundaries and taking risks with students will allow them to see science in their daily lives.”

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— Dr. Paula Messina
Director, Science Education
San José State University

Science Education Resource Center *in the News!*

PARTNERSHIPS ENHANCE THE SCIENCE EDUCATION RESOURCE CENTER (SERC)



SERC was established in 1958 and is part of the Science Education Program at San José State University (SJSU). It is a unique resource center that houses over 5,000 science resources in the areas of earth, physical, and life sciences. This free program has served over 16,000 K-12 students and over 1,000 SJSU students with hands-on science resources.

SERC has partnered with Debra Caires of the Computer Science department and her students in CS 100W class. Debra and her amazing students designed, organized and created a professional website, www.serc.sjsu.edu where those interested can explore. Also, SERC partnered with the Elementary Education Science Methods class and the ML King Library staff to develop a suite of hands-on, standards-based curriculum binders in electronic format to be given to SJSU students and teacher who train in our Wildlife Ambassador Program. During the summer of 2014, three high school students will help with the Wildlife Ambassador Program and other various projects.

—Diane Davis

Meteorology in the News!

GREEN NINJA RECEIVES 2014 STEM INNOVATOR AWARD



The [Green Ninja Project](#) is one of four endeavors to receive a 2014 Science Technology Engineering and Mathematics Innovation Award from the Silicon Valley Education Foundation. The project was recognized at the foundation's signature annual event, [Pioneers & Purpose](#) on October 1st at the Fairmont in San José.

"These Organizations represent the best in the country working to provide STEM experiences that strengthen and inspire students to explore their curiosity in STEM fields," Silicon Valley Education Foundation CEO **Muhammed Chaudhry** stated. The national award recognized pioneering programs that have demonstrated innovative methods in STEM education and includes a cash prize. The Green Ninja Project uses a collection of humorous films and hands-on learning experiences to help young people develop the inspiration and tools to do something about our changing climate. Professor Eugene Cordero of Meteorology and Climate Science at SJSU stated, "By blending science, engineering and the arts, the Green Ninja Project aims to become a nationally recognized icon for education and action on climate change." The project is a multi-platform climate science education initiative that is driven by a strong collaboration between faculty members and students across various departments including Meteorology and Climate Science, Geology, Computer Science, Science Education, Primary education, Animation and Illustration, and Television, Radio, Film and Theatre.

To date, the project has worked with more than 100 teachers and reached more than 2,000 students. Episodes of "The Green Ninja Show" have had more than a million views on You Tube and Teacher Tube. The \$5,000 prize will support students working on the show's second season.

— Pat Harris
SJSU Today, /29/14

Mathematics & Statistics *in the News!*

CAMCOS PROJECTS FOR FALL 2014

Two projects are scheduled for this fall: one is sponsored by the NASA-Ames Research Center and supervised by Professor **Bradley Jackson** focusing on efficient algorithms for finding optimal partitions of astronomical data. The other project is mathematical origami sponsored and supervised by Professor **Roger Alperin**.

Students applied in July for the projects who are willing to do research and at the end of the semester, participate in an oral presentation on CAMCOS Reports Day (the day before final exams), as well as help in writing a written report of the semester's research.

Students who wish to participate on the CAMCOS team can do so by taking Math 203. For the NASA project, these students should have experience with programming and a class in astronomy is helpful. For the origami project on flat folding, some programming Mathematica, or Maple experience is helpful.

Visit the [CAMCOS](#) webpage for more information.

— SJSU Mathematics and Statistics Department
San José State University

Moss Landing Marine Labs *in the News!*

DR. KENNETH COALE NAMED AAAS FELLOW



Dr. Kenneth Coale (Courtesy of Moss Landing Marine Labs)

Professor of Marine Biogeochemistry **Kenneth H. Coale** has been named a Fellow of the **American Association for the Advancement of Science (AAAS)** for groundbreaking experiments linking iron to plankton growth, marine production and climate change. Coale is among a select number of California State University faculty members to receive this distinction. "It is truly an honor for our little institution in Moss Landing to be recognized by such a prominent and respected scientific body," Coale said.

The professor was the chief scientist/principal investigator on all the U.S.-led open ocean iron fertilization experiments in both the equatorial Pacific and Southern Ocean that have advanced the "Iron Hypothesis" of phytoplankton production and climate forcing.

Coale was elected as an AAAS Fellow for studies of trace element biogeochemistry in marine waters and the response of marine phytoplankton to exogenous iron deposition. He is a marine biogeochemist who studies the cycles of chemicals in the sea and the natural and anthropogenic processes that influence these cycles.

Election as an AAAS Fellow is an honor bestowed upon AAAS members by their peers because of their scientifically or socially distinguished efforts to advance science or its applications. New Fellows will be honored at the 2015 AAAS Annual Meeting to be held in February in San Jose, California.

Congratulations Dr. Kenneth Coale!

— Media Contact: Brynn Kaufman, MLML
— Pat Lopes Harris
SJSU News, 12/2/14

MLML in the News!

DR. ERIKA MCPHEE-SHAW BIDS FAREWELL

Dr. Erika McPhee-Shaw left Moss Landing Marine Labs this past summer to become the Director of Western Washington University's marine laboratory, Shannon Point Marine Center. The WWU marine science program includes research and teaching, a strong REU program, and a combination of undergraduate and master's training. She will serve on the Provost's council and is expected to participate in the university's general academic strategic and development planning. She will have a joint faculty appointment in the Environmental Sciences Department. We wish her well in her new position.

DR. BIRGITTE (GITTE) MCDONALD JOINS MLML

Dr. Birgitte McDonald will become the new leader of the Vertebrate Ecology Lab in the spring, 2015 semester as Dr. Jim Harvey steps down. She is currently finishing up the second year of a post-doctoral position at Aarhus University in Denmark.

— Brynn Kaufman
MLML Wave, August 2014

NEW AQUACULTURE CENTER OPENS



Aquaculture Center, MLML (J. Fusek)

In August, 2014 the Aquaculture facility opened with significant funding from the Packard Foundation. It consists of a 1,200 sq. ft. building and 1,800 sq. ft. concrete slab for the recently constructed seawater tanks. This one-acre oceanfront property was already home to a pumping facility delivering 300 GPM of seawater to both MLML and the nearby Monterey Bay Aquarium Research Institute. We envision additional tanks and research space can be created on the 10,000 sq. ft. of space surrounding the building, offering further expansion of this dynamic center for aquaculture research and teaching.

From the development of applied methods to research into sustainable technologies, aquaculture activity is now a global endeavor. Although worldwide farming of aquatic organisms was already on the rise, improvements in methodologies have resulted in further growth in the industry. These facts, combined with an absence of dedicated aquaculture facilities within the CSU, led us to consider how existing programs could benefit and new programs could be developed if a dedicated aquaculture facility existed at MLML.

Dr. Scott Hamilton recently received funding from the National Science Foundation to explore effects of ocean acidification on fishes. The Aquaculture Center is a timely addition from his perspective, providing essential space in which to conduct studies that will assess the impacts of ocean acidification on aquaculture productions, leading to better predictions for policy makers and regulators.

The proven success of our model combining research programs with training of students in the rigors of science will lead to improvements in best practices, an increase in sustainability and ultimately jobs for our graduates.

— Dr. Jim Harvey
MLML Wave, August 2014

Faculty Recognition

OUTSTANDING LECTURER: DR. OLENKA HUBICKYJ



Dr. Olenka Hubickyj
(Photo: Thomas Sanders)

The Outstanding Lecturer Award recognizes a lecturer for excellence in teaching effectiveness and service to the SJSU community. **Dr. Hubickyj** is a lecturer in the Physics and Astronomy department and is this year's recipient.

She continues her research and serves as director of Systems Teaching Institute at NASA Ames' University Affiliated Research Center where she helps place students into internship research positions. Hubickyj states, "My kids tell me to tone down the geek. I always tell them I want to change the course name to 'All Things Fantastic.'"

Dr. Hubickyj is a child from Ukrainian immigrants who traveled from a refugee camp to New York City. She attended the City College of New York (CCNY) and came from a school like SJSU. She states "If it hadn't been for CCNY, I wouldn't be here. Going there did not mean I was less intelligent than students at elite schools. Now it is my turn to reinforce that message here."

One of Hubickyj's approaches is to allow students to express their understanding of astronomy on their own terms. A requirement of her Descriptive Astronomy course is a semester-long research project where students can present their research through any medium: she has received a symphonic poem about a mission to Mars written and performed by a music composition major, a full press packet about the Big Bang from a hospitality student and more space art than she can fit in her office. Dr. Hubickyj's message: "To help students find their power you must respect them. You must give second chances and make it safe to learn."

— Allison Arbuthnot Sanders
SJSU News
February 13, 2014

FACULTY AND STAFF ON THE MOVE

Newly hired tenure-track faculty as **Assistant Professor** —

Dr. Laura Miller, Chemistry
Dr. Guangliang Chen, Math and Statistics
Dr. Ehsan Khatami, Physics and Astronomy

Newly hired or promoted **Management and Staff** —

Dr. Kenneth Kellum, Mathematics
Dr. Sami Khuri, Chair of Computer Science
Dr. Jeff Honda, Chair of Biological Sciences

Daniel Corral, Instructional Support Tech, Biological Sciences
Aklilu Kidane, Instructional Support Tech, Chemistry
Jamie Lunkley, Chemical Support Technician, Chemistry

Retired Faculty —

Dr. S. Balasubramanian, Chemistry
Dr. Michael Beeson, Mathematics
Dr. Edward Chichester, Chemistry
Dr. Jerome Finkelstein, Physics
Dr. Victoria Johnson, Biological Sciences
Dr. Johnny Martin, Computer Science

Retired Staff—

John Dayton, Biological Sciences
Staff who have left to open a new chapter of their lives — Cheryl Eng, Sci Ed/Chemistry

We wish all of you a happy future!

Awards and Grants

DR. MIRI VANHOVEN IS A RECIPIENT OF THE RO-1 GRANT, NIH

Miri VanHoven from the Department of Biological Sciences was recently informed that she will be recipient of a highly competitive RO-1 grant from the National Institute of Health. She will be doing the work in conjunction with her Co-Principal Investigator Dr. Noelle L’Etoile of the University of California at San Francisco.

Their project is entitled “The Effect of Normal and Prolonged Sensory Activity on Neural Circuits.” They are doing both molecular and physiological studies to investigate the molecular mechanisms that govern how sensory activities affect connectivity between nerve cells. The molecular work will be done primarily in the VanHoven lab, using the model organism *C. elegans* as a proxy for the mammalian nervous system.

This work will provide great opportunities for Dr. VanHoven’s students, and is a testimony to the high quality of the work that she, her students, and their collaborators have performed to date.

— Dr. Michael Parrish
Dean, College of Science

DR. SCOTT HAMILTON—EARLY CAREER INVESTIGATOR AWARD 2014

The San José State University Research Foundation has awarded **Dr. Scott Hamilton** from Moss Landing Marine Labs the Early Career Investigator Award for his extraordinary achievements in the field of Ichthyology. His specialty is in the ecology of coastal marine fish, their role in near-shore ecosystems, and the resonance of these ecosystems to environmental change and human impacts. He is also collaborating on exploring the effects of climate change on the vital kelp forest communities.

— SJSU Today, 11/12/14

College of Science *Alumni News*

TUMI TRAN ACCEPTED INTO NOVARTIS INSTITUTE FOR BIOMEDICAL RESEARCH (NIBR) POSTBACCALAUREATE GAP YEAR SCHOLAR PROGRAM

A recent fall 2013 graduate, **Ms. Tumi Tran**, MS Chemistry has been accepted into this prestigious research program for the world’s second largest pharmaceutical company, Novartis with headquarters in Switzerland. She will spend one and a half years performing research at the Novartis Institute for Biomedical Research (NIBR) facility in Cambridge, Massachusetts (located next to MIT). This program is designed to provide research training opportunities for highly talented students from historically underserved communities. Ms. Tran was only one of two students chosen this year and underwent a very rigorous vetting process to be selected. For eligibility information, go to NIBR Global at: <http://www.nibr.com/careers/gap.shtml>.

Ms. Tran spent last summer performing research at the Mayo Clinic in Rochester, MN, an internationally known medical research institution and hospital. After her time at NIBR, she plans to enter a PhD program in biomedical sciences and have a career in research.

— Dr. Roy Okuda
Chemistry Dept, SJSU



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STEM K-12 students playing the computer games they developed! (N. Levine)

See story on page 4.

THE SCIENTIST

FALL 2014

J. Michael Parrish, PhD, Dean
Elaine Collins, PhD, Associate Dean

EDITOR

Cher Jones, Administrative Analyst

Exploring for a better tomorrow!

As an Alumni of the College of Science, you are part of a community who are continually seeking answers about our world and beyond.

For those interested in a better tomorrow, please consider making a donation toward our continued excellence in teaching future scientists.

<http://www.sjsu.edu/giving/support/colleges/cos/index.html>

The College of Science would like the reader's feedback regarding this newsletter. Suggestions and comments can be directed to Cher Jones at cher.jones@sjsu.edu. Wishing you a very joyous Holiday and Happy New Year!

