

## ***“STATE OF THE UNION” MESSAGE FROM THE PRESIDENT...***



Holly Heaton

**A**T all government levels, the year typically starts with a “State Of The Union” address. While not a politician, in keeping with that practice, here is my address for the annual state of ARCS: The state of ARCS Foundation, San Diego chapter, is strong! And with the COVID pandemic that we have been living through for the past year, that is saying something, right?

It doesn’t seem possible that just one year ago we entered into what would lead to this unprecedented pandemic! If I had a dime for every time I have heard or written “unprecedented” I would be retired by now....oh, wait, I am retired!

Of course, none of us realized that the “shut-down” would last this long or that the disease would be this deadly and tragic. Our world has changed in so many ways. Our hearts go out to the millions whose lives and livelihoods have been decimated. Similarly, our gratitude goes out to all healthcare workers, first responders and other essential people who have helped keep us safe. Fortunately, here at ARCS, we have been able to pivot, carry on and actually embrace the new order.

We changed our SOY from in-person to virtual, and in the process managed to make twice as much money for our Scholars, while we shared our event and story with folks around the country and hopefully raised the awareness of ARCS! We continued to have our meetings and field trips virtually, and again, had the opportunity to reach out to more potential members, Scholars and Scholar alumni. In fact, virtual fields trips may become the norm in the future! We have recruited new members, again while only being able to offer virtual gatherings, and we have not lost any members to COVID, thank goodness.

We have been fortunate to have a wonderful, fun, creative and efficient Board this year—note I was able to describe us using the three National buzz words! Plus I added “wonderful” because our Board is!! We’ve cut our operating expenses, improved service and NOT raised dues!! We have improved communication and thanks to the Membership Committee have managed to “reach out and touch” everyone with hand deliveries and personal messages.

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***PRESIDENT'S MESSAGE...*** Continued from Page 1

Finally, we have continued to support our extraordinary Scholars, and have raised the yearly award to \$10,000 at three of our four academic entities (SR chose to stay at the \$5000 level).

We have moved into the social media world AND managed to connect with our 600 Scholar alumni, both thanks to **Ingrid Benirschke-Perkins**. She has done phenomenal work and has energized our entire chapter. We have formed stronger, better relationships with our four academic partners and strengthened our ties with our Scholars through social media, our virtual programs and our soon-to-be rolled out "Getting To Know You" program. Finally, we have built stronger relationships with National and our 14 sister-chapters—all of which are positives for us.

We still face challenges and opportunities to improve. Our SOY is coming up on Sunday, April 25 and we are looking to you to step up with donations for this event. We are also still conducting our Membership Giving campaign. We hope to raise \$100,000 from each of these efforts and of course are looking to you to achieve our goals! As you know, this year we REALLY want to see 100% member participation. And, as always, we also want to continue to recruit and retain fabulous new members!

In closing, thank you for all you have done and continue to do to support our amazing Scholars and mission. I am so proud to be a part of ARCS and our ability to support tomorrow's leaders! I have really appreciated the opportunity to know and work with all of you. You have enriched my life. Thank you!

**Holly Heaton**, President  
ARCS Foundation, San Diego Chapter

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***Welcome (back) to Former Member  
Susan H. ("Sue") Dramm***



Susan Dramm

In 1992-93, Sue was introduced to ARCS by her neighbor and dear friend, Karen Bowden. At the time, she and her husband were singing in the UCSD chorus where many of their colleagues were young medical students. She served on the Board of an outreach program for the UCSD Medical School.

In 1995, her husband died suddenly following cancer surgery, and six years later one of her two sons died in a snowboarding accident. As much as Sue had loved living here, she decided to rebuild her life, and she relocated to New York City to pursue her lifelong passion for music.

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## *Welcome (back) to Susan Dramm...*

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She auditioned for two choruses that performed regularly at Carnegie Hall as well as major concert halls and festivals in Europe. The group sang with Riccardo Muti, Zubin Mehta and other legendary conductors. In addition, she sang with MasterVoices and served as the President of the Music Committee at the Lotos Club. According to Sue, "My music life in New York was the dream of a lifetime."

Sue is a graduate of Goucher College, studied piano at the Peabody Conservatory and taught piano from 1967-1985. She has played solo, chamber, and duo-piano benefits for non-profit organizations including the San Diego Foundation for Women, the National Foundation for Women, the Union Club of New York City and the Oratorio Society of New York. She is a choral singer, as well, having performed with the Greenwich Choral Society; UCSD La Jolla Symphony Chorus; the San Diego Master Chorale; the Oratorio Society of New York and currently with MasterVoices.

Sue's volunteer work has been extensive. She was on the founding board of the La Jolla Music Society and eventually worked in-house as Public Relations Director. She was on the board of the Athenaeum Music and Arts Library and published several in-house publications for various organizations. Just before COVID shut down New York, she sold her apartment there and returned to La Jolla. Meanwhile, thanks to Zoom, she continues piano studies and other courses at Juilliard.

Sue says, "I think ARCS has grown into an amazing organization, and I would very much like to pick up where I left off twenty years ago and rejoin."

Welcome back, Sue!

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## *A Virtual Visit to Scripps Institution of Oceanography (February 25, 2021)*

On February 25 at 10 am, ARCS San Diego embarked on its second virtual "field trip" via Zoom. This time we were treated to an inside peek at ARCS Scholar **Jessica Ng**'s work at the Scripps Institution of Oceanography, in the lab of **Jeff Severinghaus**, which is part of the Geosciences Research Division at SIO.

Jessica's research reconstructing past groundwater levels has taken her to the Andean Highlands of Chile and Argentina, where lithium mining for electric vehicle batteries is threatening limited water resources and Indigenous communities, and eastern Oregon, where local communities and tribes are seeking sustainable water use in the face of industrial agriculture. Jessica



Jessica Ng

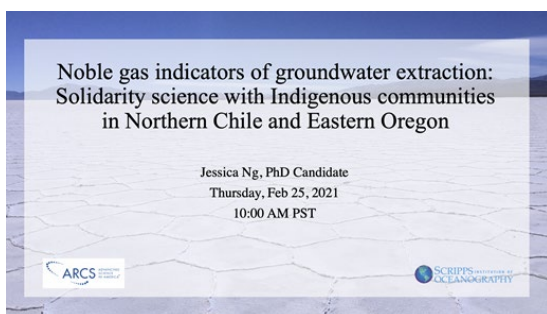
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## *A Virtual Visit to Scripps Institution of Oceanography* Continued from Page 3

talked about some of her experiences in the field and also showed us some of the instrumentation she uses in the lab. She then answered a number of questions posed by ARCS members and Scholars, and closed with a few personal insights on her activities outside of work.

We are grateful to **Suzanne Dixon**, who invited Jessica to give this talk, and to **Ann Siemens, Margaret Dudas**, and **Ingrid Benirschke-Perkins** for organizing the event. We were also delighted with the strong turnout, comprised not only of ARCS members, but also several Scholars and Scholar alumni.



The entire presentation, including the Q&A, was recorded and posted on our website under PAST EVENTS. Click [HERE](#) to view the Zoom recording.

(<https://san-diego.arcsfoundation.org/past-events>)

## *UC San Diego Check Presentation (January 28, 2021)*

ARCS San Diego awarded a total of \$240,000 to 24 graduate students at UC San Diego for the 2020-2021 academic year. The official check presentation was once again conducted via Zoom due to the ongoing coronavirus pandemic. **James Antony**, Dean of UCSD's Graduate Division, welcomed everyone on the call, which included several other dignitaries at UCSD;

specifically, **Margaret Leinen** (Vice Chancellor for Marine Sciences and Director of Scripps Institution of Oceanography), **Kit Pogliano** (Dean of Biological Sciences), **Albert Pisano** (Dean of Jacobs School of Engineering), **Steven Boggs** (Dean of Physical Sciences). **Holly** offered a few congratulatory remarks to the Scholars and to UCSD before presenting the check. Members of the ARCS University Relations Team



The entire meeting was recorded and can be viewed [HERE](#):

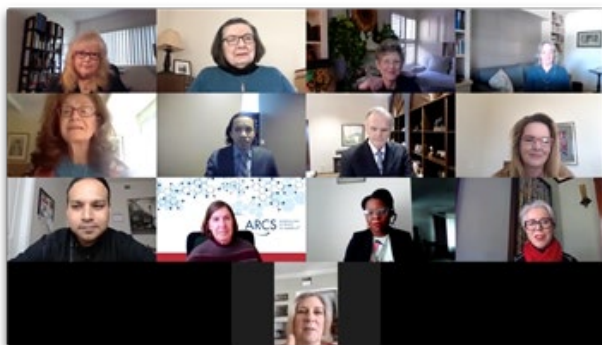
<https://youtu.be/QqxAl11GhDk>



## *UCSD Check Presentation* Continued from Page 4

(**Ellen Moxham, Suzanne Dixon**) also said a few words about their appreciation of the strong ARCS-UCSD partnership. Then, **Tamara Schaps**, Assistant Dean of Graduate Strategic Initiatives, presented a short video from **Chancellor Khosla**, who extended his heartfelt thanks and gratitude for ARCS' support. Next, we heard from 4 ARCS Scholars – **Laura Chipman, Miriam Bell, Mark Kalaj, and Samantha Sison** – who talked about their research, their proudest achievements during “the year of COVID”, and what they most value about their association with ARCS. The event concluded with a video collage of ‘thank yous’ from several current ARCS Scholars at UCSD.

### *USD Check Presentation (January 26, 2021)*



The entire meeting was recorded and can be viewed [HERE](https://www.youtube.com/watch?v=VnWkpRVE_VA):  
[https://www.youtube.com/watch?v=VnWkpRVE\\_VA](https://www.youtube.com/watch?v=VnWkpRVE_VA)

ARCS San Diego was pleased to present 4 Scholar awards at USD in 2020-2021 totaling \$40,000 in funds. Typically, our University Relations team would have visited the USD campus to make an official check presentation; however, due to the coronavirus pandemic, the ceremony was held via Zoom on January 26th. **Dr. Jean Georges**, Dean of the Hahn School of Nursing and Health Science, kicked off the proceedings by welcoming everyone on the Zoom call and thanking ARCS for the ongoing partnership and support. Then **Dr. James Harris**, President of USD, offered a few more words of introduction and gratitude. Three Scholars – **Pedro Colio, Byron Batz, and Ann Lawani** - followed with short presentations about their current research projects. Next, **Dr. Cynthia Connelly**, Director of Nursing Research, provided some updates on the PhD program at USD, and **Carol Scimone**, Assistant Director of Communications & Events, concluded the program with a final ‘thank you’ and confirmation of the receipt of funds. The ARCS members on the call then offered some additional words of appreciation and admiration for the important work done by the nurses enrolled in USD’s nursing program, as well as those who have graduated, many of whom are ARCS Scholars.



## Winter General Meeting (January 25, 2021)

To kick off our Winter General Meeting, we invited two ARCS Scholars to talk about their ocean research. **Dr. Jeffrey Drazen** (1997 ARCS Scholar at UCSD/SIO), currently professor of oceanography at the University of Hawai'i at Manoa in Honolulu, presented a 1/2-hr talk on "Understanding the Environmental Risks of Deep Sea Mining." We learned just how little is known about the deep sea, much less the potential destruction to the ecosystem as a result of deep sea mining. Dr. Drazen showed us many slides of creatures never before seen by man, which are now at risk. He also played a short video which demonstrated the use of remotely-operated vehicles (ROV) that they use to capture and examine specimens at the bottom of the ocean.



Jeffrey Drazen, PhD

**Channing Prend** (2020-2021 ARCS Scholar at UCSD/SIO) followed with a short presentation about his work with robotics and autonomous systems to collect data from the Southern Ocean surrounding Antarctica. Channing tuned in from Paris, where he was working with collaborators at LOCEAN (Laboratoire d'Océanographie et du Climat: Expérimentations et Approches Numériques) to prepare for a research cruise to the Southern Ocean. In fact, he spoke to us just two days before his departure!



Channing Prend

Each talk was followed by a lively Q&A and we all went away feeling enlightened and enriched. For those of you who missed these fascinating talks about the ocean, you can view them both [HERE](https://youtu.be/QLnbeihVjGg): <https://youtu.be/QLnbeihVjGg>

## 2020-2021 ARCS Light - June Chocheles



June Chocheles

The ARCS Light Award is a distinctive honor presented to a member who has given the highest quality of long-term service to ARCS Foundation. The ARCS Light honored at the Chapter's annual meeting and at the ARCS Foundation All Members Conference, which will likely be virtual this year.

**Helga Moore**, the 2019 ARCS Light, announced this year's honoree: **June Chocheles**. June joined the San Diego chapter in 2014 and has been generously giving her time, talent, and treasure to ARCS ever since. This honor could not have gone to a more deserving member!



## **2020-2021 ARCS LIGHT** Continued from Page 6

Here are some of June's many accomplishments: From 1979-1983, she worked at the Smithsonian Institution in various capacities, promoting research and educational activities and managing a variety of special programs and events.

After moving west, she had a distinguished career with the Science Application International Corporation (SAIC) and played a major role on the Athena Foundation Board, chairing the Pinnacle Scholarship Campaign which provides scholarships to undergraduate female students in the field of STEM.

Prior to joining ARCS, she was an active member of the ARCS Community Advisory Council, a Fund development Committee effort to establish a connection to the business community.

After joining ARCS, she used her connections in the Biotech community to increase sponsorships to the SOY events. She streamlined our procedures and brought us technically into the 21st century, unofficially gaining her the title of "Ms. Matrix." She has also served on the Board, most recently as Executive VP and VP/Fund Development.

In addition, June is a classical violinist and a fine arts painter. She has dabbled in a variety of sports, including biking, swimming, sculling, yoga, and running. Most importantly, she is a lovely, caring individual, always willing to step in and go the extra mile.

Thank you, June, and congratulations from all of us at ARCS San Diego!

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## **Updates from ARCS Scholars**



**Mia (Shin) Malone, PhD** (2020-2021 ARCS Scholar, Scripps Research) defended her thesis on February 22, 2021. Dr. Shin's research in the Lander and Wiseman Labs combines biochemistry and cryo-electron microscopy to uncover molecular mechanisms of an essential quality control protease conserved from bacteria to humans, that is implicated in various aging-related disorders, such as neurodegeneration and cancer.



**Naneh Apkarian, PhD** (2017-2018 ARCS Scholar, SDSU) published the results from a national survey of chemistry, mathematics, and physics instructors on the use of active learning in undergraduate STEM education in PLOS ONE, an open-access journal, on February 25, 2021. You can read the full analysis [HERE](https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0247544):  
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0247544>

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## Updates from ARCS Scholars Continued from Page 7



**Tom Wong, PhD** (2014-2015 ARCS Scholar, UCSD) is currently an assistant professor of physics at Creighton University in Omaha, Nebraska, researching quantum computing at the intersection of physics and computer science. He is best known for exploring how quantum computers search for information in databases and networks, and for introducing a new type of quantum computer that utilizes effective nonlinearities.

In this 45-minute podcast, Dr. Wong he talks about how quantum computing could revolutionize the way we live life. He explains what quantum computing is, from how it operationally differs from classical computing, to how it is actually an entirely different way of computing and should be treated as such.

Tom also discusses some of the real-world benefits and concerns about this technology. Particularly, how quantum computing could drastically advance our pursuit of higher tech medicines and vaccines, but also the potential vulnerability of our current information if we don't prepare for a quantum computing world now. Here's a link to the podcast: <https://thebluntreport.podbean.com/e/tom-wong-quantum-computing>

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## Scholar Alumni - Where Are They Now?

**Julie Tubbs, PhD** (1999-2000, Scripps Research) – Dr. Tubbs has been working for Molecular Assemblies, a local biotech company, since 2015. She is a senior scientist with expertise in creatively defining solutions for biomedical problems relevant to human disease (including cancer), protein engineering and molecular visualization. Julie is helping Molecular Assemblies develop an enzymatic DNA synthesis technology designed to power the next generation of DNA-based products. The company's patented enzymatic method, based on making DNA the way nature makes DNA, produces long, high-quality, sequence-specific DNA reliably, affordably, and sustainably. Julie also earned a MicroMBA at UCSD Rady School of Management in November 2014. Outside of work, she volunteers for the San Diego Humane Society and SPCA, and also serves as bookkeeper at the Ethnos Community Church.



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## *Scholar Alumni - Where Are They Now?*

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**Laurie Ecoff, PhD** (2006-2007, USD) - Laurie Ecoff is a Clinical Associate Professor in the Clinical Nursing and Executive Nurse Leader Programs. She received her Bachelor's of Science in Nursing and Doctor of Philosophy in Nursing from the University of San Diego. Additionally, she received a Master's of Science in Nursing Administration from San Diego State University.

Dr. Ecoff is currently Vice President of the Center of Nursing Excellence (CONE) at Sharp HealthCare in San Diego. In this role, she oversees the development, implementation and evaluation of the CONE strategic plan, designed to advance the profession of nursing. Dr. Ecoff was most recently the Director of Research, Education and Professional Practice at Sharp Memorial Hospital.



For her dissertation, Dr. Ecoff focused on evaluation of an educational initiative to promote evidence-based practice. Dr. Ecoff is a founding member of the consortium and one of the lead faculty for the Consortium for Nursing Excellence in San Diego, a community collaborative comprised of nurse leaders from health care systems and schools of nursing. The consortium offers an Evidence-Based Practice Institute for advanced practice nurses (mentors) and direct care nurses (fellows).

Dr. Ecoff was honored in October 2019 at USD's 2019 Alumni Honors and it was captured on video [HERE](https://www.youtube.com/watch?v=oR16uRlwk1g): <https://www.youtube.com/watch?v=oR16uRlwk1g>

**Brendan McNulty, PhD** (1990, SDSU) - Dr. McNulty has been actively engaged in geological research during his twenty years at CSUDH (California State University, Dominguez Hills). McNulty's research has been funded by five National Science Foundation grants, including projects in North America (Sierra Nevada, California), South America (Cordillera Blanca, Peruvian Andes), and Asia (Qinling Mountains, Shaanxi Province, China). Research was primarily centered on the evolution of continental magmatic arcs, and was featured in top geology journals.. This work led to the CSUDH Award for Outstanding Research in 2006.



McNulty subsequently focused on environmental issues, including a collaborative project with Dr. Weixing Tong (Los Angeles Water Board). Their work centered on training undergraduate and graduate students in hydrogeology, with a specific focus on the contamination of groundwater by gasoline oxygenates (notably MTBE: methyl tertiary-

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## **Scholar Alumni** Continued from Page 9

butyl ether). This project - funded by the National Science Foundation's Opportunities for Enhancing Diversity in the Geosciences (OEDG) program - provided students hands-on experience with a "real world" environmental problem, financial support while attending college, and training that led to jobs.

McNulty is currently involved in K-12 science teacher education and has collaborated on several externally funded projects (NSF-Urban Systemic Initiative; NASA-ALERT; Los Angeles Annenberg Math-Science Literacy Project). McNulty's current interests center on developing field trip guides for non-geologists. As an example, Los Angeles citizens might be interested in the [geology behind Palos Verdes Peninsula](https://www.arcgis.com/apps/MapJournal/index.html?appid=4a79d16013444616ba2a31ae55c7dde0):

<https://www.arcgis.com/apps/MapJournal/index.html?appid=4a79d16013444616ba2a31ae55c7dde0>

Plans are underway to write field trip guides for several other important geology sites in southern California, align the guides with the Next Generation Science Standards and implement them as resources for middle and high school teachers.

### **ARCS Calendar of Events (all virtual)**

#### **March**

- Tuesday, March 16 – Board Meeting
- Friday, March 26 – Field trip to Sharp Hip Preservation Center (Presentation by Dr. Richard Santore and Rob Healey)

#### **April**

- Tuesday, April 20 – Board Meeting
- Sunday, April 25 (6-7:15 pm) – Scientist of the Year Virtual Event – SOY Honoree: Erica Ollmann Saphire, PhD

#### **May**

- Tuesday, May 18 – Board Meeting