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Newsletter

Mission Statement: The Association for Women in Science, Inc. (AWIS) champions the interests of women in science, technology, engineering, and mathematics across all disciplines and employment sectors. Working for positive system transformation, AWIS strives to ensure that all women in these fields can achieve their full potential.

Letter From the President

Dear AWIS-SD members and friends:

We did it! Another successful WIST conference was well-attended on May 20, 2017. Here is the serious picture of the WIST Committee taken in front of the UCSD Faculty Club before the conference.

I am so proud of all of our volunteers in all committees. Each and every one of you, who volunteers for a committee, is part of what makes AWIS-SD so great. This issue of the newsletter highlights everything that AWIS-SD does and does so well. Please take a few moments to review the articles and gain insights into all the facets of AWIS-SD.

We also could not do all of our work without the generous contributions of our sponsors. Thank you to all AWIS-SD sponsors. Again, without you, this would not be possible.

Finally, if you have not yet joined an AWIS-SD committee, I urge you to do so—by actively participating in an AWIS-SD committee, you will get the most out of your AWIS-SD membership.
Warmly,

DeeAnn

DeeAnn Visk,
President AWIS-SD
president@awissd.org

Inside this issue

WIST keynote addresses inspired us all

by Corine Lau and Juliati Rahajeng

Morning keynote address:
Gillian Wilson, PhD, led us to a journey of the unlimited sky. Wilson is the interim Deputy Director of the University of California Observatories, and a professor of physics and astronomy at UC Riverside. She grew up in Scotland and obtained her PhD at the University of Durham, UK.

Dr. Gillian Wilson describing her love for astronomy and cosmology. Photo credit: Corine Lau.

Wilson found her passion in astronomy and cosmology when pondering big questions such as "How many stars are out there?" and "What is going to happen to the universe?" According to Wilson, the universe began 13.7 billion years ago following the Big Bang, which did not result in a tremendous sound as movies often portray. The universe is in a state of expansion, and the rate of expansion is increasing. However, the growing universe is expected to slow down. Now the question becomes: will the universe keep expanding or will it turn into a big freeze eventually?

Wilson took a unique approach to address the question on universe expansion. She studies distant regions in the universe where clusters of galaxies are closer to each other than average. Interestingly, galaxies in these clusters do not expand, nor do they produce stars, thus providing a good model for studying universe evolution. To find these clusters of galaxies, Wilson relies on the most sophisticated telescopes available, including the Hale telescope at the Palomar Observatory, NASA's Hubble and Spitzer Space telescopes, and the twin 10m Keck telescopes located in the summit in Mauna Kea, Hawaii.

Wilson leads a 25-member international team in the SpARCs survey and reporting on new cluster galaxy discoveries. Together with the GCLASS survey, more than 200 such clusters of galaxies have been discovered. Wilson's latest endeavor is to engage public interest in science through art and music. The play "Star Maps, Earth Code, and the musical performance "Colliding Worlds" are the recent results of cosmology colliding with performing arts!

Afternoon keynote address:
Homa Akbarian, PhD, gave an inspiring keynote speech about her journey to leave her beloved home country to pursue her dream for a better future.

Akbarian was born in Tehran, Iran. With only a passport in her hand and no exit permit, it was impossible for her to leave Iran to get a better education abroad. Even though her father told her that it was nearly impossible to get the exit permit since there were hundreds of people applying for only a few available daily, she insisted on going anyway. After a lot of physical struggle and the help of a kind-hearted stranger, Akbarian got the exit permit and flew to Germany.

Her fight did not end there. She was determined to learn German, spending 10-11 hours each day. Her diligent studying enabled Akbarian to obtain a certificate that led to a German Federal Research Foundation Graduate Fellowship at Universitat Siegen. After earning a Master's degree in Physical Chemistry, she accompanied her husband to Los Angeles to pursuit his career. Akbarian then enrolled as a PhD student in Inorganic Chemistry at UCLA. Two impressive tributes followed: Akbarian earned UCLA's Award for Outstanding Dissertation in Inorganic Chemistry, and UCLA's Award for Excellence in Research when she graduated in 1996.

Dr. Homa Akbarian encourages the audience to 'take the risk and never give up'. Photo credit: Corine Lau.

WIST keynote addresses inspired us all (con't)

After her graduation, Akbarian received three to four job offers and decided to work for Clorox Company as a Scientist II in the New Products Department. She worked her way up the corporate ladder for the next 12 years. Then, she was offered a leadership position in the Regulatory Department. In 2007, Akbarian's husband accepted a faculty position at The University of California, San Francisco (UCSF) and she gladly followed.

Because of her experience in regulatory affairs, Akbarian obtained a position as the Director of Technical Transfer and Technical Assurance at Neutrogena, a skin care product division of Johnson & Johnson. After working for more than five years at Neutrogena, she transferred to the company's Medical Device and Diagnostic division, where she has worked for the past five years.

Based on the many challenges in her life, Akbarian offered the following advice:

1. Take the risk and never give up.

2. Focus on what is in your control and don't worry about what is out of your control.

3. Change teaches you to first survive, then thrive, manage, and lead in our rapidly changing environment.

4. Love what you do and do it well.

5. Continue learning instead of being intimidated, and use the opportunities to reboot your brain.

2017 AWIS-SD Scholarship Recipients

by Joan Allmaras

AWIS-San Diego annually awards scholarships to recognize the accomplishments of women in STEM fields at the community college, undergraduate, master's, and doctoral levels studying at any school within San Diego County. These scholarships would not be possible without the generous donations from corporate sponsors, including Thermo Fisher and UCSD Extension. More than 100 applications were received from applicants in fields ranging from engineering to earth science to psychology. Of those applicants, seven outstanding young women received a $1,000 scholarship.

This year's AWIS-SD scholarship recipients whose accomplishments were recognized at WIST. Photo credit: Corine Lau.

Arian Reyes is pursuing a degree in computer engineering at San Diego City College. She is actively involved in the INSPIRE engineering program at UC-Irvine, HACKJUNTOS at Qualcomm, and the Adelante Training program at Northrup Grumman. In addition, Arian serves as the Vice President of the Society of Hispanic Professional Engineers. She plans to transfer to UCLA this fall to continue her education in computer engineering.

Viridiana Apodaca is also a student at San Diego City College and is an active member of the MESA (Mathematics, Engineering, and Science Achievement) Program. She was selected for the NASA Community College Aerospace Scholars program, and plans to transfer to UC-Santa Barbara in the fall to continue her studies. Her ultimate goal is to obtain a Master's degree in chemical engineering.

Chrestina Mansoor is an undergraduate student at San Diego State University studying civil engineering. An Iraqi immigrant, she was inspired by the destruction she witnessed firsthand during the Iraq War to develop safer infrastructure. As a result, Chrestina has participated in several research projects, such as the Mississippi River Gulf Outlet Inspection and the Wind Turbine Project. She is also an active member of the SDSU MESA program and has been nominated to represent the

2017 AWIS-SD Scholarship Recipients (con't)

organization at their annual Statewide Leadership Conference.

Rani Shiao is an undergraduate student at UCSD pursuing a dual bachelor's degree in molecular biology and earth science. She volunteers in the Tuszynski lab and the UCSD Center for Neural Repair as well as the Norris lab at the Scripps Institution of Oceanography at UCSD. She plans to pursue a master's degree, researching the effects of serotonergic inputs on neuropathic pain following spinal cord injury.

Chidinma Okonkwo is also an undergraduate student at UCSD, studying biochemistry/chemistry. She is a scholar in the NIGMS-funded Initiative for Maximizing Student Development and has been working in the Ghosh lab for the last year. In this role, Chidinma examines the importance of protein structures of a bacterial protein and the molecular interactions to understand approaches that might be necessary to prevent bacterial infection. Upon graduation this spring, she plans to continue her education with graduate studies in biochemistry.

Kathryn Shaw is a Master's-degree student at CSU-San Marcos, studying the psychology of phantom vibration syndrome. Her early research experience examined the immune functioning of young adult survivors of child abuse as well as projects focused on adolescent caregivers. In addition, she has worked at a suicide hotline, crisis treatment facility, and as a teaching assistant. She plans to ultimately earn her doctorate in quantitative psychology.

Shereen Ghosh is a doctoral student at UCSD, one of the highest-ranked in her class. She is currently working in the Gleeson laboratory on pediatric neurodegenerative disease, in which she has identified a familial mutation as well as a prospective cure. While a Master's-degree student at the Salk Institute, she also worked at Pfizer, and has been involved with high school outreach and teaching assistantships.

Six of the seven recipients were able to attend the WIST Conference to be recognized for their accomplishments as well as network and socialize with fellow scientists.

Krista Ellsworth from Thermo Fisher Scientific (left), and Shannon McDonald from UCSD Extenstion (right) present their $1000 scholarships.
Photo credit: Corine Lau.

Given the exceptional quality of the applicants this year, the scholarship committee also recognized six additional women with honorable mention:

Luz Robelido, San Diego City College

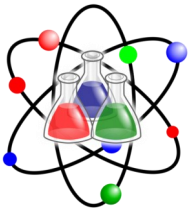
Mariah Moschetti, University of California-San Diego

Ruichen Sun, University of California-San Diego

Lorrie Yates, California State University-San Marcos

Karli Chudeau, California State University-San Marcos

Annie Rathore, Salk Institute



WIST workshop—The Transition from Bench to Non-Bench Careers

by Mai Khuong

As a graduate student wanting to transition away from the bench after graduation, I was delighted to attend the Non-Bench Careers workshop held during the WIST conference on May 20, 2017. Panelists Dr. Alessandra Blasina, Dr. Miriam Cohen, and Dr. Shannon Muir shared their experiences with transitioning from the laboratory bench work to their current industry non-bench careers.

Blasina made the transition after spending more than 15 years at the bench at various biotechnology companies (Pfizer, Shire Pharmaceuticals, and COI Pharmaceuticals). She now works as a Regulatory Affairs Associate at Agility Clinical, Inc, where she oversees compliance with all industry laws and regulations.

Cohen transitioned to business after spending more than 10 years at the bench in academia. She said that five of those years were spent as a "glorified post-doctoral fellow." She now works as a medical writer at Arbor Scientia, writing material for promotional medical education. Her duties include creating PowerPoint presentations, interactive models, and visual aids for her clients.

Unlike other panelists, Muir transitioned away from the bench and into science policy shortly after receiving her PhD. As a California Council of Science and Technology Science (CCST) Policy Fellow, she worked on policies that ranged from online prescriptions to electronic cigarette usage.

WIST workshop—Bench to Non-Bench Careers (con't)

The panelists give their experience and advice on transitioning from bench to non-bench positions. Photo credit: Mai Khuong.

Based on their individual experiences, all three panelists shared their insights and advice on how to transition. Here are two main takeaways from the workshop.

1. Be involved in organizations.

All three panelists joined non-profit organizations prior to transitioning into their non-bench careers. They consider their involvement extremely valuable in making their transitions. Blasina joined San Diego Regulatory Affairs Network (SDRAN) and participated in its mentoring program.

Through the program, Blasina learned that skills for a new job are acquired gradually as one begins working in a particular position. Rarely does one possess these skills ahead of time.

Cohen served on AWIS-SD's Corporate Sponsorship Committee. While on the committee, she gained leadership skills and successfully wrote funded grants, which aided in her job search for a medical writing position.

While a graduate student, Muir affiliated with the UC San Diego Graduate Student Association and the UC Student Association Board of Directors. Muir's involvement with those organizations greatly aided her transition into science policy.

Science Ticker

By Alyson Smith

- Around 15,000 scientists and science enthusiasts gathered in downtown San Diego on Earth Day for one of the more than 600 Marches for Science. Marchers advocated for evidence-based government policies, continued funding for scientific research, and increased diversity in STEM. Speakers at the San Diego march included professors and students of all levels from around San Diego County. Representatives from AWIS-SD attended the march, wearing AWIS "Why do you love Science" shirts and "I support women in STEM" buttons.

- In collaboration with researchers in Beijing, the Izpisúa Belmonte group at the Salk Institute has developed a new type of stem cell termed extended pluripotent stem cells. In contrast to embryonic stem cells and induced pluripotent stem cells, this new cell type can give rise to extra-embryonic tissues such as the placenta in addition to all embryonic tissues. These cells can be stably cultured, allowing for the development of new methods in disease modeling, drug discovery, and tissue generation.

- Grace Engleman, a San Diego high school student, has founded an all-female robotics team, called ROARbots, at the School for Entrepreneurship and Technology. Engleman was asked to start the team after gaining robotics experience as the only female student on the school's freshman team. ROARbots participated in EXPO Day as part of this year's San Diego Festival of Science and Engineering.

- A team of researchers from the La Jolla Institute of Allergy and Immunology and Sanford Burnham Prebys Medical Discovery Institute have developed a new

drug with the potential to reverse type 2 diabetes. This drug increases insulin sensitivity by specifically targeting a tyrosine phosphatase that normally inactivates the insulin receptor. In mice, it prevented high-fat induced onset of diabetes symptoms without affecting weight. The team plans to begin clinical trials in humans soon.

- The vaccination rate of California public school kindergartners has risen to 96 percent, an increase of three percentage points over last year and the highest rate since the introduction of the current vaccination regimen in 2001. The increase is linked to a 2015 California law, following the Disneyland measles outbreak, which greatly restricted personal-belief exemptions from vaccination for public school students.

- Two San Diego biotechnology companies recently received grants from the Combating Antibiotic Resistant Bacteria Biopharmaceutical Accelerator (CARB-X), a public-private partnership started by the Obama administration in 2015. Forge Therapeutics will receive up to $8.8 million to continue developing an antibiotic against LpxC, a previously untargeted enzyme in gram negative bacteria. Cidara Therapeutics will receive up to $6.9 million to develop its method of inducing immune cells to target bacterial, fungal, and viral pathogens.

- As part of an effort to develop new ways of communicating science to the public, London-based artist Ivyone Khoo worked with Michael Latz of the Scripps Institution of Oceanography to develop a new exhibit at the Birch Aquarium. This “Infinity Cube” exhibit features projections of videos of dinoflagellates, single-celled, bioluminescent marine organisms. Khoo created the video footage for the exhibit by introducing populations of dinoflagellates provided by Latz to patterned stimuli and filming the resulting bioluminescence.

- The Scripps Translational Science Institute hosted the tenth annual Future of Genomic Medicine Conference at the beginning of March. The conference featured discussions on bringing genomic medicine research into clinical practice. Some topics included the future of CRISPR genome editing technology and the federal Precision Medicine Initiative. More than 600 physicians and scientists from around the country attended the conference.

- A team of scientists at Scripps Health and The Scripps Research Institute has developed a method to artificially construct an entire meniscus, the piece of cartilage in the knee joint. The method uses high voltages to precisely array bovine collagen fibers and simultaneously deposit live cartilage cells. This new technology can potentially replace cadaver meniscus transplants, which are often of the wrong shape and may be contaminated; and synthetic meniscus replacements, which are less durable than live cartilage.

WIST workshop—Bench to Non-Bench Careers (con’t)

2. Be willing to learn on the job.

The transition from bench to non-bench is not always easy. Once you get the position, be willing to learn and assume new roles. Blasina took any opportunities that came her way. As a Regulatory Affairs Associate, she assumed project management roles and even became a United States agent for global life science companies conducting business in the United States. By doing so, she expanded her skill set and became more valuable as an employee. As a CCST Science Policy Fellow, Muir observed that colleagues willing to set their ego aside and learn new skills became the most successful. In her role, Muir had to become the world’s leading expert on whatever topic landed on her desk. For that reason, her enthusiasm became a great asset.

Reflecting on WIST 2017

by Christina Niemeyer

Every other year I say I am not going and definitely not volunteering for it. This year, I can happily say I did both. My role and participation in WIST 2017 was beneficially to me in many ways, even though I am a veteran, having attended and volunteered for almost 20 years.

One of my favorite aspects of WIST is the networking throughout the day. That does not mean just looking for the next job opportunity. It means catching up with people I haven't seen in a while, and meeting new and future scientists. A topic of our discussion includes how I can help women move into a STEM career. Just one example of networking "working" was at lunch when I was sitting at a table with wonderful women, including one of the speakers. We were discussing how even though many of the themes of the different WIST events are similar, every time I am newly inspired. It was pointed out to me that people get different things out of the talks at different stages of their careers; obvious but not always realized.

I am always a little disappointed that I can't attend all the concurrent presentations. Luckily, we all were able to hear the two keynote speakers. I learned from Dr. Gillian Wilson that there is a massive amount of information in a gray square with many white blemishes, so there is always something new to be discovered. From Dr. Homa Akbarian, I was reminded to focus on the things I can change. They were very different presentations, yet both were very interesting.

As most of you know, AWIS-SD is volunteer run and it takes a lot of work to manage the various programming. WIST is the largest of these programs and requires a special committee and 6-9 months of preparation. We had a fantastic group of women working on WIST 2017. I will not list them all here, but I can say that when women work together as we did, we can't help but be successful and help make the world a better place.

So, when WIST 2019 calls for a planning committee, I will need to pull out this newsletter and the program from WIST 2017, and remember that it is time to volunteer for this wonderful event again. Hopefully, many of you will do the same. It is not too early to start thinking about it.

Our Mission Statement: AWIS-San Diego is committed to supporting the advancement of women in science and science-related fields by providing opportunities to participate in professional networking, mentoring, and leadership activities.

AWIS Star Chapter
AWIS
ASSOCIATION FOR WOMEN IN SCIENCE
San Diego

March Speed Mentoring Workshop

by Missy Scranton

In March, AWIS-SD held its second annual Speed Mentoring event at National University in Torrey Pines. AWIS-SD Speed Mentoring works to balance real connections with accelerated networking, allowing the mentees to grow their professional network and gain insight into topics to help them develop personally and professionally. Mentors graciously shared their insights and advice with AWIS members in topics ranging from project management to personal finance to making the most of networking opportunities. A list of this year's mentors as well as a short biography for each are posted below.

Participants were able to personally connect with mentors in small groups of 3-5 mentees per mentor. While sessions were brief (three sessions of twenty minutes each), mentees took full advantage of the hour mixer afterwards to exchange contact information and follow up with further questions. Mentees and mentors both found the experience rewarding to engage directly with AWIS-SD members who are at all different stages of their careers.

If you would like to be a mentor in future Speed Mentoring events or have suggestions for future topics of interest for this event, please contact the AWIS-SD events committee at events@awissd.org.

Speed Mentoring round table discussion. Photo credit: Missy Scranton.

2017 Speed Mentors

Laure Escoubet joined Celgene in 2006 bringing her epigenetic expertise to bear immediately with the identification and validation of promising epigenetic targets in cancer through a functional genomic screen, effectively launching Celgene's epigenetic drug discovery efforts. She is currently a Director at Celgene and Head of Epigenetic Drug Discovery.

Laurie Itkin is a financial advisor, certified divorce financial analyst (CDFA), author and speaker. Laurie graduated from the Wharton School of the University of Pennsylvania with a B.S. in economics and a concentration in finance.

DeeAnn Visk owns her own business as a medical writer and editor. She is more than happy to share advice in careers outside of academia and starting a business.

Mahsuni Gokdemir has lived in San Diego for two years and works at Qualcomm as an LTE Modem Firmware Engineer. Currently, she is the technical lead of a project designing LTE modem chips and manages a team of 4-5 people.

Masha Evpak is a scientist-turned-science communicator who teaches the public about biology as The Genetics Gal online. Her experience as a graduate student opened her eyes to the epidemic of low confidence among graduate students and other scientists. Determined to help these smart people realize how awesome they are, she now runs boot camps helping graduate students regain their confidence!

Corine Lau is a Cancer Genomics Scientist at Human Longevity Inc. Prior to transitioning from academia into industry full-time, Corine consulted in scientific writing and scientific curation in a home-based setting. She completed her postdoctoral training at UCSD in eukaryotic nuclear assembly. She is a long-standing volunteer of AWIS-SD, and currently an AWIS-SD Newsletter Committee co-chair.

2017 STEM Career Conference: Discover Your SuperHEROINE Roadmap to Success

by Elizabeth Jacobs

The AWIS-SD Outreach Committee successfully hosted its largest ever event, the 2017 STEM Career Conference, on February 4th at San Diego State University. The single-day, conference style event titled 'Discover Your SuperHEROINE Roadmap to Success' was designed by committee members Bridget Kohlnhofer, Robyn Wygal, Sigrid Katz, Anne Kornahrens, Abbie Ferrieri, Diane Retallack, Yike (Lindy) Jiang, and Elizabeth Jacobs. The conference was made possible by generous partnerships with Sony, Pfizer, Expanding Your Horizons (EYH), Society for Women Engineers (SWE), Elementary Institute of Science, Yesteryear Comics, San Diego Comics, Villainous Comics, Fleet Science Center, Biocom, and SDSU Department of Regulatory Affairs. Young women from local high schools and colleges participated in panel discussions, hands-on workshops, and networking events that all emphasized the significance of collaborative discussion and networking as a powerful tool for career progression.

The event began with a keynote address delivered by Debra Kimberling, Advocacy Director for the Society of Women Engineers, to the entire audience of students, parents, mentors and panelists. This inspiring introduction to the importance of networking, communication, and social support provided the framework for the following sessions and activities. Focus groups of students and parents next participated in separate directed programming for the remainder of the day and finally congregated for the closing awards ceremony. Alongside the student activities, which were led by local professional women in STEM, a parallel set of sessions guided parents through the challenges which arise during the high school to college transfer – financing college, student support, internships, academic classes, on-campus jobs, and students' social pressures.

2017 STEM Career Conference: Discover Your SuperHEROINE Roadmap to Success (con't)

Student attendees at the 2017 STEM Career Conference: Discover Your SuperHEROINE Roadmap to Success.

Members of the 2017 STEM Career Conference planning committee: (from left to right) Abbie Ferrieri, Diane Retallack, Robyn Wygal, Sigrid Katz, Anne Kornahrens and Jackie Jordan.

Conference attendees Emma Wu, Natalie Navarette, Alina Luk, Ashley Loza, and Stacy Anselmo were recognized for their outstanding poster presentations with prizes donated by event partner Sony at the networking 'mocktail' hour. A palpable sense of excitement surrounded all aspects of the STEM Career Conference and was captured perfectly by event participants Luis Topete (Director of MESA School Programs) and Andrea Govea (Solar's Young Women Academy):

"I work with various middle schools in San Diego with programming that is focused on STEM and that provides outreach and academic support... There are a lot of events happening across San Diego, but when it comes to female-focused events there aren't that many…but today's event is an example of what it should be all the time!" **- Luis**

"I want to take this opportunity to say how inspiring this program was for the girls [who are] told they shouldn't be in STEM fields. They are told that they should be focusing on other things, they're not going to get in to college. Today's event instead told them what they can do and that if they just believe in themselves and the people around them that will get them there!" **– Andrea**

The Outreach Committee would like to thank all event attendees for their enthusiasm and participation throughout the day. In addition, this event would not have been possible without the support of Lorah Bodie and Lisa Dowdy with the SDSU Regulatory Sciences Program (venue donation), Debra Kimberling from SWE (keynote speaker), Liz Ferguson from EYH (breakfast donation), Elana Parker from Pfizer (lunch donation), Tristan Higgins from Sony (prize donations), Bob Bellman of San Diego Comics (prize donations), and an amazing group of volunteers!

Event recap by numbers:

Student participants – 114
(30, college; 84, high school)
Parent participants – 19
Mentors – 19
Workshop hosts – 4
Event partners – 11
Event volunteers – 30
Value of external event support – $5,055

February Strategy Session - Creating a Powerful Professional Network

by Jennifer Kuo

Speaker and coach, Ann marie Houghtailing, came to share her knowledge and empower women to engage in more personable networking in February's strategy session. Her attitude and dynamic energy were contagious as she provided techniques to make networking easier. Her invaluable experience and hilarious stories were a treat for all attendees. Here are a few lessons from Houghtailing that I would like to share:

1. Go to networking events with a goal

It's not about the number of business cards you are passing out but making at least one meaningful connection. What to talk about? Figure out the other person's story and what they want. Then listen and see how you can offer help in terms of offering a wider network or knowledge. If it works, they will be sure to remember you and will gladly pay it back when you need a favor.

2. Network with a buddy

If you don't like going to networking events alone, bring a friend. This will not only make you more accountable for attending networking events, but also you can help introduce each other and promote one another's accomplishments. Breaking into a larger group as a duo is less intimidating than doing it alone.

3. Know how to exit a conversation

You are not bound to stay in the first conversation you get into at networking events. Try, "Thank you. It was great meeting you, and I'll definitely connect with you on LinkedIn. I'm going to connect with a few more people while I'm here."

4. Be mindful of other people's time and respect their availability

Meeting up to chat over coffee is great if time allows, but it may be easier and more doable to schedule 15-minute phone calls and get the questions you have answered. Another great idea is to invite them to a networking event that you plan on attending or go to one you know that they will be at and arrange to chat there.

5. Follow up and maintain contact

When following up by email, be sure to mention how you were connected and why the connection is valuable. Other ways to show that you are thinking of them include: writing meaningful LinkedIn recommendations, nominating co-workers for office awards when appropriate, congratulating people on career transitions, sending relevant articles based on prior conversations, and reach outing to express gratitude when advice was given and made an impact.

Lin-Chien and Jennifer Kuo with speaker Ann marie Houghtailing.

For more information on Ann marie Houghtailing, visit her website at http://annmariehoughtailing.com/

The San Diego Festival of Science and Engineering EXPO Day 2017

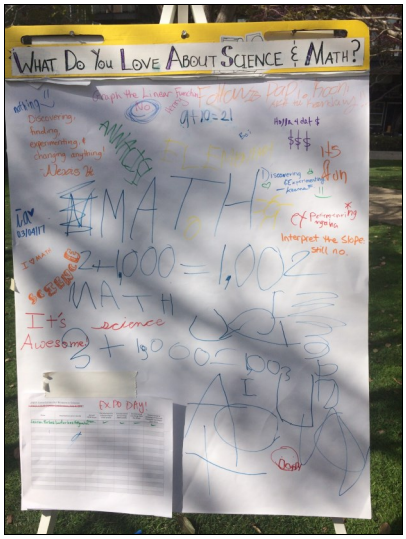
by Antonia Darragh

The annual San Diego Festival of Science and Engineering is a 10-day festival packed with free science, technology, engineering, and mathematics (STEM) events for the community. The festival started off with EXPO day, the largest of the festival's events, at PETCO Park on Saturday, March 4, 2017. Around 25,000 students, professionals, parents, and members of the community explored STEM through demonstrations and hands-on activities, including cheese microbe communities, DNA-coding beads, and how to make biodiesel from vegetable oil. The festival's mission is to "engage and encourage kids in science and engineering and work with parents and teachers to inspire today's students to become tomorrow's STEM innovators."

AWIS-SD Outreach booth at the Science and Engineering Festival Expo Day 2017. Photo credit: Corine Lau.

AWIS-SD Outreach participates in the festival's EXPO day every year. This year, Outreach Committee member Antonia Darragh and Outreach Co-Chair Anne Kornahrens organized our booth's activity on pH indicators. Volunteers asked visitors to hypothesize what solutions were acidic, neutral, or basic. Then attendees added acid or base to neutral purple/red cabbage juice (pH indicator) and examined if the color change matched their predictions. Future scientists were especially enthusiastic about the bright colors that the purple/red cabbage turned, and some parents asked for the pH indicator recipe. One young participant exclaimed, "I'm a scientist!" Visitors also used pH paper to measure hydronium ions in their solutions to quantify pH on a scale of 0 to 14. Another activity involved having visitors paint with a neutral yellow turmeric solution on yellow paper, and then they would watch with amazement as their paintings turned red when sprayed with a base solution. Attendants of all ages related to applications of measuring pH, for example in pools, natural bodies of water, cooking, cleaning, and chemistry class.

Visitors were very engaged by our 17 excellent volunteers, many of whom are students and scientists from a variety of STEM fields. We had blank poster board for people to express what they love about Science and Math. Many wrote or drew positive reflections on their favorite aspects of STEM.



Our booths "What do you love about Science and Math" free-expression poster board at Expo Day 2017. Photo credit: Anne Kornahrens.

The Outreach Committee would like to give special thanks to the wonderful volunteers and organizers who made this event possible and so much fun!

Interested in participating next year? Stay posted on AWIS-SD outreach volunteer opportunities:

http://www.awissd.org/index.php/page/outreach-volunteer-opportunities

Interested in running this workshop for a different event? Check out http://www.awissd.org/index.php/page/outreach-resources

2017 GSDSEF Science Fair Judging

by Geetha Subramanian

March 15, 2017 was a warm, pleasant morning with the leaves whispering on the trees as the wind blew from the ocean across the Balboa Park Activity Center. Many AWIS members and non-members came to judge the science and engineering fair projects as part of the annual greater San Diego Science and Engineering Fair (GSDSEF). As I was strolling from the parking lot towards the Activity Center, I noticed the tremendous efforts taken, including many sign boards about the event, special parking lots for the judges, and an amazing number of students representing several schools and judges from various organizations. They were discussing the plans and activities of the day over lunch. I joined my fellow judges for a delicious lunch sandwich, after which our wonderful AWIS Outreach coordinators (Alyson Smith and Anne Kornahrens) gave us the judging assignment for the student projects.

Over 30 AWIS-SD volunteers participated in the judging of GSDSEF science fair.

These science projects were meticulously and creatively crafted by the myriad of female students in 6th–8th grades (Junior category) and 9th–12th grades (Senior category) from all the local public and private schools in San Diego County. It was a red-letter day for these young students to present their science in an artistic way. I was amazed to see the vivacious problem solving of these young minds with projects ranging from “Lead detection in water” to “Gene therapy via CRISPR/Cas9 mediated Cellular reprogramming for treating blinding eye diseases.”

As judges, we endeavored to be open-minded and evaluate the female students for their originality, creativity, scientific hypothesis, methods and results, and their enthusiasm. We had a record number of AWIS judges (34) divided into groups of two, three, or four, with each group asked to evaluate about 10 (senior) or 30 (junior) projects.

A view of the marvelous science poster displays. Photo credit: Iovanka Todt and Kristin Bompiani-Myers.

There were a total of 560 posters presented this year in the large Balboa Activity Center hall. It felt like a beehive filled with beautiful young student bees presenting their projects in well-arranged aisles. As part of AWIS, we were honored to judge 330 young women scientists with one finalist chosen for each of our 14 judging groups. We invited these young scientists and their families to an informal dinner and presented their AWIS-SD science fair award on Sunday, Apr 30, 2017.

AWIS-SD Outreach participates in the annual EYH Conference

by Elizabeth Jacobs

On a beautifully sunny and unseasonably warm Saturday in early March, the AWIS-SD Outreach Committee celebrated over 10 years of partnership with the Expanding Your Horizons (EYH) Network by participating in the annual EYH conference. This single-day event invites female middle school students to explore the beauty and mystery of science, technology, engineering, and mathematics (STEM) alongside female STEM professionals.

A total of 13 volunteers (including some non-AWIS members!) led three sets of 20 eager students through four experiments as part of a crime scene investigation. Students used solid and liquid analysis, DNA electrophoresis, and fingerprint pattern recognition to identify the culprit. The scenario was that an athletic competition attendee had attempted to cover up a doping scandal by breaking into a lab. This story piqued interest and prompted enthusiasm since many of the students recognized the role of doping in the 2016 Olympic Games.

The AWIS-SD Outreach committee volunteers did an outstanding job leading these future STEM professionals through a tight scheduled and intellectually intense day!

Elizabeth Jacobs introducing crime scene investigation workshop to EYH students.
Additional volunteers from the AWIS Outreach Committee included Anita Pottekat,
Kina Thackray, Diane Retallack, Robyn Wygal, Kirsten Harper and Pam Bhattacharya.

Member News

- Manal A. Swairjo, PhD, Associate Professor at the Department of Chemistry and Biochemistry of San Diego State University, recently published two articles:

Naduni Paranagama et al. (2017) Mechanism and catalytic strategy of the prokaryotic-specific GTP cyclohydrolase-IB. Biochemical Journal 474(6): 1017-1039.
This paper was featured on the cover of the April 2017 issue of the journal.
http://www.biochemj.org/content/474/6/1017

Xianghan Mei et al. (2016) Crystal structure of the archaeosine synthase QueF-like – insights into amidino transfer and tRNA recognition by the tunnel fold. Proteins 85(1):103-116.
This paper was featured on the cover of the January 2017 issue of the journal.
http://rdcu.be/q5V7/

You got your PhD, what's next?

by Juliati Rahajeng

If only approximately 20% of PhDs obtain tenure track positions in academic institutions, where will the 80% end up? This makes me think that tenure track positions are now the alternative career option. However, throughout my graduate program, I was never introduced to many different career pathways. Therefore, as a post-doc, it is encouraging that the University of California San Diego Postdoctoral Association (UCSD PDA) has been holding the "What Can You be with Your PhD?" STEM Career Symposium annually for four straight years now. The goal of the symposium is to familiarize graduate students and postdocs with the various careers they can pursue with their PhDs.

The symposium started with a keynote speaker, Philip Sheridan, PhD, COO and Co-Founder of Bio4Front. He laid out the critical steps in job search: Self-evaluation, exploration, education and empowerment, and execution. Self-evaluation is important in determining technical, soft, and leadership skills that one has. Soft and leadership skills are important in gaining jobs in biotech companies since many job functions in such companies require cross-discipline interactions and collaborations. Sheridan mentioned that 85% of job application success comes from well-developed soft and people-management skills. Within the exploration step, one needs to look at available career pathways and cultures within various companies. Once determined, getting additional trainings or developing additional skills will help in obtaining the chosen positions. It is also crucial to

You got your PhD, what's next? (con't)

identify transferrable skills that one has. The final step is to execute on the job search by writing resumes that define who you are and incite interest for one-on-one meetings and by networking.

The symposium was then followed by 10 concurrent panel sessions that included R&D in Life Sciences, R&D in Science & Engineering, R&D in Bioengineering and Bioinformatics, Teaching, Clinical & Regulatory Affairs, Consulting & Marketing, Scientific Writing & Communication, Project Management & Business Strategy, Business & Entrepreneurship, Intellectual Property, and Tech Transfer & Science Policy.

There were about three to six panelists within each panel. In the Clinical & Regulatory Affairs panel, there were five panelists that were regulatory professionals in clinical research, drugs, and medical device developments.

Joanne McNelis (Clinical/Regulatory Scientist, Cato Research), Evelyn Walenta (Clinical Research Associate, QuintilesIMS), Lily Alvarez (Quality Assurance Manager, MedWaves), and Michelle Mazzoni (VP of Regulatory Affairs and Quality) underlined the importance of gaining additional training by obtaining regulatory certification to transition into the field. It helps to understand the field and shows one's interest in clinical and regulatory affairs. Allison Komiyama (Principal Consultant, AcKnolwledge Regulatory Strategies) did her postdoctoral training at the Center for Devices and Radiological Health (CDRH) of the FDA.

Everyone in the Clinical & Regulatory Affairs Panel also mentioned that networking is key. Becoming a member and volunteer of a non-profit professional association, such as San Diego Regulatory Network (SDRAN), is also important not only to know people in the field, but also to hone in on soft and leadership skills.

Another panel that I attended was the Scientific Writing & Communication panel that consisted of AWIS-SD President DeeAnn Visk (Principal Writer, DeeAnn Visk Consulting), Tiffany Cox (Public Information Representative, Qualcomm Institute at UCSD), Jessica Yingling (Founder and President, Little Dog Communications), Heather Buschman (Communications and Media Senior Manager, UCSD Health Sciences), and David Brin (Novelist).

Visk works with clients in preparing manuscripts. She gained her experience by writing for Genetic Engineering and Biotechnology News. She suggested that PhDs who are interested in transitioning into the field not directly start a business like she did, but to gain experience by working for a company in scientific writing and communication first. There are a lot of things to manage alone when one starts a business, including communicating with and invoicing clients, maintaining websites, and marketing. Visk and other panelists shared that joining networking associations and writing for their newsletters, or writing blogs would be a great start in transitioning into the field. Buschman and Cox mentioned that taking writing classes, including Science Writing from the UCSD Extension or a writing class from Lynne Friedman, is helpful in becoming a science writer. Additionally, Yingling and Buschman suggested learning resume writing and interview skills at the UCSD Career Center.

Scientific Writing and Communication panelists speaking for the UCSD PDA STEM Career Symposium on March 25, 2017 (L - R): Tiffany Fox, Jessica Yingling, DeeAnn Visk, and Heather Buschman. David Brin is not pictured. Photo courtesy of Jean Branan.

Following the concurrent panels, some panelists stayed for the networking reception to continue their conversations with attendees. I particularly enjoyed the opportunity to talk to some panelists from panels that I did not get the chance to attend. I also networked with the attendees, who were mostly happy to learn about various career pathways available in the market.

AWIS-SD participates in the 2017 March for Science

by Christina Niemeyer

On April 22nd, Earth Day, approximately 30 AWIS-SD members, family and friends showed their support for science by joining the San Diego March for Science. The local event coincided with marches in Washington, D.C. and around the world, which was a nonpartisan demonstration in support of science and against its increasing politicization.

The San Diego event started at 10:00 at Civic Center Plaza in Downtown with presentations by scientists of all ages, including Seney Larson Moreno, an 8th grader and Greater San Diego Science & Engineering Fair Award Recipient, and Ralph Keeling, director of the SIO's carbon measuring program. The actual March started at 11:00 and was about a mile walk to Waterfront Park, where approximately 15,000 participants continued to chant and raise awareness of the importance of science. The Post-March Expo included booths by numerous scientific groups including Fleet Science Center, SIO, UCSD and Sanford Burnham Prebys Medical Discovery Institute. Scott Peters U.S. Congressman, California's 52nd Congressional District, showed his support of science by addressing the crowds at the County Administration Building.

AWIS-SD members and friends at the March for Science, San Diego.

We started meeting up at 9:30 in front of the San Diego Metropolitan Credit Union, which put us in the thick of things right in front of the Civic Center Plaza. Many members wore their AWIS shirts or a science-based shirt. A few of us carried signs; some of the best signs overall included: Think like a proton and stay positive; Science not Silence. As a whole we were fairly boisterous, joining with thousands of others in the main chant of the event: "What do we want? Evidence-based Research! When do we want it? After Peer Review". Because almost all of us knew at least one other scientist or friend that was marching, our group got separated in the crowds, but overall we had a great showing. Several of us stayed after the Post-March Expo to enjoy the beautiful weather and have a great lunch in Little Italy. Overall, it was a day we showed scientists ask questions, obtain facts, and share their results to make the world a better place.

Upcoming AWIS-SD Events

See more AWIS-SD events here.

- **Academia 2 Industry Coffee Club**
  For our July 7th meet-up, A2I has invited Dr. Kristin Bompiani-Myers, Molecular Biology group leader at InhibRx.
  Date: Friday, July 07, 2017 04:30 PM
  Venue: Bella Vista Cafe, La Jolla, CA

- **Family Day at the Coastal Roots Farm**
  Every second Sunday of the month the farm is open for a family-friendly morning of activities on the farm, highlighting different activities that happen on the farm: seeding, transplanting, composting, harvesting and more.
  Date: Sunday, July 09, 2017 10:00 AM -3:00 PM
  Venue: Coastal Roots Farm, 441 Saxony Road, Encinitas, CA 92024
  The event is free for AWIS-SD members and their families.
  Non-AWIS members: $10 adults, $5 children (to help cover cost of food), payment will be accepted the morning of the event.
  Important: Those who wish to attend will need to register with both AWIS-SD
  http://www.awissd.org/index.php/all-events/events-calendar/276-family-event-at-coastal-root-farm
  AND with the Coastal Roots Farm.
  https://www.eventbrite.com/e/family-day-at-the-farm-registration-32518250964
  Since this event is open to the general public, please register soon!

- **Academia 2 Industry Coffee Club**
  For our August 4th meet-up, A2I has invited Dr. Sheena Sahni, Financial Representative at WestPac Wealth Partners.
  Date: Friday, August 04, 2017 04:30 PM
  Venue: Bella Vista Cafe, La Jolla, CA

- **STRATEGY SESSIONS: Creating a Career Success**
  In this Strategy Session, we will have a penal discussion on how to make a career transition, entrepreneurships and etc.
  Free for AWIS-San Diego members. $25 for non-members.
  Date: Monday, August 07, 2017 06:00 PM - 08:00 PM
  Venue: Hera Hub, 4010 Sorrento Valley Blvd, Suite 400, San Diego, CA 92121
  http://www.awissd.org/index.php/all-events/events-calendar/255-strategy-sessions-creating-a-career-success

- **OUTREACH: Science Investigators Workshop at SONY's Bring Your Child to Work Day**
  Date: Friday, August 11, 2017 08:00 AM - 01:30 PM
  Venue: Sony
  Three Science Investigator Workshops
  Slime Science Ages 7-8
  Potato Circuit Chargers Ages 9-11
  Crime Scene Sleuths Ages 12-16
  http://www.awissd.org/index.php/all-events/events-calendar/275-Sony%20Bring%20Your%20Child%20to%20Work%20Day

About the Authors

Corine Lau received her Ph.D. in Molecular, Cellular, and Developmental Biology from the University of Colorado, Boulder, and her B.S. in Biochemistry from the University of Washington, Seattle. She pursued her post-doctoral training at the University of California, San Diego. She is currently a cancer genomics scientist at Human Longevity Inc. Corine has been involved with AWIS-SD since 2006, and held various AWIS-SD leadership roles including Treasurer, Board member, and Website Committee co-chair. She currently serves as Newsletter co-chair.

Juliati Rahajeng received her PhD in Biochemistry and Molecular Biology from the University of Nebraska, Medical Center in 2011. She joined UCSD School of Medicine as a postdoctoral researcher one month after her graduation. Juliati has been a member of AWIS-SD for the past 3 years. She is currently an active member of the Scholarship and the Newsletter committees. She was also a member of the AWIS-SD Open House 2015 committee.

Joan Allmaras is a native of North Dakota, Joan moved to San Diego to attend the University of San Diego, where she earned her bachelor's degree in marine science with a minor in chemistry. Since graduation, she has worked at The Scripps Research Institute and is currently the Chief Administrative Officer of the Scripps Center for HIV/AIDS Vaccine Immunology and Immunogen Discovery. This fall, she will begin graduate school at the University of Pennsylvania, pursuing a master's degree in nonprofit leadership.

Elizabeth Jacobs is a postdoctoral research associate at The Scripps Research Institute, where she develops antibody-drug conjugates of Duocarmycin SA in collaboration with Bristol-Myers Squibb. She received her Bachelor's degree through the College Scholars Program at The University of Tennessee in 2009 and completed her PhD at The University of East Anglia in 2014. She has been an AWIS member since 2015 and serves as the San Diego Chapter Outreach Committee Social Media Manager and Public Relations Committee Co-chair. She would like to use her experience in research to promote positive change in early STEM education.

Mai Khuong is a graduate student in the Biology program at UCSD studying mechanisms of chromatin assembly. She has been an active member of the AWIS Newsletter Committee since 2016. In her free time, she can be found training for half and full marathons and writing about them on her blog. She hopes to complete her PhD this summer and transition into a career in the biotech industry.

Christina Niemeyer is Associate at i2 Grants Associates, a woman-owned and operated, California-based team with years of experience identifying and securing grants for emerging companies and non-profit organizations in the life sciences. Christina has served as Laboratory Director at both Sanford-Burnham Medical Research Institute and Salmedix, where she played a critical role in developing the approved oncology drug Treanda. Christina earned her Ph.D. at Bayor College of Medicine in cell biology and her B.S. from Texas A&M University in microbiology, where she graduated magna cum laude.

About the Authors

Melissa (Missy) Scranton received her PhD in Plant Biology from University of California, Riverside. In 2013, she moved back to her home town to study algal biotechnology at University of California, San Diego as postdoctoral researcher. She is currently a researcher at BASF Enzymes, LLC and a Co-Chair of the AWIS-SD Events committee.

Jennifer Kuo is a graduate student in the Biomedical Sciences program at UCSD studying mechanisms of neurodegeneration. She has been an active member of the Strategy Session Committee since 2015 and is currently serving as co-chair. In her free time, she can be found training for triathlons, hiking, or watching Big Bang Theory. After completing her PhD, she hopes to pursue a career in the biotech industry.

Antonia Darragh is a student of molecular biology in the Graduate PhD Program of Biological Sciences at the University of California, San Diego. She works in Scott Rifkins lab using molecular biology tools to study the evolution of the genus of roundworms, *Caenorhabditis*. Antonia has been on the AWIS-SD Outreach committee since 2014. She enjoys community service and playing sports. For more information on Antonia please visit https://portfolium.com/AntoniaDarragh.

Geetha Subramanian has a double Master's in Medical Microbiology from the University of Madras, and from the Dept of Molecular Biology and Immunology at University of Southern California, LA. Geetha has a broad experience in the biotech industry with versatile skills in micro and molecular biology, molecular diagnostics and pharmaceuticals. She has also been teaching part time in local colleges and tutored students to help them advance in their education and attain their goals.

Contribute to the Newsletter

If you are an AWIS-SD member, we encourage you to contribute to the newsletter. Please send articles, photographs, and member news as MS Word attachments to newsletter@awissd.org. News articles should not exceed 250 words, event summaries should not exceed 500 words, and feature articles (special-interest stories and profiles) should not exceed 1000 words. The submission deadline for the next issue is Jul 10, 2017

Important Contacts

AWIS Board	Name	E-mail
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To contact the board, visit the following website: http://www.awissd.org/

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