Dear WISE Supporters:

As another academic year comes to a close, it is an opportune time to reflect on all we have done over the last 9 months. During the 2017-18 academic year WISE:

- Provided innovative, engaging STEM educational opportunities for over 1,000 girls and low-income students in the Tucson metro area
- Supervised 25 UA interns who logged approximately 3,375 hours supporting STEM diversity initiatives
- Hosted 8 professional development and networking events, connecting female STEM students to successful women in STEM
- Trained 31 University students in program facilitation and science communication
- Collaborated with 10 different units across 7 colleges to get UA students out in the community to gain real-world work experience and increase educational opportunities in the community

Moreover, program evaluations consistently report that our programming increases science motivation and confidence among program participants and expands understandings of precisely who can enter and succeed in STEM fields. University level students report that the experiences they’ve gained as program participants, interns, and facilitators has equipped them with the real-world skills and experience necessary to enter and succeed in the STEM workforce. And perhaps most importantly, program participants report gaining a greater appreciation for diversity and better understanding how they can help foster more inclusive and diverse STEM communities.

This work and these outcomes would not be possible without the generous and on-going support of numerous individuals, foundations, and organizations. Special thanks to the Agnese Nelms Haury Program in Environment and Social Justice, the UA Commission on the Status of Women, the Rebecca Fund at the Women’s Foundation of Southern Arizona, Freeport McMoRan, and the UA Colleges of Engineering, Science, and Social and Behavioral Sciences for supporting our work this academic year.

Please find more information on our programs and accomplishments in the following pages. Thanks again for your support!

Sincerely,
Dr. Jill Williams
WISE Director
Each year, WISE hosts the Science and Engineering Excellence (SEE) Banquet. This event provides an opportunity to recognize and celebrate the important work being done to increase interest and diversity in STEM fields at the UA and in southern Arizona more broadly. This year, we welcomed our biggest crowd yet, 180 individuals from across the UA and in the community.

Guests were able to hear an inspiring keynote address by UA alumnus and Master Inventor, Tara Astigarraga. Ms. Astigarraga has been at IBM since 2001 and has spearheaded numerous design and technical innovations aimed at streamlining and transforming the way we do business; these innovations have resulted in the filing of over 65 patents. She is also a proud member of the Choctaw Nation and was the 2016 recipient of the American Indian Science and Engineering Society’s Technical Excellence Award. Blending her career and heritage, Ms. Astigarraga is a dedicated and passionate champion for Native Americans and women pursuing STEM fields. Her ultimate goal is to provide other Native Americans and women with the same opportunities she has had and to prove that career and traditional values can co-exist.

In her keynote address, she reflected on her unexpected entry into the technology field (her undergraduate degrees are in Communication and Spanish Linguistics); how her unique background and experience has made her effective and successful in her career; and why having a diverse workforce is crucial for ensuring that our technical innovations are of high quality and serve the breadth of the population.

To watch a video of Tara’s speech, go to: https://youtu.be/7f7w-0-qYSo
We also had the opportunity to honor the winners of the 2018 Science and Engineering Excellence Awards and celebrate the important work they do.

Excellence in Campus-Community Collaboration: Dr. Monica Ramirez-Andreotta, UA Department of Soil, Water, and Environmental Sciences. Dr. Ramirez-Andreotta is known for her passion for environmental science research in which she encourages low-income and minority communities to participate in data collection to build trust between scientists and the community, promote interest in environmental science, and foster social justice. (Dr. Ramirez-Andreotta was unable to join us, so she had some of her students accept the award on her behalf).

University Excellence: Dr. Gurtina Besla, UA Department of Astronomy. Dr. Besla is the driving force behind the Tucson Initiative for Minority Engagement in STEM Program. Through this program, she fosters the success of students from underrepresented groups in STEM fields and works to create more inclusive environments across the University.

Excellence in K-12 Education. Jennifer Maxwell, Emily Gray Junior High. Ms. Maxwell is a middle school teacher and a teacher leader with the STEMAZing Project. She is known as a thoughtful teacher who serves as a role model for her students and helps other teachers effectively integrate innovative science instruction into their classes.

Excellence in K-12 Education. Sheila Marquez, Tucson Magnet High School. Ms. Marquez is a high school science teacher and the advisor of the Mathematics, Engineering, and Science Achievement Program. Her classroom provides a haven for students who have the beginnings of interest in STEM fields and allows them to cultivate their own capabilities and talents.

General Excellence. Women in Engineering Programming Board. The mission of the Women in Engineering Programming Board is to create a community of empowered women in engineering. Through outreach events and student support programs, they aim to create an environment where girls and young women can see themselves as engineers and successfully move through their academic careers and into the workforce.
Thanks to our Generous Sponsors for Making the 2018 Science and Engineering Excellence Banquet Possible!
The STEM Pipeline Mentorship Program provides young women pursuing STEM fields with the opportunity to gain concrete skills and to build relationships with other women committed to fostering diverse and inclusive STEM communities. During the 2017-18 academic year, 28 young women participated in the program and met monthly for skill-building workshops and networking opportunities. The program serves high school, undergraduate, and graduate students, 58.1% of whom identify as underrepresented racial or ethnic identities.

Over the course of the academic year, program participants met for 8 workshops during which they had the opportunity to learn from successful STEM leaders from the University and the community. Workshops covered topics including: Goal Setting; STEM Majors and Career Exploration; Networking and Mentorship for Professional Success; Self-Empowerment Strategies; Negotiating Challenging Situations (including microaggressions, imposter syndrome, and sexual harassment); Making the Most of Research Opportunities; and Making Connections and Getting a Job. Panelists included women from diverse backgrounds, including women running for political office, representatives from local organizations (like the Girl Scouts of Southern Arizona), researchers and staff from the Colleges of Engineering, Science, Public Health, Medicine, and Social Sciences, the founder of the KYA app for girls’ empowerment, and many more.

WISE is proud to report that program data demonstrated that participants consistently reported finding program workshops beneficial to their personal growth and academic/professional development. 100% of respondents reported that the workshops helped them identify how to find a mentor and network effectively; gave them more strategies and resources to feel empowered; and made them feel more confident in applying for and interviewing for STEM jobs. At the same time, the program provides an opportunity to expand student knowledge of different UA colleges and departments.

As one program participant commented: “I always look forward to the mentorship program meetings. It’s just nice to see that there is a happy, healthy life with a good career on the other side of all of this schooling.”

Thanks to the UA College of Engineering and the Commission on the Status of Women for providing the financial support that makes this program possible.
Girls Who Code participants use newfound skills to help foster kindness

The 2017-18 academic year marked the first full year of the UA Girls Who Code Club. Our club aims to eliminate the gender gap in technology by providing free weekly coding classes to middle and high school girls. We train UA undergraduate and graduate students, and successful program alumni, to facilitate the program. This serves to provide opportunities for mentoring relationships to develop between facilitators and participants, while also enabling UA students to gain valuable outreach experience that they can mobilize when pursuing other opportunities.

This year, we enrolled 26 middle/high school participants and trained 6 UA student facilitators from the College of Engineering, Science, and Social and Behavioral Sciences.

As their culminating project, participants used the skills gained through the club to complete a Computer Science Community Impact Project. Participants selected the topic of kindness, and coded a randomized compliment generator and games about ending littering to be kind to the environment, wrote poems, and created kindness memes and stickers. Visit us at https://uofagwc.jimdo.com/ to see the final product!

We have just completed the application and selection process for our 2018-19 Girls Who Code facilitators. We received over 25 applications from students across the University who want to give back to the community, increase interest in computer science, and help foster more diverse and inclusive STEM fields. Our new cohort of facilitators includes a high school graduate of Girls Who Code and several graduate students studying computer science and data analytics, along with many returning facilitators who have generously donated their time to the program for 3 semesters thus far. We look forward to building our club next year and thank the UA Libraries for donating use of a computer lab for our weekly meetings.

Some thanks to the UA College of Engineering and the Rebecca Fund at the Women’s Foundation of Southern Arizona for making this program possible during the 2017-18 academic year.
Bio/Diversity Project Interns Share Their Experiences with the Community

On May 2, the spring 2018 interns with The Bio/Diversity Project presented their final projects to university and community partners. Interns drew on their experience as environmental science outreach educators and knowledge gained in weekly intern meetings, to create digital stories that connected their experience as interns to academic, career, and personal goals. Through their digital stories, we gained a sneak-peek into what being an intern looks like: the challenges and success; the skills interns gained; and the expected and unexpected impact being an intern had on them. Students consistently reported that experience in the program helped them gain skills in science communication, increased their respect for teachers, and helped them understand the importance of providing diverse STEM role models and educational opportunities for students from groups underrepresented in STEM fields.

In addition to expanding environmental science educational opportunities for nearly 1,000 K-12 students this year, the Bio/Diversity Project has been successful at helping UA student participants obtain paid employment in the environmental science field after their internships end. 30% of past Bio/Diversity Project interns attribute subsequent paid positions to their participation in the program and skills gained. For example, Alex Wolfe (pictured below) now works at the Desert Museum and attributes her success obtaining this position to her work with the Bio/Diversity Project.

Funding from the Haury Program in Environment and Social Justice has been instrumental in enabling the Bio/Diversity Project to get off the ground over the last two years. As our funding through the Haury Program comes to an end this June, we are excited to report that we have received funding from the UA Green Fund to continue and expand the program through June 2020.

The Green Fund is made up of undergraduate and graduate students who review proposals and allocate funding to projects that help make the UA a more sustainable institution. Funding from the Green Fund will enable us to double the number of UA interns who participate in the program, expand the number of K-12 classes we work with, and develop and implement campus-wide events that raise awareness about the importance of biodiversity conservation and fostering inclusive and diverse environmental science communities and organizations. In order to support this expansion we will be hiring 2-4 work study eligible students to work with us beginning in fall 2018, so stay posted for job announcements!

Thanks to the Haury Program in Environment and Social Justice for supporting The Bio/Diversity Project from 2016-18, to our partners at Saguaro National Park and the Arizona Sonora Desert Museum, and the teachers who shared their classrooms with us!
Support Us

The Women in Science and Engineering Program relies on the dedication and support of community members in order to do the work that we do in increasing interest and diversity in STEM fields. If you are interested in making a financial contribution to support our work, we are able to accept donations through the University of Arizona Foundation. Gifts can be made on a one-time or recurring basis, anonymously, publicly, or on behalf of a third party. To make a donation electronically, please visit www.uafoundation.org/give/sbs/sirow-wise. Donations can also be mailed directly to the address below. Please make checks out to UA Foundation-WISE and mail them to the following address.

Women in Science and Engineering Program
University of Arizona
925 N. Tyndall Ave.
Tucson, AZ 85721

WISE Wish List

Here are some ideas of what gifts of various sizes would do for WISE:

$50 Funds printing of one color poster that highlights the important work done by our interns
$100 Supplies pizza for a professional development workshop for students
$250 Allows us to host a fieldtrip for WISE interns to learn more about STEM careers and local opportunities
$500 Funds a travel grant to support student participation at academic and professional conferences
$1000 Buys lunch for 150 Expanding Your Horizons Conference participants
$1500 Funds dinner for a year of our Mentorship Program events
$5000 Funds a year of our Girls Who Code Club, providing free weekly coding classes for girls in 6-12 grade