DO-IT NEWS

Director's Digressions: Highlights of Our Annual Report

By Sheryl Burgstahler, DO-IT Director

In an effort to reflect on all the great things we have accomplished, our annual report showcases both of the centers that I direct—the Access Technology Center, which supports the development and procurement of accessible IT at the University of Washington, and the DO-IT Center, which supports the success of students with disabilities nationwide.

For DO-IT, the 2018 report highlights included supporting more than 60 students in locating and securing internships and
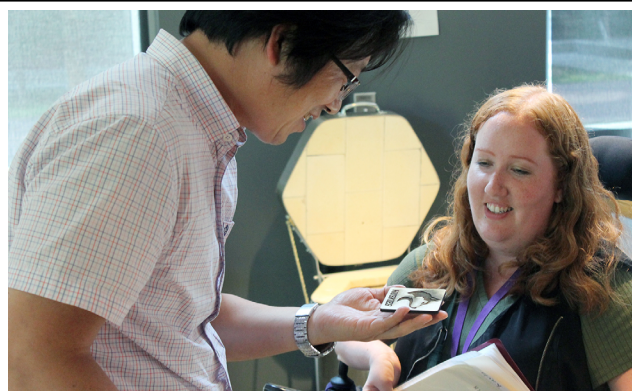
Jungsoo Kim, a visiting scholar from South Korea, attends a summer study session and learns about makerspaces with DO-IT staff member Kayla Brown.

growing our community to more than 1000 participants with disabilities. Our online mentoring community continues to engage hundreds of people with disabilities in locating resources and supporting each other as peers, near peers, and mentors. We also obtained seven new grants. With this funding we will be able to offer several nationwide capacity building institutes and facilitate online communities of practice to help other projects make their activities and resources accessible to participants with disabilities, help National Science Foundation proposal writers help broaden the participation of people with disabilities in their projects, outreach to students with disabilities who are Native Americans, and hold a workshop for women with disabilities interested in pursuing computer science.

In addition to our US efforts, we engaged with the DO-IT Center in Japan and are currently working with a visiting scholar to develop a DO-IT Center in South Korea.

You can read the annual report online at *www.uw.edu/doit/2018-uw-it-access-technology-services-annual-report*.

We love to hear about participant progress in education and careers. Please continue to keep us updated, as well as to inform us of opportunities that we can engage in or promote to our students. If you would like to fund our programs, visit *www.uw.edu/giving/make-a-gift/?page=make&code=DOITFD* or email *doit@uw.edu*.

AccessComputing Participant Awarded *Baltimore Sun's* "25 Women to Watch" and *New Mobility Magazine's* "5 Women Under 40 to Watch"
By Kayla Brown, DO-IT Staff

Kavita Krishnaswamy, *AccessComputing* Team Member and doctoral candidate at the University of Maryland Baltimore County, has been included in *Baltimore Sun's* "25 Women to Watch" and *New Mobility Magazine's* "5 Women Under 40 to Watch."

"This experience was very humbling and I felt honored to have the opportunity to be recognized for making a difference in the world for positive impact," Kavita shared in response to these honors.

"I am very grateful for *AccessComputing* and *AccessSTEM* for supporting me throughout the journey of my undergraduate and graduate years in college because that allowed me to be confident in my abilities to pursue a Ph.D. in computer science and specializing in creating accessible controls for robots that can help people with disabilities and seniors. I'm also very grateful to my advisor Dr. Oates for his guidance and support to help me master the skills in machine learning and artificial intelligence. My special thanks goes to Dr. Maya Cakmak for opening the door for me

to collaborate on our research project to effectively tele-operate robots with accessible web interfaces and giving the real-world experiences interacting with actual robots."

See more on the awards at *www.baltimoresun.com/features/women-to-watch/bs-fe-25-women-to-watch-2018-story.html* and *www.newmobility.com/2018/09/women-to-watch-5-under-40/*. For more information on *AccessSTEM* or *AccessComputing* consult *www.uw.edu/doit/programs/accessstem/overview* or *www.uw.edu/accesscomputing/* respectively.

AccessCyberlearning 2.0 Capacity Building Institute
By Lyla Crawford, DO-IT Staff

The *AccessCyberlearning 2.0* capacity building institute (CBI), was funded by the National Science Foundation's (NSF) (grant #1824450), was held in Seattle January 15 – 18, 2019.

The CBI brought together researchers, graduate students, and leaders in NSF-funded cyberlearning projects to engage with each other and explore how to make digital learning research, products, activities, and resources welcoming to, accessible to, and usable by everyone, including those with disabilities.

During the workshop four research questions were explored: (1) What challenges do learners with different types of disabilities face in using current and emerging digital learning tools and engaging in online learning activities? (2) How do current digital learning research and practices contribute to the marginalization of individuals with disabilities? (3) What advances in digital learning design are required to

AccessCyberlearning 2.0 CBI attendees.

support multi-modal learning and engagement that is fully accessible to and usable by students with disabilities? (4) What specific actions can digital learning researchers, funding agencies, educators, and other stakeholders take to systematically address issues with respect to disabilities?

Over the next few months participants will continue to collaborate on a white paper that contributes to the development of forward-looking, highly adaptable, distributed, collaborative digital environments that can personalize learning for our students, including individuals with disabilities. Potential applications cut across multiple (a) domains of knowledge, (b) learning contexts, and (c) time spans. The project will also develop guidelines for how researchers can address disability/accessibility-related issues with respect to (a) designing and testing new technologies, (b) analyzing and reporting outcomes, and (c) designing project activities and resources.

Proceedings from the workshop are being developed and will be posted, along with other related resources, at *www.uw.edu/doit/programs/accesscyberlearning*.

My Summer Language-Intensive Program
By Rochelle Bowyer, *DO-IT Ambassador*

Since I was little, I have always wanted to study abroad; however, I worried about funding and not being able to get proper accommodations for my disability while studying. In high school, I hated when I felt like my disability was holding me back. I feel like, especially in public schools, dyslexia can be swept under the rug, meaning I was often left behind or missing out, and we couldn't afford extra tutors or English lessons. When I entered high school, I chose a small public arts school called The Center School. I had a teacher who was passionate about teaching me, and I didn't feel ashamed when writing papers. I finally accomplished that growth and support I needed. When I graduated from high school two years ago, I was excited that I possibly could study abroad and keep up with my studies.

Rochelle in Beijing.

This summer, I went to Beijing to study Mandarin. I had to save a lot of money, and learn a lot about budgeting and saving money, which I highly recommend to everyone. Every day, I went to classes in the morning and then toured at night. My classes were filled with people from all over the world, and I wasn't only growing a deeper understanding of Chinese culture but Indian, Korean, Russian, and Tanzanian cultures as well. I got to challenge my definition of what it meant to be a global citizen and asked myself how I could be better.

Studying abroad broadens your community and allows you to learn through experience. Traveling and getting to know others allows you to develop a stronger social understanding of the global community while exploring your own personal growth. Kindness overcomes language barriers. For example, two strangers, who didn't speak English, used their daily commute to help me write better Chinese characters. From these situations I learned the value of movement, tone, and body language in conversations. I developed deep relationships with people who didn't speak the same language.

I also learned the privileges of having a good sewer system and traffic lights. Some days it would be over 80 degrees with pouring rain, and puddles would build up without drainage. I would walk in water up to my ankles to get

to class. In Beijing, there weren't many traffic signals. I was often scared to cross the street, but I learned how to be aggressive and walk with a group of people.

Being disabled can make people feel isolated, just like members of other groups and cultures within our country and community. We should all learn about different cultures, as well as about disability and different minority groups. It would be great if more information was provided in high school, or more language and culture classes were offered at the library or community colleges.

I feel lucky to live in Seattle, where I have so many opportunities for knowledge and diversity. I challenge everyone reading this to try to grow to be a better global citizen by reaching out, doing something new, and widen your own community. Also, challenge yourself to interact with different people in your daily life, share knowledge, experience different media options and learn stories that are from other perspectives.

AP Computer Science Principles Professional Development for Teachers of Students Who Are Deaf and Hard of Hearing

By Brianna Blaser, DO-IT Staff

Advanced Placement Computer Science Principles (AP CSP) helps students understand how computing and technology influence the world around them. The *AccessCSforAll* AP CSP curriculum, based on the Code.org (*code.org/educate/csp*) curriculum, is the only accessible version of CSP. We are committed to bringing this course to students with disabilities and examining its effectiveness.

AP CSP is intended to be taken by a wide range of high school students. Algebra I is the only recommended pre-requisite. No previous computer science experience is needed. In 2017, the first year the AP test was offered, about 75% of exam takers passed. The score

is comprised of both an exam (60%) and performance tasks (40%), which are projects that students complete over the course of the school year.

AccessCSforAll will hold an AP Computer Science Principles (CSP) (*apstudent. collegeboard.org/apcourse/ap-computer-science-principles*) Professional Development (PD) workshop for teachers from schools for the deaf Monday, July 22 – Friday, July 26, 2019 at the Model Secondary School for the Deaf at Gallaudet University in Washington, DC.

This event will be held at no charge to participants. Travel expenses will be covered. In addition, each participant will receive a $500 stipend and a certificate of completion.

Teachers of any subject are invited to apply to attend the *AccessCSforAll* PD. Participants will commit to teaching AP CSP at their schools within two years and to provide (1) information about enrollment in the course and (2) feedback on their experience with the curriculum. *AccessCSforAll* will continue to provide support during the academic year.

Apply by March 22 (*catalyst.uw.edu/webq/survey/blaser/364178?solstice_selected_button*). Applicants will be notified of their status by early April. Email *accesscsforall@uw.edu* with any questions. Find more information on our website (*bit.ly/APCSPPD*).

An accessible version of AP CSP allows students with disabilities to prepare for computer programming in higher education.

My Research on Haptics and Wearable Computing

By Caitlyn Seim, *AccessComputing* Team Member

I am currently a Ph.D. student in human-centered computing at the Georgia Institute of Technology. I chose to pursue this degree when I discovered that I could combine my passion for scientific discovery with my love of engineering. My undergraduate degree is in electrical engineering, which allowed me to work with my hands and build new technologies. Now, I apply those skills to create and study new computing devices for learning and rehabilitation.

I have savored the process of pursuing a doctorate. The process has taught me how to take my skills (such as writing code) and knowledge (such as different types of signal filters) and apply them to answer narrow scientific questions and engineering problems.

My research focuses on wearable computing and haptics. In my work, I create systems such as a stimulation device for stroke recovery or a tactile system to teach braille. The work aims to address real-world problems while developing new techniques and answering scientific questions. For example, I challenged the Braille Literacy Crisis (*nfb.org/Images/nfb/documents/word/The_Braille_Literacy_Crisis_In_America.doc*) by creating a pair of computerized gloves that teach braille using tactile taps and a new stimulation technique. There are many considerations in this area, ranging from physical comfort and accessibility to algorithms for context-awareness. In turn there are many advantages—small, wearable devices can interact directly with the body, be always on or available, allow multitasking, and gather unique data.

As part of my doctoral work, I also advise and mentor students in research. As a member of *AccessComputing*, it is important to me to help other students succeed. I make it clear that my lab is an inclusive environment, and that people with all different stories are welcome and appreciated here. The way students shine is through their curiosity, dedication, and energy.

IT Capacity Building Award Presented to University Libraries

By Sheryl Burgstahler, DO-IT Director

At our IT Accessibility Liaisons meeting last month, I delivered, on behalf of the UW-IT Accessibility Task Force (see uw.edu/accessibility/leadership/), an "IT Capacity Building Award." We honored the University of Washington (UW) Libraries for "efforts to make IT information resources accessible to all faculty, staff and students at the University of Washington, including those with disabilities."

Congratulations to the staff of UW Libraries for their extraordinary efforts to ensure that IT procured, developed, and used at the UW is accessible to faculty, students, staff, and visitors.

Sheryl Burgstahler presents the IT Capacity Building Award to Andy Andrews, the Accessibility Coordinator for UW Libraries.

IDEAS Cohort Elevator Pitch Workshop

By Kayla Brown, DO-IT Staff

Every month the IDEAS (Individuals with Disabilities Engaging for Academic Success) project provides a space for UW students with disabilities to connect with each other and foster relationships based on similar experiences.

In January, cohort members were provided resources on how to create an "elevator pitch." An elevator pitch is a tailored summary of a person's skills and goals that can be used when interacting with potential employers or other networking opportunities. It's called an elevator pitch because it is short and concise enough to be conveyed on an elevator ride! To utilize and practice their elevator pitches, students were encouraged to attend the Diversity Career Fair at the UW Seattle campus later that month.

For more information on how to run an elevator pitch event, read "The Elevator Pitch Contest: A Promising Practice for Preparing STEM Students with Disabilities for Employment" (*www.uw.edu/doit/elevator-pitch-contest-promising-practice-preparing-stem-students-disabilities-employment*).

Funding for this project was provided through a Diversity and Inclusion Seed Grant from the UW Office of Minority Affairs & Diversity. These grants support projects for institutional transformation across the UW's tri-campus community that align with the goals of the 2017-2021 UW Diversity Blueprint.

For more information about the IDEAS project, see the IDEAS announcement in the October 2018 issue of DO-IT News (*www.uw.edu/doit/ideas-grant*) or contact me at *kayladb@uw.edu*.

Going to the Tapia Conference

By Martina Svyantek, *AccessComputing* Community of Practice Member

My name is Martina Svyantek, and I am a doctoral candidate at Virginia Tech exploring how disability is discussed within institutions of higher education. I share a lot about me and my studies at *www.martinasvyantek. com*. I was interested in attending Tapia this year to share how the group I work with, Accessible Technologies, made strides this year with two internal campaigns to get the message across to all people working or attending Virginia Tech that accessibility is an achievable goal. For 2018-2019, we are focused on addressing captioning (*www.assist. vt.edu/calm/caption-on.html*) and color contrast (*www.assist.vt.edu/calm/check-contrast.html*) issues with professional development and easy-to-follow guides. We have promoted these campaigns to faculty, staff, and students, urging them to "Keep C.A.L.M. (Choosing Accessible Learning Materials)" (*www.assist. vt.edu/calm.html*) in their own work.

My favorite parts of the conference were sharing my own experiences during the "Welcoming Students with Disabilities" panel and getting to know other attendees. While working at the booth with others from *AccessComputing*, I got to know people who I had only associated with names on papers or emails. I also made a great new friend in Rua Williams, a doctoral student from University of Florida; we now collaborate and push each other to submit our work to different conferences and journals! This new friendship demonstrates why networking is such an important part of going to a conference.

Getting to know new people who are interested in your work is both thrilling and overwhelming—it's okay to be excited!

To those who have never been to a conference, I would suggest checking the schedule of events before getting to the conference so you can decide what panels or presentations you want to attend, figure out how to travel between rooms, and plan time for meals.

The schedule will also provide a few names of people whose work you think is interesting. You might want to research their other work ahead of time and come up with a game plan to introduce yourself. Getting to know people at a conference is not like an interview, so don't put too much pressure on yourself!

I'd also like to leave you with some thoughts on conference accessibility. I've always found that I have a better conference experience when I request that my access needs be met, instead of trying to ignore them. Supporting others with their requests also helps organizers recognize that accessibility goes beyond ramps and stairs. Considerations such as how rooms are laid out, the presence of microphones, captioning, lighting, food—it all goes into planning. This can be difficult for those unfamiliar with accessibility, which is why the Gender, Bodies, and Technology group reached out and enlisted me as the Accessibility Coordinator for their 2019 conference (*www.genderbodiestechnology.com/*). Networking with people and my experiences at different conferences led to this opportunity for me to use my knowledge and skills to benefit a larger group. What could going to a conference bring you?

DO-IT offers opportunities to learn skills and make connections important for a successful college career.

About DO-IT
DO-IT (Disabilities, Opportunities, Internetworking, and Technology) serves to increase the successful participation of individuals with disabilities in challenging academic programs and careers, such as those in science, engineering, mathematics, and technology. Primary funding for DO-IT is provided by the National Science Foundation, the State of Washington, and the U.S. Department of Education.

For further information, to be placed on the DO-IT mailing list, request this newsletter or other materials in an alternate format, or make comments or suggestions about DO-IT publications or web pages, contact us at

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