

AccessComputing OPPORTUNITIES! NEWS

...for Computing and IT Students with Disabilities

Fall 2015

Dear Student,

This newsletter comes from *AccessComputing*. Funded by the National Science Foundation, *AccessComputing* serves to increase the participation of people with disabilities in computing fields. We apply evidence-based practices to help students with disabilities successfully pursue undergraduate and graduate degrees and careers in computing fields.

Pages two and three of this newsletter share *AccessComputing* team member profiles, information on how to join *AccessComputing*, and how to attend conferences as a student.

Pages four and five showcase internships and scholarship opportunities and how to get involved in undergraduate research.

Pages six and seven highlight resources, for learning more about computing education and careers, and another *AccessComputing* team member profile.

We sincerely wish you a successful and enjoyable college experience. To request this newsletter in an alternate format, *AccessComputing* at 206-685-3648 (V/TTY) or accesscomp@uw.edu.



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AccessComputing Team Member Profile: Ather

During grad school, summers can be a blessing—but only if you use them right. I was presented with a few internship opportunities last spring, and I decided to decline all of them in order to work on my own plans for my future.

I knew I was graduating in December and would be looking for full-time employment or possibly a PhD program. I decided to take a leap of faith, travel, and engage in as many events and experiences as possible.

My summer started off with a trip to Dublin, Rome, Florence, and Paris. The IBM People with Disabilities Award made it possible for me to attend the Web For All Conference, which is co-located with the World Wide Web (WWW) Conference every year. I was given the opportunity to present my work on accessible graphs, which won the Delegates Award for the Most Significant Accessibility Research. My next trip was to Mountain View, CA to attend the Google Scholar Retreat, which was a dream come true. As Google Scholars, we were introduced to the Google campus and activities that have truly changed the way I see computer science as a whole. My final trip was to Austin, TX to attend the Student Professional Development Workshop. This was funded by CMD-IT (Center for Minorities and People with Disabilities in IT) and gave me an incredible opportunity to gain insight into developing a successful career, getting myself ready for technical as well as behavioral interviews, and looking past my disability.

Besides traveling, I took on other projects. My research on a jQuery plugin to create web accessible graphs was accepted at the Graphical Web Conference in Pittsburgh. I was also given the opportunity to volunteer at SC15 this November in Austin, TX.

I also planned a Hackathon (*evohax.com*) on Accessible Wearable Technologies. I started the renovation of SCI Video Blog (*scivideoblog.com*), which is a video blog to help people with spinal cord injuries, and I initiated a project with my university to map the campus for accessibility. I also developed free and accessible websites and promo videos for non-profit organizations of Philadelphia to push the concept of web accessibility in the local community. I was assigned leadership of a team of other Google scholars to initiate a nationwide initiative to foster an interest in computer science among middle school age children in our communities. I also won the Geek of the Year Award at the Philadelphia Geek Awards 2015.

I also enjoyed doing some gliding organized by Freedom Wings International, surfing organized by Life Rolls On, and paddle boarding organized by Bacharach, which are all daring activities for any C5 Quadriplegic like myself. I went waterskiing and got back to playing Quad Rugby regularly.

AccessComputing Seeks Students in Computing Fields

AccessComputing is recruiting students with disabilities. Funded by the National Science Foundation, *AccessComputing* provides opportunities for students to learn about resources, locate internships and other work experiences, participate in events, secure tutoring for computing classes, develop disability disclosure and accommodation strategies, and network with peers and mentors.

The *AccessComputing* project is recruiting high school, community college, undergraduate, and graduate students pursuing computing careers. The *AccessComputing* student team member application is available online at www.uw.edu/accesscomputing/accesscomputing-team-application. For more information, contact *AccessComputing* at 206-685-3648 (V/TTY) or accesscomp@uw.edu.



AccessComputing Team Member Profile: Jimmy

I'm finishing my master's degree in music, science, and technology at Stanford. I worked at Gibson Guitars in their research and development division. Gibson is primarily known for its guitars, but also owns many other various technology and music companies. I have been playing guitar for 11 years and love many of Gibson's products, so this was a perfect position for me. This summer, I designed, administered, and reported on an experiment looking at what happens when you send audio over wifi. A professor from my graduate program worked with me on this project. My main role was to develop the test methods we would be using, which I based off of the International Telecommunication Union (ITU) standards, but I also spent a lot of time finding bugs and fixing them. I did similar work while at Dolby, but never as the lead. It was exciting to be the knowledgeable one in the conversation! I spent the final month finding participants for our study. We're currently analyzing results and hopefully will find some cool conclusions.

What I learned most about this summer was communication and responsibility. My domain knowledge was fairly strong, and that's why I got the position, but I needed to be able to bring other people in the group up to speed

quickly. It was the first time that I didn't have someone to defer to if I didn't know the answer, and it took confidence to sometimes say "I don't know." It was my responsibility to then find the correct answer by reading papers and prototyping. I feel that I grew a lot and am more independent because of this experience.

Attending Conferences as a Student

Finding and going to conferences as a student can be a great way to build a network, learn important professional development skills, be exposed to new fields and job opportunities, or present about your own research.

What conferences should you think about going to? Conferences *AccessComputing* students have attended include

- Tapia Celebration of Diversity in Computing (www.tapiaconference.org)
- Grace Hopper Celebration of Women in Computing (www.gracehopper.org)
- Career Opportunities for Students with Disabilities Full Access Student Summit (www.cosdonline.org)
- ACM Special Interest Group in Computer Science Education (SIGCSE) (www.sigcse.org/events/symposia)
- ASSETS Conference on Computers and Accessibility (www.sigaccess.org/assets)
- The International Conference on Assistive Technology and Persons with Disabilities (www.csun.edu/cod/conference)
- CMD-IT Student Professional Development Conference (www.cmd-it.org/programs/current/student-professional-development-workshop)
- Other local computing, disability, or diversity related conferences

Interested in attending a conference?

AccessComputing has limited funds to support student with disabilities who are interested in attending conferences. Contact *AccessComputing* for more information.


Internships, Scholarships, and More!

Many organizations offer internships, scholarships, and other opportunities that are of interest to students with disabilities in computing fields. Check out the following opportunities and visit the webpages of each organization for up-to-date information.

Google Lime Scholarship

 Google is committed to helping the innovators of the future make the most of their talents by providing scholarships and networking retreats for computer science students with disabilities. Recipients receive a scholarship, are invited to attend the annual Google Scholars' Retreat at the Googleplex in Mountain View, California, and are considered for internship opportunities at Google. Scholarships are awarded based on the strength of candidates' academic background and demonstrated passion for computer science. For more information, visit www.limeconnect.com/opportunities/page/google-lime-scholarship-program.

The Center for Minorities and People with Disabilities in Computing (CMD-IT)


 CMD-IT offers several career exploration and professional development opportunities that students with disabilities might be interested in. These include workshops on careers in academia, national laboratories, and industry. Check out cmd-it.org for more information.

ENTRY POINT! Summer Internship Opportunities


ENTRY POINT! offers outstanding internship opportunities for students with disabilities in a variety of fields, including computing. Students with disabilities can apply their skills in a real-world setting in competitive summer internships. For more information, visit www.entrypoint.org.



Career Opportunities for Students with Disabilities

 COSD is a unique consortium composed of large and small universities, national employers, and US Government agencies focused on the career employment of college graduates with disabilities. Their conferences are a great opportunity to learn about careers. For more information, visit www.cosdonline.org.

Workforce Recruitment Program

 The Workforce Recruitment Program (WRP) connects public and private sector employers with students with disabilities. Employers seek to fill both internships and permanent positions in a variety of fields, using WRP applicants. During fall, students complete an online application and participate in interviews. By late March, a database of student information is made available to employers. Interested employers make direct contact with students about internship and job offers. Ask your school's disability services or career services coordinator if your school works with WRP or visit wrp.gov for more information.

Emerging Leaders Summer Internship Program for College Students

EMERGING LEADERS

Coordinated by the National Business & Disability Council (NBDC) at The Viscardi Center, the Emerging Leaders internship program places top undergraduate and graduate college students with disabilities in fulfilling summer internships nationwide that provide them with meaningful leadership development and networking opportunities. Visit www.viscardicenter.org/services/nbdc/emerging-leaders/students.html for more information.



AccessComputing Industry Affiliates Bring More Opportunities for You!

AccessComputing works with a number of tech companies who are interested in increasing the number of people with disabilities in their workforce. To further this goal, we are creating a resume database, which can be used by companies to recruit students with disabilities for internships and career jobs. Stay tuned for more information!

How Can I Get Involved with Undergraduate Research?

Research internships present opportunities for undergraduates to gain an exposure to research and consider whether they are interested in research careers and graduate school. There are several programs that allow computing undergraduates with disabilities to become involved in research.

- Distributed Research Experiences for Undergraduates (REUs) (parasol.tamu.edu/dreu/) matches women and students from underrepresented groups, including students with disabilities, with a computer science or engineering faculty mentor for summer research experiences at the mentor's home institution.
- The Quality of Life Center at the University of Pittsburgh offers an REU Program (www.herl.pitt.edu/education/undergrad/reu) focused on rehabilitation engineering and assistive technology fields. They encourage students with disabilities to apply.
- Find more links to summer research programs that are interested in recruiting students with disabilities at www.uw.edu/accesscomputing/how-can-i-get-involved-undergraduate-research.
- There are many National Science Foundation sponsored sites for research experiences for undergraduates. Search for a site at www.nsf.gov/crssprgm/reu/reu_search.jsp.

Subject to funding availability, *AccessComputing* funds research and industry internships for students with disabilities. To learn more, contact *AccessComputing* at 206-685-3648 (V/TTY) or accesscomp@uw.edu.

Resources

AccessComputing and DO-IT share resources to help students with disabilities at the University of Washington succeed in school and your career. Check them out!

- Choose Computing (www.uw.edu/accesscomputing/get-informed/why-choose-computing) encourages high school students with disabilities to pursue computing and IT careers. There you'll find profiles of successful computing students and professionals who happen to have disabilities and resources to learn more about careers in computing.
- Watch the video *How Can We Include Students with Disabilities in Computing Courses?* (www.uw.edu/doit/videos/index.php?vid=64) With the increasing demand for computing professionals, it's important that students with disabilities are included in computing courses.
- To explore programming, consult the Quorum tutorial, which is accessible: <http://quorumlanguage.com/documents/hourofcode/part1.php>.
- Our Scholarship listings (www.uw.edu/doit/resources/scholarships) have something for all types of students, disabilities, and interests. Using an interactive sorting tool, you can filter scholarships by disability or other criteria.

Interested in participating in an REU (Research Experience for Undergraduates)?

AccessComputing has funding for 2016 to place computing students with disabilities in computing research projects at colleges and universities.

www.uw.edu/accesscomputing/accesscomputing-research-experiences-undergraduates



Where Can I learn More About Computing Education and Careers?

There are countless resources online for learning about computing education and careers.

Computing Degrees and Careers

(computingcareers.acm.org/)

The Association for Computing Machinery has resources to help you learn about computing education. Learn about preparing for computing majors, skills you'll learn, and about different computing majors.

The National Center for Women and Information Technology (NCWIT)

(www.ncwit.org/resources)

NCWIT has many resources related to computing education, including: How can I prepare for a computing major? Which computing pathway is right for me? Which computing majors are right for me?

Association for Computing Machinery (ACM) Career News

(www.acm.org/membership/careernews/)

Subscribe to this newsletter to hear about the latest in career-related topics.

Institute of Electrical and Electronics Engineers, Inc (IEEE) Career Resources

(www.ieeeusa.org/careers/default.asp)

IEEE offers many different resources, including workshops, webinars, employment assistance, and career-focused e-books.



AccessComputing Team Member Profile: Lauren

This summer I worked on a research project sponsored through the Distributed Research Experiences for Undergraduates (DREU)

program again, only this time I traveled to Boulder, Colorado and lived there for over two months. That part was really special, because I have never lived away from home for a long period of time. It was important for me to see how well I could manage it if the right resources were available.

I worked on a project involving wearable assistive technology that uses Sparkfun and Adafruit microcontrollers with onboard Wi-Fi, Arduino programming, and mobile development with Xamarin forms. We produced a button device that is used with smart phones as an assistive augmentative communication tool. It is small, portable, and only costs about \$15 to make. Further work on this project is going to be implemented, and I will be listed as an author on a future paper.

I was able to participate in this internship after I met Professor Shaun Kane, who works at the University of Colorado Boulder and is also a member of *AccessComputing*, while I was attending the Tapia Conference this year. I started out the internship reading research papers to learn about what was already out there. This was much harder than I anticipated; there are so many resources to look through. After we decided on the goal of the project, we started working with the Sparkfun and Adafruit board programming, which I had no prior experience with. These programs had very little documentation, which was pretty frustrating at times. I eventually overcame that obstacle and began developing the cross-platform mobile application that was

going to be used to program the board to user specifications. Before the internship ended, we were able to run a few light usability tests and talk to a physical therapist about potential applications or studies. I was also able to learn more information about graduate school and I'm now thinking that I want to try and pursue a PhD, so I'm planning on looking into taking the GRE soon.

I was back home for about a week before I attended another computing event, CMD-IT's Student Professional Development Workshop that was held in Austin, Texas. There I worked on improving my resume (which it definitely needed) and I met a ton of cool people there, many of whom I'm still in contact with. We want to try and put on a workshop at the next Tapia Conference about effective leadership. Earlier in the summer I applied and was awarded a scholarship to attend the Grace Hopper Conference this year! I've kept in contact with some people in Colorado and from Tapia and the CMD-IT Workshop, and hope to connect with them at Grace Hopper. That's all of the computing I did over the summer for the most part. I had a lot of fun and learned a bunch of new things!





What Can I Do Now to Be Successful in School and Move My Career Forward?

No matter where you are across the country or in your career path, there are a variety of ways that you can work to ensure that you're successful in school and beyond. Consider some of the following actions for strengthening your skills and connections:

- Start planning for next summer. Many internship employers begin hiring summer interns during the fall. Start your search now by connecting with your campus career center or contacting employers directly.
- Talk to *AccessComputing* staff about funding available for tutoring, internships, and conference travel.
- Build your profile on LinkedIn and connect with professional contacts, including *AccessComputing* staff.
- Give back to other students. Engage in conversations over the *AccessSTEM@uw.edu* mentoring community.

About this Publication

This publication is published by *AccessComputing*. Its purpose is to inform students with disabilities in computing about some of the many opportunities available to them. It is printed periodically. Submit content suggestions to Brianna Blaser at 206-685-3648 (V/TTY) or blaser@uw.edu. This publication was developed with funding from the National Science Foundation (Grant #CNS-1539179, #CNS-1042260, and #CSN-1539179). The contents do not necessarily represent the policies of the U.S. federal government, and you should not assume their endorsement.

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