



OPPORTUNITIES! NEWS

...for Computing and IT Students with Disabilities

Fall 2016

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 degrees and careers in computing fields.

Pages two and three of this newsletter highlight resources, internships, scholarships, career opportunities, and information on undergraduate research.

Pages four and five share a team member profile, information on attending conferences, and resources for computing education and careers.

Pages six through eight include information on learning about accessibility, another team member profile, shared resources for task management, and information on *AccessComputing*.

AccessComputing Seeks Students in Computing Fields
 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*.



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Resources

AccessComputing and DO-IT share resources to help students with disabilities succeed in school and their 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. You can find scholarships by disability, due date or other criteria.

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



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.

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) (www.cra.org/cra-w/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.

AccessComputing Team Member Profile: Paulette



My name is Paulette, and I recently transferred from Columbia University to Empire State College. My main focus is computer science. My career goal is to lead tech diversity programs for Google. This summer, I attended the 2016 Association

for Computational Linguistics Conference on August 8-12 in Berlin. I was excited to learn more about natural language processing (NLP) and meet some interesting people from across the industry. This conference was sponsored by major multinational companies like Google and IBM and represented some of the best and brightest minds doing research in the field of NLP, machine learning, and artificial intelligence. I was excited to attend sessions on natural language processing as it pertains to machine intelligence and accessible products.

Several presentations were given by my colleagues from Columbia University. One of my favorites was by a presentation called Entity Focused Approach to Generating Company Descriptions, which combined top down search approaches and data driven generation, proposing a hybrid solution, which resulted in impressive wikipedia-style abstracts for smaller start-up companies.

Women and people with disabilities are extraordinarily underrepresented in this field of computing, so I was excited to network with other diverse engineers from around the world. They even hosted a specific reception for women/underrepresented people to

meet and mingle, with the goal of fostering mentorship. I met a female professor from Columbia University and a woman pursuing her Ph.D at the University of Washington, both of whom were passionate about inclusion in tech.

I would strongly encourage other students to attend a conference overseas. It was so inspiring to see how well computing transcends cultural barriers and allows us to communicate in a common language. I enjoyed learning about what educational institutions outside the US are focusing on and teaching, and it even caused me to consider studying abroad one day.

The conference sponsored a boat ride around the city of Berlin, which was an excellent networking opportunity and also afforded some beautiful views of the city. I loved Berlin—I am very grateful to *AccessSTEM* and the University of Washington for sponsoring this incredible opportunity!

Richard E. Ladner: SIGACCESS Outstanding Contribution Recipient 2016

Join us in congratulating *AccessComputing* PI Richard Ladner on receiving the 2016 Association for Computing Machinery (ACM) SIGACCESS Award for Outstanding Contributions to Computing and Accessibility. According to their website, “the award recognizes individuals who have made significant and lasting contributions to the development of computing technologies that improve the accessibility of media and services to people with disabilities.”

Richard’s research in accessibility has included projects such as the ASL-STEM Forum, MobileASL, ClassInFocus, tactile graphics and V-Braille. In addition to his research, Richard’s contributions to the field include his work with DO-IT through *AccessComputing* and the Summer Academy for Advancing Deaf and Hard of Hearing in Computing.

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.ghc.anitaborg.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/sigcse/)
- 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.



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.

Why Should I Learn about Accessibility?

Many companies are interested in ensuring that technology is accessible to people with disabilities. Some companies are motivated by a desire to do the right thing in order to ensure access for all of their customers; others are concerned with the possibility of facing lawsuits if their products are in violation of the Americans with Disabilities Act. Because many students don't learn about accessibility in their education, companies must train their employees on these topics. This means that having knowledge of accessibility can make you a great job candidate.

What can you do if your school doesn't offer any classes on accessibility?

- Look for summer internships or research opportunities that allow you to learn more.
- Ask your department about the possibility of doing an independent study on accessibility.
- Find ways to learn on your own:
 - o *AccessComputing's* Web 2.0 Curriculum (www.uw.edu/accesscomputing/webd2/) is a web design curriculum that emphasizes standards-based and accessible design.
 - o The Teach Access Tutorial for Accessible Mobile and Web Apps tutorial (<https://teachaccess.github.io/tutorial/>) will help you get a solid footing on accessibility via hands-on exercises and useful reference guides.
 - o Deque is offering scholarships to people with disabilities to give them access to Deque's in-depth web accessibility curriculum for a full year at no cost. Find out more at www.dequeuniversity.com/scholarships.

AccessComputing Team Member Profile: JoShanda



My Name is JoShanda. I am currently enrolled at Middle Tennessee State University (MTSU). I'm majoring in integrated studies with a focus in information technology and a minor in business admin. I spent this past summer gaining experience for when I graduate in December.

I utilized my networking skills to gain an internship with the American Red Cross. During the internship, I learned a lot about reimaging and setting up computers, as well as how to be proactive and gain experience in leadership and self-direction. I also had the opportunity this summer to become the president of the Pinnacle Honor Society on campus at MTSU due to my leadership skills.

I also attended a conference in Nashville called Analytics Summit, which allowed me to network with people and learn more in the IT field. I have learned by being part of *AccessComputing* that you have to sell yourself, so I utilized those skills as I networked at the summit. I was able to meet with the president of Nashville Technology Council, and we discussed opportunities for me to job shadow at companies in the area. This led to me job shadowing at Hospital Corporation of America (HCA), where I got to excited to visit and gain experience from their IT department.

Despite my nerves, I put my best feet forward and remained positive for the outcome. My number one goal is to become a project manager in IT, and I had the pleasure of meeting the manager that oversees that department for my job shadow.

I have worked hard my entire life, and my parents have always told me to strive for the best—these experiences this summer have made me feel like it is my destiny to meet my goals.

Based on my experiences with *AccessComputing*, I have learned to never let your disability, in my case a learning disability, stand in your way. Always know there is hope at the end of the tunnel. I am a living proof that thinking positive will take you a long way in your career and having the right people in your life as well. I have developed more knowledge than ever before this summer, and even though I had some obstacles that stood in my way through the process, I didn't give up on my craft in career development in IT and remained focused on my purpose.

The Thread: Task Management Applications

I wanted to share with you a question posed by an *AccessSTEM Team Member* from our Internet discussion forum and some of the responses so that you can get the flavor of the many rich conversations the *AccessComputing* community has online. Forum posts are edited for clarity and brevity.

Anyone use a killer task management website or application? Having ADHD, I often get overwhelmed. I use Google Calendar, but I find it doesn't fit all my needs.

AccessComputing Staff: I have heard good things about www.any.do/, but I haven't dug into it. I've also heard good things about EverNote and Microsoft's OneNote.

AccessComputing Team Member: I use Any.do for free on my phone. I am a strong proponent of lists. However my major complaints for Any.do are the font size and inability to color code—there are small color markers, but you can't change the background or highlight.

AccessComputing Staff: I am a very visual learner, and sometimes apps put things out of sight out of mind. I like having a classic planner like Plum Paper where I can customize the sections for work, chores, bills, etc. I've also used the app Hours, which tracks what I'm doing and for how long. I also sometimes just set a timer so I can focus on one activity for a limited amount of time.

AccessComputing Team Member: Since I am blind, much of this software can be inaccessible and doesn't work with audio or is very slow and tedious while looking through color codes. I tried using MS Outlook's task management, but I gave up. I ended up settling on just a text file (Notepad) that I manage myself. I'll make different text files for each project. Maybe I am biased because I can't use a lot of the software out there, but it seems like more effort to use the software for me than just keeping these text lists.

AccessComputing Team Member: From my understanding, MS Outlook has a very accessible task schedule that works with Jaws. I personally keep a planner with events and to-dos. When I have a ton going on, I think the task apps can be helpful for never forgetting the little things. A long to-do list adds stress because the list can seem endless, whereas daily tasks are more mentally appealing, even if this means micromanaging tasks.

AccessComputing Team Member: There is an IOS app called Errands that I use to prioritize my tasks.





AccessSTEM Team Member: I use a combination of Wunderlist and Ical to organize my tasks. I really like Wunderlist as it has a built in reminder and priority system and can be synced across platforms. It can also export task lists and send them as an email attachment if I need to print them out.

AccessComputing Team Member: Task management is an issue that almost everyone deals with. If you are looking for something simple, Trello works with both web and mobile. It can handle team projects by assigning different people for tasks. Trello organizes things by project, where you then create tasks as part of a project. There are color labeling options and priorities, and you can post comments, and attach files.

AccessComputing Team Member: I also have ADHD and struggle with managing my to-do list. I've found the most success in following David Allen's Getting Things Done methodology, where you basically write down everything you need to accomplish, and then sort these items into project categories. The two apps that work best for me are EveryTask and Wunderlist, both of which allow you to set reminders and priority levels.

AccessComputing Co-PI: It's important to prioritize projects, but I also like to think in terms of a timeline, so progress can be made on all projects. I like noting my tasks in a calendar format, whether electronic or paper. I have tasks listed for each day, and when I don't

finish something, I move it to another day. This can also help motivate me to finish things quickly so I don't have to move it.

AccessComputing Mentor: I also use Trello, which can be organized into to-do, doing, and done. It is great for tasks not done in one sitting or take many days, or tasks with multiple parts. There is a great sample to see how it works here: trello.com/b/TO0Du5t7/job-search-sample-board.

AccessComputing Staff: I like Toodledo.com—it allows me to enter a due date, priority, status, and notes. I can then create filters that allows me to see things in different ways. It has a very intuitive, easy-to-use interface and has both an iPhone and Android app. It is pretty accessible with VoiceOver.

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, and #CNS-1042260). 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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