

Increasing the Participation of Women with Disabilities in Academic STEM Careers

The *AccessADVANCE* project held its inaugural capacity building institute (CBI) on May 25th and 27th, 2021. At the event, *AccessADVANCE* staff and participants shared challenges and solutions regarding the recruitment and participation of women with disabilities in ADVANCE activities and academic science, technology, engineering, and mathematics (STEM) careers. In addition, they identified specific ways that stakeholders can work together to increase the participation and advancement of women with disabilities in academic STEM careers, with a focus on systemic change.

AccessADVANCE works to increase the participation and advancement of women with disabilities in academic STEM careers. *AccessADVANCE* is increasing knowledge and understanding of the issues related to this often marginalized group, in order to identify effective interventions with the potential to systematically address issues impacting the career advancement and success of women faculty with disabilities.

Presentation slides used during the event are [available online](#) in an accessible format.

Agenda

May 25, 2021

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| 9 – 9:15 am | Welcome and Introductions |
| 9:15 – 10:00 am | Presentation: Accommodations and Universal Design Sheryl Burgstahler, University of Washington |
| 10-10:20 am | Small Group Discussion: What barriers do women with disabilities face in academic STEM careers? |
| 10:20 – 10:35 am | Small group report out |
| 10:35 – 10:50 am | Break |
| 10:50 – 10:55 am | Video: Women with Disabilities in STEM Academic Careers |
| 10:55 – 11:25 am | Panel discussion of the experiences of women faculty with disabilities Cecilia Aragon, University of Washington Cinzia Cervato, Iowa State University |
| 11:25 – 11:45 am | Small Group Discussion; What are some strategies for addressing the barriers discussed earlier? |
| 11:45 – 12 pm | Small group report out |
| 12 –12:30 pm | Informal discussion |

May 27, 2021

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| 9 – 9:15 am | Welcome |
| 9:15 – 9:45 am | Presentation: Accessible Meetings and Events Brianna Blaser, University of Washington |
| 9:45 – 10:05 am | Discussion: How do we institutionalize flexibility gained during the pandemic and prepare for a post-pandemic world? |
| 10:05 – 10:15 am | Discussion report out |
| 10:15 – 10:30 am | Break |
| 10:30 – 11:05 am | Flash talks <ul style="list-style-type: none">• The Mind Hears Blog Provides a Mutual-Mentoring Forum for Deaf and Hard-of-Hearing Academics Michele Cook and Ana Caicedo, University of Massachusetts Amherst• ADVANCE FORWARD Women with Disabilities Task Force Canan Bilen-Green and Cali Anicha, North Dakota State University• Enabling Inclusive Access for All Students with Virtual Reality Chemistry Labs Maria Gallardo-Williams, North Carolina State University |
| 11:05 – 11:30 am | Presentation: Accessible Learning Management Systems: Making Your Online Course Accessible for Everyone Gaby de Jongh, University of Washington |
| 11:30 – 11:45 am | Discussion: How can <i>AccessADVANCE</i> support you? What resources would be helpful? |
| 11:45 am – 12:00 pm | Evaluation and final thoughts |
| 12 – 12:30 pm | Informal discussion |

Presentation Summaries

Accommodations and Universal Design

Sheryl Burgstahler, University of Washington

The UW's Disabilities, Opportunities, Internetworking, and Technology (DO-IT) Center promotes the practice of (1) applying universal design (UD) to create inclusive educational and career opportunities and resources for people with disabilities and (2) providing effective accommodations for people with disabilities when opportunities and resources are not fully accessible. This dual approach is consistent with all of the projects the DO-IT Center undertakes, including *AccessADVANCE*, which is funded by the National Science Foundation to increase the successful participation and advancement of women with disabilities in STEM faculty careers. *AccessADVANCE* has the following objectives:

- For Institutions and Projects: To increase the engagement and capacity of ADVANCE,¹ INCLUDES,² and other programs that promote women in STEM and their host institutions to make institutional changes that make academic STEM careers more welcoming and accessible to women with disabilities.
- For Individuals: To increase the interest and success of women with disabilities in pursuing academic STEM careers through outreach activities.
- For the Entire Community: To expand an online Knowledge Base and other resources to share Q&As, case studies, and promising practices regarding institutional steps to increase the participation of women with disabilities in academic STEM careers.

In an inclusive environment, everyone who meets requirements, with or without accommodations, is encouraged to participate; all participants should feel welcome and be able to fully engage in accessible and inclusive environments and activities. Historically, people with disabilities have been excluded and segregated. Most recent efforts to achieve access for this group focus on rehabilitation and accommodation. Increasingly, we are now moving towards a society where all people are included; looking through a social justice lens, universal design (UD) provides a reasonable framework to achieve this goal. Ability exists on a continuum, where all individuals are more or less able to see, hear, walk, read printed material, communicate verbally, tune out distractions, learn, manage their health, and undertake other activities in life. Most disabilities are not obvious and reported for a variety of reasons; thus, in our current climate, many products and services are made accessible to individuals with disabilities through approved accommodations for those who request them.

If we instead look to improve the designs of products (e.g., websites and environments (e.g., online learning opportunities) through the application of UD principles, guidelines and practices, they will be fully inclusive of more people and reduce the need for accommodations. UD is defined as the “design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.” A UD approach can benefit people who face challenges related to socioeconomic status, race, culture, gender, age, language, or ability. For example, captioning a video provides access to people who are unable to hear the audio, are English learners, are in a noisy or noiseless location, have slow Internet connections, want to know the spelling of words, or need to search text to find content quickly. Applying UD to information technology builds in accessibility features and also ensures compatibility with assistive technology that individuals with disabilities commonly use. A universally designed website, for example, would have text alternatives for graphics, include captions or transcripts for all video and audio content, ensure that all content and navigation can be reached with the keyboard alone, and spell out acronyms. In a nutshell, UD provides multiple ways for people to learn, demonstrate what they have learned, and engage, as well as ensures

¹ The [NSF ADVANCE](#) program aims to "broaden the implementation of evidence-based systemic change strategies that promote equity for STEM faculty in academic workplaces and the academic profession."

² The [NSF INCLUDES](#) program aims to "to improve collaborative efforts aimed at enhancing the preparation, increasing the participation, and ensuring the contributions of individuals from groups that have been historically underrepresented and underserved in the STEM enterprise."

all technologies, facilities, services, resources, and strategies are accessible to individuals with a wide variety of disabilities.

In summary, UD is an attitude that values diversity, equity, and inclusion. It can be implemented incrementally, focuses on benefits to all people, promotes good teaching practice, does not lower academic or career standards, and minimizes the need for accommodations. For more information on UD, consult [The Center for Universal Design in Education](#).

Accessible Meetings and Events

Brianna Blaser, University of Washington

Whether in person or online, there are concrete steps that ADVANCE projects and STEM departments can take to ensure that their meetings, events, and presentations are more accessible to a wide audience. Begin by thinking about who might face barriers to an event. These may be disability-related barriers for individuals who are blind or have low vision, deaf or hard of hearing, have mobility impairments, or have other disabilities. Also consider whether events are accessible to non-native speakers of English, individuals connecting to virtual meetings via phone, or other groups.

For virtual meetings and events, consider whether the software that you are using is accessible. Many options do not easily interface with screen readers or other assistive technology used by people with disabilities. Some may not support captioning or sign language interpreters. Become familiar with accessibility features of your software and share relevant details with your participants. If your software supports automatic captioning, consider turning it on.

When you are announcing a meeting, make it clear how to request accommodations and respond promptly to requests that you do receive. For example, approve requests from deaf or hard of hearing attendees for sign language interpreting or live captioners to ensure equal access even if automatic captions are available. A common request is for access to presentation slides; in this case, be sure the slides you offer are designed in an accessible format. For in-person events, you may receive requests related to navigation of an event space and dietary restrictions.

Ideally, share accessible versions of the agenda and presentation materials ahead of time, and provide materials to interpreters and captioners. Designate someone separate from the presenter to manage an online meeting. Mute all participants as they join the meeting. Work with presenters to ensure they are well lit and encourage them to use non-moving backgrounds, headsets for high quality audio, and presentation visuals with large fonts, uncluttered pages, high contrast color schemes, more than color coding to communicate information, simple graphic images, and captioned videos with audio description if available. Encourage speakers to incorporate a variety of presentation methods, including polls, breakout rooms, and/or discussions in chat. Remind them to speak all the content on their slides and verbally describe images or graphics since some participants may not have access to content on the screen.

Share links to resources mentioned in the presentation within the chat. Let participants know the best way to ask questions or engage and encourage them to voice their names each time they speak.

After the meeting, follow up with URLs, resources, and action items. Consider recording virtual events to allow participants asynchronous access after the event. Gather feedback about accessibility on any evaluation that you conduct. If you are collecting demographic information about participants, ask whether they identify as having a disability. Make adjustments to future meetings or events based on this feedback.

For more resources on this topic, read DO-IT's [Accessibility and Universal Design of Online Meetings](#) and SIGACCESS's [Accessible Conference Guide](#) and [Accessible Virtual Conference Guide](#).

The Mind Hears Blog Provides a Mutual-Mentoring Forum for Deaf and Hard-of-Hearing Academics

Michele Cook and Ana Caicedo, University of Massachusetts Amherst

Deaf and hard-of-hearing academics face a lot of challenges in their work as well as challenges in advancement through academia. Over 14% of the working age adult population have significant hearing loss. However, due to academic ableism and lack of support, only 4% of faculty are deaf or hard of hearing. These faculty members often feel isolated and like they are constantly reinventing the wheel—we personally felt we needed to create a community to learn from each other, network, and share solutions and experiences.

Our blog, *The Mind Hears*, was launched in September 2018. We create original posts, which are articles that share our frustrations, solutions, and a variety of other topics. We also share writings and art from other deaf and hard-of-hearing authors and artists, as well as profiles of deaf and hard-of-hearing academics. Our biggest challenges include getting the word out and finding colleagues, the variances of representation and experiences of hearing loss, and the fact that this project is all based on volunteer efforts.

Our society often sees disability as a deficit—however, our disabilities also give us strengths, provide skills, and make us better people. Our blog showcases the work and accomplishments of deaf and hard-of-hearing people as well as creates a network and community.

ADVANCE FORWARD Women with Disabilities Task Force

Canan Bilen-Green and Cali Anicha, North Dakota State University

This presentation focused on the steps North Dakota State University (NDSU) took during their NSF ADVANCE-funded Institutional Transformation project designed to recruit, retain, and

advance women, including women of color and women with disabilities. They began educating themselves and the campus community about disability in general, while also learning more specifically about how disability manifests in academic workplaces. They prioritized identifying barriers experienced by women faculty with disability and looked for ways to address those barriers. A report that reviewed practices at other universities was followed by the establishment of a Women Faculty with Disabilities Task Force and a Faculty Survey on status of disability awareness and policy/practice on campus. The task force held Faculty Forums to discuss results of that survey and to gather additional input. Based on those findings as well as other research, the Task Force promoted policy changes for tenure clock flexibility and accommodations requests processes. The Task Force and the broader campus community benefited from the insights and strategies shared by visiting scholars and cross-disciplinary disability awareness programming. Visiting scholar Margaret Price (University of Ohio) presented and provided working meeting sessions on the multiple facets of essential functions of faculty positions, during which collegiality was discussed as a construct that can create barriers across academia for some faculty. Tammy Berberri (University of Minnesota Morris) provided a series of universal design presentations and workshops for faculty and for students.

The Task Force's work showcased that it is the status of physical and social environments rather than an individual's physical or health status that essentially disables and marginalizes people. Similar to any marginalized identity group, faculty with disabilities and other marginalized identities bring a rich diversity of perspective and skills that are (still) too-often missing or undervalued. From a faculty survey and follow-up faculty forum, the Task Force learned that physical and cognitive/emotional disabilities were seen by NDSU faculty as fundamentally different. One comment in that regard was that in academia, your mind is your primary tool, thus there is an additional taboo related to cognitive/emotional disabilities. In sum, the Task Force learned that academia is missing out and that we all need to continue (un)learning disability stereotypes and working to develop and implement meaningful policy and practice changes to create truly accessible, inclusive, and equitable workplaces for faculty with disability.

Enabling Inclusive Access for All Students with Virtual Reality Chemistry Labs

Maria Gallardo-Williams, North Carolina State University

Underrepresented students may not receive equal access to an instructor's time and attention. An instructor's own biases determine the nature of their interactions with students, and even well-meaning instructors can be not inclusive or demeaning. This often prevents students with disabilities from having access to the class materials or fair treatment. This is an insidious problem, which may or may not be recognized in peer and student evaluations, and an issue that might go unnoticed even by educators committed to diversity and inclusion. This subject can be difficult to navigate, as it is generally based on perceived biases, which can be a complex dynamic between educators and students.

Virtual reality provides an avenue to generate materials that can be used to enhance or replace classroom instruction. Our approach at North Carolina State University was to design virtual reality labs that were as inclusive as possible. We worked with students that represented a broad range of race, gender identities, and ethnicities. These realistic simulations offered the advantage of minimizing instructor bias (since the instructor generates the material before meeting their students) while offering students who might struggle with the instructor in a one-on-one setting the opportunity to still learn from the instructor. Analysis of the data collected in a user study of virtual reality materials created for organic chemistry labs offers insights into the way that students interact with virtual reality instructors. Comments provided by underrepresented minority students point to the perceived impartiality of the instructor, ability to engage with the material independently, and remote access as some of the desirable features of the experience.

Accessible Learning Management Systems: Making your Online Course Accessible for Everyone

Gaby de Jongh, University of Washington

Considering the creation of an accessible online course is a good place to learn about information technology (IT) accessibility, as similar steps need to be taken across an institution to ensure that their IT resources are accessible to people with disabilities, including faculty.

These steps include

- Structuring content using headings,
- Creating alt text for images,
- Captioning and audio-describing videos,
- Uploading accessibly-formatted content, and
- Using accessibility checkers to find barriers to accessibility.

Canvas, Blackboard, and Moodle are all examples of Learning Management Systems (LMSs). All LMSs have options for accessible courses, as described below.

Headers provide an outline of the content so users can understand how the content is structured. Screen readers identify headers and provide the ability to skim content topics. Headers can be easily applied through the rich-text editor on the content creator part in your LMS.

A screen reader can't interpret an image, but can read alternative text, or alt text, that a creator has provided with the image. Alt text should be limited to 120 characters and provide meaning or information. Decorative images should be marked as such. Within your LMS, you can use the rich-text editor within each page of content to click on an image and provide alt text.

Captions provide textual information for those who can not access the audio, whether due to a disability, their environment, or other reasons. Having the option for audio descriptions provides context in videos for content that isn't spoken out loud. YouTube and other video sources often

provide automatically generated captions, but these usually aren't fully accurate and need to be edited.

Accessible content is created in a way that communicates structure to assistive technology. Microsoft Word allows for this by offering styles, which should be used instead of manually making visual changes to text. Word also provides options for alt text, formatted tables, meaningful hyperlinks, and updated document properties. Microsoft PowerPoint has these features as well, including accessible built-in templates. Provide unique slide titles, large font sizes, captioned videos, and grouped images to make sure your presentations are accessible. PDFs must feature tags, correct reading order, and have appropriately formatted tables. PDF does provide options for accessible forms using Tooltips, but not accessible STEM mark-up.

Accessibility checkers can help find barriers or identify where barriers might be. They usually alert the user to correct heading structures, unique slide titles, missing alt text, issues with tables and lists, missing language attributes, limited document access, and appropriate reading order. However, these are not always correct and require a user to double-check most of these features.

For more information about IT accessibility, consult the [UW Accessibility website](#).

Panel Discussion of Women Faculty with Disabilities

The panel discussion featured two women faculty with disabilities, Cecilia Aragon from the University of Washington and Cinzia Cervato from Iowa State University. Both women shared their experiences and engaged in a rich conversation with participants.

What has been your experience as a faculty member with a disability?

- One of the hardest parts starting out as faculty was that you never get to see how other faculty members have struggled in their careers. I acquired my disability after becoming a faculty member. I hid my disability for a long time, spending a lot of time accommodating myself without asking for external support. I finally spoke out so that I can help others and share my story.
- I also acquired my disabilities after I had become a faculty member. I had a brain hemorrhage seven years ago that affected my vision, movement, hearing, speech, and eating. I essentially had to relearn everything and learn how to ask for help.

How can academia be more welcoming to faculty with disabilities?

- Both of us already had tenure when our disabilities occurred. What can we do to make academia more welcoming? Gaining my disability did make me more empathetic and added even more to my diversity, equity, and inclusion (DEI) work. I had never realized

how many different types of disabilities there are and how many accessibility barriers there are within academia.

- Since my disability is visible, many students see me as more accommodating and accepting and are comfortable bringing up their needs. I did have other plans for my career and had to change those, but I now realize I have so many ways to make a difference. I already was the first woman to get tenure in my department--now I can help fight for women from a variety of minorities to find their space in our department.

Do you use official accommodations and what was the process for getting those?

- I don't have official accommodations, but my department chair is very supportive. When I moved to a new university, I found that it worked differently than my old university. I thought I would be able to get accommodations through a centralized place, but was told I had to pay from my own grants and departmental budget. Departments then have to balance accommodating their faculty and staff with other needs.
- I was lucky to have a departmental chair who was supportive of paying for my accommodations I needed, which mainly included regular cleaning of my office and providing me space that I needed to eat.
- Men and others can often blow off my accommodations or requests. But I feel like if I'm not advocating for it, then others will also feel like they can't advocate for their needs.
- How many times can you ask for what you need? A faculty member, or anyone, only has so much social capital to ask for help. Every time a person with a disability has to ask for help, they feel like a burden.
- Things are often just focused on risk management and budget control--this can make people with disabilities feel like a burden. We want an institution that is inclusive and welcoming.
- Draft people of good will among your colleagues. People think they shouldn't speak up because they don't want to patronize others; however, people who speak up can also be taking some of the burden off of people with disabilities to advocate for their own rights.
- We often talk about women, people of color and different races, but disability is often sidelined in conversations about DEI. We need to increase awareness.

How can departments and campuses learn to be more inclusive?

- There should be more critical disabilities studies and disability cultural centers on campus that help promote messages of inclusion across campus.
- Seeing and hearing more stories from students with disabilities and from other backgrounds help create empathy and understanding among faculty and staff, as well as highlight why we need more diversity and inclusion.

Group Discussion Summaries

Participants answered the following questions in small groups. Answers were recorded and are shared below.

What barriers do women with disabilities face in academic STEM careers?

- Institutional Constraints
 - Some disability service centers are set up to help students but not faculty. Faculty often do not have access to or are unaware of a centralized office that addresses disability-related issues for faculty. They may be reluctant to ask their department chair or others who have roles in granting promotions and tenure.
 - Departments may be expected to pay for accommodations, instead of a centralized university office; if so, faculty with disabilities may refrain from requesting accommodations to ensure they are not considered a financial burden to their departments.
 - People who are approving accommodations for faculty may not be educated in disability rights and reasonable accommodations.
 - During the COVID-19 pandemic, it is/was unclear to faculty with autoimmune disabilities if they will be expected to come back to campus or otherwise put themselves at risk.
 - Academia is often inflexible with a rigid track for advancement.
 - Some units charged with providing accommodations to faculty focus on teaching and do not offer support for research, advising, service work, and other aspects of a faculty career.
 - Lab spaces can be hard to make accessible due to lack of space, high noise levels, availability of locations, or other factors.
 - Spaces for service animals to drink, eat, and relieve themselves are not always available.
 - Websites and technology often are not designed to be accessible.
 - Solutions for access are often reactive instead of proactive, which leaves people with disabilities perpetually needing to self-advocate to ensure equitable access.
 - Many policies are created from a minimum legal compliance perspective (How do we avoid getting in trouble?) rather than a justice perspective ("How do we ensure that we have an inclusive and accessible workplace?"). Compliance should be a floor rather than a ceiling.
- Biases
 - Some individuals assume that women with disabilities are incompetent or do not belong in academic positions. Merit and expectations are based on a biased system, where minorities aren't always seen as part of a field or bringing valuable skills to the table.
 - People with invisible disabilities may feel a need to prove they actually have a disability or need accommodations.

- People with disabilities are often asked to ensure a department is accessible, even if it isn't in their job description and they don't have the expertise.
- Faculty are reluctant to use microphones because they assume they are loud enough or there aren't hard of hearing individuals in the audience, thus requiring someone who is hard of hearing to request an accommodation.
- Training on implicit and explicit biases, intersectional approaches, and other diversity, equity, and inclusion (DEI) areas is needed for everyone within academia.
- Individual Constraints
 - Women are often taught to avoid inconveniencing people, and people with disabilities are often made to feel like their needs create an inconvenience.
 - Women are often expected to do more work than others already, both in and out of the office (e.g., emotional labor, caretaking, family duties).
 - Imposter syndrome often causes women with disabilities to think they need to work harder than others or that they don't deserve accommodations.
 - Many academic researchers work long hours, while people with disabilities may not be able to do that either because of energy constraints or because of the time they need to spend on getting access to resources or on disability-related care.
 - People with disabilities often encounter the so-called disability tax where it takes them longer to complete tasks because of accessibility barriers. Institutions should find mechanisms to counter this as well as ensure equity for those who have a higher burden within academia.
 - Travel can create barriers for people with disabilities. It can be difficult to accommodate this.
 - It is often difficult for faculty members with disabilities to get accommodations at conferences.

What are some strategies for addressing the barriers discussed earlier?

- Track how many faculty members have disabilities and address disability in campus climate surveys.. This step can lead to greater accountability for universities and departments. Keep in mind, however, that people may not disclose age-related disabilities and some may not even identify as having a disability.
- Proactively work to promote disability inclusion. For example, at the University of Washington, within the Information Technology organization, multiple proactive practices are applied to ensure PDF documents are accessible, videos are captioned, and accessible technology is available to students, faculty and staff.
- Centralize services and funding for accessibility and accommodations. This saves time, cost, and risk by streamlining the process. This office could also be the unit tasked with encouraging the application of universal design to all campus offerings in order to make the entire campus more accessible and inclusive.
- Use universal design checklists to create institutional change that is equitable; include universal design when designing facilities, courses, IT, and facilities.

- Adopt the social model of disability and consider disability-related issues when discussing department successes and conducting individual performance reviews.
- Create/update policies and procedures that support people with disabilities within departments that move beyond minimum compliance; it could include more funding and resources to support faculty requests.
- Promote more widespread knowledge and connections with the nationwide networks of disability service centers in order to share knowledge, resources, and best practices.
- Fund staff support to help ensure departmental websites, documents, videos, and course materials are accessible.
- Provide training and education for human resources, faculty, support staff, and teaching assistants about their roles related to accessibility.
- Increase equity by providing more staff support, teaching release, and summer funding for people with disabilities.
- Offer opportunities for faculty members to learn ways to disclose their disabilities, negotiate accommodations, and build other self-advocacy skills.
- Consider removing the expectation of negotiation: Allow faculty and staff to be offered all the resources and accommodations available, and let them turn down what they don't need.
- Provide a contingency fund to cover new challenges that arise unexpectedly.
- Encourage funding agencies to think about accessibility of the application process and provide the funding for disability accommodations into their published solicitation processes.
- Increase awareness of NSF's [Facilitation Awards for Scientists and Engineers with Disabilities](#).
- Encourage universities to implement an institutional housework benefit for all faculty (see [Housework Is an Academic Issue](#) article).
- Promote a faster accommodation system; keep in mind that faculty often have to switch buildings, rooms, and labs quickly from quarter to quarter and don't have the time to wait weeks for accommodations at each location.

How do we institutionalize flexibility gained during the pandemic and prepare for a post-pandemic world?

- Faculty and students should not be penalized if they must continue to work or learn remotely.
- Provide adequate training and support for faculty if they are expected to teach hybrid courses. Address how to make both versions of the class equivalent and accessible for students, while overburdening faculty.
- Post-pandemic, continue organizing hybrid conferences wherein both versions of the conference are equitable experiences.
- Consider ways to address issues surrounding working from home, including the case that women are often taxed with caregiving work at home.

- If there are any post-pandemic supplemental funds, advocate for their use for support staff and teaching assistants.
- Continue to have virtual or hybrid meetings, which are more inclusive of working parents, those with disabilities, and others. Record and caption meetings as appropriate so those who cannot attend or who take longer to process information can access them at a later time.
- Compensate faculty and staff who have had to work more over the past year accordingly.
- Maintain increased ventilation and spacing in classrooms to prevent upticks in illness and allow for people to feel safer while on campus.

How can *AccessADVANCE* support you? What resources would be helpful?

- Consider developing an affinity group for women with disabilities in academia to support networking among women with disabilities in academia.
- Share suggestions for how to incorporate information about universal design, support and accommodations into onboarding processes for new faculty and staff.
- Offer sessions and resources on job negotiations, disclosure, and self-advocacy to support women with disabilities pursuing and engaging in STEM faculty careers.
- Provide guidance on how to apply the concepts of universal design, accessibility, and inclusion to the specific context of faculty work, e.g. to faculty hiring/negotiation, resource allocation, space allocation, promotion/tenure review, work-life policies, and workload expectations.
- Develop and support the development of peer-reviewed articles with data and information on these topics to promote change in academia.
- Develop an information brief and/or training materials for administrators and department heads that addresses why more support—e.g, financial and other assistance—is needed for women faculty with disabilities.
- Develop resources and strategies for encouraging departments and institutions to maximize the benefits of flexible and accessible remote work options—e.g., to reduce risk for those who cannot be vaccinated for COVID-19, to reduce transportation access barriers, to minimize exposure to environmental scents and chemicals, to improve communication when compared to situations where all/some participants are wearing masks, to increase opportunities to work asynchronously, to make it easier for some participants to adjust lighting within home environments as compared to offices, to allow viewing information on a computer screen rather than on a board across the room, to make it easier to adjust sound levels and connect hearing aids to computers, to make it possible to turn off the video and perform tasks that helps maintain focus, to engage in multi-modal ways (e.g., chat), to monitor how an individual is expressing/reacting, and to minimize crosstalk that interferes with productive discussions.

Community of Practice

AccessADVANCE staff and participants engage in an online Community of Practice (CoP) that includes key stakeholder groups that impact the success of women with disabilities in academic STEM careers to share ideas and assist in the creation and dissemination of resources to encourage others to support women with disabilities.

CoP members

- plan, attend, and recruit others to attend project training and capacity-building opportunities;
- ensure women with disabilities are invited to events that promote their pursuit of and support in academic STEM career positions;
- share strategies for making departments more welcoming and accessible to women with disabilities;
- discuss ways to build productive relationships with disability service offices that serve faculty;
- recruit women faculty and senior graduate students with disabilities to the e-mentoring community; and
- share resources.

You and your colleagues can join *AccessADVANCE* CoP by sending the following information to doit@uw.edu:

- Name
- Position/ Job Title
- Institution
- Postal Address
- Email Address

Minigrants

AccessADVANCE has funds available to support activities to expand, replicate, and disseminate practices related to our project goals nationwide. The ultimate goal is to increase the number of women with disabilities successfully pursuing STEM faculty careers.

An institution or other organization can seek funding to support

- meetings or trainings focused on policies and practices that can increase the participation of women with disabilities in faculty careers.
- an existing event for faculty or potential faculty in order to attract and involve women with disabilities.
- a stand-alone new event to mentor and support women with disabilities in STEM faculty careers.
- a training event for faculty, administrators, or staff to build their capacity to support faculty with disabilities.

- registration, materials, and travel expenses to deliver presentations, host exhibits or special interest groups, or otherwise share project resources at conferences.

We expect most requests to be for \$4,000-5,000. Proposals can be submitted any time, but limited funding is available. To apply, complete the *AccessADVANCE* Minigrant Application Form (uw.edu/doit/apply-accessadvance-minigrant).

Recipients of *AccessADVANCE* minigrants are required to submit an activity summary and a draft of an article for the *AccessADVANCE* Knowledge Base. This summary must include a completed evaluation form. Recipients are also encouraged to collect feedback from participants during or immediately following the event. For project evaluation forms, see Minigrant Evaluation Forms.

Resources

The [AccessADVANCE website](#) contains

- information about project goals, objectives, activities, and project partners
- evidence-based practices that support project goals and objectives
- resources for women with disabilities in academic STEM careers, those who supervise or manage women with disabilities in academic STEM careers, as well as those who help manage and run STEM departments and research

AccessADVANCE maintains a searchable database of frequently asked questions, case studies, and promising practices related to supporting women with disabilities in academic STEM careers. The Knowledge Base can be accessed by following the “Search Knowledge Base” link on the *AccessADVANCE* website.

AccessADVANCE also shares resources for women and others with disabilities in advancing their careers through academia. Some examples are as follows:

- [Disability and Hiring: Guidelines for Departmental Search Committees](#)
Guidance published by the Modern Language Association (MLA).
- [Faculty Members, Accommodation, and Access in Higher Education](#)
A collaborative essay published by the Modern Language Association (MLA).
- [How Academic Jobs Screen Out Disabled People](#)
A 2017 article from Pacific Standard that discusses ableist aspects of job descriptions.
- [Occupation and Industry Series: Accommodating Educators with Disabilities](#)
Guidance from the Job Accommodation Network.
- [Our Disabilities Have Made Us Better Scientists](#)
A 2019 article from Scientific American discussing how disability can be

perceived as a negative in research and academia but actually provides critical positives.

- [Rights and Responsibilities of Faculty Members Who Have Disabilities](#)
Describes the rights and responsibilities for faculty members who have disabilities
- [The Neglected Demographic: Faculty Members with Disabilities](#)
A 2017 article from The Chronicle of Higher Education.
- [Wanted: Disabled Faculty Members](#)
A 2016 essay published in Inside Higher Ed.
- [Why is Data on Disability so Hard to Collect and Understand?](#)
This paper offers best practices for collecting demographic data related to disability.
- [Women, Minorities, and Persons with Disabilities in Science and Engineering: 2019 | NSF - National Science Foundation](#)
Tables present detailed data on the demographic characteristics, enrollment, degrees, and employment of women, minorities, and persons with disabilities in science and engineering.

AccessADVANCE also creates and promotes resources that help apply universal design to academic settings, which help promote accessibility for all, including women with disabilities.

- [30 Web Accessibility Tips](#)
Creating or deploying web-based resources that are fully accessible to all users.
- [Accessibility and Universal Design of Online Meetings](#)
Learn tips to prepare for a fully accessible online meeting.
- [Apply for an AccessADVANCE Minigrant](#)
AccessADVANCE has funds available to support activities to expand, replicate, and disseminate practices related to our project goals nationwide. Apply now!
- [Disability-Related Videos](#)
Video collections that share perspectives of individuals with disabilities and universal design strategies that make the world more inclusive.
- [Equal Access: Universal Design of Engineering Departments](#)
Guidelines on creating an accessible engineering department using universal design.

- Equal Access: Universal Design of Instruction
A checklist to maximize the learning of all.

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