

# Conducting Inclusive Scientific Events - Opportunities and Strategies for Virtual Meetings

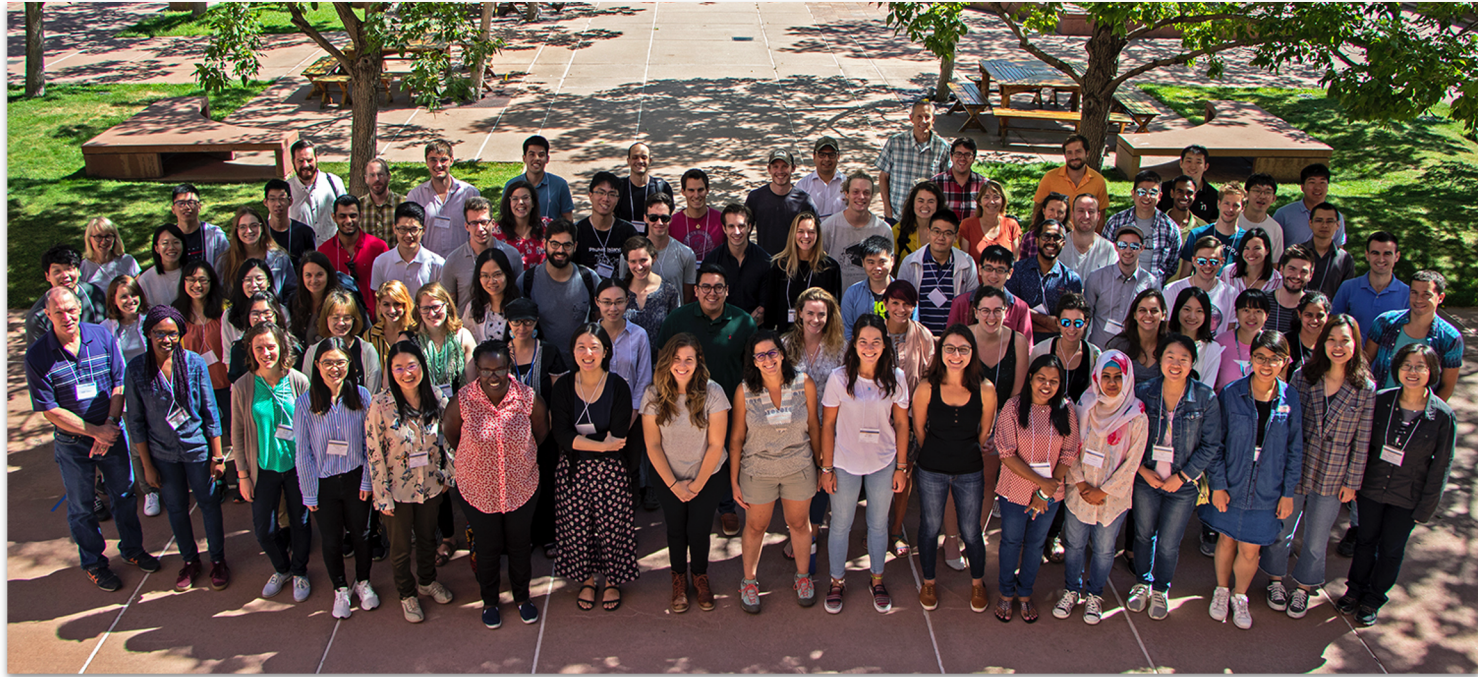
*Rebecca Haacker and Marissa Vara  
with thanks to Lorena Medina Luna, Valerie Sloan, and Daniel Zietlow*



23 February 2022



# Conducting inclusive scientific meetings



Scientific conferences have an important role in the exchange of ideas and knowledge within the scientific community. Conferences also provide early-career researchers with opportunities to make themselves known within their field of research. (Sarabipour 2020)

# Meetings are part of our commitment to Diversity, Equity & Inclusion

Clear messaging and support from leadership and funding agencies

NCAR Strategic Plan  
for Education & Outreach

UCAR Strategic Plan for  
Diversity Equity & Inclusion

NCAR  
Strategic Plan

UCAR Workforce  
Development Plan

improved engagement  
and recruitment practices

creating inclusive  
environments

alignment of educational  
pathway programs

evaluation  
& assessment

staff training and  
recognition for DEI work

sustained financial  
support for DEI

partnerships with  
professional societies

Joint effort between all labs and programs across NCAR UCAR UCP

# Our responsibility to conduct inclusive meetings

The White House has issued several Executive Orders on DEIA in the Federal Workforce, and addressing discrimination in education. Equity in education is a priority of the federal government, supported by all federal agencies.<sup>1</sup>

Funding agencies expect inclusive meetings and efforts to broaden participation. *“NSF established a performance area focused on broadening participation: to expand efforts to increase participation from underrepresented groups and diverse institutions throughout the United States in **all NSF activities and programs.**”*<sup>2</sup>

Diversity and inclusion for moral reasons: *“[...] a commitment to creating institutional environments that are inherently equitable where all members are heard, seen, and valued [...]”*<sup>3</sup>

Inclusion and diverse perspectives improves the quality of meetings, and meeting outcomes, and ultimately improve science.<sup>4</sup>



- 1: The Biden-Harris Administration Immediate Priorities (2021) <https://www.whitehouse.gov/priorities/>
- 2: Haacker, R., M. Burt, and M. Vara (2022), Moving beyond the business case for diversity, *Eos*, 103, <https://doi.org/10.1029/2022EO220080>.
- 3: <https://www.nsf.gov/od/broadeningparticipation/bp.isp>
- 4: McLeod, P. L., S. A. Lobel, and T. H. Cox (1996), Ethnic diversity and creativity in small groups, *Small Group Res.*, 27, 248–264, <https://doi.org/10.1177/1046496496272003>.

# Inclusive meetings lead to better science

AMERICAN METEOROLOGICAL SOCIETY  
AMS 2022 | 102nd ANNUAL MEETING | HOUSTON & ONLINE | 03-07 JANUARY

#AMS2022 Environmental Justice Session:

## The struggle for environmental justice: Successes, challenges, and implications for the weather-water-climate enterprise

Moderator:

Dr. Robert D. Bullard | Dr. Rajul Pandya


Dr. Louie Rivers | Dr. Matthew S. Tejada | Dr. Bakyah S. Nelson

Session 6  
Tuesday, 25 January  
10:45 AM CST

Board on Women and Minorities

## PAULETTE BLANCHARD

PHD Candidate in the Department of Geography at the University of Kansas



Blanchard hopes to push institutions to hire scientists from native and other marginalized communities, while giving these individuals academic freedom to explore science issues from their own worldview. She believes innovation happens with diverse thinking and freedom to think diversely. To natives in the geosciences she shares the following:

**“You are important. You are not alone, we got you. You are the hopes and dreams of all your ancestors.”**

Paulette's work focuses on indigenous-led environmental movements and activism. She holds a MA from the University of Oklahoma and a BA from Haskell Indian Nations University.



#AMSEarlyCareer #AMS2022 #ECC2022


The 10th Annual Conference for Early Career Professionals

presents

## A Fireside Chat with Early Career Award Winner

Join us for a fireside chat and question and answer session.

Sunday, January 23rd  
2:55 PM - 5:00 PM

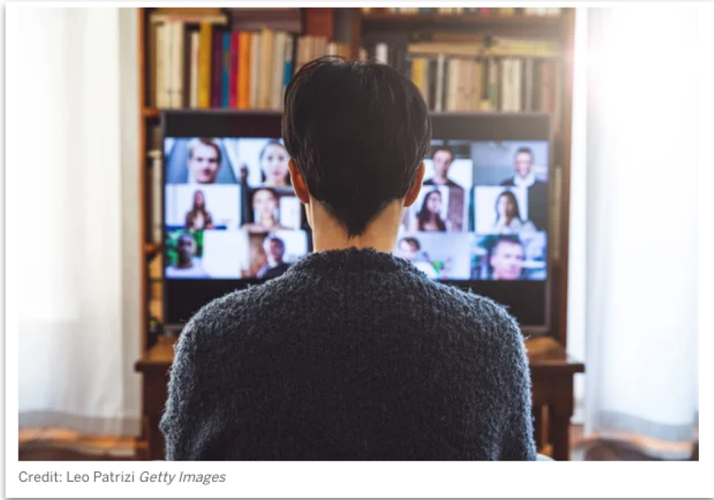
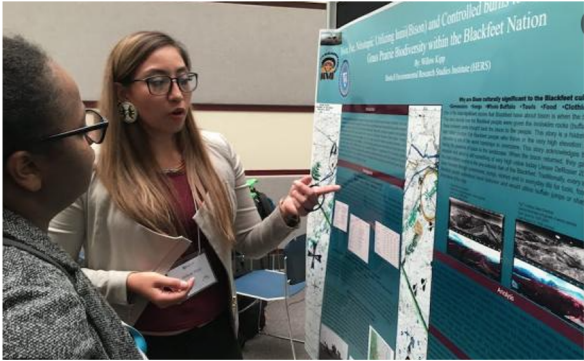


Joseph E. Trujillo-Falcón  
@LatinWx

AMERICAN METEOROLOGICAL SOCIETY  
102nd ANNUAL MEETING | HOUSTON

#AMSEarlyCareer #AMS2022 #ECC2022

# The surprising benefits of moving to virtual meetings



Credit: Leo Patrizi Getty Images



(Credit: Getty Images)



Travelers waiting in line at the airport. Scott Chen / Getty Images

*“Although the COVID-19 pandemic has brought traditional in-person conferences to a halt for the foreseeable future, the growth of virtual conferences has highlighted many of the disadvantages associated with the in-person format and demonstrated the advantages of moving these events online.” (Sarabipour 2020)*

# Impact of virtual meetings on access and inclusion

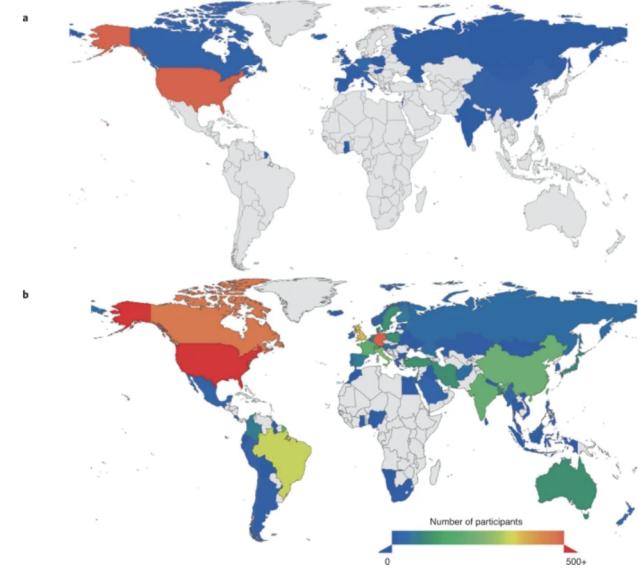
“Virtual conferences can be more inclusive, more affordable, less time-consuming and more accessible worldwide, especially for early-career researchers.” (Sarabipour 2020)

Virtual meetings reduce:

- Time away from home
- Need for Visas
- Travel funds
- Some accessibility issues
- Carbon footprint

“While the 2019 European Geosciences Union (EGU) General Assembly in Vienna attracted just over 16,200 participants, the online 2020 General Assembly registered over 26,000 individual users.” (Liu 2020)

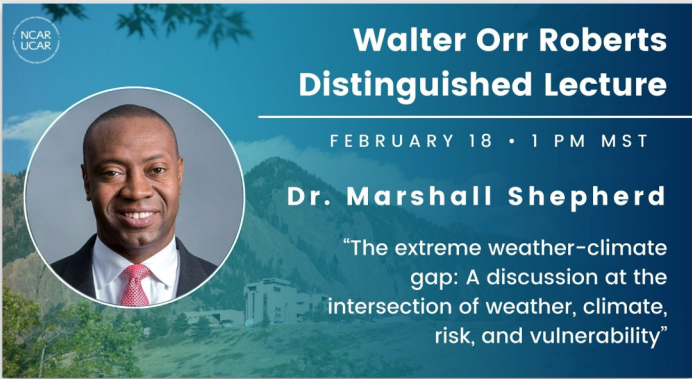
**Fig. 3: Increased diversity and inclusion of participants in the RECOMB conference in virtual compared to in-person formats.**



**a, b.** Geographic distribution of the affiliations of participants in 2019 (a) and 2020 (b). Color represents the number of participants from each country (blue to red: 0 to >200).

Wu, J., Rajesh, A., Huang, YN. *et al.* Virtual meetings promise to eliminate geographical and administrative barriers and increase accessibility, diversity and inclusivity. *Nat Biotechnol* 40, 133–137 (2022).

# Impact of virtual meetings on access and inclusion, cont.



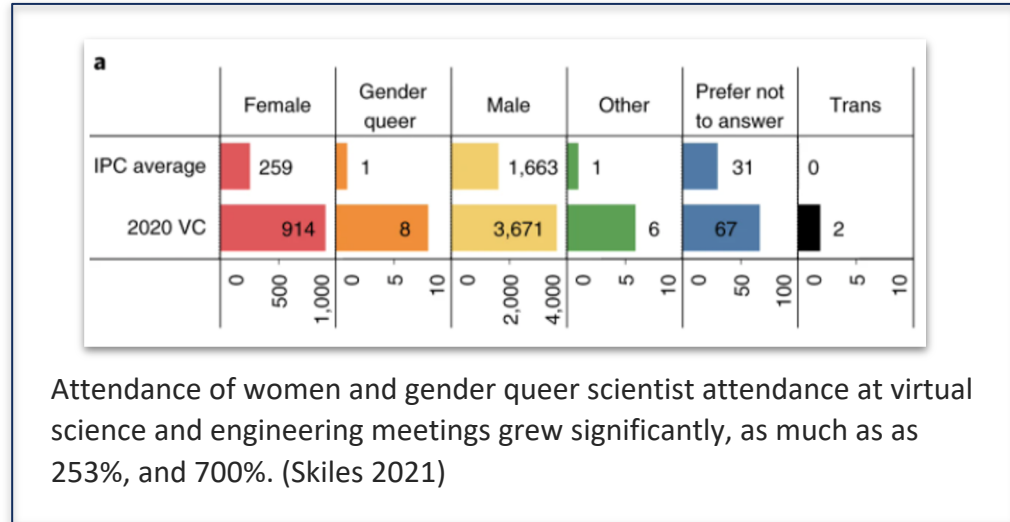
**Walter Orr Roberts Distinguished Lecture**

FEBRUARY 18 • 1 PM MST

**Dr. Marshall Shepherd**

“The extreme weather-climate gap: A discussion at the intersection of weather, climate, risk, and vulnerability”

The virtual Walter Orr Roberts Distinguished Lecture made it possible to host Dr. Shepherd who doesn't travel by plane.

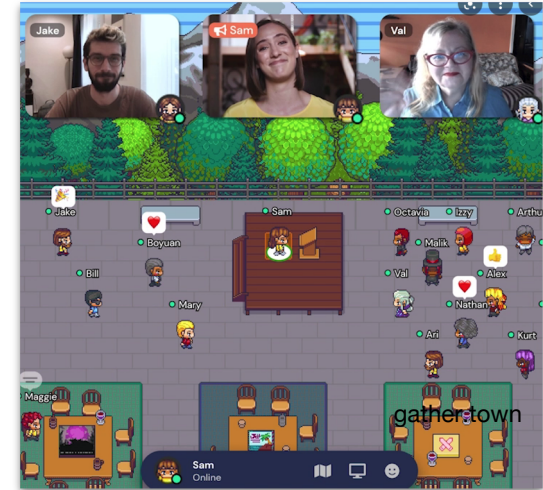


Inclusion and the quality of sessions: *“Submitting questions online through moderated chats, for example, can help graduate students to feel less intimidated and allow scientists to formulate better queries.”* Viglione 2020



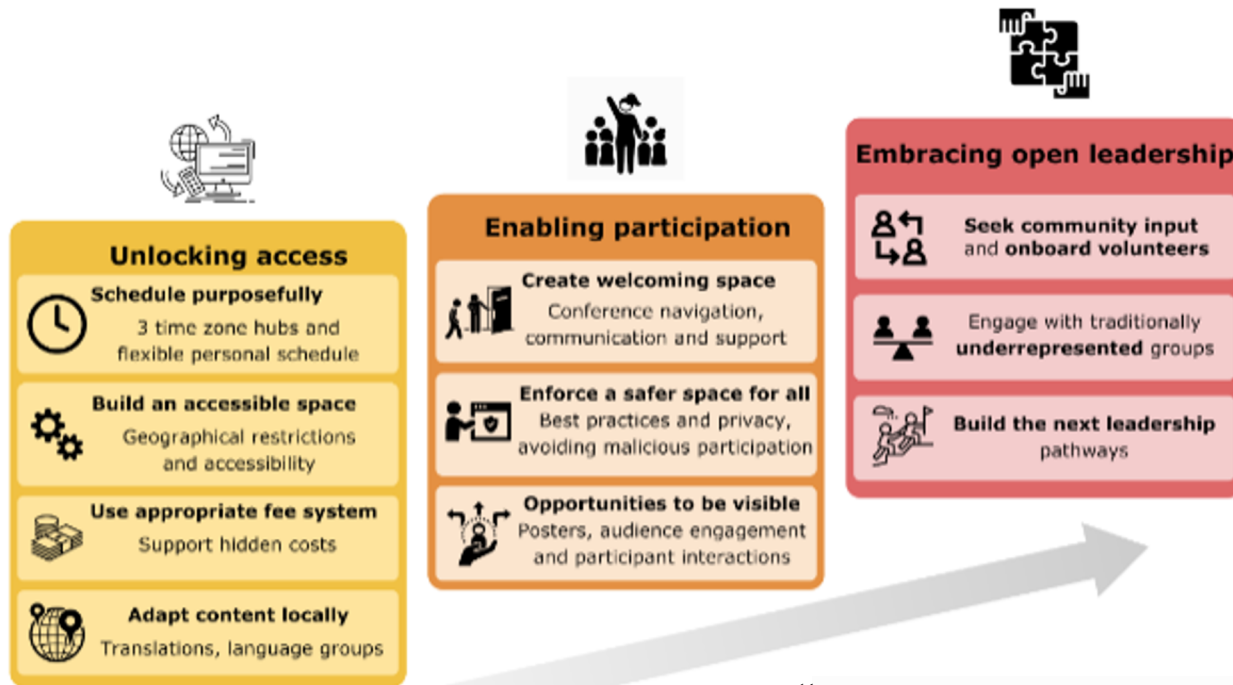
# Challenges and losses of conduction meetings online

- Who is invited to speak?
- Reduced peer interactions and opportunity for collaboration and networking between specialties
- Limited networking opportunities in poster halls or social events
- High-speed internet access for all
- Screen fatigue from the need to spend substantial periods of time in front of a computer
- Lack of closed captioning at many meetings and events
- Interference from work and home responsibilities
- Unique challenges of hybrid meetings: coordination, equal access to session, technical difficulties



Wu, J., Rajesh, A., Huang, YN. *et al.* Virtual meetings promise to eliminate geographical and administrative barriers and increase accessibility, diversity and inclusivity. *Nat Biotechnol* 40, 133–137 (2022). <https://doi.org/10.1038/s41587-021-01176-z>

# Towards more inclusive online conferences



*“fostering social justice requires inclusivity to actively be centered in every aspect of online conference design.”* Levitis et. al 2021

# Sample inclusive practices for virtual meetings

- Virtual meetings expand the possibilities of who to invite as speakers and organizers - think broadly! Share power and leadership
- Plan for additional staffing needs to support technical questions, access, and to moderate sessions
- Gather participant data and conduct surveys to assess DEI goals of the meeting
- Make use of apps like “Braindate” and “Brella”, “gather.town”, and collaborative tools (polls, word clouds etc)
- Requiring camera-use defeats inclusion goals (differences in internet speed, physical abilities, work environments)
- Ensure accessibility, provide live captions/ sign language interpretation, follow best practices for screen readable materials, color blindness etc,. Conduct meetings to they support cognitive accessibility
- Plan for sufficient breaks to give people time away from the screen

# Resources

AGU; Ethics and Equity Center. [Best Practices for Inclusive Remote Meetings](#). Accessed 02/15/2022

Haacker, R., M. Burt, and M. Vara (2022), Moving beyond the business case for diversity, *Eos*, 103, <https://doi.org/10.1029/2022EO220080>.

Levitis, E., Gould van Praag, C. D., Gau, R., Heunis, S., DuPre, E., Kiar, G., ... MAUMET, C. (2021, March 23). Centering inclusivity in the design of online conferences - An OHBM - Open Science perspective. <https://doi.org/10.31234/osf.io/vj5tu>

Liu, 2020: The surprising advantages of virtual conferences. [Scientific American](#). Aug 21, 2020

McLeod, P. L., S. A. Lobel, and T. H. Cox (1996), Ethnic diversity and creativity in small groups, *Small Group Res.*, 27, 248–264, <https://doi.org/10.1177/1046496496272003>.

NSF - Broadening participation. <https://www.nsf.gov/od/broadeningparticipation/bp.jsp>

Sarabipour 2020: Research Culture: Virtual conferences raise standards for accessibility and interactions. <https://elifesciences.org/articles/62668>

Skiles, M., Yang, E., Reshef, O. *et al.* Conference demographics and footprint changed by virtual platforms. *Nat Sustain* (2021). <https://doi.org/10.1038/s41893-021-00823-2>

The Biden-Harris Administration Immediate Priorities (2021) <https://www.whitehouse.gov/priorities/>

Traeger 2022: When scientific conferences went online, diversity and inclusion soared. [Chemistryworld](#), 01/27/2022

Viglione, G. 2020: How scientific conferences will survive the coronavirus shock. [Nature New Feature](#). June 02, 2020.

Wu, J., Rajesh, A., Huang, YN. *et al.* Virtual meetings promise to eliminate geographical and administrative barriers and increase accessibility, diversity and inclusivity. *Nat Biotechnol* 40, 133–137 (2022). <https://doi.org/10.1038/s41587-021-01176-z>

# Discussion for Breakouts

1. What opportunities do you see in making meetings more inclusive (in person, hybrid, virtual meetings)?
2. How can we improve the way we facilitate deeper connections between people at virtual conferences?
3. What challenges, tips, or strategies can you share?