



Redefining Math Conferences: A Panel

Robyn Brooks and Padi Fuster Aguilera

Note: The opinions expressed here are not necessarily those of Notices.

Introduction

In January 2023, a panel called “Redefining Math Conferences” took place at the Joint Math Meetings (JMM); this panel grew out of our work as founders of the Math for All conference. The goal of this panel was to create a space where organizers of inclusive conferences could share their experiences, successes, and thoughts about the work involved in organizing these events. In this article, we discuss our intentions for the panel, and its main takeaways.

This article is not meant to be a set of inclusive conference guidelines; for articles of this nature, the interested reader may wish to look at [JSTM⁺22, CH19] as a starting point. We want to acknowledge that the following comments, except those in quotes, are our own and have been filtered through our own personal biases and experiences.

The Math for All conference was founded with the purpose of fostering inclusivity in mathematics, with an explicit focus on nurturing a sense of belonging amongst attendees. As founders and organizers, we continue to invest time in learning how to provide participants with an open and friendly environment in which to learn and discuss mathematics. A big part of the work that we do relies on having an open mind and the desire to keep learning.

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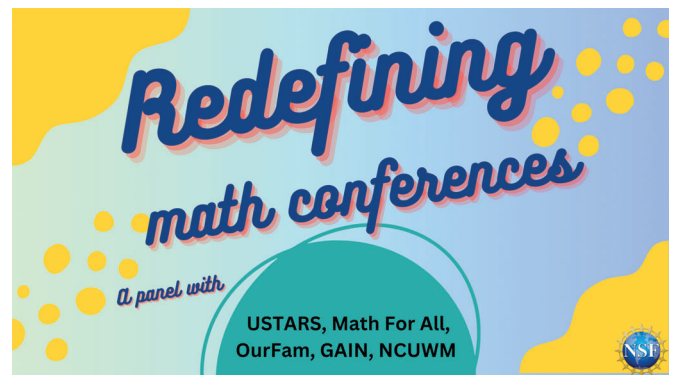


Figure 1. Flyer for the panel.

One way of doing this is to brainstorm and talk to others doing this work. This is why we decided to hold this panel with organizers of several math conferences that are centered around building welcoming math spaces. Moreover, we saw this space as an opportunity to create a networking platform and to foster community for all those engaged and interested in doing this work.

Intention and Panel Organization

The following is a list of the conferences and the panelist representatives. (If you wish to know more about these conferences, we have included their websites as footnotes.)

- **Graduates Achieving Inclusion Now (GAIN).**¹
Panelist: Seppo Niemi-Colvin, postdoctoral fellow at Indiana University at Bloomington

¹<https://sites.google.com/view/gainconference>

- **The Math For All in Clemson Conference.**² Panelist: Keisha Cook, assistant professor at Clemson University
- **The Nebraska Conference for Undergraduate Women in Mathematics (NCUWM).**³ Panelist: Christine Kelley, professor at University of Nebraska-Lincoln
- **The Online Undergraduate Resource Fair for the Advancement and Alliance of Marginalized Mathematicians (OURFA²M²).**⁴ Panelist: Zoe Markman, senior math major at Swarthmore College
- **The Underrepresented Students in Topology and Algebra Research Symposium (USTARS).**⁵ Panelist: Christopher O’Neill, associate professor at San Diego State University



Figure 2. Conferences represented on the panel.

The purpose of this panel was to both create a networking place for organizers of conferences and use the visibility that the JMM provides to reach out to a wider audience, and create awareness on the criticality of creating inclusive conferences spaces. Our goal for the panel was not to convince others that such spaces are necessary, but instead to work on growing and learning with community on how to effectively create more welcoming spaces for all. We also aimed to disrupt the JMM space by bringing these conversations there, with the hope that the JMM organizers would adopt some of the effective organizational practices discussed by the panelists.

By organizing this panel, we wanted to highlight the importance of creating inclusive conferences because we believe that having a welcoming space is key for participants to really engage and do great mathematics. As graduate students, we had been to many conferences where we had no sense of belonging—even with all the privilege that we carry, being white, cis-women, coming from families with members in academia—and this kept us from enjoying the mathematics. Those of you who have felt this before will immediately understand what we are talking about.

Insecurities and imposter syndrome are invisible barriers which hinder people from being able to enjoy and do mathematics. Welcoming spaces can help remove some of these weights and invite people to bring their full selves and thrive. Mathematics is more fruitful when these invisible barriers are recognized and counteracted. It is naive to believe that mathematicians can focus on just doing mathematics without removing these barriers, because of the mental energy that is required to exist in noninclusive academic spaces. This means that, when organizing a conference, figuring out how to remove barriers and create welcoming spaces must be centered. This focus is as important as thinking about the mathematical content of a conference. Ensuring that conference participants are able to fully contribute should be a central goal, not an afterthought.

We wished for our panel to be a place where we could work towards facilitating genuine community for all, and for it to be a meeting point for those wishing to do this work. By inviting organizers of these exemplary conferences, we ended up with a diverse group of panelists, which suggests that these conferences are already doing work to ensure diverse perspectives within their organizing committee.

The prepared questions for the panel were meant to have the panelists reflect on their intentions and experiences when organizing. We believe that conference organizing requires critical thinking, care, and constant reassessment of the small details. This time and effort is crucial when centering the participants and their experiences. We also wanted to identify and share specific conference practices that have been developed over time, from the creativity of the participants and organizers. We wanted to give the panelists time to share useful tips for other organizers or those who are thinking of doing this work. Finally, acknowledging that doing this work can also cause harm, we wanted to give panelists time to share some of their mistakes, and what they learned.

During the event, panelists introduced themselves, their conferences, and answered the following three questions:

- In the context of creating a conference that has a welcoming environment, what do you think is the most important thing to consider when organizing?
- Are there any good changes/ideas that you implemented in your conference that ended up in somebody being able to enjoy the conference?
- What mistakes have you made while organizing, for example, encountering a tough moment during the conference, and how did you deal with these mistakes?

²<http://tinyurl.com/mathforallconference>

³<https://math.unl.edu/ncuwm>

⁴<https://sites.google.com/view/ourfa2m2>

⁵<https://www.ustars.org>

Takeaways

We summarize the main takeaways from this panel as four points: accessibility, intention, diversity of voices, and growth mindset.

Accessibility. Accessibility was one of the main topics around which the panel discussion was centered. One focus of the conversation was that in-person conferences are not accessible to everyone—there are many reasons why in-person conference participation is unfeasible. To name a few, people may be unable to attend due to financial, health, or safety issues, care giving responsibilities, or because conferences are often only designed for able-bodied individuals. Since the pandemic started, in-person conference attendance has been increasingly challenging (or even impossible) for many of our colleagues. Moreover, many country- or state-specific laws can become invisible barriers for participants, such as abortion bans, anti-trans legislation, anti-immigration laws, etc. As a commitment to accessibility, conference organizers can provide a virtual participation option.⁶

During the panel, the OURFA²M² panelist spoke about their focus on accessibility on many different levels. The OURFA²M² conference is fully virtual. They use *Alt text* in all their advertising and encourage others to do the same. *Alt text* (Alternative text) gives an image description, which can be read aloud by screen-reading tools, among other uses. The OURFA²M² panelist also spoke about accessibility, in the context of removing barriers in the form of knowledge of the field. Within their conference and as resources on their website, OURFA²M² offers workshops on topics such as using LaTeX, applying for an REU, and crash courses as introductions to math research areas. Finally, OURFA²M² organizers are intentional in their work to invite participants and new organizers from community colleges and two-year degree granting institutions. By doing this, students from institutions that typically have less visibility and access to resources have a chance to be exposed to new opportunities to do math research, and venues to participate in the broader math community.

Along with these points, the Math For All panelist shared their poster workshops as a way to increase accessibility. These poster workshops are held at local institutions prior to the conference and are usually led by undergrad or grad students. The main focus of these workshops is to demystify the process and to give tools to undergrads for creating a scientific poster from scratch. In particular, in these workshops facilitators introduce students to LaTeX and Overleaf and discuss topics such as how to find a mentor and a poster topic, as well as how to present a poster

effectively. Additionally, free poster printing is provided to all participants presenting a poster at the conference.

Another common feature amongst USTARS, NCUWM, and Math For All is that they provide travel funding for participants at different levels. (Note that GAIN and OURFA²M² are fully virtual, so the cost of travel is zero.) When possible, conference organizers pay directly for food, travel, and lodging instead of providing reimbursements. This practice can be key in allowing participation of those without the financial resources to pay costs ahead of time.

Intentionality. Intentionality was a recurring topic brought up during the panel in order to set up inclusive and safe spaces. Safe spaces cannot be possible without collective agreement and effort from all participants. In order to create this collective action and mindset, conference organizers must be intentional in setting the stage at the beginning of the conference and throughout the event.

In this spirit, the Math For All panelist talked about their conference opening remarks in which they include snippets of the history of the place where the conference takes place, in order to disrupt the predominantly white cis-male academic space and create space for those who do not identify with this group. Additionally, the conference has an ethical conduct agreement which participants agree to abide by during registration. This agreement is also read out loud at the start of the conference to set the tone and allow participants to reflect on it. The goal of this is to center the importance of the agreement to the conference dynamics, and to remind participants that a safe and welcoming space is not possible without everyone's collaboration.

The NCUWM panelist talked about assigning seating for the opening banquet where each table has a faculty member, undergrads from different institutions, and an invited guest or mentor in order “for participants to meet several others right away and become comfortable talking with others they do not know.” The conference intentionally invites speakers and mentors from diverse backgrounds and experiences, such as career trajectory, type of institution, racial, ethnic, and sexual orientation. This is so that “each participant [can] recognize someone who they can identify with who may inspire them (like an “I can do this, too” realization).”

During the NCUWM networking dinner, invited professionals and other mentors are assigned specific tables, and the undergraduate participants choose where to sit. At dessert, seats are rotated, so that participants have the ability to network with a larger group of people. This gives students who may be more shy or less confident a means of meeting role models.

The GAIN conference has the goal of being a space for mathematicians to talk about issues of discrimination and systemic inequity. The GAIN panelist spoke about

⁶*Letter to the AMS: A call to defend bodily autonomy in the mathematics community:* <https://sites.google.com/view/bodily-autonomy-in-math>

how this goal shaped the conference: what kind of topics would be discussed and the structure of the talks and participant interaction. For instance, the conference was spread over several weekends. Each weekend had a different discussion topic including sexism, racism, homophobia, ableism, and mental health. During these weekend events, a mathematician would give an introductory talk about the specific issue, and space was allotted for participants to discuss and debrief on the issue itself, as well as its impact on the mathematical community. The panelists emphasized the importance of bringing these issues, which are often not considered *mathematical topics*, into mathematical spaces. Without talking about and working to address these issues, which affect many mathematicians, inclusivity is not achievable.

Diversity of voices. A recurring theme during the panel was the importance of 1) having a diverse group of organizers in order to better serve the conference participants and 2) listening to the people that you want to serve.

The OUREFA²M² conference was created by undergraduate students who identified a need to create resources for their peers and themselves. Within the organizational group, there is a diversity of voices to better serve their participants' needs. For example, all the accessibility practices mentioned before came from having organizers with different accessibility needs. The OUREFA²M² panelist spoke specifically about how the organizers focus on creating an exhaustive list of groups that need to be included and served within the mathematical community.

Similarly, the USTARS conference was originally started by graduate students from underrepresented groups in math. The current set of organizers are past attendees who were positively impacted by the conference, and wanted to continue the work, so that future students would also have a place where they felt that they belonged. Specifically, the USTARS panelist talked about how this practice preserves the founding goals and allows the conference to adapt to the needs of the groups that it works to serve.

As a result of the numerous iterations of USTARS and NCUWM and their continuity in serving students in mathematics, they have built a very strong community both at and across conferences. More generally, all the conferences represented by the panel have made a big impact on the math identity of participants.

Growth mindset. Another common theme was the necessity of having a growth mindset when organizing conferences. This involves not seeing the practices and structure of the conference as fixed, but instead spending time reflecting and updating these practices based on feedback from the participants.

For example, the NCUWM panelist mentioned their implementation of small group discussions during the conference with topics focused on intersectional issues faced

by women in math. This conference component was implemented as a suggestion from a past participant, and has become a very valuable space for connection among attendees.

Through explaining challenging moments that the organizers had faced, the Math For All panelist mentioned the importance of having volunteers whom you trust to be able to handle situations that might come up during the conference. However well-intentioned, careful, or trained an organizer is, there may be instances where certain practices or oversight can cause harm. Given this possibility, it is important to have a structure in place to address issues as they arise so that conference organizers can listen and respond to unexpected situations. In addition, making space for reflection and implementing changes based on feedback from participants can help improve future conference iterations.

Apart from these main takeaways, the questions of the audience brought up other important themes. One of the themes was that, while many people attempt to address the presence of sexism, racism, etc in mathematical spaces, often classism and its effects are not mentioned. Classism is present and rooted in academia, not only because of the cost of higher education, but also because of the inherent privilege that comes with being able to access higher education. Additionally, there is a hierarchy within academic spaces, e.g., level of position and salary, that creates classes within the mathematical community. During the panel there was not a concise idea of how to address this issue while organizing conferences, other than creating spaces where academic hierarchy is not a barrier to participant interaction, or reaching out and advertising to colleges with fewer resources. In any case, this remains a subject for us to reflect on.

Another theme that was discussed was how to reach out to those who do not care about the importance of inclusivity and diversity. The general sentiment was that it is not the responsibility of a conference organizer to convince others of the benefits that come from inclusive practices in mathematics. The focus of the work should go towards intentionality and care toward the community. A commitment from each participant to listen, learn, and challenge one's biases is essential to work towards creating safer spaces.

The last theme discussed was how big conferences such as the JMM could implement some of the good practices that had been brought up during the panel. In the later years, big conferences have started adapting ethical conduct agreements and safe practices but given the resources and staff available to the organizations that run these conferences, more can be done. For example, having a conduct agreement but not bringing it up throughout the conference makes it somehow a static document and it can

become meaningless. For safe practices to have meaning, they need to be accompanied by actions and commitment on behalf of the organizations responsible for designing the event.

One main practice that was brought up was the fact that JMM has no virtual option for participants and there seems to be no intention of implementing this option in the foreseeable future.⁷ In fact, this was one of the downsides when organizing this panel, because we did not have control over having a virtual option for it. This type of accessibility has a huge impact on who is able to attend and benefit from these conferences, and this in turn acts as a gateway, preventing participation and limiting opportunities for many people.

Concluding Remarks

The main message that we would like to convey is that **centering inclusion throughout conferences can only give rise to more prolific mathematics, as everyone is able to engage in mathematical topics and with the conference community. Therefore, if the goal of a conference is truly to maximize the mathematical outcomes, then this side of conference organization cannot be omitted. It is just as important to provide welcoming and safe spaces in which people can collaborate and reimagine how to live in a better, more just world for everybody.**

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⁷We reached out to meet@ams.org to see if they were considering having a hybrid mode for JMM in the future, and they said they were not considering it at this time.



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Credits

Figure 1 is courtesy of Padi Fuster Aguilera and Robyn Brooks. Figure 2 is courtesy of Padi Fuster Aguilera, Robyn Brooks, OURFA²M², Math for All, and USTARS.

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