Survey: The Future of Conferences

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A new survey of attitudes on in-person and virtual technical conferences

In 2020, the Covid pandemic changed the way that everyone collaborated for work and school. It also transformed technical conferences.

In 2022, we ran a simple survey of about 331 people, most of the people working in computer and information sciences. We asked questions about their attitudes towards virtual and hybrid conferences.

This report is a summary of a new 2024 survey revisiting many of the same questions. This survey received 305 responses. Attitudes about virtual versus in-person conference attendance have evolved between 2022 and 2024. The respondents to the 2024 survey are ready to get back to in-person interactions.

Conference attendance is recovering slowly after the 2020 pandemic. Respondents report that, on the average, they attended about 4 conferences in the past year – with an average of 1.8 in-person conferences, plus 0.8 hybrid and 1.3 virtual conferences. In-person conferences are definitely more popular, but virtual and hybrid may still serve the needs of many conference attendees.

In this new survey, it was possible to make comparisons about conference attitudes between 2022 and today, but not too much has changed. The top "conference obstacles" and "preferences" from the 2022 survey were mostly unchanged in the new survey.

Topic 1: In-person, virtual, hybrid: which is best?

➢ ***Question:*** *How do you prefer to attend a conference?*

The respondents were offered three choices, return to: **in-person** conferences, **hybrid** conferences (supporting both in-person and virtual online attendance), or **virtual** conferences (all online). In this 2024 survey, in-person was the preferred conference mode for over half of the respondents:

- Prefer hybrid - 100 respondents (33%)
- Prefer in-person - 159 (52%)
- Prefer virtual - 28 (9%)
- Not planning to attend future conferences - 17 (6%)

In the 2022 survey, 54% preferred hybrid, 36% in-person, 9% virtual, and 1% did not plan to attend future conferences. It is a statistically significant increase in the number of people who prefer in-person.

Topic 2: Conference challenges (for virtual and in-person)

The survey posed a series of questions to probe for ideas and opinions about the obstacles and benefits for each conference mode – to learn what might be improved to increase attendee value.

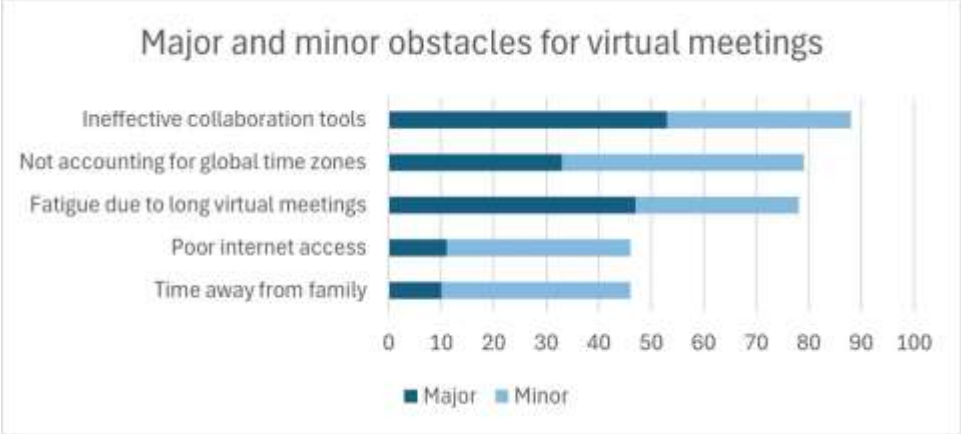
- ***Question**: What do you find challenging for a virtual conference?*

The survey polled respondents to select *major issue*, *minor issue*, or *not an issue* for each of five different potential challenges. The following three items were rated as challenging (major and minor issue responses) by almost everyone in the survey:

- Ineffective collaboration tools - 88%
- Programs that don't account for global time zones - 79%
- Fatigue due to long virtual meetings - 78%

In the 2022 survey, the top challenges for virtual conferences were ineffective collaboration for casual discussions, ineffective collaboration for interactive discussions, inconvenient schedule for people in global time zones, and fatigue due to long virtual meetings.

The same obstacles were at the top of the list in the 2024 survey:



	Ineffective collaboration tools		
2024 survey	53% Major issue	35% Minor issue	12% Not an issue

The 2022 survey had two questions about collaboration tools obstacles:

	Ineffective collaboration for casual discussions		
2022 survey	68% Major issue	26% Minor issue	6% Not an issue

	Ineffective collaboration for interactive discussions		
2022 survey	48% Major issue	41% Minor issue	11% Not an issue

There were small increases from 2022 to 2024 in the assessment of two other significant obstacles: online meeting fatigue and multiple time zones.

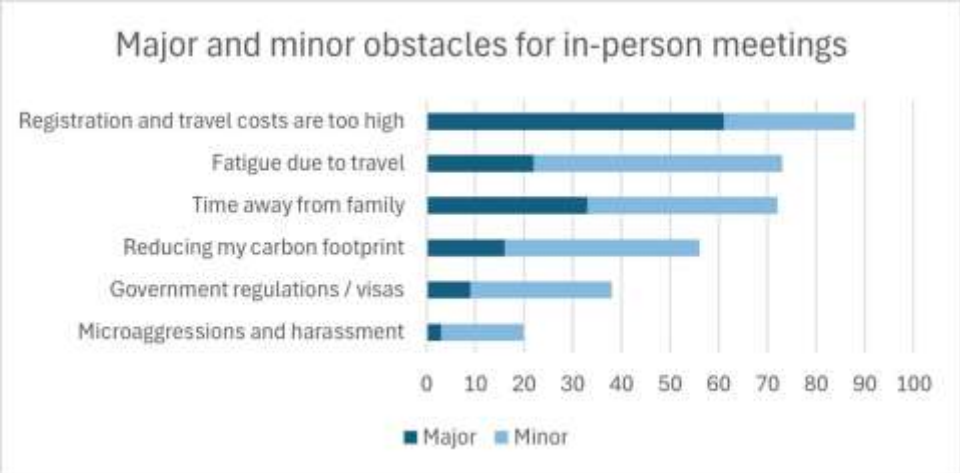
	Fatigue due to long online meetings		
2024 survey	47% Major issue	31% Minor issue	23% Not an issue
2022 survey	49% Major issue	37% Minor issue	14% Not an issue

	Programs that don't account for global time zones		
2024 survey	33% Major issue	46% Minor issue	21% Not an issue
2022 survey	39% Major issue	49% Minor issue	12% Not an issue

Impediments to in-person conferences

In the 2022 survey, pandemic-related health concerns were high. But in 2024, other top issues "rose to the top" of the survey respondents' concerns. The issues rated as the biggest impediments to in-person conference attendance included cost, fatigue, and time away from family.

- ***Question****: What do you find challenging for an in-person conference?*



The 2024 had an increase over 2022 in respondents worried about conference costs, but the other issues stayed relatively stable from 2022.

Cost for registration and travel

- 61% Major issue, 27% Minor issue, 12% Not an issue
  (in our 2022 survey - 41% major, 42% minor, 17% Not an issue)

Fatigue from conference travel

- 22% Major issue, 51% Minor issue, 27% Not an issue
  (this question didn't appear in our 2022 survey)

Time away from home and family

- 33% Major issue, 39% Minor issue, 28% Not an issue
  (in our 2022 survey - 29% major, 45% minor, 26% Not an issue)

Note also that we asked the "micro-aggression/harassment" question in both surveys, and the results were just about the same. It isn't a major issue, but as we pointed out in the 2022 survey report, this doesn't mean it isn't important.

We stand by our 2022 statement: "We cannot be complacent just because it is seen as "not an issue" by 82% of the survey respondents. We must not condone any degree of "bad behavior" at conferences, especially micro-aggressions and harassment directed at attendees with less "power" (especially students)."

Microaggressions & harassment

- 3% Major issue, 17% Minor issue, 80% Not an issue
  (in our 2022 survey - 3% Major, 15% Minor, 82% Not an issue - no big change)

"Carbon footprint" – the carbon cost of all the attendees traveling long distances to attend an in-person conference – is cited as one of the side-benefits of the move to virtual and hybrid conferences. But the survey didn't indicate much change in attitudes about carbon costs.

Reducing carbon footprint was mostly unchanged from 2022:

- 16% Major, 40% Minor, and 44% Not an issue
  (in our 2022 survey - 21% Major, 43% Minor, and 36% Not an issue - no big change)

There is a slightly higher proportion of people outside of North America that identified carbon footprint as a major issue, but it isn't a statistically significant difference. (For non-North America respondents: 21% Major, 44% Minor, 35% Not an issue.)

In addition to the identification of challenges, survey respondents were prompted to share some data about what they find valuable in a conference. The respondents were asked to select *greatest importance, moderate importance, and least importance* for each of five different potential benefits.

- ***Question****: What do you find most valuable post-conference?*

With the return of more in-person conferences, it is not surprising that "Hallway conversations" would be rated very highly. There were several questions that explored the kinds of interactions respondents valued highly. They explained that for them, conferences are a good place to meet new people and make connections:

2024 survey	Greatest value	Medium value	Greatest + Medium
Making connections	85%	12%	97%
Hallway conversations	60%	32%	92%
Feedback on my research work	32%	46%	78%

When you come home from a conference, you may decide to review some of the written or recorded materials connected to conference presentations – papers in the conference proceedings plus supplementary materials such as slides and videos from the conference sessions.

There were a couple of similar questions in the 2022 survey:

2022 survey	Greatest value	Medium value	Greatest + Medium
New ideas and/or connections to attendees	70%	26%	96%
Feedback on material I presented	17%	42%	59%

We asked questions about the relative value of these conference materials. Academics on the average put a higher value on conference proceedings than industry developers and managers. The opposite was true for slides and videos.

	Greatest value	Medium value	Greatest + Medium
Proceedings (industry & managers)	24%	45%	69%
Proceedings (academics)	42%	34%	76%
Slides (industry & managers)	36%	49%	85%
Videos (industry & managers)	35%	45%	80%
Slides (academics)	20%	43%	63%
Videos (academics)	22%	36%	58%

Topic 3: Affordability, access, and future conference attendance

The 2022 survey asked a few questions about conference costs, but we wanted to learn more.

One new area of inquiry in the 2024 survey was a series of questions about who pays for conference attendance. We learned that there is a big difference between conference attendees from companies versus universities.

- ***Question**: Who pays for your conference travel and registration?*

Company (or university) pays	154 (50%)

Research grant pays	31 (10%)
Student fellowship or grant	2 (1%)
Self-pay	73 (24%)
Company gives me time off, I pay fees and travel	20 (7%)
Paid by conference (Speaker or Volunteer)	14 (5%)
Other	11 (4%)

This table divides the funding source data for respondents working in different parts of the field (academic versus industry developers versus managers):

	Company pay + Grant	Self-pay + Time off	Paid speaker or volunteer	Other	Total
Industry developer	52 (47% of developers)	45 (41%)	6 (5%)	7 (6%)	110
Academic	66 (87%)	9 (12%)	1 (1.3%)	0 (0%)	76
Manager	56 (64%)	25 (29%)	5 (6%)	1 (1%)	87
Other	13 (41%)	14 (44%)	2 (6%)	3 (9%)	32

This confirms what we already suspected… Many industry developers (41%) say they are paying for their conference attendance on their own. The vast majority of academics have their universities or their research grants covering their registration and travel costs.

The question of "who pays for conference attendance" is related to another survey question: do the respondents think that conference cost is a major issue?

One question asked if cost was an issue:

- Is Registration and Travel Cost a major issue / minor issue / not an issue

We correlated the answers to that question with the "who pays" question:

	Is cost an issue?			
	Major issue	Minor issue	Not an issue	Total
Self-pay + Time off	63 (68% of self-pay)	18 (20%)	11 (12%)	93
Company pay + Grant + Paid speaker	115 (58% of non-self-pay)	62 (30%)	24 (12%)	201
Other	7 (63% of other)	2 (20%)	2 (20%)	11
Total	185 (61%)	82 (27%)	37 (12%)	305

What did we learn? For a significant fraction of the "self-pay" community (the people who pay for conference registration and travel from their own pockets), the cost is a major issue – but the high cost of registration and travel is still on our minds even if our company or research grant will pay the bill.

If high costs continue to be a barrier to attendance, especially for in-person conferences, conferences may lose attendance and influence over time.

Are people still going to conferences?

Survey respondents reported how many conferences of each type they attended in the past year:

Percent of respondents who attended N conferences in the past year (*2024 survey*)				
	1 conference	2	3	4 or more
In-person conferences	21%	24%	12%	17%
Hybrid conferences	24%	10%	4%	6%
Virtual conferences	22%	11%	7%	12%

The numbers for 2021 conference attendance (in the 2022 survey) were very different:

Percent of respondents who attended N conferences in the past year (*2022 survey*)				
	1 conference	2	3	4 or more
In-person conferences	14%	3%	0%	0%
Hybrid conferences	23%	10%	3%	0%
Virtual conferences	32%	29%	22%	33%

From the 2022 survey:

- The average respondent attended 2.5 conferences in 2021 – almost all were virtual.
- The average respondent planned to attend 3.5 conferences in 2022, with 41% of them virtual.

For the 2024 survey:

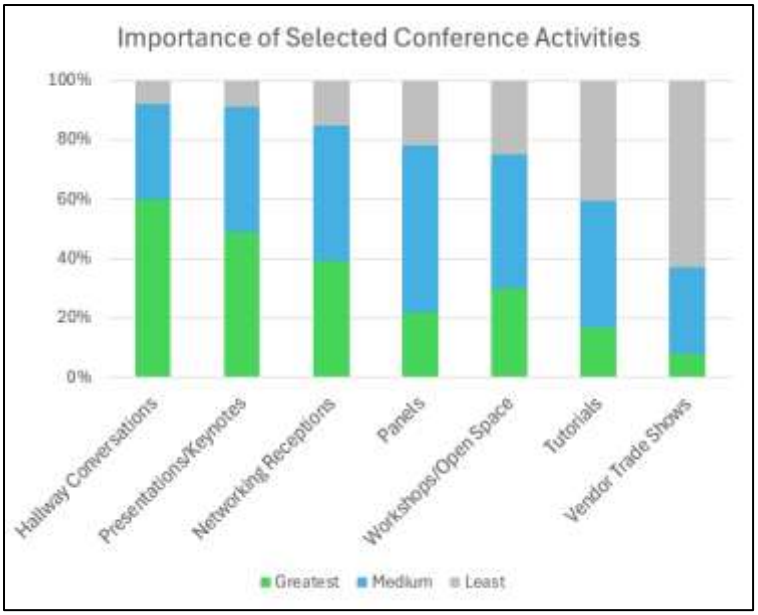
- The average respondent attended 4.0 conferences in the past year, about half were virtual or hybrid. 63% of the respondents report that they attended at least one virtual or hybrid conference.

It is interesting that attendance at virtual conferences continues to be more popular than hybrid conferences, probably because the number of hybrid conferences has remained fairly small. 53% of respondents attended at least one virtual conference, but only 43% attended at least one hybrid conference.

But it is also clear that everyone is ready to attend in-person conferences again. 75% of respondents said that they attended at least one in-person conference.

Why do people attend conferences?

Here are a few things that we learned from the survey questions that rated what attendees found valuable. Almost everyone thought that Hallway Conversations were valuable, but much fewer found that Vendor Trade Shows were valuable.



Hallway Conversations

- Hallway Conversations were considered valuable by everyone.
- 60% rated Hallway Conversations as "Greatest Importance". They are more valuable to Academics than anyone else (71% of academic respondents said "Greatest Importance").

Presentations & Keynotes

- Presentations and Keynotes are more valuable to Managers than anyone else.
- 59% of managers rated Presentations & Keynotes as "Greatest Importance". Among the non-managers, only 46% said "Greatest Importance".

Tutorials

- No one is strongly interested in Tutorials
- Only 17% of respondents rated Tutorials as "Greatest Importance", and 41% said "Least importance".

Vendor Trade Shows

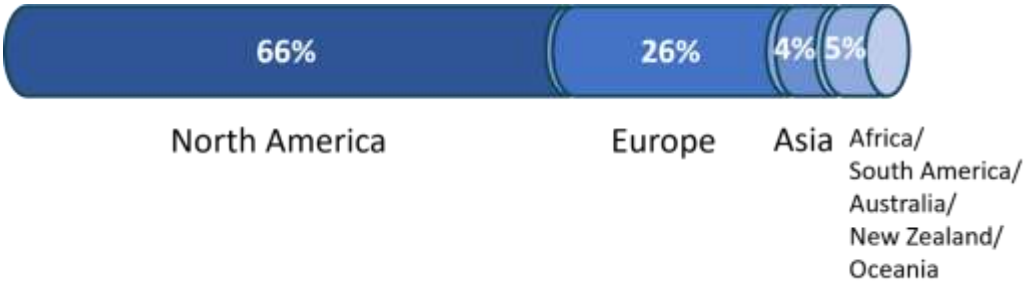
- No one is strongly interested in Vendor Trade Shows
- Only 8% of respondents rated Vendor Trade Shows as "Greatest Importance", and 63% said "Least importance".

A few statistics about the survey population

The survey collected responses from 305 people:

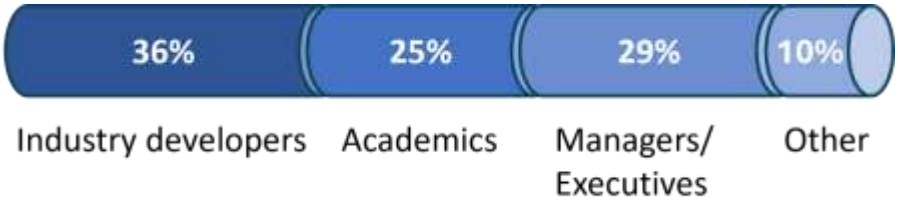
- 201 (66%) from North America
- 79 (26%) from Europe (including UK)

- 11 (4%) from Asia
- 14 (5%) from the southern hemisphere



The distribution of respondents was:

- 110 (36%) from industry, including software developers and independent contributors, consultants, and coaches
- 76 (25%) from academic research, including students
- 87 (29%) managers and executives
- 32 (10%) who identified as "other"



The distribution of the size of the respondents' work organization was:

- 76 (25%) very small (fewer than 5 employees)
- 33 (11%) small (5-99 employees)
- 44 (14%) medium (100-999 employees)
- 72 (24%) big (1000-9999 employees)
- 80 (26%) very big (10,000 employees or more)

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Most of the respondents attend conferences regularly, and they attend a wide range of meetings. To gauge the breadth of conference experience, the survey asked respondents about which conferences they liked to attend:

➢ ***Question:*** *What conferences do you regularly attend?*

244 (80%) respondents named at least one conference. There was an amazing range of answers. Over 700 different conferences were mentioned in the responses, everything from AAAS to JavaZone to QCon to XP.

Some notes for the organizers of future conferences

Conference organizers need to "serve their conference communities." There needs to be a balance – many successful conferences attract many of the same attendees year after year, but also attempt some outreach out to expand the community. In some fields, the organizers of in-person conferences make an extra effort to promote attendance from people in the local region, especially by offering low-cost tutorials and training in some of the basics.

In order to anticipate conference attendee needs, conference organizers should orchestrate surveys, to collect more community-specific information about the attitudes of both "old-timers" and "newbies" and increase the conference's "value proposition" for perspective attendees. In such a survey, questions should ask conference attendees "what is working well?" and "what kinds of new things can we do to improve the conference?"

A conference with a significant "repeat business" might want to retain a more traditional conference structure – with a handful of experimental hybrid sessions to attract new non-local attendees. But a conference looking to expand its community of presenters and attendees may try to be more experimental, and more willing to try new community engagement strategies.

The authors have experience in orchestrating internal company conferences using virtual technology with presenters and audiences in multiple sites and time-zones, and we've learned that many people may choose to attend only a small fraction of a virtual conference. The sessions need to be organized in blocks attractive to the needs of different "sub-communities." The organization of the conference into smaller "chunks" – with related presentations grouped together, plus an awareness of which competing sessions might conflict with each other for audience share – is critical to give attendees a positive experience.

Summary

The survey data is clear that while some love attending conferences without travel, others really desire direct personal interaction. Some of the obstacles to virtual meetings have been clearly delineated in the survey. It may take a combination of technology and conference re-design to make the future of conferences virtual while sustaining the high-touch interactions of the past.

This isn't a completely scientific study, but the data is still useful for considering the future of conferences. Virtual and hybrid conferences will continue to provide value to many people. We hypothesize that survey respondents are much more likely than the general population to attend conferences and use virtual technology. Data may be found in [1].

About the authors:

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References

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