
CIDR 2022 Report – Our experiences managing a hybrid conference

Gabor Szarnyas (CWI), Kevin Wilkinson (CIDR
Foundation)

Contents

- Introduction** **3**

- Conference setup** **3**
 - Introduction 3
 - Dates of the conference 3
 - Registration 3
 - Zoom 4
 - Meeting hosts 4
 - Configuration of the meetings 4
 - Registration 5
 - Configuration 5
 - Sending out invitations 6
 - AV setup 7
 - Alternative setup 7
 - Meeting setup 7
 - Keynotes and satellite events 8
 - Q&A sessions 8
 - Slack 9
 - Twitter 10
 - YouTube 10
 - Calendar 10

- Lessons learnt** **10**
 - Summary of the post-mortem meeting 10
 - Registration process 11
 - Zoom links 11
 - Generating personalized Zoom links 11
 - Talks 12
 - Zoom setup 12
 - Communication 13
 - YouTube 13
 - Online interaction 13
 - Hotel contract 14
 - Preparing for the conference 14

- Template** **14**

Introduction

We recently organized the [CIDR 2022 conference](#) which was run in hybrid mode between Jan 10 and Jan 12. In this report, we document the details on the conference configuration and the lessons learnt while organizing this event. If you have any feedback about the conference, please let us know at cidrdb@gmail.com.

This report is available at <http://cidrdb.org/cidr2022/report/cidr2022-report.pdf>.

Conference setup

Introduction

[CIDR](#) is a database conference held each year alternating between California and Amsterdam. Due to COVID restrictions, the 2021 event was fully online while the 2022 event was hybrid, held physically at Chaminade Resort and online via Zoom. We allowed presenters to be remote but all session chairs were on-site. Apart from Zoom, no other collaboration tools were needed by conference participants.

Dates of the conference

The [program](#) was 2.5-days long, with the first two days stretching between 7:30-17:30 Pacific Standard Time (corresponding to 17:30-5:30 Central European Time) and a final, half-day ending at noon.

Registration

Participants could attend the conference in-person or online via Zoom. Registration was a two-step process. First, people completed the CIDR registration web-form (created with Google Forms). Second, in-person attendees were directed to a Chaminade website to reserve and pay for a room and online attendees were directed to an EventBrite website to register for the Zoom.

In-person registration closed two weeks before the start of CIDR. Online registration closed one day before CIDR. Once closed, we then created and emailed personalized Zoom links to all attendees (see below). A few online registrations trickled in after this but they were easy to manage except the ones that we got **after the Zoom meeting started**:

Warning. It is not possible to add new Zoom registrations while the meeting is active.

Zoom

The online part of the conference was held on Zoom. CIDR is a single-thread conference so we used a single Zoom meeting for the entire conference. Individual Zoom links (private URLs) were provided to all participants (both online and in-person) to connect to the Room.

Meeting hosts

We used the Zoom account of Gabor Szarnyas under the CWI organization. This account is set up to allow up to 300 participants.

We set Peter Boncz's CWI Zoom account as an "Alternative host" of each event. The benefit of this setting is two-fold:

- the alternative host is able to start the meeting and
- the alternative host is automatically elevated to be a co-host of the meeting when they join an ongoing meeting.

Warning. Adding alternative hosts from outside the CWI domain is still not possible (due to a limitation of Zoom). It is only possible to designate these users as co-hosts once the meeting started.

Configuration of the meetings

We created the CIDR Zoom meeting with the following settings:

- Registration: (yes) Required
- (no) Only authenticated users can join meetings
 - Turning this off enables participants to join without signing in to a Zoom account. We chose this to avoid delays caused by participants having to log in to Zoom.
- (yes) Waiting room
- (yes) Mute participants upon entry
- (no) Request permission to unmute participants
 - This would allow us to unmute people without their consent.
- (no) Allow participants to join anytime

Registration

Configuration

Once the Zoom meeting is created, go to the meeting page, **Email Settings** and check:

- (yes) Send Confirmation Email to Registrants.

Settings:

- Email Contact: "CIDR 2022"
- Subject to "Personalized Zoom link for CIDR 2022".
- Email content:

This email contains your personalized Zoom link for the conference. We will use the same Zoom meeting for the entire duration of the event.

Looking forward to seeing you in Chaminade or online!

The organizers

Zoom has settings that cannot be specified when creating a meeting. Instead, they can only be changed using the Zoom API or live during the meeting. Therefore, we configured the following setting at the start of each day once the meeting was started:

- (no) Allow participants to unmute themselves

We have previously observed that participants of Zoom meetings sometimes ask for the passcode even when it is encoded in the URL. We think this happens because Zoom sometimes "forgets" the passcode – this might happen in case many redirections occur in the browser or when joining the meeting was unsuccessful the first time (e.g., because the user was in another meeting). To mitigate this problem, we set the passcode `c i d r`, which is easy to remember and type.

Note. We have considered allowing participants to unmute themselves. However, our observation was that some participants accidentally unmute themselves, introducing their microphone rubbing against clothes, background noises, etc. Due to a large number of participants, this would have introduced considerable noise so we disabled this option.

Warning. Zoom has settings that are configured at an organizational level that only administrators can change. This includes configurations such as whether it is possible to turn off the "start video on entry" feature (the CWI default Zoom feature does not allow turning this feature off when creating a Zoom meeting). Therefore, make sure to check these settings early and contact your sysadmins if necessary.

Sending out invitations

We had about 200 participants in total, about 75 on-site plus 125 remote.

Automatically We tried using the Zoom API to bulk register the Zoom participants from a CSV file. The API does authorization using a JSON Web Token (JWT), which can be generated at <https://marketplace.zoom.us/develop/create>. **Generating the token requires developer privileges.**

Unfortunately, this did not work due to a bug in the SSO setup used by CWI's Zoom account: we found that it resets user privileges after each login.

Manually We performed the registration manually. This entailed entering the name and email address of each attendee on the CIDR Zoom meeting webpage.

- We first tried Chromium browser but found that it throws HTTP 401 errors quite frequently after registering the first 20 participants.
- When using Firefox with a private browsing session, the HTTP 401 error did not occur. The main thing slowing down the registration is the captcha that comes up quite frequently (select chimneys, bridges, stairs, etc.).
- We did not try other browsers.

We found that the following workflow worked best:

1. Open a private browsing window, open the registration page.
2. Wait for the cookie pop-up to be displayed. It does not matter whether you select "accept" or "deny".
3. Open ~30-40 registration pages.
4. Fill in the registrations.
5. Close the private browsing window.
6. Go back to point 1.

Repeat this until you have no registrants left.

The average time to register an attendee was about 20 seconds.

Note. It is best to have Zoom send out the registration emails. For CIDR 2021, the Zoom emails were sent from a CWI address and we noticed that some addresses bounced.

AV setup

At the conference venue, we had the following setup.

- CIDR Presenter: main laptop on the podium, used for screensharing
- CIDR QA: secondary laptop for the on-site Zoom moderator

We had two cameras: one focused on the presenter podium (linked to the CIDR Presenter laptop) and one focused on the Q&A "podium" (linked to the CIDR QA laptop).

There were two microphones, one on each podium. These were multiplexed and fed into the conference room overhead speakers and also into the CIDR QA laptop to provide audio for the online participants. The CIDR Presenter laptop was muted.

For remotely given talks, the Zoom focus was switched to the presenter. We required remote presenters to submit a pre-recorded version of their talk. This would be played in the event the presenter's Zoom connection fails.

This setup was simple and avoided any echo. However, due to the multiplexing, Zoom was unable to automatically change its focus (the video feed shown in "Speaker view") to the person speaking (someone presenting, someone asking a question in the room, or someone asking a question remotely). Therefore, we controlled this manually.

Alternative setup

We experimented with an alternative setup. The room had a physical switchbox which allowed changing between the camera filming the podium and the video output of the presenter laptop. We considered using the output of this switchbox for streaming. However, the switchbox lacked picture-in-picture support, meaning that remote participants would have been able to see either the presenter or the presented slides but not both. This would lead to a suboptimal viewing experience, so we decided against using this setup.

Meeting setup

Starting the meeting (once per day) At the start of the day, we started the Zoom meeting and set the (co-hosts) as follows.

- Gabor Szarnyas (CIDR Zoom moderator): **host** -- machine for video playback if required
- Gabor Szarnyas [secondary Zoom account]: **co-host** -- machine for controlling co-host privileges
- Peter Boncz [set to co-host automatically]: **co-host**

- Fatma Ozcan: **co-host**
- CIDR Presenter: **co-host**
- CIDR QA: **co-host**
- session chairs: **co-hosts**

(Gabor: I used two laptops. I logged in with my CWI account on my Zoom moderator laptop and another Zoom account on the secondary laptop.)

Each day, a few minutes before the conference was to start, we disabled the waiting room and admitted the participants in the waiting room to the meeting.

Starting the sessions Before the start of each session, we tried to identify the speakers presenting their papers online and elevated them to co-hosts.

Spotlighting Zoom has two similar facilities for controlling the main video feed (i.e., the one that shows up in speaker mode): "pinning" and "spotlighting". We found that pinning did not work reliably and therefore used spotlighting. Typical spotlighting setups were the following:

- During a session's opening: CIDR Presenter, CIDR QA
- During an on-site talk: CIDR Presenter
- During an online talk: the remote speaker
- During the Q&A: CIDR Presenter, CIDR QA, the remote speaker (if applicable), and remote attendees asking questions

Zoom allows for both replacing the video feed in the spotlight and adding/removing ones.

Keynotes and satellite events

The keynote talks were given on-site and recorded.

- The Diversity and Inclusion event, Women in Databases, was held in a separate Zoom meeting (created by a different Zoom account) so that it could overlap with the conference Zoom. A single Zoom link was used for this event (as opposed to personalized URLs).
- The evening sessions, the Gong Show and the Start-up Panel, were presented in the conference Zoom meeting.

Q&A sessions

We strived to make CIDR as interactive as possible and involve the online audience. We found the following workflow was best to facilitate discussions:

1. Participant X raises their hand using the Zoom "raise hand" feature.
2. X optionally turns on their web camera.
3. X is put in the spotlight by the Zoom moderator.
4. The session chair announces that participant X has a question.
5. The Zoom moderator asks X to unmute (see below).
6. X accepts to unmute and asks the question.
7. The presenter answers the question.

The Zoom chat window was also used by online participants to submit questions. The session chair would monitor the chat and ask questions on behalf of participants. The chat window was also a source of lively discussion by online participants. Unfortunately, this discussion was invisible to the Chaminade audience.

Instructions for unmuting:

- Press the "Ask to unmute" blue button in the video window of X (if they have turned their camera on) or by selecting the entry of X in the Participants window. Note that this button does not change immediately after clicking. Eventually, it changes into a button that says "Mute" but this only happens *after* X has accepted to unmute. So, if you hit the button, do not see a change and hit it again, it could happen that X just unmuted, the button became a "Mute" button, and by hitting it again you have muted them. So, aim for the center of the button, hit it once, and trust it worked.
- If X hits mute after asking their question, they cannot go off mute by themselves. So, if there is a follow-up, the chair/co-hosts should check whether X is unmuted again.

Warning. When trying to unmute users in the Participants window, user entries can "jump up and down" (due to some participants entering/leaving the session). To prevent this, it is worth using the "search participant" box (which appears once there are about 10+ participants). Once the first few characters of the participant's name are typed, the "jumping" should be reduced to a minimum.

Slack

We created a private Slack instance only for CIDR organizers. (`cidr2022-org`). This proved useful for side-discussion during the conference (e.g., AV issues).

We integrated Twitter and GitHub notifications into Slack. These are simple to add (e.g., install the GitHub app, connect to the `cidrweb`, then issue the following command in Slack: `/github subscribe cidrweb/cidrdb.github.io`).

Twitter

The CIDR Twitter account, [cidrdb](#), has about ~200 followers at the start of the conference. That grew to 400+ followers by the end of the conference. We used this Twitter account to announce the daily program and the keynotes, Additionally, this Twitter handle served as a center for the conversation around the conference, e.g., people tweeting about their papers or about talks they have seen. We retweeted most tweets with @c i d r d b in them which worked well for drawing attention to the account.

YouTube

We have uploaded the pre-recorded talk to YouTube and set their visibility to **unlisted** (accessible through the link but included in search results). After the conference, we changed their visibility to **public**.

We uploaded the keynotes after the day's sessions have finished.

Calendar

We created a calendar with the conference sessions in Google Calendar and shared it publicly. Participants could import it to their calendar, and get the time slots converted into their own timezones.

Lessons learnt

Summary of the post-mortem meeting

Soon after CIDR 2022, the organizers held a meeting to review the conference. There was general agreement that:

- Zoom worked well for local and remote presenters.
- AV setup with two cameras and two wired microphones was adequate.
- Use of Zoom chat for Q&A and discussion worked ok but the chat log was not saved. Next time we should consider using Slack instead.
- KISS was key to success, i.e., the simple setup was easy to manage and made CIDR run smoothly.

A survey will be sent to all attendees requesting their feedback.

Registration process

We devised a two-step registration process: first register for CIDR at one website, then go to a Chaminate website for in-person attendance room or to an EventBrite website for online attendance. This process was too complicated. Some people only did one of the steps. In addition, it was error-prone in that there was no automation to detect this.

A better process would be a single website for both CIDR registration and payment (for a room or a Zoom). Unfortunately, we did not have time to develop such a website and did not have time or funds to contract with an outside agency.

Zoom links

We used personalized Zoom links, one per attendee, as opposed to a single, common Zoom link shared among all attendees. This was a good decision. It allowed us to identify online participants by their registration name and made it harder for Zoom bombers. However, generating these personalized links was harder than expected (see below).

In addition to the personalized Zoom links, we created some personalized but anonymous Zoom links, e.g., with names like CIDR guest 1, CIDR guest 2, ... These were used for various purposes, e.g., (1) for invited speakers or panel participants who did not register for the conference, (2) to allow late registrants to connect while waiting for their personalized link to be generated.

We also provided personalized Zoom links to all in-person attendees. This is counter-intuitive but was a good decision. It enabled in-person attendees to follow the conference from their hotel room for whatever reason they might be there (overslept, another meeting, quarantine).

However, we did not anticipate that in-person attendees would use their phone/laptop to connect to the Zoom while in the main conference room. This had the potential for problems. First, it may have created feedback if the microphone/speaker on their device was not muted. Second, it consumed bandwidth from the venue's Wi-Fi. In the future, anticipate that in-person attendees will connect to the Zoom and plan accordingly.

Generating personalized Zoom links

Zoom allows creating meeting registrations in bulk (e.g., from a CSV file) but only from the Zoom API. This works fine but requires developer permissions. We were using the CWI Zoom account so we lacked developer permission. We were forced to do a manual line-by-line insert of each registrant. It worked but is not a good solution, especially for a large conference.

In addition, on occasion, we needed to create new Zoom registrations while the CIDR conference was live. This was not possible. New registrations are only possible while the meeting was offline. Our solution was to create, in advance, a number of anonymous "guest" registrations that could be used until the meeting was over for the day.

Talks

- The on-site session chairs should have the slides for their session available and easily accessible on the presenter laptop. Some were diligent about this, others, not so. The organizers need to be vigilant about communicating this to the session chairs to avoid these unnecessary delays.
- The presenter laptop was a Mac with Keynote and PowerPoint installed rather than a Windows PC with Keynote installed. The concern was that Windows has issues with the recent versions of Keynote. So a Mac laptop was a safer choice. It worked well.

Zoom setup

- We found it useful to have two Zoom moderators, one on-site and one online. The remote moderator could detect issues with the Zoom feed and inform the on-site moderator who could then fix any on-site issues (e.g., occasionally, the video feed of the presenter would get dropped).
- Occasionally the two moderators unintentionally worked at cross-purposes (e.g., one muting a microphone while the other unmutes it). In the future, we should work out specific roles and protocols so the moderators' actions do not conflict.
- It is useful to create the conference Zoom meeting with two Zoom hosts, ideally one on-site and one online. This allows the meeting to be started/stopped by multiple people as one host may be unavailable (due to timezone differences, potential internet outages, etc.).
- The main conference room used two PCs, a Windows PC for the on-site moderator and a Mac laptop for the presentation. This worked well however both machines accumulated a large number of processes during a full day of sessions. A good practice is to do some cleanup on the presenter laptop at the end of each session and to reboot each laptop at the start of each day. At one point the moderator laptop froze (memory issues suspected) and had to be rebooted in the middle of a session.
- Zoom's "Request permission to unmute participants" feature allows users to opt-in to being unmuted by a (co-)host without having to manually approve this each time. In 2022, we have not used this feature due to privacy concerns (assuming that many users would not opt-in to using this). However, we should consider using it next year as it can help avoid some friction. Even

if some users decide against opting in (who can still join the conference and can be reached by "manual unmuting"), the Zoom moderator will be able to unmute the presenter and QA laptops without manual approval from the on-site organizers.

Communication

- We found Slack essential for instant communication among the organizers.
- The GitHub and Twitter integrations proved very useful. The Twitter integration allowed us to see tweets mentioning @cidrdb in real-time. The GitHub integration allowed us to track the status of the website's deployment process (which failed on rare occasions).
- Due to the limitations of the Zoom chat (lack of features such as threading and keeping history between sessions), we think using a Slack instance for the participants and disabling the Zoom chat would lead to a better experience.

YouTube

When videos are uploaded to YouTube, they may not be immediately available for viewing. YouTube does various security checks, adds annotations and renders the video into various formats. Especially for longer videos, it may take some time for the video to be viewable. Initially, only an SD version is available with the HD version arriving later. Overall, a video may take a few hours to appear.

Online interaction

Many of the purely online conferences held during the pandemic made an effort to enable spontaneous small group discussions so as to mimic the side chats that occur during an in-person conference. CIDR 2022 only provided a single Zoom chat which was intended primarily for online questions.

In fact, the chat thread also served as a lively discussion channel. Unfortunately, these discussions were not visible to the in-person audience. In addition, the chat was not saved for later viewing. At the urging of one participant, several Zoom breakout rooms were created for online side discussion. As this was an after-thought and not well-promoted, the breakout rooms were not used.

If future CIDR conferences have a hybrid component, we should provide some ways for online participants to interact informally, e.g., using breakout rooms. CIDR 2022 lacked this which was a real deficiency for online participants.

Hotel contract

CIDR Foundation signed the CIDR 2022 contract with Chaminade Resort in August 2020. This was in the midst of the Covid-19 pandemic. We expected the pandemic to be over by January 2022. Our contracted minimum revenue was set (“conservatively”) to be about 10% lower than previous California CIDRs.

By October 2021 the pandemic was still with us. We discussed converting CIDR 2022 to online-only. However, we were not in a strong legal position to cancel the Chaminade contract. We would have owed Chaminade essentially 100% of our contracted revenue. Force majeure did not apply since indoor gatherings were allowed by health authorities, so long as precautions were taken.

In December, the omicron variant became dominant and it seemed very likely we would not meet our minimum revenue target. We expected a shortfall of about 30%. We approached Chaminade and explained our situation. Given that this was likely a one-time event and given the promise of future conferences, we came to an agreement that did not involve penalties for our shortfall.

As a side note, we chose to charge online attendees rather than allow free attendance. It was an amount that was significant but not onerous. This was a good decision. It supplemented the lost revenue at Chaminade and discouraged casual sign-ups by people who were not serious about participating in the conference.

Preparing for the conference

For future events, we highly recommend holding a “dress rehearsal” session with a small group. The group should consist of a few organizers (on-site chair, on-site Zoom moderator, remote Zoom moderator), 2-3 on-site presenters and 2-3 online presenters. Get proactive people who will ask questions, talk to each other in the Zoom chat, etc. The rehearsal should also include sound effects such as the gong in the Gong Show.

The group should run a full 2-hour session with talks and Q&As. This would uncover a number of issues, including audio and video glitches, potential issues around interaction (e.g., the local audience unable to see the Zoom chat).

Organizing this rehearsal poses some logistical challenges (e.g., it may have to happen on a Sunday night).

Template

This report was generated using the [eisvogel pandoc template](#).