

# Report on the 44th European Conference on Information Retrieval (ECIR 2022): The First Major Hybrid IR Conference

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## Abstract

The 44th European Conference on Information Retrieval (ECIR'22) was held in Stavanger, Norway. It represents a landmark, not only for being the northernmost ECIR ever, but also for being the first major IR conference in a hybrid format. This article reports on ECIR'22 from the organizers' perspective, with a particular emphasis on elements of the hybrid setup, with the aim to serve as a reference and guidance for future hybrid conferences.

**Date:** 10–14 April, 2022.

**Website:** <https://ecir2022.org>.

## 1 Introduction

The 44th European Conference on Information Retrieval (ECIR'22) was held at the northernmost location in the history of ECIR, in beautiful Stavanger, Norway. After having the last two ECIRs as online-only events, we were especially excited to have an in-person conference and be able to meet again face-to-face with colleagues and friends.

The conference started with a day of workshops and tutorials (Sunday), followed by the main conference with keynotes, paper, poster, and demo presentations over three days (Monday–Wednesday). The industry day and doctoral consortium were scheduled to run parallel on the fifth day (Thursday), after the main conference. Social events included the welcome reception on Sunday evening, the conference banquet on Tuesday, and excursions on Friday after the conference.

The main conference program included 35 full papers (20% acceptance rate), 29 short papers (22% acceptance rate), 12 demonstration papers (55% acceptance rate), 11 reproducibility papers (61% acceptance rate), 12 doctoral consortium papers (71% acceptance rate), 13 invited CLEF papers, 6 selected papers from the 2021 issues of the Information Retrieval Journal as well as keynote talks by Isabelle Augenstein (University of Copenhagen), Peter Flach (University of Bristol), and this year's BCS IRSG Karen Spärck Jones Award winner, Ivan Vulić (University of Cambridge). In addition to the main conference, ECIR'22 featured four tutorials, five workshops, a doctoral consortium, and an industry day.

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ECIR’22 represents a landmark in that it was the first major IR conference in a hybrid format. The notion of hybrid conferences is still new and very challenging, especially in terms of being inclusive of remote participants. ECIR 2022 was regarded as an experiment in this regard, introducing several novel elements. Given that hybrid conferences will likely stay for the years to come, we believe that it is valuable, both to the research community as well as to future conference organizers, to share our findings and experiences.

This article summarizes the conference from the organizers’ perspective. For a participant’s experience report, we refer the reader to the excellent summary by [Aumiller and Almasian \[2022\]](#).

## 2 Hybrid Setup and Practical Considerations

This section presents the hybrid setup that was planned for ECIR’22 and our reasoning behind the specific choices. Our aim was to combine the best of in-person and virtual formats and to create an inclusive environment that fosters interaction between participants—regardless of whether they attend in-person or online. We will reflect on our choices in Section 4.

### 2.1 Practical Considerations

- **Live and single timezone:** A general decision was to make everything happen live in the local timezone (CET). Given that it was a physical conference, we primarily aimed to cater for in-person participants, while supporting remote attendance as much as possible.
- **Dedicated Zoom rooms:** For remote sponsors, Zoom meetings were set up during designated times, which in-person attendees could join from dedicated meeting rooms at the conference venue, labeled as “remote sponsor rooms.” Similarly, there was a dedicated Zoom room set up for social chat.
- **Daily emails:** To help participants follow what is happening at any given day, an email was sent out with all information pertaining to that day.

### 2.2 Main Conference

- **Talks:** In-person and remote talks were mixed in the programme. We optimized for the topical coherence of sessions and especially wanted to avoid having sessions with remote-only presenters—those would have carried the risk of very low attendance from the in-person crowd. Remote presenters were asked to give a live talk over Zoom and also supply a recording that may be used as a backup in case of connection issues. While watching recordings together is far from ideal, it is still a better option than having gaps in the programme in case of missing presenters (which did happen on several occasions).
- **Professional AV team:** We hired a professional service for providing the audio-video equipment and personnel for the live Zoom feed during the main conference. Our main motivation was to make it as enjoyable as possible for those joining remotely, both in terms of audio-video quality as well as having multiple cameras in the auditorium, thereby creating a stronger sense of presence for online attendees.

Table 1: Four-way interactions between in-person and online participants for posters and demos.

		Presenter	
		In-person	Online
Participant	In-person	talk to the presenter in the Poster hall	talk to the presenter in a remote presentation room during one of their dedicated slots
	Online	set up a 1:1 meeting and use the remote social room	talk to the presenter over Zoom during one of their dedicated slots

- **Single track:** We aimed for a single track conference (as much as possible) in order to make it easier, especially for remote participants, to follow what is happening. We wanted to leave ample time for networking, so that people can simply take a break if the topic of a given session is outside their interests—this is much less doable if there are multiple parallel sessions running. There are also economic reasons behind it, namely, the professional AV service is rather costly and scales linearly with the number of parallel sessions. In the end, we did have to make the reproducibility sessions run parallel to the main conference track, but it was only the second half of the last main conference day was split to two tracks.
- **Dory for Q&A:** We introduced the use of Dory:<sup>1</sup> an online tool for managing Q&A after talks. In Dory, attendees can post questions, either with name or anonymously. Others can then see those questions and vote on them if they find them interesting. At Q&A time, the session chair looks at the highest-voted questions and decides which of those to ask the presenter next, by pinning it. That question then moves at the top of the screen, so that both the speaker and the audience can see it while it is being read aloud by the session chair. The remaining questions may be answered by the presenter after the talk. Dory is inclusive and democratic: both in-person and online attendees can ask questions and voting helps ensure that the questions that are of interest to most get asked. Further, it forces the person asking the question to think it through and formulate an actual question—thereby avoiding “I have more of a comment than a question” type monologues or multiple rounds of follow-up questions dominated by a single (often senior) person, possibly taking up the entire Q&A time and thus preventing others to ask questions.
- **Posters and demos:** Poster and demo presentations were scheduled during the lunches, but were also available during the entire day so that people could look at them during the coffee breaks as well. The posters of remote presenters were printed out and hanged by the local organizers. Each remote poster was assigned a dedicated time slot, during which participants could interact with the remote presenter via Zoom. Table 1 summarizes the different ways in-person and online attendees could interact over posters and demos. In addition to the above, asynchronous communication was also facilitated by having a Dory for each poster.

<sup>1</sup><https://www.dory.app/>

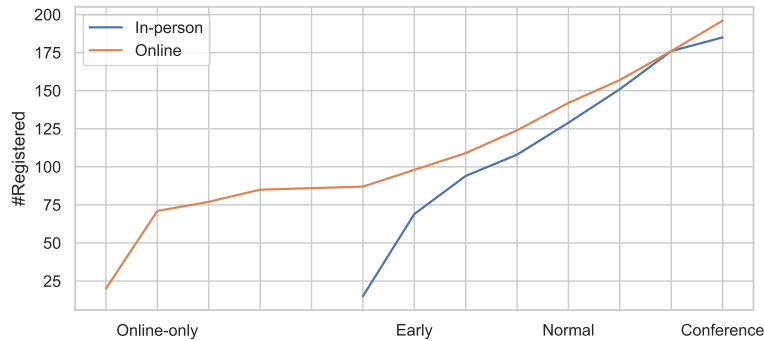


Figure 1: Registrations over time.

### 2.3 Workshops, Tutorials, Industry Day, Doctoral Consortium

For the other, non-main-conference days, we had to scale down a bit and work with our own audio-video equipment (kindly lent by the University of Stavanger), operated by the local organizing team and volunteers. It was left to the individual events whether to follow the setup of the main conference or implement their own preferred solution. These events used a Zoom meeting setup as opposed to a webinar (used for the main conference), which allows for more interaction between participants.

## 3 Statistics and Survey Results

This section reports statistics on participation and presents the results of a post-conference survey.

### 3.1 Participation

Overall, ECIR'22 had 185 in-person and 196 online participants, including complimentary registrations given to sponsors and student volunteers. A small number of participants had both types of registrations and were following some parts of the conference in person and other parts online, leaving us with a total of 378 unique participants. The number of registered in-person participants was highest for the main conference days (168), closely followed by the industry day/doctoral consortium (161) and the workshop/tutorial day (159).

Figure 1 shows the number of registrations over time, where each tick along the x-axis represents a week. Since it was rather uncertain in January 2022 whether an in-person conference can be held, we opted for a two-stage registration process. Initially, only authors were required to make an online-only registration by the end of January. As Norway officially opened up for international travel in February, we enabled in-person registration as well. Those already registered online could upgrade their tickets by paying the difference. It is worth mentioning that our decision of going for a physical conference in hindsight was the right call, but back in February 2022 that was a decision not without risks. Indeed, by the early registration deadline (28 February), we had less than 70 in-person registrations, which made things look borderline feasible from a financial perspective. By the end of the normal registration deadline (20 March), we had over 125

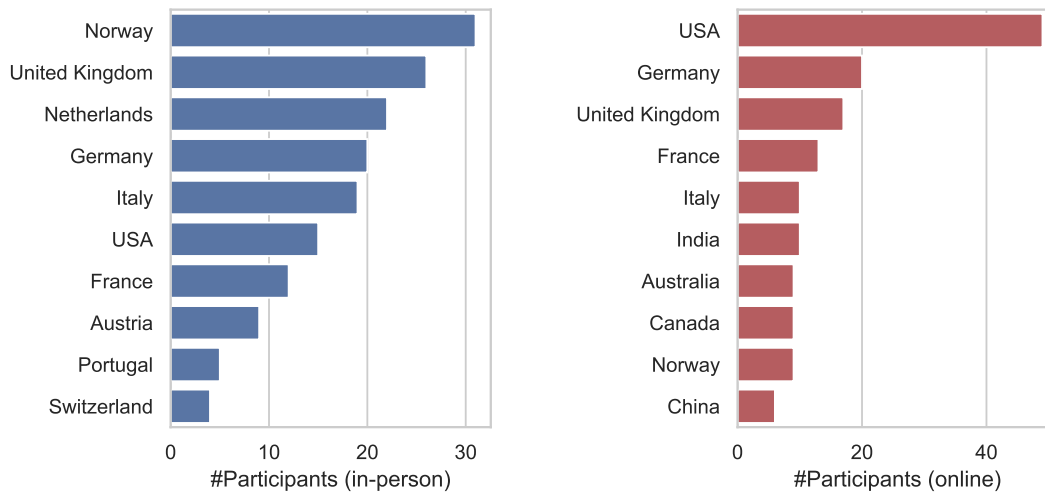


Figure 2: Countries with the most participants in-person (Left) and online (Right).

in-person attendees—a figure we were already quite pleased with. The last three weeks leading up to the conference have seen an unexpected, over 45% increase in in-person registrations. Clearly, many were holding off registering until the last days when there is sufficient certainty that they could travel. On the one hand, we were very happy with the increase in participation, which has surpassed our most optimistic expectations. On the other hand, this presented a number of organizational challenges, as everything had to be scaled up by almost 50% on a very short notice. Thankfully, according to the feedback we received, this challenge has been successfully dealt with.

It is also worth noting that there were a large number of requests for changing registration types from in-person to online and vice versa, and sometimes opting for a combination of the two. This is understandable given the circumstances (e.g., last minute cancellations due to getting COVID or receiving a late approval to travel after all), but poses an additional set of requirements on the registration process, both in terms of system and administrative support.

Figure 2 shows the countries with the most participants, in-person and online. Not surprisingly, there was very strong in-person attendance from Norway, followed by the countries that traditionally have a strong presence in the IR community. As can be seen from the number of online participants from different countries, many countries still had COVID restrictions in effect at the time of the conference, which significantly affected participation from outside Europe, with many participants choosing to attend online instead of in-person.

### 3.2 Post-conference Survey

All conference participants were invited to fill out an anonymous post-conference survey. A total of 91 responses were received. Below, we present the survey questions and aggregated results.

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## How would you rate ECIR 2022 overall?

As shown in Figure 3, the vast majority (over 92%) of participants rated ECIR'22 above an average conference, with almost half of them giving it the maximum rating.

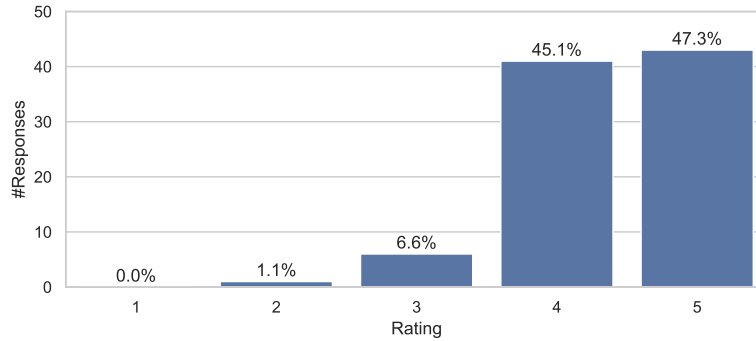


Figure 3: Overall rating, where the value 3 corresponds to an average conference.

## Which parts of the conference did you attend?

According to Figure 4, the survey response rate was much higher for in-person than online participants. One cannot know for sure the reason for this, but one aspect might be that in-person participants attending most of the conference feel a stronger engagement with the event than many of those attending online, who might be more selective with which sessions to attend. As can be expected and seen from the figure, many participants attended the main conference only.

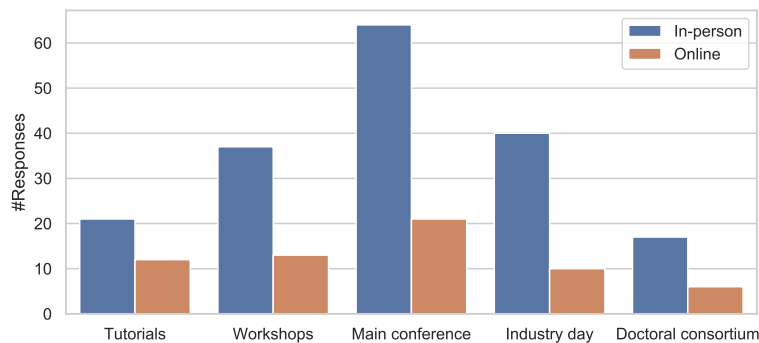


Figure 4: Parts of the conference attended in-person and online.

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## Which of these describes your participation best?

Figure 5 shows that for those attending in-person, for the majority this was the first physical conference since the pandemic. As ECIR always has a high attendance of PhD students, this was also for many participants their first physical conference ever.

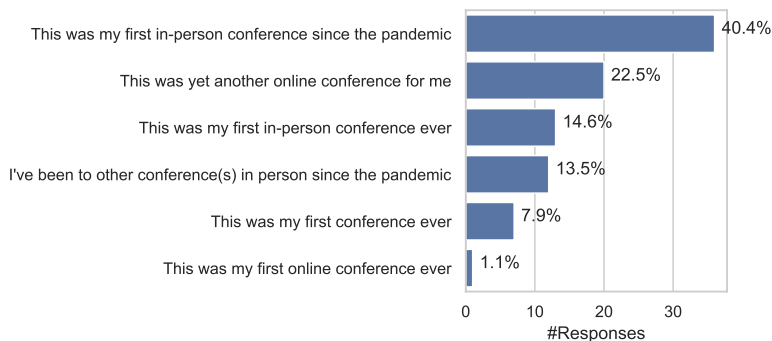


Figure 5: Characterization of participants.

## If you attended in person: How would you rate the conference venue and facilities (rooms, auditoriums, food, etc.)?

Figure 6 shows very high satisfaction with the conference venue, the majority giving it the maximum rating. Very likely, the use of a very modern conference hotel, with plenty of space, contributed to the high rating.

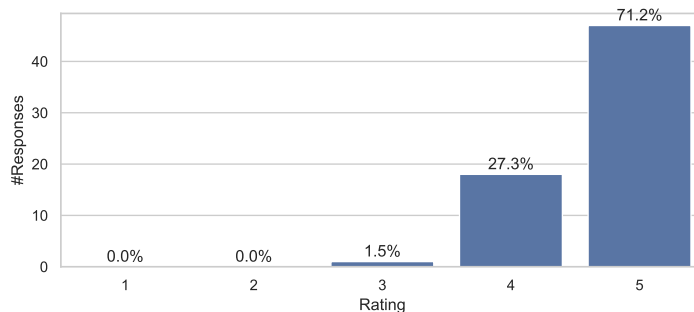


Figure 6: Rating of conference venue and facilities by in-person participants.

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## If you attended remotely: How would you rate the quality of the live Zoom feed?

Figure 7 shows that the online participants were well satisfied with the quality of the live Zoom feed. This high score most likely does not only reflect on the technical quality, helped by the use of professional equipment and staff, but also on measures to make online participants feel included, e.g., by the use of Dory.

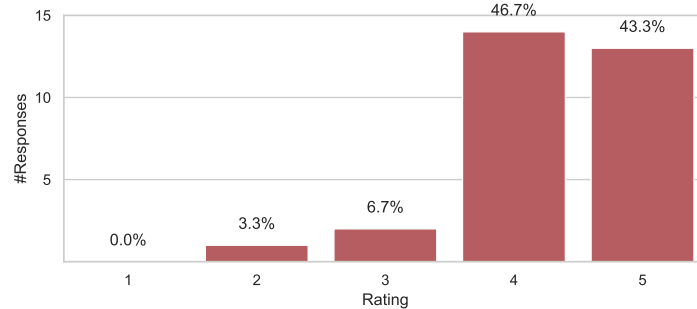


Figure 7: Rating of live Zoom feed by remote participants.

The last three questions solicited free-form feedback:

- Can you name one or more things that you particularly liked?
- Can you name one or more things that could have been better or could be improved for future conferences?
- Do you have any other comments for us?

All text responses were coded by two of the local organizers. First, a set of aspects mentioned were identified, then in a second annotation round each feedback was annotated with the list of positive and negative aspects mentioned.

Figure 8 shows those aspects that were mentioned by at least 3 people, either as a positive or as a negative. We reflect on these in the next section.

## 4 Reflections

This section presents our reflections on various aspects of the conference, based on our own experiences combined with survey results. Many of the issues represent some of the general challenges around hybrid conferences and are not specific to ECIR'22.

- The **conference venue** and **facilities** and especially the **food** were praised. People also liked the **location** and surroundings, but some would have preferred the **banquet** to be at a different place.
- **Organization** has received an overwhelming amount of positive feedback. Survey respondents highlighted the professionalism, clear structure, and communication (e.g., the daily email briefs). It was also very nice to experience how appreciative participants were of the efforts made by the local organizing team.



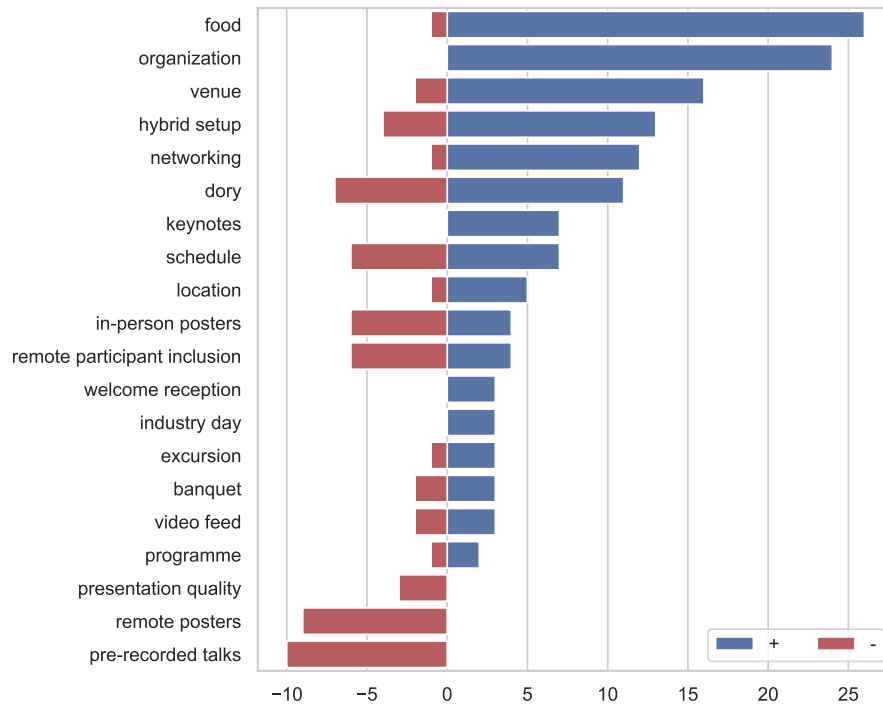


Figure 8: Positive and negative aspects commented.

- While **registration** was not commented on by any of the participants, it is worth mentioning that we wish we had a more flexible registration service, allowing participants to change between registration types and offering more generous refund terms. Keeping track of everyone’s registration status represented a non-trivial administrative effort (likely resulting from the combination of the two-stage registration process, the large number of changes and special requests due to COVID, the use of the particular registration service dictated by university agreement).
- The **single track setup** was welcomed and made it easier for people to follow everything. It also provided ample time for **networking**.
- The **hybrid setup** worked well overall, and several participants remarked the seamless switching between in-person and remote talks. The **video feed** from multiple cameras, showing the presenter/auditorium from different angles, was appreciated and helped remote participants to feel more present. Notably, enabling live interaction between remote presenters and in-person session chairs, while streaming all this live, was a setup new even to the professional AV team. This would have been very difficult to manage without their help. On a few occasions, there were minor audio quality issues on the remote presenters’ side (e.g., due to outside noise or low quality microphone), which is difficult to control.
- **Including remote participants** is nevertheless very challenging. The time zone was inconvenient for some. Also, it not possible for them to participate in social events. While it would be an option to organize a social event for remote participants only, it is doubtful that there would be significant interest in attending such an event for a mid-size conference like ECIR—especially that it would be outside normal working hours for many who are par-

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icipating remotely. A few remote participants indicated that they would have liked a way to interact during the conference. Even though **remote Zoom rooms** were made available, these were scarcely visited. It could be the case that another form of communication, e.g., a dedicated Slack channel, would be more desirable.

- In terms of talks, the **keynotes** were a clear success. **Live remote presentations** generally worked well (apart from a few minor audio/video issues, like bad sound quality or lighting conditions). However, using a Zoom webinar setup, it remains to be sorted out how session chairs can subtly signal to speakers how much time they have left. **Pre-recorded talks** were not received well—their value was questioned as it was not possible to interact with the speakers afterwards. It is important to emphasize that all online speakers were asked to present live. They were also requested to show up 20 minutes before the session start for technical briefing and testing. When presenters failed to show up on time or cancelled last minute (sometimes without giving a reason), we had no other choice but to revert back to the video recordings, in order to avoid gaps in the programme. (The alternative of shifting around scheduled talks on short notice is not viable as it would make it impossible for participants to plan their attendance.) Instead of playing pre-recorded talks, one suggestion was to put them on the conference website, where those interested can watch them at their own convenience. Again, the issue is that it is typically not known right until the start of the session that the presentation would not be happening live. Another suggestion was that all speakers should be “forced” to present in-person. Needless to say, this is simply not feasible and is probably not how future hybrid conferences would want to set themselves up. A better solution, therefore, is yet to be found for remote presentations. Whatever that may look like, it should factor in two important considerations: how to remedy for technical difficulties (e.g., network outage on the presenter’s side) and how to ensure a fair treatment of remote presentations in that they get the same exposure as in-person presentations.
- The **Dory** was one of the most commented elements. Many regarded it as a perfect choice: it is both *inclusive*, as all participants get to ask questions whether they are present physically or remotely, and *democratic*, in that questions that are deemed interesting by most get to be asked. Still, some in-person participants did not like the fact that it was not possible to interact live and ask follow-up on the answer to the initial question. Some noted that it takes time to write down a question. While true, participants were specifically encouraged to formulate and submit questions during the talk, and not at the beginning of the Q&A block. Clearly, the Dory was new to most (if not all) participants; even though all session chairs were briefed before the start of the session, some managed to make more effective use of it than others, which may contribute to how it was perceived. The fact is, even with the very short 2.5 minutes allocated for Q&A per talk, a lot more questions got asked—and answered—than using the traditional “questions from the floor” setup.
- **In-person posters** are regarded as one of the best ways to facilitate discussions in a more informal setting. Scheduling the poster sessions during lunches might not be ideal, but the options are limited if the conference is single track. **Remote posters**, on the other hand, are clearly not working. The main reason is that there is little incentive for in-person participants to visit remote posters (which would require them to go the remote poster rooms), unless they have a very strong interest in a specific paper. Especially when it is the first in-person meeting after two years of Zoom talks, people, quite understandably, would

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prefer real-life face-to-face communication. Thus, remote poster presenters were limited to interacting mainly with other remote participants. This suggests that the whole concept of posters may need to be re-evaluated for hybrid events. Table 1 was jokingly referred to as the “confusion matrix” during the conference opening, but it turned out to be actually confusing to some. This reinforces the need for change—simplification, however, is only possible if some of the interactions are removed.

## 5 Conclusion

ECIR’22 was a great success, both in the number of attendees (378 in total, of which 185 in-person) and their level of satisfaction. It was rewarding to see how much people enjoyed meeting friends and colleagues other after a long while, and it has likely influenced in a major way how the conference was perceived. Nevertheless, we are glad that we could play a role in facilitating this. It was also obvious that there is a lot of added value in face-to-face meetings and that the dynamics of human interactions are very different from online conferences.

One of the biggest organizational challenges was dealing with uncertainty—first, whether the conference can be held in a physical format at all, then, whether there would be enough attendees to break even, and finally, to scale up everything on short notice in order to accommodate all the late registrants. Another set of challenges has to do with the hybrid format, where many open issues remain. It is critical to realize and accept that there are differences between in-person and remote participation, and that it is simply not possible to provide the same experience for those that are attending online. Most importantly, and quite understandably, in-person participants much prefer interacting with each other than to go on Zoom calls to talk to remote attendees. Therefore, we should perhaps accept that there are clear advantages to in-person participation, while at the same time strive at our best to ensure the best remote experience. We hope that our experience report can help future conference organizers with the planning of hybrid events.

## Acknowledgments

We have a large number of individuals as well as organizations to thank for making ECIR’22 the success it was:

- **PC chairs** (full papers: Suzan Verberne and Matthias Hagen, short papers: Christin Seifert and Craig Macdonald, reproducibility papers: Faegheh Hasibi and Carsten Eickhoff, demo papers: Theodora Tsikrika and Udo Kruschwitz, workshops: Lucie Flek and Javier Parapar, tutorials: Nazli Goharian and Shuo Zhang, industry day: Jiyin He and Marcel Worring, doctoral consortium: Asia Biega and Alistair Moffat, awards: Maarten de Rijke);
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  - **ECIR 2021 organizers** for providing advice as well as seed money left over from ECIR'21.

## References

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