UnExplored FrontCHIIRs: A Workshop Exploring Future Directions for Information Access

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ABSTRACT

With the rise and growing prevalence of generative models, particularly multi-modal ones, it is an opportune time to explore beyond existing interactive information retrieval research trends. Indeed, it is essential to determine new avenues to explore how users interact with these models as well as revisit existing avenues that can be embellished with new technology. In this session, we aim to create a venue to *workshop* ideas that explore the future of search experiences and user interactions with information in a collaborative, low-pressure environment. This *UnExplored FrontCHIIRs* workshop enables participants to form a sub-community within CHIIR to facilitate further development of the proposed ideas and allow deeper collaborative problem-solving than just presenting late-breaking work.

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1 OVERVIEW

Despite the increase in popularity that generative models have seen over the past several years, culminating with OpenAI's release of ChatGPT in November 2022 [5] and the resultant explosion of research (e.g., retrieval augmented generation [6], relevance assessment [3, 8]), there is much left to be investigated with how users access, interact with, modify, and create information they access daily. While information systems will now invariably incorporate generative techniques, the focus should not be on how these techniques will affect information access but on how we, as researchers and users, want information access systems to evolve irrespective of the incorporation of generative techniques. Moreover, as a community, we are at an inflection point where we can consider previous results that were not explored further due to (at the time) good reasons but may now make more sense (e.g., the utility of long queries [1]).

Accordingly, this workshop offers any CHIIR attendee the chance to envision the "future of user interaction and experience for information access systems" (e.g., accessibility improvements for users with impairments [2] or literacy issues [7]). As CHIIR is a diverse community, the goal is to allow participants to quickly present an idea for such a future (or revisit a past idea that did not progress) and then discuss it in detail with those interested. In doing so, participants can provide and receive feedback on ideas they may have not otherwise considered or even realized were a possibility. Additionally, the hope is that such conversations and workshopping spur longer-term collaboration among individuals who may not have had previous opportunities to interact and collaborate to produce new and exciting research to be published at a future CHIIR.

Participants are expected to come to the half-day workshop with a nascent idea in mind and potentially some ways to investigate this idea. These ideas will be quickly presented to the group, and smaller subgroups will be formed to engage in this *workshopping* process with the goal of having some form of rudimentary research agendas created, which are briefly presented, and that can be acted upon after CHIIR. The tentative schedule is presented in Table 1.

Table 1: A tentative schedule of the the workshop.

Time	Event
09.00-09.15	Opening
09.15-10.45	**Part I:** Speed dating for ideas: Participants pair up and have a short conversation about their ideas, before moving on to the next person.
10.45-11.00	Morning tea break
11.00-12.00	**Part II:** Break out groups based upon interests from speed dating activity.
12.00-12.30	Re-group and closing

Ideas can range from very systems-oriented (e.g., new systems or modalities with a user focus) to user-oriented (e.g., new evaluations) to broader implications in the field (e.g., legal or ethical considerations). We will provide three dimensions to investigate the future directions for information access and example ideas kickstarting the conversations.

1.1 Information Access Brainstorm Dimensions and Discussion Points

How can new technological advances help conducting research in information access? This brainstorming dimension will ask attendees to consider the roadblocks in their research practices. These roadblocks can be a starting point for exploring traditional and emerging information access research approaches. In other words, how can new technology help researchers become better researchers or conduct more advanced research? How are new technologies advancing current research methodologies?

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How can new technological advances help people access information? This dimension will ask attendees to think broadly about the current research access practices (e.g., search engines and social media). From these current practices, we will focus on exploring the impact of new technological advancements on facilitating enhanced access to information for everyday individuals. We will encourage attendees to think broader and brainstorm how technological advances such as ChatGPT still disadvantage user groups across different demographics. This could include assistive technologies aiding information access (e.g., screen readers, voice recognition) or adaptive interfaces for diverse user needs. What are specific challenges and potential technological solutions for diverse user groups? How can technology be leveraged to improve information access?

In which stage of the information-seeking process can new technologies be beneficial? Throughout information-seeking stages, how can new technologies provide opportunities to enhance and streamline the information-seeking process for users, making it more efficient, personalised, and accessible? We will guide participants through information-seeking processes scrutinising each step in people's searches. For instance, which advances can help with recognising a need for information, accepting the challenge to take action to fulfil the need, formulating the problem, expressing the information need in a search system, examining the results, reformulating the problem and its expression, and using the results [4]. How can technological advances help people recognise and express their information needs? Can technology assist in mitigating information overload and facilitating better evaluation of information authenticity and relevance?

The following are some further examples of ideas of what we might expect to be discussed at the workshop:

- How can generative models enhance conversational search?
- What advancements and innovations will contribute to making the future of search more immersive and interactive?
- What ethical considerations should be taken into account when developing AI-powered search systems?
- How can we design search systems that help users search for meaning and context?
- Are users more likely to issue long queries now that systems can support them and how might we improve such interactions?
- What alternative interfaces and interaction methods can revolutionize the way users interact with information?
- Which specific tasks will become predominant in the future landscape of information retrieval?
- How can search technologies strike a balance between providing comprehensive results and respecting user privacy and ownership of data?

2 KEY OUTCOMES

There are two primary outcomes for this workshop:

- Participants build and establish new connections (or deepen existing ones) with other CHIIR participants to foster future collaboration on the topics presented in the workshop.
- An exploration of how users interact with and experience search might be changed with new advancements in search technology and how to keep such advancements accessible to users.

A potential outcome of this workshop is a more extensive summary publication to SIGIR Forum (or similar) around any insights into fostering more in-depth collaboration and workshopping of ideas as well as trends around the envisioned future of user interaction and experience in search.

3 ORGANIZER BIOGRAPHIES

Adam Roegiest[1] is the VP of Research and Technology at Zuva, a legal tech start-up focusing on contract analysis. He has published on a wide variety of topics during and after his PhD, some of which would be considered "out there" and seemingly hard to publish (e.g., searching from Mars), at CHIIR and other IR conferences. Adam has previously coordinated several TREC tracks (Total Recall 2015 and 2016, Real-Time Summarization 2016).

Johanne Trippas[2] is a Vice-Chancellor's Research Fellow at RMIT University, specializing in intelligent systems, focusing on digital assistants and conversational information seeking. Her research aims to enhance information accessibility through conversational systems, interactive information retrieval, and human-computer interaction. Additionally, Johanne is currently part of the NIST TREC program committee and is an ACM CHIIR steering committee member. She serves as vice-chair of the SIGIR Artifact Evaluation Committee, tutorial chair for ECIR'24, general chair of the ACM CUI'25, and ACM SIGIR-AP'23 proceedings chair. She has organized workshops (CHIIR'20–22), a TREC Track (CAsT'22), and tutorials (CHIIR'21, SIGIR'22, and WebConf'23).

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