

# 33rd ACM Conference on Hypertext and Social Media

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The ACM Hypertext conference is a premium venue for peer-reviewed research on hypertext theory, systems, and applications. It is concerned with all aspects of modern hypertext research including social media, semantic web, dynamic and computed hypertext and hypermedia as well as narrative systems and applications.

Hypertext 2022 was held in Barcelona, Spain, between June 28th and July 1st, co-located with ACM WebSci and ACM UMAP. Due to the global pandemic, this edition was the first hybrid one in this conference history, embracing both online and onsite attendees. This newsletter article briefly summarizes how the conference went and its major challenges.

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## 1. INTRODUCTION

The ACM International Conference on Hypertext and Social Media, known as Hypertext, was held this year, for the first time, in Spain. The conference took place in Barcelona, co-located with the ACM Web Science and the ACM User Modeling, Adaptation and Personalization conferences, both happening in the same city a few days before and after the conference.

For the first time in the history of the conference, ACM Hypertext 2022 was organized as a hybrid event, with the opportunity for speakers and attendees to participate onsite or online. The response from the community was very positive, although the number of online attendees was larger than onsite (52 vs 28, for a total of 80 participants); however, this made it easier to attend from a significant amount of different countries (21), making it a truly worldwide event.

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## 2. CONFERENCE TRACKS, KEYNOTE SPEAKERS, AND AWARDS

ACM Hypertext 2022 is a track-based conference, that featured four main tracks (which are described in Section 2.1), late breaking results, demonstrations, and blue sky ideas (discussed in Section 2.2), as well as workshops and tutorials (summarized in Section 2.4), together with two invited talks given by the keynote speakers (more details in Section 2.3).

Accepted submissions are available in the Hypertext 2022 Conference Proceedings that are published by ACM via the ACM Digital Library [Bellogin et al. 2022]. The call for papers attracted numerous submissions, which were carefully reviewed by the program committee, who decided upon acceptance or rejection – in particular, 18 out of 49 full and short papers were accepted. Valid submissions came from a total of 274 authors from 18 countries.

### 2.1 Conference Tracks

This year's conference was organized according to the following tracks, which aim at covering all the different aspects of modern hypertext research:

**Social Web content, language and networks – chair: Marcelo Armentano (ISISTAN Research Institute, Argentina)**

The social web refers to the social relations that link people and content in the World Wide Web. The enormity and high variance of the information that propagates through large user communities influence the public discourse in society and set trends and agendas in topics that range from marketing, education, business and medicine to politics, technology, and the entertainment industry. Contributions to this track may focus on both content and structure of the web, as well as behavior of users. This includes the study of behavior, norms, and psychological perceptions that characterize Web-mediated social interactions and might help either limiting undesirable outcomes (e.g., conflict, hate speech, misinformation) or promoting positive social dynamics (e.g., cooperation, integration, support, knowledge diffusion). Contributions focusing on multimodal social interactions (i.e., not limited to text) are particularly welcome.

**Digital humanities, culture and society – chair: Jessica Rubart (Ostwestfalen-Lippe University of Applied Sciences and Arts, Germany)**

In the Digital Humanities track, we seek submissions contributing to the intersection between computer sciences on the one hand and the humanities and social sciences on the other hand. The Hypertext and Social Media conference has always had strong contributions related to digital humanities and new media topics. By studying these fields, we can better understand cultural effects of digital technologies or how people behave in social situations. This track invites contributions to the theory, methods and applications of Digital Humanities.

**Information exploration and visualization – chair: Claus Atzenbeck (Hof University, Germany)**

Hypertext has always had a strong connection to information structuring. In today's world, where we are confronted with huge amounts of information and extensive communication over social or corporate networks, research on the representation and visualization of hypertext structures becomes even more important. This includes issues related to user interaction with or navigation in these structures, including multimodal or collaborative aspects. Human-computer interaction can also be supported by specialized exploration tools or AI-based, intelligent components trained to support information exploration in hypertexts. This track also welcomes submissions on surveys, theories, and cognitive or cultural aspects related to information exploration or visualization of hypertexts.

**Personalized recommender systems – chairs: Osnat “Ossi” Mokryn (University of Haifa, Israel), Eva Zangerle (University of Innsbruck, Austria), and Markus Zanker (University of Bolzano, Italy).**

This is a joint track between ACM Hypertext and ACM UMAP, where the same track chairs and overlapping Program Committee was used, one of the novelties of this edition. Personalized, computer-generated recommendations have become a pervasive feature of today's online world. From the traditional book and movie recommendations, to suggestions of what we should eat and wear or where we should travel, recommender systems are seamlessly embedded in our daily lives. The underlying recommender systems are designed to help users and providers in a number of ways. From a user's viewpoint, these systems assist consumers by identifying relevant and appealing items (e.g., products and services) within large collections. From a provider's perspective, recommender systems have shown to be valuable tools to steer consumer behavior. Regardless of who

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are the main stakeholders, the design of recommender systems requires the careful consideration of various aspects, including the choice of the user modeling approach, the recommendation algorithm itself, and the user interface. This track aims to provide a forum for researchers and practitioners to discuss open challenges, latest solutions and novel research approaches in the field of recommender systems.

## 2.2 Other Tracks

### **Late breaking results and demonstrations – chair: Fedelucio Narducci (Politecnico di Bari, Italy)**

Original and unpublished ideas that are still in the early stages of research (work-in-progress) were the target for the late breaking results category, encouraging researchers and practitioners to use this track as a valuable opportunity to receive useful feedback on early-stage work and foster discussions and collaborations among colleagues.

At the same time, we believed demonstrations are an essential and exciting complement to the overall conference program. These are a great way to show implementations of novel, engaging, and crucial concepts or systems related to hypertext interest areas and receive some helpful feedback from the community.

In combination, 16 submissions were received, and only 9 were accepted, reviewed and selected by a dedicated committee (more details in <https://ht.acm.org/ht2022/program-committee/>).

### **Blue Sky Ideas – chair: Fedelucio Narducci (Politecnico di Bari, Italy)**

In cooperation with the Computing Community Consortium (CCC), ACM Hypertext 2022 invited submissions to a special “Blue Sky Ideas” track. The emphasis of this track was on visionary ideas, long term challenges, and opportunities for highlighting new research directions for the HT community. Research and topics that are outside of the current mainstream topics of the field were especially welcome. Submissions were judged on the extent to which they expand the possibilities and horizons of the field or challenge existing assumptions prevalent in the field.

In this track, 8 out of the 10 received submissions were accepted (as in the previous case, this task was done by a dedicated committee). Thanks to CCC sponsorship, the top 3 papers submitted to this track were awarded with prizes of \$1000, \$750 and \$500 respectively.

In addition, there was a call for Doctoral Consortium submissions from graduate students chaired by Tommaso di Noia (Politecnico di Bari, Italy), but none of the 3 received submissions was accepted.

### 2.3 Keynote Speakers

We were able to include two great keynote speakers whose topics covered a diverse range of areas of interest for the community:

- **m.c. schraefel**, Professor of Computer Science and Human Performance at the University of Southampton and leader of the Wellthlab. This keynote was shared with the ACM Web Science Conference, where the speaker questioned web scientists and hypertext researchers to explore the role of web science in general and hypertext in particular in helping to create the infrastructure of radical cultural shift towards health.
- **Dene Grigar**, Professor and Director of The Creative Media & Digital Culture Program at Washington State University Vancouver. This talk detailed the speaker's (and her group's) efforts to preserve cultural artifacts, arguing that reconstructing hypertexts fits into a larger notion of digital conservation and the act of media translation.

### 2.4 Awards

At the end of the conference, the best paper awards were announced:

- **Douglas Engelbart Best Paper Award:** *Links Of Darkness: Hypertext And Horror*, by Mark Bernstein and Stee McMorris.
- **Ted Nelson Newcomer Best Paper Award:** *Cross-Lingual Query-Based Summarization of Crisis-Related Social Media: An Abstractive Approach Using Transformers*, by Fedor Vitiugin and Carlos Castillo.

Additionally, and sponsored by the CCC, these were the prizes awarded to the best Blue Sky Ideas:

- First place: *The Web At War: Hypertext, Social Media, and Totalitarianism*, by Mark Bernstein.
- Second place: *From Users to (Sense)Makers: On the Pivotal Role of Stigmergic Social Annotation in the Quest for Collective Sensemaking*, by Ronen Tamari, Daniel Friedman, William Fischer, Lauren Hebert and Dafna Shahaf.

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- Third place: *Weaponising Social Media for Information Divide and Warfare*, by Ehsan Ul Haq, Gareth Tyson, Tristan Braud and Pan Hui.

### 3. WORKSHOPS IN ACM HT 2022

This edition of ACM Hypertext hosted four Workshops selected by our Workshop, Exhibition & Tutorial Chair, Yeliz Yesilada. The proceedings of some of these workshops are published post-hoc in the ACM Digital Library.

#### 3.1 5th Workshop on Human Factors in Hypertext (HUMAN '22)

Claus Atzenbeck (Hof University) and Jessica Rubart (Ostwestfalen-Lippe University) organized this workshop. HUMAN'22 has a strong focus on the user. Its user-centric view on hypertext not only includes user interfaces and interaction, but also discussions about hypertext application domains. Furthermore, the workshop raises the question of how original hypertext ideas can improve today's hypertext systems. Historically, hypertext research is strongly connected with human factors. Hypertext pioneers, such as Doug Engelbart or Ted Nelson, focused on human factors in hypertext, e.g., Doug Engelbart's "augmenting human intellect" or Ted Nelson's information structure "ZigZag". This workshop combines original hypertext research ideas with recent hypertext research trends. In addition, the motivation is to consolidate different hypertext research areas from the viewpoint of human factors.

#### 3.2 The Narrative and Hypertext (NHT)

David Millard (University of Southampton) and Charlie Hargood (Bournemouth University) organized this workshop. The Narrative and Hypertext (NHT) workshops aim to provide an interdisciplinary forum to bring together individuals from the humanities and technological communities to share work and discuss state-of-the-art research on narrative from both a technical and aesthetic perspective. It is the longest running workshop series at ACM Hypertext – running since 2011 – and has fostered numerous collaborations which have led to work published in the main conference, as well as serving as an important discussion point for important issues facing the community. NHT has a sister workshop, AIS (Authoring for Interactive Storytelling) that runs as part of the ICIDS conference. AIS2020 kickstarted work on a new edited volume focused on 'The Authoring Problem' for interactive digital narratives, this is now in production, and this year NHT22 invites

open contributions related to the topics within the book, these are concerned with the technical and craft difficulties of writing complex interactive multimedia and text, and designing and building the software to support that process.

### 3.3 Open Challenges in Online Social Networks (OASIS '22)

Barbara Guidi (University of Pisa), Andrea Michienzi (University of Pisa), and Laura Ricci (University of Pisa) organized this workshop. Since their introduction, Online Social Networks deeply changed the way humans interact with each other, offering countless new possibilities and demolishing the physical barriers among people. Their worldwide adoption introduced numerous problems, including poor privacy management, the spread of fake news, the impact of bot accounts, architectural scalability, a poor redistribution of the economic value generated, and others. The aim of this workshop is to attract contributions that are able to identify relevant problems in centralized and decentralized Online Social Networks and propose innovative solutions to these problems.

### 3.4 7th edition of The International Workshop on Social Media World Sensors (SIdEWayS)

Mario Cataldi (Université Paris 8), Luigi Di Caro (University of Turin), and Claudio Schifanella (University of Turin) organized this workshop. The main goal of the workshop is to discuss ideas and solutions concerning the analysis and the evolution of Social Media content, with a focus on the how it can be view and interpreted as a real-time sensor (in any possible declination, negative or positive) of the surrounding society.

## 4. EXPERIENCE OF A HYBRID HYPERTEXT CONFERENCE

There are a series of challenges when organizing a hybrid conference that are unique to that particular setting, both during but, more importantly, before the conference started. The most critical one is related to the uncertainty: in contrast to purely online events (common during 2020 and 2021, mostly), we need to offer two types of registration that have different requirements (in terms of cost and infrastructure) without any guarantee on their numbers: will the onsite attendance come back to pre-2020 numbers? since the online registration is lower than onsite, will this move people to prefer the former? These are valid questions that we needed to answer several months in advance of the conference, where

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the travel restrictions and health situation could be very different to the actual moment of the conference. Our decision in this regard was to aim for a 50-50 ratio between online and onsite attendees, expecting the overall numbers to remain the same as in previous years; moreover, as the conference was planned for the summer, we hoped restrictions would be lower at that time, while the inherent tourism attractiveness of the city (Barcelona) would do the rest. Another decision we took was to discriminate between author and participant rates, so that online author rates were slightly higher, in order to avoid a hybrid conference with almost no physical presence.

From the technological side, in 2022 there are a wide range of options to choose from. For a conference this size, we thought a dedicated app was not needed, so we resorted to using Zoom video conferencing system to stream the presentations, either from online or onsite attendees, complemented with the Slack messaging tool, where attendees could ask questions or continue the discussion during or after the presentations. Additionally, the talks of the conference were recorded and uploaded to the SIGWEB Youtube channel (<https://www.youtube.com/c/ACMSIGWEB/>) after the conference. Three challenges were evident with this setting: a) what is the best schedule to accommodate for the online attendees, while considering the conference is actually running in a European city? For this, we tried to keep a European schedule although the keynotes and some discussion sessions were located in the so-called “golden hours” (i.e., where it is easier for anyone in the world to attend). b) how to integrate online attendees in social events? We did not manage to do this since we found more infrastructure was needed (cameras, microphones, and internet would be needed during the banquet, even though the time was probably not optimal for many attendees), however, to adjust for this we consciously avoided any announcement related to the program track to be done during the social events. c) making the recorded talks available as early as possible is useful for attendees (as it avoids the problem of having different timezones), but it requires an extra effort on editing and processing that we could not devote during the conference; on top of that, while using YouTube for archiving reasons could be a good solution, it is probably not the best option to use it for the talks while the conference is still running, as there would be little difference between those who registered and those who did not, so an additional storage variable might be considered.

Finally, there are challenges and issues that affect the human side that moves and makes conferences like this one possible. We were notified of (or get requests for) delays in almost any procedure, including paper submission and reviews. Financial support either for developed countries but also for those in need because lack of local funding was more important than ever, and we are really happy to have had the possibility to offer a Fair Access Fund sponsored by SIGWEB for this. At the same time, we believe the hybrid nature of this and other conferences increases the options to get to a diversified audience while, at the same time, it democratizes the access to conferences, both because online fees are usually lower, but also because the recorded talks make it easier to follow a presentation on its own pace, usually with subtitle capabilities, and pausing or repeating confusing or interesting parts.

Despite these challenges, we are optimistic about hybrid conferences, and really hope that our experience will make the next hybrid events easier to organize and more inclusive for participants, in particular thinking of the organization of ACM Hypertext 2023, which will take place in Rome, Italy, next year. We hope to see you there!

## ACKNOWLEDGMENTS

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## REFERENCES

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