



Association for
Computing Machinery

Advancing Computing as a Science & Profession

June 22-24, 2022

Aveiro,
Portugal



imx

2022

ACM INTERNATIONAL
CONFERENCE ON
INTERACTIVE MEDIA
EXPERIENCES

IMX 2022

Adjunct Proceedings of the 2022 ACM International Conference on
INTERACTIVE MEDIA EXPERIENCES

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ACM International Conference on Interactive Media Experiences

22-24 June, 2022

Aveiro, Portugal

Adjunct Proceedings

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Welcome from the ACM IMX 2022 Chairs

We are delighted to welcome you to the 2022 edition of the ACM International Conference on Interactive Media eXperiences - ACM IMX 2022! In keeping with tradition, as the leading international conference for presentation and discussion of research into interactive media experiences, we bring together international researchers and practitioners from a wide range of disciplines, ranging from human-computer interaction, multimedia engineering and design to media studies, media psychology and sociology in order to present and discuss the state of the art of research in the field. We hope you enjoy an engaging program, share insights into novel subject areas, and form networks that enable you to carry on working in new research directions.

The theme for 2022 is “Interactive Media Brings us Together”, when the IMX conference is back to in-person again, and we intend to meet our community to share ideas and exchange knowledge. The conference is scheduled to take place in Portugal, in the city of Aveiro, called “The Venice of Portugal”, with the Aveiro lagoon and the salt pans, the canals that give the city its nickname. IMX 2022 is hosted by the University of Aveiro and co-organized by Universidade Federal Fluminense and Universidad Politécnica de Madrid. For the ones who cannot travel, the conference provides the opportunity to participate in an online/virtual space.

Diversity and inclusion were a major consideration for the selection of our personnel – the organizing committee, student volunteers, doctoral consortium mentors, and associate chairs – as well as the selection of our virtual conference platform, registration processes, and attendees support. Our diversity and inclusion chairs worked with the SIGMM and SIGCHI Development Fund committee in order to provide grants for contributing students and early career researchers. Finally, in our efforts to improve the diversity of attendance across different geographical regions, IMX 2022 is also offering substantial discounts to countries identified by the ACM as economically developing.

In this edition, we will have three brilliant keynotes: Prof. Sun Joo (Grace) Ahn, from University of Georgia, USA, talking about “Designing and Scaling IMX Programs for Community-Level Interventions”; Álvaro Villegas, from NOKIA, Spain, talking about “Teleporting remote experts with Distributed Reality”; and Prof. Mark Billinghurst, from University of South Australia, Australia, and University of Auckland, New Zealand, talking about “Empathic Computing: Delivering the Entire Metaverse”. Our diversity and inclusion chairs have also organized a panel about “Diversity in the Metaverse” with the support of SIGMM to invite distinguished speakers to talk about this exciting topic.

As for latest editions, IMX 2022 has made an effort to extend our community to include new researchers from developing countries. IMX 2020, with the support of the SIGCHI Development Fund, co-hosted a special focused workshop looking at ‘Latin America’ with the view to improve our ties with researchers in the region. In IMX 2021, three out of four half-day workshops featured organizers from Latin America. This year, two of five workshops have organizers from Latin America. We are incredibly delighted that the five workshops ‘LIQUE 2022 – Life Improvement in Quality by Ubiquitous Experiences Workshop’, ‘SensoryX 2022 – Multisensory Experiences’, ‘Emotion IMX2022 – Considering Emotions in Multimedia Experience’, ‘Performances IMX2022

– Designing live performances of the future’, and ‘XRWALC 2022 – 1st International Workshop on Analytics, Learning & Collaboration in eXtended Reality’ allow our community to engage in discussions and gather insights on a wide variety of topics. The workshops will all happen on June 22nd along with the mentorship program crafted and led by our doctoral consortium chairs for the benefit of our doctoral consortium authors. The mentorship program is a single-track event that will provide an opportunity for 6 doctoral students to present and discuss their work.

The Adjunct Proceedings of ACM IMX 2022 bring the works selected and presented in the IMX-in-Industry track, IMX’s Doctoral Consortium, and in the Workshops “Emotion IMX 2022 – Considering Emotions in Multimedia Experience”, “XRWALC 2022 – 1st Int. Workshop on Analytics, Learning & Collaboration in eXtended Reality” and “PERFORMANCES IMX2022 - Designing the performances of the future”.

In the Industry Talks & Exhibitions Track at IMX 2022, we sought stand-out industry viewpoints which help to attract attention, provoke discussion, networking and collaboration amongst conference delegates throughout the event. We also promoted virtual/online booths for exhibitions/demos, which further expanded the interaction and networking possibilities. With these initiatives, our goal was to showcase significant advances in research and development, technologies and real-world experiences that have industrial applicability. Contributions span business cases, marketing and market insights, case studies, best practices and lessons learned in IMX and related fields. In response to our call for participation, we received 5 interesting submissions. All proposals were put through a rigorous peer-review process as expected from ACM IMX. Each submission was evaluated by at least two reviewers and was judged in terms of interest for the IMX community, innovation, technical background, and presentation clarity. As a result of this process, we accepted 4 high-quality proposals giving an acceptance rate of 80%.

The Doctoral Consortium (DC) at the IMX 2022 conference is aimed for people preparing PhDs (or other doctoral degrees) that are relevant to the themes of IMX, and feel that this is a community that they would benefit from being part of, and to which they could contribute. The DC is a forum for PhD students to discuss their work and ideas with their peers and more experienced researchers in the field. They get the chance to give a presentation on their work and get feedback and suggestions from a range of experts and fellow students, participating in a group that will help them support each other with ideas for research approaches and having a great PhD experience. Submissions were evaluated based on their relevance, approach, contribution and maturity; and six high-quality proposals were accepted this year, from different countries, in a wide range of relevant topics, including: Empathy, Affect and Cognition, Multimodal Interfaces, HCI, Multimedia, Quality of Experience, Immersion, Augmented Reality, and AI. On the opening day of IMX, these doctoral students join a group of fellow students and experts at the Doctoral Consortium, in a fun and inclusive environment; and they give a pitch presentation of their talk to the full IMX 2022 community in a plenary session at the conference, on the following days, with increased opportunities to share and discuss their work with the community.

The very first “EmotionIMX: Considering Emotions in Multimedia Experience” workshop aims to bring together researchers and practitioners from various fields (including, but not limited to, computer science, design, and cognitive science) to discuss challenges in considering affects and emotions for interactive media experiences (i.e., to assess and/or improve these experiences) from

an interdisciplinary perspective. Emotions are indeed fundamental to human experience, as they impact cognition, perception, and daily tasks (such as communication). In response to our call for participation, we received seven interesting submissions. All proposals were put through a rigorous peer-review process as expected from ACM IMX. As a result of this process, we accepted five high-quality proposals, giving an acceptance rate of 70%. These proposals cover diverse dimensions about emotions, ranging from the way they can be measured (i.e., using physiological signals or facial expression recognition), to how they can be approached during interactive media experiences. Furthermore, we welcome two inspiring keynote speakers from academia and industry to take discussions to the next level.

XR (extended or cross reality) technology is gaining relevance in many professional domains and is used and experimented with for various purposes. The XRWALC workshop at ACM IMX 2022 aims to explore the latest advancements with a focus on three particular application aspects: Remote Analytics: inspect and interact with remote systems, explore and analyze data within immersive XR environments; Immersive Learning: exploit the advantages of safe and affordable learning environments that allow to simulate, try out, experience, learn and train; and Collaboration in XR: approaches to design and enable group collaboration. In response to our call for participation, we accepted 12 compelling submissions, most of which were assessed by three peer reviewers. We further welcome two thought-provoking keynote speakers who will inspire the discussions at the workshop.

The very first "PerformancesIMX: Designing the performances of the future" workshop aims to start a conversation between the emerging digital live arts pioneers, technologists, and developers, to explore together where live performance might go. The workshop aims to explore the interception of technology and performance, with a focus on how technology might be leveraged to enhance performances and the process of developing performances, provide new ways to reach and interact with audiences, as well as how it can create new ways of performing. We invited both researchers and practitioners to present their work, experiments, insights, successes, and failures, as well as their fears and hopes in this domain. We accepted 12 intriguing contributions in response to our call for participation, consisting of 4 pictorials (present in these proceedings) and 8 video demonstrations, the majority of which were evaluated by three peer reviewers. We also have two inspirational keynote speakers who will enhance the discussions at workshop.

Finally, our local chairs have also organized a very nice social event including a boat ride in the canals of Aveiro using a "moliceiro", which is a typical boat of the lagoon that was used in seaweed harvesting, followed by a dinner at The Ria Melia Hotel restaurant. Once the conference is over, all main track accepted papers, in addition to the work-in-progress reports and demo contributions, have been included in the ACM Digital Library (DL) using TAPS (The ACM Publishing System) by our proceedings chairs. As a matter of principle, all contributions from IMX 2022 to the ACM DL were made fully accessible thanks to support from our accessibility chairs.

IMX 2022 was made possible through the hard work, dedication, and generous time volunteered by a lot of people in the community. We would like to take this opportunity to give our heartfelt thanks to all the contributors and volunteers involved in the making of this conference - the authors, the ACs, the reviewers, the mentors, the workshop organizers, the track chairs, the proceedings chairs, the publicity and web chairs, our panelists, our keynotes, the IMX steering

committee, the SIGCHI executive committee, and our community. We would like to extend our gratitude to our sponsors and supporters ACM SIGCHI, ACM SIGMM, and ACM SIGWEB, our industry sponsors Altice Labs, Nokia and Sky, our platform supporter OhYay, and our hosting organizations University of Aveiro, Universidade Federal Fluminense and Universidad Politécnica de Madrid. We would also like to thank you for your implied support in registering for the conference and showing up to participate in what will no doubt be a memorable experience.

We hope that the program we have put together for you promotes thought-provoking conversations, noteworthy questions, and share-worthy memories. We look forward to meeting you in Aveiro!

Débora C. Muchaluat Saade (UFF, Brazil), Jesús Gutiérrez (UPM, Spain)

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