

2nd International Workshop on Immersive and Situated Analytics (ISA'23)

in conjunction with the International Symposium on Mixed and Augmented Reality (ISMAR 2023)

ABSTRACT

The field of **immersive analytics** has gained significant attention in recent years, particularly in natural sciences where users need to explore and understand complex three-dimensional spatial data.

In immersive analytics, the combination of **situated visualization** and **embodied interaction** can be a powerful tool for exploring complex data in real-time. By creating visualizations that are contextually situated within a physical space, users can better understand the data they are working with and make more informed decisions. By incorporating embodied interaction, users can engage with the data in a more natural and intuitive way, allowing them to explore the visualization in a more immersive and interactive manner. **Situated analytics** (SA) is a method of interactive exploration for multi-dimensional data in AR. SA allows two-way dialogue between the user, the real world, and the information space, illuminating the divide between the virtual and the physical context. With the increased amount of data collection and processing, SA is a promising tool for data analysis.

This workshop aims to address the challenges of Situated Visualization and Embodied Interaction, as well as the more integrated topic of Situated Analytics (SA). The workshop will be structured into two distinct parts:

In the morning, we will focus on the research talks in the direction of situated visualization, embodied interaction and immersive analytics. It starts with **two keynote presentations**, focusing on **immersive visualization environments (IVE)** and **situated analytics (SA) for digital twins**. After that, we will have **10 paper presentations**, focusing on creative ideas for situated visualization, interaction and analytics design.

In the afternoon, we will focus on the potential impact of situated visualization and embodied interaction techniques on situated analytics (SA) within the context of user decision-making for **digital twin applications**. The afternoon session is organized as a **hands-on interactive brainstorming session**, enabling attendees to experience SA challenges and try solution concepts.

Advances in digitization of industry, cities, healthcare, and most other aspects of human life provide a rich source of real-world information, creating digital twins. Situated Analytics can be used to analyze digital twins for decision making. We aim to exchange

research about situated analytics for digital twins, including applications, limitations, and challenges.

TOPICS OF INTERESTS

We invite researchers to submit their original ideas, technical papers, work-in-progress contribution, and position papers on any of the following topics but not limited to:

Immersive and Situated Visualization

- Visual encodings and representations in immersive environments
- Immersive visualization
- Multi-view representations and layout in immersive environments
- AR adaptive visualization for dynamic and cluttered environments.

Embodied Interaction

- Multimodal input and output for immersive interaction
- Touch, tangible and gesture interfaces
- Haptic interaction
- Spatial user interaction
- Embodied interface and interaction
- Tracking and interpreting user movements in immersive environments
- User experience in situated visualization and embodied interaction in immersive environments

Situated Analytics

- Situated analytics application
- Individual and collaborative SA
- Situated information visualization for SA
- Abstract visualization for SA
- Analytical interaction techniques for SA

IMPORTANT DATES

- Papers submission: ~~July 17th~~, **July 28th, 2023**
- Notification of acceptance: August 7th, 2023
- Camera-ready copy: August 21st, 2023
- Workshop date: October 16th, 2023

Each deadline expires at 23:59:59 (AoE)

SUBMISSION

We welcome paper submissions of 2-4 pages, excluding references. Paper quality versus length will be assessed according to a contribution-per-page judgment. All submissions will be accepted or rejected as workshop papers.

All accepted papers will be archived in the IEEE Xplore digital library.

Detailed submission and review guidelines are available on the workshop website at that link: <https://tc.computer.org/vgtc/publications/conference/>.

All paper submissions must be in English.

All paper submissions must be made through PCS using that link: <https://easychair.org/conferences/?conf=isa23>.

If you have any questions or thoughts, please let us know via the group's email (isa.ismar2023@gmail.com)