



# HCI International 2025

22 - 27 June • Gothenburg, Sweden

## Call for Participation Techniques and Technologies for Immersive and Embodied Learning

***Sunday, 22 June 2025 - 08:30 - 12:30 CEST***

Organizers:

**William Jones**

The Information School, University of Washington, Seattle, WA, USA

[williamj@uw.edu](mailto:williamj@uw.edu)

**Masood Rangraz**

School of Industrial Engineering and Management and the Digital Future Research Center., KTH Royal Institute of Technology, Stockholm, Sweden

[rangraz@kth.se](mailto:rangraz@kth.se)

**Petter Wannerberg**

RISE Research Institutes of Sweden, Sweden

[petter.wannerberg@ri.se](mailto:petter.wannerberg@ri.se)

### Aim of the Workshop

Immersive learning and embodied learning are closely related and complementary approaches that engage the learner in interactive experiences. A shared intention is to promote not only immediate learning of the targeted subject but also the long-term retention of knowledge gained as well as the transfer of this knowledge and its practical application. Immersive learning focuses on the learning environment. Embodied learning focuses on incorporating physical movement and sensory experiences into the learning process.

Technologies and tool development to enable, for example, virtual reality (VR) including gesture recognition [2,6] and tangible interfaces [5] can facilitate both. But so too can techniques of learning such as “hands-on” interaction [3] and question-based learning [1] that do not critically depend upon enabling technologies.

### Expected Workshop outcome

We will pursue the following publication options: 1. A “Late Breaking Paper” describing the workshop and its outcomes for inclusion in the Conference proceedings, and 2. A long paper to be considered for publication in the context of the HCII 2026 Conference Proceedings.



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## Workshop topics

We consider the following questions in particular:

- **What works?** The workshop will catalog and compare the many extant approaches to immersive and embodied learning. Which approaches appear especially promising?
- **How? How well?** Special focus will be given to practical considerations involved in different approaches. Which approaches show the greatest ability to scale? And without “side effects” (e.g., the discomfort and disorientation sometimes experienced in VR).
- **For whom?** We give special attention to techniques and technologies that might engage and benefit people with so-called “special needs” – e.g., teens and pre-teens, older people, and people diagnosed with attention deficit hyperactivity disorder (ADHD) but then, with the expectation that many of these techniques and technologies may have broader application [4]

## Workshop agenda

The following is a framework for the program of the Workshop:

<i>Time</i>	<i>Program event</i>
8:30-9:30	<b>Introductions.</b> <ul style="list-style-type: none"><li>• Introductory remarks to set the stage: Agenda for the day; key issues to address; scope.</li><li>• Participants will each have a minute to introduce themselves, their background and one thing they hope to get out of the workshop.</li><li>• Formation into breakout groups.</li></ul>
9:30-10:30	<b>Breakout group discussion (part 1)</b> Breakout groups (“earth”, “air”, “fire”, “water”) each discuss the same set of questions/issues (see first section) as they formulate an action plan of research and development. Those who have chosen to submit a full paper to the workshop will be given up to 10 minutes to give a presentation of their paper’s core ideas (+ up to 5 minutes for follow-on discussion).
10:30-11:00	<b>Refreshment break</b>
11:00-12:00	<b>Breakout group discussion (part 2)</b> Breakout groups (“earth”, “air”, “fire”, “water”) each discuss the same set of questions/issues (see first section) as they formulate an action plan of research and development.
12:00-12:30	<b>Conclusions</b> In a common meeting, each of the four breakout groups will have up to 10 minutes to summarize their discussion and to describe their action plan of research & development



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## Guidelines to prospective authors

### Submission for the Workshop

Prospective authors should submit their proposals in PDF format through the [HCI Conference Management System \(CMS\)](#).

All who are interested in participating (online or in-person), should submit:

- A one- to two-page proposal (up to one thousand words or so, excluding references)
- Describe how your position relates to the workshop and to your own research. Brevity is encouraged! You will have ample opportunity to expand upon your good ideas in the publication(s) to follow from the workshop.
- Please DO NOT anonymize.
- Please also indicate whether you can participate in the workshop in-person or only online.

All participants, online and in-person, are also invited to contribute to the post-workshop article (the potential venue for publication will be discussed at a later stage). Questions? Feel free to contact William Jones ([williamj@uw.edu](mailto:williamj@uw.edu)).

### Submission for the Conference Proceedings

The contributions to be presented in the context of Workshops will not be automatically included in the Conference proceedings.

However, after consultation with the Workshop organizer(s), authors of accepted Workshop proposals who are registered for the Conference are welcome to submit, through the Conference Management System (CMS), an extended version of their Workshop contribution to be considered, following further peer review, for presentation at the Conference and inclusion in the “Late Breaking” volumes of the Conference proceedings, either in the LNCS as a long paper (typically 12 pages, but no less than 10 and no more than 20 pages), or in the CCIS as a short paper/extended poster abstract (typically 6 pages, but no less than 4 and no more than 11).

## Workshop deadlines

Submission of Workshop contributions	19 April 2025
Authors notified of decisions on acceptance	26 April 2025
Finalization of Workshop organization and registration of participants	2 May 2025



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## Workshop Organizer(s)

**William Jones** is a Research Associate Professor Emeritus in the Information School at the



University of Washington. He is recently interested in the relationships between information, knowledge and successful aging. William has published in the areas of personal information management (PIM), human-computer interaction, information retrieval (search), and human cognition/memory. He wrote the book *Keeping Found Things Found* and, more recently, the three-part series, *The Future of Personal Information*.

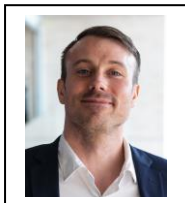
William holds 6 patents relating to search and PIM. He is currently lead editor for a 2025 Cambridge Press book, "Thrive in Time: Techniques & Technologies to Age Successfully".

**Masood Rangraz** is a postdoctoral fellow at KTH Royal Institute of Technology in the School



of Industrial Engineering and Management and the Digital Future Research Center. Included in his research: Human and Automation Interaction, Digital Competence, Accessible design, Cognitive Accessibility, Technology Enhanced Learning. He has published in the fields of Information Systems (Informatics) and Design.

**Petter Wannenberg** is a XR developer and researcher at RISE Research Institutes of Sweden.



He is an expert in shaping virtual worlds and the processes around it, both creatively and technically. He is currently leading research and development teams in creating virtual pedagogical environments using game engine technologies. His research focus is developing the Swedish school system by creating VR world of learning and using of artificial intelligence in and around the creation of virtual worlds. He is also a member of the EMRN

(European Metaverse Research Network).

## Useful links and References

1. Olle Bälter, Richard Glassey, Andreas Jemstedt, and Daniel Bosk. 2024. Pure question-based learning. *Education Sciences* 14, 8: 882. Retrieved October 11, 2024 from <https://www.mdpi.com/2227-7102/14/8/882>
2. Julia Chatain, Manu Kapur, and Robert W. Sumner. 2023. Three Perspectives on Embodied Learning in Virtual Reality: Opportunities for Interaction Design. In *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems*, 1–8. <https://doi.org/10.1145/3544549.3585805>
3. Virginia J. Flood, Anna Shvarts, and Dor Abrahamson. 2020. Teaching with embodied learning technologies for mathematics: responsive teaching for embodied learning. *ZDM* 52, 7: 1307–1331. <https://doi.org/10.1007/s11858-020-01165-7>
4. William Paul Jones and Bälter, Olof. 2025. The win/win in following lines of inclusion in Human-Computer Interaction investigation. In *HCI INTERNATIONAL 2025, HCI INTERNATIONAL 2025 27th International Conference on Human-Computer Interaction*.



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5. Sara Khorasani, Brandon Victor Syiem, Sadia Nawaz, Jarrod Knibbe, and Eduardo Velloso. 2023. Hands-on or hands-off: Deciphering the impact of interactivity on embodied learning in VR. *Computers & Education: X Reality* 3: 100037. Retrieved January 28, 2025 from <https://www.sciencedirect.com/science/article/pii/S2949678023000314>
6. Antonia Ypsilanti, Ana B. Vivas, Teppo Räisänen, Matti Viitala, Tuula Ijäs, and Donald Ropes. 2014. Are serious video games something more than a game? A review on the effectiveness of serious games to facilitate intergenerational learning. *Education and Information Technologies* 19, 3: 515–529. <https://doi.org/10.1007/s10639-014-9325-9>

## Registration regulation

Workshops will run as 'hybrid' events. Organizers are themselves expected to attend 'on-site', while participants will have the option to attend either 'on-site' or 'on-line'. The total number of participants per Workshop cannot be less than 8 or exceed 25.

Workshops are 'closed' events, i.e. only authors of accepted submissions for a Workshop will be able to register to attend the specific Workshop, complimentary with their Conference registration.