Workshop on Emerging Novel Prototyping Techniques for XR (ENPT XR)

Workshop hosted by IEEE VR 2023, March 23-24, 2023, Shanghai, China, (Hybrid/Online)

Extended reality has finally become a mainstream technology. Recent advances in commercial VR and the calls by big tech companies to build the “Metaverse,” have increased interest in the medium. This interest forced designers from different backgrounds to look for effective ways to communicate their ideas to technical developers and rapidly prototype effectively for XR.

This full-day workshop will bring together researchers and industry practitioners from different backgrounds to discuss the future of prototyping for VR, AR, and 3D User Interfaces, and help chart a course for the future of XR prototyping techniques. We invite authors to submit 4-6 page papers on any of the following topics:

- Rapid prototyping for XR experiences (AR, VR, MR)
- Rapid prototyping by novice and non-tech-savvy designers
- Prototyping for immersive storytelling
- Prototyping for Haptic/tactile feedback in XR applications
- XR hardware design and prototyping
- Repurposing of existing prototyping techniques for immersive contexts
- Novel prototyping techniques supported by custom devices/tools
- Prototyping techniques or technologies/plugins/frameworks designed specifically to support novice (non-technical) users in designing/prototyping XR
- User/case studies evaluating the above topics
- Speculative design evaluating the future of the above topics

Related but unlisted topics are also welcome. In addition to a presentation at the workshop, authors of all accepted submissions will be strongly encouraged to demonstrate their novel prototyping techniques in a video which will be shared with the workshop participants.

We seek to tie these contributions together intellectually with unifying ideas, frameworks, and theories that provide common ground for discussing, analyzing, connecting, inventing, comparing, and making predictions about emerging new prototyping techniques as well as to identify gaps or opportunities for a future research agenda from gaps in a new taxonomy. To start the discussion concretely, we will use the notion of prototyping for XR experiences by novice/non-tech-savvy designers.

Workshop Questions for Discussion

- Do these prototyping techniques differ among VR, AR, MR, etc.? How? Why?
- What is common about these new prototyping techniques, and what things or ideas connect them? What differs?
- Do they vary in importance based on the application, e.g., storytelling vs healthcare app?
- Is there a next generation of prototyping techniques or just a set of disparate developments? Are they unique to XR or inspired primarily by other arts like film or fields like engineering?
- Taking prototyping for XR experiences by novice/non-tech-savvy designers as a provisional starting point, is it possible to extend, expand, support, disagree with, or modify the initial XR prototyping techniques for novice designers' framework? or introduce alternative approaches?
- How can we predict, understand, and identify gaps in prototyping for XR experiences by novice/non-tech-savvy designers?
- Are there opportunities for new methods or tools inspired by gaps uncovered by this?

Important Dates:

■ IEEE VR Conference Papers Author Notification	December 15, 2022, AoE
■ Submission Deadline	January 15, 2023, AoE
■ Notification Deadline	January 20, 2023, AoE
■ Camera-Ready	February 3, 2023, AoE

Provisional Schedule

Time	Activity
30 min	In-person + virtual meet & greet
15 min	**Introduction** The workshop theme, approach, and goals
60 min	**Rapid presentations by position paper authors** (Part 1) *3MT (3-minute thesis) style, so most of the workshop is dedicated to building new knowledge and discuss ideas. Participants are expected to read the position papers before the workshop.*
15 min	**Break**
60 min	**Rapid presentations by position paper authors** (Part 2)
60 min	**Discussion or keynote speaker** Frame questions for further discussion in breakout groups
90 min	**Lunch**
30 min	**Discussion** *Initiate the discussion around developments in prototyping techniques for XR. This discussion could be based on extending, expanding, supporting, disagreeing, discrediting or modifying the initial XR prototyping techniques for novice designers' framework or introducing alternative approaches.*
60 min	**Breakout groups** *Break into different groups and discuss the workshop questions in teams*
15 min	**Break**
45 min	**Group reports** *Individual and collective ideas*
30 min	**Closing remarks** Around future work, research agenda, plans for follow-up activities, publication plans

Submission Information:

Papers should be submitted via PCS: https://new.precisionconference.com

Submissions must be anonymized and in PDF format, in the VGTC format:
http://junctionpublishing.org/vgtc/Tasks/camera.html

All submissions will be reviewed by experts in the areas listed above. At least one author of each accepted submission must register for the workshop and IEEE VR 2023 conference. Authors of accepted papers will be expected to give a 3-minute presentation at the workshop, and encouraged to give a demonstration of their research as a video. Proceedings will be submitted for inclusion in the IEEE Xplore Library. We will also host the papers on this site.

Potentially, these papers will be seeds of journal article contributions under a special issue through an arrangement with a Journal or a magazine. This is to be confirmed soon.

Possible Keynote Speakers: Mark Billinghurst, or Michael Nebling (pending their confirmation)

Organizers:

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