Game, Film, and Interactive Experience Technologies

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In this article, we provide an understanding of the technical areas desired for this special issue as well as an overview of the selected papers.

In August 2024, I drafted a call for papers for a special issue of *Computer* on game, film, and interactive experience technologies. My expectations for this special issue were that we would receive submissions relevant to game, film, and interactive experience technology professionals and chief scientists that are relevant to near-term and far-term deployment in the development of games, films, and interactive experiences. Paper topics sought included the following:

- machine learning for games and interactive experiences
- generative artificial intelligence (AI) and large language models for game, film, and interactive experience authoring
- architectures for the networking of games and film production
- sensor-based games and interactive experiences
- computational human perception for games and interactive experiences
- novel architectures for the metaverse
- large language models that can generate complete feature-length films
- technologies for building a human-intelligent metaverse
- game and interactive experience architectures for use in education.

After a year-long process, we have the following accepted articles:

- "A Serious Game for Dena'ina Language and Heritage"

- "Augmented and Virtual Reality in STEAM: Virtual Field Trips"
- "Mediated Ecological Validity in Anthropomorphic Avatar Dyad Parasocial Interactions"

So, we have two serious games papers and one very deep virtual reality (VR) research article of great value. Enjoy!

The article "A Serious Game for Dena'ina Language and Heritage"[A1] details an extensible serious game framework that can be adapted to support different language and heritage content. The authors use this framework to create a serious game entitled Dnigi. Dnigi means "moose" in the Dena'ina language. The game focuses on Alaska Native heritage by exploring various regions of Alaska and their native histories. The goal of the project is to create an interactive experience that preserves the heritage and languages of Alaska's Indigenous people.

The article "Augmented and Virtual Reality in STEAM: Virtual Field Trips"[A2] details an integrated augmented reality (AR) and VR interactive experience that supports geoscience education. This education utilizes augmented

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artifacts and 3D models that promote an understanding of the geoscience domain via virtual field trips to places of geological interest. The authors believe that this system enhances spatial reasoning, environmental awareness, and the interdisciplinarity required for a good grounding in the geoscience topic. Additionally, their system provides access to distant locations like the Samaria Gorge that are unavailable to most.

The third article is titled "Mediated Ecological Validity in Anthropomorphic Avatar Dyad Parasocial Interactions."[A3] Ok! What is this article about with such an interesting title? Well, it is about creating a team-dynamics workshop inside of VR to teach emotional intelligence (EI) with results indicating "that the increase in EI scores after the VR improvisation exercises was predicted by the strength of the subjects' parasocial relationship to the interactor's mediated virtual human avatar persona." Got that? The author is very deep into this and is an outstanding researcher in this field.

And now on to the papers…

The editor of this special issue wishes to thank the authors for their contributions! I hope that the readers of *Computer* take the time to read and learn, outside their normal domains. **C**

ABOUT THE AUTHOR

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APPENDIX: RELATED ARTICLES

A1. X. Zhang et al., "A serious game for Dena'ina language and heritage," *Computer*, vol. 58, no. 9, pp. 22–30, Jul. 2025, doi: 10.1109/MC.2025.3566359.

A2. T. Fotiadis et al., "Augmented and virtual reality in STEAM: Virtual field trips," *Computer*, vol. 58, no. 9, pp. 31–45, Jul. 2025, doi: 10.1109/MC.2025.3568137.

A3. E. H. Stringer, "Mediated ecological validity in anthropomorphic avatar Dyad parasocial interactions," *Computer*, vol. 58, no. 9, pp. 46–56, Jul. 2025, doi: 10.1109/MC.2025.3577043.