

IEEE Transactions on Learning Technologies (IEEE-TLT)

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Special Issue on Metaverse and the Future of Education

Call for Papers

Contact: tlt-edumeta@ieee.org

Abstract Submission by email (Optional): 15 September 2022

Full Manuscripts Due: 15 November 2022

Extended Deadline: 15 December 2022

The Metaverse is considered the third wave of the Internet revolution, able to support persistent interconnected online 3D virtual environments (3DVE), and promising to bring new levels of social connection and collaboration. The term refers to multiple types of technology and a broad shift in how we interact with technology. Immersive technologies such as Virtual Reality (VR), Augmented Reality (AR), Mixed Reality (MR), and 3D data (e.g. point clouds, 360 images and videos) are pivotal technologies to engage with the Metaverse. Scholars around the world are already exploring how the Metaverse will impact education. “Education Metaverse”, “Edu-Metaverse” or “Metaverse for Learning” have therefore become keywords and concepts to investigate in this area.

How to effectively design and use Metaverse in teaching and learning remains crucial for the development of effective learning experiences that take advantage of the affordances of this medium. In addition, there are critical ethical and governance issues related to the Metaverse and XR (Extended-Reality) technologies, including security, privacy, equity, accessibility and intellectual property. Currently, corporations, capitals, and non-governmental enterprises are driving the development of the Metaverse and its use in various industry and social sectors. In the past decades, the world has been trying to bridge the vast digital divide and now we are beginning to see the emergence of a new “Metaverse Divide”.

As with all new technologies, it is important to determine, among other factors, the effectiveness as well as the appropriateness of immersive technologies in an educational setting. It is essential to analyze the efficacy and regulatory impacts of immersive technologies and Metaverse in an educational environment.

Papers published in this Special Issue will discuss and share fundamental research outcomes and innovative application cases of Metaverse in education. Prospective authors are invited to submit their research findings on state-of-the-art reviews, novel ideas, theoretical frameworks, practical analysis, and emergent applications of Metaverse and education in relevant fields. It aims to document, complexify, and resolve some of the key challenges and opportunities generated by the nexus between education and the Metaverse.

Suggested Topics

Topics of interest for this special issue include, but are not limited to:

1. The theoretical, pedagogic frameworks and ecological structure of Edu-Metaverse, and the standards for using it
2. Edu-Metaverse exemplary use cases and practice, including platforms (design and development) and application scenarios in various disciplines (e.g. STEM, social sciences, creative industries/practice, and language teaching, etc.), from K-12 to higher education and including corporate training
3. Social aspects and communication in Edu-Metaverse. Multilingual teaching and cross-cultural communications and the presence of self
4. Collaboration in Edu-Metaverse. How do students and educators collaborate in Edu-Metaverse? What are the benefits and challenges associated with collaborative work?
5. Ethical and security challenges associated with Edu-Metaverse. Data operation and maintenance, digital copyright protection, NFTs, and ethical issues
6. The pedagogical and technological barriers to address in Edu-Metaverse. How to prevent the Metaverse Divide?
7. Assessment and evaluation in Edu-Metaverse. How to assess learning in Edu-Metaverse?
8. Edu-Metaverse for lifelong learning
9. Edu-Metaverse as a catalyst for accelerated learning and training (e.g. simulations, virtual people, etc.)
10. Socio-technical aspects of Edu-Metaverse implementation (e.g. data analytics and user experience (UX), etc.)

Note: TLT is somewhat unique among educational technology journals given our dual-discipline focus on computer science and learning design. We expect papers to make substantive technical and/or design-knowledge contributions to the development of learning technologies as well as show how the technologies can be used to support learning. Papers that are concerned primarily with the evaluation of existing learning technologies and their applications are suitable for TLT only if the technologies themselves are novel, or if significant technical and/or design insights are offered.

Submission and Review Process

Abstracts may be submitted to the guest editors via email at tlt-edumeta@ieee.org; this is not mandatory but will enable the editors to offer early feedback on the paper's suitability with respect to the aims and scope of the special issue.

Full manuscripts should be prepared in accordance with the [IEEE Transactions on Learning Technologies guidelines](#) and submitted via the journal's [ScholarOne Manuscripts portal](#)¹, being sure to select the relevant special issue name during the submission process.

Manuscripts must not have been published or currently be under consideration for publication elsewhere. Only full manuscripts intended for review, not abstracts, should be submitted via the ScholarOne portal, and conversely, full manuscripts cannot be accepted via email.

Each full manuscript that passes an initial pre-screening will be subjected to rigorous peer

review in accordance with TLT's editorial policies and procedures. It is anticipated that 7 or 8 articles (plus a guest editorial) will ultimately be published in the special issue.

Important Dates

- Full manuscripts due: 15 November, 2022
- Completion of first review round: 15 February, 2023
- Revised manuscripts due: 30 March, 2023
- Final decision notification: 15 May, 2023
- Publication materials due: 15 June, 2023
- Publication of special issue: Summer 2023

Guest Editors

- Anasol Peña-Rios, BT Research Labs, UK.
- Andreas Dengel, Goethe University Frankfurt, Germany.
- Daphne Economou, University of Westminster, UK.
- Victor Zamudio-Rodriguez, Instituto Tecnológico de León, Mexico.
- Brian Yecies, University of Wollongong, Australia.
- Junjie Gavin Wu, City University of Hong Kong.

Please contact tlt-edumeta@ieee.org with any questions, comments, or concerns. You may email an abstract of your paper for feedback by September 15 of 2022.