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Wednesday, April 24, 2024

3:00 to 4:30pm

CREATE for STEM Institute, 115 Erickson Hall

https://msu.zoom.us/webinar/register/WN_cOpNhNZ2SMaTqmIdRPoT5A

Designing and evaluating artificial intelligence-supported immersive learning experience: Affordances, challenges, and visions

Dr. Chih-Pu Dai

Assistant Professor, University of Hawai'i at Mānoa's College of Education

Presentation abstract:

Fostering immersive learning experiences is a paramount goal in education. These experiences, facilitated by carefully designed advanced learning technologies, offer learners valuable opportunities to actively construct knowledge and refine skills within authentic contexts. In the era of artificial intelligence (AI), the authenticity of immersive learning experiences can be meaningfully enhanced by effectively integrating AI with advanced immersive learning technologies. In this talk, I will reveal the challenges confronted by prior research in this domain and underscore the potential for further innovation. The discussion will explore the intersections of advanced immersive learning technologies (e.g., digital game-based learning and virtual reality-supported simulation-based learning), AI, and virtual agents, elucidating their roles in teaching, learning, and assessment. More specifically, I will cover research endeavors focused on the design, development, implementation, and evaluation of advanced immersive learning technologies aimed at enriching and supporting math learning, math and science teacher learning, and computer science education. Furthermore, envisioning a transformative future in education, where AI-powered virtual agents facilitate adaptive and personalized learning experiences, the prospect of human-AI collaborative learning becomes promising. The integration of human-centered AI design principles and learning theories enables the ethical and responsible development and implementation of AI technologies in education. Education researchers and practitioners can strive towards creating meaningful learning experiences that cater to the needs of *all* learners in the era of AI.

Biography:

Dr. Chih-Pu Dai is an Assistant Professor in the Department of Learning Design and Technology at the University of Hawai'i at Mānoa's College of Education. His research interests and areas of expertise include Artificial Intelligence (AI) in Education, Extended Reality, Game-Based Learning and Simulation-Based Learning. Specifically, he designs and studies immersive and experience-oriented advanced learning technologies with the integration of AI and machine learning to enhance teaching and learning in science, technology, engineering, and mathematics + computing (STEM+C) fields for diverse K-12 and adult learners. His interdisciplinary work, spanning across Learning Design and Technology, Educational Psychology, and Human-Computer Interaction (HCI), has been published in leading journals such as *Educational Psychology Review*, *Computers & Education*, *British Journal of Educational Technology*, *Educational Technology Research and Development*, and *Computers and Education: Artificial Intelligence*, as well as high-quality venues such as the *ACM CHI conference on Human Factors in Computing Systems*.

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