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	Nota di contenuto	1. Introduction -- 2. X-FILEs Vision for personalized and Adaptive Learning -- 3. X-FILEs Vision for Multi-modal Learning Formats -- 4. X-FILEs Vision for Extended/Cross Reality (XR) -- 5. X-FILEs Vision for Artificial Intelligence (AI) and Machine Learning (ML) -- 6. Cross-Cutting Concerns -- 7. Epilogue.
	Sommario/riassunto	As explored in this open access book, higher education in STEM fields is influenced by many factors, including education research,

government and school policies, financial considerations, technology limitations, and acceptance of innovations by faculty and students. In 2018, Drs. Ryoo and Winkelmann explored the opportunities, challenges, and future research initiatives of innovative learning environments (ILEs) in higher education STEM disciplines in their pioneering project: eXploring the Future of Innovative Learning Environments (X-FILEs). Workshop participants evaluated four main ILE categories: personalized and adaptive learning, multimodal learning formats, cross/extended reality (XR), and artificial intelligence (AI) and machine learning (ML). This open access book gathers the perspectives expressed during the X-FILEs workshop and its follow-up activities. It is designed to help inform education policy makers, researchers, developers, and practitioners about the adoption and implementation of ILEs in higher education.