**Supporting the creation Mixed Reality (XR) artefacts: And its implications on TPACK**

**Assoc. Prof. Kathryn MacCallum, University of Canterbury, New Zealand**

Worldwide there is a growing recognition of the importance of attracting students towards science, technology, engineering, and mathematics (STEM) subjects in schools. In Aotearoa New Zealand, there has been a recent change to the school curriculum, were students are now expected to develop an understanding of Computer Science (CS) concepts from Years 0–13 (5–18 years of age). The focus has been to move student away from just using digital technologies, to rather teaching student to develop their own digital artefacts. This change has implications for all teachers, where there is a stronger focus that teachers support developed of these skills across the curriculum.

Despite the aspirations of these changes, schools are still grappling with how to effectively integrate the new curriculum content. Adopting new emerging technology, such as extended reality (XR), and new approaches, such as Design Thinking, can provide new opportunities to connect and integrate the learning of CS. However, this approach has implications on teachers, especially if these approaches are integrated across the curriculum. Drawing on a recent research project, that explored how XR tools could be adopted to facilitate learning across the curriculum, this presentations examines how this approach has the potential to influence teaching practice. In particular, the presentation examines the need to develop a deeper understanding of the knowledge areas needed by teachers, to teach and integrate digital technologies, when the teaching CS is framed across the curriculum.