



MAPPING OPPORTUNITIES FOR IMPROVED EQUITY IN MAKERSPACES AND VIRTUAL REALITY

Department:

Systems Design Engineering

Program:

PhD

Project type:

Dissertation

Project co-researchers:

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CAYLEY MACARTHUR

What can we learn from gender-imbalanced maker groups to support the diverse needs of makers in STEM-focused environments? What systemic barriers prevent the successful adoption of new technologies (like virtual reality) by diverse makers, specifically women?

Cayley MacArthur's PhD dissertation analyses the impact of equity, diversity, and inclusion within STEM-focused environments by examining women's experience in these disciplines and spaces.

The promise of “making” – that is, learning, experimenting, DIY, creation, re-appropriation, or otherwise – has become a popular topic in human-computer interaction (HCI) research. Making and “makerspaces” are of interest to public and private institutions for their potential to build confidence and potentially inspire new career paths in STEM.

MacArthur examines how these environments are often not designed to be accessible to women, people of colour, and people with disabilities by conducting ethnographic fieldwork with diverse makers. For example, she examines how VR research is designed, conducted, and reported in ways that are systematically biased against women.

This research considers what steps we need to take to make these spaces more inclusive and inviting to marginalized groups.

Interesting fact: Turns out quilting bees can serve as comparative models for game jams! MacArthur attended a lot of both for her research.