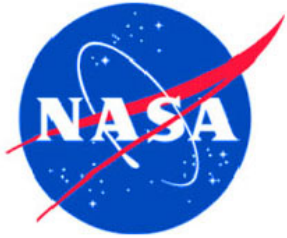


The Next Wave

Humans, Computers, and Redefining Reality

William Little

NASA Kennedy Space Center

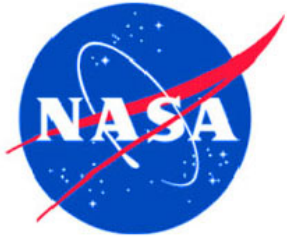


The KSC Augmented/Virtual Reality Lab (AVR Lab)



Charter:

“Dedicated to exploration into the growing computer fields of Augmented Reality, Virtual Reality, Mixed Reality, and the Natural User Interface, the AVR Lab is a proving ground for new technologies that can be integrated into future NASA projects and programs.”



Augmented **R**eality (AR)

+

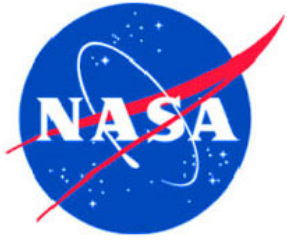
Virtual **R**eality (VR)

+

Mixed **R**eality (MR)

=

EXtended **R**eality (XR)



What is HCI?

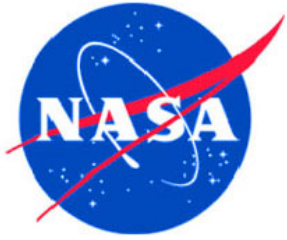


HCI

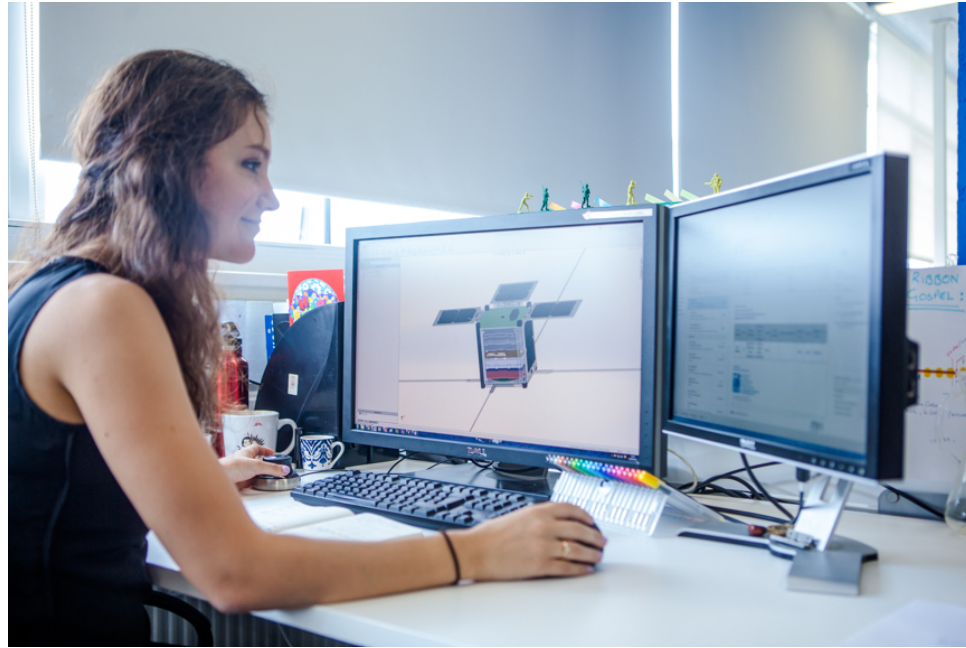
Human **C**omputer **I**nterface

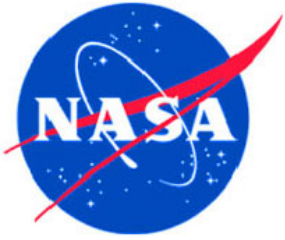


Human **C**omputer **I**nteraction



From GUI to NUI



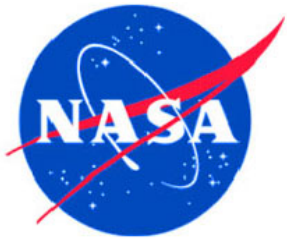


Augmented Reality



Wikipedia: “A live direct or indirect view of a physical, real-world environment whose elements are ‘augmented’ by computer-generated or extracted real-world sensory input such as sound, video, graphics, haptics, or GPS data.”



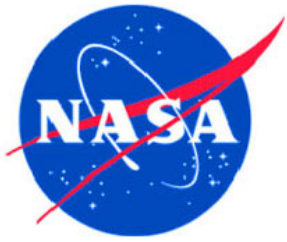


Virtual Reality



Wikipedia: “A computer technology that uses virtual reality headsets or multi-projected environments, sometimes in concert with physical environments or props, to generate realistic images, sounds and other sensations that simulate a user’s physical presence in a virtual or imaginary environment.”



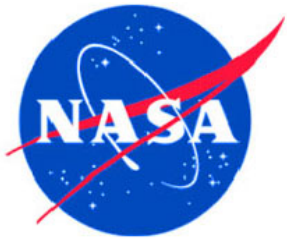


Mixed Reality



Wikipedia: “The merging of real and virtual worlds to produce new environments and visualizations where physical and digital objects co-exist and interact in real time. Mixed reality takes place not only in the physical world or the virtual world, but is a mix of reality and virtual reality, encompassing both augmented reality and augmented virtuality via immersive technology.”





Time Flies When You're Having Fun!

