

Seeing Anew: Paradigm Shifting across the Virtuality Continuum...

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Abstract: As an original pioneer of Virtual Reality, Prof. Furness presents both the legacy and future of Mixed and Augmented Reality through innovations that unlock and link minds. Inventing some of the original inspirations that led to the Google Glass and Oculus Rift, his keynote will inspire making creative leaps to realize the promise of research. Since the 1960's, his career has been about how to achieve radical innovation through helping others to "see anew." In inspiring a paradigm shift in thinking about the virtuality continuum, his work and global network of labs has shifted the thinking from being about function to purpose; perception to performance; from capabilities to possibilities. *"The virtuality continuum for me has been really about really bridging between the wonders of the real world and the infinite possibilities of the human imagination."* As Mixed and Augmented Reality innovation begins to transform everyday life, Dr. Furness presents the future role of transdisciplinary research and curriculum in melting the boundaries between Science, Technology, Media, Art, Humanities and Design to teach the next generation of innovators. He shares his future venture of the Virtual World Society that is creating a collaborative initiative of experiential learning, using virtual, mixed and augmented reality as a platform to empower youth to envision and create a better world for tomorrow.

Bio: *Tom Furness* is a pioneer in human interface technology and grandfather of virtual reality. He earned a BS degree in Electrical Engineering from Duke University and the Ph.D. in Engineering and Applied Science from the University of Southampton, England. Tom is currently a professor of Industrial and Systems Engineering with adjunct professorships in Electrical Engineering, Mechanical Engineering and Human Centered Design and Engineering at the University of Washington (UW), Seattle, Washington, USA. He is the founder of the Human Interface Technology Laboratory (HIT Lab) at UW and founder and international director of the HIT Lab NZ at the University of Canterbury, Christchurch, New Zealand and the HIT Lab Australia at the University of Tasmania, Launceston, Tasmania. He is also an Erskine Fellow and Adjunct Professor at the University of Canterbury and an Adjunct Professor at the University of Tasmania. Prior to joining the faculty at the UW, Tom served a combined 23 years as an U.S. Air Force officer and civilian at the Armstrong Laboratory at Wright-Patterson Air Force Base, Ohio, where he developed advanced cockpits and virtual interfaces for the Department of Defense. He is the author of the Super Cockpit program and served as the Chief of Visual Display Systems and Super Cockpit Director until he joined the University of Washington in 1989. He is credited as a pioneer in developing virtual reality and augmented reality. Tom lectures widely and has appeared in many national and international network and syndicated television science and technology documentaries and news programs. He is the inventor of the personal eyewear display, the virtual retinal display, the HALO display and holds 19 patents in advanced sensor, display and interface technologies. With his colleagues Dr. Furness has started 27 companies, two of which are traded on NASDAQ at a market capitalization of > \$ 7 B (USD). In 1998 he received the Discover Award for his invention of the virtual retinal display. He recently received the 2013 SPIE Prism Award for his invention of the ChromaID technology.