# Visual Computing Trends 2015

**Prof. Dr. Henry Fuchs, University of North Carolina at Chapel Hill, USA**

## “The Future of Virtual and Augmented Reality“

Abstract

Virtual and augmented reality may this year be at a historical inflection point, not unlike the personal computer on the eve of the IBM PC’s introduction— about to transition from niche products to mass market, from a handful of daily users, to millions. What’s worrisome is that this historic transition was predicted by many experts at least once before, in the early 1990s, when VR systems first became commercially available. What is different this time? This talk will review the history of VR, the development of the component technologies and several representative applications. We’ll review the key technical problems to be solved, assess their current state of effectiveness, and consider how the situation may be different now than during the last promising era. We’ll consider some remaining technical challenges (such as merging real and virtual scenes), examine a few new scenarios, and speculate on why a VR startup company may be worth $ 2B.

Curriculum Vitae

Henry Fuchs (PhD, University of Utah, 1975) is the Federico Gil Distinguished Professor of Computer Science and Adjunct Professor of Biomedical Engineering at University of North Carolina at Chapel Hill. He is one of three co-directors (together with Nadia Thalmann and Markus Gross) of the BeingThere International Research Center in Telepresence, collaboration between ETH Zurich, NTU Singapore, and UNC Chapel Hill. Active in computer graphics since the 1970s, Fuchs has written or coauthored some 200 papers on a variety of topics, including rendering algorithms (BSP Trees), graphics hardware (Pixel-Planes), virtual environments, telepresence, medical and training applications. He is a member of the US National Academy of Engineering, a fellow of the American Academy of Arts and Sciences, recipient of the 1992 ACM SIGGRAPH Achievement Award and the 2013 IEEE VGTC Virtual Reality Career Award.