Keynote speaker WSCG 2014

Brian A. Barsky: Simulating Human Vision and Correcting Visual Aberrations with Computational Light Field Displays

University of California, Berkeley
http://www.eecs.berkeley.edu/Faculty/Homepages/barsky.html

Abstract

This talk will present research on simulating human vision and on correcting visual aberrations with computational light field displays . The simulation is not an abstract model but incorporates real measurements of a particular individual's entire optical system. Using these measurements, synthetics images are generated. This process modifies input images to simulate the appearance of the scene for the individual. Recent work on vision-correcting displays will also be briefly introduced. Given the measurements of the optical aberrations of a user's eye, a vision correcting display will present a transformed image that when viewed by this individual will appear in sharp focus. This could impact computer monitors, laptops, tablets, and mobile phones. Vision correction could be provided in some cases where spectacles are ineffective.

Short Bio

Brian A. Barsky is on the faculty of the University of California, Berkeley where he is Professor of Computer Science and Vision Science, Affiliate Professor of Optometry, Member of the Joint Graduate Group in Bioengineering with the UCSF medical school, Member of the Berkeley Center for New Media, Member of Berkeley Institute of Design, and an Arts Research Center Affiliate. He holds degrees from McGill University, Cornell University, and the University of Utah. He is a Fellow of the American Academy of Optometry (F.A.A.O.).