

Stanford EE Computer Systems Colloquium

January 11, 2023

The EE380 talk has been cancelled for today due to an unresolved failure of Zoom, a repeat of the problem seen last Fall. We will reschedule the talk as soon as we can identify its cause. Our apologies to Alvy Ray Smith and to all of the audience for the inconvenience.

This lecture will be live streamed with possible participation using Zoom. Eventually the video will be posted to the EE380 archive on YouTube.

Venue for the talk. Zoom Cyberspace, January 11, 2023 4:00-5:30 PM Pacific Standard Time (UTC-8) using remote capture and allowing for possible audience participation. Zoom live presentation.

You are invited to join and participate from PC, Mac, Linux, iOS or Android:

<https://stanford.zoom.us/j/99611110980?pwd=c0ZuUFdpeVE3ajkzWlUrb1crN1h6dz09>

Password: 092927

Meeting ID: 996 1111 0980

Password: 092927

SIP: 99611110980@zoomcrc.com

Password: 092927

The Great Digital Convergence and the Arrival of Digital Light, or What EE Has to Do with the Movies

Alvy Ray Smith

Cofounder of Pixar

Abstract

I spent the last 10 years writing up the several histories, in one book, that led to computer graphics--more generally to Digital Light, the class of all pictures made of pixels, and more specifically to the first digital movies, the flagships. And was I ever surprised! These are the stories of Fourier (did you know he almost lost his head to the guillotine?), the Sampling Theorem (who proved it first? Not Shannon), computation (who invented the

stored-program computer?), movies (they weren't created by Edison, Muybridge, or the Lumiere brothers), and of course Digital Light (where and when were the first pixels? The first color world is increasingly based on pixels?). I thought I knew all these but I didn't. And what's a pixel anyway? (It's not a little square and never has been). Come hear a new take on our visible world and praise Moore's Law with me.

Biography

Alvy Ray Smith co-founded Pixar and Altamira Software. He was the first Director of Computer Graphics at Lucasfilm and the First Graphics Fellow at Microsoft. He has received two technical Academy Awards for his contributions to digital movie-making technology. See https://en.wikipedia.org/wiki/Alvy_Ray_Smith for additional details.

alvyray.com

Annotations: <http://alvyray.com/DigitalLight/>

Order:

<https://www.amazon.com/Biography-Pixel-Leonardo-Alvy-Smith/dp/0262542455/>

Wired article:

<https://www.wired.com/story/pixar-animation-alvy-ray-smith-pixel/>

Podcast:

<https://soundcloud.com/siggraph-spotlight/44-a-conversation-with-alvy-ray-smith>

CHM interview: <https://www.youtube.com/watch?v=sDHn3hw8lAA&t=1s>