



Talk title:

Volumetric Communication across Artificial Reality Continuum. Applications in Telehealth

Abstract:

With the proliferation of devices capable of presenting sensory stimuli across Artificial Reality Continuum (Augmented Reality, Virtual Reality, Mixed Reality, Extended Reality etc), new design problems and design principles are being developed and evaluated. In this talk, I will introduce the technology of volumetric/holographic communication and will discuss the National Science Foundation's project that brings volumetric communication to telehealth, remote medical procedure assistance and training, and other medical applications.

Bio:

Dr. Pietroszek is the Executive Director of the Institute for Immersive Designs, Experiences, Applications, and Stories (Institute for IDEAS), a research institute based in Washington DC. He is also a tenured Associate Professor at American University in the Film and Media Arts Division of the School of Communication, an affiliate of the Department of Computer Science, and an Associate Director of the Center for Environmental Filmmaking.

Krzysztof research interests include the application of machine learning to media, designing volumetric cameras and telemedicine equipment, and developing technologies related to creating films and interacting in virtual and augmented reality. To date, Krzysztof authored or co-authored over 50 research publications, chapters and journal papers.

Krzysztof is also a filmmaker, who produced an award-winning feature film ("Waiting for Summer"), wrote and directed six short fiction and documentary films ("Private Apocalypse of Tim", "Agape", "Daniel", "Eve", "Greenscreen", and "Vera"), and created a transmedia mixed-reality experience ("Vera").

Krzysztof developed several VR video games ("Cube VR", "Chessnaught VR") and published over 40 peer-reviewed research papers. Dr. Pietroszek's research is supported by the National Science Foundation, Canada Media Fund, private industry partners, and other federal funding agencies. To date, Krzysztof raised over 4,000,000 USD in various funding.

Krzysztof is often invited to speak at conferences and events related to immersive technology and storytelling. Recent talks include a keynote at Cannes Film Festival, 2022 International Conference on 3D Immersion, Interaction and Multi-sensory Experiences, CILECT Congress 2019 and IARIA Congress 2022.

Krzysztof was also a founder of a number of startups, including Netclick, an education technology company funded by Imagine K12 (Y-combinator) incubator in Silicon Valley, and Cineclick, a games-in-cinema startup financed by Canada Media Fund.

A true explorer, Krzysztof hitch-hiked 30,000 miles, climbed Kilimanjaro, Mt Blanc, and a thousand of smaller mountains, barely survived climbing Matterhorn, and backpacked in over 60 countries. In his spare time, Krzysztof writes travel books and children stories, plays piano and tennis, and occasionally climbs a nearby rocks.