

<b>Education</b>	<b>Portland State University</b> Ph.D. in Computer Science	2012 - 2017
	<b>Portland State University</b> Bachelor of Science in Computer Science	2010 - 2012
	<b>Ho Chi Minh City University of Science</b> Bachelor of Science in Computer Science	2007 - 2009
<b>Research Interests</b>	Human-Computer Interaction Video Visualization and Interaction Virtual Reality	
<b>Honors &amp; Awards</b>	<b>Best Paper Honorable Mention Award, ACM CHI</b>	2017
	<b>Presidential Award for Academic Achievements, Portland State University</b>	2017
	<b>Maseeh Fellowship, Portland State University</b>	2015
	<b>Best Paper Honorable Mention Award, ACM CHI</b>	2015
	<b>Best Paper Honorable Mention Award, ACM CHI</b>	2013
<b>Experience</b>	<b>Research Scientist</b> San Francisco, CA	Adobe Research 2017.10 – present
	<b>Research Intern</b> San Francisco, CA Work with Stephen DiVerdi and Aaron Hertzmann in the Creative Technologies Lab to research and develop new interfaces for Virtual Reality.	Adobe Research 2016.06 – 2016.12
	Projects	
	<ul style="list-style-type: none"><li>• <i>Vremiere: In-headset Virtual Reality Video Editing (Summer 2016)</i>: Develop a video editing system that allows editors to edit spherical video in the Oculus Rift headset. This project led to an accepted paper at ACM CHI 2017. It was also selected to present at Adobe Max 2016 Sneaks as project Clover (<a href="#">watch on YouTube</a>).</li><li>• <i>CollaVR : Collaborative In-Headset Review for VR Video (Fall 2016)</i>: Develop an application that enables multiple filmmakers to collaborate and review VR video together while fully immersed in VR.</li></ul>	
	<b>Graduate Research Assistant</b> Portland, OR Research and develop new visualization and interaction techniques for video applications.	Portland State University 2012.09 – 2017.10
	Projects	
	<ul style="list-style-type: none"><li>• <i>Video Summagator</i>: Develop a 3D video visualization-based interface for video summarization and navigation. Allows a user to quickly look into the video cube, understand the video, and navigate to the content of interest.</li><li>• <i>Direct Manipulation Video Navigation in 3D</i>: Develop a 3D video navigation system that visualizes the motion and video frame in 3D, and allow a user to navigate the video by spatial-temporally manipulating the object in 3D.</li><li>• <i>Direct Manipulation Video Navigation on Touch Screens</i>: Explore the design and usability issues of touch-based direct manipulation video navigation (DMVN) interfaces. Develop three new techniques for touch-based DMVN, and conduct a user study to evaluate these techniques on both small and large touch screen devices.</li><li>• <i>Responsive Tutorial Video Player</i>: Develop a new video navigation method that allows users to interact with software tutorial video as if they were using the software.</li></ul>	

- *Hotspot Video Surveillance System*: Develop a multi-video visualization system for video surveillance that allows the system designer to integrate noisy computer vision techniques to improve the performance of the security staffs in surveillance tasks.
- *Gaze-based Notetaking for Learning from Lecture Videos*: Develop a gaze-based system to assist a user in notetaking while watching lecture videos. The system can integrate offline video analysis and online gaze analysis to provide automatic support for notetaking tasks such as highlighting notes and controlling video playback.
- *Depth conflict reduction techniques for stereo VR interfaces*: Develop two new UI-adjustment techniques, namely Dynamic Depth and Halo Blur, to reduce the depth conflict problems in stereoscopic VR video applications.

### Graduate Teaching Assistant

Portland, OR

CS 333 (Introduction to Operating Systems)

CS 202 (Programming Systems)

CS 410/510 (Cloud and Cluster Data Management)

Portland State University

2012 – 2017

### Publications

Depth Conflict Reduction for Stereo VR Video Interfaces

Cuong Nguyen, Stephen DiVerdi, Aaron Hertzmann, Feng Liu

In Proceedings of *CHI 2018* (*conditionally accepted, 25.7% acceptance rate*)

CollaVR : Collaborative In-Headset Review for VR Video

Cuong Nguyen, Stephen DiVerdi, Aaron Hertzmann, Feng Liu

In Proceedings of *UIST 2017* (*22.5% acceptance rate*)

Vremiere: In-Headset Virtual Reality Video Editing

Cuong Nguyen, Stephen DiVerdi, Aaron Hertzmann, Feng Liu

In Proceedings of *CHI 2017* (*25% acceptance rate*)

***Best Paper Honorable Mention Award***

Gaze-based Notetaking for Learning from Lecture Videos

Cuong Nguyen and Feng Liu

In Proceedings of *CHI 2016* (*23.4% acceptance rate*)

Hotspot: Making Computer Vision More Effective for Human Video Surveillance

Cuong Nguyen, Wu-chi Feng, and Feng Liu

*Information Visualization* (2016)

Making Software Tutorial Video Responsive

Cuong Nguyen and Feng Liu

In Proceedings of *CHI 2015* (*23% acceptance rate*)

***Best Paper Honorable Mention Award***

Direct Manipulation Video Navigation on Touch Screens

Cuong Nguyen, Yuzhen Niu, and Feng Liu

In Proceedings of *MobileHCI 2014* (*21.3% acceptance rate*)

Direct Manipulation Video Navigation in 3D

Cuong Nguyen, Yuzhen Niu, and Feng Liu

In Proceedings of *CHI 2013* (*20% acceptance rate*)

***Best Paper Honorable Mention Award***

Video Summagator: An Interface For Video Summarization and Navigation

Cuong Nguyen, Yuzhen Niu, and Feng Liu

In Proceedings of *CHI 2012* (*23% acceptance rate*)

### Activities

Reviewer for IEEE VR 2018, ACM ISS 2017, ACM Multimedia 2017, IEEE Transactions on Multimedia 2016, CHI WIP 2013

Presentation at CHI 2017, CHI 2016, CHI 2015, MobileHCI 2014, CHI 2013, CHI 2012

**Skills**

*Programming languages:* C++, Python, C#, SQL

*Virtual Reality development:* Oculus Rift SDK, Unity, OpenGL, network (ZeroMQ), spatial audio (Steam Audio, Hoa Library)

*Video interaction and visualization:* video processing (OpenCV), GUI design and programming (OpenFrameworks, Processing, FLTK), visualization (VTK), eye tracking (Tobii EyeX SDK), depth sensor (Intel RealSense SDK), statistical analysis (SPSS)

**References**

Feng Liu, Associate Professor, advisor at Portland State University, fliu@cs.pdx.edu

Wu-chi Feng, Chair / Professor, Portland State University, wuchi@cs.pdx.edu

Stephen DiVerdi, Senior Research Scientist, mentor at Adobe Research, diverdi@adobe.com

Aaron Hertzmann, Principal Scientist, mentor at Adobe Research, hertzmann@adobe.com