

XUAN LUO

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EDUCATION

University of Washington <i>PhD Student in Computer Science & Engineering</i> Advisors: Steven M. Seitz, Jason Lawrence, and Ricardo Martin-Brualla.	Sept. 2015 – 2021 (expected) Seattle, WA
Shanghai Jiao Tong University <i>BS in Computer Science & Technology</i> ACM Honors Class (one of the top gifted CS programs in China).	Sept. 2011 – July 2015 Shanghai, China

RESEARCH INTERESTS

Augmented/Virtual Reality, 3D Vision, Computational Photography, Image Synthesis

PROFESSIONAL EXPERIENCE

University of Washington <i>Graduate Student Researcher</i> Advisors: Steven M. Seitz, Jason Lawrence, and Ricardo Martin-Brualla	2015 – now Seattle, WA
<ul style="list-style-type: none">• Restored what famous historical figures would look like if rephotographed with modern cameras.• Collected a large-scale rectified historical stereo dataset and visualized historical scenes in 3D.• Designed an inexpensive glass-free DIY 3D display with a tablet and a plastic sheet folded into a cone.	
Facebook <i>Research Intern</i> Mentor: Johannes Kopf. Collaborators: Jia-bin Huang, Kevin Matzen, and Richard Szeliski	June 2019 – March 2020 Seattle, WA
<ul style="list-style-type: none">• Estimated geometrically consistent depth from monocular videos, enabling video effects to a whole new level.	
Disney Research Zurich <i>Research Intern</i> Collaborators: Thabo Beeler, Derek Bradley, Matthias Niessner, and Paulo Gotardo.	Summer 2017 Zurich, Switzerland
<ul style="list-style-type: none">• Worked on facial motion capture.	
Google Daydream <i>Software Engineering Intern</i> Mentor: Jason Lawrence	Summer 2016 Seattle, WA
<ul style="list-style-type: none">• Worked on utilizing spatial-temporal consistency to denoise 3D models.	
National University of Singapore <i>Visiting Scholar</i> Advisor: Shuicheng Yan	Aug. 2014 – Feb. 2015 Singapore
<ul style="list-style-type: none">• Co-designed a flexible graph-based parallel deep learning framework allowing data/model parallelism, arbitrary network deployment (e.g., recurrent neural network), and unlimited CPU/GPU usage.	
Shanghai Jiao Tong University <i>Undergraduate Researcher</i> Advisor: Hongtao Lu	Aug. 2013 – Aug. 2014
<ul style="list-style-type: none">• Designed a new stereo matching method with better adaptive support window for curved & slanted surfaces.• Proposed a new framework that improves tree-based stereo matching methods in speed & accuracy.	

PUBLICATIONS

<i>Time-Travel Rephotography</i> <i>arXiv:2012.12261</i> Xuan Luo, Cecilia Zhang, Paul Yoo, Ricardo Martin-Brualla, Jason Lawrence, and Steven M. Seitz	2020
<i>Consistent Video Depth Estimation</i> <i>SIGGRAPH</i> Xuan Luo, Jia-Bin Huang, Richard Szeliski, Kevin Matzen, and Johannes Kopf	TOG 2020
<i>KeystoneDepth: History in 3D</i> <i>International Virtual Conference on 3D Vision</i> Xuan Luo, Yanmeng Kong, Jason Lawrence, Ricardo Martin-Brualla, and Steven M. Seitz	3DV 2020
<i>Slow Glass: Visualizing History in 3D</i> <i>Fourth Workshop on Computer Vision for AR/VR</i> Xuan Luo, Yanmeng Kong, Jason Lawrence, Ricardo Martin-Brualla, and Steven M. Seitz	CVPR-W 2020
<i>Pepper's Cone: An Inexpensive Do-It-Yourself 3D Display</i> Xuan Luo, Jason Lawrence, and Steven M. Seitz	UIST 2017

<i>Purine: A Graph-based Deep Learning Framework</i> Min Lin, Shuo Li, Xuan Luo , and Shuicheng Yan	ICLR 2015
<i>Adaptive Stereo Matching via Loop-erased Random Walk</i> Xuejiao Bai, Xuan Luo , Shuo Li, and Hongtao Lu	ICIP 2014

HONORS AND AWARDS

Selected EECS Rising Star by EECS at UC Berkeley	Nov. 2020
Anne Dinning - Michael Wolf Endowed Regental Fellowship, UW	2015 – 2016
Distinguished Undergraduate Scholarship, SJTU	2015
Shanghai Outstanding Graduate, Shanghai	2015
National Scholarship, China <i>Highest scholarship in China</i>	2013
Kai Yuan Scholarship, SJTU	2012
2012 University Physics Competition, Silver Medal, USA	2012

MEDIA & PRESS

<i>Time-Travel Rephotography</i>	2020
Two Minute Papers, GIZMODO, Hack a Day, QubitAI, Guokr, Tencent, marktechpost.com, TechTheLead, Tech Times, The Science Times, Review Geek, Tech Explore, msnice.net, knews.cc	
<i>Consistent Video Depth</i>	2020
Two Minute Papers, QubitAI, Synced, Medium, Bo Yu AI	
<i>Pepper's Cone</i>	2018
"Demo Hour" of ACM Interactions Magazine, iProgrammer, Hack a Day, Hacker News	

INVITED TALKS

A Celebration of Stereoscopic 3D by London Stereoscopic Archive et al., UK "Computational Time Machine". Host: Denis Pellerin and Rebecca Sharpe	Feb. 2021
GAMES: Graphics and Mixed Environment Seminar "Consistent Video Depth Estimation". Host: Zhaopeng Cui and Xiaoguang Han	Dec. 2020
AAA Alumni Association Cloud Conference	May 2020
Apple, Seattle, WA "Consistent Video Depth Estimation". Host: Qi Shan	May 2020

PROFESSIONAL SERVICE

WiGRAPH: Women in Graphics Research (wigraph.org) Communications Director	Fall 2020 – now
CV/ML Graduate School Prep Workshop Guest speaker & Panel member Help undergrads of underrepresented groups to prepare for graduate-level study.	April 2021
Ph.D. Admission Committee, Univeristy of Washington	2018
ACM-W Undergraduate Mentorship Mentored three women undergrads.	Spring 2017
Paper Reviewer <ul style="list-style-type: none"> The ACM Special Interest Group on Computer Graphics (SIGGRAPH) Conference on Computer Vision and Pattern Recognition (CVPR) International Conference on Computer Vision (ICCV) The Association for the Advancement of Artificial Intelligence (AAAI) 	

TEACHING EXPERIENCE

CSE576: Computer Vision Guest Lecturer, University of Washington	Nov. 2020
CSE590B: Computer Vision & Graphics Seminar Graduate Student Instructor, University of Washington	Spring 2019
CSE599J1: Selected Topics in Computational Fabrication Teaching Assistant, University of Washington	Winter 2019
CSE481V: CSE Virtual and Augmented Reality Capstone Teaching Assistant, University of Washington	Fall 2018

RESEARCH MENTORING

Paul (Seok Hyun) Yoo Undergraduate student at University of Washington <ul style="list-style-type: none">Worked on restoring high-quality color images of historical figures.	Fall 2019 – Spring 2021
Yanmeng (Anny) Kong Master student at University of Washington <ul style="list-style-type: none">Worked on collecting a large-scale historical stereo dataset, <i>KeystoneDepth</i>. Work published at 3DV 2020.	2017 – Spring 2021

SKILLS

Programming Languages: C++, Python, Matlab, Java, HTML, \LaTeX , C#, PHP, Verilog, TinyOS
Tools: PyTorch, Tensorflow, Unity, Photoshop, MySQL, OpenGL

SPECIALTY

Fine Arts: Good at painting. My drawings are available at [here](#).