

LIFAN WU

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EDUCATION

University of California, San Diego, La Jolla, CA

September 2015 – July 2020

Ph.D. in Computer Science

Advisor: [Prof. Ravi Ramamoorthi](#)

Tsinghua University, Beijing, China

August 2011 – July 2015

B.Eng. in Computer Science & Technology

Institute for Interdisciplinary Information Sciences

Special Pilot Computer Science Class ([Yao Class](#))

WORK EXPERIENCE

NVIDIA, Redmond, WA

August 2020 – Present

Research Scientist

PUBLICATION

Analytic Spherical Harmonic Gradients for Real-Time Rendering with Many Polygonal Area Lights

Lifan Wu, [Guangyan Cai](#), [Shuang Zhao](#), [Ravi Ramamoorthi](#)

ACM Transactions on Graphics (SIGGRAPH 2020), 39(4), July 2020

A Differential Theory of Radiative Transfer

[Cheng Zhang](#), **Lifan Wu**, [Changxi Zheng](#), [Ioannis Gkioulekas](#), [Ravi Ramamoorthi](#), [Shuang Zhao](#)

ACM Transactions on Graphics (SIGGRAPH Asia 2019), 38(6), November 2019

Accurate Appearance Preserving Prefiltering for Rendering Displacement-Mapped Surfaces

Lifan Wu, [Shuang Zhao](#), [Ling-Qi Yan](#), [Ravi Ramamoorthi](#)

ACM Transactions on Graphics (SIGGRAPH 2019), 38(4), July 2019

Multiple Axis-Aligned Filters for Rendering of Combined Distribution Effects

Lifan Wu, [Ling-Qi Yan](#), Alexandr Kuznetsov, [Ravi Ramamoorthi](#)

Computer Graphics Forum (EGSR 2017), 36(4), June 2017

Downsampling Scattering Parameters for Rendering Anisotropic Media

[Shuang Zhao](#)^{*}, **Lifan Wu**^{*}, [Frédéric Durand](#), [Ravi Ramamoorthi](#) (^{*} Joint first authors)

ACM Transactions on Graphics (SIGGRAPH Asia 2016), 35(6), November 2016

INTERNSHIPS

NVIDIA Research, real-time rendering group

June 2019 – Sept. 2019

NVIDIA Research, real-time rendering group

June 2018 – Sept. 2018

Disney Research Zurich, rendering group

June 2017 – Sept. 2017

Google, map group

June 2016 – Sept. 2016

TEACHING

Teaching Assistant	CSE 167, Computer Graphics	Winter 2019
Course Staff	CSE 167x, Computer Graphics on edX	2018 – 2020

REVIEWER

ACM SIGGRAPH, ACM SIGGRAPH Asia, Eurographics, Pacific Graphics, ACM Symposium on Virtual Reality Software and Technology (VRST), International Journal of Computer Vision (IJCV)

HONORS AND AWARDS

ACM SIGGRAPH Thesis Fast Forward Finalists	2020
NVIDIA Graduate Fellowship	2019 – 2020
Professional Excellence Scholarship , Tsinghua University	2014
Tsinghua-Baidu Scholarship , Tsinghua University	2013
Fellowship of Tsinghua Xuetaang Talents Program , Tsinghua University	2012 – 2015
Among top 300 / 3000 Tsinghua students each year.	
Silver Medal , Chinese National Olympiad in Informatics	Aug. 2010
Gold Medal , Asia-Pacific Informatics Olympiad	May 2010
Ranked 2nd place out of 350 contestants.	

SKILLS

Programming Languages	C/C++, Python, Matlab, Java, Ruby
Softwares & Applications	Mitsuba, PyTorch, TensorFlow, OptiX, PBRT, CUDA