

Qi Sun

www.qisun.me
qisun0@gmail.com

- WORK** **Research Scientist** June 2018 - Now
- Adobe Research, San Jose, CA
- EDUCATION** **Doctor of Philosophy** Aug. 2013 - May 2018
- Center of Visual Computing, Computer Science, Stony Brook University
Advisor: Distinguished Professor Arie Kaufman
Dissertation: Computational Methods for Immersive Perception
Committee: Arie Kaufman, Hong Qin, Xiaojun Bi, David Luebke, Li-Yi Wei
- Bachelor of Science** Aug. 2013
- Mathematics
Taishan Honors College, Shandong University, China Sep. 2010 - Aug. 2013
 - Computer Science
Shandong University, China Sep. 2009 - Sep. 2010
- PUBLICATIONS** **DiffTaichi: Differentiable Programming for Physical Simulation**
Yuanming Hu, Luke Anderson, Tzu-Mao Li, **Qi Sun**, Nathan Carr, Jonathan Ragan-Kelley, Frédo Durand
arXiv:1910.00935
- Reducing Simulator Sickness with Perceptual Camera Control**
Ping Hu, **Qi Sun**, Piotr Didyk, Li-Yi Wei, Arie Kaufman
SIGGRAPH Asia 2019
- Learning to Reconstruct 3D Manhattan Wireframes from a Single Image**
Yichao Zhou, Haozhi Qi, Simon Zhai, **Qi Sun**, Zhili Chen, Li-Yi Wei, Yi Ma
ICCV (Oral Presentation) 2019
- A Transparent Display with Per-Pixel Color and Opacity Control**
TJ Rhodes, Gavin Miller, Li-Yi Wei, **Qi Sun**, Daichi Ito
SIGGRAPH 2019 Emerging Technologies
- Towards Virtual Reality Infinite Walking: Dynamic Saccadic Redirection**
Qi Sun, Anjul Patney, Li-Yi Wei, Omer Shapira, Jingwan Lu, Paul Asente, Suwen Zhu, Morgan McGuire, David Luebke, Arie Kaufman
SIGGRAPH 2018
- Perceptually-Guided Foveation for Light Field Displays**
Qi Sun, Fu-Chung Huang, Joohwan Kim, Li-Yi Wei, David Luebke, Arie Kaufman
SIGGRAPH Asia 2017
- Eccentricity Effects on Blur and Depth Perception**
Qi Sun, Fu-Chung Huang, Li-Yi Wei, David Luebke, Arie Kaufman, Joohwan Kim

arXiv 2017 (Optics Express 2019, in revision)

Mapping Virtual and Physical Reality

Qi Sun, Li-Yi Wei and Arie E. Kaufman

SIGGRAPH 2016

Poster: Buyers Satisfaction in A Virtual Fitting Room Scenario Based on Realism of Avatar

Qi Sun, Seyedkoosha Mirhosseini, Ievgeniia Gutenko, Ji Hwan Park, Charilaos Papadopoulos, Bireswar Laha, and Arie E. Kaufman

IEEE Symposium on 3D User Interfaces, 3DUI 2015

Benefits of 3D Immersion for Virtual Colonoscopy

Koosha Mirhosseini, **Qi Sun**, Krishna Gurijala, Bireswar Laha, Arie Kaufman

IEEE Visualization Workshop on 3DVis 2014

Data-Driven Human Motion Synthesis Based on Angular Momentum Analysis

Ping Hu, **Qi Sun**, Xiangxu Meng, and Jingliang Peng

IEEE International Symposium on Circuits and Systems, IEEE-ISCAS 2013

Modeling 3D Faces from Samplings via Compressive Sensing

Qi Sun, Yanlong Tang, and Ping Hu

International Conference on Digital Image Processing, ICDIP 2013

Kinect-Based Automatic 3D High-Resolution Face Modeling

Qi Sun, Yanlong Tang, Ping Hu, and Jingliang Peng

International Conference on Image Analysis and Signal Processing, IEEE-IASP 2012

EXPERIENCE

Research Intern

Jul. 2017 - Sep. 2017

Adobe Research, Procedural Imaging Group (San Jose, CA)

- With Paul Asente, Cynthia Lu and Li-Yi Wei

Research Intern

April. 2017 - Jul. 2017

NVIDIA Research, New Experiences Group (Redmond, WA)

- With Anjul Patney, Morgan McGuire, Omer Shapira, Aaron Lefohn and David Luebke

Research Intern

Jun. 2016 - Aug. 2016

NVIDIA Research, New Experiences Group (Santa Clara, CA)

- With Fu-Chung Huang, Joohwan Kim and David Luebke

Research Intern

Nov. 2012 - Feb. 2013

Microsoft Research Asia, Hardware Computing Group (Beijing, China)

**SELECTED
PRESS/MEDIA**

Adobe Glasswing Transparent Display

The Verge, CNET, Axios, Next Reality, Printed Electronics World, TechHQ etc.

Towards Virtual Reality Infinite Walking

BBC News, SIGGRAPH blog, IEEE, Adobe News, NVIDIA Blog, Two Minute Papers, Stony Brook News, Road to VR, Hackaday, VR Focus, VR World, Inverse, ScienceDaily, eurekaAlert, newsAtlas, Sohu.com (Chinese), RedShark News, VR Sol-

dier, Stylus, InAVate, 4gamer (Japanese) Virtual Reality Magazine (German), Microsiervos (Spanish) etc.

Mapping Virtual and Physical Reality

SIGGRAPH Technical Papers Preview, Business Wire, Seamless Virtual Reality News (Japanese), leiphone.com/sina.cn etc. (Chinese), Tencent gameinstitute 2016 white paper, Game II DOOSAN Gallery New York

Perceptually-Guided Foveation for Light Field Displays

Road to VR, Seamless Virtual Reality News (Japanese)

TEACHING/ ADVISING

Guest Lecturer

CSE 564: Visualization, Stony Brook University	2018 Spring
Seminar: Frontiers of Computing Studies, Peking University	2019 Summer

Teaching Assistant

CSE 214: Computer Science II, Stony Brook University	2013 Fall
--	-----------

Mentor

CSE 593: Independent Study in Computer Science, Stony Brook University	2013 Fall, 2014 Spring
---	------------------------

Advisees

Yuanming Hu, PhD student at MIT
 Sandra Malpica, PhD student at University of Zaragoza
 Yichao Zhou, PhD student at UC Berkeley
 Dushyant Goyal, Masters student at Stony Brook University, Now Machine Learning Research Engineer at Element Inc

INVITED TALKS

Human Learning: Understanding and Computing the Eyes and Brain in VR

Schloss Dagstuhl, Wadern, Germany	2019
Max-Planck-Institut für Informatik, Saarbrücken, Germany	2019
Microsoft Research Asia, Beijing, China	2019

Industrial Innovations in the Age of VR/AR

Wayfair Inc., Boston, MA	2019
--------------------------	------

Towards Virtual Reality Infinite Walking, Talk & Live Demo

Adobe Tech Summit, San Francisco, CA	2019
GPU Technology Conference (GTC), San Jose, CA	2018

Computational Methods for Immersive Perception

Harvard University, Cambridge, MA	2018
University of Florida, Gainesville, FL	2018
Adobe Research, San Jose, CA	2017
games-cn Webinar	2017

SERVICE

Conference Committee

ACM SIGGRAPH Asia Technical Briefs and Posters	2019
SIGGRAPH Symposium on Interactive 3D Graphics and Games (i3D)	2019-2020

Reviewer

ACM SIGGRAPH, ACM CHI, IEEE Visualization, Computer Graphics Forum (CGF), ACM Transaction on Graphics (TOG), ACM User Interface Software and Technology (UIST), ACM i3D, IEEE 3D User Interfaces (3DUI), IEEE VR [both Conference and Journal tracks], IEEE ISMAR, ACM Symposium on Applied Perception (SAP), IEEE Consumer Electronics Magazine

Other

Adobe Research PhD fellowship committee 2018 - 2019

Adobe Research Women-in-Technology Scholarship 2019

AWARDS

Stony Brook Computer Science Special Chair Fellowship 2013 - 2014

Outstanding Bachelor Thesis Award of Shandong Province, China 2013

**GRANTED
PATENTS**

Adjusting an Angular Sampling Rate during Rendering Utilizing Gaze Information

Qi Sun, Fu-Chung Huang, Joohwan Kim and David Luebke

US10395624B2, granted 2019-08-27

System and Method for Generating a Progressive Representation Associated with Surjectively Mapped Virtual and Physical Reality Image Data

Arie Kaufman, **Qi Sun** and Li-Yi Wei

US10403043B2, granted 2019-09-03