

Yu Guo	(update: 10/10/2023)	https://tflsguoyu.github.io/	tflsguoyu@gmail.com
CURRENT	Tencent America Senior Graphics Researcher		CA & NY, US Sept. 2021 – present
EDUCATION	University of California, Irvine Ph.D in Computer Science Dissertation: Multi-scale Appearance Modeling of Complex Materials. Advisor: Shuang Zhao		Irvine, CA, US Sept. 2016 – Aug. 2021
	University of Chinese Academy of Sciences M.S. in Computer Science Thesis: GPU-based Soft Body Deformation with Nonlinear Finite Element Method. Advisor: Pheng Ann Heng (CUHK)		Beijing & Shenzhen, China Sept. 2010 – Jul. 2013
	Central South University B.S. in Mathematics and Applied Mathematics Thesis: Forces Distribution with Fractal Theory in High Velocity Compaction Technology.		Changsha, China Sept. 2006 – Jul. 2010
PUBLICATIONS	“Woven Fabric Capture from a Single Photo” by Wenhua Jin, Beibei Wang, Milos Hasan, Yu Guo, Steve Marschner and Lingqi Yan. <i>SIGGRAPH Asia</i> ’22		
	“Beyond Mie Theory: Systematic Computation of Bulk Scattering Parameters based on Microphysical Wave Optics” by Yu Guo, Adrian Jarabo and Shuang Zhao. <i>ACM Transactions on Graphics (TOG)</i> , 2021 (presented at <i>SIGGRAPH Asia</i> ’21).		
	“MaterialGAN: Reflectance Capture using a Generative SVBRDF Model” by Yu Guo, Cameron Smith, Miloš Hašan, Kalyan Sunkavalli and Shuang Zhao. <i>ACM Transactions on Graphics (TOG)</i> , 2020 (presented at <i>SIGGRAPH Asia</i> ’20).		
	“A Bayesian Inference Framework for Procedural Material Parameter Estimation” by Yu Guo, Miloš Hašan, Lingqi Yan and Shuang Zhao. <i>Computer Graphics Forum (CGF)</i> , 2020 (presented at <i>Pacific Graphics</i> ’20).		
	“Position-Free Monte Carlo Simulation for Arbitrary Layered BSDFs” by Yu Guo, Miloš Hašan and Shuang Zhao. <i>ACM Transactions on Graphics (TOG)</i> , 2018 (presented at <i>SIGGRAPH Asia</i> ’18).		
	“A Virtual Try-on System for Prescription Eyeglasses” by Qian Zhang, Yu Guo, Pierre-Yves Laffont, Tobias Martin, and Markus Gross. <i>IEEE Computer Graphics and Applications (CG&A)</i> , 2017.		
	“3D Faces are Recognized More Accurately and Faster than 2D Faces, but with Similar Inversion Effects” by Derric Eng, Belle Yick, Yu Guo, Hong Xu, Miriam Reiner, Tat-Jen Cham, and Annabel Chen. <i>Vision Research</i> , 2017.		
“Physically Based Video Editing” by Jean-Charles Bazin, Claudia Plüss (Kuster), Yu Guo, Tobias Martin, Alec Jacobson, and Markus Gross. <i>Computer Graphics Forum (CGF)</i> , 2016 (presented at <i>Pacific Graphics</i> ’16).			
“GPU Accelerated CBCT Reconstruction from Few Views with SART and TV Regularization” by Ping Liu, Lin Shi, Defeng Wang, Yu Guo, Jianying Li, Jing Qin, and Pheng-Ann Heng. <i>International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI)</i> , 2013.			

“Real-time Hand Detection Based on Multi-stage HOG-SVM Classifier” by Jiang Guo, Jun Cheng, Jianxin Pang, and **Yu Guo**. *International Conference on Image Processing (ICIP)*, 2013.

“A GPU-Accelerated Finite Element Solver for Simulation of Soft-Body Deformation” by **Yu Guo**, Jianying Li, Ping Liu, Qiong Wang, and Jing Qin. *International Conference on Information and Automation (ICIA)*, 2013.

“A Survey on Simulation of Soft Tissue Deformation in Virtual Surgery(In Chinese)” by **Yu Guo**, Jing Qin. *Journal of Integration Technology (JIT)*, 2013.

“Fall over or Sliding down?” by **Yu Guo**. *SIGGRAPH Asia (Poster)*, 2012.

“A Master-Slave Robotic Simulator Based on GPUDirect” by Jianying Li, **Yu Guo**, Heye Zhang, Yongming Xie. *International Conference on Intelligent Robots and Systems (IROS)*, 2012.

WORKING
EXPERIENCES

Tencent America New York, NY, US
Senior Researcher at Pixel Lab **Jan. 2023 – present**
Working on AIGC related projects: genAI, 3D reconstruction, segmentation, image-based relighting.

Tencent America Playa Vista, CA, US
Senior Researcher at Graphics and Vision Team **Sept. 2021 – Dec. 2022**
Working on Volumetric rendering in UE; Texture map delighting, shadow and highlight removal.

Facebook Reality Lab Sausalito, CA, US
Research Intern at Monaco Team **July. 2020 – Sept. 2020**
Working on Eye caustics rendering and its inverse problem.
Advisor: [Christophe Hery](#), [Olivier Maury](#)

Adobe Research San Jose, CA, US
Research Intern at Emerging Graphics Group **July. 2019 – Sept. 2019**
Working on Material capture and estimation.
Advisor: [Miloš Hašan](#), [Kalyan Sunkavalli](#)

Megvii (Face++) Research USA Redmond, WA, US
Research Intern **July. 2018 – Sept. 2018**
Working on Human face shadow/highlight removal and face relighting.
Advisor: [Jue Wang](#)

Autodesk San Francisco, CA, US
Research Intern at Core Rendering team **July. 2017 – Sept. 2017**
Working on efficient volumetric rendering of 3D-printing materials.
Advisor: [Miloš Hašan](#)

Nanyang Technological University Singapore
Research Associate at BeingThere Centre (BTC), IMI **Oct. 2013 – Mar. 2016**
(BTC is a US\$18 million international research project on 3D Telepresence and Virtual Reality between ETH ([Markus Gross](#)), UNC ([Henry Fuchs](#)) and NTU ([Nadia Magnenat Thalmann](#)).)
Working on stereo rendering; physical-based video manipulation; virtual try-on system for prescription glasses.
Collaborators: [Miriam Reiner](#), [Jean-Charles Bazin](#), [Tobias Martin](#), [Claudia Plüss](#), [Pierre-Yves Lafont](#), [Qian Zhang](#)

Advisor: [Tat-Jen Cham](#)

Shenzhen Institutes of Advanced Technology

Research Assistant at HCI lab

Shenzhen, China

Sept. 2011 – Jul. 2013

Working on mesh processing; soft body simulation; virtual surgery; CUDA acceleration.

Advisor: Pheng-Ann Heng

REVIEWS

TOG, CGF, SIGGRAPH, SIGGRAPH Asia, EG, PG