

<b>Yu Guo</b>	(update: 08/08/2022)	<a href="https://tflsguoyu.github.io/">https://tflsguoyu.github.io/</a>	<a href="mailto:tflsguoyu@gmail.com">tflsguoyu@gmail.com</a>
CURRENT	<b>Tencent Game AI Research Center</b> <i>Senior Researcher</i>		
EDUCATION	<b>University of California, Irvine</b> <i>Ph.D in Computer Science</i> <b>Dissertation:</b> Multi-scale Appearance Modeling of Complex Materials. <b>Advisor:</b> <a href="#">Shuang Zhao</a>		
	<b>University of Chinese Academy of Sciences</b> <i>M.S. in Computer Science</i> <b>Thesis:</b> GPU-based Soft Body Deformation with Nonlinear Finite Element Method. <b>Advisor:</b> <a href="#">Pheng Ann Heng</a> (CUHK)		<b>Beijing &amp; Shenzhen, China</b> <b>Sept. 2010 – Jul. 2013</b>
	<b>Central South University</b> <i>B.S. in Mathematics and Applied Mathematics</i> <b>Thesis:</b> Forces Distribution with Fractal Theory in High Velocity Compaction Technology.		<b>Changsha, China</b> <b>Sept. 2006 – Jul. 2010</b>
PUBLICATIONS	<hr/> <p>“<b>Woven Fabric Capture from a Single Photo</b>” by Wenhua Jin, Beibei Wang, Milos Hasan, <b>Yu Guo</b>, Steve Marschner and Lingqi Yan. <i>SIGGRAPH Asia</i> ’22</p> <p>“<b>Beyond Mie Theory: Systematic Computation of Bulk Scattering Parameters based on Microphysical Wave Optics</b>” by <b>Yu Guo</b>, Adrian Jarabo and Shuang Zhao. <i>ACM Transactions on Graphics (TOG)</i>, 2021 (presented at <i>SIGGRAPH Asia</i> ’21).</p> <p>“<b>MaterialGAN: Reflectance Capture using a Generative SVBRDF Model</b>” by <b>Yu Guo</b>, Cameron Smith, Miloš Hašan, Kalyan Sunkavalli and Shuang Zhao. <i>ACM Transactions on Graphics (TOG)</i>, 2020 (presented at <i>SIGGRAPH Asia</i> ’20).</p> <p>“<b>A Bayesian Inference Framework for Procedural Material Parameter Estimation</b>” by <b>Yu Guo</b>, Miloš Hašan, Lingqi Yan and Shuang Zhao. <i>Computer Graphics Forum (CGF)</i>, 2020 (presented at <i>Pacific Graphics</i> ’20).</p> <p>“<b>Position-Free Monte Carlo Simulation for Arbitrary Layered BSDFs</b>” by <b>Yu Guo</b>, Miloš Hašan and Shuang Zhao. <i>ACM Transactions on Graphics (TOG)</i>, 2018 (presented at <i>SIGGRAPH Asia</i> ’18).</p> <p>“<b>A Virtual Try-on System for Prescription Eyeglasses</b>” by Qian Zhang, <b>Yu Guo</b>, Pierre-Yves Laffont, Tobias Martin, and Markus Gross. <i>IEEE Computer Graphics and Applications (CG&amp;A)</i>, 2017.</p> <p>“<b>3D Faces are Recognized More Accurately and Faster than 2D Faces, but with Similar Inversion Effects</b>” by Derric Eng, Belle Yick, <b>Yu Guo</b>, Hong Xu, Miriam Reiner, Tat-Jen Cham, and Annabel Chen. <i>Vision Research</i>, 2017.</p> <p>“<b>Physically Based Video Editing</b>” by Jean-Charles Bazin, Claudia Plüss (Kuster), <b>Yu Guo</b>, Tobias Martin, Alec Jacobson, and Markus Gross. <i>Computer Graphics Forum (CGF)</i>, 2016 (presented at <i>Pacific Graphics</i> ’16).</p> <p>“<b>GPU Accelerated CBCT Reconstruction from Few Views with SART and TV Regularization</b>” by Ping Liu, Lin Shi, Defeng Wang, <b>Yu Guo</b>, Jianying Li, Jing Qin, and Pheng-Ann Heng. <i>International Workshop on High Performance Computing for Biomedical Image Analysis (HPC-MICCAI)</i>, 2013.</p>		

“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

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**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** Shenzhen, China  
*Research Assistant at HCI lab* Sept. 2011 – Jul. 2013

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

**Advisor:** [Pheng-Ann Heng](#)

REVIEWS

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