

Education	Ph.D. in Computer Science Cornell University	August 2008 – August 2014 Ithaca, NY, USA
	B.Eng. in Computer Science Shanghai Jiao Tong University	September 2003 – July 2007 Shanghai, China
Experience	Assistant Professor University of California, Irvine	July 2015 – Present Irvine, CA, USA
	Postdoctoral Associate Massachusetts Institute of Technology	September 2014 – June 2015 Cambridge, MA, USA
	Research Assistant Cornell University	August 2008 – August 2014 Ithaca, NY, USA
Publications	<i>Refereed Journal Articles</i>	
	J1. Jiaping Wang, Shuang Zhao , Xin Tong, Stephen Lin, Zhouchen Lin, Yue Dong, Baining Guo, Heung-Yeung Shum. <i>Modeling and Rendering Heterogeneous Translucent Materials using Diffusion Equation</i> . ACM Transactions on Graphics, 27(1), 9:1–9:18, March 2008. (Presented at SIGGRAPH 2009.)	
	J2. Jiaping Wang, Shuang Zhao , Xin Tong, John Snyder, Baining Guo. <i>Modeling Anisotropic Surface Reflectance with Example-Based Microfacet Synthesis</i> . ACM Transactions on Graphics, 27(3), 41:1–41:9, August 2008. (Presented at SIGGRAPH 2008.)	
	J3. Bruce Walter, Shuang Zhao , Nicolas Holzschuch, Kavita Bala. <i>Single Scattering in Refractive Media with Triangle Mesh Boundaries</i> . ACM Transactions on Graphics, 28(3), 92:1–92:8, August 2009. (Presented at SIGGRAPH 2009.)	
	J4. Edgar Velázquez-Armendáriz, Shuang Zhao , Miloš Hašan, Bruce Walter, Kavita Bala. <i>Automatic Bounding of Programmable Shaders for Efficient Global Illumination</i> . ACM Transactions on Graphics, 28(5), 142:1–142:9, December 2009. (Presented at SIGGRAPH Asia 2009.)	
	J5. Shuang Zhao , Wenzel Jakob, Steve Marschner, Kavita Bala. <i>Building Volumetric Appearance Models of Fabric using Micro CT Imaging</i> . ACM Transactions on Graphics, 30(4), 44:1–44:10, July 2011. (Presented at SIGGRAPH 2011.)	
	J6. Nikhil Naik, Shuang Zhao , Andreas Velten, Ramesh Raskar, Kavita Bala. <i>Single View Reflectance Capture using Multiplexed Scattering and Time-of-Flight Imaging</i> . ACM Transactions on Graphics, 30(6), 171:1–171:10, December 2011. (Presented at SIGGRAPH Asia 2011.)	
	J7. Shuang Zhao , Wenzel Jakob, Steve Marschner, Kavita Bala. <i>Structure-Aware Synthesis for Predictive Woven Fabric Appearance</i> . ACM Transactions on Graphics, 31(4), 75:1–75:10, July 2012. (Presented at SIGGRAPH 2012.)	
	J8. Shuang Zhao , Miloš Hašan, Ravi Ramamoorthi, Kavita Bala. <i>Modular Flux Transfer: Efficient Rendering of High-Resolution Volumes with Repeated Structures</i> . ACM Transactions on Graphics, 32(4), 131:1–131:12, July 2013. (Presented at SIGGRAPH 2013.)	
	J9. Ioannis Gkioulekas, Bei Xiao, Shuang Zhao , Edward Adelson, Todd Zickler, Kavita Bala. <i>Understanding the Role of Phase Function in Translucent Appearance</i> . ACM Transactions on Graphics, 32(5), 147:1–147:19, September 2013. (Presented at SIGGRAPH 2013.)	

- J10. Ioannis Gkioulekas, **Shuang Zhao**, Kavita Bala, Todd Zickler, Anat Levin. *Inverse Volume Rendering with Material Dictionaries*. ACM Transactions on Graphics, 32(6), 162:1–162:13, November 2013. (Presented at SIGGRAPH Asia 2013.)
- J11. **Shuang Zhao**, Ravi Ramamoorthi, Kavita Bala. *High-Order Similarity Relations in Radiative Transfer*. ACM Transactions on Graphics, 33(4), 104:1–104:12, July 2014. (Presented at SIGGRAPH 2014.)
- J12. **Shuang Zhao**, Wenzel Jakob, Steve Marschner, Kavita Bala. *Building Volumetric Appearance Models of Fabric using Micro CT Imaging*. Communications of the ACM (Research Highlights), 57(11), 98–105, November 2014.
- J13. Pramook Khungurn, Daniel Schroeder, **Shuang Zhao**, Kavita Bala, Steve Marschner. *Matching Real Fabrics with Micro-Appearance Models*. ACM Transactions on Graphics, 35(1), 1:1–1:26, December 2015. (Presented at SIGGRAPH 2016.)
- J14. **Shuang Zhao**, Fujun Luan, Kavita Bala. *Fitting Procedural Yarn Models for Realistic Cloth Rendering*. ACM Transactions on Graphics, 35(4), 51:1–51:11, July 2016. (Presented at SIGGRAPH 2016.)
- J15. **Shuang Zhao***, Lifan Wu*, Frédo Durand, Ravi Ramamoorthi (*: joint first authors). *Downsampling Scattering Parameters for Rendering Anisotropic Media*. ACM Transactions on Graphics, 35(6), 166:1–166:11, November 2016. (Presented at SIGGRAPH Asia 2016.)
- J16. Chao Xu, Rui Wang, **Shuang Zhao**, Hujun Bao. *Real-Time Linear BRDF MIP-Mapping*. Computer Graphics Forum, 36(4), 27–34, July 2017. (Presented at EGSR 2017.)
- J17. Fujun Luan, **Shuang Zhao**, Kavita Bala. *Fiber-Level On-the-Fly Procedural Textiles*. Computer Graphics Forum, 36(4), 123–135, July 2017. (Presented at EGSR 2017.)
- J18. **Shuang Zhao**, Frédo Durand, Changxi Zheng. *Inverse Diffusion Curves using Shape Optimization*. IEEE Transactions on Visualization and Computer Graphics, 24(7), 2153–2166, July 2018.
- J19. Yu Guo, Miloš Hašan, **Shuang Zhao**. *Position-Free Monte Carlo Simulation for Arbitrary Layered BSDFs*. ACM Transactions on Graphics, 37(6), November 2018. (To be presented at SIGGRAPH Asia 2018.)

Conference Papers

- C1. Bei Xiao, Ioannis Gkioulekas, Asher Dunn, **Shuang Zhao**, Todd Zickler, Edward Adelson, Kavita Bala. *Effects of Shape and Color on the Perception of Translucency*. Vision Science Society Annual Meeting, May 2012.
- C2. Ioannis Gkioulekas, Kavita Bala, Frédo Durand, Anat Levin, **Shuang Zhao**, Todd Zickler. *Computational Imaging for Inverse Scattering*. Electronic Imaging, 351:1, Feb 2016.
- C3. **Shuang Zhao**, Rong Kong, Jerome Spanier. *Towards Real-Time Monte Carlo for Biomedicine*. Monte Carlo and Quasi-Monte Carlo Methods. Springer Proceedings in Mathematics & Statistics, 241, 447–463, July 2018.

In-Submission and Ongoing Work

Chengqian Che, Fujun Luan, **Shuang Zhao**, Kavita Bala, Ioannis Gkioulekas. *Inverse Transport Networks*. Technical Report (arXiv:1809.10820), September 2018.

Bei Xiao, Wenyan Bi, **Shuang Zhao**, Ioannis Gkioulekas, Kavita Bala. *Effect of Geometric Sharpness on Translucent Material Perception*. Journal of Vision, in submission.

Chao Xu, Rui Wang, **Shuang Zhao**, Hujun Bao. *Multi-Scale Micro-Appearance Modeling and Realtime Rendering of Thin Fabrics*. IEEE Transactions on Visualization and Computer

Graphics, in submission.

Lifan Wu, **Shuang Zhao**, Lingqi Yan, Ravi Ramamoorthi. *Accurate Appearance Preserving Prefiltering for Rendering Displacement-Mapped Surfaces*. Ongoing work.

Zahra Montazeri, Chang Xiao, Yun Fei, Changxi Zheng, **Shuang Zhao**. *Mechanics-Aware Yarn Models for Cloth Rendering*. Ongoing work.

Patents

Fujun Luan, Kavita Bala, **Shuang Zhao**. *Fitting Procedural Yarn Models for Realistic Cloth Rendering*. Patent pending (US15636213, US20180005413A1).

Teaching

SIGGRAPH Courses

Kai Schröder, **Shuang Zhao**, Arno Zinke. *Recent Advances in Physically-Based Appearance Modeling of Cloth*. SIGGRAPH Asia 2012 Course.

UCI Courses

CS 114	Projects in Advanced 3D Computer Graphics	Spring 2016
ICS 162	Modeling and World Building	Winter 2017
CS 114	Projects in Advanced 3D Computer Graphics	Spring 2017
CS 295	Realistic Image Synthesis	Spring 2017
ICS 162	Modeling and World Building	Winter 2018
CS 114	Projects in Advanced 3D Computer Graphics	Spring 2018

Professional Activities

Papers Program Committee

ACM SIGGRAPH, 2019
ACM SIGGRAPH Asia, 2018
ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games (I3D), 2016–2019
ACM Symposium on Virtual Reality Software and Technology (VRST), 2018
CAD/Graphics, 2017
Eurographics, 2019
Eurographics Symposium on Rendering (EGSR), 2017–2018
Pacific Graphics, 2018

Courses Program Committee

ACM SIGGRAPH Asia, 2015–2016

Information Director

ACM Transactions on Graphics, 2015–2018

Reviewer

ACM SIGGRAPH, ACM SIGGRAPH Asia, Eurographics, Pacific Graphics
ACM Transactions on Graphics (TOG), ACM Transactions on Applied Perception (TAP), IEEE Transactions on Visualization and Computer Graphics (TVCG), IEEE Transactions on Image Processing (TIP)