

FUJUN LUAN

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EDUCATION

Ph.D. in Computer Science *August 2015 - August 2021*
Cornell University *Ithaca, NY, USA*
Advisor: [Prof. Kavita Bala](#)

B.Eng. in Computer Science *August 2011 - July 2015*
Tsinghua University *Beijing, China*

WORK EXPERIENCE

Research Scientist *September 2021 - present*
Adobe Research *San Jose, CA, USA*

Research Assistant *August 2015 - August 2021*
Cornell University *Ithaca, NY, USA*

Research Intern *June 2020 - August 2020*
Facebook Reality Labs *Redmond, WA, USA*

Research Intern *June 2018 - September 2018*
Facebook Research *Seattle, WA, USA*

Research Intern *January 2018 - March 2018*
Face⁺⁺ *Beijing, China*

Research Intern *June 2017 - September 2017*
Adobe Research *Cambridge, MA, USA*

Research Intern *June 2016 - September 2016*
Adobe Research *Cambridge, MA, USA*

Research Assistant *June 2014 - September 2014*
University of California, Santa Barbara *Santa Barbara, CA, USA*

PUBLICATION

Differentiable Rendering using RGBXY Derivatives and Optimal Transport

Jiankai Xing, **Fujun Luan**, Ling-Qi Yan, Xuejun Hu, Houde Qian, Kun Xu
SIGGRAPH Asia 2022

Learning-based Inverse Rendering of Complex Indoor Scenes with Differentiable Monte Carlo Raytracing

Jingsen Zhu, **Fujun Luan**, Yuchi Huo, Zihao Lin, Zhihua Zhong, Dianbing Xi, Jiaxiang Zheng, Rui Tang, Hujun Bao, Rui Wang
SIGGRAPH Asia 2022

Differentiable Rendering of Neural SDFs through Reparameterization

Sai Praveen Bangaru, Michaël Gharbi, Tzu-Mao Li, **Fujun Luan**, Kalyan Sunkavalli, Miloš Hašan, Sai Bi, Zexiang Xu, Gilbert Bernstein, Frédo Durand
SIGGRAPH Asia 2022

ARF: Artistic Radiance Fields

Kai Zhang, Nick Kolkin, Sai Bi, **Fujun Luan**, Zexiang Xu, Eli Shechtman, Noah Snavely
ECCV 2022 (selected for Adobe MAX 2022 Sneak)

Reconstructing Translucent Objects using Differentiable Rendering

Xi Deng, **Fujun Luan**, Bruce Walter, Kavita Bala, Steve Marschner
SIGGRAPH 2022

Rendering Neural Materials on Curved Surfaces

Alexandr Kuznetsov, Xuezheng Wang, Krishna Mullia, **Fujun Luan**, Zexiang Xu, Miloš Hašan, Ravi Ramamoorthi
SIGGRAPH 2022

IRON: Inverse Rendering by Optimizing Neural SDFs and Materials from Photometric Images

Kai Zhang, **Fujun Luan**, Zhengqi Li, Noah Snavely
CVPR 2022 (oral presentation)

Unified Shape and SVBRDF Recovery using Differentiable Monte Carlo Rendering

Fujun Luan, Shuang Zhao, Kavita Bala, Zhao Dong
EGSR 2021

PhySG: Inverse Rendering with Spherical Gaussians for Physics-based Material Editing and Relighting

Kai Zhang*, **Fujun Luan***, Qianqian Wang, Kavita Bala, Noah Snavely (* equal contribution)
CVPR 2021

Langevin Monte Carlo Rendering with Gradient-based Adaptation

Fujun Luan, Shuang Zhao, Kavita Bala, Ioannis Gkioulekas
SIGGRAPH 2020

Towards Learning-based Inverse Subsurface Scattering

Chengqian Che, **Fujun Luan**, Shuang Zhao, Kavita Bala, Ioannis Gkioulekas
ICCP 2020

Deep Painterly Harmonization

Fujun Luan, Sylvain Paris, Eli Shechtman, Kavita Bala
EGSR 2018

Deep Photo Style Transfer

Fujun Luan, Sylvain Paris, Eli Shechtman, Kavita Bala
CVPR 2017

Fiber-Level On-the-Fly Procedural Textiles

Fujun Luan, Shuang Zhao, Kavita Bala
EGSR 2017

Fitting Procedural Yarn Models for Realistic Cloth Rendering

Shuang Zhao, **Fujun Luan**, Kavita Bala
SIGGRAPH 2016

Anisotropic Density Estimation for Photon Mapping

Fujun Luan, Lifan Wu, Kun Xu
CVM 2015

TECHNICAL PAPER REVIEWER

SIGGRAPH Asia 2017, SIGGRAPH 2018, CVPR 2018, ECCV 2018, ACCV 2018, PG 2018, SIGGRAPH 2019, CVPR 2019, EG 2019, TVCG 2019, IEEE Access 2019, CVPR 2020, ECCV 2020, SIGGRAPH 2020, IET Computer Vision, 3DV 2020, TPAMI 2020, IEEE TIP 2020, ACCV 2020, PG 2020, SIGGRAPH 2021, CVPR 2021, ICCV 2021, WACV 2021, EG 2021, 3DV 2021, PG 2021, ICLR 2022, WACV 2022, etc.

HONORS AND AWARDS

Microsoft Research Fellowship 2018 Finalist
Adobe Research Fellowship 2017 Award
Tsinghua Academic Progress Scholarship 2014

US PATENTS

Rendering Neural Materials on Curved Surfaces

US Patent (pending, Adobe Internal File # P11355-US).

June 2022

Alexandr Kuznetsov, Xeuzheng Wang, Krishna Mullia, **Fujun Luan**, Zexiang Xu, Milos Hasan, Ravi Ramamoorthi

Generating Three-Dimensional Representations for Digital Objects Utilizing Mesh-based Thin Volumes

US Patent (pending, Adobe Internal File #P11132-US).

May 2022

Sai Bi, Yang Liu, Zexiang Xu, **Fujun Luan**, Kalyan Sunkavalli

Image Rendering Utilizing Procedural Yarn Model Generated in Multi-Stage Processing Pipeline

US Patent 10,410,380.

September 2019

Kavita Bala, **Fujun Luan**, Shuang Zhao

SKILLS

Programming Languages

C/C++, Python, Matlab, Java, R

Software & Applications

Mitsuba, PyTorch, TensorFlow, CUDA, OptiX

MEDIA COVERAGE

Deep Photo Style Transfer

[The Verge](#), [Petapixel](#), [9to5Mac](#), [DPReview](#), [Slash Gear](#), [Gizmodo](#), [Apple Insider](#), [Digital Trends](#), [BGR](#), [Lifeboat](#), [Engadget](#), [New Atlas](#), [TNW](#), [Techspot](#), [Ubergizmo](#), [Softpedia](#), [ExtremeTech](#), [Phys.org](#), [Cornell Chronicle](#), [Two Minutes Paper](#)

Deep Painterly Harmonization

[Vice](#), [IFLScience](#), [Filo.news](#), [slashCAM](#), [Leiphone](#), [Onedio](#), [astronomer](#), [nplus1.ru](#), [Two Minutes Paper](#)