Fujun Luan

•**Tel:** +1(917)847-6869   •**Email:** **luanfj11@gmail.com**   •**Web:** **https://www.cs.cornell.edu/~fujun/**

EDUCATION {

Doctor of Philosophy	**Aug. 2015 – present**

Department of Computer Science
Cornell University, Ithaca, NY, USA
Advisor: **Prof. Kavita Bala**

Bachelor of Engineering	**Aug. 2011 – July 2015**

Department of Computer Science and Technology
Tsinghua University, Beijing, China

} INTERNSHIPS {

Facebook Research (Seattle), Computational Photography Group   June 2018 – Sept. 2018
- Multi-view stereopsis using adversarial training on state-of-the-art neural network structures.

Face++ (Beijing), Face Detection Group   Jan. 2018 – Mar. 2018
- Face attribute editing using convolutional neural networks trained on millions of faces.

Adobe Research (Boston), Creative Intelligence Lab   June 2017 – Sept. 2017
- Design and build a painting editing system via a deep-learning approach.

Adobe Research (Boston), Creative Intelligence Lab   June 2016 – Sept. 2016
- Design and build a image style processing system for photos via a deep-learning approach.

UCSB (Santa Barbara), MIRAGE Lab   June 2015 – Sept. 2015
- Monte Carlo rendering and denoising using machine learning-based filters.

} PUBLICATIONS {

Inverse Transport Networks
Chengqian Che, Fujun Luan, Shuang Zhao, Kavita Bala, Ioannis Gkioulekas
ArXiv 2018 (submitted to CVPR 2019)

Deep Painterly Harmonization
Fujun Luan, Sylvain Paris, Eli Shechtman, Kavita Bala
Eurographics Symposium on Rendering (EGSR 2018)

Deep Photo Style Transfer
Fujun Luan, Sylvain Paris, Eli Shechtman, Kavita Bala
IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2017)

Fiber-Level On-the-Fly Procedural Textiles
Fujun Luan, Shuang Zhao, Kavita Bala
Eurographics Symposium on Rendering (EGSR 2017)

Fitting Procedural Yarn Models for Realistic Cloth Rendering
Shuang Zhao, Fujun Luan, Kavita Bala
ACM Transactions on Graphics (SIGGRAPH 2016)

Anisotropic Density Estimation for Photon Mapping
Fujun Luan, Lifan Wu, Kun Xu
International Conference on Computational Visual Media (CVM 2015)

}

RESEARCH EXPERIENCES {

Physics and Learning Integration via Inverse Transport Networks   **Mar. – Nov. 2018**

Research Assistant   *Cornell University*

- We introduced inverse transport networks as a novel learning architecture for inverse rendering problems.

Adversarial Learning for Multi-View Stereopsis   **June - Sept. 2018**

PhD Technical Research Intern   *Facebook Research*

- We built an adversarial fine tuning system designed for advanced computer vision tasks with a focus on learning multi-view stereo reconstruction using deep convolutional neural networks.

Data-Driven Face Attributes Editing   **Jan. – Mar. 2018**

Research Engineer   *Face++*

- We achieved real-time high-level face semantic attributes editing such as adding facial hair or turning older via deep features interpolation extracted from pre-trained deep neural networks on millions of real-world faces.

Deep Photo Style Transfer and Harmonization   **June – Nov. 2016, June – Nov. 2017**

PhD Technical Research Intern   *Adobe Research*

- We introduced a framework for photorealistic style transfer and painterly harmonization using deep neural networks pre-trained on image recognition. Search on "deep photo style transfer" and "deep harmonization" for a full list of press coverage.

Procedural Yarn Cloth Model   **Nov. 2015 – Jan. 2017**

Research Assistant   *Cornell University*

- We introduced an end-to-end fitting pipeline for procedural yarn parameters from physical measurement (i.e., Micro-CT scan), and demonstrate fiber-level details in cloth rendering as well as flexible editing.
- We then introduced a realization-free rendering framework to address the memory limitation when instantiating the procedural yarn models for very large fabrics.

} SELECTED PHD COURSES {

Machine Learning Theory

Foundations of Artificial Intelligence

Analysis of Algorithms

Advanced Programming Languages

} SKILLS {

Programming Language:	C/C++, Python, Matlab, Java, Lua, R
Software:	PyTorch, Tensorflow, OptiX, CUDA, Git
Operating Systems:	Linux, OS X, Windows

} ACTIVITIES AND AWARDS{

Microsoft Research Fellowship 2018 Finalist
Adobe Research Fellowship 2017 Award
Tsinghua Academic Progress Scholarship 2012 – 2015
Reviewer for: ACM SIGGRAPH / ACM SIGGRAPH Asia / CVPR / ECCV / ACCV / EG / PG

}