Zhenglin Geng

Apt. 803, Quillen, 737 Campus Drive
Stanford, CA, 94305

Mobile: 6505214638
Email: zhenglin@stanford.edu

Education

PhD Student in Computer Science, Stanford Sep 2016 - Present

Courses: CS229(Machine Learning), CS149(Parallel Computing), CS231n(Neural Networks), EE364a(Convex Optimization)

B.S. of Eng. Tsinghua University, Beijing (**Excellent Graduate Award**) Aug 2012 – July 2016

Major GPA: **93/100 (top 3)**, Major**: Computer Software**.

Core Courses: Data Structures and Algorithms, Operating System, Compiler, Database, Network, Architecture.

Research and Work Experience

Simulation Engineer at Intuitive Surgical Jun 2017 - Sep 2017

- Developed a physics simulator for our flexible bronchoscopy robot and the deformable airway based on H3D, which might be shipped in the program for training surgeons.

Inequality Cloth (SCA2017) Sep 2016 - Jan 2017

Advisor: **Ron Fedkiw**, Professor at Computer Science Department at Stanford

- Our method models inextensibility of cloth as inequality constraints thus mitigates the typical locking issues in traditional cloth simulation.
- This approach allows for geodesic compression which typically happens after mesh compression, paving the way for data augmentation of high-fidelity cloth simulation.

Graphics Engineer at Hongyu Tech. (A VR startup company in Beijing) May 2016 - Aug 2016

- Built Unity plugin APIs for our VR system with optimized framebuffer on Nexus 6.

Light Field Capture Using Hand-held Camera (Undergraduate thesis, Tsinghua) Sep 2016 - June 2016

Advisor: **Hui Zhang**, Associate Professor at School of Software at Tsinghua University

- Built an Android program based on Unity which allows users to capture light fields by panning or rotating the camera and visualize the light fields in real time.

Composition-aware Video Cropping (Internship, Award of Excellence, Microsoft) Oct 2015 - Jan 2016

Advisor: **Steve Lin**, Senior Researcher at **Microsoft Research Asia**

- Developed a program to generate videos with better composition by panning, scaling and rotating a cropping window over casually taken videos.
- Developed a method based on video segmentation and saliency detection to measure cropping quality.

Miscellaneous

Research Interests

- Computer graphics, Deep learning, Physics simulation, Numerical analysis.

Teaching

Course assistant, CS148 Introduction to Computer Graphics, Fall 2017

Programming languages

- C++ (most familiar): some experience with STL and templates;
- Python: some experience with pytorch and nltk (machine learning).
- Java: some familiarity with multi-threading, networking, and Android;
- Others: Javascript, C#, Haskell, scala, Lua, matlab, MASM Assembly.

Graphics: OpenCV, OpenGL/GLSL, DirectX 11/HLSL, Unity, Maya, Blender, Renderman;

Parallel computing: CUDA, OpenMP, MPI, Spark.

My home page http://stanford.edu/~zhenglin/ **.**