Wuyue Lu

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EDUCATION

Bachelor's Degree in Computer Science, University of Science and Technology of China (USTC)
GPA(Overall): **3.92/4.30** (**Top 1/132** in the department)

PUBLICATIONS

- Hatamizadeh, A., Hoogi, A., **Lu, W.** and Terzopoulos, D., Nov. 2018, *A Novel Deep Learning-based Energy Model for Image Segmentation*. (Under Review)
- **Lu, W.** and Liu, L., Nov. 2018, *Surface Reconstruction via Cooperative Evolutions* (Under Review)

RESEARCH INTEREST

Computer Graphics, especially rendering techniques, physically-based animation (e.g. fluid & cloth simulation) and surface modeling (e.g. surface reconstruction & deformation).

AWARDS

- Academic First Scholarship 2016 (**Top 5%** in the department)
- National Scholarship 2017 (**Top 2%** in the department)
- Guo Moruo Scholarship 2018 (The most prestigious scholarship awarded by USTC)

RESEARCH EXPERIENCE

UCLA Computer Graphics & Vision Laboratory (UCLA-CSST Program) | Summer Research Internship
*Advisor: **Demetri Terzopoulos**, Distinguished Professor, Computer Science Department, UCLA*

- **Medical Image Segmentation with CNN and Active Contour Model** July 2018-Sept 2018
  - Applied the active contour model on CNN feature maps for medical image segmentation
  - Implemented active contour model as a special layer and built training framework for parameter maps

Graphics & Geometric Computing Laboratory (GCL) at USTC | Research Leader
*Advisor: **Ligang Liu**, Professor, School of Mathematical Sciences, USTC*

- **3D Surface Reconstruction from Point-Cloud Data without Normal** Nov 2017-June 2018
  - Designed surface reconstruction method from point cloud data without normal information
  - Implemented explicit deformable surface model guided by unsigned distance field of high robustness
  - Finished paper *Surface Reconstruction via Cooperative Evolutions* (submitted to CGF, as first author)

Computational Biomedicine Imaging & Modeling Center at Rutgers University | Summer Research Internship
*Advisor: **Mubbasir Kapadia**, Assistant Professor, Computer Science Department, Rutgers University*

- **GPU Acceleration for Crowd Simulation and Dynamic Path-Planning** July 2017-Sept 2017
  - Implemented path-planning algorithms on GPU with CUDA
  - Integrated GPU accelerated code with crowd simulation methods and contributed to the *SteerSuite* library

PROJECTS

- **Real Time Physics-Based Animation** Jan 2017-May 2017
  - Implemented physics-based simulation methods, including Mass Spring Systems and Finite Element Method
  - Designed a visualization framework for 3D animations with OpenGL and the Qt GUI library
- **Machine Learning for TETRIS** Dec 2015-May 2016
  - Applied reinforcement learning and decision tree on the game Tetris
  - Deployed the learning agent onto a cloud server and obtained strong results

SKILL SET

Programming Skills: 7+ years of programming experience, solid expertise in C++ (>50k lines), experienced in Java, Python (adept in *numpy*, *sklearn* and *tensorflow*) and OpenGL Shader Language (GLSL), adept in modern OpenGL pipeline, Qt GUI library, MATLAB, and Linux

Mathematical Skills: Linear algebra, probability, machine learning, and computational geometry