Honglin Chen

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Research Interests

My research interests mainly focus on Computer Graphics, especially on numerical optimization and its applications on visual computing problems, e.g. physics-based simulation and digital fabrication.

Most of my recent work is related to physics-based simulation, while a bunch of other topics remain attractive to me, including the application of machine learning on simulation and shape modeling.

Education

Jun 2019 *(Expected)* | **B.Eng. in Computer Science and Technology**
Sep 2015 | College of Computer Science & Technology
Zhejiang University, Hangzhou, China
Overall GPA: 3.89/4.0(87.3/100) | Major GPA: 3.89/4.0

Sep 2017-Dec 2017 | **Exchange Student**
Department of Computer Science
University of British Columbia, Vancouver, Canada

Work Experience

Nov 2018 - Current | **Development Intern**
Internet Graphics Group, **Microsoft Research Asia**
Project: Soft Pneumatic Model | *Mentor: Yizhong Zhang*

Research Experience

Current | **Undergraduate Research Intern**
Apr 2018 | State Key Lab of CAD&CG, Zhejiang University
Final Year Thesis: Constitutive model approximation using volume graph | *Advisor: Jin Huang*

Jul-Sep 2018 | **Summer Research Intern**
Multimedia and Interactive Computing Lab, Nanyang Technological University
Project: Interactive Material Design | *Advisor: Jianmin Zheng*

Oct 2017-Mar 2018 | **Research Trainee**
Student Research Training Program, Zhejiang University
Project: Cloth Simulation | *Advisor: Kun Zhou*

Selected Projects

Jul-Current 2018 | **Interactive Material Editor**
Advisor: Jianmin Zheng
An open-source interactive material editor supporting global Young Modulus optimization and visualization based on force and displacement input.(source)
Reference: Interactive Material Design using Model Reduction, Siggraph 2015

Mar-Jun 2018 | **Animation based on Embedded Deformation**
Course: Advance in Computer Graphics | Advisor:Kun Zhou/Zhong Ren
Project ranked top 1% (99.0/100)
An open-source interactive solution for object animation. (source)
Reference: Embedded Deformation for Model Reduction, Siggraph 2007

Jan-Mar 2018 | **Cloth Simulation**
A simple cloth simulator based on mass-spring model. (demo)
Implement collision detection and response.
Reference: Robust treatment of collisions, contact and friction for cloth animation, Siggraph 2002 and Simulation of clothing with folds and wrinkles, Eurographics 2003

Jul 2017 | **Mini Scientific Calculator**
A simple open-source scientific calculator following MVVM model. (source)
Implement algorithms of calculating conditional number, solving matrix equation, polynomial equation, integral and ordinary differential equation, cubic spline and creating line chart.

Honors and Scholarships

First Class Academic Scholarship(Top 5% in Academic Performance)	2016
Distinctive Student Awards	2016
Scholarship of the Government of Zhejiang Province	2016
Scholarship of Arts and Athletics	2016
Scholarship of Arts and Athletics	2017

Language & Skills

English:	TOEFL score: 108 (R: 30 L:29 S:22 W:27) GRE score (V: 157 Q: 170 AW: 4.0)
Programming Skill:	C++(primary language): abundant experience with Linux+Cmake and QT, familiar with major open-source graphics library(Eigen, Libigl, Vegas, Tetgen, VCGlib), OpenGL and GLSL OpenCV(familiar) Latex(good) Git(good) Python(average) Assembly Language(average) Erlang(average) CUDA C(limited)
Graphics Software:	MeshLab(familiar) Blender(familiar) Unity3d(limited)

Interests and Activities

I enjoy long-distance running and run pretty fast.
Related Prizes
1-st prize winner at the women's 3000 m, Sports meeting of Zhejiang University Nov.2015
2-nd prize winner at the women's 1500 m, Sports meeting of Zhejiang University Nov.2015