RESEARCH STATEMENT

My research interests include numerical optimization and simulation for computer graphics and beyond, especially physics-based animation and geometry processing. My current goal is to devise novel methods that are robust, accurate, and efficient to benefit visual effects, geometric design, robotics, engineering, virtual reality, games, etc.

EDUCATION

Ph.D. in Computer and Information Science
Department of Computer and Information Science, University of Pennsylvania
Advisor: Prof. Chenfanfu Jiang
GPA: 4.0/4.0

M.Sc. in Computer Science
Department of Computer Science, University of British Columbia
Advisor: Prof. Alla Sheffer
Grade Average: 95.3/100

B.Eng. (Hons) in Computer Science and Technology (Mixed Class)
College of Computer Science & Technology and Chu Kochen Honors College, Zhejiang University
Advisor: Prof. Alla Sheffer
Grade Average: 95.3/100

HONORS AND SCHOLARSHIPS

Adobe Research Fellowship (10,000 USD)
Mitacs Globalink Graduate Fellowship (10,000 CAD)
Excellent Bachelor Thesis Award (Zhejiang University) Jun. 2015
First Class Scholarship for Outstanding Merits (Top 3% in Academic Performance, 5,000 RMB) 2013-2014

PUBLICATIONS

➢ Minchen Li, Zachary Ferguson, Teseo Schneider, Timothy Langlois, Denis Zorin, Daniele Panozzo, Chenfanfu Jiang, Danny M. Kaufman. Incremental Potential Contact: Intersection- and Inversion-free, Large-Deformation Dynamics. ACM Transactions on Graphics (SIGGRAPH), 2020


➢ Yu Fang*, Ziyin Qu* (equal contribution), Minchen Li, Xinxin Zhang, Yixin Zhu, Mridul Aanjaneya, Chenfanfu Jiang. IQ-MPM: An Interface Quadrature Material Point Method for Non-sticky Strongly Two-Way Coupled Nonlinear Solids and Fluids. ACM Transactions on Graphics (SIGGRAPH), 2020


### RESEARCH EXPERIENCE

- **Research Assistant**, SIG Lab, University of Pennsylvania  
  **Project:** Physics-Based Animation  
  **Advisor:** Prof. Chenfanfu Jiang  
  **Sep. 2018 – Present**

- **Research Intern**, Creative Intelligence Lab, Adobe Research  
  **Project:** Cloth Simulation  
  **Mentor:** Dr. Danny Kaufman, Dr. Timothy Langlois  
  **May. 2020 – Aug. 2020**

- **Research Intern**, Creative Intelligence Lab, Adobe Research  
  **Project:** Variational Contact  
  **Mentor:** Dr. Danny Kaufman, Dr. Timothy Langlois  
  **May. 2019 – Aug. 2019**

- **Research Intern**, Creative Intelligence Lab, Adobe Research  
  **Project:** Domain Decomposition  
  **Mentor:** Dr. Danny Kaufman, Dr. Timothy Langlois  
  **May. 2018 – Aug. 2018**

- **Research Intern**, Creative Intelligence Lab, Adobe Research  
  **Project:** Surface Parameterization  
  **Mentor:** Dr. Danny Kaufman, Dr. Vladimir G. Kim  
  **Sep. 2017 – Nov. 2017**

- **Research Assistant**, Imager Lab, University of British Columbia  
  **Project:** Geometric Modeling  
  **Advisor:** Prof. Alla Sheffer  
  **May. 2016 – Apr. 2018**

- **Undergrad Research Assistant**, Institute of Artificial Intelligence, Zhejiang University  
  **Project:** Skeletal Animation  
  **Advisor:** Prof. Jijun Li  
  **Nov. 2014 – May. 2015**

- **Mitacs Globalink Research Intern**, WiNoM Lab, University of British Columbia  
  **Project:** Cloud-Based Gaming  
  **Advisor:** Prof. Victor C.M. Leung, Dr. Wei Cai  

- **Research Trainee**, National Research and Innovation Training Program, China  
  **Project:** 3D Face Reconstruction  
  **Advisor:** Prof. Kun Zhou  
  **Oct. 2013 – Apr. 2014**
TEACHING EXPERIENCE

Teaching Assistant, University of Pennsylvania

➢ EAS 205 – Scientific Computing
  Instructor: Prof. Chenfanfu Jiang
  Jan. 2020 - Apr. 2020

➢ CIS 563 - Physically Based Animation
  Instructor: Prof. Chenfanfu Jiang
  Sep. 2019 - Dec. 2019

Teaching Assistant, University of British Columbia

➢ CPSC 418 - Parallel Computation
  Instructor: Prof. Mark R. Greenstreet

➢ CPSC 314 - Computer Graphics
  Instructor: Dr. Mikhail Bessmeltsev
  Sep. 2015 - Dec. 2015

INVITED TALKS


➢ Robust and Accurate Simulation of Elastodynamics and Contact. UPenn CIS PhD Mixer. Apr. 28, 2020.


SERVICE

Reviewer [Publons Profile]

➢ ACM Transactions on Graphics (2020)

➢ SIGGRAPH (2020)

➢ Eurographics (2020)

➢ Virtual Reality (2019-2020)

PROGRAMMING SKILLS

Proficient: C/C++, OpenGL, MATLAB, LaTeX

Familiar: Java, JavaScript, CUDA C, OpenCV

EXTRACURRICULAR ACTIVITIES

Photographer and Executive of Chinese Students and Scholars Association at UBC

Director of Photography of Chu Kochen Honors College’s Graduate Short Film
  Apr. 2015 – Jun. 2015