EDUCATION

Zizhou Huang

•New York University	2020-2025
Ph.D. in Computer Science	
Research Focus: Differentiable physics simulations and (inverse) optimizations; geometry processing.	
•University of Science and Technology of China	2016-2020
Bachelor in Applied Mathematics	GPA: $3.99/4.3$

PUBLICATIONS

Geometric Contact Potential. Zizhou Huang, Max Paik, Zachary Ferguson, Daniele Panozzo, Denis Zorin. ACM Transaction on Graphics (SIGGRAPH), 2025.

Intersection-free Garment Retargeting. Zizhou Huang, Chrystiano Araújo, Andrew Kunz, Daniele Panozzo, Denis Zorin, Victor Zordan. SIGGRAPH, 2025.

High-Order Continuous Geometrical Validity. Federico Sichetti, Zizhou Huang, Marco Attene, Denis Zorin, Enrico Puppo, Daniele Panozzo. ACM Transaction on Graphics (SIGGRAPH), 2025.

MiSo: A DSL for robust and efficient MINIMIZE and SOLVE problems. Federico Sichetti, Enrico Puppo, Zizhou Huang, Marco Attene, Denis Zorin, Daniele Panozzo. ACM Transaction on Graphics (SIGGRAPH), 2025.

Optimized shock-protecting microstructures. Zizhou Huang, Daniele Panozzo, Denis Zorin. ACM Transaction on Graphics (SIGGRAPH Asia), 2024.

Differentiable Solver for Time-dependent Deformation Problems with Contact. Zizhou Huang, Davi Colli Tozoni, Arvi Gjoka, Zachary Ferguson, Teseo Schneider, Daniele Panozzo, Denis Zorin. ACM Transaction on Graphics (SIGGRAPH), 2024.

Cut-Cell Microstructures for Two-scale Structural Optimization. Davi Colli Tozoni, Zizhou Huang, Daniele Panozzo, Denis Zorin. Computer Graphics Forum (SGP), 2024.

Open-source Project

•PolyFEM Library github.com/polyfem/polyfem

Top 3 contributor.

- A C++ library for physics simulations using the Finite Element method, with the support of contact and friction in elastic simulations.
- Implemented differentiability of Stokes equation and hyper-elastic simulations with collisions. Wrote a Python binding for differentiable simulators.

EXPERIENCE

•Roblox – Researcher Internship

– Advisor: Victor Zordan, Andrew Kunz.

- Research project on automatic cloth fitting from one avatar to another using optimizations on cloth 3D models.

•nTop – Software Engineer Internship

- Implemented fluid and elastic homogenization in the nTop software.
- Performed topology optimizations for microstructure design in one-way coupled fluid and elastic simulations.

•Reviewer for Siggraph, ACM TOG, TVCG, CADCG

TECHNICAL SKILLS

Languages: C/C++, Python Libraries : Pytorch, Eigen, TBB, libigl Tools: Git, Linux, CUDA Softwares: Blender, Matlab, Mathematica, Illustrator, Premiere Pro

SCHOLARSHIPS AND AWARDS

•MacCracken Fellowship at NYU

•Outstanding Graduate at USTC

•Outstanding Graduation Thesis (top 5%) at USTC

2024 Jun. – Aug.

2022 Jun. - Aug.

2022 - Present