

EDUCATION

•New York University

2020-2025

Ph.D. in Computer Science

GPA: 3.98/4.0

Expected Graduation: 2025 Summer

Research Focus: Physics Simulations and (inverse) Optimizations, Computer Graphics.

Courses: Geometry Processing, Deep Learning, High-Performance Computing

•University of Science and Technology of China

2016-2020

Bachelor in Applied Mathematics

GPA: 3.99/4.3

Courses: Stochastic Process, Statistics, Numerical Methods, Computer Aided Geometric Design

PUBLICATIONS

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.

PREPRINTS

Orientation-aware Incremental Potential Contact. **Zizhou Huang**, Max Paik, Zachary Ferguson, Daniele Panozzo, Denis Zorin. 2024.

High-Order Continuous Geometrical Validity. Federico Sichertti, **Zizhou Huang**, Marco Attene, Denis Zorin, Enrico Puppo, Daniele Panozzo. 2024.

Optimized shock-protecting microstructures. **Zizhou Huang**, Daniele Panozzo, Denis Zorin. 2023.

A Large-Scale Benchmark for the Incompressible Navier-Stokes Equations. **Zizhou Huang**, Teseo Schneider, Minchen Li, Chenfanfu Jiang, Denis Zorin, Daniele Panozzo. 2021.

OPEN-SOURCE PROJECT

•PolyFEM Library <https://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.

EXPERIENCE

•Roblox – Researcher Internship

2024 Jun. – Aug.

– Advisor: Andrew Kunz, Adam Burr.

– Research project on automatic cloth fitting from one avatar to another using mesh optimizations.

•nTop – Software Engineer Internship

2022 Jun. – Aug.

– Implemented fluid and elastic homogenization in the nTop software.

– Performed topology optimizations for microstructure design in periodic fluid and elastic simulations.

•Reviewer for Siggraph, Siggraph Asia, CADCG

2022 - Present

•Teaching Assistant for Honor Algorithms, Computer Graphics

TECHNICAL SKILLS

Languages: C/C++, Python

Libraries : Pytorch, Eigen, TBB, libigl

Tools: Git, Linux, CUDA

Softwares: Blender, Matlab, Mathematica, Illustrator, Premiere Pro

SCHOLARSHIPS

•MacCracken Fellowship at NYU

2020-2025

•Outstanding Graduate at USTC

2020

•Outstanding Graduation Thesis (top 5%) at USTC

2020