

Zhouyuan Chen

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EDUCATION

New York University <i>Master of Science in Computer Science</i>	Sep. 2023 – Current New York, United States
Zhejiang University of Technology <i>Bachelor of Engineering in Software Engineering</i>	Sep. 2019 – Jun. 2023 Hangzhou, China

PUBLICATIONS

Topological Offsets <i>Daniel Zint, Zhouyuan Chen, Yifei Zhu, Denis Zorin, Teseo Schneider, Daniele Panozzo</i>	2024 <i>preprint on Arxiv</i>
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RESEARCH PROJECTS

Geometric Computing Lab at New York University <i>Research Assistant, Advised by Daniele Panozzo, Daniel Zint and Teseo Schneider</i>	Jun. 2023 – Current New York, United States
<ul style="list-style-type: none">• Finite Element Analysis with Prisms and Tetrahedra (Jun. 2024 - Current)<ul style="list-style-type: none">* In progress. I am working on implementing the meshing part to generate a mesh with as little as possible tetrahedron shell. And later I will try to build a linear system to simulate the mesh with hybrid elements.• Automatic Simulator for Annotation Images (Mar. 2024 - Current)<ul style="list-style-type: none">* In progress. Participating in implementing the pipeline for meshing and simulation with the wildmeshing toolkit and FEBio.* Integrated the meshing pipeline as an open-source medical extension software in the 3D Slicer.• Topological Offsets (Jun. 2023 - Jul. 2024) [Link]<ul style="list-style-type: none">* Implemented the Topological Offsets algorithm in 2D and 3D, and modified the algorithm's idea.* Participated in developing the open-source software wildmeshing toolkit.	
Digital Media Technology Lab at Zhejiang University of Technology <i>Research Assistant, Advised by Jiazhou Chen</i>	Aug. 2021 – Jun. 2022 Hangzhou, China
<ul style="list-style-type: none">• Teeth Undercut Model Generation (Feb. 2022 - Jun. 2022) [Link]<ul style="list-style-type: none">* Designed and implemented an algorithm to reconstruct the undercut model of human teeth, which can automatically generate the mesh to help dentists avoid manually making the undercut model.• Collision Visualization and Acceleration (Aug. 2021 - Jan. 2022) [Link]<ul style="list-style-type: none">* Designed and implemented an algorithm to visualize the minimum embedding distance between teeth.* Implemented a C++ broad phase collision detection acceleration algorithms library.	

TEACHING EXPERIENCE

Geometric Modeling(CSCI-GA.3033-018) <i>Teaching Assistant at New York University</i>	Spring 2024 New York, United States
Intro to Computer Science(CSCI-UA 101-10) <i>Grader at New York University</i>	Spring 2024 New York, United States

SKILLS AND INTERESTS

Programming Languages: C/C++, Python, Java, SQL
Libraries and Tools : Eigen, Libigl, CMake
Languages: English (fluent), Chinese (native)
Research Interests: Computer Graphics, Geometry Processing, Numerical Simulation