

Zhongshi Jiang

jiangzs@nyu.edu | [LinkedIn](#) | github.com/jiangzhongshi | [Google Scholar](#)

SUMMARY

- 10+ years experience in 3D digital geometry and simulation research
- Passionate in 3D spatial representation (mesh, point cloud, Gaussian Splatting), feedforward 3D generation, body model and articulations, and scalable simulations.
- AI Researcher in ultra-realistic Large-Scale Generative 4D Human Foundation Models.

CURRENT EXPERIENCE

Meta Reality Labs, Human AI

Remote, New Jersey | Jul 2022 – Present

AI Research Scientist – Staff Level

- *Research Area:* Photorealistic 3DGS and mesh-based feedforward reconstruction for articulated human with dynamic deformation using video prior. Kinematic articulated body models.
- Leading research and production of **body deformation and garment representation** for human foundation models that feedforward create photorealistic 3D avatars using a phone scan.
- Optimized pre- and post-training data mixtures across million-level online videos; innovated **structural priors** to enable dynamic deformation across diverse garments and accessories through post-training; ensure the distilled models meet VR on-device deployment target for mobile compute and latency.
- Engineered the transition of ultra-detailed facial, neck, and hair **dynamics 3D reconstruction** pipelines from classical multi-view tracking to **scalable, end-to-end** neural architectures.
- Evaluation: Developed innovative evaluation frameworks using psychophysics ([SIGGRAPH Asia](#)) and AI preference metrics to benchmark high-resolution face quality and clothing appearance.
- *Strategic Leadership:*
 - Define and execute year-long technical roadmaps for body/garment representation; align cross-functional teams (data, algorithm, production, and platform) on large-scale simulation strategies.
 - Mentored 10+ researchers; drive the architectural transition of the avatar stack across multiple paradigm shifts.

EDUCATION

New York University, Courant Institute

Sep 2022 — New York, NY

Ph.D. in Computer Science

- Dissertation: *Synergistic Geometry Processing: from Robust Shape Modeling to Scalable Physical Simulation.*
- Advisor: Prof. Daniele Panozzo
- Research Area: Robust 3D Geometry bridging geometric modeling to Higher order Finite Element **Physical Simulations**; Large scale **simulation-ready** 3D dataset.
- Honors: [Adobe Research Fellowship 2018](#) (outstanding 10 graduate students in vision, graphics, AI), [Geometry Processing Dataset Award 2019](#) (for the first one million CAD models for geometric deep learning research)

University of Science and Technology of China

Jun 2016 — Hefei, China

B.Sc. in Mathematics

PRIOR EXPERIENCE

nTopology Inc.

New York, NY | Jun 2021 – Aug 2021

Geometry Software Researcher Intern

- Fully automatic and robust high-order meshing algorithm with error control to convert implicitly represented surfaces to coarse NURBS patches for industrial CAD systems.

Adobe Research

Seattle, WA | May 2017 – Aug 2018

Research Scientist Intern

- Developed graph neural networks for 3D surfaces to automate texture map layout generation and shape segmentation on large-scale datasets.

SELECTED PUBLICATIONS

For full list see [Google Scholar \(1300+ citations\)](#)

Large-Scale Codec Avatars: The Unreasonable Effectiveness of Large-Scale Avatar Pretraining, Proc. CVPR 2026.

Introduced the first pre/post-training paradigm for 3D human modeling at scale.

MHR: Momentum Human Rig, Proc. CVPR 2025.

Developed a human-aware rigging system to improve physical realism and articulation.

ABC: A Big CAD Model Dataset for Geometric Deep Learning, Proc. CVPR 2019.

Established the million-scale industry benchmark for 3D geometric deep learning.

Declarative Specification for Unstructured Mesh Editing Algorithms, ACM Trans. on Graphics (SIGGRAPH Asia) 2022.

Engineered a high-performance C++ framework for robust mesh editing.

Bijjective and Coarse High-Order Tetrahedral Meshes, ACM Trans. on Graphics (SIGGRAPH) 2021.

Innovated inversion-free higher order meshing algorithms to guarantee numerical stability.

TECHNICAL SKILLS & MISC

Programming: Python, C++, PyTorch, ClaudeCode

Domains: 3D Geometry, 3D Foundation Models, Generative AI, 3D Computer Vision, Physical Simulation

Honors: SGP Dataset Award (2019), Adobe Research Fellowship (2018)