Honglin Chen

Email: honglin.chen@columbia.edu
https://honglin-c.github.io/

Education

Sep 2021-Aug 2026 | **PhD in Computer Science**
Columbia University, New York, United States
Advisor: Changxi Zheng

Sep 2019-Jan 2021 | **MSc in Computer Science**
University of Toronto, Toronto, Canada
Advisor: David I.W. Levin

Sep 2015-Jun 2019 | **B.Eng. in Computer Science and Technology**
Zhejiang University, Hangzhou, China
GPA: 3.89/4.0

Research Interests

Vision & Graphics, Generative Models, Machine Learning, Optimization, Physical Simulation

Work Experience

Oct 2026- Current | **Waymo**, Mountain View
Research Engineer
World modeling for autonomous vehicle simulation.

Jun 2025- Aug 2025 | **Adobe Research**, London
Research Intern - *Mentor: Paul Guerrero*
Trained a feed-forward diffusion model that turns static auto-rigged meshes into editable pose spaces using motion priors from pretrained video diffusion models.

Jun 2024- Aug 2024 | **Meta Reality Lab**, San Francisco Bay Area
Research Intern - *Mentor: Tuur Stuyck*
Built a neural network model for real-time hair dynamics prediction from head and shoulder movements for VR applications.

Jun 2023- Aug 2023 | **Adobe Research**, Toronto
Research Intern - *Mentor: Alec Jacobson*
Developed an efficient and stable optimization solver for physical simulation, improving robustness while maintaining a simple and effective formulation.

Jun 2022- Aug 2022 | **Adobe Research**, New York (remote)
Research Intern - *Mentor: Kevin Wampler*
Designed a localized physics-based deformation method for artifact-free interactive shape editing, now shipped in Adobe Fresco.

Feb 2021- May 2021 | **NVIDIA Research**, Toronto
Research Intern - *Mentor: Sanja Fidler*
Conducted research on modeling dynamics using neural fields.

Nov 2018-May 2019 | **Microsoft Research Asia**, Beijing
Research Intern - *Mentor: Yizhong Zhang*
Conducted research on the simulation, design, and fabrication of modular pneumatic soft robots.

Publication

1. **Honglin Chen**, Karran Pandey, Rundi Wu, Matheus Gadelha, Yannick Hold-Geoffroy, Ayush Tewari, Niloy J. Mitra, Changxi Zheng, Paul Guerrero.
ViPS: Video-informed Pose Spaces for Auto-Rigged Meshes. *SIGGRAPH Asia 2026*
2. **Honglin Chen**, Hsueh-Ti Derek Liu, Alec Jacobson, David I.W. Levin, Changxi Zheng.
Trust-Region Eigenvalue Filtering for Projected Newton. SIGGRAPH Asia 2024
3. **Honglin Chen**, Hsueh-Ti Derek Liu, David I.W. Levin, Changxi Zheng, Alec Jacobson.
Stabler Neo-Hookean Simulation: Absolute Eigenvalue Filtering for Projected Newton. SIGGRAPH 2024
4. **Honglin Chen***, Rundi Wu*, Eitan Grinspun, Changxi Zheng, Peter Yichen Chen.
Implicit Neural Spatial Representations for Time-dependent PDEs. ICML 2023
5. **Honglin Chen**, Changxi Zheng, Kevin Wampler.
Local Deformation for Interactive Shape Editing. SIGGRAPH 2023
6. Ty Trusty, **Honglin Chen**, David I.W. Levin.
The Shape Matching Element Method: Direct Animation of Curved Surface Models. SIGGRAPH 2021
7. **Honglin Chen**, Hsueh-Ti Derek Liu, Alec Jacobson, David I.W. Levin.
Chordal Decomposition for Spectral Coarsening. SIGGRAPH Asia 2020.

Honors and Scholarships

Roblox Graduate Fellowship (70,000 USD)	2024-2026
WiGRAPH Rising Stars in Computer Graphics	2024
University of Toronto Tuition Fellowship (65,000 CAD)	2019-2021
First Class Academic Scholarship(Top 5% in Academic Performance)	2016
Distinctive Student Awards	2016
Scholarship of the Government of Zhejiang Province	2016
Scholarship of Arts and Athletics	2016, 2017

Academic Services

Reviewers for SIGGRAPH, SIGGRAPH Asia, Eurographics.

Teaching

Invited Course	Introduction to Optimization for Simulation (Symposium on Computer Animation, Aug 2024).
Mentor	Summer Geometry Initiative (2023).
Guest Lecturer	Computer Animation (Columbia, Spring 2024, Spring 2025); Seminar in Geometry and Animation (UofT, Fall 2020).
Teaching Assistant	Computer Animation (Columbia, Spring 2024); Computer Vision II: Learning (Columbia, Spring 2023); Seminar in Geometry and Animation, Physics Based Animation (UofT, Fall 2020); Computer Graphics (UofT, Winter 2020, Summer 2020).