

# Zhen Chen

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RESEARCH      Currently, My research majorly focuses on understanding the physical phenomenon  
INTERESTS      of thin shell models, explore the corresponding geometric properties, and robust mesh  
processing. I am also interested in exploring the possibility to combine the cloth sim-  
ulation with deep neural networks.

EDUCATION      **The University of Texas at Austin**      Austin, Texas  
Ph.D. in Computer Science      2018 – Present  
Supervisor: Prof. Etienne Vouga  
**University of Science and Technology of China**      Anhui, China  
Bachelor in Mathematics      2014 – 2018  
Mentors: Prof. Ligang Liu

PUBLICATIONS      [1] **Zhen Chen**, Danny M. Kaufman, Mélina Skouras, Etienne Vouga. **Complex Wrinkle Evolution**. *ACM Transactions on Graphics, 2023 (SIGGRAPH 2023)*.

[2] **Zhen Chen**, Zherong Pan, Kui Wu, Etienne Vouga, Xifeng Gao. **Robust Low-Poly Meshing for General 3D Models**. *ACM Transactions on Graphics, 2023 (SIGGRAPH 2023)*.

[3] Yan Zheng, Lemeng Wu, Xingchao Liu, **Zhen Chen**, Qiang Liu, Qixing Huang. **Neural Volumetric Mesh Generator**. *NeurIPS 2022 Workshop SBM Poster, 2022*.

[4] **Zhen Chen**, Hsiao-yu Chen, Danny M. Kaufman, Mélina Skouras, Etienne Vouga. **Fine Wrinkling on Coarsely-Meshed Thin Shells**. *ACM Transactions on Graphics, 2021*.

[5] **Zhen Chen**, Daniele Panozzo, Jeremie Dumas. **Half-Space Power Diagrams and Discrete Surface Offsets**. *IEEE Transaction on Visualization and Computer Graphics, 2019*.

TALKS      **Complex Wrinkle Field Evolution**  
SIGGRAPH      2023  
**Robust Low-Poly Meshing for General 3D Models**  
SIGGRAPH      2023  
**Fine Wrinkling on Coarsely-Meshed Thin Shells**  
SIGGRAPH      2022  
**Half-Space Power Diagrams and Discrete Surface Offsets** (with Jeremie Dumas)

EXPERIENCE	<b>Research Intern, Tencent AI Lab</b>	Bellevue, US
	Mentor: Xifeng Gao	Summer 2023
	Project description: Develop a robust and efficient algorithm for approximate convex decomposition of general 3D meshes. We aim to enhance collision detection in real-time games.	
	<b>Research Intern, Tencent AI Lab</b>	Bellevue, US
	Mentor: Xifeng Gao	Summer 2022
	Project description: Propose a remeshing algorithm which captures sharp features with intersect-free and water-tight guarantee, and apply this technique to the real world mesh data.	
	<b>Research Intern, Adobe</b>	Remote in Austin, US
	Mentor: Danny M. Kaufman	Summer 2021
	Project description: Design a time integrator which achieves a trade-off between amplitude distortion (dissipation) and period distortion (dispersion). This is specifically designed for the incremental potential contact (IPC) model.	
	<b>Research Assistant</b>	UT Austin
REVIEWS	Supervisor: Etienne Vouga	Fall 2021 - Spring 2022
	Project description: Proposed an algorithm which interpolates the wrinkle patterns on two key frames. This can be applied for the artist to draw and design wrinkles on the cloth, and get a temporally continuous interpolation.	
	<b>Teaching assistant, Department of Computer Science</b>	UT Austin
	CS 303E: Elements of Computers and Programming	Fall 2018
	<b>Teaching assistant, Department of Mathematics</b>	USTC
	Complex Analysis	Fall 2017
	Mathematical Analysis	Spring 2017
	<b>Student intern, Geometric Computing Lab</b>	NYU
	Host: Prof. Daniele Panozzo	Summer 2017
	Project description: Explored the algorithm to compute the offset surface of 3D meshes.	
HONORS AND AWARDS	Computer Graphics Forum, 2022	
	SIGGRAPH 2022 (sub-reviewer), 2023	
	Baosteel ScholarShip(Top 2%)	2017
LANGUAGE AND SKILLS	National Scholarship (Top 1% nationwide)	2016
	Outstanding Freshman Scholarship (Top 1%)	2014
LANGUAGE AND SKILLS	<b>Programming:</b> C/C++, Python, Matlab	
	<b>Software:</b> Houdini, Adobe Premiere	
	<b>Language:</b> Chinese(native), English(fluent)	