

# Honglin Chen

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## Research Interests

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My research interests mainly focus on computer graphics, especially on numerical optimization and its applications on visual computing problems, e.g. physics-based simulation, geometry processing and computer animation.

## Education

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Sep 2019-Jan 2021	<b>MSc in Computer Science</b> Department of Computer Science <b>University of Toronto</b> , Toronto, Canada <i>Advisor: Prof. David I.W. Levin</i>
Sep 2015-Jun 2019	<b>B.Eng. in Computer Science and Technology</b> College of Computer Science & Technology <b>Zhejiang University</b> , Hangzhou, China GPA: 3.89/4.0
Sep 2017-Dec 2017	<b>Exchange Student</b> Department of Computer Science <b>University of British Columbia</b> , Vancouver, Canada

## Publication

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- Honglin Chen**, Hsueh-Ti Derek Liu, Alec Jacobson, David I.W. Levin.  
**Chordal Decomposition for Spectral Coarsening.**  
ACM Transactions on Graphics (SIGGRAPH Asia), 2020.
- Ty Trusty, **Honglin Chen**, David I.W. Levin.  
**The Shape Matching Element Method: Direct Animation of Curved Surface Models.**  
*In Submission.*

## Work Experience

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Aug 2021 ( <i>Expected</i> ) Feb 2021	<b>Research Intern</b> NVIDIA Toronto Artificial Intelligence Lab, <b>NVIDIA</b>
Nov 2018-May 2019	<b>Research Intern</b> Internet Graphics Group, <b>Microsoft Research Asia</b> Project: Soft Pneumatic Robot   <i>Mentor: Dr. Yizhong Zhang</i>

## Research Experience

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Present Sept 2019	<b>Research Assistant</b> Dynamic Graphics Project Lab, University of Toronto <i>Advisor: Prof. David I.W. Levin</i>
Apr 2018-Jun 2019	<b>Undergraduate Research Intern</b> State Key Lab of CAD&CG, Zhejiang University Project: Embedded Deformation   <i>Advisor: Prof. Jin Huang</i>
Jul-Sep 2018	<b>Summer Research Intern</b> Multimedia and Interactive Computing Lab, Nanyang Technological University Project: Interactive Material Design   <i>Advisor: Prof. Jianmin Zheng</i>

## Honors and Scholarships

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University of Toronto Tuition Fellowship	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

## Invited Talks

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1. Toronto Geometry Colloquium <i>Chordal Decomposition for Spectral Coarsening.</i>	Nov 2020
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## Teaching

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• <b>Substitute Lecturer, University of Toronto:</b> CSC2521 Seminar in Geometry and Animation	Instructor: <i>Alec Jacobson</i>	Fall 2020
• <b>Teaching Assistant, University of Toronto:</b> CSC2521 Seminar in Geometry and Animation	Instructor: <i>Alec Jacobson</i>	Fall 2020
CSC2549/417 Physics Based Animation	Instructor: <i>David I.W. Levin</i>	Fall 2020
CSC2504/418 Computer Graphics	Instructor: <i>Sarah Kushner</i>	Summer 2020
CSC2504/418 Computer Graphics	Instructor: <i>David I.W. Levin</i>	Winter 2020

## Selected Courses

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- Geometry Processing • Physics-Based Animation • Convex Optimization
- Matrix Calculations • Seminar in Geometry and Animation I & II
- Numerical Analysis • Matrix Theory • Advances in Computer Graphics

## Language & Skills

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Programming Skill:	C++(primary language): familiar with Eigen, Libigl, CMake Matlab(familiar) Git(familiar) Python(good) OpenGL and GLSL(good) Latex(good) OpenCV(good) Assembly Language(average) Erlang(average) CUDA C(limited)
Graphics Software:	Blender(familiar) MeshLab(familiar) Maya(average) Adobe Illustrator(familiar) Photoshop(familiar)
Languages:	English(fluent) Mandarin(native)