ZHECHENG WANG

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KEYWORDS

Computer Graphics, Physical Simulation, Geometry Processing, Computational Design, Digital Fabrication, Interdisciplinary Studies

GRADUATE COURSES

Computational Imaging, Seminar on Geometry & Animation, Deep Learning, Physically Based Animation, Imitation Learning for Robotics

EDUCATION

University of Toronto	Doctor of Philosophy in *Computer Science* *Dynamic Graphics Group*	Sept. 2022 - present
The University of Texas at Austin	Bachelor of Science in *Electrical Engineering*	Sept. 2018 - Dec. 2021
	Bachelor of Science in *Mathematics*	Sept. 2018 - May 2021
	Bachelor of Science in *Radio-Television-Film*	Sept. 2018 - Aug. 2020
	Computational Science and Engineering Certificate	Sept. 2018 - Dec. 2021
	cumulative GPA: 3.86	

TEACHING EXPERIENCE

University of Toronto - Teaching Assistant   Sept. 2022 - Dec. 2022
- Tutorial TA for undergraduate CS class *Software Design*

RESEARCH EXPERIENCE

University of Toronto - Research Assistant *Advisor: Prof. Eitan Grinspun*   Sept. 2022 - present
KAUST - Visiting Student *Advisor: Prof. Dominik L. Michels & Prof. Helmut Pottmann*   Mar. 2022 - Aug. 2022
- Ongoing SIGGRAPH 2023 project: Computational Fabrication, Inverse Design, Architectual Geometry
Dartmouth College - Visiting Student *Advisor: Prof. Bo Zhu*   Mar. 2021 - Jan. 2021
- SIGGRAPH 2022: Fluid Simulation, JCP: Learning For PDE And Fluid Systems
Massachusetts Institute of Technology - Summer Geometry Institute Fellow   July 2021 - Aug. 2021

ACADEMIC PROJECTS

Post-processing Spatially-Varying Blur Effects with Learned 6D Blur Fields *Advisor: Prof. David Lindell*   Oct. 2022 - Dec. 2022
- Recreating depth of field and bokeh for any images with a learned 6D blur field.
Discrete Elastic Rods Based Simulation in Fabrication *Advisor: Prof. Etienne Vouga*   Aug. 2021 - Dec. 2021
- Implement a model of discrete elastic rods and study its application in additive manufacturing.
Nonmanifold Periodic Minimal Surfaces *Advisor: Prof. Etienne Vouga & Dr. Nicholas Sharp* [blog post]   Aug. 2021 - Aug. 2022
- Implementing a fixed boundary and a periodic moving boundary discrete minimal surface algorithm.
- Study optimization strategy (MCF, Willmore flow) to find saddle points for a periodic boundary minimal surface problem.
Volume Encoded Parametrization *Advisor: Prof. Marco Tarini* [blog post]   Aug. 2021
- Using volume-encoded LSCM to enforce orthogonality and zero-distortion in volume-encoded UV-map.

PUBLICATION

A Clebsch Method for Free-Surface Vortical Flow Simulation. [project] Shiying Xiong, <u>Zhecheng Wang</u>, Mengdi Wang, and Bo Zhu. ACM Transactions on Graphics (SIGGRAPH), 2022.

PRESENTATIONS & TALKS

- **SIGGRAPH 2022 - *A Clebsch Method for Free-Surface Vortical Flow Simulation***, Roundtable Session: Fluid Simulation.

HONORS & SCHOLARSHIPS

- MIT Summer Geometry Institute Honoraria ($4000)   July 2021
- UT ECE Best Research Capstone Design Honorable Mention   May 2021

ADDITIONAL INFORMATION

Programming: **C/C++**, Java, Mathematica, MATLAB, **Python** (**Taichi**, **PyTorch)**, LaTeX, Linux
Electrical Engineering: PCB design, soldering, **embedded system**, low-level chip interface, **ARM Assembly**