

JIAYI ERIS ZHANG

<https://eriszhang.github.io> ◇ jiayieris.zhang@mail.utoronto.ca

EDUCATION

University of Toronto

Honours BSc in Computer Science & Mathematics

Overall GPA: 3.96/4.0

Sept. 2016 - June 2021

Toronto, ON

RESEARCH INTERESTS

Physics-based Animation, Geometry Processing, Interactive Tools for Supporting Creativity

RESEARCH EXPERIENCE

Adobe Research

Research Intern at the Emerging Graphics Group with Dr. Qi Sun

June 2020 - Present

San Jose, CA (Remote)

- Working on a novel method for simulating skin microgeometry deformation

DGP Lab, University of Toronto

Research Assistant with Prof. David I.W. Levin and Prof. Alec Jacobson

Sept. 2019 - May 2020

Toronto, ON

- Worked on a novel method for adding secondary physical motion to rig-based animation

DGP Lab, University of Toronto

Research Assistant with Prof. Marc Alexa and Prof. Alec Jacobson

Mar. 2019 - June 2019

Toronto, ON

- Worked on a novel method for efficiently computing updates for least-squares rotational alignment problems and further optimized implementation using AVX vectorization

DGP Lab, University of Toronto

Capstone Project with Prof. Alec Jacobson

Sept. 2018 - 2019

Toronto, ON

- Worked on a shape optimization method that slims down supporting structures of 3D printing and further extended it to an interactive structural prototyping tool

DGP Lab, University of Toronto

Research Assistant with Prof. Anastasia Bezerianos and Prof. Fanny Chevalier

Apr. 2018 - Sept. 2020

Toronto, ON

- Worked on an image-editing-based user interface that facilitates pictorial visualization authoring

Numerical Analysis Group, University of Toronto

Research Assistant with Prof. Kenneth R. Jackson

2018 - 2019

Toronto, ON

- Worked on a two-level importance sampling algorithm in simulating portfolio credit risk based on Gaussian Copula Model

HONOURS AND AWARDS

Adobe Research Women-in-Technology Scholarship [Link](#)

2020

Awarded to outstanding female undergraduate/master computer science students worldwide

CRA Outstanding Undergraduate Researchers Award Finalist [Link](#)

2020

Awarded to top undergraduate computer science researchers in North America

University of Toronto Excellence Award UTEA

2019

Dean's Honour List

2017 - 2020

George Luste Prize in 1st Year Physics	2018
George Gray Falle Scholarship	2017
University of Toronto Scholar	2017
Admission Scholarship	2016

PUBLICATIONS

Complementary Dynamics

Jiayi Eris Zhang, Seungbae Bang, David I.W. Levin, Alec Jacobson

· *ACM SIGGRAPH ASIA 2020*

DataQuilt: Extracting Visual Elements from Images to Craft Pictorial Visualizations

Jiayi Eris Zhang, Nicole Sultanum, Anastasia Bezerianos, Fanny Chevalier

· *ACM Conference on Human Factors in Computing Systems (CHI) 2020*

Fast Updates for Least-Squares Rotational Alignment

Jiayi Eris Zhang, Marc Alexa, Alec Jacobson

· *Preprint. The work was submitted to SIGGRAPH Asia 2019 once and will be resubmitted soon*

TEACHING EXPERIENCE

CSC419/2520 Geometry Processing

Fall 2020

Teaching Assistant with Prof. Alec Jacobson

TALKS AND PRESENTATIONS

HER CODE CAMP Panelist

July 2020

Adobe Research Intern Intro Talk

June 2020

Montreal-Toronto pre-SIGGRAPH Workshop (MOTOGRAPH)

December 2019

Undergraduate Research in Computer Science Conference (URCSC)

September 2018

Undergraduate Summer Research Program (UGSRP)

August 2018

SKILLS

Programming Languages: Python, C/C++, Java, Matlab, Javascript, HTML, CSS

Tools/Frameworks: React, D3.js, libigl, OpenGL, OpenCV, Pytorch, CUDA C, SIMD SSE/AVX

Languages: English, Mandarin

SELECTED COURSEWORK

Graduate Courses

- Physics-based Animation • Seminar on Geometry and Animation I & II
- Geometry Processing • Foundation of Computer Vision • Matrix Calculations

Undergraduate Courses

- Computer Graphics • Intro to Visual Computing • Numerical Optimization
- Neural Networks • Operating Systems • Parallel Computing • Differential Geometry
- Numerical Methods • Computational Methods for Partial Differential Equations
- Advanced Ordinary Differential Equations

VOLUNTEER EXPERIENCE

SIGGRAPH Student Volunteer in Los Angeles

2019