JIAYI ERIS ZHANG

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EDUCATION

University of Toronto Sept. 2016 - June 2021
Honours BSc in Computer Science & Mathematics Toronto, ON
Overall GPA: 3.97/4.0

RESEARCH INTERESTS

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

RESEARCH EXPERIENCE

Adobe Research June 2020 - Present
Research Intern at the Emerging Graphics Group with Dr. Qi Sun San Jose, CA (Remote)

· Working on a novel method for simulating skin microgeometry deformation

DGP Lab, University of Toronto Sept. 2019 - May 2020
Research Assistant with Prof. David I.W. Levin and Prof. Alec Jacobson Toronto, ON

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

DGP Lab, University of Toronto Mar. 2019 - July 2019
Research Assistant with Prof. Marc Alexa and Prof. Alec Jacobson 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 Sept. 2018 - 2019
Capstone Project with Prof. Alec Jacobson 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 Apr. 2018 - Sept. 2019
Research Assistant with Prof. Anastasia Bezerianos and Prof. Fanny Chevalier Toronto, ON

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

Numerical Analysis Group, University of Toronto 2018 - 2019
Research Assistant with Prof. Kenneth R.Jackson 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, Alec Jacobson, Marc Alexa
· *In submission*

TEACHING EXPERIENCE

CSC419/2520 Geometry Processing Fall 2020
Teaching Assistant with Prof. Alec Jacobson

TALKS AND PRESENTATIONS

Toronto Geometry Colloquium Opener (with Dr. Danny Kaufman) October 2020
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