CHEN ZHENGHAI

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PERSONAL INFORMATION

Nationality: Chinese Gender: Male Date of Birth: January 21, 1993
Native Place: Fujian

EDUCATION

National University of Singapore, Singapore August 2015 - October 2020 (expected)
PhD Student in Computer Science Thesis submitted on 5 May 2020
School of Computing

Sichuan University, Chengdu, China September 2011 - June 2015
Bachelor of Engineering Overall Score: 92.01, GPA: 3.78, Rank: 1/350
College of Software Engineering

RESEARCH INTERESTS

Parallel meshing, General purpose GPU, Geometry processing

SKILLS

Programming Languages: C\C++, CUDA, Python

PHD THESIS

Quality Mesh Generation on GPU

PAPERS

Designing GPU Algorithms with Applications to Mesh Renement
Zhenghai Chen and Tiow-Seng Tan
Submitted to PACT 2020

Computing Three-dimensional Constrained Delaunay Refinement Using the GPU
Zhenghai Chen and Tiow-Seng Tan
The 28th International Conference on Parallel Architectures and Compilation Techniques, PACT 2019, Seattle, WA, USA, September 21-25, 2019, pp. 408–419.

Computing Delaunay Refinement Using the GPU
Zhenghai Chen, Meng Qi and Tiow-Seng Tan
Proceedings of the 21st ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games, I3D 2017, San Francisco, CA, USA, March 4-5, 2017, pp. 11:1–11:9.

PROJECTS

Quality Mesh Generators on the GPU Jan. 2016 - present
This project aims to generate high quality meshes of large sizes using the GPU.
The first working GPU mesh generators for 2D constrained Delaunay, 3D constrained Delaunay and 3D restricted Delaunay problems have been proposed, all of which achieve an order of magnitude speedup compared to the best sequential and parallel counterparts.
Source code: `https://github.com/chenzhenghai/`

Fast VMM(Vision Measurement Machine) Feb. 2017 - Mar. 2018, Singapore & Suzhou
Designed and implemented a software measuring product components in sub-pixel accuracy.
Controlled cameras, lasers and motors to collect and measure input signals in a few seconds.

CONFERENCE PRESENTATIONS

[**PACT'19**] The 28th International Conference on Parallel Architectures and Compilation Techniques, 21-25 Sept 2019, Seattle, WA, USA. **Oral Presentation**

[**I3D'19**] ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games, 21-23 May 2019, Montreal, Quebec, Canada. **Poster Presentation**

[**I3D'17**] ACM SIGGRAPH Symposium on Interactive 3D Graphics and Games, 25-27 Feb 2017, San Francisco, CA, USA. **Oral Presentation**

TEACHING EXPERIENCES

2D Videogame Development, Teaching assistant	July in 2016 - 2019
Graphics Rendering Techniques, Teaching assistant	2016 - 2019

HONORS AND AWARDS

Research Achievement Award, School of Computing, NUS, Singapore	2017, 2020
Outstanding Student, Sichuan Province	2015
IBM Chinese Excellent Student Scholarship	2014
National Scholarship, China	2011 - 2014