Wei Han
Curriculum Vitae

Shenzhen, China
hanwein2@gmail.com

Research Interests	geometry processing, numerical optimization, discrete differential geometry

Projects

Marching Cubes 33(MC33)
- Generated full MC33 cases via rotation, flipping, inversion, while enforcing **consistent normals**
- Designed edge-level **caching** to eliminate duplicate computations
- Code, binary

Half-edge Mesh Library
- Implemented a half-edge mesh structure supporting edge **collapse**, **flip**, and **QEM simplification**
- Built **BVH** for accelerated intersection queries (mesh–mesh, face–face, line–face)
- Code, binary

Triangle Mesh Viewer
- Developed a **real-time** mesh display tool to visualize intermediate states during mesh processing
- Code, binary

Education

MSc in Computer Science, Huazhong University of Science and Technology, China   2018-2021

BSc in Information Security, Northeastern University, China   2013-2017

Publications

Robust whole slide image analysis for cervical cancer screening using deep learning   2021
*Shenghua Cheng[#], Sibo Liu[#], Jingya Yu[#], Gong Rao, Yuwei Xiao, **Wei Han**, Wenjie Zhu, Xiaohua Lv, Ning Li, Jing Cai, Zehua Wang, Xi Feng, Fei Yang, Xiebo Geng, Jiabo Ma, Xu Li, Ziquan Wei, Xueying Zhang, Tingwei Quan, Shaoqun Zeng, Li Chen, Junbo Hu & Xiuli Liu*
Nature Communications, volume 12, Article number: 5639 (2021)

An Unsupervised Style Normalization Method for Cytopathology Images   2021
*Xihao Chen, Jingya Yu, Shenghua Cheng, Xiebo Geng, Sibo Liu, **Wei Han,** Junbo Liu, Li Chen, Xiuli Liu, Shaoqun Zeng*
Computational and Structural Biotechnology Journal, volume 19, 2021

Research Positions

MSc Student, Huazhong University of Science and Technology, China   2018-2021
Advisor: Quan Tingwei
- Backend for website of cervical cell annotation and label management
- The processing of gigapixel Whole Slide Images (WSIs) was optimized through custom algorithms, **Parallel Computing**, **TensorRT**, and **C++**, achieving a time of 1.5 minutes per slide
- Engineered the visualization software for an **AR** microscope system, enabling real-time visualization of AI-identified suspicious cervical cells to aid in rapid screening and diagnosis
- Co-designed and implemented an end-to-end **online learning system** to unify the fragmented workflow between medical experts and model developers, facilitating data management, model

training, and iterative annotation

Experience	**Devops/Embeded software Engineer, Shenzhen Da-Jiang Innovations Sciences and Technologies Ltd, China**	2022-2024

- Established a multi-environment (SIL/SILite/Embedded) code coverage pipeline for the flight-system, integrated into CI/CD
- Co-developed FSTest, an **embedded C++ testing framework**, and automated its execution via CI/CD
- Built a CI/CD pipeline for dji_guardian, a Python test framework, enhancing test code quality
- Refactored dji_guardian into a configurable architecture to improve test case reusability
- Created a **cross-platform C++ mock library**, integrated with GTest, to simplify unit testing

Devops/Backend software Engineer, Tencent Technology Shenzhen Co Ltd, China   2021-2022

- Developed backend services for **Tencent Cloud Doctor** using Go
- Engineered a gateway tool to regulate and manage incoming traffic to microservices
- Built a pipeline to do traffic replay to enhance backend reliability and software quality

Additional Information

Language
- English: TOEFL iBT **106**
- Chinese: Native

Programming Languages
- Expert: **C++**, **Python**
- Proficient: Go
- Familiar: Java, Groovy, JavaScript

Software & Platforms
- Computer Vision & Graphics: OpenCV, **OpenGL**
- Development Tools: Pybind11, QT
- CI/CD Systems: Jenkins, Gerrit

Technical Expertise
- C++ **Multithreaded** Programming
- Cross-language Interface Development