HAN ZHANG

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EDUCATION

The Chinese University of Hong Kong, Hong Kong *August 2018 - July 2020*
Department of Mathematics Master of Philosophy

Sun Yat-Sen University, Guangzhou *August 2014 - June 2018*
School of Mathematics Bachelor of Science

RESEARCH INTEREST

Computational Geometry Scientific Computing Geometry Processing

ACADEMIC EXPERIENCE

The Key Laboratory of Computational Science of Guangdong Province *September 2016 - April 2018*
Part-Time Research Assistant *Guangzhou, CHINA*

· Research on medical images supervised by Prof.Ying JIANG. Especially on finding a new approach for CT reconstruction through wavelet basis.

Faculty of Mathematics, The Chinese University of Hong Kong *August 2018 - July 2020*
Teaching Assistant *Hong Kong, CHINA*

· Research on computational geometry and deep learning. Supervised by Lok Ming LUI

Department of Computer Science, Shenzhen University *July 2020 - June 2021*
Research Assistant *Shenzhen, CHINA*

· Research on scene reconstruction and path planning. Work with Hui Huang

Faculty of Mathematics, The Chinese University of Hong Kong *July 2021 - Present*
Research Assistant *Hong Kong, CHINA*

· Research on computational geometry and medical image segmentation. Supervised by Lok Ming LUI

PROJECTS

Quasi-Conformal Network *October 2019 - September 2020*
with Lok Ming LUI The Chinese University of Hong Kong
We build a deep neural network based on quasi-conformal theories, called QC-net, to obtain diffeomorphic registration maps between corresponding data. QC-Net incorporates data information from training data. As such, QC-net can output a meaningful registration map based on the known data structure learn from the network.

Continuous Path Planning for Reconstruction *July 2020 - June 2021*
with Hui HUANG Shenzhen University
We introduce the first path-oriented drone trajectory planning algorithm, which performs continuous (i.e., dense) image acquisition along an aerial path and explicitly factors path quality into an optimization along with scene reconstruction quality.

Shape Average and Mean Prior Segmentation *July 2021 - Present*
with Lok Ming LUI The Chinese University of Hong Kong
TBD

PUBLICATIONS

Continuous Aerial Path Planning for 3D Urban Scene Reconstruction. **Han Zhang**, Yucong Yao, Ke Xie, Chi-Wing Fu, Hao Zhang, Hui Huang. (*Siggraph Asia 2021*).

Quasi-Conformal Neural Network (QC-net) with Applications to Shape Matching. **Han Zhang** (*MPhil thesis*)

ACADEMIC ACHIEVEMENTS

Excellent Student Scholarship of Sun Yat-Sen University *First Class*
Excellent Thesis of Sun Yat-Sen University *Outstanding*
China Undergraduate Mathematical Contest in Modeling *Second Prize*
National High School Mathematics League *Second Prize*

EXTRA-CURRICULAR

Institute of Computing Technology, Chinese Academy of Sciences *July 2017*
Outstanding Student of 'Computing Future' summer training class *Beijing, CHINA*

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Department of Mathematics, The Chinese University of Hong Kong *October 2017*
Visiting Student *Hong Kong, CHINA*

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Department of Mathematics, The Chinese University of Hong Kong *August 2018 - August 2020*
Teaching Assistant *Hong Kong, CHINA*

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TECHNICAL STRENGTHS

Programming Languages C++, MATLAB, PYTHON, CGAL...