Yiming Qian

Contact Information

School of Computing Science
Simon Fraser University
Burnaby, BC, Canada, V5A 1S6

+1(780)668-5381
qym.ustc@gmail.com
https://yi-ming-qian.github.io/

Research Interests

Computer vision, computer graphics, machine learning, computational imaging.

Appointment

Simon Fraser University Mar 2019 – Present

Postdoctoral Fellow
Supervisor: Prof. Yasutaka Furukawa
Working on deep learning for structured 3D generation and reconstruction.

Education

University of Alberta Sep 2014 – Mar 2019

Ph.D. in Computing Science
Advisors: Prof. Herbert Yang and Prof. Minglun Gong
Thesis: Light transport acquisition and 3d reconstruction in the presence of light refraction.

Memorial University of Newfoundland Sep 2012 – Aug 2014

M.Sc. in Computer Science
Advisor: Prof. Minglun Gong
Thesis: Self-tuning one-class support vector machines for data classification.

University of Science and Technology of China (USTC) Aug 2008 – Jul 2012

B.Eng. in Automation, School of Information Science and Technology

Awards

Alberta Innovates Graduate Student Scholarship 2016 – 2018
- $31500CAD annual support to academically superior graduate students at an Alberta university

Graduate Travel Award 2016, 2017
Graduate Student Professional Development Award 2015, 2016
PhD Early Achievement Award 2015
- Awarded annually to one PhD student across the department

Dean's Excellence Award 2015
- Awarded annually to one PhD student in each department of Faculty of Science

Best Paper Award 2015
- The 28th Canadian Conference on Artificial Intelligence, Halifax, Nova Scotia

Graduate Student Scholarship (Memorial University) 2012 – 2014
Outstanding Undergraduate Student Scholarship (USTC) 2009 – 2011

Publications

Referred Conferences and Journals

Yiming Qian and Yasutaka Furukawa. "Learning Pairwise Inter-Plane Relations for Piecewise Planar Reconstruction." *Proceedings of the European Conference on Computer Vision (ECCV)*, 2020.

Shihao Zou, Xinxin Zuo, **Yiming Qian**, Sen Wang, Chi Xu, Minglun Gong and Li Cheng "3D Human Shape Reconstruction from a Polarization Image." *Proceedings of*

the European Conference on Computer Vision (ECCV), 2020.

Qing Cai, Huiying Liu, **Yiming Qian**, Sanping Zhou, Xiaojun Duan and Yee-Hong Yang. "Unsupervised Hierarchical Image Segmentation through Fuzzy Entropy Maximization." *Pattern Recognition*, 2019.

Yiming Qian, Yinqiang Zheng, Minglun Gong and Yee-Hong Yang. "Simultaneous 3D Reconstruction for Water Surface and Underwater Scene." *Proceedings of the European Conference on Computer Vision (ECCV)*, 2018.

Bojian Wu, Yang Zhou, **Yiming Qian**, Minglun Gong, Hui Huang. "Full 3D Reconstruction of Transparent Objects." *ACM Transactions on Graphics (Proceedings of SIGGRAPH)*, 2018.

Yiming Qian, Minglun Gong and Yee-Hong Yang. "Stereo-based 3D Reconstruction of Dynamic Fluid Surfaces by Global Optimization." *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017.

Shibai Yin, **Yiming Qian** and Minglun Gong. "Unsupervised Hierarchical Image Segmentation through Fuzzy Entropy Maximization." *Pattern Recognition*, 2017.

Yunhai Wang, **Yiming Qian**, Yang Li, Minglun Gong and Wolfgang Banzhaf. "Artificial Multi-Bee-Colony Algorithm for k-Nearest-Neighbor Fields Search." *Proceedings of the ACM Genetic and Evolutionary Computation Conference (GECCO)*, 2016.

Yiming Qian, Minglun Gong and Yee-Hong Yang. "3D Reconstruction of Transparent Objects with Position-Normal Consistency." *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2016.

Yiming Qian, Minglun Gong and Yee-Hong Yang. "Frequency-based Environment Matting by Compressive Sensing." *Proceedings of the IEEE International Conference on Computer Vision (ICCV)*, 2015.

Yiming Qian, Hao Yuan and Minglun Gong. "Budget-Driven Big Data Classification." *Canadian Conference on Artificial Intelligence*, 2015. *Best Paper Award*.

Yiming Qian, Minglun Gong and Li Cheng. "STOCS: An Efficient Self-Tuning Multiclass Classification Approach." *Canadian Conference on Artificial Intelligence*, 2015.

Minglun Gong, **Yiming Qian** and Li Cheng. "Integrated Foreground Segmentation and Boundary Matting for Live Videos." *IEEE Transactions on Image Processing (TIP)*, 2015.

Hadar Averbuch-Elor, Yunhai Wang, **Yiming Qian**, Minglun Gong, Johannes Kopf, Hao Zhang, Daniel Cohen-Or. "Distilled Collections from Textual Image Queries." *Computer Graphics Forum (Proceedings of Eurographics)*, 2015.

Internships

Google, Mountain View May 2017 - Aug 2017

- Software engineer intern @ The Chrome Team
- I implemented an innovative image warping method for virtual reality stereo video compression.

Microsoft Research Asia, Beijing Jul 2011 - Jun 2012

- Research intern @ Internet Graphics Group
- B.Eng thesis topic: facial intrinsic image decomposition
- 20 undergraduate students were enrolled annually into the program across the university.

Teaching Experience

Teaching Assistant

- CMPUT 411, Introduction to Computer Graphics, UAlberta — Fall 2015
- COMP 4751, Introduction to Computer Graphics, Memorial — Winter 2014
- COMP 4740, Design and Analysis of Algorithms, Memorial — Fall 2013

Guest Lecturer

- CMPT412, Computer Vision, SFU — Fall 2019
  Presented a lecture on the bag-of-words method in computer vision.
- CMPUT 411, Introduction to Computer Graphics, UAlberta — Fall 2018
  Presented a lecture on line and circle generation in computer graphics.
- CMPUT 611, Computational Photography, UAlberta — Winter 2016
  Presented a lecture on frequency-based environment matting.

Lab Instructor

- CMPUT 174, Introduction to the Foundations of Computation I — Winter 2015
- CMPUT 174, Introduction to the Foundations of Computation I — Fall 2014
  Presented 20-minute lectures on introductory python programming, and then assisted students by answering questions in the weekly lab.

Service and Outreach

I have been a reviewer or a program committee member for the following journals and conferences:

- IEEE/CVF Conference on Computer Vision and Pattern Recognition
- AAAI Conference on Artificial Intelligence
- International Conference on Robotics and Automation
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Winter Conference on Computer Vision
- Asian Conference on Computer Vision
- Pattern Recognition
- Machine Vision and Applications

I have been a volunteer at the following events:

- Speaker at Let's Talk Science for high school students from rural areas, 2017
- Tour Guide for Computing Science Open House, 2015, 2016, 2017
- Demo Presenter at Iverson Programming Competition Day, 2015, 2016