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Education

- M. Sc. @ Tsinghua University (THU)** Fall 2019 – Spring 2022
Data Science & Information Technology, Tsinghua-Berkeley Shenzhen Institute (TBSI)
GPA: 3.95/4.0 Rank: 2nd /98 Advisor: Prof. [Qionghai Dai](#) & Prof. [Lu Fang](#)
- B. E. @ South China University of Technology (SCUT)** Fall 2015 – Spring 2019
Intelligence Science & Technology, Automation Department
GPA: 3.90/4.0 Rank: 1st /51 With: Prof. [Zhijun Zhang](#)
- Berkeley Extension @ University of California, Berkeley (UCB)** Fall 2018
Computer Science & Statistics, Berkeley International Study Program
Got 3 A-grades in major courses

Research Experience

- GigaMVS: A Benchmark for Ultra-large-scale Gigapixel-level 3D Reconstruction** Oct 2020 – Sep 2021
Construct high-resolution 3D reconstruction dataset to support large scene reconstruction with fine details.
Contribute to the data collection and analysis. [Accepted by IEEE TPAMI](#) (IF:16.389, as co-first-author).
- Surface Material Perception Through Multimodal Learning** Sep 2019 – Oct 2020
Material perception using structured light camera by fusing reflecting, scattering and texture modalities.
Contribute to the methods, theoretical analysis and experiments. [Accepted by IEEE JSTSP](#) (IF:6.856, as first-author)
- Visual system of a BCI manipulator for automatic drinking** Jun 2017 – May 2018
Recognize and localize the cup for grasping by computer vision.
As a team leader of National Undergraduate Training Program. [Accepted by ROBIO](#). (as second author)
- Deciphering cortex neural signals using mesoscale imaging** Sep 2021 – Jun 2022
Analyze the dynamic and distributed neural activities using large-scale, high-resolution imaging platform.
Contribute to the neural decoding of facial expressions and visual response.

Other Experiences

- Teaching Assistant for *Introduction to Audio-visual Information system*** Fall 2021 @ THU
Design assignments and provide coding guidance.
- Research Internship in 3D Reconstruction for Autonomous Driving** Sep 2022 – Present @ Baidu Research
Reconstruct relightable 3D vehicle models from trajectory data for autonomous driving simulation

Honors

- Chinese National Scholarship, by Minister of Education of China 2017
Chinese National Scholarship, by Minister of Education of China 2016
Mathematical Contest in Modeling (MCM), Meritorious Award 2017
8-th Mathematics competition of Chinese College Students, First Price 2016

Publications

1. Jianing Zhang*, Jinzhi Zhang*, **Shi Mao***, Mengqi Ji, Guangyu Wang, Zequn Chen, Tian Zhang, Xiaoyun Yuan, Qionghai Dai and Lu Fnag. GigaMVS: A Benchmark for Ultra-large-scale Gigapixel-level 3D Reconstruction. *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)*, 2021, IF: 16.389, cite:2
2. **Shi Mao**, Mengqi Ji, Bin Wang, Qionghai Dai, and Lu Fang. Surface Material Perception Through Multimodal Learning. *Journal of Selected Topics in Signal Processing (JSTSP)*, 2022, IF 6.856, cite:1
3. Zhijun Zhang*, **Shi Mao***, K. Chen, L. Xiao, B. Liao, C. Li, and P. Zhang. CNN and PCA based visual system of a wheelchair manipulator robot for automatic drinking. *IEEE International Conference on Robotics and Biomimetics (ROBIO)*, 2018, cite:4
4. Lu Fang, Mengqi Ji, **Shi Mao**, Shengjin Wang. Method, Equipment, Electronic Device for Scene Semantic Segmentation. China Patent, ZL202110125033.9, 2021-04-30. Tsinghua University
5. Lu Fang, Mengqi Ji, **Shi Mao**, Jianing Zhang, Xiaoyun Yuan, Yan Zhao, Jianwei Wen. An Unstructured Light-field Intelligent Sensing System and Device. China Patent, ZL202110978131.7,2021-12-21, Tsinghua University