CHENGZHOU TANG

Homepage◇ Google Scholar◇ chengzhout@gmail.com

EDUCATION

Simon Fraser University — January 2015 - May 2020
School of Computing Science — Burnaby, BC, Canada
Ph.D. in Computer Science

Peking University — August 2011 - July 2014
School of Electronic and Computer Engnieering — Beijing, China
M.S. in Computer Applied Technology

China Agricultural University — September 2008 - July 2011
College of Information and Electrical Engineering — Beijing, China
B.S. in Computer Science & Technology of Honours Program

FULL-TIME EXPERIENCES

Meta — June 2022 - Current
Research Scientist — *Menlo Park, CA, USA*

- Large-scale Multimodal Video Understanding.
- Real-time On-device Stereo Matching.

Apple — July 2020 - May 2022
Machine Learning Engineer — *Cupertino, CA, USA*

- Feature Detector & Descriptor Learning
- Camera Pose Estimation from IMU.

PUBLICATIONS

Xiaodong Gu, Weihao Yuan, Zuozhuo Dai, Siyu Zhu, **Chengzhou Tang**, Zilong Dong, Ping Tan. DRO: Deep Recurrent Optimizer for Video to Depth. RA-L 2023.

Chengzhou Tang, Yuqiang Yang, Bing Zeng, Ping Tan, Shuaicheng Liu. Learning to Zoom Inside Camera Pipeline. CVPR 2022.

Xiaodong Gu, **Chengzhou Tang**, Zhuozuo Dai, Siyu Zhu, and Ping Tan. Recurrent Closet Point for Point Clouds. CVPR 2022 (Oral Presentation).

Shitao Tang, **Chengzhou Tang**, Rui Huang, Siyu Zhu, and Ping Tan. DSM: Dense Scene Matching for Camera Localization. CVPR 2021.

Chengzhou Tang, Lu Yuan and Ping Tan. LSM: Learning Subspace Minimization for Low-level Vision. CVPR 2020 (Oral presentation, 5% acceptance rate).

Luwei Yang, Ziqian Bai, **Chengzhou Tang**, Honghua Li, Yasutaka Furukawa and Ping Tan. SANet: Scene Agnostic Network for Camera Localization. ICCV 2019.

Chengzhou Tang and Ping Tan. BA-Net: Dense Bundle Adjustment Networks. ICLR 2019 (Oral presentation, 1.7% acceptance rate).

Chengzhou Tang, Oliver Wang, Feng Liu, and Ping Tan. Joint Direction and Stabilization for 360° Videos. TOG (Presented at SIGGRAPH 2019).

Chengzhou Tang, Oliver Wang and Ping Tan. GSLAM: Initialization-robust Monocular Visual SLAM via Global Structure-from-Motion. 3DV 2017.

Zhaopeng Cui, Nianjuan Jiang, **Chengzhou Tang** and Ping Tan. Linear Global Translation Estimation with Feature Tracks. BMVC 2015.

Chengzhou Tang, Ronggang Wang. Local Subspace Video Stabilization. In: IEEE International Conference on Multimedia & Expo, 2014

Chengzhou Tang, Ronggang Wang. Sparse Moving Factorization for Subspace Video Stabilization. In: IEEE International Conference on Acoustics, Speech and Signal, 2014

Chengzhou Tang, Ronggang Wang, Wenmin Wang. Adaptive Motion Estimation Order for Frame Rate Up-conversion. In: IEEE International Symposium on Circuits and Systems, 2013.

TEACHING EXPERIENCES

MACM-101, Discrete mathematics	2015 Summer, SFU
CMPT-165, Introduction to the internet and the world wide web	2016 Summer, SFU
CMPT-128, Introduction to computing science and programming for engineers	2017 Fall, SFU
CMPT-127, Computing laboratory	2018 Summer, SFU

STUDENT MENTORSHIPS

Yuqiang Yang Januray 2021 - November 2021
MSc student at UESTC

Achievement: Co-first authored publication on CVPR'22.

Shitao Tang May 2020 - November 2020
MSc student at SFU

Achievement: First authored publication on CVPR'21.

RESEARCH INTERNSHIPS

Microsoft, AI Perception and Mixed-Reality, Redmond July 2019 - October 2019
Research Intern *Redmond, WA, USA*

· Project: Calibration-free Multi-view Detection for Retail Store.
· Mentor: Lu Yuan.

Adobe Research, Creative Tech Lab, Seattle September 2016 - December 2016
Research Intern *Seattle, WA, USA*

· Project: Panorama Video Re-cinematography for Virtual Reality Headset.
· Mentor: Oliver Wang.

Microsoft Research Asia, Visual Computing Group, Beijing April 2014 - June 2014
Research Intern *Beijing, China*

· Project: IMU and Image Fusion for Video Stabilization.
· Mentor: Lu Yuan.

PATENTS

Method for motion vector estimation US9584824B2 (Grant)
Low-illumination image processing method and device US20180182074A1(Grant).
Video processing method, device and system US20160112701A1(Grant).
Re-cinematography for spherical video US15619702(Grant).

SERVICES

Reviewers for: **Computer Vision**: CVPR, ECCV, ICCV, WACV; IJCV, TPAMI, MVA. **Machine Learning**: NeurIPS, ICML, ICLR, AAAI. **Graphics**: PG, IEEE VR, VRST; TVCG. **Robotics**: IROS, ICRA; AUTON ROBOT.