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Bingbing Zhuang

Education

- 2015– Present **Ph.D. Candidate in Electrical and Computer Engineering.**
National University of Singapore
Advisors: Loong Fah Cheong, Gim Hee Lee
- 2011–2015 **Bachelor in Electric Engineering and Information Science.**
University of Science and Technology of China (USTC), Hefei, China
GPA: 3.96/4.30, Rank: 3/105; Math GPA: 4.20/4.30

Research Interests

3D Computer Vision in general, especially in Structure-from-Motion/SLAM and 3D reconstruction, and its application to robotics.

Experience

- 2018 **Research Intern**, NEC Laboratories America, CA.
Jun.–Nov. Mentors: Prof. Manmohan Chandraker, Dr. Quoc-Huy Tran and Dr. Pan Ji in the Media Analytics group. Research on robust Structure-from-Motion and SLAM on unconstrained video.
- 2014 **Research Intern**, *Computer Science*, The University of Hong Kong.
Jul.–Aug. Advisor: Prof. Yizhou Yu. Research on Person Re-identification problem based on metric learning and post-rank optimization
- 2014 Jun. **Research Engineer**, *Information Processing Center*, USTC.
–2015 Jun. Advisor: Prof. Nenghai Yu. Research on abnormal event detection in video based on sparse coding.

Publications

- Learning Structure-and-Motion Aware Rolling Shutter Correction.**
Bingbing Zhuang, Quoc-Huy Tran, Pan Ji, Loong-Fah Cheong, Manmohan Chandraker.
Computer Vision and Pattern Recognition (**CVPR**), 2019. *Oral Presentation*
- Degeneracy in Self-Calibration and a Deep Learning Solution for Uncalibrated SLAM.**
Bingbing Zhuang, Quoc-Huy Tran, Gim Hee Lee, Loong-Fah Cheong, Manmohan Chandraker.
IEEE/RSJ International Conference on Intelligent Robots and Systems(**IROS**), 2019.
[Under Review]
- Baseline Desensitizing In Translation Averaging.**
Bingbing Zhuang, Loong-Fah Cheong, Gim Hee Lee.
Computer Vision and Pattern Recognition (**CVPR**), 2018.

Rolling-Shutter-Aware Differential SfM and Image Rectification.

Bingbing Zhuang, Loong-Fah Cheong, Gim Hee Lee.

International Conference on Computer Vision (ICCV), 2017.

Person Re-Identification by the marriage of KISS Metric Learning and Post-Rank Optimization: KISSPOP.

Bingbing Zhuang, Ziping Zhu, Fangbemi Abassin Sourou, Nenghai Yu.

International Conference on Internet Multimedia Computing and Service (ICIMCS), 2015

Selected Awards

2015-2019 President's Graduate Fellowship, NUS

2015 Excellent Bachelor's Thesis Award (Top 5%), USTC

2015 Honorary Rank of Academic Achievement of the Grade 2011 Undergraduates (Top 5%), USTC

2011-2015 Top 3 cumulative GPA in the department of EEIS, USTC

2011-2015 Numerous Scholarships, USTC

2010 Province First Prize in China National Physics Olympiad

Patent Applications

Camera Self-Calibration Using Convolutional Neural Networks with Applications to SFM/SLAM with Uncalibrated Images/Videos

Q.-H. Tran, B. Zhuang, P. Ji, and M. Chandraker

NEC Laboratories America, Inc. (provisional application US/62/793,948, filed on Jan 2019)

Rolling Shutter Correction Using Convolutional Neural Networks with Applications to SFM/SLAM with Rolling Shutter Images/Videos

Q.-H. Tran, B. Zhuang, P. Ji, and M. Chandraker

NEC Laboratories America, Inc. (provisional application US/62/751,888, filed on Oct 2018)

Professional Services

Reviewer Computer Vision and Pattern Recognition (CVPR)

International Conference on Computer Vision (ICCV)

The Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP)

Teaching Assistant

2017 Fall EE5731 Visual Computing, NUS

2016-2018 EE4212 Computer Vision, NUS

Spring

2016 Fall CG3207 Computer Architecture, NUS

2014 Fall Programming in C language, USTC