KAI CHEN

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No.129 Luoyu Road, Hongshan District, Wuhan, Hubei, P.R. China
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EDUCATION

M.Eng. in Photogrametry and Remote Sensing, **Wuhan University** August 2016 - Present
- Adviser: Prof. Jian Yao
- Research Interests: Image and Video Processing
- GPA: 3.71/4.00

B.Eng. in Remote Sensing Science and Technology, **Wuhan University** August 2012 - June 2016
- Graduate with Honor
- Thesis: Panorama Completion Based on Graph Cuts Optimization
- Excellent Bachelor's Degree Thesis of Hubei Province
- GPA: 3.84/4.00 (Top 3%)

RESEARCH EXPERIENCE

Image Completion September 2015 - July 2016
- Designed a unified framework to complete 360 panoramas.

Affine Image Rectification July 2016 - May 2017
- Rectify content distortion in tiled images with features in frequency domain.
- Proposed an efficient image completion algorithm based on affine image rectification.

Image and Video Blending May 2017 - August 2017
- Evaluated performance of different blend methods: Multi-band blending, poisson blending, mean value coordinate blending, pyramid convolution blending, etc.
- Designed an effective blending framework for video blending.

Video Stitching August 2017 - December 2017
- Proposed a new motion model for video stitching.
- An effective video stitching method balancing spatial alignment and temporal consistency.

Image Stitching December 2017 - Present
- Proposed to combine multiple constraints in unified content-preserving warping framework for image stitching.
- Designed a more general framework GCPW to handle color difference between images.

PUBLICATIONS

CONFERENCE

1. **Kai Chen**, Jian Yao, Menghan Xia, Xinyuan Gui, Li Li and Xiaohu Lu. "A Unified Blending Framework for Panorama Completion via Graph Cuts", The XXIII ISPRS Congress (ISPRS 2016), Accepted.
2. **Kai Chen**, Jian Yao, Binbin Xiang and Jingmin Tu. "Video Stitching with Extended-MeshFlow", The 24th International Conference on Pattern Recognition (ICPR 2018), Accepted.
3. **Kai Chen**, Jian Yao, Binbin Xiang and Li Li. "Multiple Combined Constraints for Image Stitching", The 25th IEEE International Conference on Image Processing (ICIP 2018), Accepted.
4. **Kai Chen**, Jingmin Tu and Jian Yao. "xxxx xxxx xxxx", The 14th Asian Conference on Computer Vision (ACCV 2018), Submitted.

JOURNAL

1. **Kai Chen**, Jingmin Tu and Jian Yao. "Generalized Content-Preserving Warp: Direct Photometric Alignment beyond Color Consistency", IEEE Access, 2018, Accepted.

INVENTION PATENTS

1. Jian Yao, **Kai Chen**, Li Li, Menghan Xia and Renping Xie. "A Method and Unified System for Panorama Completion via Graph Cuts", 2016, Under review.
2. Jian Yao, **Kai Chen** and Jinjie Zhao. "An Online Video Stitching Method Based on MeshFlow", 2018, Under review.

AWARDS & SCHOLARSHIPS

1. Second Prize Scholarship for undergraduates — September 2013
2. First Prize Scholarship for undergraduates — September 2014
   · Top 6%
3. Wang Zhizhuo Innovative Talent Award — October 2014
   · 2 out of 254 competitors won this award
4. Second Prize Scholarship for undergraduates — September 2015
5. Outstanding Undergraduate Graduate of Wuhan University — June 2016
6. Excellent Bachelor's Degree Thesis of Hubei Province — July 2016
   · Rank 1st among 254 graduates
7. First Prize Scholarship for postgraduates — September 2017
   · Top 5%

TECHNICAL SKILLS

Programming Languages

C/C++, MATLAB, Python, CMake

Tools and Software Skills

OpenCV, Qt, Eigen, Ceres, CGAL

Others

LaTeX, can write well organized paper