**Heng Guo**

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***Educational Background***

**University of Electronic Science and Technology of China (UESTC) Chengdu, China**

M.S in Information Engineering, Institute of Image Processing (Overall GPA: 3.69/4.0) *Sep 2015– Jun 018*

Advisor: [Prof. Bing Zeng](http://www.ee.ust.hk/~eezeng/) (IEEE Fellow) & [Prof. Shuaicheng Liu](http://www.liushuaicheng.org/)

Graduation Thesis: Research on Digital Video Stabilization Algorithm based on Android Platform

**University of Electronic Science and Technology of China (UESTC) Chengdu, China**

B.S in Electronic Information Engineering (Overall GPA: 3.76/4.0) *Sep 2011– Jun 2015*

Graduation Thesis: Multiple Video Mosaicking Using Bundled Camera Paths

***Honors & Awards***

Excellent Master Thesis of UESTC (Top 3%) 06/2018

Excellent Postgraduate of UESTC (Top 6%) 06/2018

National Scholarship (Top 2%) 10/2017

Academic Scholarship (Top 10%) in 2015&2016&2017

Excellent Graduate of UESTC (Top 7%) 09/2015

The 1st Prize in the National College Student Information Security Contest 07/2014

The 2nd Prize in the National Undergraduate Electronics Design Contest 09/2013

People's Scholarship (Top 15%) in 2011 & 2012 &2013

***Research Experience***

[**Joint Video Stitching and Stabilization from Moving Cameras**](http://www.liushuaicheng.org/TIP/VideoStitching2016/tip16.pdf)[**Project Website**](http://www.liushuaicheng.org/TIP/VideoStitching2016/index.html)

***Heng Guo****, Shuaicheng Liu, Tong He, Shuyuan Zhu, Bing Zeng, Moncef Gabbouj.* *IEEE Transactions on Image Processing* (**TIP 2016**)

(The research is supported by **The Fundamental Research Funds for the Central Universities**)

* Propose a uniﬁed framework in which video stitching and stabilization are achieved jointly and design a plugin “VideoStitcher” in AE.
* Design a grid-based tracking method which produces features distributed evenly within and across multiple views.
* Use mesh-based motion model to improve the accuracy of spatial alignment and avoid temporal distortion such as wobble.

[**Joint Bundled Camera Paths for Stereoscopic Video Stabilization**](http://www.liushuaicheng.org/ICIP2016/stabilization/StereoStab.pdf)[**Project Website**](http://www.liushuaicheng.org/ICIP2016/stabilization/index.html)

***Heng Guo****, Shuaicheng Liu, Shuyuan Zhu, Bing Zeng. IEEE International Conference on Image Processing* (**ICIP 2016**)

(The research is supported by **The National Natural Science Foundation of China**)

* Propose a framework for stereoscopic video stabilization which keep correct disparity
* Design a novel warping method “JDSW” which jointly considers disparities and stabilities in mesh warping.

View Consistent MeshFlow for Stereoscopic Video Stabilization

***Heng Guo****, Shuaicheng Liu, Shuyuan Zhu, Hengtao Shen, Bing Zeng. IEEE Transactions on Computational Image* (**TCI 2018**)

* Apply MeshFlow to improve the efficiency and robustness of stereoscopic video stabilization algorithm.
* Propose quantitive evaluations for the video stability and the correctness of disparity between left and right views.

Laptop Security Tracking System

*Yvefeng Hou,* ***Heng Guo****, Gengbo Wu, Yuchen Jiang.*

Design an embedded platform based on microprocessor which protects user’s laptop. The system contains three function: anti-theft warning, location tracking and privacy protection.

***Internship & Volunteering Experience***

**Intern——Artificial Intelligence Research Institute of Qihoo 360** 06/2016-12/2016

**Contribution**: Design an online video stabilization application based on android platform.

* Develop a real-time video stabilization algorithm that stabilizes user-captured video with only 0.5 second delay.
* Design the architecture of android application and use multi-thread and pipeline to achieve the processing speed of 30fps on full HD video.
* Optimize the memory leak and improve the robustness of the algorithm to handle scene with quick rotation and parallax.

**Volunteer——HaiHong Village Committee of Dujiangyan City, Sichuan Province**  06/2012-07/2012

Participate in the program of Aid Education and be honored with “**Outstanding Individual in Social Practice**