

Dr. Haiting Lin

CONTACT INFORMATION	Computer Scientist - Photoshop Adobe (San Jose) Address: Santa Clara, CA 95050 USA	<i>Mobile:</i> +1(302)784-5624 <i>E-mail:</i> linht122@gmail.com <i>WWW:</i> haitinglin.altervista.org
EDUCATION	National University of Singapore , Singapore Ph.D., School of Computing, Jun 2013 <ul style="list-style-type: none">• Dissertation: <i>A new in-camera color imaging model for computer vision</i>• Adviser: Associate Professor Michael S. Brown• Area of Study: Radiometric Calibration and Color Processing• GPA: 4.38/5.0 Renmin University of China , China B.S., Computer Science, Jun 2008 <ul style="list-style-type: none">• Research Topic: <i>Similar Image Searching</i>• GPA: 3.79/4.0	
AWARDS	Best Student Paper , Electronic Imaging Symposium, 2016 Research Scholarship , National University of Singapore, 2008 to 2012 Excellent Student Scholarship , Renmin University of China, 2004 to 2008. Bronze Medal , The ACM Asia Programming Contest, Dec 2006.	
RESEARCH INTERESTS	Computer Graphics, computer vision, computational photography, image/video processing. Specifically, including: Intelligent camera; Virtual/Augmented/Mixed reality; Light field ray geometry; Stereo and 3D reconstruction; Radiometric calibration; In-camera color imaging modeling.	
WORK POSITIONS	Computer Scientist Jul 2017 to Current Adobe - Photoshop, advanced solution exploration and integration Principal Scientist Jul 2016 to Jul 2017 JJK holdings, LLC, for virtual Reality solutions Postdoctoral Scholar Jul 2013 to Feb 2016 Computer & Information Sciences, College of Engineering, University of Delaware Project Officer Feb 2013 to Jun 2013 School of Computer Engineering, Nanyang Technological University, Singapore Research Assistant Jun 2012 to Dec 2012 School of Computing, National University of Singapore	
EXPERIENCES	[1] Emerging Product Exploration and Implementation: (Jul 2017 to current) Explore advanced solutions for mobile platforms, discover and build products that are both defensible and delightful for both iOS and Android systems. Based on our advanced rendering framework, implemented a GPU-based Photoshop Camera Raw rendering pipeline on iOS and Android mobile devices in order to efficiently support learning based auto toning; Participated in and continue building a cross platform parallel rendering framework; Developed a super efficient and natural lens blur rendering algorithm; Developed	

variant Intelligent camera effects; Continue to explore strategic market opportunities with cross platform supports based on most advanced technologies as a scientist in emerging Products Group (EPG).

- [2] **Real-time 3D reconstruction and rendering:** (Jul 2016 to Jul 2017) Conducting researches on real-time 3D reconstruction for Virtual Reality applications; Embedding Light Field technology into realistic virtual scene rendering.
- [3] **Light field ray geometry:** (Jul 2013 to Feb 2016) Developed geometry reconstruction methods from light fields by exploring unique properties including the focal stack symmetry, a robust Bilateral consistency metric solving noise and occlusion problems in real light fields respectively; Helped to design a light field stitching framework using high dimension graph cut; Developed a Barcode detection and rendering algorithm with light field cameras to simultaneously locate and focus at objects of variant distances; Helped to design a compressive sensing based algorithm for surface geometry and ambient occlusion estimation.
- [4] **Computer assisting system for user education:** (Feb 2013 to Jun 2013) Developed a system to detect, recognize and track windows elements (such as application interfaces, moving cursors) for user behavior analysis with an efficient region proposal strategy and an affinity based part to entirety grouping method.
- [5] **In-camera imaging model:** (Jun 2011 to Feb 2013) Collected and analyzed Raw and sRGB image sets from variant camera models; Brought back the missing component (gamut mapping) into traditional radiometric calibration theory; Developed a new in-camera imaging model incorporating the gamut mapping learned from the data. With this model, incomparably significant accuracy was achieved in the conversion from sRGB to CCD RAW.
- [6] **Other projects:** (Jan 2009 to Feb 2013) Computational Photography: developed a motion-aware image matting method for objects with motion blur using local statistics; Image registration: developed an MRF based blood vessel registration method with input medical MRI images of a beating heart; Machine learning: developed a vehicle license plate recognition system and a cartoon characters' personality classification algorithm based on SVM.

PATENTS

- [1] **Haiting Lin**, Yumin Jia, Jen-Chan Chien. *Kernel Reshaping-Powered Splatting-Based Efficient Image Space Lens Blur*. US Patent, 2020. (Approval Pending)
- [2] Zhan Yu, Yumin Jia, Jinoh Oh, **Haiting Lin**. *Parallel rendering engine*. US Patent 10650482, 2020.
- [3] Jingyi Yu, Yu Ji, **Haiting Lin**. *Real-time object capturing and 3D display systems and methods*. International Patent WO 2016/040582 A1, 2016.

PUBLICATIONS

- [1] Nianyi Li, **Haiting Lin**, Bilin Sun, Mingyuan Zhou, Jingyi Yu. *Rotational Crossed-Slit Light Fields*. International Conference on Computer Vision and Pattern Recognition (CVPR), 2016.
- [2] Yang Yang, **Haiting Lin**, Zhan Yu, Sylvain Paris, Jingyi Yu. *Virtual DSLR: high quality dynamic depth-of-field synthesis on mobile platforms*. IS&T International Symposium on Electronic Imaging, 2016. (**Best Student Paper Award**)
- [3] Xinqing Guo, Zhan Yu, Sing Bing Kang, **Haiting Lin**, Jingyi Yu. *Enhancing Light Fields through Ray-Space Stitching*. Transactions on Visualization and Computer Graphics (TVCG), accepted, 2015.

- [4] **Haiting Lin**, Can Chen, Sing Bing Kang, Jingyi Yu. *Depth Recovery from Light Field Using Focal Stack Symmetry*. International Conference on Computer Vision (**ICCV**), 2015.
- [5] Wei Yang, **Haiting Lin**, Sing Bing Kang, Jingyi Yu. *Resolving Scale Ambiguity Via XSlit Aspect Ratio Analysis*. International Conference on Computer Vision (**ICCV**), 2015.
- [6] Wei Yang, Yu Ji, **Haiting Lin**, Yang Yang, Sing Bing Kang, Jingyi Yu. *Ambient Occlusion via Compressive Visibility Estimation*. International Conference on Computer Vision and Pattern Recognition (**CVPR**), 2015.
- [7] Mingyuan Zhou, **Haiting Lin**, Jingyi Yu, S. Susan Young. *Hybrid sensing face detection and recognition*. IEEE Applied Imagery Pattern Recognition Workshop (**AIPR**), 2015.
- [8] Can Chen, **Haiting Lin**, Zhan Yu, Sing Bing Kang, and Jingyi Yu. *Light Field Stereo Matching Using Bilateral Statistics of Surface Cameras*. International Conference on Computer Vision and Pattern Recognition (**CVPR**), 2014.
- [9] Xinqing Guo, **Haiting Lin**, Zhan Yu, and Scott McCloskey. *Barcode Imaging using a Light Field Camera*. Workshop on Light Fields for Computer Vision (**LF4CV**), 2014.
- [10] **Haiting Lin**, Zheng Lu, Seon Joo Kim, Michael S. Brown. *Nonuniform Lattice Regression for Modeling the Camera Imaging Pipeline*. European Conference on Computer Vision, (**ECCV**), 2012.
- [11] Seon Joo Kim, **Haiting Lin**, Zheng Lu, Sabine Susstrunk, Steven Lin and Michael S. Brown. *A New In-Camera Imaging Model for Color Computer Vision and its Application*. IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 34(12), 2289-2302, 2012.
- [12] **Haiting Lin**, Seon Joo Kim, Sabine Susstrunk and Michael S. Brown. *Revisiting Radiometric Calibration for Color Computer Vision*. International Conference on Computer Vision (**ICCV**), 2011.
- [13] **Haiting Lin**, Yu-Wing Tai and Michael S. Brown. *Motion regularization for matting motion blurred objects*. IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), 33(11): 2329-2336, 2011.
- [14] **Haiting Lin**, Yu-Wing Tai and Michael S. Brown. *Motion regularization for matting motion blurred objects*. SIGGRAPH Talks 2010.

OTHER
PUBLICATIONS

ACADEMIC
SERVICE

Program Committee for the 12th Asian Conference on Computer Vision:
National University of Singapore, Singapore, ACCV'2014.

Program Committee for National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics:
Jodhpur, India, NCVPRIPG'2013.

Reviewer for variant conferences and journals:

The Asian Conference on Computer Vision (**ACCV**), International Conference on Pattern Recognition (**ICPR**), the Pacific Graphics (**PG**), IEEE Transactions on Pattern Analysis and Machine Intelligence (**TPAMI**), IEEE Transactions on Cybernetics (**CYB**), IEEE Transactions on Circuits and Systems for Video Technology (**CSVT**), IEEE Transactions on Image Processing (**TIP**), The Visual Computer (**TVCJ**), Computer Vision and Image Understanding (**CVIU**), Image and Vision Computing (**IMAVIS**), Computers & Graphics (**CAD/CG**), the IEEE Transactions on Multimedia (**MM**).

TECHNICAL SKILLS Programming: C, C++, Objective-C, Matlab, Java, GLSL, WebGL, Latex.