
Education

- 01/2016 – present **Ph.D. Computer Science.**
University of Southern California
Focus: Computer Vision and Computer Graphics
Advisor: Prof. Hao Li
- 08/2013 – 05/2015 **M.S. Electrical Engineering, *honor program*.**
University of Southern California, *GPA 3.89/4.00*
Focus: Signal and Image Processing (Computer Vision and Machine Learning)
- 08/2009 – 07/2013 **B.Eng. Electronic and Information Engineering.**
Xidian University, Xi'an, China, *GPA 87.5/100*
Focus: Signal Processing

Publication

- PAMI 2020 **A General Differentiable Mesh Renderer for Image-based 3D Reasoning,**
Shichen Liu, Tianye Li, Weikai Chen, and Hao Li,
IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020 (to appear).
- ICCV 2019 **Soft Rasterizer: A Differentiable Renderer for Image-based 3D Reasoning,**
(oral presentation) Shichen Liu, Tianye Li, Weikai Chen, and Hao Li,
Proceedings of the IEEE International Conference on Computer Vision, 10/2019.
- ICCV 2019 **Learning Perspective Undistortion of Portraits,**
(oral presentation) Yajie Zhao*, Zeng Huang*, Tianye Li, Weikai Chen, Chloe LeGendre, Xinglei Ren, Jun Xing,
Ari Shapiro, and Hao Li,
Proceedings of the IEEE International Conference on Computer Vision, 10/2019.
- ECCV 2018 **Deep Volumetric Video from Very Sparse Multi-View Performance Capture,**
Zeng Huang, Tianye Li, Weikai Chen, Yajie Zhao, Jun Xing, Chloe LeGendre, Linjie Luo,
Chongyang Ma, and Hao Li,
Proceedings of the 15th European Conference on Computer Vision, 09/2018.
- SIGGRAPH Asia 2017 **Learning a Model of Facial Shape and Expression from 4D Scans,**
Tianye Li*, Timo Bolkart*, Michael J. Black, Hao Li, and Javier Romero,
ACM Transactions on Graphics, Proceedings of the 10th ACM SIGGRAPH Conference and
Exhibition in Asia, 11/2017.
- ECCV 2016 **Real-Time Facial Segmentation and Performance Capture from RGB Input,**
Shunsuke Saito, Tianye Li, and Hao Li,
Proceedings of the 14th European Conference on Computer Vision, 10/2016.

Technical Experience

- 06/2020 – present **Research Intern, Facebook Reality Labs.**
◦ Research on computer vision and computer graphics.
- 08/2017 – present **Research Assistant, USC Institute for Creative Technologies.**
◦ Researched on sparse-view 3D volumetric capture for full human body.
◦ Researched on perspective undistortion method for portraits.
◦ Researched on rasterization-based differentiable rendering for image-based 3D reasoning.

- 10/2015 – present **Research Assistant**, *University of Southern California*.
- Built multi-view performance capture system using GoPros and Kinect cameras.
 - Developed convolutional network for real-time facial segmentation and performance capture.
 - Captured RGBD dataset for evaluating dense human body correspondence algorithm.
 - Developed active appearance model from scratch for face tracking.
- 05/2018 – 08/2018 **Research Intern**, *Snap Inc.*
- Researched on computer vision and computer graphics.
- 09/2016 – 06/2017 **Research Intern**, *Max Planck Institute for Intelligent Systems*.
- Researched on generic model for facial shape, expression and pose.
 - Researched on high-quality mesh registration for large 4D facial scan datasets.
- 08/2015 – 10/2015 **Image Tech Research Engineer**, *Dolby Laboratories*.
- Developed applications and features that ease the creative process for next generation cinema.
 - Provided documentation and guidance for new applications and features.
- 02/2015 – 08/2015 **Image Processing Intern**, *Dolby Laboratories*.
- Developed innovative image/video processing and video coding algorithms.
 - Documented and presented new algorithms and implementations in various forms.
- 07/2012 – 08/2012 **Intern**, *Open Laboratory and Solution Center, Agilent Technologies*.
- Assisted customers with microwave and telecommunication instrument calibration.
 - Experimented on standard microwave components and documented standard procedures.

Teaching Experience

- 2018 – 2019 **Teaching Assistant**, *University of Southern California*.
- Fall 2019, Advanced Computer Vision (CSCI 677). Instructor: Prof. Ram Nevatia.
 - Spring 2018, Digital Geometry Processing (CSCI 621). Instructor: Prof. Hao Li.
- 2015 **Grader**, *University of Southern California*.
- Spring 2015, Mathematical Pattern Recognition (EE 559). Instructor: Prof. Keith Jenkins.

Academic Talk

- 2017 **Learning a Model of Facial Shape and Expression from 4D Scans**.
- ACM SIGGRAPH Conference and Exhibition in Asia, 11/2017
 - Graphics and Mixed Environment Webinar, 12/2017

Professional Activities

- Reviewer NeurIPS 2020, ECCV 2020, CVPR 2020, AAAI 2020, ICCV 2019, Eurographics 2019, Pacific Graphics 2018, CAVW 2018, ICCV Workshop PeopleCap 2017, IEEE VR 2017

Honors

- 2020 IEEE CVPR Outstanding Reviewer
- 2015 Electrical engineering master honor program, University of Southern California
- 2010-2012 University scholarship, Xidian University

Skills

- Programming C/C++, MATLAB, Python; OpenCV, Caffe, PyTorch, TensorFlow
- Devices Kinect (v1 and v2), Intel RealSense, PrimeSense
- Electronics Signal generator, oscilloscopes, signal/network analyzer, soldering, circuits debugging
- Languages Mandarin Chinese (native), English (fluent), German (basic)

Last update: July 9, 2020