

Research Interests

Field: computer graphics, computational photography, computer vision, AR/MR/VR, machine learning

Current Position

Feb. 2020 – Present	Postdoctoral Researcher National Taiwan University Communication and Multimedia Lab.	Taipei, Taiwan
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Education

Sep. 2009 – Jun. 2014	Ph.D. in Computer Science National Taiwan University Advisor: Yung-Yu Chuang Dissertation: <i>Sampling and Reconstruction Techniques for Efficient Monte Carlo Rendering</i>	Taipei, Taiwan
Sep. 2007 – Jun. 2009	M.S. in Computer Science National Chiao Tung University Advisor: Zen-Chung Shih Thesis: <i>Visibility-Guided Importance Sampling</i>	Hsinchu, Taiwan
Sep. 2003 – Jun. 2007	B.S. in Computer Science National Chiao Tung University Rank 1 st in class Member of Phi-Tau-Phi Scholastic Honor Society in 2007 7 times Academic Excellence Award (top 5%)	Hsinchu, Taiwan

Employment History

May. 2018 – Jan. 2020	Sr. Algorithm Developer Toppano Inc. Develop computer vision and AR/MR algorithms	Taipei, Taiwan
Projects	<i>Inception (Virtual Studio System)</i> Inception is an intuitive and powerful virtual studio system implemented with Unity and Unreal Engine. It provides several features including RGB-D video enhancement, real-time matting, virtual lighting augmentation, and mixed reality preview. The system had been used to assist the final projects of Department of Digital Culture Creation and Multimedia, China University of Science and Technology from 2019 to 2020. <i>Batman (Multi-object Tracking System)</i> Batman is a high-accuracy system for multi-object tracking, consisting of both hardware devices and software algorithms.	

HTC Inc.
Develop computer vision and AR/MR algorithms

Projects

LightProbeGen (AR/MR Lighting Tool)
LightProbeGen is an intuitive and fun tool for assisting AR/MR applications to construct real-world lighting environment.



TrueColor (VR App. for Painting and 3D Model Texture Design)
TrueColor is an interesting VR game for spray painting and pen drawing. It can also be used as an professional VR editor for designing the textures of 3D models. The tool is launched already on VIVEPORT.



Arcade Saga (VR Game)
Arcade Saga is the first exclusive VR game for HTC VIVE. It has already hit the store shelves on VIVEPORT and Steam.

3D Face Reconstruction
An algorithm for creating a 3D face model from a single image

Jul. 2011 – Sep. 2011

Summer Intern

Taipei, Taiwan

Digimax Inc.

Fall 2009 – 2013

Teaching Assistant

Taipei, Taiwan

National Taiwan University

Course: Digital Image Synthesis

Publications

ClipFlip: Multi-view Clipart Design
I-Chao Shen, Kuan-Hung Lin, Li-Wen Su, Yu-Ting Wu, Bing-Yu Chen
In *Computer Graphics Forum*, volume 40, number 1, page 327-340, February 2021

Dual-Matrix Sampling for Scalable Translucent Material Rendering
Yu-Ting Wu, Tzu-Mao Li, Yu-Hsun Lin, Yung-Yu Chuang
In *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, volume 21, number 3, page 363-374, March 2015.

VisibilityCluster: Average Directional Visibility for Many-Light Rendering
Yu-Ting Wu, Yung-Yu Chuang
In *IEEE Transactions on Visualization and Computer Graphics (TVCG)*, volume 19, number 9, page 1566-1578, September 2013.

SURE-based Optimization for Adaptive Sampling and Reconstruction
Tzu-Mao Li, Yu-Ting Wu, Yung-Yu Chuang
In *ACM Transactions on Graphics (Proceedings of ACM SIGGRAPH Asia 2012)*, volume 31, number 6, article 194, Singapore, November 2012. (selected as a highlight paper by the chair)

International Short Papers and Posters

VisibilityChunk: Average Directional Visibility for Importance Sampling
Yu-Ting Wu, Yung-Yu Chuang
ACM SIGGRAPH Asia 2012 Poster, article 44, Singapore, November 2012 (selected as a highlight poster by the chair)

Domestic Publications

Improved Reflective Shadow Maps with Visibility Approximation

Mifan Bang, Yu-Ting Wu, Yung-Yu Chuang

Computer Graphics Workshop (CGW) 2011, Taipei Taiwan, July 2011

Academic Activities

2012 – Present	Reviewer CVPR, ECCV, The Visual Computer, WSCG, JISE	
May. 2016	Invited Talk National Cheng Kung University Topic: Virtual Reality: Technology and Content Development	Tainan, Taiwan
May. 2016	Invited Talk Yuan Ze University Topic: Virtual Reality: Technology and Content Development	Taoyuan, Taiwan
Dec. 2013	Invited Talk Industrial Technology Research Institute (ITRI) Topic: Introduction to Physically-Based Ray Tracing	Hsinchu, Taiwan