

Education

09.2022 - Present	University of Maryland College Park with a 4.0/4.0 GPA
Ph.D. Student	Advisor Jia-Bin Huang
Computer Science	Research areas 3D vision and video synthesis (CVPR 2023 and ECCV 2024).
09.2018 - 06.2020	National Taiwan University with a 4.24/4.3 GPA
Master of Science	Advisor Yi-Ping Hung
Computer Science and Information Engineering	Thesis <i>3D Video Stabilization with Depth Estimation by CNN-based Optimization</i> (CVPR 2021)
	Committee Yung-Yu Chuang, Yu-Chiang Frank Wang, Chu-Song Chen, Kuan-Wen Chen
09.2014 - 06.2018	National Chiao Tung University with a 4.14/4.3 GPA (now National Yang Ming Chiao Tung University)
Bachelor of Science	Major Network and Multimedia Program
Computer Science	GPA rank 1st / 50

Work Experience

06.2024 - 12.2024	Google DeepMind in Cambridge, MA
Student Researcher	<i>Mentors: <u>Forrester Cole</u>, <u>Erika Lu</u>, Tali Dekel, and Sarah Rumbley</i>
05.2023 - 11.2023	Adobe Research in San Jose, CA
Research Intern	<i>Mentors: <u>Feng Liu</u>, Zhoutong Zhang, Kevin Blackburn-Matzen, Simon Niklaus, and Jianming Zhang.</i> <i>Investigated a new algorithm of fast novel view synthesis for casual videos (ECCV 2024).</i>
09.2020 - 03.2022	Academia Sinica in Taipei, Taiwan
Research Assistant	<i>Investigated an image restoration algorithm for medical CT images and other projects related to 3D computer vision. Supervised by Chu-Song Chen.</i>
09.2018 - 06.2020	National Taiwan University in Taipei, Taiwan
Graduate Research Assistant	<i>Investigated video stabilization algorithms with deep learning approaches (CVPR 2021 and ICIP 2021). Advised by Yi-Ping Hung and collaborated with MediaTek, Inc.</i>
08.2016 - 06.2018	National Chiao Tung University in Hsinchu, Taiwan
Undergraduate Research Assistant	<i>Developed a vision-based drone autopilot system and investigated learning-based local features for SLAM systems. Advised by Kuan-Wen Chen.</i>

Publications

Highlight

2024 ECCV	Fast View Synthesis of Casual Videos with Soup-of-Planes Yao-Chih Lee , Zhoutong Zhang, Kevin Blackburn-Matzen, Simon Niklaus, Jianming Zhang, Jia-Bin Huang, and Feng Liu webpage · pdf
2023 CVPR	Shape-aware Text-driven Layered Video Editing Yao-Chih Lee , Ji-Ze Genevieve Jang, Yi-Ting Chen, Elizabeth Qiu, Jia-Bin Huang webpage · pdf
2021 CVPR	3D Video Stabilization with Depth Estimation by CNN-based Optimization Yao-Chih Lee , Kuan-Wei Tseng, Yu-Ta Chen, Chien-Cheng Chen, Chu-Song Chen and Yi-Ping Hung webpage · pdf

2024 arXiv preprint	VividDream: Generating 3D Scene with Ambient Dynamics Yao-Chih Lee , Yi-Ting Chen, Andrew Wang, Ting-Hsuan Liao, Brandon Y. Feng, Jia-Bin Huang <i>webpage · pdf</i>
2023 CAI	Improved Contrastive Unpaired Translation for Metal Artifacts Reduction in Nasopharyngeal CT Images Yu-Hsing Hsieh, Jia-Da Li, Yao-Chih Lee , Chu-Song Chen, LiFu Wu, and Skye H Cheng <i>IEEE Conference on Artificial Intelligence · pdf</i>
2023 arXiv preprint	Text-driven Visual Synthesis with Latent Diffusion Prior Ting-Hsuan Liao, Songwei Ge, Yiran Xu, Yao-Chih Lee , Badour AlBahar, Jia-Bin Huang <i>webpage · pdf</i>
2022 CVPRW	Artistic Style Novel View Synthesis Based on A Single Image Kuan-Wei Tseng, Yao-Chih Lee , Chu-Song Chen <i>CVPR Workshop · webpage · pdf</i>
2022 arXiv preprint	Globally Consistent Video Depth and Pose Estimation with Efficiency Yao-Chih Lee , Kuan-Wei Tseng, Guan-Sheng Chen, Chu-Song Chen <i>pdf · code</i>
2021 ICIP	PixStabNet: Fast Multi-Scale Deep Online Video Stabilization with Pixel-based Warping Yu-Ta Chen, Kuan-Wei Tseng, Yao-Chih Lee , Chun-Yu Chen, Yi-Ping Hung <i>IEEE International Conference on Image Processing · pdf</i>
2021 CVPRW	Part-aware Measurement for Robust Multi-View Multi-Human 3D Pose Estimation and Tracking Hau Chu, Jia-Hong Lee, Yao-Chih Lee , Ching-Hsien Hsu, Jia-Da Li, Chu-Song Chen <i>CVPR Workshop · pdf</i>
2018 TAICHI	A Design of Vision-based Navigation System for the Visually Impaired Ping-Jung Duh, Yu-Cheng Sung, Yao-Chih Lee , Kuan-Wen Chen, Liang-Yu Fan Chiang <i>The Conference of Taiwan Computer-Human Interaction (TAICHI)</i>
2017 TAICHI	A UAV Autopilot System for Sports Player Tracking Yu-Cheng Sung, Yao-Chih Lee , Sarah Wang, Wei-Ting Hu, Kuan-Wen Chen <i>The Conference of Taiwan Computer-Human Interaction (TAICHI)</i>

Honors and Awards

09.2014 - 06.2017	Academic Achievement Awards at NCTU
Award	<i>Awarded 4 times to top 5% ranking in the semesters.</i>
05.2017	Undergraduate Project Excellence Award at NCTU
Award	<i>Awarded to the project of a visual-based UAV autopilot system for sports player tracking.</i>
01.2017	Core Course Award at NCTU
Award	<i>Awarded to the top 3 ranking in the core course, Operating System.</i>

Service

2024	Reviewer
	<i>CVPR · ECCV · ACCV · ACM TOMM</i>
2023	Reviewer
	<i>CVPR · ICCV · SIGGRAPH Asia · Computer Vision and Image Understanding</i>
2022	Reviewer
	<i>Pattern Recognition.</i>
2021	Reviewer
	<i>Pattern Recognition.</i>

Teaching

2024	Computer Vision at UMD CMSC426
Teaching Assistant	
2023	Introduction to Data Science at UMD CMSC320
Teaching Assistant	
2022	Introduction to Artificial Intelligence at UMD CMSC421
Teaching Assistant	
2021	3D Computer Vision with Deep Learning Applications at NTU CSIE5429
Teaching Assistant	
2019	Digital Image Processing at NTU CSIE5612
Teaching Assistant	Probability at NTU CSIE2121
2018	Computer Vision for UAV Autopilot at NCTU DCP1249
Teaching Assistant	