# Yao-Chih Lee

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## **Research Interests**

3D Computer Vision, View Synthesis, Video Synthesis and Processing, Structure-from-Motion/SLAM

## **Experience**

University of Maryland, College Park

College Park, MD Sep. 2022–present

Ph.D. in Computer Science

• Advisor: Jia-Bin Huang

Adobe Research San Jose, CA

Research Intern May 2023–Nov. 2023

• Mentors: Feng Liu, Zhoutong Zhang, Kevin Blackburn-Matzen, Simon Niklaus, and Jianming Zhang.

• Project: Fast view synthesis of casual videos (15-min training and 27-fps rendering, webpage)

Academia Sinica Taipei, Taiwan

Research Assistant Sep. 2020–Mar. 2022

**National Taiwan University** 

Taipei, Taiwan

M.S. in Computer Science and Information Engineering (GPA: 4.24/4.3)

Sep. 2018-Jun. 2020

• Thesis: "3D Video Stabilization with Depth Estimation by CNN-based Optimization" [CVPR2021]

National Chiao Tung University

Hsinchu, Taiwan

B.S. in Computer Science (GPA: 4.14/4.3)

Sep. 2014-Jun. 2018

## **Publications**

- 1. **Yao-Chih Lee**, Zhoutong Zhang, Kevin Blackburn-Matzen, Simon Niklaus, Jianming Zhang, Jia-Bin Huang, Feng Liu, "Fast View Synthesis of Casual Videos," *arXiv:2312.02135*, 2023. [webpage, arxiv]
- 2. **Yao-Chih Lee**, Ji-Ze Genevieve Jang, Yi-Ting Chen, Elizabeth Qiu, Jia-Bin Huang, "Shape-aware Text-driven Layered Video Editing," **CVPR**, 2023. [webpage, arxiv]
- 3. Ting-Hsuan Liao, Songwei Ge, Yiran Xu, **Yao-Chih Lee**, Badour AlBahar, Jia-Bin Huang, "Text-driven Visual Synthesis with Latent Diffusion Prior," arXiv:2302.08510, 2023. [webpage, arxiv]
- 4. **Yao-Chih Lee**, Kuan-Wei Tseng, Guan-Sheng Chen, Chu-Song Chen, "Globally Consistent Video Depth and Pose Estimation with Efficiency," *arXiv:2208.02709*, 2022. [arxiv]
- Kuan-Wei Tseng, Yao-Chih Lee, Chu-Song Chen, "Artistic Style Novel View Synthesis Based on A Single Image," CVPRW, 2022. [pdf]
- 6. **Yao-Chih Lee**, Kuan-Wei Tseng, Yu-Ta Chen, Chien-Cheng Chen, Chu-Song Chen and Yi-Ping Hung, "3D Video Stabilization with Depth Estimation by CNN-based Optimization," **CVPR**, 2021. [webpage, pdf]
- 7. Yu-Ta Chen, Kuan-Wei Tseng, **Yao-Chih Lee**, Chun-Yu Chen, Yi-Ping Hung, "PixStabNet: Fast Multi-Scale Deep Online Video Stabilization with Pixel-based Warping," **ICIP**, 2021. [pdf]
- 8. Hau Chu, Jia-Hong Lee, **Yao-Chih Lee**, Ching-Hsien Hsu, Jia-Da Li, Chu-Song Chen, "Part-aware Measurement for Robust Multi-View Multi-Human 3D Pose Estimation and Tracking," **CVPRW**, 2021. [pdf]

#### **Awards and Achievements**

- Reviewer, CVPR 2023, ICCV 2023, Siggraph Asia 2023, Pattern Recognition, Computer Vision and Image Understanding
- Academic Achievement Award, 4 times