Ting-Hsuan **Liao**

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Education ──────────────────────

University of Maryland *College Park, US*

PH.D IN COMPUTER SCIENCE *Sept. 2022 ∼ June 2027 (exp.)*

Advisor: Prof. Jia-Bin Huang
Overall GPA: 4.0 / 4.0

National Tsing Hua University *Hsinchu, Taiwan*

B.S. IN COMPUTER SCIENCE *Sept. 2018 ∼ June 2022*

Advisor: Prof. Chun-Yi Lee
Overall GPA: 4.17 / 4.30,   cumulative ranking: 9/142

Experience ──────────────────────

Adobe Research | Research Intern *May 2024 ∼ Nov. 2024*

Mentor: Uttaran Bhattacharya
Design new algorithms for text to human motion generation.

Intel Corporation | Research Intern *June 2023 ∼ Dec. 2023*

Mentor: Ilke Demir
Design new algorithms for texture synthesis for 3D scene.

ELSA Lab at National Tsing Hua University | Research Assistant *Spring 2020 ∼ Spring 2022*

Mentors: Chun-Yi Lee
Conduct research toward Computer Vision (CV) and Reinforcement Learning (RL). (BMVC 2022, CVPRW 2022, IROS 2022)

Publications ──────────────────────

PAD3R: Pose-Aware Dynamic 3D Reconstruction from Casual Videos

- **Ting-Hsuan Liao***, Haowen Liu*, Yiran Xu, Songwei Ge, Gengshan Yang, Jia-Bin Huang.
- SIGGRAPH Asia 2025 (Conference track)

Bridging Diffusion Models and 3D Representations: A 3D Consistent Super-Resolution Framework

- Yi-Ting Chen, **Ting-Hsuan Liao**, Pengsheng Guo, Alex Schwing, Jia-Bin Huang.
- ICCV 2025   pdf

Shape My Moves: Text-Driven Shape-Aware Synthesis of Human Motions

- **Ting-Hsuan Liao**, Yi Zhou, Yu Shen, Chun-Hao Paul Huang, Saayan Mitra, Jia-Bin Huang, Uttaran Bhattacharya.
- CVPR 2025   pdf, website

VividDream: Generating 3D Scene with Ambient Dynamics

- Yao-Chih Lee, Yi-Ting Chen, Andrew Wang, **Ting-Hsuan Liao**, Brandon Y. Feng, Jia-Bin Huang.
- arXiv preprint   pdf, website

Text-driven Visual Synthesis with Latent Diffusion Prior

- **Ting-Hsuan Liao**, Songwei Ge, Yiran Xu, Yao-Chih Lee, Badour AlBahar, Jia-Bin Huang.
- arXiv preprint   pdf, website

Pixel-Wise Prediction based Visual Odometry via Uncertainty Estimation

- Hao-Wei Chen, **Ting-Hsuan Liao**, Hsuan-Kung Yang, Chun-Yi Lee.
- WACV 2023　　　　　　　　　　　　　　　　　　　　　　　　　　📄 pdf

ELDA: Using Edges to Have an Edge on Semantic Segmentation Based UDA

- **Ting-Hsuan Liao***, Huang-Ru Liao*, Shan-Ya Yang, Jie-En Yao, Li-Yuan Tsao, Hsu-Shen Liu, Chen-Hao Chao, Bo-Wun Cheng, Chia-Che Chang, Yi-Chen Lo, Chun-Yi Lee.
- BMVC 2022, CVPRW 2022　　　　　　　　　　　　　　　　　　　📄 pdf

Investigation of Factorized Optical Flows as Mid-Level Representations

- Hsuan-Kung Yang, Tsu-Ching Hsiao, **Ting-Hsuan Liao***, Hsu-Shen Liu*, Li-Yuan Tsao*, Tzu-Wen Wang*, Shan-Ya Yang*, Yu-Wen Chen*, Huang-Ru Liao*, Chun-Yi Lee.
- IROS 2022　　　　　　　　　　　　　　　　　　　　　　　　　　📄 pdf

Honors & Awards

2022	**Dean's Fellowship for Incoming Ph.D Student of University of Maryland,**
2021	**Computer Science Senior Project Contest - Finalists,** 12 out of 77 teams
2021	**National Scholarship of Pan Wen-Yuan Foundation,** 12 out of the country
2021-2019	**Academic Achievement Award (Five times) ,** top 5% of class
2021	**Scholarship for EECS Excellent Students,** 6 out of 144 students

Service

2025	**Reviewer,** CVPR, CVPRW, ICCV, SIGGRAPH Asia, TPAMI
2024	**Reviewer,** CVPR, ECCV
2023	**Reviewer,** CVPR
2022	**Reviewer,** ECCV

Teaching

Multimodal Foundation Models at UMD　　　　　　　　　　　　*Fall 2025*
Teaching Assistant

Computer Vision at UMD　　　　　　　　　　　　　　　　　　*Spring 2024*
Teaching Assistant

Discrete Structures at UMD　　　　　　　　　　　　　　　　　*Fall 2023*
Teaching Assistant

Introduction to Data Science at UMD　　　　　　　*Fall 2022 and Spring 2023*
Teaching Assistant

Logic Design Laboratory at NTHU　　　　　　　　*Fall 2020 and Fall 2021*
Teaching Assistant

National Tsing Hua University　　　　　　　　　　　　　　　*Spring 2021*
Academic Counselor