

Hsin-Ying Lee

Curriculum Vitae

✉ hsinyinglee.business@gmail.com

🌐 <https://hsinyinglee.com>

Education

- 2016–2020 **Ph.D.**, *University of California, Merced, CA, USA.*
Electrical and Computer Engineering
Vision and Learning Lab [link](#)
- 2015–2016 **Masters of Science**, *University of Southern California, CA, USA.*
Electrical Engineering
- 2010–2014 **Bachelor of Science**, *National Taiwan University, Taipei, Taiwan.*
Electrical Engineering

Work Experience

- July. 2020 - Jun. 2025 **Creative Vision, Snap Inc. CA.**
Research Scientist.
- May. 2019 - Mar. 2020 **Google Research, Mountain View, CA.**
Research Intern. *Mentor: Weilong Yang*
- Dec. 2018 - May. 2019 **Google Cloud AI, Sunnyvale, CA.**
Student Researcher. *Mentor: Lu Jiang, Ming-Hsuan Yang*
- May. 2018 - Nov. 2018 **Nvidia Research, Santa Clara, CA.**
Research Intern. *Mentor: Xiaodon Yang, Ming-Yu Liu*
- May. 2017 - Aug. 2017 **Google Video Content Analysis, Mountain View.**
Intern. *Mentor: Min-Hsuan Tsai*
- Aug. 2016 – May. 2020 **Vision and Learning Lab, EECS, University of California, Merced.**
Research Assistant. *Advisor: Ming-Hsuan Yang*

Publications [\(📄 Google Scholar profile\)](#)

- CVPR 2025 (highlight) **4Real-Video: Learning Generalizable Photo-realistic 4D Video Diffusion.**
Chaoyang Wang, Peiye Zhuang, Tuan Duc Ngo, Willi Menapace, Aliaksandr Siarohin, Michael Vasilkovsky, Ivan Skorokhodov, Sergey Tulyakov, Peter Wonka, [Hsin-Ying Lee](#)
- CVPR 2025 **PrEditor3D: Fast and Precise 3D Shape Editing.**
Ziya Erkoç, Can Gümeli, Chaoyang Wang, Matthias Nießner, Angela Dai, Peter Wonka, [Hsin-Ying Lee](#), Peiye Zhuang
- CVPR 2025 **UniPhy: Learning a Unified Constitutive Model for Inverse Physics Simulation.**
Himangi Mittal, Peiye Zhuang, [Hsin-Ying Lee](#), Shubham Tulsiani
- ICLR 2025 **DELTA: Dense Efficient Long-range 3D Tracking for Any Video.**
Tuan Duc Ngo, Peiye Zhuang, Evangelos Kalogerakis, Chuang Gan, Sergey Tulyakov, [Hsin-Ying Lee](#), Chaoyang Wang

- ICLR 2025 **VD3D: Taming Large Video Diffusion Transformers for 3D Camera Control.**
 Sherwin Bahmani, Ivan Skorokhodov, Aliaksandr Siarohin, Willi Menapace, Guocheng Qian, Michael Vasilkovsky, [Hsin-Ying Lee](#), Chaoyang Wang, Jiaxu Zou, Andrea Tagliasacchi, David B. Lindell, Sergey Tulyakov
- ICLR 2025 **GTR: Improving Large 3D Reconstruction Models through Geometry and Texture Refinement.**
 Peiye Zhuang, Songfang Han, Chaoyang Wang, Aliaksandr Siarohin, Jiaxu Zou, Michael Vasilkovsky, Vladislav Shakhrai, Sergei Korolev, Sergey Tulyakov, [Hsin-Ying Lee](#)
- NeurIPS 2024 **4Real: Towards Photorealistic 4D Scene Generation via Video Diffusion Models.**
 Heng Yu, Chaoyang Wang, Peiye Zhuang, Willi Menapace, Aliaksandr Siarohin, Junli Cao, Laszlo A Jeni, Sergey Tulyakov, Hsin-Ying Lee
- ECCV 2024 **UpFusion: Novel View Diffusion from Unposed Sparse View Observations.**
 Bharath Raj Nagoor Kani, Hsin-Ying Lee, Sergey Tulyakov, Shubham Tulsiani
- CVPR 2024 (Spotlight) **Scenetex: High-quality texture synthesis for indoor scenes via diffusion priors.**
 Dave Zhenyu Chen, Haoxuan Li, [Hsin-Ying Lee](#), Sergey Tulyakov, Matthias Nießner
- CVPR 2024 **Panda-70M: Captioning 70M Videos with Multiple Cross-Modality Teachers.**
 Tsai-Shien Chen, Aliaksandr Siarohin, Willi Menapace, Ekaterina Deyneka, Hsiang-wei Chao, Byung Eun Jeon, Yuwei Fang, [Hsin-Ying Lee](#), Jian Ren, Ming-Hsuan Yang, Sergey Tulyakov
- CVPR 2024 **Scenewiz3d: Towards text-guided 3d scene composition.**
 Qihang Zhang, Chaoyang Wang, Aliaksandr Siarohin, Peiye Zhuang, Yinghao Xu, Ceyuan Yang, Dahua Lin, Bolei Zhou, Sergey Tulyakov, [Hsin-Ying Lee](#)
- CVPR 2024 **Exploiting Diffusion Prior for Generalizable Pixel-Level Semantic Prediction.**
 Hsin-Ying Lee, [Hsin-Ying Lee](#), Hung-Yu Tseng, Ming-Hsuan Yang
- ICLR 2024 **Magic123: One Image to High-Quality 3D Object Generation Using Both 2D and 3D Diffusion Priors.**
 Guocheng Qian, Jinjie Mai, Abdullah Hamdi, Jian Ren, Aliaksandr Siarohin, Bing Li, [Hsin-Ying Lee](#), Ivan Skorokhodov, Peter Wonka, Sergey Tulyakov, Bernard Ghanem
- SIGGRAPH Asia 2023 **Text-Guided Synthesis of Eulerian Cinemagraphs.**
 Aniruddha Mahapatra, Aliaksandr Siarohin, [Hsin-Ying Lee](#), Sergey Tulyakov, Jun-Yan Zhu
- ICCV 2023 **Text2tex: Text-driven texture synthesis via diffusion models.**
 Dave Zhenyu Chen, Yawar Siddiqui, [Hsin-Ying Lee](#), Sergey Tulyakov, Matthias Nießner
- ICCV 2023 **InfiniCity: Infinite-Scale City Synthesis.**
 Chieh Hubert Lin, [Hsin-Ying Lee](#), Willi Menapace, Menglei Chai, Aliaksandr Siarohin, Ming-Hsuan Yang, Sergey Tulyakov
- CVPR 2023 **3DAvatarGAN: Bridging Domains for Personalized Editable Avatars.**
 Rameen Abdal, [Hsin-Ying Lee](#), Peihao Zhu, Menglei Chai, Aliaksandr Siarohin, Peter Wonka, Sergey Tulyakov

- CVPR 2023 **SDFusion: Multimodal 3D Shape Completion, Reconstruction, and Generation.**
Yen-Chi Cheng, [Hsin-Ying Lee](#), Sergey Tulyakov, Alexander Schwing, Liangyan Gui
- CVPR 2023 **Make-A-Story: Visual Memory Conditioned Consistent Story Generation.**
Tanzila Rahman, [Hsin-Ying Lee](#), Jian Ren, Sergey Tulyakov, Shweta Mahajan, Leonid Sigal
- CVPR 2023 (highlight) **DiscoScene: Spatially Disentangled Generative Radiance Field for Controllable 3D-aware Scene Synthesis.**
Yinghao Xu, Menglei Chai, Zifan Shi, Sida Peng, Ivan Skorokhodov, Aliaksandr Siarohin, Ceyuan Yang, Yujun Shen, [Hsin-Ying Lee](#), Bolei Zhou, Sergey Tulyakov
- CVPR 2023 **Unsupervised Volumetric Animation.**
Aliaksandr Siarohin, Willi Menapace, Ivan Skorokhodov, Kyle Olszewski, Jian Ren, [Hsin-Ying Lee](#), Menglei Chai, Sergey Tulyakov
- ICLR 2023 (oral) **3D Generation on ImageNet.**
Ivan Skorokhodov, Aliaksandr Siarohin, Yinghao Xu, Jian Ren, [Hsin-Ying Lee](#), Peter Wonka, Sergey Tulyakov
- WACV 2023 **Adaptively-Realistic Image Generation from Stroke and Sketch with Diffusion Model.**
Shin-I Cheng, Yu-Jie Chen, Wei-Chen Chiu, [Hsin-Ying Lee](#), Hung-Yu Tseng
- ECCV 2022 **Vector Quantized Image-to-Image Translation.**
Yu-Jie Chen, Shin-I Cheng, Wei-Chen Chiu, Hung-Yu Tseng, [Hsin-Ying Lee](#)
- ECCV 2022 **Show Me What and Tell Me How: Video Synthesis via Multimodal Conditioning.**
Ligong Han, Jian Ren, [Hsin-Ying Lee](#), Francesco Barbieri, Kyle Olszewski, Shervin Minaee, Dimitris Metaxas, Sergey Tulyakov
- ECCV 2022 **Cross-Modal 3D Shape Generation and Manipulation.**
Zezhou Cheng, Menglei Chai, Jian Ren, [Hsin-Ying Lee](#), Kyle Olszewski, Zeng Huang, Subhransu Maji, Sergey Tulyakov
- ICLR 2022 **InfinityGAN: Towards Infinite-Resolution Image Synthesis.**
Chieh Hubert Lin, [Hsin-Ying Lee](#), Yen-Chi Cheng, Sergey Tulyakov, Ming-Hsuan Yang
- CVPR 2022 **InOut: Diverse Image Outpainting via GAN Inversion.**
Yen-Chi Cheng, Chieh Hubert Lin, [Hsin-Ying Lee](#), Jian Ren, Sergey Tulyakov, Ming-Hsuan Yang
- NeurIPS 2021 **Exploring cross-video and cross-modality signals for weakly-supervised audio-visual video parsing.**
Yan-Bo Lin, Hung-Yu Tseng, [Hsin-Ying Lee](#), Yen-Yu Lin, and Ming-Hsuan Yang
- ECCV 2020 **RetrieveGAN: Image Synthesis via Differentiable Patch Retrieval.**
Hung-Yu Tseng, [Hsin-Ying Lee](#), Lu Jiang, Ming-Hsuan Yang, Weilong Yang
- ECCV 2020 **Controllable Image Synthesis via SegVAE.**
Yen-Chi Cheng, [Hsin-Ying Lee](#), Min Sun, Ming-Hsuan Yang

- ECCV 2020 **Semantic View Synthesis.**
Hsin-Ping Huang, Hung-Yu Tseng, [Hsin-Ying Lee](#), Jia-Bin Huang
- ECCV 2020 (spotlight) **Neural Design Network: Graphic Layout Generation with Constraints.**
[Hsin-Ying Lee](#), Weilong Yang, Lu Jiang, Madison Le, Irfan Essa, Haifeng Gong, Ming-Hsuan Yang
- ICLR 2020 (spotlight) **Cross-Domain Few-Shot Classification via Learned Feature-Wise Transformation .**
Hung-Yu Tseng, [Hsin-Ying Lee](#), Jia-Bin Huang, Ming-Hsuan Yang
International Conference on Learning Representations, 2020
- IJCV 2019 **DRIT++: Diverse Image-to-Image Translation via Disentangled Representations.**
[Hsin-Ying Lee*](#), Hung-Yu Tseng*, Qi Mao*, Jia-Bin Huang, Yu-Ding Lu, Maneesh Kumar Singh, and Ming-Hsuan Yang,
International Journal of Computer Vision
- NeurIPS 2019 **Dancing to Music.**
[Hsin-Ying Lee](#), Xiaodong Yang, Ming-Yu Liu, Ting-Chung Wang, Yu-Ding Lu Ming-Hsuan Yang, and Jan Kautz
Conference on Neural Information Processing Systemn, 2019
- ICIP 2019 **Self-supervised Audio Spatialization with Correspondence Classifier.**
Yu-Ding Lu, [Hsin-Ying Lee](#), Hung-Yu Tseng, Ming-Hsuan Yang
IEEE International Conference on Image Processing, 2019
- CVPR 2019 **Mode Seeking Generative Adversarial Networks for Diverse Image Synthesis.**
Mao Qi*, [Hsin-Ying Lee*](#), Hung-Yu Tseng*, and Ming-Hsuan Yang
IEEE Conference on Computer Vision and Pattern Recognition, 2019
- ECCV 2018 (oral) **Diverse Image-to-Image Translation via Disentangled Representations.**
[Hsin-Ying Lee*](#), Hung-Yu Tseng*, Jia-Bin Huang, Maneesh Kumar Singh, and Ming-Hsuan Yang,
European Conference on Computer Vision, 2018
- ECCV 2018 **Sub-GAN: An Unsupervised Generative Model via Subspaces.**
Jie Liang, Jufeng Yang, [Hsin-Ying Lee](#), Kai Wang, and Ming-Hsuan Yang,
European Conference on Computer Vision, 2018
- ICCV 2017 **Unsupervised Representation Learning by Sorting Sequence.**
[Hsin-Ying Lee](#), Jia-Bin Huang, Maneesh Kumar Singh, and Ming-Hsuan Yang,
International Conference on Computer Vision, 2017
- TCAD 2017 **NTUplace4dr: a detailed-routing-driven placer for mixed-size circuit designs with technology and region constraints.**
Chau-Chin Huang, [Hsin-Ying Lee](#), Bo-Qiao Lin, Sheng-Wei Yang, Chin-Hao Chang, Szu-To Chen, Yao-Wen Chang, Tung-Chieh Chen, Ismail Bustany,
IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems
- DAC 2017 **Graph-Based Logic Bit Slicing for Datapath-Aware Placement.**
Chau-Chin Huang, [Hsin-Ying Lee](#), Bo-Qiao Lin, Yao-Wen Cheng,
Design Automation Conference, 2017
- CVPR 2016 **Soft-Segmentation Guided Object Motion Deblurring.**
Jinshan Pan, Zhe Hu, [Hsin-Ying Lee](#), and Ming-Hsuan Yang,
Conference on Computer Vision and Pattern Recognition, 2016

- ICCAD 2015 **Detailed-routability-driven analytical placement for mixed-size designs with technology and region constraints.**
Chau-Chin Huang, Hsin-Ying Lee, Bo-Qiao Lin, Sheng-Wei Yang, Chin-Hao Chang, Szu-To Chen, Yao-Wen Chang
International Conference on Computer-Aided Design, 2015
- Communications **Bio-inspired Proximity Discovery and Synchronization for D2D**
Letters 2013 **Communications.**
Shih-Lung Chao, Hsin-Ying Lee, Ching-Chun Chou, and Hung-Yu Wei
IEEE Communications Letters, Volume 17, Issue 12, Page 2300 - 2303, Dec. 2013

Academic Services

- Area Chair CVPR 2025, CVPR 2024, ICLR 2024, AAAI 2024, CVPR 2023, NeurIPS 2023, AAAI 2023, BMVC 2021
- Reviewer CVPR, ICCV, ECCV, ICLR, NeurIPS, SIGGRAPH, SIGGRAPH Asia, BMVC, WACV, CVIU, IJCV, TPAMI, TETCI
- Organizer CVPR 2021 Tutorial on **Unlocking Creativity with Computer Vision: Representations for Animation, Stylization and Manipulation**
- Organizer CVPR 2024 Tutorial on **3D/4D Generation and Modeling with Generative Priors**