

# Hsin-Ying Lee

## Curriculum Vitae

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### Education

- 2016–2020 **Ph.D. Student**, *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 - Present **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 [\(🔗 Google Scholar profile\)](#)

- 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 **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
- 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 System, 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 Letters 2013 **Bio-inspired Proximity Discovery and Synchronization for D2D 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

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## Academic Services

- Area Chair 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**