

# LONG MAI

mai-t-long.com

(971) · 240 · 9948 ◊ mai.t.long88@gmail.com

## EXPERIENCE

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<b>Adobe Research</b> <i>Senior Research Scientist</i>	September 2023 - Present San Jose, CA
<b>ByteDance Research</b> <i>Senior Research Scientist</i>	December 2022 - September 2023 San Jose, CA
<b>Adobe Research</b> <i>Research Scientist</i>	June 2017 - February 2021 San Jose, CA

## EDUCATION

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<b>Portland State University, Portland</b> Doctor of Philosophy in Computer Science	April 2012 - June 2017
<b>Portland State University, Portland</b> Bachelor in Computer Science	January 2009 - April 2012
<b>Hochiminh City University of Sciences, Vietnam</b> Bachelor in Computer Science	September 2006 - December 2008

## SELECTED PUBLICATIONS

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Yitian Zhang, **Long Mai**, Aniruddha Mahapatra, David Bourgin, Yicong Hong, Jonah Casebeer, Feng Liu, Yun Fu, “*REGEN: Learning Compact Video Embedding with (Re-)Generative Decoder*”, International Conference on Computer Vision, Honolulu, HI, USA, October 2025 (ICCV 2025).

Aniruddha Mahapatra, **Long Mai**, Yitian Zhang, David Bourgin, Feng Liu, “*Progressive Growing of Video Tokenizers for Highly Compressed Latent Spaces*”, International Conference on Computer Vision, Honolulu, HI, USA, October 2025 (ICCV 2025).

Yuan Yao, Yicong Hong, Difan Liu, **Long Mai**, Jiebo Luo, Feng Liu “*Diffusion Transformer-to-Mamba Distillation for High-Resolution Image Generation*”, British Machine Vision Conference, Sheffield, UK, November 2025 (BMVC 2025, **Oral Presentation**).

Jinbo Xing, **Long Mai**, Cusuh Ham, Jiahui Huang, Aniruddha Mahapatra, Chi-Wing Fu, Tien-Tsin Wong, Feng Liu “*MotionCanvas: Cinematic Shot Design with Controllable Image-to-Video Generation*”, SIGGRAPH 2025, Vancouver, CA, August 2025.

Yichun Shi, Peng Wang, Jianglong Ye, **Long Mai**, Kejie Li, Xiao Yang, “*MVDream: Multi-view Diffusion for 3D Generation*”, International Conference on Learning Representations, Vienna, Austria, May 2024 (ICLR 2024).

**Long Mai**, Feng Liu, “*Motion-Adjustable Neural Implicit Video Representation*”, IEEE Conference on Computer Vision and Pattern Recognition, New Orleans, LA, USA, June 2022 (CVPR 2022, **Oral Presentation**).

Mahdi Miangoleh\*, Sebastian Dille\*, **Long Mai**, Sylvain Paris, and Yağız Aksoy, “*Boosting Monocular Depth Estimation Models to High-Resolution via Multi-Resolution Merging*”, IEEE Conference on Computer Vision and Pattern Recognition, Nashville, TN, USA, June 2021 (CVPR 2021).

Wei Yin, Jianming Zhang, Oliver Wang, Simon Niklaus, **Long Mai**, Simon Chen and Chunhua Shen, “*Learning to Recover 3D Scene Shape from a Single Image*”, IEEE Conference on Computer Vision and Pattern Recognition, Nashville, TN, USA, June 2021. (CVPR 2021, **Oral Presentation, Best Paper Finalist**).

Qi Li, **Long Mai**, Michael A. Alcorn, and Anh Nguyen, “*A Cost-Effective Method for Improving and Re-purposing Large, Pre-trained GANs by Fine-tuning Their Class-Embeddings*”, 2020. (ACCV 2020, **Oral Presentation, Best Application Paper Honorable Mention**).

Thu Nguyen-Phuoc, Christian Richardt, **Long Mai**, Yong-Liang Yang, and Niloy Mitra, “*BlockGAN: Learning 3D Object-aware Scene Representations from Unlabelled Images*”, 2020. (NeurIPS 2020).

Peng Zhou, **Long Mai**, Jianming Zhang, Ning Xu, Zuxuan Wu, and Larry Davis, “*M2KD - Incremental Learning via Multi-model and Multi-level Knowledge Distillation*”, 2020 (BMVC 2020).

Zhuowan Li, Quan Tran, **Long Mai**, Zhe Lin, and Alan Yuille, “*Context-Aware Group Captioning via Self-Attention and Contrastive Features*”, IEEE Conference on Computer Vision and Pattern Recognition, Seattle, WA, USA, June 2020 (CVPR 2020).

Simon Niklaus, **Long Mai**, Jimei Yang, and Feng Liu, “*3D Ken Burns Effect from a Single Image*”, SIGGRAPH Asia 2019, Brisbane, Australia, November 2019.

Haotian Zhang, **Long Mai**, Ning Xu, Zhaowen Wang, John Collomosse, and Hailin Jin, “*An Internal Learning Approach to Video Inpainting*”, IEEE International Conference on Computer Vision, Seoul, Korea, October 2019 (ICCV 2019).

Jun Hao Liew, Scott Cohen, Brian Price, **Long Mai**, Sim-Heng Ong, and Jiashi Feng, “*MultiSeg: Semantically Meaningful, Scale-Diverse Segmentations from Minimal User Input*”, IEEE International Conference on Computer Vision, Seoul, Korea, October 2019 (ICCV 2019).

Michael Alcorn, Qi Li, Zhitao Gong, Chengfei Wang, **Long Mai**, Wei-shinn Ku, Anh Nguyen, “*Strike (with) a Pose: Neural networks are easily fooled by strange poses of familiar objects*”, IEEE Conference on Computer Vision and Pattern Recognition, Long Beach, CA, USA, June 2019 (CVPR 2019).

Hoang Le, **Long Mai**, Brian Price, Scott Cohen, Hailin Jin, and Feng Liu, “*Interactive Boundary Prediction for Object Selection*”, European Conference on Computer Vision, Munich, Germany, September 2018 (ECCV 2018).

Simon Niklaus, **Long Mai**, and Feng Liu, “*Video Frame Interpolation via Adaptive Separable Convolution*”, IEEE International Conference on Computer Vision, Venice, Italy, October 2017 (ICCV 2017).

**Long Mai**, Hailin Jin, Zhe Lin, Chen Fang, Jonathan Brandt, and Feng Liu, “*Spatial-Semantic Image Search by Visual Feature Synthesis*”, IEEE Conference on Computer Vision and Pattern Recognition, Honolulu, HI, USA, July 2017 (CVPR 2017, **Spotlight Presentation**).

**Long Mai\***, Simon Niklaus\*, and Feng Liu, “*Video Frame Interpolation via Adaptive Convolution*”, IEEE Conference on Computer Vision and Pattern Recognition, Honolulu, HI, USA, July 2017 (CVPR 2017, **Spotlight Presentation**).

**Long Mai**, Hoang Le, and Feng Liu, “*Content and Surface Aware Projection*”, Graphics Interface, Edmonton, CA, May 2017 (GI 2017).

**Long Mai**, Hailin Jin, and Feng Liu, “*Composition-preserving Deep Photo Aesthetics Assessment*”, IEEE Conference on Computer Vision and Pattern Recognition, Las Vegas, NV, USA, June 2016 (CVPR 2016).

**Long Mai**, Feng Liu, “*Kernel Fusion for Better Image Deblurring*”, IEEE Conference on Computer Vision and Pattern Recognition, Boston, MA, USA, June 2015 (CVPR 2015).

**Long Mai**, Feng Liu, “*Comparing Salient Object Detection Results without Ground Truth*”, European Conference on Computer Vision, Zurich, Switzerland, September 2014 (ECCV 2014).

**Long Mai**, Yuzhen Niu, and Feng Liu, “*Saliency Aggregation: A Data-driven Approach*”, IEEE Conference on Computer Vision and Pattern Recognition, Portland, OR, USA, June 2013 (CVPR 2013).

## PRODUCT TRANSFERS

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**Adobe Firefly Video** (2024): Co-lead the design and development of the video tokenizer and decoder architecture for Adobe’s Firefly Video foundation model.

**Generative Extend** (Adobe Premiere Pro, 2024): Core contributor developing specialized decoder architectures and optimizations for fast and high-resolution decoding.

**Moving Photos** (Adobe Photoshop Elements, 2021): Automatic feature that allows users to turn their static photographs into a short video with realistic motion parallax.

**Composition Similarity Search** (Adobe Stock, 2019): AI-power image search feature that lets users search Adobe Stock for photographs with similar photographic composition.

## PATENTS

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Long Mai, Hailin Jin, Zhe Lin, Chen Fang, Jonnathan Brandt, “*Utilizing a digital canvas to conduct a spatial-semantic search for digital visual media*”, 2019, U.S. Patent No. 10963759.

Simon Niklaus, Long Mai, Jimei Yang, “*3D Motion Effect from a 2D Image*”, 2021, U.S. Patent No. 11017586.

Haotian Zhang, Long Mai, Ning Xu, Zhaowen Wang, Hailin Jin, John Collomosse, “*Video Inpainting with Deep Internal Learning*”, 2021, U.S. Patent No. 11055828.

Simon Niklaus, Long Mai, Feng Liu, “*Frame interpolation via adaptive convolution and adaptive separable convolution*”, 2019, U.S. Patent Application No. 16/495,029.

Scott Cohen, Long Mai, Jun Hao Liew, Brian Price, “*Identifying target objects using scale-diverse segmentation neural networks*”, 2020, U.S. Patent Application No. 16/231,746.

Long Mai, Michael Alcorn, Baldo Faieta, Vladimir Kim, “*3d-aware image search*”, 2021, U.S. Patent Application No. 16/821,301.

Long Mai, Yannick Hold-Geoffroy, Naoto Inoue, Daichi Ito, Brian Lynn Price, “*Methods and systems for geometry-aware image contrast adjustments via image-based ambient occlusion estimation*”, 2021, U.S. Patent Application No. 16/691,110.

Quan Tran, Long Mai, Zhe Lin, Zhuowan Li, “*Contrastive captioning for image groups*”, 2022, U.S. Patent Application No. 16/998,876.

## TECHNICAL SKILLS

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Tools and Libraries: PyTorch, Tensorflow, Torch7, Caffe, OpenCV, OpenVINO.

Programming: Python, C/C++, Matlab.