LONG MAI

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EXPERIENCE

ByteDance Research — December 2022 - Present
Senior Research Scientist — *San Jose, CA*

Adobe Research — June 2017 - February 2021
Research Scientist — *San Jose, CA*

Adobe Research — June 2016 - September 2016
Research Intern — *San Jose, CA*

Portland State University — April 2012 - May 2017
Graduate Research Assistant — *Portland, OR*

EDUCATION

Portland State University, Portland — *April 2012 - June 2017*
Doctor of Philosophy in Computer Science

Portland State University, Portland — *January 2009 - April 2012*
Bachelor in Computer Science

Hochiminh City University of Sciences, Vietnam — *September 2006 - December 2008*
Bachelor in Computer Science

PUBLICATIONS

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 viaMulti-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**).

Simon Niklaus, **Long Mai**, and Oliver Wang, *"Revisiting adaptive convolutions for video frame interpolation"*, IEEE Winter Conference on Applications of Computer Vision, February 2021 (WACV 2021).

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).

Juan León Alcázar, Fabian Caba, **Long Mai**, Federico Perazzi, Joon-Young Lee, Pablo Arbeláez, and Bernard Ghanem, *"Active speakers in context"*, IEEE Conference on Computer Vision and Pattern Recognition, Seattle, WA, USA, June 2020 (CVPR 2020).

Ke Xian, Jianming Zhang, Oliver Wang, **Long Mai**, Zhe Lin, and Zhiguo Cao, *"Structure-Guided Ranking Loss for Single Image Depth Prediction"*, IEEE Conference on Computer Vision and Pattern Recognition, Seattle, WA, USA, June 2020 (CVPR 2020).

Naoto Inoue, Daichi Ito, Yannick Hold-Geoffroy, **Long Mai**, Brian Price, Toshihiko Yamasaki, *"RGB2AO: Ambient Occlusion Generation from RGB Images"*, 2020 (Eurographics 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

Moving Photos (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

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.

ACADEMIC AWARDS

Maseeh Fellowship for Outstanding Graduate Student, 2016

Portland State University Commendation Award, 2012

Maria Balogh Endowed Computer Science Scholarship, Maseeh College of Engineering and Computer Science, 2011 – 2012.

Innovation Program Funding Award, Maseeh College of Engineering and Computer Science, Portland State University, 2011.

IBM scholarship, Vietnam National University - Hochiminh City University of Sciences, 2008.

TECHNICAL SKILLS

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

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