Name: Ming Lu
Data of Birth: 1991-09-02
Tel: +86 18622816139
E-mail: lu199192@gmail.com

I am a researcher at Intel Labs China. My research interests are computer graphics and 3D vision.

For Computer Graphics (2013-now), I've worked on developing high-quality, efficient, scalable, intelligent visual synthesis systems. I'm especially interested in visual content capture (3D face/body/gaze/object/scene/etc.) and enhancement (super-resolution/denoising/interpolation/style transfer/relighting/etc.).

For 3D Vision (2022-now), I've worked on improving the quality, efficiency, scalability and intelligence of indoor and outdoor applications such as visual navigation and autonomous driving.

I have published over 20 papers on top-tier journals and conference proceedings (Google Scholar Citations: 718, H-index: 11, I10-index: 11). I also had over 20 PCT/US/EP patents approved for filing. Some of my works have been used in Intel GPU/CPU, Chris Lee's MV and the opening ceremony of Winter Olympic Games 2022.

Education

2009-2013	**Bachelor of Electronic Information Engineering**, *Tianjin University*, China, *Rank: 1/107*.
2013-2019	**Ph.D Candidate of Information and Communication Engineering**, *Tsinghua University*, China, . Research Topics: 3D Vision and Computer Graphics

Work Experience

2013/06- 2013/09	**Summer Intern**, Institute of Automation, Chinese Academy of Sciences, Beijing. Research topic: 3D reconstruction based on high-resolution light field images
2014/07- 2014/12	**Summer Intern**, NEC Research, China, Beijing. Research topic: Image classification and object detection based on Deep Convolutional Neural Network
2015/01- 2019/10	**Intern**, Intel Lab, China, Beijing. Research topic: 3D face reconstruction and tracking, image processing based on Deep Convolutional Neural Network

Skills

Basic	java, webgl
Intermediate	python, lua
Advanced	c,c++,cuda,opengl,torch, pytorch

Languages

Chinese	Mothertongue
English	Intermediate

Conversationally fluent

Publication

3D Human

[1] Wen Q, Xu F, **Lu M**, et al. Real-time 3d eyelids tracking from semantic edges[J]. ACM Transactions on Graphics (TOG), 2017, 36(6): 193.

[2] Zhao H, **Lu M**, Yao A, et al. Learning to Draw Sight Lines[J]. International Journal of Computer Vision, 2019.

[3] Wang Z, Ling J, Feng C, **Lu M**, Xu F. Emotion Preserving Blendshape Update with Real-time Face Tracking[J]. IEEE Transactions on Visualization and Computer Graphics.

[4] Wang Z, Yu X, **Lu M**, Xu F, et al. Single Image Based Portrait Relighting via Explicit Multiple Channel Modeling - SIGGRAPH Asia 2020.

[5] Kang Y, Yao A, Wang S, **Lu M**, et al. Explicit Residual Descent for 3D Human Pose Estimation from 2D Joint Locations - BMVC 2020.

[6] **Lu M**, et al. SamplingAug: On the Importance of Patch Sampling Augmentation for Single Image Super-Resolution - BMVC 2021.

[7] **Lu M**, et al. Semantically Disentangled Variational Autoencoder for Modeling 3D Facial Details - TVCG 2022.

[8] **Lu M**, et al. Structure-aware Editable Morphable Model for 3D Facial Detail Animation and Manipulation - ECCV 2022.

2D Process

[1] **Lu M**, Zhao H, Yao A, et al. Decoder network over lightweight reconstructed feature for fast semantic style transfer[C]//Proceedings of the IEEE International Conference on Computer Vision. 2017: 2469-2477.

[2] **Lu M**, Zhao H, Yao A, et al. A Closed-Form Solution to Universal Style Transfer[C]//Proceedings of the IEEE International Conference on Computer Vision. 2019.

[3] **Lu M**, Xu F, Zhao H, et al. Exemplar-based portrait style transfer[J]. IEEE Access, 2018, 6: 58532-58542.

[4] Y Guo, **Lu M**, W Zuo, et al. Deep Likelihood Network for Image Restoration With Multiple Degradation Levels. IEEE Transactions on Image Processing (TIP) 2021.

[5] **Lu M**, et al. SamplingAug: On the Importance of Patch Sampling Augmentation for Single Image Super-Resolution - BMVC 2021.

[6] **Lu M**, et al. Overfitting the Data: Compact Neural Video Delivery via Content-aware Feature Modulation - ICCV 2021.

[7] **Lu M**, et al. Adaptive Patch Exiting for Scalable Single Image Super-Resolution - ECCV 2022.

[8] **Lu M**, et al. Efficient Meta-Tuning for Content-aware Neural Video Delivery - ECCV 2022.

3D Vision

[1] Zhao H, **Lu M**, Yao A, et al. Physics inspired optimization on semantic transfer features: An alternative method for room layout estimation[C]//Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition. 2017: 10-18.

[2] Zhong L, **Lu M**, Zhang L. A direct 3D object tracking method based on dynamic textured model rendering and extended dense feature fields[J]. IEEE Transactions on Circuits and Systems for Video Technology, 2018, 28(9): 2302-2315.

[3] Zhao H, **Lu M**, Yao A, et al. Pointly-supervised Scene Parsing with Uncertainty Mixture[J]. Computer Vision and Image Understanding 2020.

[4] Huang X, Huang Z, **Lu M**, et al. A semi-global matching method for large-scale light field images[C]//2016 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP). IEEE, 2016: 1646-1650.

[5] Huang Y, Sun X, **Lu M**, et al. Channel-max, channel-drop and stochastic max-pooling[C]//Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops. 2015: 9-17.

[6] Kong T, Sun F, Yao A, Liu H, **Lu M**, et al. RON: Reverse Connection with Objectness Prior Networks for Object Detection, In IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2017.

[7] Wang Y, Sun F, **Lu M**, Yao A. Learning Deep Multimodal Feature Representation with Asymmetric Multi-layer Fusion - ACM MM 2020.