Guo Lu

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Research Interest

Video Compression, Video Enhancement, Deep Learning

Education

Shanghai Jiao Tong University — **Shanghai, China**
Ph.D. candidate at Electronic Engineering — *September 2014 - present*
Supervisor: Zhiyong Gao

The University of Sydeny — **Sydeny, Australia**
Joint-training Ph.D. student — *September 2017 - March 2019*
Supervisor: Dong Xu and Wanli Ouyang

Ocean University of China — **Qingdao, China**
Bachelor of Electronic Engineering — *August 2010 -June 2014*

Professional Skills

Deep Learning: Tensorflow, Caffe, Pytorch
Video Compression: H.264, H.265
Basic: Matlab,C/C++,Python, FFmpeg, OpenCV

Publications

[1] **Guo Lu**, Xiaoyun Zhang, Wanli Ouyang, Li Chen, Zhiyong Gao, Dong Xu. An End-to-End Learning Framework for Video Compression. in IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2020.

[2] **Guo Lu**, Xiaoyun Zhang, Wanli Ouyang, Dong Xu, Li Chen, Zhiyong Gao. Deep Non-local Kalman Network for Video Compression Artifact Reduction. in IEEE Transactions on Image Processing (TIP), 2019.

[3] **Guo Lu**, Wanli Ouyang, Dong Xu, Xiaoyun Zhang, Chunlei Cai, Zhiyong Gao. DVC: An End-to-end Deep Video Compression Framework. in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Long Beach, 2019. **(Oral)**

[4] Chunlei Cai, Li Chen, Xiaoyun Zhang, **Guo Lu**, Zhiyong Gao, A Novel Deep Progressive Image Compression Framework, in Picture Coding Symposium (PCS), 2019.

[5] Hongwen Zhang, Jie Cao, **Guo Lu**, Wanli Ouyang and Zhenan Sun. DaNet: Decompose-and-aggregate Network for 3D Human Shape and Pose Estimation, in ACM Multimedia (ACM MM), 2019.

[6] **Guo Lu**, Wanli Ouyang, Dong Xu, Xiaoyun Zhang, Zhiyong Gao, Ming-Ting Sun. Deep Kalman Filtering Network for Video Compression Artifact Reduction in Proceedings of the European Conference on Computer Vision (ECCV), 2018.

[7] **Guo Lu**, Xiaoyun Zhang, Li Chen, Zhiyong Gao. Novel Integration of Frame Rate Up Conversion and HEVC Coding based on Rate-Distortion Optimization in IEEE Transactions on Image Processing (TIP), 2018.

[8] **Guo Lu**, Xiaoyun Zhang, Li Chen, Zhiyong Gao. A Novel Frame Rate Up Conversion Using Iterative Non-local Means Interpolation in International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB), 2017.

[9] Chunlei Cai, **Guo Lu**, Qiang Hu, Li Chen, Zhiyong Gao. Efficient Learning Based Sub-pixel Image Compression, in CVPRW, 2019.

Awards and Achievements

- Scholarship of KLA Corporation, 2019
- Scholarship of China Scholarship Council, 2017
- Graduation with honor (2%), 2014
- First Academic Scholarship, 2011,2012
- National Scholarship, 2012
- Enterprise Scholarship, 2011

Academic Ssrvices

- Reviewer for IEEE Transactions on Image Processing
- Reviewer for IEEE Transactions on Multimedia
- Reviewer for IEEE Transactions on Circuits and Systems for Video Technology
- Reviewer for IEEE Signal Processing Letter
- Reviewer for Computer Vision and Image Understanding
- Reviewer for Multimedia Tools and Applications
- Program Committee Member for AAAI-2020
- IEEE Student Member

Talks

- AVSS 2019 Tutorial, Taipei.
- CVPR 2019, Oral, LA, USA.
- VALSE 2019 Spotlight, Hefei, China

Co-Authors

- **Wanli Ouyang**, Senior Lecture, The University of Sydney, wanli.ouyang@sydney.edu.au
- **Ming-Ting Sun**, Professor, University of Washington, mts@uw.edu
- **Zhiyong Gao**, Professor, Shanghai Jiao Tong University, zhiyong.gao@sjtu.edu.cn