

Guo Lu

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Research Interest

Video Compression, Video Enhancement, Deep Learning

Education

Shanghai Jiao Tong University

Ph.D. candidate at Electronic Engineering

Supervisor: Zhiyong Gao

Shanghai, China

September 2014 - present

The University of Sydney

Joint-training Ph.D. student

Supervisor: Dong Xu and Wanli Ouyang

Sydney, Australia

September 2017 - March 2019

Ocean University of China

Bachelor of Electronic Engineering

Qingdao, China

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

[-] **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), **in submission, Minor Revision**.

[1] **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.

[2] **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)**

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

[4] 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.

[5] **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.

- [6] **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.
- [7] **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.
- [8] **Guo Lu**, Xiaoyun Zhang, Zhiyong Gao. [A Novel Framework of Frame Rate Up Conversion Integrated Within HEVC Coding](#), in IEEE International Conference on Image Processing (ICIP), 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