

Shangchen Zhou

SenseTime Research
Building 11A, Science Park, Shenzhen, China
☎ +86 177-4516-2188
✉ shangchenzhou@gmail.com
🌐 shangchenzhou.com

I received My B.Eng. degree from the University of Electronic Science and Technology of China (UESTC) in 2015, working with Prof. Zenglin Xu and M.Eng. degree from Harbin Institute of Technology (HIT) in 2018, supervised by Prof. Hongxun Yao and Prof. Wangmeng Zuo. I have also been a research intern at SenseTime Research. I am broadly interested in image processing and computer vision. My current research focuses on image deblurring, stereo&3D vision, optical flow, etc.

Research Experience

- 08/2018- **Research Intern**, *SenseTime Research*, Shenzhen, China.
08/2019 Working with: Jiawei Zhang and Jimmy S. Ren

Education Background

- 09/2015- **M.Eng.**, *Harbin Institute of Technology(HIT)*, Harbin, China.
07/2018 Major: Computer Science and Technology GPA: 83.31/100 Top: 3%
Gold Award Graduate (5/187)
Advisor: Prof. Hongxun Yao and Prof. Wangmeng Zuo
- 09/2011- **B.Eng.**, *University of Electronic Science and Technology of China (UESTC)*, Chengdu, China.
07/2015 Major: Computer Science and Technology GPA: 3.83/4.0 Top: 3%
Advisor: Prof. Zenglin Xu

Publications

Conference Papers

- 2019 **Spatio-Temporal Filter Adaptive Network for Video Deblurring.**
○ **Shangchen Zhou**, Jiawei Zhang, Jinshan Pan, Haozhe Xie, Wangmeng Zuo, and Jimmy Ren.
○ In *Proceedings of International Conference on Computer Vision, ICCV 2019*.
○ Propose a spatio-temporal filter adaptive network for video deblurring. It integrates the frame alignment and deblurring into a unified framework and formulates them as two convolution process using generated pixel adaptive filters and our proposed FAC layers.
- 2019 **Pix2Vox: Context-aware 3D Reconstruction from Single and Multi-view Images.**
○ Haozhe Xie, Hongxun Yao, Xiaoshuai Sun, **Shangchen Zhou**, Shengping Zhang.
○ In *Proceedings of International Conference on Computer Vision, ICCV 2019*.
- 2019 **DAVANet: Stereo Deblurring with View Aggregation.**
○ **Shangchen Zhou**, Jiawei Zhang, Wangmeng Zuo, Haozhe Xie, Jinshan Pan, and Jimmy Ren.
○ In *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2019 (Oral)*.
○ Propose a novel stereo-image deblurring network with depth awareness and view aggregation, and present a large-scale multi-scene stereo blur dataset containing 20,637 blurry-sharp stereo image pairs from 135 diverse sequences.
- 2018 **Deep Saliency Hashing.**
○ Sheng Jin, Xiaoshuai Sun, Hongxun Yao, **Shangchen Zhou**, Xiansheng Hua, and Lei Zhang.
○ arXiv preprint arXiv:1807.01459.
○ In submission.
- 2018 **Association Study of Alzheimer's Disease with Tree-guided Sparse Canonical Correlation Analysis.**
○ **Shangchen Zhou**, Shuai Yuan, Zhizhuo Zhang, and Zenglin Xu.
○ In *Proceedings of the International Conference on Neural Information Processing, ICONIP 2018*.
○ Propose a tree-guided sparse Canonical Correlation Analysis to find biologically meaningful associations between SNPs and MRI features on Alzheimer's disease. (Note that this work was done when I was an undergraduate)

- 2018 **A Novel Voxel Representation for 3D Reconstruction.**
- Haozhe Xie, Hongxun Yao, Xiaoshuai Sun, **Shangchen Zhou**, Xiaojun Tong.
 - In *International Conference on Internet Multimedia Computing and Service*, ICIMCS 2018.
 - Propose a new voxel representation, which provides more abundant information and facilitates the network learning.
- 2016 **Tree-guided Group Sparse based Representation for Person Re-identification.**
- **Shangchen Zhou**, Hongxun Yao, Wei Yu and Yasi Wang.
 - In *International Conference on Internet Multimedia Computing and Service*, ICIMCS 2016.
 - **Best Paper Award.**
 - Proposes a tree-structured person representation for person re-identification, which is more robust for background noise and non-aligned case.

Journal Papers

- 2019 **Unsupervised Semantic Deep Hashing.**
- Sheng Jin, Xiaoshuai Sun, Hongxun Yao, **Shangchen Zhou**.
 - Neurocomputing.
 - propose a novel unsupervised semantic deep hashing method for large-scale image retrieval, which uses semantic information in CNN features to guide the network training.
- 2018 **Gradual recovery based occluded digit images recognition.**
- Yasi Wang, Hongxun Yao, Wei Yu, Dong Wang, **Shangchen Zhou**, Xiaoshuai Sun.
 - Multimedia Tools and Applications.
 - Propose a stacked auto-encoders for the problem of occluded digit images recovery and recognition, which regards image recovery as a gradual process.

Patents

- 2019 **A CNN-based Stereo Deblurring Algorithm**, CN109829863A.
- **Shangchen Zhou**, Jiawei Zhang and Jimmy Ren.
- 2019 **A Spatio-Temporal Filter Adaptive Video Deblurring Network**, CN110062164A.
- **Shangchen Zhou**, Jiawei Zhang and Jimmy Ren.

Projects

- 2016 **Analysis and Mining of Group Behavior based on multi-source and Heterogeneous Data in Public Security (61133003)**, *Major Program of National Natural Science Foundation of China*.
- Responsible for a module of group behavior analysis, which classifies the armed and non-armed groups as while detects weapons.
- 2014 **Smartphone Privacy Protection System Based On the Smart Bracelet**, *Innovation Fund Project*, Team Leader.
- An Android App that can unlock lock screen and folders of the smartphone and decrypt files automatically, when the user's bracelet is around and can be detected.
- 2013 **Ginkgo schedule**, *Microsoft Engineering Training Project*.
- A windows 8 App that helps users to develop schedules or curriculum arrangements easily.

Academic Services

Conference Reviewer.

- ICCV2019

Journal Reviewer.

- PR, JEI

Awards and Honors

- 2018 **Gold Award Graduate (Top 3%)**, *HIT*.
- the Highest award for graduate in HIT.
- 2017 **First-class Academic Performance Scholarship for Postgraduates**, *HIT*.
- 2016 **Best Paper Award**, *ICIMCS*, *ACM*.

- 2015 **Outstanding Student Recommended for Admission (Top 2%), HIT.**
- 2015 **Outstanding Graduate, UESTC.**
- 2013 **First Prize in Mathematics Competition of UESTC (Top 1%), UESTC.**
- 2014 **National Scholarship (top 2%), MOE.**
the Highest national wide scholarship for undergraduate students in China.
- 2012, 2013 **Special-grade Scholarship of People (Top 3%, 2 Times), UESTC.**

Skills

- Computer Python, Matlab, C/C++, Lua, L^AT_EX| Photoshop (skilled)
- Frameworks PyTorch, TensorFlow, Torch, Caffe
- Languages English, Mandarin (Native speaker)
- Others Competent in communications, good leadership and strong teamwork spirits